RiskPACC

INTEGRATING RISK PERCEPTION AND ACTION TO ENHANCE CIVIL PROTECTION-CITIZEN INTERACTION

ETHICS AND EQUALITY PROTOCOL AND DATA MANAGEMENT PLAN

Deliverable 9.3

Dissemination Level: Public

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 101021271

D9.3 Ethics and Quality Protocol and Data Management Plan	
Deliverable number:	
Version:	2
Delivery date:	30/01/2023
Dissemination level:	Public
Nature:	Report
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Document control			
Version	Date	Author(s)	Change(s)
0.1	20/01/2022	Selby Knudsen (TRI)	First draft
0.2	03/02/2022	Selby Knudsen, Panagiotis Loukinas, Su Anson (TRI)	Change of template, edits to first draft
0.3	07/02/2022	Selby Knudsen (TRI)	Comments and edits addressed
0.4		Claudia Berchtold, Jeannette Anniés	Edits to draft 3; internal review
1.0	21/02/2022	Selby Knudsen (TRI)	Final draft addressing edits
1.1	06/01/2023	Selby Knudsen (TRI), Jeannette Anniés (USTUTT), Sascha Düerkop (FhG)	Edits following Advisory Board review; comments from internal reviewers
1.2	23/01/2023	Selby Knudsen (TRI)	Final draft addressing edits
2.0	30/01/2023	Selby Knudsen (TRI), Maike Vollmer (FhG)	Addressing comments from coordinator

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ABOUT RISKPACC

Increasingly complex and interconnected risks globally highlight the need to enhance individual and collective disaster resilience. While there are initiatives to encourage citizen participation in creating a resilient society, these are typically fragmented, do not reach the most vulnerable members of the communities, and can result in unclear responsibilities for building disaster resilience.

New technologies can also support preparedness and response to disasters, however, there is limited understanding on how to implement them effectively. Awareness of risks and levels of preparedness across Europe remain low, with gaps between the risk perceptions and actions of citizens and between the risk perceptions of citizens and Civil Protection Authorities (CPAs).
The RiskPACC project seeks to further understand and close this Risk Perception Action Gap (RPAG). Through its dedicated co-creation approach, RiskPACC will facilitate interaction between citizens and CPAs to jointly identify their needs and develop potential procedural and technical solutions to build enhanced disaster resilience. RiskPACC will provide an understanding of disaster resilience from the perspective of citizens and CPAs, identifying resilience building initiatives and good practices led by both citizens (bottom-up) and CPAs (top-down). Based on this understanding, RiskPACC will facilitate collaboration between citizens, CPAs, Civil Society Organisations, researchers and developers through its seven (7) case studies, to jointly design and prototype novel solutions.

The “RiskPack” toolbox/package of solutions will include a framework and methodology to understand and close the RPAG; a repository of international best practice; and tooled solutions based on new forms of digital and community-centred data and associated training guidance. RiskPACC consortium comprised of CPAs, NGOs, associated organisations, researchers and technical experts will facilitate knowledge sharing and peer-learning to close the RPAG and build disaster resilience.

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Executive Summary

This deliverable, D9.3, provides the background on the ethics work done so far in RiskPACC and details what will be done going forward, as well as describing the data management plan that is in place for the project. The ethics and data management plan are discussed in two separate sections of the report, section 2 and section 3 respectively. Finally, the report concludes with outlining the upcoming ethics deliverables and detailing the future involvement of the external ethics advisory board for the project.

Section 2 discusses the ethics requirements of the project in-depth, including the regulatory frameworks and laws that govern Horizon 2020 and the relevant regulations regarding ethics for the RiskPACC project. These guidelines are established in both the Horizon 2020 legislation and the RiskPACC Grant Agreement. Following a discussion of these regulations, which include requirements such as having ethics approvals in place and striving towards gender equity, previous ethics work completed by the project is discussed. Relevant details from D10.1 and D10.2 are referenced, including the status of the ethics review process and a description of the informed consent process. In addition, more detailed descriptions on different ethics procedures for the different forms of data collection that will take place occurs. This includes a discussion of the questionnaire from WP1 and WP2, which can be found in Annex 1.

Section 3 overviews the data management plan. This plan details the type of data to be collected by the consortium partners, the storage of data and deliverables, publication of data, transfer of data, and the data protection officers for consortium members. This section draws on the work that was previously done in D10.3, including the types of data that each partner plans to collect and the details of the DPO/data protection plans. It also focuses on the FAIR data requirements set out by the European Commission as well as data protection and data security measures that will be undertaken by the consortium. Finally, this section details the responsibility of different consortium partners in terms of data management and data protection.

This deliverable finishes with a discussion of the upcoming deliverables that are due in M12 and M24, including a short discussion on further involving the ethics advisory board.

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Glossary and Acronyms

Acronym	Description
CPA	Civil Protection Authority
CSO	Civil Society Organization
DMP	Data Management Plan
D	Deliverable
EU	European Union
EC	European Commission
FhG	Fraunhofer-Gesellschaft zur Förderung der angewandten Forschung e.V.
GA	Grant Agreement
GDPR	General Data Protection Requirements
H2020	Horizon 2020
VGI	Volunteered Geographical Information
WP	Work Package

TABLE 1: GLOSSARY AND ACRONYMS

1 INTRODUCTION

1.1 Overview

Deliverable 9.3 (D9.3) will provide the information that will assist project partners in understanding the ethics and data management requirements that need to be followed for all project activities. It will provide guidelines to be followed by all project partners, as well as a background as to why these guidelines are in place. This, along with the ethics documents that have been created in WP10, will allow project activities to be carried out following all ethics and data management guidelines.

For project activities, such as interviews and the co-creation labs, there are certain standards in ethics and data management that must be met. This document will outline those standards and how they must be followed so that the information is available for all project partners. This will ensure that all partners protect the privacy and personal data of research participants. This document will also provide a common place for project partners to be aware of the ethics works that has been done in the project and provide some practicle material for case study partners to conduct research in an ethical manner.

The report fulfills the requirements of Task 9.3 (T9.3) of the RiskPACC project. This task underlines the important ethical concepts that govern RiskPACC, as well as the data management regulations that will be followed. T9.3 falls within Work Package 9 (WP9), “Consortium Management and Research and Innovation Coordination.” One aim of this WP is to ensure ethical and legal compliance of the research and its deliverables, and the adherence with data management requirements. This task seeks to address this aim by developing an ethics protocol and data management plan, as well as discussing various ethical and data management regulations. Additionally, WP9 aims to ensure a gender balance in research activities, which is addressed in the ethics section of this deliverable.

In line with the above, the main objective of this report is to create an ethics and equality protocol/handbook and combine this protocol with a Data Management Plan (DMP) for any data collected throughout the course of the project. This is to ensure that adequate ethical standards are met and appropriate data protection and management measures are taken. The ethics protocol is designed to ensure that the consortium manages potential ethical issues according to applicable frameworks, ethical standards, and other ethics requirements. The DMP will outline the data that will be collected, how the data will be used, and how it will be safely stored.

While this document will provide the overall project management aspects of the ethical and data management requirements, other WPs have developed deliverables based on specific aspects of the ethical and data requirements. WP 10, “Ethics Requirements” has produced three deliverables that will be discussed in this report:

- D10.1: H-Requirement 1
  - This deliverable addressed procedures for participant recruitment, the consent process, protection of vulnerable groups, and the incident findings protocol.
- D10.2: H-Requirement 2
  - This deliverable details the procedure for obtaining ethical approval from each consortium partner and provides copies of the signed approvals
- D10.3: H-Requirement 3
  - This deliverable outlines the data protection procedures, as well as data that will be collected and the appointment of the data protection officers for consortium members.

Additional ethics requirements from WP10 will be produced in RiskPACC's project months (M) M12 and M24. These documents will review the ethics of the previous year of the project and address any issues that have come up. Additionally, this annual review will provide an opportunity to make any necessary changes to the ethics and data management plan for the project.[1]

1.2 Structure of the deliverable

This report includes the following sections:

- Section 2: In this section the ethics proposals and regulations will be laid out. This will begin with an overview of the ethics regulations that govern RiskPACC as well as previous ethics work done on the project, including the ethics approval processes that have taken place. This will provide a guide for partners to make sure ethics principles are followed during all project research activities. Subsequently, the human subjects research will be detailed as well as ethical protections that will be in place for data collection. Finally, the ethics monitoring plan will be described.

- Section 3: In this section the Data Management Plan (DMP) for RiskPACC will be described. The chapter will begin with a data summary, which will include the data to be collected, and purpose of collection. Standards, guidelines, and principles of data management and protection will then be discussed, as well as H2020 data regulations. It will conclude with a discussion of data protection and responsibilities of all partners.

- Section 4: This section provides the conclusion and next steps for the deliverable. This includes the introduction of the data collection and storage guidelines for the partners conducting research.

[1] For this revised version of D9.3, the suggestions from the Ethics Advisory Board, as presented in D10.5 (M12), have been implemented.

2 RESEARCH ETHICS

This chapter provides an overview of the ethics protocol for RiskPACC, including regulations governing the project, human subject activities, ethical issues to be addressed, and the proposed ethics management plans. This will provide a guide of the ethical principles governing the project for all partners to easily access, as well as ensure that all ethical guidelines are followed.

2.1 Ethics regulations and partner obligations

This section discusses the various EU regulations governing the ethics of European Commission (EC) funded research, as well as the EC ethics rules established in the RiskPACC Grant Agreement (GA) and the deliverables D10.1, D10.2 and D10.3 that have already been submitted as part of WP10 on the project's ethics requirements (RiskPACC Grant Agreement, 2020). WP10 differentiated between pre and post-grant requirements. Pre-grant requirements included the participation of non-EU countries, while post-grant requirements included human subjects protection, protection of personal data, misuse of data, and general ethical considerations.

2.1.1 EU LAWS GOVERNING RISKPACC

The EU has developed ethics rules that govern Horizon 2020 projects. As that is the mechanism that funded this project, these regulations will guide the work done in RiskPACC. This legislation defines and makes clear what the RiskPACC's ethical obligations under the GA are. Partners are expected to understand these regulations while engaging in research activities as this could avoid situations of conflict or violation that could affect the results of the project.

2.1.1.1 European legislation

There are several European laws pertaining to human rights and ethics that are recognised by the RiskPACC consortium, as they inform the rules that govern Horizon 2020.

European Convention on Human Rights (ECHR)

RiskPACC partners recognise the fundamental obligations arising from the ECHR, including respect for human rights, right to private and family life, freedom of thought, conscience and religion, freedom of expression. The consortium partners will conduct research and organise their activities in ways that neither jeopardise nor threaten such rights, whether held by persons within the consortium or those who may otherwise be affected by research and engagement activities conducted by the consortium's partners.

Charter of Fundamental Rights of the European Union

RiskPACC will respect the rights and freedoms embodied in the Charter of Fundamental Rights of the EU, including the principles of dignity, freedoms, equality, solidarity, citizens' rights and justice.

Data Protection Directive 95/46/EC and the General Data Protection Regulation 2016/679/EU (GDPR)

RiskPACC partners will conform to the applicable rules and aims of Data Protection Directive 95/46/EC17and the General Data Protection Regulation18, its successor. This will be discussed further in section 3, the Data Management Plan.

2.1.1.2 Regulations establishing the H2020 programme

RiskPACC was funded under the Horizon 2020 research and innovation programme, which was created under Regulation (EU) No 1291/2013 of the European Parliament and of the Council establishing Horizon 2020 — the Framework Programme for Research and Innovation (2014-2020) and repealing Decision No 1982/2006/EC15. There are several ethical principles outlined in these regulations that must be followed by the consortium:

1. **Recital 29** states that:

   Research and innovation activities supported by Horizon 2020 should respect fundamental ethical principles. The opinions of the European Group on Ethics in Science and New Technologies (EGE) should be taken into account. Article13 of the Treaty on the Functioning of the European Union (TFEU) should also be taken into account in research activities. All activities should be carried out ensuring a high level of human health protection in accordance with Article 168 TFEU[2].

2. **Article 19** highlights the ethical principles and fundamental rights rules that apply to research and innovation activities:

   All the research and innovation activities carried out under Horizon 2020 shall comply with ethical principles and relevant national, Union and international legislation, including the Charter of Fundamental Rights of the European Union and the European Convention on Human Rights and its Supplementary Protocols. Particular attention shall be paid to the principle of proportionality, the right to privacy, the right to the protection of personal data, the right to the physical and mental integrity of a person, the right to non-discrimination, and the need to ensure high levels of human health protection[3].

2.1.1.3 Rules for participation and dissemination in Horizon 2020

Regulation (EU) No 1290/2013 also lays down the rules for participation and dissemination in "Horizon 2020 - the Framework Programme for Research and Innovation (2014-2020)" and contains several ethical principles that must be adhered

[2] As seen in Regulation (EU) 1291/2013 of the European Parliament and of the Council of 11 December 2013 establishing Horizon 2020 – the Framework Programme for Research and Innovation (2014-2020) and repealing (EU) No 1291/2013 (Text with EEA relevance). (2013). *Official Journal*, L 347, 104-173, page 107

[3] As seen in Regulation (EU) No 1291/2013, page 114

to by the RiskPACC consortium. The following articles are of relevance for the project and are presented here at length.

1. **Article 13**
   (*3)* *A proposal that contravenes ethical principles or any applicable legislation, or which does not fulfil the conditions set out in Decision No 2013/743/EU, in the work programme, in the work plan or in the call for proposals may be excluded from the evaluation, selection and award procedures at any time.*
   (4) *where relevant and specified in the work programme or the work plan, proposals shall explain how and to what extent gender analysis is relevant to the content of the project*[4].
2. **Article 14** on ethics review states "the Commission shall systematically carry out ethics reviews for proposals raising ethical issues. That review shall verify the respect of ethical principles and legislation and, in the case of research carried out outside the Union, that the same research would have been allowed in a Member State". Article 14 further states that "the Commission shall make the process of the ethics review as transparent as possible and ensure that it is carried out in a timely manner avoiding, where possible, the resubmission of documents"[5].
3. **Article 18**
   (5) *The grant agreement shall, where appropriate and to the extent possible, reflect the general principles laid down in the Commission Recommendation on the European Charter for Researchers and the Code of Conduct for the Recruitment of Researchers, principles of research integrity, the Commission Recommendation on the management of intellectual property in knowledge transfer activities, the Code of Practice for universities and other public research institutions as well as the gender equality principle laid down in Article 16 of Regulation (EU) No 1291/2013.*
   (6) *The grant agreement shall, where appropriate, contain provisions ensuring the respect of ethical principles, including the establishment of an independent ethics board and the right of the Commission to carry out an ethics audit by independent experts*[6].
4. **Article 23**
   (9) on implementation of actions states that *participants shall comply with national legislation, regulations and ethical rules in the countries where the action will be carried out. Where appropriate, participants shall seek the approval of the relevant national or local ethics committees prior to the start of the action*[7].

2.1.1.4 RiskPACC Grant Agreement

The RiskPACC consortium also recognises its ethical obligations under the terms of the RiskPACC GA 101019707, in particular **Article 34 - Ethics and Research Integrity**, which states that the consortium will carry out RiskPACC research in compliance with ethical principles, including the highest standards of research integrity

[4] As seen in Regulation (EU) No 1290/2013, page 90
[5] ibid

[6] As seen in Regulation (EU) No 1290/2013, page 91
[7] As seen in Regulation (EU) No 1290/2013, page 92

as set out, for instance in the European Code of Conduct for Research Integrity and applicable international, EU and national laws (RiskPACC Grant Agreement, 2020). In addition, Article 34 stipulates that the following principles be followed in all research activities of the project:

- ***Reliability*** *in ensuring the quality of research reflected in the design, methodology, analysis, and the use of resources.*
- ***Honesty*** *in developing, undertaking, reviewing, reporting and communicating research in a transparent, blind and unbiased way.*
- ***Respect*** *for colleagues, research participants, society, ecosystems, cultural heritage and the environment.*
- ***Accountability*** *for the research from idea to publication, for its management and organisation, for training, supervision and mentoring, and for its wider impact.*[8]

Further, per **Article 34.2** of the GA, activities raising ethical issues must comply with the ethics requirements set out as deliverables in WP10. As the article enshrines,

> *Before the beginning of an activity raising an ethical issue, each beneficiary must have obtained: (a) any ethics committee opinion required under national law and (b) any notification or authorisation for activities raising ethical issues required under national and/or European law needed for implementing the action tasks in question. The documents must be kept on file and be submitted upon request. If they are not in English, they must be submitted together with an English summary, which shows that the action tasks in question are covered and includes the conclusions of the committee or authority concerned (if available)*[9]*.*

In addition to Article 34, the consortium recognises its obligations under and **Article 33-Gender equality**. As the article states:

> *The beneficiaries must take all measures to promote equal opportunities between men and women in the implementation of the action. They must aim, to the extent possible, for a gender balance in all levels of personnel*[10]*.*

All of these regulations will be followed as part of RiskPACC. Future chapters in this deliverable, as well as deliverables 10.1 and 10.2, provide more information on how we intend to honour these obligations.

2.1.2 RiskPACC Ethics Requirements

There were two deliverables completed previously for RiskPACC that have addressed the ethics rules and regulations that govern RiskPACC. The deliverable that addresses data management, D10.3 (POPD – Requirement No. 3), will be discussed further in section 3.

Deliverable 10.1: Procedures and requirements for the recruitment of research participants, informed consent and data processing

[8] See RiskPACC GA, page 54
[9] See RiskPACC GA, page 54
[10] See RiskPACC GA, page 53

This deliverable was completed in M1 of the project, and developed the **guidelines** that will govern the following activities of the project involving **human subjects**:

- Identifying and recruiting participants
- Informed consent procedures, including assent for cases involving minors
- Informed consent templates
- Identifying and protecting vulnerable groups
- Incidental finding policy

It also discussed data privacy and protection, different recruitment strategies for different activities that will be undertaken, and approaches to protect vulnerable groups and address incidental findings within RiskPACC

Deliverable 10.2 – Ethical approvals

This deliverable describes the approach that the RiskPACC consortium took to gaining **ethical approval with each consortium member**. Ethics approval was organised by Fraunhofer, who provided templates for ethics board members and project managers to sign. Each consortium member has a slightly different ethics approval process, which is detailed in the report. Some of the partners that had to go through a more complex review process including the involvement of committees have their approvals pending. The ethics approvals that were available at the time of submission were included in the appendix of the deliverable. Additional approvals have been received since submission of 10.2 and can be found in the annex of D10.5. Table 2 in section 2.4.3 details the ethics submission status for all consortium members.

Other ethics deliverables will be due in M12 and throughout the project as a part of WP10. More specifically, three reports will be produced with input from the Ethics Advisory Board in Months 12, 24, and 36 as deliverables 10.5, 10.6, and 10.7. These reports will detail the progress of the project and all ethical compliance work that has taken place in the interim. These deliverables will include input from the RiskPACC Ethics Advisory Board.

2.2 RiskPACC Human Subjects Activity

RiskPACC is a social science research project that will engage human participants in the following activities:

- Interviews with civil protection authorities (CPAs) and community groups, including civil society organization (CSOs), involved in disaster management.
- Workshops with consortium members and other case study employed staff, as well as citizens and CPAs.
- Co-creation activities including joint workshops with citizens and CPAs.
- Surveys.
- Testing technology solutions, including Volunteered Geographic Information (VGI) mapping activities and sentiment analysis.

The consortium partners are familiar with social science research and the ethical considerations that must be taken when working with human subjects, due to previous research in the area. All have agreed to follow the ethics regulations outlined above and most have signed declarations that all research will be conducted ethically. All

signed declarations were included in D10.2, except for those pending approval. More details on the pending forms can be found in Table 2.

In the following chapters, different data collection approaches applied by RiskPACC are detailed, including the related ethical considerations. The methods described include interviews, workshops, technical tools and surveys.

2.2.1 INTERVIEWS

WPs 1, "Understanding good practices and challenges in Civil Protection policy and practice," and 2, "Engaging citizens to expand understandings of risks, vulnerabilities, and data collection activities," will require conducting interviews with human subjects. These interviews will take place in all of the case study areas that are involved in RiskPACC and will be conducted in the following countries: Belgium, Italy, Czech Republic, Greece, the UK, Germany, and Israel. The purpose of these interviews is to:

(a) determine current practices used by community groups and CPAs to build resilience in their areas, including future ideas and needs of the areas, and

(b) understand the risk communication, risk perception, and interactions between the two groups.

Methodology:

These interviews will be conducted by the case study partners that are involved in the consortium, with assistance from their scientific partners and the leaders of the different tasks that will use the interview data. Case study partners for RiskPACC include: CAFO (Czech Republic), Service Public Federal Interieur (Belgium), Municipality of Eilat and Magden David Adom in Israel (Israel), ISAR (Germany), Municipality of Rafinas-Pikermious (Greece), Comune di Padova (Italy), and Lancashire Constabulary (UK). Participants will be chosen based on contacts that case study partners have in their communities.

The question guides were developed by the WP1 and WP2 leaders to reflect the needs of these work packages. They were then sent to consortium members and case study leaders for comment. After the comments were incorporated to the guides, they were finalised and then translated into the local language of the interviewee. These interviews are planned as semi-structured interviews and will be conducted via an online video platform, over the phone, or face-to-face depending on the local conditions and needs of the interviewee. The interview should be audio recorded where possible, which eliminates the need to store video recordings and minimizes data storage.

Ethical considerations:

All interview procedures will be detailed in the information sheet given to the participants and all participants will be required to sign a consent form prior to any questions being asked. Both the information sheet and consent form can be found in the Annex of D10.1 and the version created for the co-creation labs can be found in the Annex of D10.5. An updated version based on comments from the Ethics Advisors can be found in the annex of this document (Annex 2). Participants will be informed of

their ethical rights, including the right to withdraw from the interview at any point. All interviews will require consortium partners to abide by the standards of research integrity, data protection and ethical comportment. This includes non-discriminatory behaviour, inclusive approaches to involving stakeholders in interviews and management of stakeholders' expectations.

2.2.2 RiskPACC Workshops

Several work packages, most prominently WP3, "Co-creation lab and stakeholder integration," will involve different workshops (so-called 'labs'), with both consortium members ('internal' workshops) as well as external stakeholders in the case study areas ('external' workshops). The internal workshops will involve consortium members, with the aim of determining the technology needs of the case study partners and gaining information on the aim of each case study.

External workshops will take place in the case study countries of the project, specifically Belgium, Italy, Czech Republic, Greece, the UK, Germany,[11] and Israel. Different workshops will have different purposes, with co-creation workshops being used to discuss disaster management activities undertaken by CPAs and citizens, as well as developing and piloting solutions to close the risk perception action gap (RPAG).

Methodology:

The co-creation workshops will be developed by the leaders of WP3. The exact methodology will be determined by both desk and qualitative research that is currently being conducted and is presented in Deliverable 3.4. The project description specifies how this methodology is itself tested throughout the project lifetime (T3.3, T3.4, T3.6).

The internal workshops will involve different case study consortium partners. These workshops are designed to determine what each case study wants to achieve within RiskPACC and which of the proposed technologies would best fit their needs.

The external workshops will rely on case study partners to recruit participants. These participants will include those that are involved in CPA activities, and community members. The guiding and research questions that are an integral component to these workshops are to be developed by the case study partners, so are yet to be determined.

Ethical Considerations:

Consortium partners will take the following precautions to ensure ethical standards are met during the stakeholder workshops:

- All stakeholder workshops require consortium partners to abide by the standards of research integrity, data protection and ethical comportment. This

[11] The workshops hosted by ISAR Germany would take place in Germany if set up as an in-person (on-site) event. In Lap Phase I of the project, the workshop by ISAR was set up as an online event, which therefore was open to participants independent from their geographical location. In Lab Phase II, the workshop by ISAR is an in-person (on-site) event hosted in Germany.

includes non-discriminatory behaviour, inclusive approaches to involving stakeholders in consultations and management of stakeholders' expectations.
- All participants, both consortium members and those that are not a part of RiskPACC, will sign consent forms before participation.

2.2.3 Details on RiskPACC Technical Tools

In WP5, "Tool development," several technology solutions will be established that will require research participants in the testing phase. At this stage of the project there are three different technologies that have been proposed:

- Sentiment analysis using crowd sourced data.
- Volunteered geographic information (VGI) data.
- Platform developed by STAM, a consortium partner.

Additional technologies may emerge from research, but these are the ones that are currently established.

Methodology:

These different technologies will require different levels of research participation.

1. The sentiment analysis will be using fully anonymized twitter data. The data will be provided by *Twitter* and it will not include usernames or personal data.
2. The VGI data will be collected from volunteers that are recruited to conduct mapping. These volunteers will be recruited by the participating case studies and mapping activities will be conducted (see RiskPACC D10.1).
3. For the STAM platform, participants will be recruited through STAM's network as well as case study leads. This platform will require participants to enter information onto the platform to test the utility. Much of the data will be entered through dummy accounts to protect personal data.

Ethical considerations:

There are several additional ethical considerations to discuss when developing these online tools and platforms. All testing of technologies will follow the appropriate ethical considerations, and all participants will go through an informed consent process.

For the sentiment analysis which lies with the company and project partner CrowdSense (CS), CS will work with *Twitter* to ensure that strict privacy guidelines are maintained. These guidelines are established under the ISO/IEC 27001:2013, "Information technology-security techniques- Information security management systems- Requirements". No private information, including direct messages (i.e., private chat messages between users), will be used for this analysis. Potential interfaces with additional platforms are mentioned in → *Chapter 3.1.4*.

For the VGI data, contact information and information on previous VGI experience will be collected, although this data will be anonymized or omitted from any publicly released reports.

The STAM platform may collect some personal information, including contact information and demographics, but to minimize risk this information will be

pseudonymised through the creation of dummy accounts. Participants will be informed of the privacy policy before enrolling in the app, and will not be required to provide information that they do not feel comfortable providing. Additionally, this information will be anonymized or omitted from public reports.

2.2.4 Details on Surveys

In addition to the data mentioned above, there is the possibility that surveys will be used. While this has not been formally decided, they might be used to test knowledge gained during the co-creation workshops, e.g., in the WP6 context. No methodology has been established at this point, but if surveys are conducted, they will follow the same ethics guidelines that are followed in all other research participant interactions in RiskPACC, including informed consent procedures. The exact methodologies and ethical considerations will be discussed in future ethical documents, such as the M12 and M24 review.

2.3 Ethical and Legal Issues

This section will discuss different ethical issues that may arise in the research that will be done in RiskPACC and how we plan to address them.

2.3.1 Consent

As mentioned in the preceding sub-section, the partners will provide participants with project information sheets and consent forms (see D10.1 and Annex 2) in a language and in terms fully understandable to them. These forms will describe the aims, methods and implications of the research, the nature of the participation and any benefits or risks (e.g., to privacy) that might be involved. They will explicitly affirm that participation is voluntary and that participants have the right to refuse to participate and to withdraw their participation, or data, at any time, without any consequences for the participants/interviewees (data givers). The forms will outline how partners will collect and protect data during the project (e.g., use of pseudonymisation or anonymisation), and then destroy it, store it securely, or reuse it (with consent). The forms will also indicate the procedures to be implemented in the event of unexpected findings. Researchers will ensure that potential participants have fully understood the information and what participation will entail, and do not feel pressured or forced to give consent. All participants will be given the opportunity to ask questions and receive understandable answers from the RiskPACC partner with whom they engage; interviewers, organisers of the workshops, or recruiting partners for the technology solutions; before making decisions about their participation.

The partners will obtain consent in a form suited to the different methods used in the project (e.g., by signing the consent form after the information process). If a participant/interviewee cannot give consent in writing, non-written consent will be formally documented and independently witnessed. In the exceptional case that any participants are unable to give informed consent, special care will be exercised and the partner conducting the research will obtain approval from a guardian or legal representative who is able to give consent on their behalf. The guardian/legal representative will be provided with full information about the project and the likely involvement of the participant including an assurance that the participant may

withdraw from the study at any time without penalty. The guardian/representative will be given sufficient time to ask questions during the consent process.

Monitoring will take place by the ethics manager and coordinating partners during the activity to ensure that any risks are minimised. In the case of children taking place in research, assent will be obtained from the minor along with consent being obtained from the parent.

2.3.2 Privacy and Protection of Personal Data

The project will collect and process personal data only if, and insofar as, it is necessary for its research and engagement activities. Project partners will collect such data from respondents in EU and non-EU countries. Personal data may be collected during the following project activities (with the countries in which such activities will occur noted in parenthesis, if applicable):

(1) interviews of CPAs and Community groups (Greece, Belgium, Italy, UK, Czech Republic, Germany, Israel);

(2) stakeholder workshops (Greece, Belgium, Italy, UK, Czech Republic, Israel, Germany);

(3) testing technology developed[12] (to be determined);

(4) project communications and dissemination activities.

Personal data may be collected from members of the consortium, members of external organisations or individuals in their capacities as experts, respondents, or participants. Use of such data will be in line with legal and ethical standards described herein and in section 3.

RiskPACC will store anonymised or pseudonymised data securely on password-protected computers (see D10.3 for more information on the anonymisation and pseudonymisation process). All interview recordings will be stored on an encrypted disk or on a mobile disk stored separately. Personal data will only be used for the purpose for which it was collected (e.g., workshop management or communication) and will be deleted immediately after that purpose is fulfilled, unless legally required to be retained. Published interviews, surveys, and panel reports will not contain any personal data or reference to personal data. RiskPACC will comply with ethical principles and applicable international, EU and national law (for example, the EU General Data Protection Regulation 2016/679).

We will ask research participants for fully informed consent and provide them with a clear description of the procedures to be used for data control and when pseudonymisation/anonymisation will be used. Using the RiskPACC participant information sheet and informed consent form (see Deliverable 10.1 and Annex 2), RiskPACC will give participants information about how the project will collect and protect their data during the project and either destroy or reuse it at the end of the project. If partners consider a plan to re-use personal data once it has been

[12] This testing may include collecting contact information, personal opinions, or creating profiles in the apps (see section 2.2.3 for more detail)

pseudonymised, they will give participants information about this as soon as it becomes available and give them the opportunity to consent or withdraw their data.

During the project, RiskPACC will give participants the option to withdraw themselves and their data at any time. As part of each communication the participant receives, RiskPACC will give participants the opportunity to opt out of further communications and have their data deleted from the project's records. If the project uses secondary personal data, it will only do so from a public source or such source as is authorised for secondary use (either specifically for our research and engagement activities or generally for any secondary use. An example of secondary data that may be used in RiskPACC is the use of Twitter data).

All partners of the consortium will adopt good practice data security procedures. This will help avoid unforeseen usage or disclosure of data, including the mosaic effect (obtaining identification by merging multiple sources). Measures to protect data include access controls via secure log-ins, installation of up-to-date security software on devices and regular data backups.

Recorded information (audio and/or visual) will be given special consideration to ensure that privacy and personal identities are protected. Participants will be asked about consent for photo and video collection during the consent process (see → D10.1). Data subjects will be able to opt out of interviews, workshops, or technology testing at any stage. In keeping with best practices for data security, KEMEA and Trilateral Research will store the pseudonymised interview responses in a secure location in the file system that only project staff can access. There will be no disclosive information in data files, meaning there is no risk of individual respondents being identified. USTUTT steers the use of workshop data in the same manner by training the case study partners how to handle the personal data of workshop participants. The case study partners who are responsible for conducting the workshops may record them if it is compliant with the GDPR standard. The recordings should be stored within each case study's organisation along with any pseudonymisation key. The pseudonymisation key must be kept separate from the pseudonymised data. Only once the data has been pseudonymised will be able to be shared with the project consortium. Signed consent forms must also be stored separately from the data collected.

2.3.3 VULNERABLE GROUPS

Children and Minors:

Within RiskPACC, partners wish to include young people (ages 8-12) in the case study assessment and co-creation labs that are foreseen to be additional workshops conducted voluntarily by the case study partners in the scope of WP4.The justification for this is as follows:

The objective of involving children in one of the case study areas is to determine whether the educational information on disasters in Belgium is being understood by the children being taught this information. As correctly understanding this information will make children safer in the future, it is important to understand how they are digesting the information. This is the reason why children will be involved in RiskPACC

research, as there is no other way to gather this information. This will be beneficial to not only the minors involved, but those that are enrolled in the curriculum going forward.

As mentioned in the EC (2018) Ethics and data protection document:

> *All research involving children and young people raises significant ethics issues, as they may be less aware of the risks and consequences of their participation. This is also true as regards the processing of their personal data* (p. 12).

As a result, research activities involving children and minors will be subject to extra ethical attention in order to avoid any ethics issues their participation may imply. Partners conducting activities involving children or minors will obtain the consent of a parent/legal representative as well as the assent of the child and provide information to them in a language that they may understand. As suggested by the Ethics and data protection guidance document, researchers will "minimise the collection and processing of their data as far as possible" (EC, 2018). According to the EC Guidance on How to complete your ethics self-assessment, a justification for the involvement of children should be provided (EC, 2019). As the document puts it:

> *Research involving children (or other persons unable to give consent) should be carried out only if: •studies with consenting adults would not be effective •participants are subject to only a minimal risk and burden •the results of the research will benefit the individual or group represented by the participant (p.9).*

If research involving children does occur at a later date in the project, both parental consent forms and child assent forms will be developed. These forms will be tested before using to verify that the information is presented in a way that is understandable to a younger audience[13].

Other vulnerable groups:

In RiskPACC, vulnerability is being understood as comprising those people/groups that are particularly vulnerable to a certain type of disaster. Therefore, vulnerability is concerning any issue that compromises susceptibility, coping capacity, and adaptive capacity of the exposed population. For the course of the RiskPACC project, we will consider vulnerability to include any persons that may have compromised coping capacity and adaptive capacity. In conducting research with vulnerable populations such as elderly persons and persons with disabilities, extra care will be taken to protect their rights and ensure that their compliance is freely given. This will include providing the information sheet and consent form in an accessible fashion. More on these

[13] Currently, the case study by IBZ is considering workshops with children, because IBZ has in the past created training material targeted at children. The training material aims to train students how to react in the event of a risk at school. The training material is tested with adults, but showing it to children might improve its comprehensibility. That way, the case study would make sure to include a vulnerable group that is not considered or heard in other cases. This has not been confirmed, and if it is, ethical considerations will be followed in developing the consent and gaining approvals.

definitions and their contributions to vulnerability can be found in D10.1. Other vulnerable groups are to be defined in the endeavours of WPs 3 and 4.

2.3.4 GENDER EQUALITY

Under **Article 33** of the GA, there is a legal obligation to aim for gender equality. RiskPACC does so in two ways:

(1) by promoting gender equality within the consortium, among the stakeholders it engages with, and the gender of the experts it draws from (including in the literature) and

(2) by taking into consideration the gender in the topic it studies, i.e. disasters and disaster risk management.

Regarding the first point, there is a strong presence of women as Work Package leaders and participating partners. We will also promote gender balance in the advisory board and pay attention to ensuring gender balance among the various stakeholders we will engage with as part of the project, including in the co-creation workshops. We will aim for a 50/50 gender balance in participants as the major approach to diversity, which is fully explained in D3.4. Gender balance and diversity of participants will be controlled by tracking the gender of participants and providing the gender balance assessment in the periodic reports, e.g., as reported in D3.5 (and D3.6 and D3.7 in the upcoming project months). Furthermore, we will make sure that the work of women researchers will not be neglected in our analysis.

Regarding the second point, we recognise that gender analysis is particularly relevant to conducting research on disaster management, risk perception, and resilience. Previous findings summarized in D1.1 and D3.4 have shown that there are specific differences between men and women when it comes to understanding resilience and risk perception. The proposal mentioned some specific work to be done on gender aspects of disaster, including understanding the specific gender impacts of any RiskPACC solutions. To make sure these gender aspects are addressed, RiskPACC partners will attempt to ensure a gender balance in research participants wherever possible. This process will be monitored by the ethics manager. In cases where this is not possible, partners will strive to be as close to gender parity as possible.

2.3.5 COUNTRIES OUTSIDE OF THE EU

Research conducted as part of the RiskPACC project will involve two non-EU countries: the UK and Israel. In compliance with Article 34.1 of the GA according to which “funding will not be granted for activities carried out outside the EU if they are prohibited in all Member states or for activities which destroy human embryos” (p.51). No such activities will be conducted as part of RiskPACC. Additionally, according to the H2020 Guidance on completing an ethics self-assessment (2019), “it is not enough for the activity to be accepted and comply with legal obligations of the non-EU country; the activities must ALSO be allowed in at least one Member State” (p. 27). All national legislation will be consulted when it comes to ethics to make sure compliance is maintained. Both the UK and Israel have been deemed to have adequate data protection measures that are equivalent to the EU’s laws, therefore data can be transferred between these countries and the EU (ICO, n.d.; Data Guidance, 2021).

2.3.6 Data Collection and the COVID-19 Pandemic

Any data collection that takes place in RiskPACC will take into account the local Covid-19 conditions in areas where research is taking place. This includes understanding the government regulations in all areas where research is conducted, as well as limiting the personal contact that is required from participants. Wherever possible, and when agreed to by all parties, interviews and workshops will take place online, over Teams or a similar video platform. If it is not possible to be fully online, and local conditions and regulations allow, there may be the potential for some in-person interaction. Whenever this occurs, the option will be available to participate online for those that are not comfortable or not able to meet in person.

2.4 Ethics Monitoring

This section will detail the ethics monitoring rules and regulations that will govern data collection activities in RiskPACC.

2.4.1 Ethics Advisor and Ethics Monitoring for RiskPACC

TRI is the ethics advisor for RiskPACC. Selby Knudsen, Research Analyst at TRI, will be the dedicated contact person for any ethical concerns from consortium members and participants, and will address ethics concerns as they come up. When issues arise, the ethics advisory board may also be consulted. Research ethics will be continually monitored during the project, including monitoring consent form processes and maintaining valid ethics approvals from all partners. Ethics will be frequently reviewed, and reports will be submitted at M12 and M24 concerning any changes or developments.

2.4.2 Ethics Advisory Board

The RiskPACC consortium has appointed an external ethics board to address any ethical concerns that may come up during the research process. The board has been addressed on previous ethical documents, such as the consent form, and will be further involved in the ethics deliverables that are due in M12 and M24. The board is in the process of being re-defined, as a new member will join in the next few months.

2.4.3 Ethics Approval Process

Article 34, specifically 34.2, of the RiskPACC GA (2020) notes that "before the beginning of an activity raising an ethical issue, each beneficiary must have obtained: (a) Any ethics committee opinion required under national law and (b) Any notification or authorisation for activities raising ethical issues required under national and/or European law needed for implementing the action tasks in question" (p. 54). The documents must be kept on file and be submitted upon request by the coordinator to the Agency (see Article 52 of the RiskPACC GA). If they are not in English, they must be submitted together with an English summary, which shows that the action tasks in question are covered and includes the conclusions of the committee or authority concerned (if available). As part of the ethical monitoring task, Fraunhofer has collected details of the ethics approval process from each consortium's partner and is keeping these on file. Before the start of an action task that raises ethical issues, ethics

committee opinion required under national law and notification/authorisation for the activity as required by the law will be collected from the partner in charge of the task. Fraunhofer will keep the documents on file and will submit them to the Commission, if required. This will fulfil Requirement (H) no. 2 according to which "Copies of opinions/approvals by ethics committees and/or competent authorities for the research with humans must be kept on file." (See D10.2).

In the case of RiskPACC, each partner was sent an ethics declaration to be signed by the RiskPACC project manager for the partner. In addition, an ethics declaration was sent to the ethics manager for each partner to be signed. See Deliverable 10.2 for copies of the ethics approval documents as well as approvals from consortium partners. Some partners have not received approvals yet, as they are waiting for their institutions review boards for approval. These approvals will be kept by Fraunhofer with the others that were received previously. Table 2 below shows the updated status of ethics approvals from all partners. Following the submission of D10.2, KEMEA, CAFO, and UT have completed their ethics approvals, which can be found in D10.5.

Organisation name	Ethics approval status
Fraunhofer Gesellschaft für Angewandte Forschung e.V. (FhG)	Ethics approval included in D10.2
Trilateral Research (TRI)	Ethics approval included in D10.2
Institute of Communications and Computer Systems, National Technical University of Athens (ICCS)	Ethics approval **received,** included in D10.4 submission
University of Warwick (UoW)	Ethics approval included in D10.2
Center for Security Studies (KEMEA)	Ethics declaration signed by the project manager and available in D10.2, ethics approval from ethics manager signed and sent after 10.2 submitted, included in D10.5
European Organisation for Security (EOS)	Ethics approval included in D10.2
European forum for urban security (Efus)	Ethics approval included in D10.2
Czech Association of Fire Officers (CAFO)	Ethics approval signed and sent after 10.2 delivered, included in D10.5
University of Stuttgart (USTUTT)	Ethics approval **received,** included in D10.4 submission
Service Public Federal Interieur (IBZ)	Ethics approval included in D10.2
University of Twente (UT)	Ethics approval signed and sent after 10.2 delivered, included in D10.5
Municipality of Eilat (MoE)	Ethics approval included in D10.2
Magen David Adom (MDA)	Ethics approval included in D10.2
University College London (UCL)	Ethics approval included in D10.2
CrowdSense BV (CS)	Ethics approval included in D10.2
STAM	Ethics approval included in D10.2

ISAR Germany, International Search and Rescue (ISAR)	Ethics approval included in D10.2
Lancashire Constabulary (LC)	Ethics approval **received,** included in technical review submission
Municipality of Rafina-Pikermi (MRP)	Ethics approval included in D10.2
Municipality of Padua (CPD)	Ethics approval included in D10.2

TABLE 2: ETHICS APPROVAL STATUS OF CONSORTIUM PARTNERS

3 DATA MANAGEMENT

This chapter will provide an overview of the RiskPACC data management plan (DMP).

3.1 Data Summary

3.1.1 Overview of Data Collection

Depending on the purpose of the data and data protection concerns, data processed within the project may be made public (PU), shared only within the consortium (category CO /sensitive data), or kept in institutional repositories (category IO /highly sensitive data). Any data shared, even within the consortium, should not contain personal data.

- Data that may be made public (PU) is any data that may be made public via open access channels. This will include blog articles, publications, and deliverables that do not contain any personal data.
- Data to be shared within the consortium (CO) may include more sensitive data that has been pseudonymised, such as pseudonymised transcriptions of interviews.
- Data kept within individual institutions (IO) may include more highly sensitive data such as contact information, that cannot be shared even with the consortium.

The main types of data (including personal data) that will be collected, processed and/or produced during the project include:

- Academic (PU) and grey literature (CO) on relevant topics, including reports from similar/related projects.
- Relevant ethics codes, guidelines, policies, and legal texts (PU).
- Results of interviews, surveys, and workshops with experts and stakeholders in the forms of video recordings (IO), audio recordings (IO), pseudonymised transcripts (CO or PU), qualitative summaries (CO or PU), and quantitative data sets (CO or PU).
- Views on selected technologies derived from such interviews, surveys, and workshops (CO or PU).
- Contact lists (of relevant stakeholders and for the mailing list) (IO).
- Signed information sheet and consent forms (IO).
- Media articles (PU).
- Project work plans and internal notes (IO or CO).
- Deliverables, articles and PowerPoint presentations (IO, CO, or PU).
- Dissemination materials, including the website, newsletters, videos, etc. (PU).

These dissemination levels are provisional, and subject to change throughout the project depending on the actual data included, the needs of the partners, and relevant privacy rules.

At the beginning of the study, in September 2021, RiskPACC partners were asked to provide details on the data that they will collect. This information is detailed for each partner in ethics deliverable D10.3.

In terms of data collected from research participants, several different types of data will be collected:

- Partners will generate qualitative data through semi-structured interviews and in workshops and co-creation labs. This data could exist in multiple forms including recorded format (audio, video), transcripts of interviews and logs of online interactions and researchers' memos. The semi-structured interview guide developed for WP1 and WP2 can be found in Annex 1.
- Partners will produce data while testing technology solutions.
- RiskPACC will identify and use public online data, including social media content, to test sentiment analysis techniques.

3.1.2 DATA TO BE COLLECTED

The types of data collected by each partner can be seen in deliverable 10.3 and has been expanded upon in other sections of this report (see section 3.1.1 and 2.2). Data collection began in M4 and will continue for much of the duration of the study. A summary of the data to be collected can be seen in Table 3 below:

Organisation Name	Personal Data to be Collected
FhG	• Contact data, anonymised research data
TRI	• Contact information of research participants • Photographs, audio recordings, transcripts • Consent forms and signatures • Personal and professional experiences and opinions
ICCS	• Data will consist of an email address, username and geographical location of the user for the environmental assessment crowdsourcing application.
UoW	No data to be collected or processed
KEMEA	• Contact information of research participants • Photographs, audio recordings, transcripts • Consent forms and signatures • Personal and professional experiences and opinions
EOS	• Contact data, anonymised research data
Efus	• Contact information of research participants • Photographs, audio recordings, transcripts • Consent forms and signatures • Personal and professional experiences and opinions
CAFO	• Contact information of research participants • Photographs, audio recordings, transcripts • Consent forms and signatures • Personal and professional experiences and opinions
USTUTT	• Names, audio, interview transcripts, photographs, contact details (e-mail)
IBZ	• Contact information of research participants

	• Photographs, audio recordings, transcripts • Consent forms and signatures • Personal and professional experiences and opinions
UT	• Contact data • information on qualifications and experience of volunteer mappers; possibly affiliation data
MoE	• Contact information of research participants • Photographs, audio recordings, transcripts • Consent forms and signatures • Personal and professional experiences and opinions
MDA	• Contact information of research participants • Photographs, audio recordings, transcripts • Consent forms and signatures • Personal and professional experiences and opinions
UCL	• Contact information of research participants • Photographs, audio recordings, transcripts • Consent forms and signatures Personal and professional experiences and opinions
CS	• PublicSonar collects publicly available data from open sources such as *Twitter*, *YouTube*, *Reddit*, news websites, blogs, RSS and forums. The retrieved data is the message itself, which does generally not contain any personal information. The collected data then varies per source and may include username, profile picture, or geolocation
STAM	• Names and Surnames, user logins, health data, geolocation, interests, pathologies and other data which will be defined during the project developments
ISAR	• Contact information of research participants • Photographs, audio recordings, transcripts • Consent forms and signatures • Personal and professional experiences and opinions
LC	• Contact information of research participants • Photographs, audio recordings, transcripts • Consent forms and signatures • Personal and professional experiences and opinions
MRP	• Contact information of research participants • Photographs, audio recordings, transcripts • Consent forms and signatures • Personal and professional experiences and opinions
CPD	• Contact information of research participants • Photographs, audio recordings, transcripts • Consent forms and signatures • Personal and professional experiences and opinions

TABLE 3: DATA TO BE COLLECTED BY EACH PARTNER

3.1.3 Existing Data

There are several deliverables and aspects of research that will rely on the use of existing data:

- RiskPACC may collect and use secondary data obtained through desk research and through a review of the literature.
- RiskPACC may possibly make use of existing data sets (European and national) where they are relevant, accessible, and compliant with EC standards and best practices on data management and ethics.
- RiskPACC may also make use of existing social media data, which will be expanded on in the next section.

3.1.4 Social Media Data

There may be the potential to use existing data from social media apps such as *Twitter, YouTube* and *Reddit*. This data will be collected and analysed following strict privacy requirements set out in ISO/IEC 27001:2013 and the agreement between CrowdSense and *Twitter*. The data that is obtained can only be used for sentiment analysis, and no confidential or private information will be disclosed, including direct messages.

3.1.5 Data Utility

There are many different persons and agencies that may use data and results that are generated by the project.

- Academics and research community
- Policy makers
- Politicians
- Public sector (e.g., first responders, civil protection authorities, municipalities)
- Non-Government Organisations (e.g., social innovators, think tanks)

3.2 Standards, Guidelines, and Principles

The RiskPACC project follows the standards, guidelines and principles listed below in the management of its data collection, use, sharing and preservation:

- European Parliament and the Council, Regulation (EU) 2016/679 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation or GDPR).
- European Commission Directorate-General for Research & Innovation, H2020 Programme Guidelines on FAIR Data Management in Horizon 2020, Version 3.0, 26 July 2016.
- European Commission, H2020 Programme Guidelines to the Rules on Open Access to Scientific Publications and Open Access to Research Data in Horizon 2020, Version 3.2, 21 March 2017.
- Applicable national data protection regulations.

Institutional policies and procedures on data management from the different partners involved in data collection will also be observed.

3.3 FAIR Requirements

The European Commission recommends that Horizon 2020 beneficiaries "make their research data findable, accessible, interoperable and reusable (FAIR), to ensure it is soundly managed" (EC, 2016). Based on this guidance, this section outlines how RiskPACC operationalises this recommendation.

3.3.1 Making Data Findable

Internal provisions

RiskPACC's internal project documents and administrative data are stored in a centralised online repository – MS Teams – provided and managed by Fraunhofer (FhG) that is accessible to all the partners working on the project. Additionally, all completed deliverables are stored on FhG's OwnCloud account. The coordinator of RiskPACC (Maike Vollmer) is the repository owner and can give other partners access to the RiskPACC MS Teams page and OwnCloud account. Any data shared between partners and stored on shared platforms must be pseudonymised, i.e., be allocated a data sensitivity of 'CO' or 'PU' (see → *Chapter 3.1*). No personal data should be shared on the platform. To make data findable and reusable, the following measures are in place:

- **Location:** In Teams, all documents are stored in relevant folders. There are currently 13 folders: General, Literature, Case Study Portraits, WP1, WP2, WP3, WP4, WP5, WP6, WP7, WP8, WP9, and WP10. Each of these folders have sub-folders where related documents can be stored in a variety of formats e.g., Word documents, PDFs, Excel spreadsheets, PowerPoints or other standard data formats. Each RiskPACC partner is responsible for storing documents related to their work in the project in the correct location. In the FhG OwnCloud account, there are 12 folders, one for each of the WPs as well as one for submitted deliverables, contractual documents, and case studies. Currently, OwnCloud is primarily used to store the submitted deliverables.
- **Naming of files**: The file names include a short title of the document and the version number to make them uniquely identifiable and distinguishable (e.g., "D8.1_DMP_v2"). This ensures any partner requiring access to the information can easily find it. Only documents uploaded to OwnCloud will follow this format.
- **Reports and documents**: All RiskPACC reports and documents contain information on authors and contributors, clear version numbering, dates, and keywords.

FhG is responsible for curating the internal data after the end of the project and when the RiskPACC MS Teams and OwnCloud accounts are taken down.

External provisions

The following provisions will ensure that public RiskPACC outputs are findable externally:

- All public deliverables (in some cases redacted versions) and outputs are published on the RiskPACC website with open access.
- Search keywords, identifiers (where possible), and metadata are provided for every deliverable and report. Optionally, the deliverables that are project-internal

(CO) can be stored behind a restricted access wall, giving the FAIR-criteria compliant option to store restricted documents with open metadata. For such documents, a form has to be filled out by readers who are interested in the CO deliverables. The request for access will be given according to its legitimacy, as decided by the project's DPOs (see below).

- All partners have been advised of the availability of data, changes to data and their location to facilitate access and wider sharing (as deemed fit).

3.3.2 MAKING DATA OPENLY ACCESSIBLE

Open access to scientific publications

Per clause **29.2** of the RiskPACC GA, each RiskPACC beneficiary will ensure open access (free of charge online access for any user) via open access routes to all peer-reviewed scientific publications relating to its results. A minimum of five peer reviewed scientific publications are planned, which will indicate a good level of performance. RiskPACC has a dedicated budget for publishing.

Per the GA, beneficiaries are required to:

- Deposit, as soon as possible and no later than at time of publication, a machine-readable electronic copy of the published version or final peer-reviewed manuscript accepted for publication in a repository for scientific publications; the beneficiary also aims to deposit, at the same time, the research data needed to validate the results presented in the deposited scientific publications (where appropriate). This data publication will depend on different GDPR regulations and consent of research participants.
- Ensure open access to the deposited publication at the latest:
    - on 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 should be in a standard format and include all of the following: (1) the terms "European Union (EU)" and "Horizon 2020"; (2) the name of the action, acronym and grant number; (3) the publication date; (4) length of embargo period if applicable; and (5) a persistent identifier (e.g. DOI).

Open access to research data

In line with RiskPACC GA clause 29.3, RiskPACC provides open access to research data, unless an exception to its open access applies. Such exceptions include if the achievement of the project's main objective would be jeopardised by making those specific parts of the research data openly accessible, if it is not in line with data protection requirements, or constitutes a trade secret. Before sharing any data, either with the consortium or externally, we will ensure that no disclosive information is included. Linking back to the data privacy approach deployed in the RiskPACC project, this could for example mean aggregating data sets and factually pseudonymising formerly personal data.

Public deliverables (sensitivity 'PU') and outputs (redacted, if needed) are published on on the FhG OwnCloud. Deliverables will be uploaded to the RiskPACC website or optionally in a repository linked to on the RiskPACC website upon approval from the European Commission, as agreed with partners in the WP Leaders meetings on 01/02/2022 and 10/01/2023. This will ensure RiskPACC public deliverables are made available as soon as possible, and give partners the possibility to obtain a DOI for their works, which is in line with the FAIR criteria.

3.3.3 MAKING DATA INTEROPERABLE

To allow data exchange and re-use between researchers, institutions, organisations and countries, RiskPACC ensures data interoperability through the consistent use of common, standardised file formats (such as .docx and .pptx). The consortium uses file formats that, even when originating in or primarily used with proprietary software and/or code, are accessible with open-source software. When available and not otherwise in conflict with data security, protection or processing measures and requirements, the consortium uses open-source software applications.

3.3.4 INCREASING DATA RE-USE

Re-use of existing data

RiskPACC will produce some work that, where appropriate, will re-use materials (e.g., figures, tables, quotations) from existing literature (academic, policy or other documents). In such cases, they will be properly referenced and acknowledged. RiskPACC partners will use literature (both academic and press articles) that is relevant to the tasks and deliverables, with appropriate references.

In terms of using previously collected data, if a partner company/organisation has collected data on the basis of legitimate interest, it can be used for another purpose but only after checking that the new purpose is compatible with the original purpose, as required by GDPR. Furthermore, the context in which the data was collected previously should be considered. This includes checking the type and nature of the data, especially whether there are restrictions on its use and access. If the previously collected data was collected on the basis of consent or following a legal requirement, no further processing beyond what is covered by the original consent or the provisions of the law is possible.

Increasing re-use of RiskPACC results

The deliverables classified as public ('PU') will be made publicly accessible via the project website.

In line with the RiskPACC GA (Article 26), the results of work performed within Work Packages in the project are owned by the party(ies) that generate(s) them. Joint ownership is governed by GA Article 26.2, which details the following:

- Two or more beneficiaries own results jointly if (a) they have jointly generated them and (b) it is not possible to establish the respective contribution of each beneficiary.
- The joint owners must agree on the allocation and terms of exercise of their joint ownership

Additionally, in re-using and disseminating data produced in deliverables, and according to Article 29.1 of the Grant Agreement, a beneficiary that intends to disseminate its results must give advance notice to the other beneficiaries of — unless agreed otherwise — at least 45 days, together with sufficient information on the results it will disseminate.

3.4 Protection of Personal Data

The project will collect, and process personal data only as is necessary for its research and engagement activities, i.e., research, consultations, interviews, and events, and to share its findings and results with stakeholders via mailing, the website, and newsletters. No personal data will be collected without a lawful legal basis. Individuals have the right to withdraw consent at any time without any negative consequences.

D10.3 identifies RiskPACC activities which will collect personal data, and indicates purposes of the collection, types of data that will be processed, its storage formats, modes of collection, sharing, location, accountability, and access arrangements. Personal data is collected from members of the consortium, members of external organisations or individuals in their capacities as experts, respondents, or participants with their consent or on the basis of legitimate interest. See deliverables D10.1 and D10.3 for further information on anonymisation and factual pseudonymisation, which will be used to ensure personal data collected cannot be linked back to the individual.

3.4.1 Data Minimization, Storage, and Retention

RiskPACC aims to minimise the amount of data collected and processed, and the length of time it retains the data. In line with GDPR requirements, partners commit to collect personal data in a way that is adequate, relevant and limited to what is necessary in relation to the purposes for which they were processed [see GDPR Art. 5 (1c)]. RiskPACC partners will ensure that personal data about an individual is sufficient for the purpose it holds, and partners will not hold any more information than what is properly needed to fulfil that purpose.

RiskPACC will store personal data securely on password-protected servers/storage spaces. Personal data is only used for the specific purpose for which it is collected (e.g., workshop management or technology testing) and will be deleted immediately after that purpose is fulfilled, unless legally required to be retained. It must be noted here that the RiskPACC GA requires project data to be archived correctly at least five years after the balance payment is paid, and that some organisations may have longer saving policies for audit/legal reasons. If consent is withdrawn before that 5 year period is complete, data will be deleted immediately. Publications related to activities involving human participants cannot contain any personal data or reference to personal data, unless the participants expressly wished to be acknowledged and/or consented to this.

RiskPACC complies with ethical principles and applicable international, EU and national law (in particular, the EU General Data Protection Regulation 2016/679). For activities for which informed consent is required, partners will provide research participants with a clear description of RiskPACC activities and clear information on

the procedures used for data control and pseudonymisation/anonymisation. The RiskPACC participant information sheet and informed consent form (see Annex 1 of D10.1), demonstrates that partners give participants information about how the project collects, uses, retains, and protects their data during the project.

3.4.2 Rights of Individuals

For those individuals that participate in research and provide information for RiskPACC, they have the following rights:

- Right to request from the RiskPACC data controllers' access to the personal data RiskPACC has that pertains to them.
- Right to request the data controllers to rectify any errors in personal data to ensure its accuracy.
- Right to request the erasure of their personal data.
- Right to request the data controllers to restrict the future processing of their personal data, or to object to its processing.
- Right to data portability - upon request the data controller will provide a data subject with a copy of the data RiskPACC has regarding them in a structured, commonly used, and machine-readable format.
- As the processing of personal data occurs based on consent, individuals have the right to withdraw their consent at any time and RiskPACC will cease further processing activities involving their personal data. However, this will not affect the lawfulness of any processing already performed before consent has been withdrawn.
- Right to lodge a complaint with a supervisory authority, such as their national data protection authority.

If partners plan to re-use personal data for any reason not specified in the original consent form, they will ask participants their consent for this re-use and participants will be given the opportunity to withdraw their data.

3.4.3 Data Transfers

In cases of personal data transfers to and from non-EU countries, RiskPACC partners will comply with the GDPR requirements. We ensure that personal data is only transferred outside of the EU in compliance with the conditions for transfer set out in Chapter V of the GDPR, as interpreted by the Court of Justice of the European Union, European Data Protection Board, and relevant national Data Protection Authorities. In case personal data are transferred from a non-EU country to the EU, such transfers will comply with the laws of these non-EU countries. The Non-EU countries included in the RiskPACC partners are the UK and Israel.

The UK is considered a non-EU country since the Brexit transition period ended on 31 December 2020. On 28 June 2021, the European Commission adopted an adequacy decision for the UK, meaning that they believe the UK has an equivalent level of data protection to the EU, and as such the personal data can flow freely from the EU to the UK (ICO, n.d.). Personal data has the potential to be transferred from the EU based case studies to TRI, which is based in the UK. In such cases, all relevant GDPR requirements will be followed.

The other non-EU country involved in RiskPACC is Israel, where two case study partners (MDA and MoE) are based. The European Commission has published an adequacy decision on Israel, meaning it believes Israel has an 'essentially equivalent' level of data protection to that in the EU. As such, personal data may flow between Israel and the EU. In this case, the Ethics Committee will ensure that such transfers are in accordance with Chapter V of the General Data Protection Regulation 2016/679. The Israeli Law, Information and Technology Authority ("ILITA") will be the responsible supervisory authority. No personal data will flow from the EU to Israel, but data will flow from Israel to both the EU and the UK. This is allowed under Israeli regulations, as they have determined that the laws of the EU provide equally stringent protections. On 1 July 2020, Israel clarified that personal data may also continue to be transferred to the United Kingdom after its withdrawal from the European Union, since the United Kingdom has been granted 'adequacy' status by the European Commission (Data Guidance, 2021).

3.4.4 DPO/PRIVACY

Where applicable, partners have appointed a Data Protection Officer (DPO) and the relevant contact details of the DPO will be made available to all data subjects involved in the research activity. For partners not required to appoint a DPO under the GDPR, a link to the companies privacy policy can be found in D10.3. A brief summary of the policies are provided below:

- EOS: EOS provides a privacy policy, as they are not required under GDPR to provide a DPO. This privacy policy states that EOS will respect the privacy of the members and treat personal data with strict confidentiality. All data will be treated in accordance with the EU GDPR regulations. Any personal data collected will be protected by the company, and will be deleted if no longer required to hold it. At any time individuals can access, rectify, delete, transfer, or object to the use of their data. Additionally, they may request limitations on the use of their data.
- TRI: TRI will collect personal data during activities such as recruitment of employees, completing proposals, and conducting research to fulfil contracts. Personal data will be held by the company for five years, longer for data collected under contracts such as H2020, unless otherwise specified. Participants that provide data have the right to withdraw consent, the right of access, the right of erasure, right to restriction of processing, the right to object, and the right to complain to the UK Information Commissioner's Office. Appropriate technical and organisational security policies are in place to secure personal data.
- IBZ: IBZ's privacy policy website encompasses detailed information about the policies that are implemented to ensure the protection of personal data. It encompasses the following aspects: Purpose of personal data processing, scope of personal data being processed, (legal) basis for personal data processing, transfer of personal data, storing of personal data, Cookies, "Your rights", Notification in case of data protection violations, security, information about privacy policy changes, Information about data protection officers.

A table available in D10.3 indicates which partners have a DPO and those who have developed a data protection policy. This table also provides the details of the DPO in the cases that one was appointed. One partner, MRP, had not appointed a DPO at the time of the last deliverable. They have since appointed one, their details are below:

Christos Stavropoulos
Communications Manager of KaPa Data Consulting.
E- mail: info@kapaconsulting.gr
Tel.: +306949332770

3.5 Data Security

During the project, RiskPACC partners will store project data in a project specific MS Teams page hosted by Fraunhofer. The MS Teams page access is given by Fraunhofer, and a username and password are required for access. In addition to the MS Teams page, partners may store local copies of research data on their institutional servers and/or business cloud-based servers with access controls, encryption, or password protection. Partners will follow their institutional security safeguards for storing data.

All partners, at a minimum, will:

- Ensure RiskPACC research data stored with them on their institutional servers is regularly backed up.
- Ensure devices and data are safely and securely stored, and access controls defined (via encryption, password protection, restriction of number of persons with access as well as other practices) at the user level.
- Support good security practices by protecting their own devices and installing and updating anti-malware software, anti-virus software, and enabling firewalls.
- In case personal data is processed, ensure appropriate security and confidentiality of the personal data, including for preventing unauthorised access to or use of personal data and the equipment used for the processing (GDPR). This will include storing data on encrypted disks, pseudonymising data, and following all guidelines when storing and sharing data.
- Where necessary, the controller or processor of personal data evaluates the risks inherent in the processing and implement measures to mitigate those risks (e.g., encryption) and ensures an appropriate level of security, including confidentiality, taking into account the state of the art and the costs of implementation in relation to the risks and the nature of the personal data to be protected (GDPR).

After RiskPACC ends, the responsibility concerning data security of the RiskPACC datasets lies with the owners and/or managers of the repositories where these are stored.

3.6 Consortium Responsibilities

This deliverable is a report produced within the specific RiskPACC task dedicated to data management and ethics: “Task 9.3: Ethics and equality protocol and monitoring

including data management." The task is led by Trilateral Research. The planning and overall co-ordination of the data management task is the responsibility of Trilateral Research. Each project partner who handles and is responsible for data collected, stored, or used, ensures compliance with the strategy outlined in this document. Trilateral Research oversees compliance with the data management plan along with FhG as project co-ordinator. As the project coordinator, FhG is responsible for appointing the overall Data Protection Officer that will be the main monitor of compliance with data protection and will therefore provide advice on data protection. Each RiskPACC partner is responsible for adhering to the strategy and procedures outlined in this document and other relevant documents.

Trilateral Research will review and revise this plan, consult with partners, and implement any corrective actions as required. The data management plan will be revised when new information becomes available, existing datasets become re-classified into a different data sharing category due to emerging/newly discovered data privacy or commercial concerns, changes to data protection law, and the removal of/changes to project partners. This deliverable will be updated during the project whenever significant changes arise.

4 CONCLUSION

4.1 Summary

The above report sets out the ethics and data management requirements for RiskPACC and details the rules and regulations that will be followed by all members of the consortium. It has detailed the procedures that will be followed by all consortium members when it comes to collecting, storing, transferring, and using data as well as outlined the various ethical requirements for such activities. Additionally, it has established the procedures required to gain ethical approval and detailed the progress of each partner.

This report, along with D10.1, 10.2, and 10.3, have gathered the relevant information to ensure that all regulations are being followed and that RiskPACC research activities are being conducted in an ethical way and following all ethics and data management requirements.

To make these guidelines and requirements more user friendly for the case study partners and ensure that data is collected and used according to the guidelines, a checklist has been created. This can be found in Annex 3 and will be shared with all of the relevant partners.

4.2 Going Forward and Next Steps

Ethics and data management activities will be monitored throughout the project, with deliverables in M12 and M24 of the project providing updates on any changes that have occurred. Additionally, the Ethics Advisory Board will be consulted further going forward, and involved in the deliverables in M12 and M24. Additionally, along with the ethics manager, the advisory board will be available to partners or participants that flag any ethical issues.

5 REFERENCES

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Regulation (EU) No 1290/2013 of the European Parliament and of the Council of 11 December 2013 laying down the rules for participation and dissemination in "Horizon 2020 - the Framework Programme for Research and Innovation (2014-2020)" and repealing Regulation (EC) No 1906/2006 Text with EEA relevance. (2013). *Official Journal*, L 347, 81-103. CELEX: **https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32013R1290**[legislation]

Regulation (EU) 1291/2013 of the European Parliament and of the Council of 11 December 2013 establishing Horizon 2020 – the Framework Programme for Research and Innovation (2014-2020) and repealing (EU) No 1291/2013 (Text with EEA relevance). (2013). *Official Journal*, L 347, 104-173. ELI: http://data.europa.eu/eli/reg/2013/1291/oj [legislation]

Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation) (Text with EEA relevance). (2016). *Official Journal*, L 119, 1-88. CELEX: **https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32016R0679**[legislation]

RiskPACC Grant Agreement. (2020). *RiskPACC: Integrating risk perception and action to enhance civil protection-citizen interaction,* Research and Innovation Grant Agreement Number 101019707

6 ANNEX

6.1 Annex 1: RiskPACC WP1 and WP2 Questionnaire

PART 1: General questions

1. **Is there a register of the hazards and risks (natural or humanmade) for the area (municipality/county/state/other) that you work in?**

   a. if yes, are these categorized and in which categories?

   b. if not, are you aware about the risks in your area area/community/municipality? Which are these risks?

   c. Do you believe that the perception of risk between CPAs and local citizens/citizen groups coincide? Please explain.

   d. What types of other stresses does your area/community/municipality (beyond the abovementioned risks) concern you?

   e. What kind of actions are you currently taking to address these hazards/risks?

2. **What are your current needs in terms of resources for managing the hazards and addressing the impacts of these hazards/risks?**

   a. Do you have enough budget, equipment, personnel?

   b. Do you think that existing budget, means or personnel could be distributed and used more efficiently?

   c. What would you like to do differently?

3. **Is the word "resilience" used in any policy report/paper or doctrine in your area of work?**

   a. If used, what does it practically mean for your area of work?

   b. If resilience isn't a term commonly used in your area, what are the terms used to describe the process by which hazards are

managed (this might for example be risk management, emergency management, etc.)

c. Are there any dedicated policies to increase disaster or community resilience? Please specify.

d. Are resilience actions based on prevention or response actions?

e. Can you think of any ways that disasters can result in positive outcomes for your area, such as opportunities for improvement? If yes, can you give examples?

PART 2: Questions for the CPAs

1. **Is there a doctrine to support communities to prepare for, confront and recover from natural hazards in your area?**

   a. What are the policies in place that you follow to support such actions? Please list relevant policies at national, regional/provincial and city/municipal levels.

   b. What are your current activities being undertaken in your area?

   c. Do you plan on introducing any specific activities in the near future?

   d. What kind of activities? (Preparation or procurement, training, raising awareness…)

   e. Longer-term, what would you like to see your area doing to increase resilience?

   f. on your current approaches what are your strengths and weaknesses?

2. **In your opinion are all community group members conceptualising risk in the same way or not? Please elaborate.**

   a. What methods, including digital technology, do you use to communicate with community members?
   b. Do you believe that new technological tools & social media are effective for risk awareness and risk communication?
   c. Do you believe that the existing communication actions in your area are effective?
   d. What are the challenges with such communication?

3. **How would you describe your relationship with the community that you work with?**

   a. Are there any community groups that you work closely with?

   b. Is there any specific consideration for the sensitive groups of citizens (e.g children, people with special needs)

   c. Are there any cultural, environmental and other associations and volunteer groups that could contribute to your mission?

4. **How would you describe your collaboration with the other CPAs that you work with?**

   a. Which CPAs collaborate with you for risk management? (specify for prevention, response, recovery phases)

   b. Do you use any methods/ tools or communication protocol for acquiring a common operational picture and coordinating your actions? Please specify

   c. What would you improve in your communication and coordination with the other CPAs

Part 3: Community group questions

1. How would you describe community action in your area with regard to the risks faced?
    a. Are there recent hazard events that the community has responded to?
    b. Are community members organised in groups/teams/organisations etc?
    c. Is there more than one community organisation in your area working on issues of risk reduction?
        i. If yes, do they communicate with each other?
        ii. Are there any specific policies or plans from the municipality that encourage the formation of such groups, or is this the result of communities self-organizing? Please elaborate
    d. In your opinion, is there a shared sense of community in your area or are there divisions?
2. Is there any communication between local authorities and community groups/individuals in your area with regard to the risks faced?
    a. How is communication done?
    b. How effective is the communication?
    c. How could communication be made better?

3. What are your opinions on the existing approaches to managing the risks in your area?
    a. What are the strengths and weaknesses of existing risk management policies and mechanisms in place?

b. As a community group, how are your views on risk currently addressed by existing risk management approaches?

c. What opportunities are there for citizens/community groups to influence policy and decision making in your area?

d. If not, what more would you like to see occurring?

1. Related to the risks you mentioned above, for which kind of events
   a. do you feel well prepared? Why?
   b. do you feel not well prepared? Why?

2. As a community member, what are the needs of your community during a potential disaster?
   a. Are you leading or are you aware of any community-led mechanisms in place in case of for disaster risk response?
   b. What kind of support would you expect from CPAs in such situations?
   c. In an ideal situation, what kind of methods/mechanisms would you like to see activated for disaster risk response?

6. Is citizens' perception of risk important for effective risk planning and response, in your opinion? Please elaborate.

a. How is citizens' perception of risk incorporated in existing risk management plans and policies in your location?

b. What would you like to see changing in the existing context?

c. Can you think of any possible ways that risk perception could be registered and incorporated in future risk management plans and policies?

d. Are there any potential barriers in the participation of communities to disaster risk activities? Please elaborate.

Part 4: Summary

1. How has the COVID-19 global crisis changed the way you think about risks?

2. How has the COVID-19 global crisis changed the way you plan for managing future risks

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 101021271

6.2 Annex 2: Information sheet version 3

PARTICIPANT INFORMATION SHEET

RiskPACC: *Integrating Risk Perception and Action to enhance Civil protection-Citizen interaction*

You have been invited to take part in the RiskPACC project, funded by the European Commission and coordinated by Dr. Maike Vollmer, Senior researcher at Fraunhofer Institute for Technological Trend Analysis (INT). The research will be conducted by (reseachers at institutions). You are free to withdraw your participation at any time, as it is voluntary. For your decision whether or not to take part, you should understand the reasons why this research is being done and what will be involved. Please take time to read the following information carefully and feel free to ask questions.

1. THE PROJECT

RiskPACC focuses on increasing disaster resilience across society by closing the so-called Risk Perception Action Gap (RPAG) and aims to provide an understanding of disaster resilience from the perspective of citizens and Civil Protection Authorities (CPAs), identifying resilience building initiatives and good practices led by both citizens and CPAs. This research runs from September 2021 till August 2024. For more information the website https://www.riskpacc.eu/ is designed. The Consortium consists of 20 organisations from industry, academia and the public sector.

Partner	Country
FRAUNHOFER GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V. (FhG)	DE
TRILATERAL RESEARCH LTD	UK
INSTITUTE OF COMMUNICATION AND COMPUTER SYSTEMS (ICCS)	GR
THE UNIVERSITY OF WARWICK (UoW)	UK
KENTRO MELETON ASFALEIAS (KEMEA)	GR
EUROPEAN ORGANISATION FOR SECURITY (EOS)	BE
FORUM EUROPEEN POUR LA SECURITE URBAINE (Efus)	FR
CESKA ASOCIACE HASICSKYCH DUSTOJNIKU SDRUZENI (CAFO)	CZ
UNIVERSITY OF STUTTGART (USTUTT)	DE
SERVICE PUBLIC FEDERAL INTERIEUR (IBZ)	BE
UNIVERSITEIT TWENTE (UT)	NL
MUNICIPALITY OF EILAT (MoE)	IL
MAGEN DAVID ADOM IN ISRAEL (MDA)	IL
UNIVERSITY COLLEGE LONDON (UCL)	UK
CROWDSENSE BV (CS)	NL
STAM SRL (STAM)	IT
I.S.A.R. GERMANY STIFTUNG GGMBH (ISAR)	DE
THE CHIEF CONSTABLE OF LANCASHIRE CONSTABULARY (LC)	UK
DIMOS RAFINAS-PIKERMIOU (MRP)	GR
COMUNE DI PADOVA (CPD)	IT

This project has received funding from the European Union's Horizon 2020 Innovation programme under the Grant Agreement No 101019707.

2. WHAT WILL THE RESEARCH INVOLVE?

RiskPACC includes different research and training activities in which you could participate, e.g. workshops, interviews, surveys, demonstration and exercises, together with consortium members or relevant stakeholders, like Civil Protection Authorities, Civil Society Organisations, NGOs, etc.

- **Interviews**: Questions about your experiences in disaster response, related technologies and resilience and well as approaches to closing the RPAG will be discusses. The interview will take 30-90 minutes, and will be held via Microsoft Teams or a similar video-conference software.
- **Workshops**: Various stakeholders assembled to consider the practicalities of your work. We may shadow an individual or group, observe interactions, or gather information on user experiences. In addition, co-creation plays an important role in the project. This means that stakeholders will actively participate in selecting and developing solutions to close the RPAG. In the frame of the workshop, a workshop evaluation can take place where the participants can voluntarily answer evaluation questions.
- **Surveys**: Questionnaires on specific issues in the risk cycle, resilience and vulnerabilities in Europe may be circulated.
- **Demonstrations**: The tools involved in RiskPACC as well as well as the final platform and physical Risk Pack will be demonstrated to test and validate their way of working and impact. These demonstrations may include trainings, roleplays and evaluation activities.

You may be asked to provide the following information when taking part in any of these activities:

- Your name, professional affiliation, age range and contact information
- Your personal and professional views and experiences as they relate to the activities above
- Photographs, video and/or audio recordings of your participation in RiskPACC activities (e.g. documentation of discussions in workshops or activities in demonstrations).

3. WHY HAVE I BEEN CHOSEN?

You have been invited because of your experience and ability to articulate the needs of stakeholders in ways that can informed and be engaged with in complex and cross-disciplinary situations.

4. DO I HAVE TO TAKE PART?

No, your participation is completely voluntarily. You can leave at any time without giving a reason and without any consequences in the further participation in the project. You are free to refuse to answer any questions or provide any information. If you were invited to participate by your employer or university, be assured that you are under no undue pressure, advantage, or disadvantage to take part. You have the right to ask questions and receive understandable answers before making any decision.

5. WILL I BE RECORDED AND HOW WILL THE RECORDED MEDIA BE USED?

During the research, observer notes, audio and/or video recordings of your activities may be made. The information that you provide may be used to write articles for peer-reviewed journals and relevant industry magazines, for presentations at conferences and workshops, and in the promotion of

RiskPACC in general. Additionally, your participation will be used to form our user requirements, revise system design, and develop the RiskPACC technologies with respect to responsible use. Without your written permission, no other use will be made. You can review any recording and notes upon request.

6. WHAT ARE THE POSSIBLE ADVANTAGES OF TAKING PART?

Whilst there are no immediate benefits, this work will contribute to future improvements in disaster resilience, reduction of the Risk Perception-Action Gap and decrease disaster risks. You will not be provided any incentive to participate.

7. WHAT ARE THE POSSIBLE DISADVANTAGES TAKING PART?

There is a small risk that you may share some confidential information by chance or that you may feel uncomfortable talking about some issues. You can inform us at any time, if you decide you do not want to have something you said or did used for RiskPACC research purposes. There is a small risk in terms of entrusting your personal data to the research team. To mitigate this risk, we have outlined strict privacy and data management procedures, in line with the applicable National and EU regulations, including the requirements of the Regulation EU 2016/679 (General Data Protection Regulation).

8. RIGHT TO WITHDRAW

You may withdraw your consent from this project at any time without giving a reason with just contacting the Researcher or project coordinator. You will be asked whether you would like us to delete your data or whether you are fine for these data to continue to be processed. You may be asked why you have decided to withdraw, but you are under no obligation to give a reason.

9. PRIVACY NOTICE

In this research project, your personal data will be processed as long as it is required, however, the data you provide will be anonymised/pseudonymised. Personal data will not be shared publicly without explicit consent and any resulting material will be anonymised/pseudonymised where desired or necessary. For RiskPACC, anonymisation and pseudonymisation processes have been developed and clearly outlined.[1] We guarantee all personal data will be pseudonymised. This means that the data can no longer be attributed to an individual without additional information and will not provide names or other identifying information. Instead, identifying information is replaced with a pseudonym (such as a reference number that works as an identifier (ID)). This encryption key is kept separate and safe without access outside the RiskPACC study.

All data will only be collected to the extent necessary (data minimisation principle). We will only collect and process data that is strictly necessary for running the research, for our internal processing, administrative purposes, and to enable us to contact you if we require further information. The record of your participation will be kept in a file separate from the research data. These data will not be shared with or disclosed to anyone outside the research team.

We will not share any information we collect about you unless we are required to do so with the European Commission as part of our obligations. However, the researcher has a duty of care to report to the relevant authorities possible harm/danger to the participant or others. If this was the case, we guarantee

[1] For further information, see RiskPACC's Deliverable D10.3: POPD.

full confidentiality. All information will be stored in a secure location at (Researchers Institution), on password protected computers and encrypted[2]. They are only shared through a secure online platform managed by Fraunhofer INT. This information will be retained for the lifetime of the project. After the project period any personal data collected and stored within the course of the RiskPACC will be either permanently and irrevocably deleted after a maximum of 12 months or archived for continued research in line with the EU General Data Protection Regulation and the other applicable national and supranational data protection laws.

10. DATA SUBJECT RIGHTS

If you are concerned or have questions about how your personal data is being processed, you have the right to contact both the consortia lead or the Legal, Ethical and Security Issues Manager. You also have the right to check what is collected and processed, to access to your data being processed, to delete or make any changes to this information, to restrict processing and to receive requested information in a time-limited fashion.

11. INCIDENTAL FINDINGS

There is a small risk that RiskPACC research reveals insights about individuals, groups and/or the collaboration between civil protection authorities, citizens and other stakeholders that have not been envisaged and that are adverse for one of the aforementioned groups and/or their collaboration. In case such findings relate to the collaboration or a particular case study, the respective incidental findings contact person will be contacted.

12. CONTACT FOR QUESTIONS, CONCERNS, OR FURTHER INFORMATION

If you have any questions about this research or your prospective involvement in it, please contact:

Individual conducting the research: Name of researcher: Organisation: Address: E-mail:	***Project Coordinator*** Dr. Maike Vollmer Email: maike.vollmer@int.fraunhofer.de Phone: +49 2251 18 393 Fraunhofer Institute for Technological Trend Analysis (INT), Appelsgarten 2, 53881 Euskirchen, GER
Data controller Name: Organisation: Address: E-mail:	***Legal, Ethical and Security Issues Manager*** Dr. Su Anson Email: Susan.Anson@trilateralresearch.com Trilateral Research Ltd., Crown House, 72 Hammersmith Road, London W14 8TH, UK

[2] In the case of pseudonymisation, the key data is secured with additional measures, for instance stored on a computer without internet connection or on a data medium in a safe

STATEMENT OF INFORMED CONSENT – RiskPACC Project

By signing this form, you agree to take part in the RiskPACC research. The nature of the research, your involvement in it and your rights regarding your participation in the action are explained in the Information Sheet accompanying this form.

To consent to the following statements, please put an "X" in the boxes. This is an opt-in process to respect your privacy. We will handle your data according to your indication.

1. I confirm that I have read and understood both this form and the accompanying Information Sheet. I had the time and opportunity to ask questions as needed. ☐
2. I understand that I am free to withdraw my consent at any time without giving reason. ☐
3. My personal data can be gathered to be used, stored and shared in the ways described on the accompanying Information Sheet. ☐
4. Data from my participation can be used to inform RiskPACC user requirements, revise design, and develop RiskPACC technologies. ☐
5. Data from my participation may be used to write articles for peer-reviewed journals and relevant industry magazines, for presentations at conferences and workshops. ☐
6. Data from my participation may be used in the promotion of RiskPACC in general. ☐
7. RiskPACC may take research notes of my activities as I participate in RiskPACC. ☐
8. RiskPACC may take audio recordings of my activities as I participate in RiskPACC. ☐
9. RiskPACC may take video recordings of my activities as I participate in RiskPACC. ☐
10. I give my consent to be identified in any public reports. ☐
11. I agree to having photos or videos taken of me for research purposes. ☐
12. I agree to having photos or videos taken of me for communication purposes. ☐
13. I agree to be quoted directly. ☐
14. I would like to receive updates on the progress and findings of the project. ☐
15. I agree to voluntarily take part in the RiskPACC research. ☐

Participant Consent

Name .....

Affiliation .....

Contact .....

Age Range: ☐ 18-30; ☐ 31-40; ☐ 41-50; ☐ 51-60; ☐ 61-70; ☐ 71 and older

Research and/or training activity/activities: ☐ Interview; ☒ Workshop and workshop evaluation; ☐ Survey; ☐ Demonstration

Signature ..... Date ..... (day/month/year)

Statement by the Researcher taking consent

I have accurately provided the information sheet to the participant and, to the best of my ability, made sure that the participant understands it. I confirm that the participant was given an opportunity to ask and get answers to questions about RiskPACC, the research activity they will be involved in. I confirm that the participant has given consent freely and voluntarily.

Name of Researcher .....

Signature of Researcher ..... Date ..... (day/month/year)

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6.3 Annex 3: Guidelines for Collecting and Storing Data

Guidelines for Collecting and Using Participant Data

	Activity	Description
Prior to Collection		
	Preparing information sheet	- Ensure that information sheet is translated into the local language or the language of the majority of participants - Change the highlighted words with the appropriate names
	Informed consent process	- Informed consent must be gathered from all participants prior to the start of any research activities. - This includes sharing and/or going over the information sheet to ensure all participants understand what is being asked of them, their rights, and privacy concerns - Participants must be given time to ask any questions they might have - The form must be dated and signed
	Storing consent forms	- Hard copies of consent forms must be stored at the offices of the case study partners conducting the research - If they were collected via email, they must be stored in an encrypted folder and not shared with others - They must be locked in a secure area, separate from any other research data
Collecting Data		
	Recording	- Recordings should be audio recordings wherever possible, and for interviews or workshops/labs when personal data is being shared we should strive for recordings to be audio recording to preserve privacy - Even after consent is signed, if information is being recorded, always inform participants that the recording has begun and give them an opportunity to refuse recording
	Pseudonymising data	- Wherever personal data is collected, it must be pseudonymised - This means assigning all participants an ID or code, and using that in place of identifying information such as

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		name in any written summary and to title recordings - The pseudonymisation codes should be stored separate from the data collected - See pseudonymisation guide for further instructions
	Transcription/translation	- Transcriptions that will be shared with consortium partners should not contain personal data - Any names and identifiers should be removed during transcription, replaced with the pseudo code given
Storing Data		
	Storing recordings	- Recordings (audio or if unavoidable video) should be stored on an encrypted disk and then locked away - Once they have been moved to the encrypted disk, they should be moved off of any computer they were stored on
	Storing personal data	- Any personal data that needs to be stored should be stored on password protected computer or on an encrypted disk - Personal data with identifiers (names, etc.) should be kept separate from de-identified data - It must stay with the institution that has collected the data and cannot be shared
	Storing pseudonymised data	- If data has been fully pseudonymised, then it can be stored on a password protected computer and can be shared with consortium members
Sharing Data		
	Sharing data with consortium	- Only data that has been pseudonymised or fully anonymised can be shared with the entire consortium - Data must be examined before sharing to make sure that no personal, identifying information is present before sharing or saving on the consortium teams/sharepoint
	Publishing data	- No data that has not been pseudonymised can be published, but data can be published that is

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		pseudonymised and includes no personal data can be published.

6.4 Annex 4: Pseudonymisation Guidelines

Pseudonymisation Guide:

- Each participant is given information and consent sheet for the proposed research activity.
- Once consent is received the participant is assigned a research participant ID number
- Research activities are recorded/appraised against this assigned ID number.
- The details that identify an individual directly (name, email, address, etc) are kept separate from the actual research activity/recording and can be replaced by the assigned ID number
    - Example: In a transcript, if a participant's name is mentioned, it can be replaced by their ID
- The key that matches the ID number and the participant's personal information must be kept separate from the recording and the informed consent.
- If data is required to be gathered on a research subject over a period of time, the data may be linked together through the use of the ID numbers. The same ID number may be used at different occasions if a research subject participates in different events.
- Access to the identifying information is restricted to the research activity leader and the project coordinator.
- Information is only shared to fulfil the objectives of the project as set out in the Grant Agreement and in compliance with data protection rules.

RiskPACC
Integrating Risk Perception and Action to enhance Civil Protection-Citizen interaction

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The RiskPACC Consortium

FIGURE 1: THE RISKPACC CONSORTIUM