



LINKS

Strengthening links between technologies and society
for European disaster resilience

D6.1 FIRST WORK PLAN FOR THE FIVE CASES

Research Report

CHIARA FONIO – VRIJE UNIVERSITEIT AMSTERDAM (VU)

NATHAN CLARK - VRIJE UNIVERSITEIT AMSTERDAM (VU)

FEBRUARY 2021



This project has received funding from the European Union's Horizon 2020 Research and Innovation Programme under Grant Agreement No. 883490



DOCUMENT INFORMATION

| | | | |
|------------------------------|-------------------------|-----------------------------|------------------|
| Grant Agreement | No. 883490 | Deliverable Due Date | 28 February 2021 |
| Project Starting Date | 1 June 2020 (42 months) | Actual Submission | 26 February 2021 |
| Deliverable Number | D6.1 (WP6) | Leading Partner | VU |

KEYWORDS

Case assessments, Framework, work plan

AUTHORS& CONTRIBUTORS

| Author | Institution | Authored Sections |
|--------------|-------------|-------------------|
| Chiara Fonio | VU | Entire Document |
| Nathan Clark | VU | Section 2 |

REVIEWS

| Reviewer | Institution | Reviewed Sections |
|--------------------|-------------|-------------------|
| Nina Blom Andersen | UCC | Entire Document |
| Kees Boersma | VU | Entire Document |
| Sara Bonati | UNIFI | Entire Document |
| Nathan Clark | VU | Entire Document |
| Simon Gehlhar | SIC | Entire Document |
| Therese Habig | SIC | Entire Document |
| Annika Hamachers | DhPol | Entire Document |
| Maximilian Kiehl | SIC | Entire Document |
| Richard Luke | SIC | Entire Document |
| Antonio Opromolla | LCU | Entire Document |

VERSION HISTORY

| Release | Status | Date |
|---------|------------------------------------|------------------|
| 0.1 | Table of contents (ToC) | 20 November 2020 |
| 0.2 | Section 1 | 30 November 2020 |
| 0.3 | Updated ToC | 9 December 2020 |
| 0.4 | Section 2 – structure | 15 December 2020 |
| 0.5 | First draft of Section 2 | 15 January 2021 |
| 0.6 | First draft of the entire document | 21 January 2021 |
| 0.7 | Second draft ready | 27 January 2021 |
| 0.8 | Third draft ready | 18 February 2021 |
| 0.9 | Fourth draft ready | 24 February 2021 |
| 1.0 | Final Version – Submitted to EC | 26 February 2021 |

DISCLAIMER

Responsibility of this publication lies entirely with the author. The European Commission is not responsible for any use that may be made of the information contained therein.

CITATION

Fonio, C. & Clark, N. (2021). First Work Plan for the Five Cases. Deliverable 6.1 of *LINKS: Strengthening links between technologies and society for European disaster resilience*, funded by the European Union's Horizon 2020 Research and Innovation Programme (No. 883490). Retrieved from: <http://links-project.eu/deliverables/>

EXECUTIVE SUMMARY

About the project

LINKS “Strengthening links between technologies and society for European disaster resilience” is a comprehensive study on disaster governance in Europe. In recent years, social media and crowdsourcing (SMCS) have been integrated into crisis management for improved information gathering and collaboration across European communities. The effectiveness of SMCS on European disaster resilience, however, remains unclear, the use of SMCS in disasters in different ways and under diverse conditions. In this context, the overall objective of LINKS is to strengthen links between technologies and society for improved European disaster resilience, by producing sustainable advanced learning on the use of SMCS in disasters. This is done across three complementary knowledge domains:

- Disaster Risk Perception and Vulnerability (DRPV)
- Disaster Management Processes (DMP)
- Disaster Community Technologies (DCT)

Bringing together 15 partners and 2 associated partners across Europe (Belgium, Denmark, Germany, Italy, Luxembourg, the Netherlands) and beyond (Bosnia & Herzegovina, Japan), the project will develop a framework to understand, measure and govern SMCS for disasters. The LINKS Framework consists of learning materials, such as scientific methods, practical tools, and guidelines, addressing different groups of stakeholders (e.g. researchers, practitioners, and policy makers). It will be developed and evaluated through five practitioner-driven European cases, representing different disaster scenarios (earthquakes, flooding, industrial hazards, terrorism, drought), cutting across disaster management phases and diverse socioeconomic and cultural settings in four countries (Denmark, Germany, Italy, the Netherlands). Furthermore, LINKS sets out to create the LINKS Community, which brings together a wide variety of stakeholders, including first-responders, public authorities, civil society organisations, business communities, citizens, and researchers across Europe, dedicated to improving European disaster resilience through the use of SMCS.

About this deliverable

This document focuses on the work plan to prepare and execute the case-based assessment of the Framework through five cases. The LINKS Framework will consist of a set of learning materials (*inter alia*, methods, tools and guidelines), to govern diversity around the use of social media and crowdsourcing in disasters, with the ultimate goal of strengthening resilience through sustainable advanced learning. It will be assessed (through an iterative cycle) across five cases. These are carried out in four countries and applied in the frame of the following hazard scenarios or cases in the frame of LINKS:

- Flooding in Denmark;

- Drought and terrorism in Germany;
- Earthquakes in Italy;
- Industrial hazards in The Netherlands.

Using a step-by-step approach, this document describes the work plan for the case assessments by structuring it along four main phases:

- A **plan and co-design phase** in which different types of knowledge are collected, analyzed and systematized to prepare for the assessments and the learning objectives per each case are discussed;
- A **preparation phase** to operationalize the knowledge of the previous phase by focusing on requirements, KPIs and other important practical steps (e.g. logistics and contacting stakeholders who will be involved in the assessments);
- **The first case-based assessment of the Framework** that will be focused on testing the research design included in the first version. The Framework will be tested locally in the case countries and in the frame of the scenarios mentioned above;
- The **preparation for the second case-based assessment** that will be focused on the analysis of the results from the first iteration and the preparatory steps to carry out the second round.

Steps, mini-milestones, risks and contingencies measures are identified in each phase.

This document is public but is designed for internal (LINKS consortium) use and it should be considered as a strategic deliverable to ensure proper planning. It is a living document that will be updated throughout the project.

TABLE OF CONTENTS

| | |
|--|----|
| 1. Introduction..... | 1 |
| 2. Concepts and objectives of the case-based assessment of the Framework | 3 |
| 2.1 The case-based assessment in the context of the main objectives of the project..... | 3 |
| 2.2 Overview of the workflow for the case-based assessments | 4 |
| 3. Work plan to prepare and execute the case-based assessments | 7 |
| 3.1 Timeline and objectives | 7 |
| 3.1.1 Plan and co- design: setting the stage for the case-based assessment of the Framework (September 2020 – May 2021) | 10 |
| 3.1.2 Preparation phase: ensuring a robust case-based assessment (June 2021-November 2021) | 17 |
| 3.1.3 First case-based assessment: the Framework applied (November 2021-May 2022):..... | 23 |
| 3.1.4 Preparation for the second case-based assessment (May 2022- November 2022)..... | 25 |
| 4. Conclusions..... | 29 |
| 5. Bibliography..... | 30 |
| 6. Annexes | 31 |
| 6.1 Annex I: Locations, Case Assessment Teams and Practitioners' expectations in each case... | 31 |

LIST OF TABLES

| | |
|---|----|
| Table 1: Plan and co-design phase | 15 |
| Table 2: Preparation phase | 21 |
| Table 3: First case-based assessment | 24 |
| Table 4: Preparation for the second case-based assessment | 27 |
| Table 5: Information on the cases | 32 |

LIST OF FIGURES

| | |
|---|----|
| Figure 1: The Case-based assessment Iteration Process | 5 |
| Figure 2: Key benchmarks | 8 |
| Figure 3: Timeline of the phases for the case-based assessment | 9 |
| Figure 4: Timeline for the development of the Framework and to prepare and execute the case-based assessment of the Framework | 10 |
| Figure 5: Main elements of the plan and co-design phase | 12 |
| Figure 6: Timeline and mini- milestones of the plan and co-design phase | 17 |
| Figure 7: Main elements of the preparation phase | 18 |
| Figure 8: Work flow to prepare the evaluation guidelines and the templates for the assessments | 20 |
| Figure 9: Timeline and mini-milestones of the preparation phase | 22 |
| Figure 10: Main elements of the first case-based assessment | 24 |
| Figure 11: Timeline for the first case-based assessment | 25 |
| Figure 12: Towards the second round of assessments | 26 |
| Figure 13: Timeline for preparing the second case-based assessment | 28 |

LIST OF ACRONYMS

| Abbreviation / Acronym | Description |
|------------------------|--|
| CATs | Case Assessment Teams |
| CM | Crisis Management |
| DCT | Disaster Community Technologies |
| DMP | Disaster Management Processes |
| DRPV | Disaster Risk Perception and Vulnerability |
| KB | Knowledge Base |
| KPIs | Key Performance Indicators |
| LAC | LINKS Advisory Committee |
| LC | LINKS Community |
| LCC | LINKS Community Center |
| LCW | LINKS Community Workshop |
| PFW | Practitioner Framework Workshop |
| PTF | Practitioner Task Force |
| SMCS | Social Media and Crowdsourcing |
| STF | Sustainability Task Force |
| WP | Work Package |

DEFINITION OF KEY TERMS¹

| Term | Definition |
|-------------------------------|---|
| Best practices | This encompasses the preferred actions in a specific type of situation to efficiently and effectively achieve a certain objective. Best Practices may be formalized in internal policy documents such as handbooks and standard operation procedures and could be based on one or several lessons learned approved by decision-makers. |
| Case | Context-based study, realised through fieldwork, to assess the LINKS Framework. A case implies an empirical inquiry that investigates a phenomenon or scenario within its real- life context. |
| Case assessments | The assessment of the LINKS Framework in local cases |
| Crowd sourcing | Describes a distributed problem-solving model where the task of solving a challenge or developing an idea get “outsourced” to a crowd. It implies tapping into “the wisdom of the crowd”. |
| LINKS Framework | A set of learning materials, such as methods, tools and guidelines for enhancing the governance of diversity among the understanding of SMCS in disasters for relevant stakeholders. Methods in LINKS refer to approaches that will enable researchers and practitioners to assess the effects of SMCS for disaster resilience under diverse conditions. Tools are practical instruments supporting first-responders, public authorities and citizens with the implementation of SMCS in disaster and security contexts. Guidelines are recommendations for improving national and regional governance strategies on SMCS as well as introductions and explanations of how to apply the methods and tools under diverse conditions. |
| LINKS Knowledge base | The outputs and knowledge obtained from the assessment of three knowledge domains. This knowledge is used to develop the LINKS Framework |
| Resilience | The ability of individuals, institutions, and systems to recover from disturbance and to develop and adopt alternative strategies in response to changing conditions |
| Social media | A group of Internet-based applications that build on the ideological and technological foundations of the Web 2.0 and that allow the creation and exchange of user-generated content (UGC)Forms of media that allow people to communicate and share information using the internet or mobile phones. |
| Sustainable advanced learning | A maintainable and evolving collection of knowledge and best practices produced for and by relevant stakeholders. Sustainable advanced learning entails a cognitive dimension (the capability to gain in-depth knowledge of |

¹ Definitions are retrieved from the LINKS Glossary (forthcoming).



| | |
|--|--|
| | crises and crisis response) and a social dimension (the ability to implement that knowledge into new practices). |
|--|--|

1. INTRODUCTION

The case-based assessment of the LINKS Framework plays a crucial role in the context of the project. It is, in fact, through the cases that first the research design (the assumptions, research questions and gaps included in the first version of the Framework), and the learning materials developed based on the results from the first round of assessments, will be assessed against a set of criteria related to the project objectives. This iterative process is key to developing and refining the Framework so that it can be ready by the end of the project to serve a wider community of stakeholders, after robust testing in four European countries: Denmark, Germany, Italy, and the Netherlands.

The cases serve the purpose of assessing the Framework and they are conceived, planned and organised in the frame of WP6 (T6.2). As per the development of the Framework, there are strong interdependencies with the other work packages (WP):

- In WP2-4 the methods for the case-based assessment are defined and the analysis of the assessment results is carried out;
- In WP5 the Framework is conceptualised and developed;
- WP7 develops the LINKS Community Center (LCC), through which the LINKS Community can share their experiences and lessons learned on, *inter alia*, the application of the Framework in the cases;
- WP8 is concerned with the LINKS Community and with LINKS Community Workshops (LCW) which are key to identify relevant stakeholders who will be involved in case-based assessments;
- WP9 critically deals with the dissemination that is of particular relevance for the cases, considering that the results will be of interest also for the wider crisis management (CM) community.

This document outlines the initial planning of the case-based assessments. It is the first of three strategic planning deliverables for the cases: D6.2 (November 2021) and D6.3 (November 2022) will be submitted respectively alongside the first and the second version of the Framework. **This implies that the first work plan is focused more on general and yet crucial steps to prepare the assessments, rather than on evaluation guidelines and templates for reporting the data collected in the cases that will be included in D6.2 when the testing in local cases will start.**

This document provides a step-by-step approach to ensure proper planning until November 2022. D6.1 will be updated in November 2021 but, to ensure consistency with its sister strategic planning deliverable on the Work plan for the LINKS Framework (Fonio & Clark 2021: D5.1), the planning in this document covers the period up until the submission of the second version of the Framework in November 2022.

D6.1 follows the same structure as the Work Plan for the LINKS Framework (D5.1):

- Section 2 is focused on the rationale behind the case-based assessment of the Framework and frames them in relation to the project objectives. Moreover, it provides an overview of cases within the workflow of the project;
- Section 3 is the core part of the work plan. It provides the timeline and the objectives of the development of the Framework both at project level and at WP6 level with an emphasis on four main phases to prepare for and execute the case-based assessments: the **plan and co-design phase**, the **preparation phase**, the **first case-based assessment of the Framework** and the **preparation for the second case-based assessment**. The steps included in each phase also include how they can best be monitored through the work plan (mini-milestones, risk and mitigation strategies);
- Section 4 deals with conclusive remarks.

In addition to these sections, preliminary information on the locations, on the Case Assessment Teams (CATs) and on the expectations for each case is included.

There are several overlapping activities between WP5 and WP6, however, to avoid redundancy, the descriptions of those activities are primarily highlighted in the main narrative of this document and are not captured in the wrap-up tables in each section.

It is worth noting that D6.1 is a living document that will be regularly updated even before the submission of the next work plan deliverables. It is of interest to the entire LINKS consortium as it revolves around key internal processes and activities which are critical to evaluate the Framework in a proper manner within and across the cases.

2. CONCEPTS AND OBJECTIVES OF THE CASE-BASED ASSESSMENT OF THE FRAMEWORK

This section introduces the rationale behind the case-based assessment of the Framework and describes how the assessments relate to the main objectives of the project. It further provides the overall approach to the workflow for the cases, in relation to the evaluation of the Framework and other project activities across the WP, and serves as an introduction to better understand the work plan outlined in Section 3.

2.1 The case-based assessment in the context of the main objectives of the project

In LINKS, the term case-based assessment refers mainly to the assessment of the practical value of the LINKS Framework in local cases in relation to the overall objective of the project. The term does not refer to, nor implies or points towards, specific research methods, although it resonates with a method of inquiry, namely case studies.

Ultimately, the project has the ambition of strengthening societal resilience by enhancing sustainable advanced learning on the uses of SMCS in disasters. The case assessments play an important role here as they will provide the breeding ground for learning which will ultimately inform the design, evaluation and use of the Framework.

As specified in D5.1, the ambition of the Framework is “to provide a set of learning materials, such as methods, tools and guidelines for enhancing the governance of diversity among the understanding of SMCS in disasters for relevant stakeholders” (LINKS Glossary, forthcoming). Both the “theoretical knowledge” outlined in the knowledge bases deliverables (Bonati, 2020: D2.1; Pazzi, et. al., 2020: D2.2; Nielsen & Raju, 2020: D3.1; Habig et.al. 2020: D4.1), and the “practical knowledge” of the stakeholders involved in the cases will contribute to the development of the Framework, which ultimately should lead to an increased awareness of the potentials and drawbacks of SMCS in all phases of disasters, and the strengthening of societal resilience.

In light of the project objectives, the Framework is effective if it enables sustainable advanced learning; contributes to a consolidated understanding; governs the diversity; and brings multidisciplinary stakeholders together, all around the uses of SMCS in disasters. To evaluate whether the Framework is effective, it will be assessed in five cases across four countries (Denmark, Germany, Italy and The Netherlands). Practically, this entails that the learning materials included in the Framework will be adjusted, applied and assessed in diverse socio-cultural contexts and in the frame of five different hazard scenarios:

- Flooding in Denmark;
- Drought and terrorism in Germany;

- Earthquakes in Italy;
- Industrial hazards in The Netherlands.

In addition to the European cases, there is a potential international associated case focused on tsunamis in Japan to explore the applicability of the Framework in non-European contexts. However, at the moment of writing (December 2020), the case is not confirmed yet.

Several groups of stakeholders in the case countries (see Philpot & Reuge, 2020: D8.1), will be actively involved in developing the Framework and assessing the learning potentials of the Framework within the cases. Indeed, the research design of the LINKS project, and the final outputs, rely on ongoing involvement of the LINKS Community for enriching the collection of knowledge within the wider crisis management (CM) community on the uses and governance of SMCS (see D5.1 on the concept of diversity by design).

The case assessments directly contribute to the LINKS project objectives in the following ways:

- **Sustainable advanced learning on SMCS in disasters (O1):** By providing diverse environments and conditions to assess the learning potentials of the Framework;
- **Achieve a consolidated understanding of SMCS in disasters (O2):** By providing diverse environments and conditions to assess and inform the theoretical (KB) and practical research assumptions emerging in the project;
- **Govern the diversity of SMCS in disasters (O3):** By providing diverse environments and conditions to test the practical and actionable implications of the learning materials and knowledge provided by the Framework and LCC;
- **Bring multidisciplinary SMCS stakeholders together (O4):** Through the inclusion of different and diverse groups of stakeholders in the design, evaluation and use of the project research and outputs.

2.2 Overview of the workflow for the case-based assessments

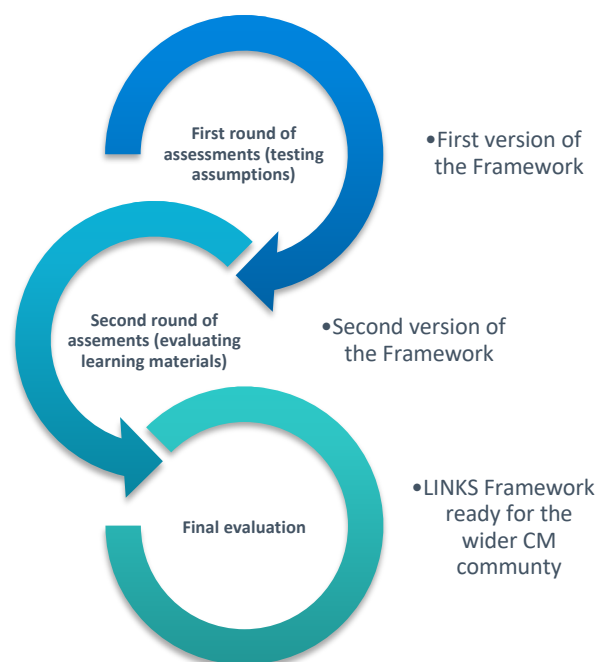
The case assessments follow an iterative cycle as part of the development and evaluation of the Framework (see Figure). This can be outlined generally by the key deliverables for the assessments:

- **First Round of Assessments (D6.4; May 2022):** The first version of the Framework (D5.3; November 2021) will consist of the conceptual/research design, meaning the research questions and the gaps identified in the KB deliverables and confirmed by relevant stakeholders as well as the methods to address those gaps. This implies that the first round of case-based assessments (T6.2) will be mainly concerned with: testing the assumptions and addressing the gaps identified in the knowledge domains and by the stakeholders involved in the project;
- **Second Round of assessments (D6.5; March 2023):** The results from the first round of case will be key to develop the second versions of the methodologies (D2.4, D3.3, D4.3;

September 2022) and the Framework (D5.4; November 2022). The evaluation of the Framework in the second round will be focused on the usefulness of the learning materials selected and developed based on learning needs and objectives and evaluated in the cases and the broader context of EU and international CM networks;

- Final Evaluation of the Framework (D6.6; November 2023) The final version of the Framework (D5.5; July 2023) will be designed drawing on the assessment of the helpfulness of the learning materials in the second round of the cases.

Figure 1: The Case-based assessment Iteration Process



Source: Authors contribution

This iterative process shown in Figure 1 will serve the purpose of evaluating and improving the Framework and of fostering, in the course of the case assessments (and project), sustainable advanced learning. This document is primarily concerned with the work plan for the first cycle, and leading up to the second round of the case-based assessments of the Framework. In Section 3 of this document, the work plan is outlined with an emphasis on the timeline, the objectives, potential risks and mitigation strategies.

Currently, the Framework is being co-designed and conceptualised in WP5 and the methodologies to assess it are being developed in WP2-4. In light of this, details on the cases and how the scenarios will play out in different countries are not provided in detail in this deliverable, even if a considerable

amount of information has already been collected in meetings and workshops (as shown in Annex I and II in D5.1 and in Annex I of this document).

The methodological deliverables (WP2-4) will formulate research instruments for each of the case studies focusing on the three knowledge bases of the project: disaster risk perceptions and vulnerability (DRPV), disaster risk management processes (DMP) and disaster community technologies (DCT). The methodologies will feed into the evaluation of the Framework and are crucial in the first development phases of both the Framework and cases assessment work plans, as described in D5.1 and D6.1.

While the methodology for the assessments concerns more WP2-4 and will be provided in the first version of D2.3, D3.2 and 4.2, the evaluation of the LINKS Framework concerns more WP6 (and WP5). The evaluation guidelines to carry out the assessments and the templates for reporting the data collected will be provided by WP6 and shared internally before submission in November 2021, based on the findings from WP2-4. This process then repeats through iterations of the methodologies and evaluation guidelines, feeding into the second round of assessments that will start in November 2022.

WP7 and WP8 will also play crucial roles in the case activities. The LINKS Community Center (LCC) will provide the technical interface in the second round of case-based assessments for access to the LINKS Framework by the different stakeholders involved in each case. Lessons learned, best practices and experiences in applying, for instance, methods, tools and guidelines will contribute to enriching the knowledge in the Framework in a dynamic way thanks to the active role of the LCC in the second round of the cases. The second round of case assessments will also serve as a means of evaluating the usefulness and useability of LCC (see Kiehl et. al., 2021, D7.1). Furthermore, through the cases, different types of stakeholders will be involved in assessing the learning potential of the Framework based on their learning needs and gaps encountered within their organisations, in their daily jobs and/or in their daily lives as citizens dealing with both natural and human-made hazards. In this way, the assessments are conducted to understand the uses of SMCS both in local contexts, via the cases, but also in a broader context, where similar learning themes emerge from the needs and gaps. Ultimately this will inform the flexibility of Framework, and its ability to both govern diversity while enabling learning which can be adjusted to local (socio-cultural) and case-specific contexts.

3. WORK PLAN TO PREPARE AND EXECUTE THE CASE-BASED ASSESSMENTS

This section describes the work plan for the case-based assessments by focusing on:

- The timeline and the objectives of the assessments (Section 3.1). This part provides an overview first at project level by mentioning the key benchmarks (deliverables) that have an impact on the work plan, and thereafter at WP6 level by outlining the main phases to carry out the case-based assessment of the Framework;
- More detailed explanations on each phase are included from Sections **Error! Reference source not found.** to **Error! Reference source not found.**. Specifically, those sections focus on: steps, main elements (key features), mini-milestones (how to best monitor the work plan). In each section, the narrative part is followed by a wrap-up table including the most important steps per phase, the partners involved, inputs (e.g. deliverables, outcomes of meetings), outputs (e.g. the mini-milestones), risks and mitigation strategies. Each section ends with a phase-specific timeline.

The work plan for the five cases and the work plan for the LINKS Framework described in D5.1 are two complementary documents. Overlapping phases and activities are inherent to the work carried out in WP5 and WP6 and the two roadmaps go hand-in-hand. Delays in the development and in the submission of the LINKS Framework will have a major impact on the case-based assessment of the Framework. Delays in analysing the data of the evaluation of the Framework, will slow down the iteration process.

3.1 Timeline and objectives

To ensure consistency with D5.1, the work plan described in this section covers the timeline from September 2020 to November 2022. However, two aspects should be considered:

- As per D5.1, this deliverable is a living document, meaning that the objectives, as well as risks and mitigation strategies, will be revised, as needed, in the course of the project;
- As mentioned in the Introduction, the second iteration of the workplan (D6.2) is due in November 2021 and will include the evaluation guidelines and the templates as well as case-specific requirements.

In light of the above considerations, **D6.1 gives more emphasis to the phases and required steps from September 2020 to November 2021.**

The visual included below (Figure, also included also in D5.1), depicts key benchmarks in the project which will impact WP6 from November 2020 to November 2022. The key benchmarks that have a significant impact on this current work plan run between November 2020 (submission of the

knowledge bases deliverables) and November 2021 (submission of the first version of the LINKS Framework).

Figure 2: Key benchmarks

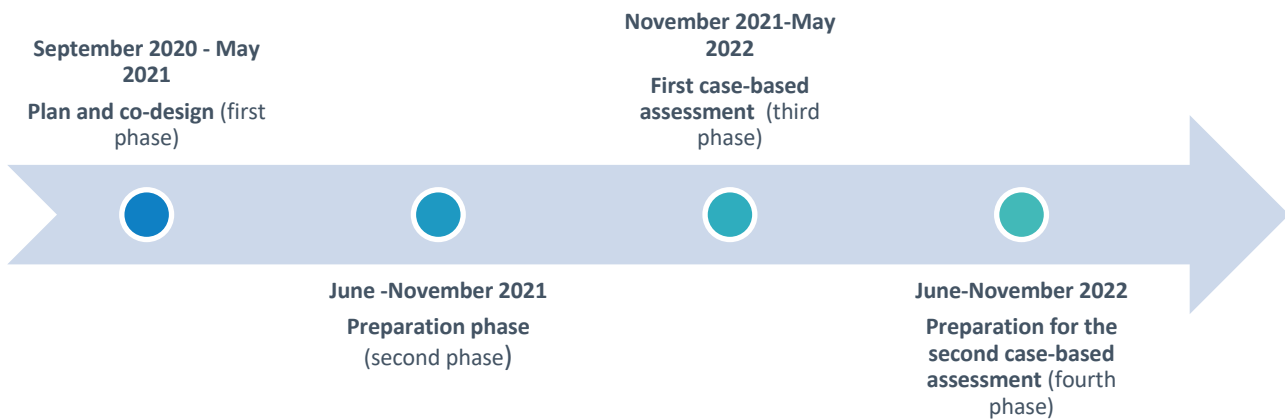


Source: Authors contribution

Figure shows that there are interdependencies between several outputs the majority of which is, at the time of writing, in the development stage. Specifically, the methodology for the case-based assessments that plays a key role in defining how the assessments will be carried out. The same holds true for the LCC through which the Framework will be accessed (in the second round of assessments) and for the Framework itself whose conceptual boundaries are yet to be clearly defined.

If we include these benchmarks in a broader picture which relates directly to work plan for the cases, we can distinguish four main phases:

Figure 3: Timeline of the phases for the case-based assessment



Source: Authors contribution

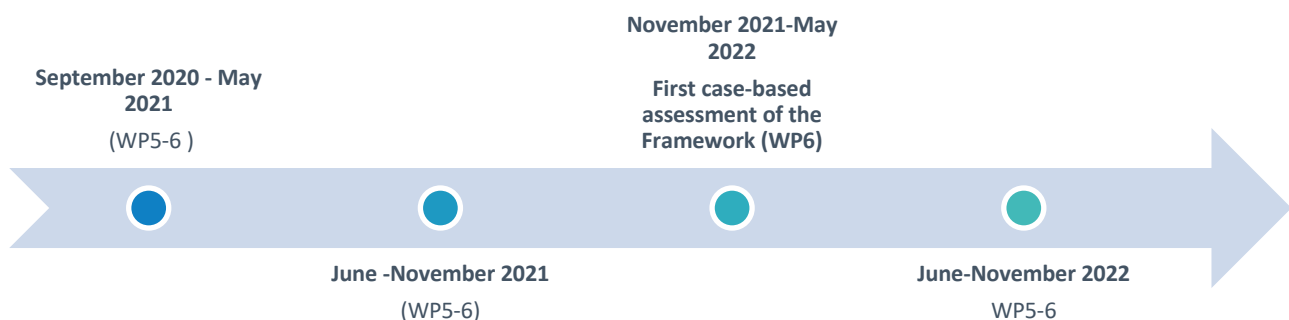
1. The **plan and co-design phase** is the first necessary building block to prepare the evaluation of the Framework through the cases. It revolves around the bulk of knowledge needed to plan the assessments in a way which is both informed by the literature and by the needs of stakeholders in different socio-cultural contexts. Only after the knowledge is systematized, collected and mapped, more practical steps can be carried out in the preparation phase. Moreover, in this phase case-specific learning objectives shall be decided, as explained in Section 3.1.1;
2. The **preparation phase** deals with both providing the evaluation guidelines based on the research design and with ad-hoc instructions per each case. All key decisions will be documented in a document called “Case Assessment Plan” which will facilitate the work of the case assessment teams (CATs). Furthermore, the preparation phase revolves around all necessary preparation activities to ensure a robust case-based assessment of the Framework (see Section 0);
3. The assumptions and the gaps that will constitute the research design included in the first version of the Framework (see D5.1) will be assessed in five local cases (third phase: **first case-based assessment**, see Section 3.1.3) and in the frame of four hazard scenarios, as mentioned in the Introduction;
4. The **preparation for the second case-based assessment** described in Section 3.1.4 will be based on the results from the first round. This phase ends in November 2022 when new evaluation guidelines will be provided in D6.2.

As shown in Figure 4, the timeline for the development of the Framework and the timeline to prepare for and execute the case-based assessments correspond. The main difference between the two is the first case-based assessment “phase” that will be carried out only in WP6. The timelines

go hand-in-hand as phases and steps are interdependent and both revolve around similar objectives:

- From September 2020 to May 2021: the stage shall be set both for the Framework and for the cases through a structured collection and systematization of knowledge;
- From June 2021 to November 2021: the development of the Framework and the preparation to evaluate it locally will take place;
- From November 2021 to May 2022: the first case-based assessment of the Framework (the research design included in the first version) will be carried out;
- From June 2022 to November 2022: the analysis of the results and lessons learned for first round of assessments will inform key decisions for the development of the second version of the Framework and for the second round of the assessments.

Figure 4: Timeline for the development of the Framework and to prepare and execute the case-based assessment of the Framework



Source: Authors contribution

3.1.1 Plan and co- design: setting the stage for the case-based assessment of the Framework (September 2020 – May 2021)

The first important phase deals both with activities and key decisions for the cases. In this phase the involvement of relevant stakeholders is either direct (for instance, involvement in meetings and workshops) or in-direct, namely their input is taken into account in the co-design phase of the LINKS Framework. As for the latter, a participatory approach has been fostered which resulted into a wide range of activities, as shown below. This phase started in September 2020 when important initiatives took shape and ends in May 2021 with the submission of the disaster risk perceptions and vulnerability (DRPV, WP2), disaster risk management processes (DMP, WP3), disaster community technologies (DCT, WP4) methodologies (D2.3; D3.2; D4.2).

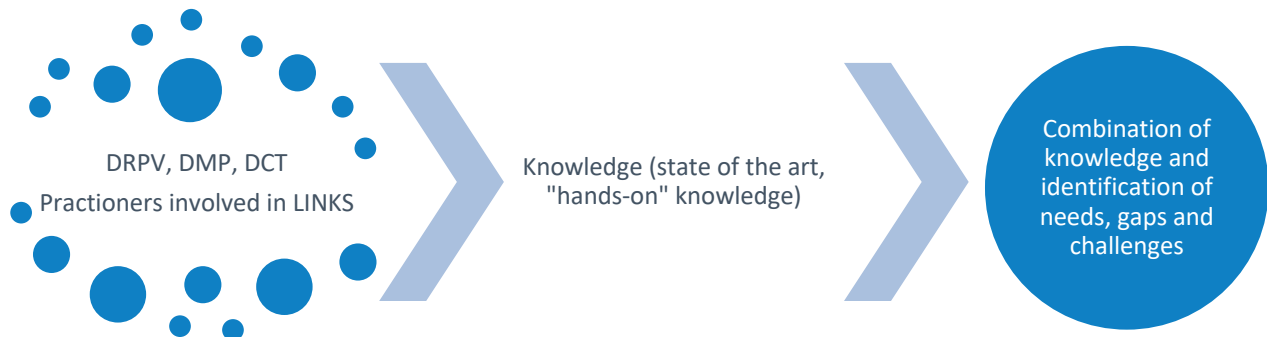
This plan and co-design phase, currently on-going, consists of the following steps:

- Initiating discussions with the practitioners (and researchers) involved in the assessments to understand the socio-cultural contexts, as well as needs, gaps and challenges experienced in their daily job (included also in D5.1)²;
- Systematize all data and knowledge collected during the meetings and workshops;
- Mapping and combining the findings and future directions for research identified in WP2-4 knowledge bases with the knowledge coming from the practitioners (included also in D5.1);
- Matching the outcomes of the “mapping and combining exercise” with general (at a project level) and specific objectives (LINKS Framework). Included also in D5.1;
- Fostering and facilitating, as needed, bi-lateral discussions between research partners involved in the development of the methodology with local practitioners to “test” their assumptions;
- Identifying the case-specific learning objectives;
- Initiating the planning for the case assessments in a structured way;
- Engaging in discussions on the design and concept for the LCC with WP7 (also included in D5.1 with a focus on the Framework);
- Engaging in discussions on the stakeholders analysis with WP8 and on how the LINKS Community Workshops (LCW) will inform the assessments; (included also in D5.1)

The main elements of this phase are the same needed and emphasized in the co-design phase for the development of the Framework (see D5.1), as depicted below:

² To avoid redundancy, cross WP5-6 activities are included in the narrative but not in the tables. This applies to all sections.

Figure 5: Main elements of the plan and co-design phase



Source: Authors contribution

The knowledge plays the same important role for the development of the Framework and for the planning of the assessments. In the frame of WP6, the activities were mainly focused on discussing with the practitioners and collecting their knowledge. As specified in D5.1, a practitioner task force (PTF) was established in September 2020 with the aim of exploring needs, gaps and challenges of the practitioners. The PTF was conceived as forum for discussion: each meeting was chaired by a practitioner organization who presented the context in which they operate, the use of SMCS as well as an overview of needs, gaps and challenges. The presentation was followed by an open discussion. Preliminary results are included in D5.1 (Annex I). The outputs of those meetings are relevant both for the development of the Framework and to prepare for the cases.

Alongside the PTF meetings, one workshop and an exercise were carried out:

1. A “Practitioner Framework Workshop” (PWF) in October 2020 with the aim of sharing thoughts and ideas of the effective use of SMCS in all phases of disasters. The main outcomes are included in D5.1 (Annex II).
2. A “Case Assessment Template” was shared in November 2020 among the partners involved in the assessments (more information is provided below and in Annex I in this document).

The meeting notes and the main findings of all these activities are considered an important mini-milestone for taking more informed decisions for the case-based assessment of the Framework, based on the actual the needs that emerged in those meetings. For example, the “case assessment template” was structured to capture the following set of data:

- The main organization responsible for the case assessments;

- The case assessment team (CATs), namely all relevant point of contacts as far as overall coordination, application of the methodology, logistics, stakeholders coordination, safety, dissemination, ethics and integrity;
- The objectives of the case study;
- Existing studies carried out at a local level that can inform LINKS case assessment;
- Socio-cultural requirements;
- Needs and challenges;
- Gaps;
- Risks and mitigation strategies;
- Expectations.

In Annex I, information on the locations, on the CATs and on the expectations is included. The objectives of the case study, the requirements, the needs, challenges and a more elaborate version of the gaps (if compared to the PTF meetings) perceived by the practitioners need further discussions and alignment with the outcomes from the knowledge bases deliverables. This is the rationale behind the mapping (as in “mapping of the knowledge”) exercise that is currently on-going (February 2021). The results will feed into a workshop that will be held in March 2021 (see: WP2-6 Workshop in D5.1 on the combination of knowledge, mini-milestones included in the co-design phase). This event is a cross WP5-6 activity and has, at its core, an underlying question: how does the knowledge generated in the knowledge base deliverables resonate with the practical knowledge of the practitioners?

The findings will offer more tangible insights into how the theoretical knowledge (WP2-4) and the knowledge of the practitioners can inform the research questions, the learning objectives and materials for the Framework in light of the assessments. Moreover, insights into the similarities and differences between the gaps emerging from the literature and those perceived by the practitioners in different socio-cultural contexts will be thoroughly discussed. As specified in D5.1, the expected outcome of this workshop is to agree on a comprehensive list of needs and gaps structured along thematic areas that will inform, *inter alia*, the case-specific methodological approaches. The outcomes of the workshop will be matched with the objectives at a project and at WP level to ensure alignment with a common vision.

In March 2021, the month of the workshop on the combination of knowledge, informal bi-lateral discussions between academic partners and practitioner organizations involved in the assessments should have taken place already but a more structured approach would be needed. This entails organizing monthly or bi-monthly meetings chaired by the academic partners to “test their assumptions” and the main findings described in the knowledge base deliverables as well as to explore potential methodological approaches with the practitioners. Such discussions have already taken place in the drafting of the first knowledge base deliverables (D2.1, D2.2, D3.1, D4.1), where research partners held seminars with the local practitioner partners to explain, discuss and validate

the results and ideas coming from the deliverables in more operational contexts. While these activities general fall under the efforts of WP2-4, WP6 will help to facilitate this planning process in the early stages. A structured approach is key to contextualising the findings in the countries in which the case assessments will take place. Those discussions shall take place either before or after the workshop. They will serve as input for the workshop and the latter will be an important input for the methodological deliverables due for submission in May 2021. In parallel with this activity, a “methodological taskforce” will be organized under the responsibility of WP2 and WP3. The methodological taskforce is complementary to the consultation process described above carried out by WP6. The main difference between the two is that the taskforce involves core partners across all cases, while the bi-lateral discussions facilitated, as needed, by WP6 involve the CATs in each country. Both are deemed to be important to develop the methodologies for the case-based assessment of the Framework. Monthly or bi-monthly meetings will start in March 2021 and will involve all partners. The discussions on the methodological implications for the assessments should go hand-in-hand with the engagement in the methodological discussions (WP2-4) described in D5.1. The discussions that will lead to D2.3, D3.2 and D4.2 are crucial both for the development of the LINKS Framework for the assessments as such.

As described in D5.1, after the WP5-6 workshop, the identification of the learning objectives shall start. The case-specific learning objectives (the third level of learning outlined in D5.1) shall be discussed within the CATs based on case-specific requirements, overall objectives, learning needs and expectations. At a later stage, the learning objectives in each case will be matched with the LINKS Framework learning (see also D5.1) model to ensure alignment.

It is foreseen the CATs will start working on a planning document (“Case Assessment Plan” which is one of the last important mini-milestone in the first phase) including all the preparatory activities needed in each case. Those activities range, for instance, from logistics to a list of stakeholders that will be involved in the assessment (to be decided with WP8), from a detailed timeline of the assessment to preparatory meetings that will be needed to collect information or to address potential challenges before they turn into problems. The template for the Case Assessment Plan will be provided by WP6 in May 2021 and the main elements included in the template will be agreed upon with WP2-8. The template will be the same in all cases and will facilitate the actual planning: CATs will be responsible for updating it. A few key information, as specified in the following section, must be included by June-July 2021.

Given the role of the LCC for the Framework and its assessment in local cases, the discussions with WP7 that started in November-December 2020 must continue with a specific focus on how the stakeholders involved in the assessments will exchange their experiences and lessons learned through the LCC.

It can be envisaged that the LCC will not be used in the first round of assessments. However, a draft plan shall be agreed upon in this phase based also on the case-specific learning objectives and on

the learning objectives from a technical point of view concerning the use of the LCC (level 3 and level 4 mentioned in D5.1). A structured decision-making process must be followed and conceptual aspects regarding which processes the LCC will facilitate should be discussed.

As mentioned in D5.1, some key decisions must be taken before the submission D7.2 (Concepts of the LINKS Community Center). Not all these decisions should be made by May 2021, when D7.2 will be delivered.

In parallel to all these activities, synergies with WP8 must be ensured to decide the specific objectives of the LINKS Community Workshops (LCWs) in relation to the cases and to decide the implications of the stakeholder analysis for the assessments. A WP5-8 meeting will be organized in April 2021 to discuss how to best engage with different stakeholders and to agree on a LCWs targeted strategy for the five cases.

Table 1: Plan and co-design phase

| Steps: plan and co-design phase | Partners | Inputs | Outputs / mini-milestones | Risks | Mitigation strategies |
|---|----------|---|--|---|--|
| Consultation process with partners involved in the case-based assessments (bi-lateral discussions between academic partners and practitioners) | WP2-6 | Notes from the PTF meetings, findings from the workshops carried out between September 2020 and March 2021) | Decisions and actions following bi-lateral discussions | <p>Mismatch between expectations and what can be realistically achieved (and how) through the assessments;</p> <p>Lack of alignment between academic partners and practitioners;</p> <p>T6.2 sub-leaders working in silos due to different roles and responsibilities in the CATs (some organisations wear the “double hats” of</p> | <p>Discuss bi-laterally with partners to address potential mismatches before the workshop on the combination of knowledge (March 2021);</p> <p>WP2-3 “methodological taskforce” mitigates those risks.</p> <p>Organise bi-lateral discussions with organisations wearing “double hats” (practitioners and researchers)</p> |

| | | | | | |
|--|--------------------------|---|---|--|--|
| | | | | practitioners and researchers) | |
| Planning | VU (lead) WP2-6 partners | Case Assessment Plan provided by VU (May 2021) | Template updated (living document). | Challenges in planning in advance due to a lack of clear indications on the Framework and on the methods | Ensure a common vision at project level as well as WP level. A “Vision Workshop” to discuss the high level methodological aspects in the project was carried out in February 2021. |
| The Framework and the LCC | VU with WP7 | WP5-7 meetings | Outcomes of the meetings | Poor synergies between WP5 and WP7 | Structured decision-making process in place from April 2021 on. |
| LCWs, stakeholder mapping, and the case assessments | WP5-8 | Objectives, needs and expectations in each case | WP5-8 meeting (April 2021). Findings of the meeting | Lack of clarity with regards to how the LCWs can be instrumental for the cases. | Draft a document based on the findings of the meeting to agree on the way forward. Decide a joint WP5-WP8 roadmap, as necessary. |

Figure 6: Timeline and mini- milestones of the plan and co-design phase



Source: Authors contribution

3.1.2 Preparation phase: ensuring a robust case-based assessment (June 2021-November 2021)

Key elements within the research design for the assessments (i.e. research questions, the gaps and the methods to test the assumptions identified in the KB and around the learning dimensions to be addressed by the Framework) will be identified in the co-design phase, before June 2021. Following this, the preparatory phase deals with combining methodological and case-specific decisions to enable robust case assessments. Strong synergies with WP2-4 are needed here as robustness is directly related to the overall methodological approach and the research instruments to evaluate the Framework. Ultimately, this phase will lead to the evaluation guidelines and the templates for reporting that will be included in D6.2 in November 2021. To get to the guidelines and the templates, the following steps are foreseen:

- Analysing the outcomes of the Research Design Workshop (V1) and of the LINKS for Learning Workshop (See: D5.1). Both workshops will be informed by the methodological deliverables (D2.3, D3.2 and D4.2). The first workshop will be held in June 2021 with the aim of discussing the research design in each case related to the knowledge bases, while the second will be held in July with the aim of the presenting the overall learning approach of the project to all partners;
- Deciding the overall case- based assessment approach;
- Deciding the learning needs and learning objectives in each case (learning level 3, see D5:1);

- Matching the general learning objectives of the LINKS Framework with the learning needs and objectives of the practitioners involved in the case assessments (cross WP5-6: see D5-1);
- Revising the specific objectives in each case;
- Carrying out specific preparatory activities in each case, as needed (e.g. collecting additional information for the assessment, organizing ad-hoc LCWs with the support of WP8 etc.);
- Setting KPIs in each case;
- Deciding the detailed timeline for the assessments in each country and, if needed, agreeing on a Covid-19 mitigation plan;
- Deciding, together with WP2-5, which data should be collected during the first round of assessments;
- Preparing the evaluation guidelines and the template for reporting on the data;
- Delivering D6.2.

The main elements of this phase are depicted in the figure below:

Figure 7: Main elements of the preparation phase



Source: Authors contribution

While the most important task in the development and consolidation phase for the Framework is to develop a coherent research design based on inputs from the methodological deliverables (D2.3; D3.2; D4.2), the key task to ensure a sound case assessments is to provide the evaluation guidelines

based on the research design. Practically, this entails both providing general guidelines and ad-hoc instructions per each case. To do this, two important activities planned in the frame WP5 will be taken into account:

1. The findings of the Research Design Workshop (V1) – June 2021
2. The findings of the Framework for Learning Workshop – July 2021

These two workshops will provide indications on the types of guidelines and template needed.

Before drafting the evaluation guidelines, the overall approach to evaluation, which depends on the main objectives of the project, must be decided. In other words, it is essential to understand what will be evaluated in the assessments based on the assumptions, research questions and gaps already identified in the methodologies and on LINKS learning model (defined in WP5: see D5.1), and how the results from the assessments will feed into it. In the first case-based assessment, the research design (assumptions, research questions and gaps) will be evaluated. The layers of this first evaluation round shall be decided in the preparation phase.

It is worth noticing that the LINKS Framework will be evaluated **through the cases**: the word “assessment” refers to the Framework and not to the cases as such.

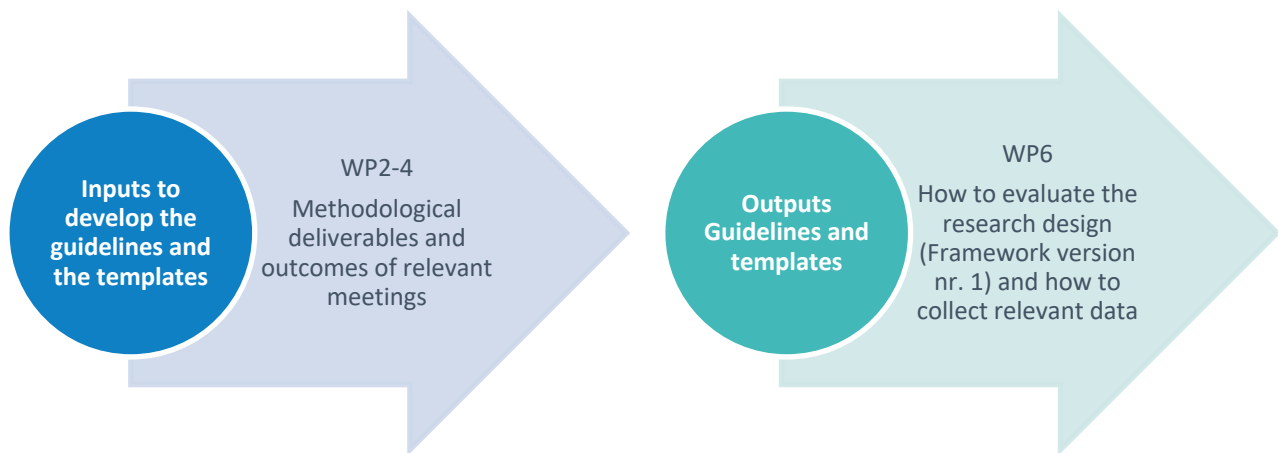
The learning needs and the learning objectives in each case must be discussed within the CATs and included in the Case Assessment Plan by July 2021 (mini-milestone). This should be done in parallel with a revision of the objectives in each case. At this stage, a revision of the objectives originally included in the Case Assessment Template, will be needed due to discussions, decisions and outcomes of previous activities. The development of the templates to report on the data collected in each case depend on which methods and which data will be needed. This will be discussed and decided in a follow-up meeting (after the three workshops mentioned above) with WP2-4 leaders (mini-milestone: July 2021).

From July 2021 on two parallel processes will be carried out:

- The development of the guidelines and of the templates (WP6 leader with the support of WP2-4);
- Case-specific decisions and activities (CATs).

In terms of roles and responsibilities for the development of the guidelines and of the templates, the following work flow will be implemented:

Figure 8: Work flow to prepare the evaluation guidelines and the templates for the assessments



Source: Authors contribution

For case-specific activities and decisions, mini-milestones cannot be set at this stage as the Covid-19 related uncertainties do not allow for a detailed planning at the moment. Moreover, each case team should figure out how to best organize (e.g. monthly or bi-monthly meetings, brainstorming sessions, *ad-hoc* workshops etc.). While both bi-lateral discussions mentioned in the previous phase and the first meetings to work on the Case Assessment Plan, will be co-organized with VU, it is important that the teams in each country start working independently with less involvement at WP leader level and more involvement as at sub-task leaders level (T6.2).

At the time of writing (January 2020), even the timeline for the case-based assessments is tentative³ and it is foreseen that some of the preparation activities will also be tentative, meaning that deciding between the use of, for example, traditional (non-mediated) participatory methods or mediated forms of assessments may vary across countries and/or may require significant adjustments in the work plan.

However, in addition to the learning needs, the learning objectives and the overall objectives per case, all CATs must focus their efforts in deciding by September 2021 at the latest, the following important elements:

- Whether they need additional information that can be helpful for the assessments. Some partners may be ready to carry out this step in the design phase but inputs from the methodological deliverables will be needed to specify their needs for more information. The collection of relevant information can be of different nature: from interviews with

³ While it is envisaged that the Framework will be evaluated in five countries between November 2021 and March 2022, some evaluation-related activities can start earlier as needed and if possible based also on the development stage of the research instruments and on the preparatory activities of the teams.

relevant stakeholders in the local communities to data collected in previous exploratory studies in the area etc. This activity will be done with the support of WP8;

- Setting KPIs in each case. The KPIs in each case can be set only after critical decisions are taken (objectives, requirements etc.). The KPIs should be decided by the overall case assessment team with the support of the WP6 leader.

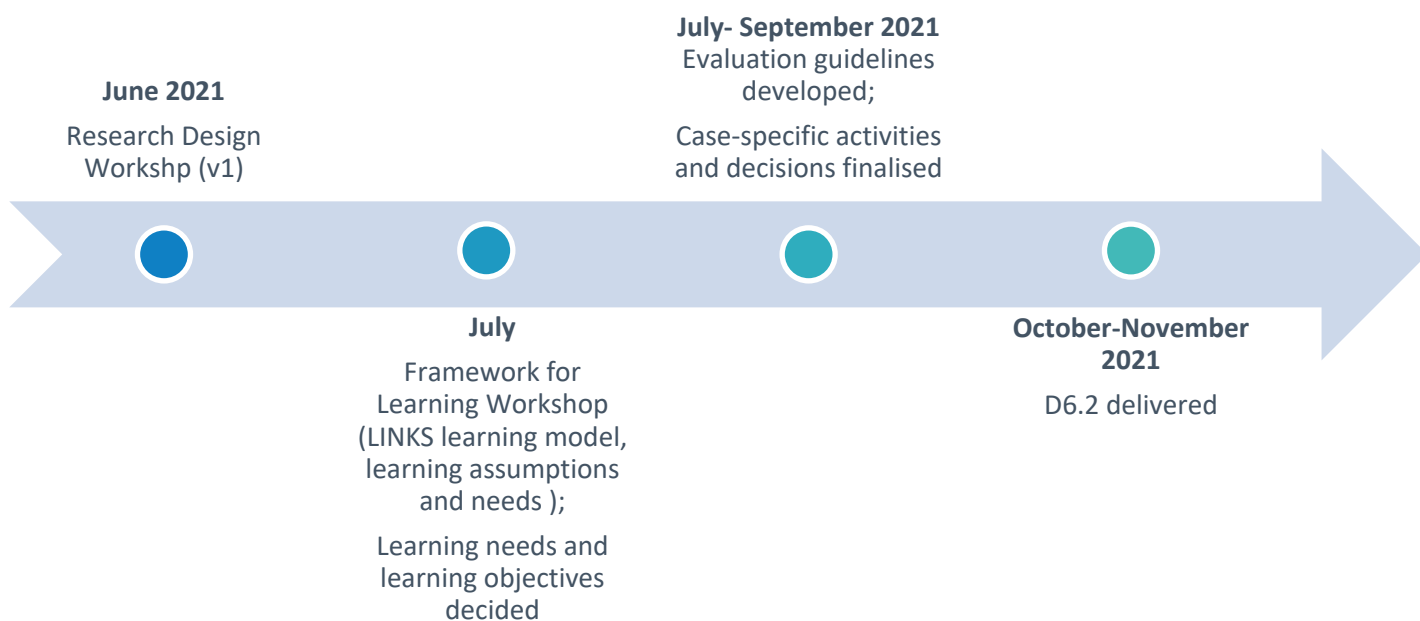
In October 2021 a draft version of the Framework (D5.2) will be shared internally. Alongside the Framework, the updated version of this work plan will also be shared in advance.

Table 2: Preparation phase

| Steps: preparation phase | Partners | Inputs | Outputs / mini-milestones | Risks | Mitigation strategies |
|---|----------|--|---|---|--|
| Overall approach to the case-based assessments | WP2-6 | Preparatory activities and outcomes of the Framework for Learning Workshop D2.3; D3.2; D4.2 | Evaluation guidelines | Challenges in identifying the approach; mismatch between what will be evaluated in the assessments and the overall approach to evaluation in the project | Escalate at coordination level and deal with potential challenges in the preparatory activities of the workshops |
| Methods and data in each case | WP2-6 | D2.3; D3.2; D4.2 | Findings of the follow-up meeting with WP2-4 leaders (July 2021) Template to report on data collected in each case | Template not ready before the first round of assessments | The follow-up meeting is a mitigation strategy. Potential challenges must be dealt with during that meeting. |
| Deciding learning needs and learning objectives in | CATs | Learning levels 1 and 2 – related activities to ensure | Learning needs and objectives included in the Case Assessment | Mismatch between level 1-2 and level 3 of learning | Dealt with in WP5 (see D5.1 - Development and |

| | | | | | |
|--|----|--|--|--|---|
| each case (level 3 of learning) | | alignment (see D.5.1) | Plan by July 2021 to be done in parallel with a revision of the objectives | | Consolidation phase) |
| Provide evaluation guidelines and templates for reporting | VU | D2.3, D3.2, D4.2 Findings of the Research Design Workshop (V1, June 2021 and of the Framework for Learning Workshop, July 2021 : see D5.1); Case assessment plans Detailed planning | D6.2 (draft version ready in October) | Delays in delivery the draft version internally. | Deliver a “lighter” version: e.g. PPT presentation with the evaluation guidelines |

Figure 9: Timeline and mini-milestones of the preparation phase



Source: Authors contribution

3.1.3 First case-based assessment: the Framework applied (November 2021-May 2022):

As mentioned in the previous section, the timeline for the case assessments can only be tentative at this stage due to both the Covid-19 related uncertainties and the timeline of the project as such. With the methodological deliverables due in May 2021, a detailed planning cannot be provided in this deliverable. Moreover, tools and instruments to carry out the assessments, as specified in 0, will be included in D6.2 due in November 2021.

In this phase, the assumptions decided in the previous phase will be assessed in four countries through the following scenarios:

- Flooding in Denmark;
- Drought and terrorism in Germany;
- Earthquake in Italy;
- Industrial hazards in The Netherlands.

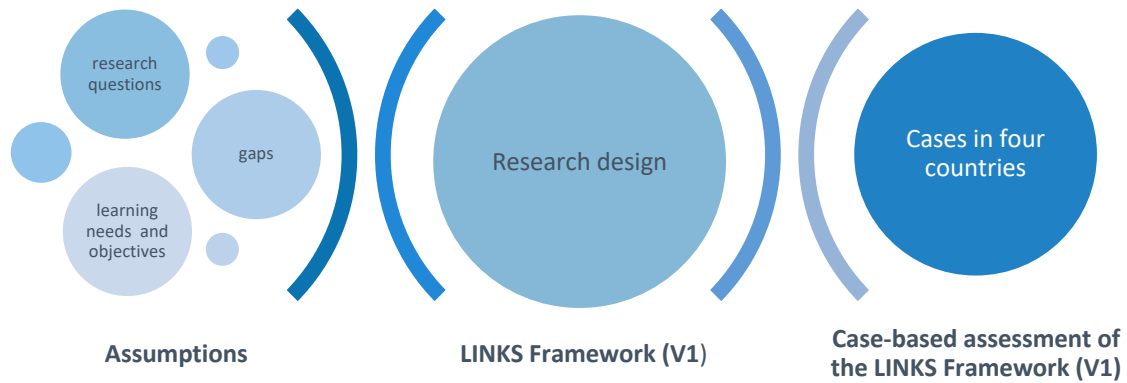
The scenarios are instrumental to the cases, not the other way round, meaning that the context is different from a crisis management exercise in which the performance of the teams is assessed through a scenario. The latter, in LINKS cases, serves as an input to address the assumptions and to discuss, using participatory approaches, with relevant stakeholders.

The tentative timeline for the evaluation in local cases goes from November 2021 to March 2022. This tentative plan does not imply that the cases will be carried out sequentially nor that some cases, if CATs are ready, cannot start before November 2021. However, the cases can take place only until March 2022 at the very latest, as explained below.

It can be envisaged some cases will happen at the same time (e.g. focus groups organized in November both in Denmark and in Italy), while others will spread the activities based on the availability of the stakeholders (e.g. interviews and focus groups carried out in different months). It can also be envisaged that in some countries the Covid-19 restrictions will not allow for face-to-face meetings and on-line interviews will be used. Nevertheless, decisions on “when” and “how” must be taken in the preparation phase.

The key elements for the evaluation of the first version of the Framework are captured in the figure below:

Figure 10: Main elements of the first case-based assessment



Source: Authors contribution

The activities that will take place in each country between November and March are the following:

1. Assessing the research design in local cases (step: data collection) based on the decisions taken in the preparation phases and on D2.3, 3.2 and 4.2, on using the evaluation guidelines and the templates included in D6.2;
2. One month after the assessments in the local context, T6.2 sub-leaders must send a report, detailing the case results to WP6 leader. This means that the last assessment shall take place no later than early March 2022;
3. WP6 leader will consolidate the case reports into one LINKS case report (D6.4 due in May 2022);
4. The case report will be transferred to WPL 2-4;
5. The data in the case report will be analyzed in T.2.4, T3.3 and T4.3 and transferred to WP5 for the development of the second version of the Framework. It should be noted that "data" here refer to the evaluation of the research design.

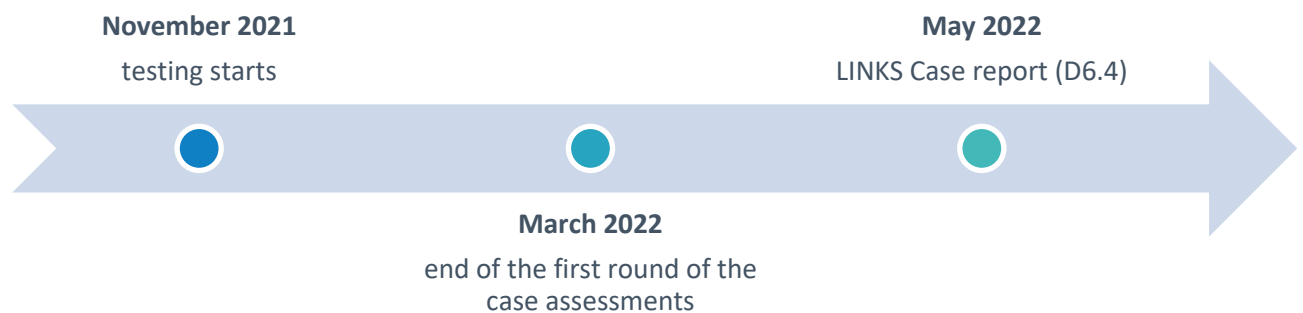
In this phase, the mini-milestones are the case results that should be sent to WP6 leader by March 2022.

Table 3: First case-based assessment

| Steps: evaluation phase | Partners | Inputs | Outputs / mini-milestones | Risks | Mitigation strategies |
|-------------------------|----------|--------|---------------------------|-------|-----------------------|
|-------------------------|----------|--------|---------------------------|-------|-----------------------|

| | | | | | |
|--|-----------------------|--------------------------------------|---|--|--|
| Data collection | T6.2 sub-task leaders | D2.3 D3.2 D4.2 D5.1 D6.2 | Local case reports sent to WP6 leader by March 2022 | Delay in delivering the local case reports | Mitigation strategies should be put in place in the preparation phase: plan a realistic evaluation, systematic and well structured, contact local stakeholders well in advance, involve the methodological PoC in all key decisions. |
| Consolidation of the case reports | VU | Local case reports | D6.4 First LINKS Case Report (May 2022) | Delays in delivering D6.4 | Ensure that case reports are sent maximum one month after the end of the local assessment |

Figure 11: Timeline for the first case-based assessment



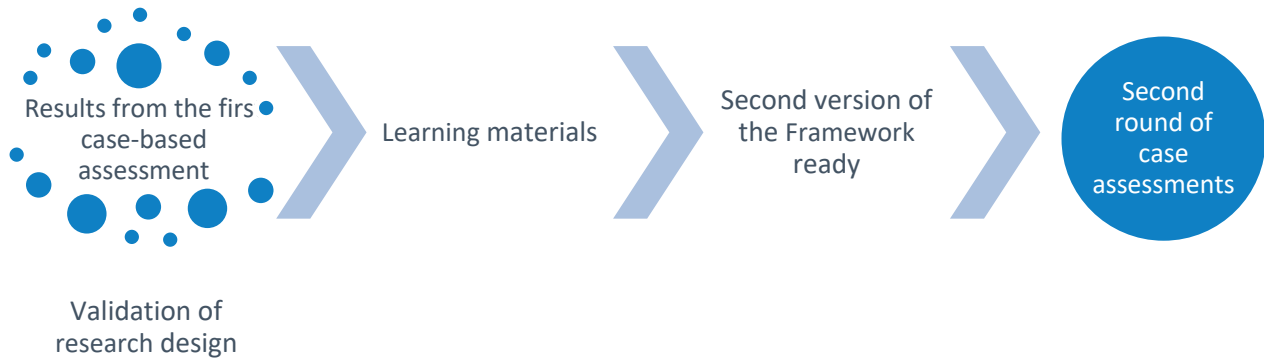
Source: Authors contribution

3.1.4 Preparation for the second case-based assessment (May 2022- November 2022)

The preparation for the second case-based assessment critically depends on the analysis coming from T2.4, T3.3, T4.3, from methodological deliverables due in September 2022 and from the development of second version of the Framework. Since the overall aim of the second iteration differs from the first (from testing assumptions to assessing learning materials), a revision of case-specific KPIs as well as adjustment of the objectives in each case will be needed. It is worth noticing that the second version will be evaluated and validated within a broader EU and international context: the associate partners will play an important role here.

The main elements of the to prepare for the second round of assessments are included in the figure below:

Figure 12: Towards the second round of assessments



Source: Authors contribution

This phase consists of the following steps:

- Analysing inputs from T2.3, T3.3 and T4.3 on the first case-based assessments;
- Engaging in discussions with WP2-4 to understand the implications on the results for the methods that will be applied in the second round of assessments; providing inputs to the second version of methodological deliverables;
- Providing input to the CATs based on the LINKS Framework: the way forward workshop organized by WP5 in July 2022 (see: D5.1);
- Re-assessing users' expectations and needs based on D6.4;
- Engaging in discussions with WP7 on the use of the LCC in the second iteration of the cases;
- Preparing new evaluation guidelines and templates that will be included in the third work plan for the case assessments (D6.3) due in November 2022.

As for CATs specific-related activities, the steps are similar to those identified in the preparation phase:

- Preparing a detailed planning;
- Reconsidering the KPIs based on the outcomes of the first iteration and on the goal of the second round of assessments;
- Working with WP8 to identify the local stakeholders who will be involved in assessing the second version of the Framework. Depending on broader methodological considerations, they can be the same pool of stakeholders or some changes would be needed.

The inputs from T2.4, T3.3 and T4.3 on the first evaluation of the LINKS Framework should be submitted by WP2-4 leaders to VU in September 2022 at the latest. This will allow for proper planning both with regards to the development of the second version of the Framework and as far as the second assessments are concerned. Inputs from WP6 to WP2-4 are also needed to ensure coherence and alignment in the second versions of the methodological deliverables.

Clear directions should be given to all teams involved in the assessments. Directions should come both internally (from the sub task leader) and “externally”, meaning from WP6 leader who is not directly involved in the discussions at case teams’ level, with the exception of the case assessment carried out in the Netherlands. The overall leadership falls under the responsibility of WP6 leader. To ensure a systematic and structured transfer of lessons learned and directions bi-lateral discussions will be carried out (in addition to workshops).

Indications on research instruments should be given already at this stage and a workshop (research instrument workshop version 2) on this involving all relevant stakeholders must be organised in between July and August, one month before the actual delivery of the second version of methodological deliverables.

The role of the LCC in the second round of assessments will be key as the learning materials will be gradually integrated.

The third work plan (D6.3) will be shared internally one month before the actual delivery date to ensure that updated evaluation guidelines and templates for reporting are understood by all partners.

Table 4: Preparation for the second case-based assessment

| Steps: re-assessment and preparation for the second iterations | Partners | Inputs | Outputs / mini-milestones | Risks | Mitigation strategies |
|--|---------------------|----------------|---|-----------------------------------|---|
| Evaluation of the research design (LINKS Framework, V1) | T2.3, T3.3 and T4.3 | D6.4 | Analyses (first assessment) delivered to VU in September 2022 | Delays in submitting the document | Discuss with WP2-4 leaders on how the structure of the analyses and on expectations |
| Directions to the CATs: where we are | WP2-6 leaders | D.6.4 and data | Meeting (July 2022) | Directions are too vague | All WP leaders should be involved in preparing the meeting |

| | | | | | |
|--|----|-------------------|---|--|---|
| heading and why | | analysis document | Minutes of the meeting | | to narrow down objectives and expected outcomes |
| Provide evaluation guidelines and templates for reporting | VU | D2.4 D3.3 D4.3 | D6.3 – draft version shared internally in October | Delays in delivering the second version of the methodological deliverables | Engaging in discussions on the second version of the methodological deliverables to start preparing guidelines before the submission of D2.4, D3.3 and D4.3 |

Figure 13: Timeline for preparing the second case-based assessment



Source: Authors contribution

4. CONCLUSIONS

In this deliverable, a step-by-step approach that paves the way to the assessment of the Framework in five cases is provided. The work plan is structured in phases along the main steps, risks and mitigation strategies and will be applied until November 2021, when a second, more detailed, iteration of the work plan will be delivered together with the first version of the Framework (D5.2). Nevertheless, this document does provide the projected planning for the periods September 2020 – November 2022.

This document goes hand-in-hands with the work plan for the LINKS Framework (D5.1): the two deliverables should be read together as there are important interdependencies between WP5 and WP6. Redundancies between the two deliverables are unavoidable.

D6.2 will be delivered in November 2021 and will include:

- The final timeline for the case-based assessments;
- The evaluation guidelines for carrying out the assessments;
- The template for reporting the data collected in the cases;

All these elements will be shared internally before formal submission.

D6.2 is in LINKS Share Point for all partners to consult and for and the WP leader to update, as necessary.

5. BIBLIOGRAPHY

- Bonati, S. (2020). Vulnerability Knowledge Base. Deliverable 2.1 of *LINKS: Strengthening links between technologies and society for European Disaster Resilience*, funded by the European Union's Horizon 2020 Research and Innovation Programme (No. 883490). <http://links-project.eu/deliverables>
- Fonio, C., Clark, N. (2021). First Work Plan for the five cases. Deliverable 6.1 of *LINKS: Strengthening links between technologies and society for European Disaster Resilience*, funded by the European Union's Horizon 2020 Research and Innovation Programme (No. 883490). <http://links-project.eu/deliverables>
- Habig, T., Lüke, R., Sauerland, T. & Tappe, D. (2020). DCT Knowledge Base – A consolidated understanding of Disaster Community Technologies for social media and crowdsourcing. Deliverable 4.1 of *LINKS: Strengthening links between technologies and society for European Disaster Resilience*, funded by the European Union's Horizon 2020 Research and Innovation Programme (No. 883490). <http://links-project.eu/deliverables>
- Kiehl, M., Lüke, R., Tappe, D., Gelhar, S., Habig, T. & Marterer, R. (2021). Report about the Needs and Potentials of LINKS Community Center. Deliverable 7.1 of *LINKS: Strengthening links between technologies and society for European Disaster Resilience*, funded by the European Union's Horizon 2020 Research and Innovation Programme (No. 883490). <http://links-project.eu/deliverables>
- Nielsen, A., Raju, E. (2020). DMP Knowledge Base - A consolidated understanding of social media and crowd sourcing. Deliverable 3.1 of *LINKS: Strengthening links between technologies and society for European Disaster Resilience*, funded by the European Union's Horizon 2020 Research and Innovation Programme (No. 883490). <http://links-project.eu/deliverables>
- Pazzi, V., Morelli, S., & Bonati, S. (2020). Risk Perception Knowledge Base. Deliverable 2.2. of *LINKS Strengthening links between technologies and society for European Disaster Resilience*, funded by the European Union's Horizon 2020 Research and Innovation Programme (No. 883490). <http://links-project.eu/deliverables>
- Philpot, J., & Reuge, E., (2020). LINKS Community Strategy. Deliverable 8.1 of *LINKS: Strengthening links between technologies and society for European Disaster Resilience*, funded by the European Union's Horizon 2020 Research and Innovation Programme (No. 883490). <http://links-project.eu/deliverables>

6. ANNEXES

6.1 Annex I: Locations, Case Assessment Teams and Practitioners' expectations in each case

A “Case Assessment Template” was shared in November 2020 among the partners involved in the assessments. As outlined in Section 3.1.1, the template was structured around the following key information:

- The main organization responsible for the case assessments;
- The case assessment team (CATs), namely all relevant point of contacts (PoC) as far as the overall coordination, application of the methodology, logistics, stakeholders coordination, safety, dissemination, ethics and integrity.
- The objectives of the case study;
- Existing studies carried out at a local level that can inform LINKS case assessment;
- Socio-cultural requirements;
- Needs and challenges;
- Gaps;
- Risks and mitigation strategies;
- Expectations.

In the following table, information on the locations, on the CATs and on the expectations is included.

With regards to the roles of the CATs:

- The case coordinator is the person responsible for the overall proper planning and execution of the case;
- The methodological PoC is the partner responsible for the application of the methodology (for instance, ensuring that a focus group is carried out in a methodologically sound way);
- The logistics PoC takes care of all logistics-related aspects (for example, booking rooms for interviews);
- The stakeholders coordinator deals – in collaboration with WP8 – with the local stakeholders who will be involved in the assessments;
- The safety PoC is responsible for the safety of the participants;
- The person responsible for dissemination takes care – in collaboration with WP9 – of dissemination-activities at local level;
- For the ethics and integrity of the assessments, the CATs are supported by the project coordinator.

It should be noted that:

- this is **only snap shot of raw data used for illustrative purpose** and the information provided by the partners can change in the course of project, also due to Covid-19 related uncertainties;
- Partners can fulfill multiple roles.

The complete results will feed into the mapping exercise (see: D5.1) and presented at the WP2-6 workshop in March 2021:

Table 5: Information on the cases⁴

| Country | Location(s) | Main organisation responsible for the case assessments | Case assessment teams (CATs) | Expectations |
|---------|---------------|--|---|---|
| Denmark | Frederiksberg | UCC | Case coordinator: Nina Blom Andersen (UCC) Methodological PoC: Anne Bach Nielsen (UCPH) Logistics PoC: Nina Blom Andersen Stakeholders PoC: Nina Blom Andersen Safety PoC: Greater Copenhagen Fire Brigade | The study will improve the Danish practitioners' ability to apply SMCS in a crisis. This involves the organizations' abilities to coordinate and share information to other stakeholder organisations but not least to improve public awareness, engagement and preparedness in the local communities. This involves a specific focus on vulnerable groups who need special help and attention |

⁴ Some entities are assuming multiple partner roles in the project (for example SIC and DhPol). The assignment of responsibilities cannot be decided at this stage and it will be done in the preparation phase.

| | | | | |
|----------------------------|--|-------|--|--|
| | | | Ethics and Integrity: Nina Blom Andersen, (UCC) | |
| Germany (drought) | Paderborn and online, other locations under discussion | SIC | Case coordinator: Therese Habig (SIC) Methodological PoC: Therese Habig (SIC) | Better understanding of (positive and negative) impact of SMCS: - support the use and management of data during and before an event (train people, test technologies etc.); - communication strategies with citizens to improve the communication in both directions |
| Germany (terrorism) | Munich, Hanau, Halle, and/or Berlin workshops are likely to be held locally in Münster (or online) | DhPol | Case coordinator: Annika Hamachers (DhPol) Methodological PoC: Annika Hamachers Logistics PoC: Annika Hamachers Stakeholders PoC: Fabian Rosenkranz (DhPol) Safety PoC: Stefan Jarolimek (DhPol) | A better network structure/approach to networked communication with relevant stakeholders; Best practices modes for structures, strategies - internal and external - to provide orientation within an ongoing operation, integration of VOST teams, contribution to digital warning infrastructures (e.g. warning apps) |

| | | | | |
|-------------------------------|--|--------------|--|--|
| <p>Italy</p> | <p>Arrone Ferentillo Montefranco Polino (Umbria region)</p> | <p>UNIFI</p> | <p>Case coordinator: Francesco Graziani (SCIT), Sara Bonati (UNIFI)</p> <p>Methodological PoC: Sara Bonati (UNIFI)</p> <p>Logistics: Fulvio Toseroni (PDT)</p> <p>Stakeholders PoC: Ilaria Venturi, Fulvio Toseroni</p> <p>Safety PoC: Fulvio Toseroni</p> <p>Dissemination: Francesco Graziani (SCIT), UNIFI</p> <p>Ethics and Integrity: Francesco Graziani (SCIT) (with VU)</p> | <p>To create a more resilient community through the use of targeted DRR approaches and the promotion of social connectivity, particularly supportive of the most vulnerable population groups such as elderly people, young people and foreigners;</p> <p>To promote active participation and inclusion in the DRR processes especially of the most marginalized/excluded groups;</p> <p>To promote a more efficient use of resources and social media in DRR processes to build more resilient communities.</p> |
| <p>The Netherlands</p> | <p>Chemelot Stein</p> | <p>ST</p> | <p>Case coordinator: Jan Starmans (ST)</p> <p>Methodological PoC: Kees Boersma (VU)</p> <p>Logistics PoC: Judy op het Veld (ST)</p> | <p>Involve local communities;</p> <p>Further improve collaboration between private and public organisations;</p> <p>Look for sustainable (online) solutions</p> <p>Implementation of a two-way communication with a heterogeneous group of</p> |



| | | | | |
|--|------|--|--|--|
| | Beek | | <p>Stakeholders PoC: Mick Claessen (VRZL); Judy op het Veld Stakeholders(ST)</p> <p>Dissemination: Mick Claessen (VRZT); Judy op het Veld</p> <p>Stakeholders(ST) Safety PoC: Jan Starmans (ST) Ethics: Nathan Clarke (VU)</p> | representatives from the local communities |
|--|------|--|--|--|