Union Civil Protection Mechanism (UCPM)

Progress Report

Version 1.0
23 February 2021

IMPORTANT NOTICE

What is a progress report?

Progress reports are deliverables which are sometimes requested at mid-term (or other crucial points in the project) if there is a long time-span without reporting.

The report (+ annexes) must be prepared (by all beneficiaries together) and uploaded on the Funding & Tenders Portal Grant Management System Continuous Reporting Deliverables screen.

Progress reports should NOT be confused with periodic reports. Periodic reports are linked to payments, progress reports are not.

COVER PAGE

PROJECT	
Project number:	[101140345]
Project acronym:	[SAFE-LAND]
Project name:	[MITIGATING THE RISK OF FLOODING AND LANDSLIDES VIA ARTIFICIAL INTELLIGENCE WITH A VIEW TO EXTREME CLIMATE EVENTS]
Project starting date:	[12/02/2024]
Project duration:	[24]

PERIOD COVERED	
⚠ *Please note that this is only a progress report. The information in this report must also be included in the next periodic report/final report.*	
Period covered *(from last periodic report):*	from [12/02/2024] to [11/11/2024]

TABLE OF CONTENTS

COVER PAGE 3
1. MILESTONES, DELIVERABLES AND CRITICAL RISKS 4
2. OVERVIEW OF THE PROGRESS AND ACTIVITIES 5
3. BUDGET IMPLEMENTATION 18
ANNEXES 19

1. MILESTONES, DELIVERABLES AND CRITICAL RISKS

Deliverables and milestones (outputs/outcomes)	YES/NO
We confirm that we updated the following Continuous Reporting screens: ● Deliverables ● Milestones	YES

Critical risks	YES/NO
We confirm that we have reviewed and updated, as relevant, the following Continuous Reporting screen: ● Critical risks	YES

2. OVERVIEW OF THE PROGRESS AND ACTIVITIES

Overview of the progress and activities

Please summarise progress in the implementation of the activities explaining how these will contribute to achieving the project objectives.

Elaborate on any emerging issue that may affect the implementation of the project and/or the achievement of its objectives.

The activities performed during the reporting period (from 12/02/2024 to 11/11/2024) and their contribution to achieve the objectives of each WP planned to start in the reporting period (see timetable) are described herein.

WP1

Task 1.1: Start-up activities

The kick-off meeting (KoM) was organised on April 9, 2024 in the eCampus headquarter in Rome (Italy). All the partners (14 project team members), together with 14 stakeholders (external experts and decision makers) attended the meeting in presence, and 37 participated in the meeting online. In particular, the following Institutions representatives attended the meeting with a presentation:

- one delegate of the Italian Minister for Civil Protection and Maritime Policies;
- two delegates if the Italian National Civil Protection - Office of technical-scientific activities for risk prediction and prevention;
- one delegate of the Umbria Region Civil Protection;
- two General Secretaries of the Italian regional Basin Authorities (Northern Apennines Basin Authority and Southern Apennines Basin Authority);
- one Policy Advisor at European Parliament (with a recorded video);
- four representatives of academic and research Italian Institutes.

During the KoM, the project coordinator presented the SAFE-LAND project, and the representatives of the partnership presented their institutions and their planned activities in the project. The minutes of the KoM constitute deliverable D1.1.

On April 9, 2024 after the KoM, each partner appointed a Steering Committee (SC) member and the first meeting of the SC took place. Members of the SC are: Elisabetta Cattoni and Francesco Focacci (eCampus), Francesco Pistolesi (UNIPI), Ida Kovač (MED), and Zorica Markovic (MUP).

The Steering Committee meeting has been organised with the following agenda:

- work plan of the activities;

- administrative issues and sharing of models and templates to be used;

- first tentative plan of the communication activities.

The minutes of the SC meeting are reported in Annex 1. All the partners had the possibility to make amendments or observations to the minutes of the meeting before consolidating the final version.

During the meeting, a draft of the project work plan was agreed among all the partners and approved. The project work plan (D1.2) contains the list of deliverables to be produced, the release date, the responsible person for each partner. During the SC meeting, the email address of the project and the location of a shared folder where relevant documents are stored were communicated to all the partners. All official documents of the SAFE-LAND project, technical documents divided per WP, templates that can be used for reporting issues and for public evidence procedures were stored in the folder

All the partners had the official mailing list of the whole consortium including experts and technical staff not present during the KoM in Rome. A project account has been created:

safe.land@uniecampus.it that all the staff of the Lead Partner have access to in order to give fast feedback to any requests.

Task 1.2: Coordination and internal monitoring

During the reporting period, in addition to the meetings described in the previous paragraph (Task 1.1), the following Technical and Steering committee meetings took place.

- On October 3rd, 2024, at the end of the conference "*Crisis Management and Strengthening the Civil Protection System*" a technical meeting of eCampus and MED had taken place in Čakovec (Croatia), in order to share information about the parameters characterising the reference areas/climate events that have to be known to select the real area (case study) in Croatia. The minutes of the technical meeting are reported in Annex 2.
- On 6 November, 2024, at the end of the daily activities of the first day of the *2024 Europe and Central Asia Regional Platform for Disaster Risk Reduction* organized by United Nations Office for Disaster Risk Reduction (UNDRR) in Budva (Montenegro), a technical meeting took place in hybrid format, with the aim to establish all the technical parameters to select the elements (slopes, rivers and people) of the case studies in Croatia, Italy, and Montenegro, and the expected climate events. The minutes of the technical meeting are reported in Annex 3.
- On 6 November, 2024, at the end of the technical meeting, the second Steering Committee meeting took place in Budva (Montenegro) to monitor the results achieved by the project at November 2024, focusing on the deliverables already delivered and the milestones already reached, and on the percentage of completion of the activities for each WP (see details in Annex 3).

The involvement of the staff in carrying out the project activities for each partner of the consortium is reported below.

eCampus

During the reporting period, recruitment activities were carried out.

A call for recruitment of two Junior Experts (Researchers) was published by eCampus on November 21, 2023. The first procedure had three applicants and Ignacio Giomi was recruited. He entered into force on June 3, 2024. The second procedure had two applicants and Salvatore Verre was recruited. He entered into force on April 2, 2024.

A comparative selection procedure has been launched by the eCampus administrative department in order to select an external expert to support the whole consortium and the lead partner, in particular, for administrative, financial and reporting issues. The expert selected was Milena Rosa, the contract entered in force on 12/02/2024 and will last until 11/02/2026.

Personnels from the eCampus University are working on project implementation. They were appointed as follows:

WP 1: PROJECT MANAGEMENT = Project coordinator (all WPs)–Elisabetta Cattoni, Francesco Focacci (WPs 1, 3 and 6), and the recruited expert Milena Rosa (WPs 1, 2).

WP 2: COMMUNICATION = Project coordinator (all WPs)-Elisabetta Cattoni, Evelina Volpe (WPs 2, 3, 4, 5, 6), Elena Camisasca (WPs 2, 3, 4, 5, 6), and the recruited expert Milena Rosa (WPs 1, 2).

WP 3: HYDROGEOLOGICAL RISK ASSESSMENT, EVALUATION OF PEOPLE'S RISK AWARENESS, AND GUIDELINES FOR REFERENCE AREAS = Project coordinator (all WPs)-Elisabetta Cattoni, Francesco Focacci (WPs 1, 3 and 6), Evelina Volpe (WPs 2, 3, 4, 5, 6), Fabrizio Comodini (WPs 3, 6), Elena Camisasca (WPs 2, 3, 4, 5, 6), the two recruited researchers Ignacio Giomi and Salvatore Verre (WPs 3, 4, 5, 6), and Yaser Peiro, a PhD student of eCampus university.

WP 4: TRUSTWORTHY AI FOR HYDROGEOLOGICAL RISK ASSESSMENT AND EVALUATION OF PEOPLE'S RISK AWARENESS OF EXISTING AREAS = Project

coordinator (all WPs)-Elisabetta Cattoni, Evelina Volpe (WPs 2, 3, 4, 5, 6), Elena Camisasca (WPs 2, 3, 4, 5, 6), and the two recruited researchers Ignacio Giomi and Salvatore Verre (WPs 3, 4, 5, 6).

WP 5: GUIDELINES ON RISK MANAGEMENT PLANNING AND ON RISK AWARENESS FOR EXISTING AREAS = Project coordinator (all WPs)-Elisabetta Cattoni, Evelina Volpe (WPs 2, 3, 4, 5, 6), Elena Camisasca (WPs 2, 3, 4, 5, 6), and the two recruited researchers Ignacio Giomi and Salvatore Verre (WPs 3, 4, 5, 6).

WP 6: APPLICATION TO PILOT AREAS = Project coordinator (all WPs)-Elisabetta Cattoni, Francesco Focacci (WPs 1, 3 and 6), Evelina Volpe (WPs 2, 3, 4, 5, 6), Fabrizio Comodini (WPs 3, 6), Elena Camisasca (WPs 2, 3, 4, 5, 6), the two recruited researchers Ignacio Giomi and Salvatore Verre (WPs 3, 4, 5, 6), and Yaser Peiro, a PhD student of eCampus university.

During the reporting period, equipment was purchased (see details in Sect. 3).

UNIPI

A call to recruit one Junior Expert was published by the Department of Information Engineering of the University of Pisa on Mar. 11, 2024. Dr. Matteo Mugnai was recruited on Apr. 22, 2024.

Currently, the personnel working on the project is as follows:

WP 1: PROJECT MANAGEMENT = Francesco Pistolesi.

WP 3: HYDROGEOLOGICAL RISK ASSESSMENT, EVALUATION OF PEOPLE'S RISK AWARENESS, AND GUIDELINES FOR REFERENCE AREAS = Francesco Pistolesi, Stefano Pagliara, Michele Palermo.

WP 4: TRUSTWORTHY AI FOR HYDROGEOLOGICAL RISK ASSESSMENT AND EVALUATION OF PEOPLE'S RISK AWARENESS OF EXISTING AREAS = Francesco Pistolesi, Stefano Pagliara, Michele Palermo, Giuseppina Sgandurra.

Throughout the first nine months, UNIPI purchased equipment as indicated in Section 3.

MED

Four employees from Medjimurje County are working on the project implementation:

WP1: PROJECT MANAGEMENT = Project manger - Ida Kovač

WP2: COMMUNICATION - Project manager - Ida Kovač and project administrator Marija Stanković

WP6: APPLICATION TO PILOT AREAS - Project manager - Ida Kovač, senior experts Irena Novak Vabec and Alan Resman

MUP

Employees from the MUP are working on project implementation. They were appointed by the management of the MUP as follows:

WP 1: PROJECT MANAGEMENT = Project manager (all WPs) – Zorica Markovic and Junior expert (WP 1 and 2) – Methija Kuburovic.

WP 2: COMMUNICATION = Project manager (all WPs) - Zorica Markovic and Junior expert (WP 1 and 2) - Methija Kuburovic

WP 6: APPLICATION TO PILOT AREAS = Project manager – Zorica Markovic (all WPs), Junior expert (WP 1 and 6) - Stefan Sosic and Junior expert (WP 2 and 6) - Nada Srdanovic.

During the reporting period, equipment was purchased (see details in Sect. 3).

Task 1.3: Financial management

eCampus nominated Milena Rosa as internal Financial Manager (FM). She is responsible for accounts, project financial reporting and monitoring supporting the whole partnership to ensure proper financial management. Milena Rosa also participates in the meetings of the SC supporting the partnership for financial aspects.

The activities performed within WP1 are on time and contribute to the achievement of the objectives. In particular, they assure the fulfilment of all the requirements by EC regarding reporting and systematic monitoring of the planned activities. The allocation of resources in personnel recruiting will contribute to optimising the technical activities within the project.

WP2

Task 2.1: Project communication strategy

The first performed communication activity was the organisation of the KoM. The activity included posters, identification of stakeholders to be invited, invitation letters, and logistic issues.

Dissemination activities performed in the reporting period included:

- logo for attracting target groups;
- email address (safe.land@uniecampus.it) for improving visibility and recognizability of the project;
- project web page within the UCPKN network for disseminating the project objectives, activities and results (SAFE-LAND | UCP Knowledge Network);
- social networking (see Annex 4), as tools to reach third parties, technical communities, and general public:
  Facebook page link: https://www.facebook.com/safeland2023
  LinkedIn page link: https://www.linkedin.com/in/safe-land-project-ucpm-7a318b33b/
  Instagram page link: https://www.instagram.com/safe_land_p/
- participation at the conference "*Crisis Management and Strengthening the Civil Protection System*" held in Čakovec (Croatia) at the Multimedia Hall of the Treasury of the Međimurje Museum on October 3rd, 2024 (see Annex 2), to present the SAFE-LAND project. There was a large number of attendees, many of them representatives of Civil Protection Directorate of Croatia and Public Administration Institutions, Red Cross Society of Čakovec, stakeholders, and researchers. The event was organized by Međimurje County to present to the different institutions and stakeholders, three different EC funded projects focused on the Civil Protection System in the management of different risks. Ida Kovač, the representative of Međimurje County partner, highlighted in her presentation the importance of the hydrogeological risk assessment in Croatia, its management and mitigation, showing the many areas at risk in the Međimurje region and the importance of the SAFE-LAND project's goals. Elisabetta Cattoni, the project coordinator, presented an overview of SAFE-LAND, the expected outputs, the engagement with the end-users, and the first activities performed to define the technical parameters, and the damage parameters to assess the hydrogeological risk of the reference areas.
- In order to achieve the objectives of the Project communication strategy (WP2), at the end of July an application had been submitted to present the SAFE-LAND project at the Marketplace Exhibition at the "*Europe and Central Asia Regional Platform for Disaster Risk Reduction*" in Budva, Montenegro, from 6 to 8 November 2024 (2024 Europe and Central Asia Regional Platform for Disaster Risk Reduction | EFDRR (undrr.org)). The Europe and Central Asia Regional Platform for Disaster Risk Reduction was organised by the United Nations Office for Disaster Risk Reduction, in partnership with the Government of Montenegro, the European Commission and the Council of Europe.
  The 2024 Regional Platform represented a key milestone in assessing progress in the implementation of the Sendai Framework for Disaster Risk Reduction 2015-2030 and the

EFDRR Roadmap for Disaster Risk Reduction 2021-2030, building on the outcomes of the Midterm Review of the Sendai Framework.
The Regional Platform's event encompassed a ministerial and High-Level session, few plenary and technical sessions running in parallel (multiple); closed thematic meeting, official ceremonies, field visits and other activities.
The target audience included ministers, senior government officials, Sendai Framework National Focal Points, local governments, international organizations, regional institutions, private sector, parliamentarians, science and academia and civil society.
The application submitted for the presentation of the SAFE-LAND project at the Marketplace Exhibition at the Forum in Budva was selected in September. From 6 to 8 November eCampus and MUP attended the event and showcased SAFE-LAND highlighting the innovation, the main goals, the activities, and the expected outputs to foster collaboration knowledge-sharing among a large number of attendees (about 500 people), DRR stakeholders across governments, civil society, and the private sector.
According to the submitted application, for the MarketPlace Exhibition at the Forum the following dissemination material had been prepared:

- Project Overview Brochure: a concise summary of the project's goals, methodology, and expected outcomes. MUP partner printed 500 copies
- Project Visualization Posters: large-format posters showing key aspects of the model, process used, project timeline, have been prepared for the Marketplace. The organizing committee of the event printed this material to post on the booth.
- Stakeholder Engagement Guide: information on how various stakeholders can participate in or benefit from the project. MUP partner printed 500 copies
- FAQ Sheet: addressing common questions about the project, AI technology, and its applications in civil protection. MUP partner printed 500 copies
- Digital Presentation Slides: to be shared electronically with attendees. The project coordinator prepared a file .ppt with the slides of the project presentation and a file video .mp4 with a recorded presentation of the project. MUP produced 100 USB for EFDRR containing the recorded presentation of the project and a stakeholder engagement guide, together with 50 notebooks and pens designed with the logo of the SAFE-LAND project and EU logo to promote project at the EFDRR.
- Feedback Forms: To gather insights and suggestions from the audience for project improvement. These materials provide a comprehensive package of information, catering to various levels of technical understanding and interest, ensuring that all attendees can engage meaningfully with the project content. MUP partner printed 500 copies.

The SAFE-LAND project booth at the Marketplace attracted a large number of institutional stakeholders interested in the development of the planned activities of the project. Some of these were interested in collaborating or applying the system in real case studies at the end of the project. Twenty-four possible stakeholders of different Institutions gave us their telephone number and their e-mail address for future communication, to promote exchange of good practices and knowledge, and to use outputs and results of the SAFE-LAND project. In Annex 5 the dissemination material and gadgets prepared for the EFDRR event are shown.

The activities performed within WP2 are on time and contribute to the achievement of the objectives. In particular, they assure dissemination of awareness of the project outputs to interested authorities and stakeholders.

WP3

Task 3.1: Definition of Reference Areas (RAs)

The elements of the reference areas (slopes, rivers and people) were defined in the reporting period. The definition of the Reference Areas (RAs) was implemented on time and the description of the technical parameters defining the elements of the areas was reported in Deliverable D3.1 (M4 - Jun, 2024).

The definition of high or low at-risk individuals in terms of psychological maladjustment and risk perception was reported in Deliverable D3.1 (M4 - Jun, 2024).

Task 3.2: Definition of Reference Climate Events (RCEs)

The activities of this task are on time. The Reference Climate Events (RCEs) were defined in the reporting period. The description of the technical parameters defining the reference climate events was reported in Deliverable D3.1 (M4 - Jun, 2024)

Task 3.3: Definition of Damage Parameters (DPs)

The activities of this task are on time. The Damage Parameters (DPs) were defined in the reporting period. The description of the damage parameters of each element of the reference areas was reported in Deliverable D3.1 (M4 - Jun, 2024)

Task 3.4: Hydrogeological risk assessments of reference areas (RAs)

This task started on time (the end is planned in month M20). The following activities started, which will be necessary for the upcoming tasks in this work package:

- geotechnical analyses of the stability of “slopes” elements of the reference areas and evaluation of the effect of different reference climate events on the damage parameters;
- hydraulic and hydrological analyses of the elements “rivers” of the reference areas and evaluation of hydraulic risks induced by different reference climate events;
- a scoping review of the psychological literature allowed the identification of risk and protective factors in terms of the insurgence of PTSD (post-traumatic stress disorder), and other psychological difficulties in case of landslides and floods. Moreover, the literature review allowed the identification of the variables involved in risk perceptions. Considering these data, a research protocol was created to investigate the psychological risk and the risk perception of floods and landslides in subjects aged 15 to over 65.

Task 3.5 - Guidelines on risk management plans and risk awareness

This task started on time. During the first few months, preliminary activities to write clear guidelines for risk management have been planned.

The aim of the reference guidelines is to suggest the most effective mitigation measures among all possible measures to reduce the risk of a reference element.

A first initial classification has been made between structural and non-structural measures.

With reference to landslide and flooding risks, mitigation measures have been identified based on technical and damage parameters values (of the reference slopes/rivers, from local to basin scale).

The assessment of an individual's level of psychological risk (no risk, low risk, risk, high risk) combined with their perception of risk (underestimated, adequate, overestimated) will contribute to the implementation of the Guidelines by increasing appropriate risk awareness, knowledge on these issues and identifying those individuals who are most vulnerable and at risk in the event of floods and landslides.

Activities of WP3 are currently on time and contribute to the WP3 objectives.

WP4

Task 4.1: Trustworthy AI to map areas (climate events) to RAs (RCEs)

To fulfill Task 4.1, we developed AI techniques to reliably match Reference Areas (RAs) and Reference Climate Events (RCEs) with real geographical areas and actual climate events. This association process enables a robust and adaptable system to infer potential impacts, both material and psychological, based on the most relevant historical analogs. Each RA and RCE is characterized by a set of features to represent its unique profile. For RAs, key features include geography, population density, infrastructure resilience, and historical climate exposure. RCEs, on the other hand, are characterized by features such as event type (e.g., floods, droughts), intensity, duration, and impact on local populations. This feature-based approach ensures that each RA and RCE can be objectively quantified for similarity matching.

To find RAs similar to a given area, we employed feature-based distance metrics such as Euclidean distance and cosine similarity. These techniques assess how closely a real area aligns with predefined RAs in our knowledge base, ensuring a high degree of accuracy in capturing geographic, demographic, and resilience-related similarities. Through feature weighting, we enhanced sensitivity to certain aspects, like population density and infrastructure resilience, for finer distinctions between potential matches.

Matching real climate events to RCEs required additional attention to temporal and intensity-based features. Here, we also employed dynamic time warping (DTW) and clustering algorithms to capture temporal patterns and event profiles. DTW, for instance, accounts for variations in event timelines, enabling the system to match real events with RCEs based on both intensity and duration patterns. Cluster analysis further allows our system to detect groupings of similar RCEs, improving predictive accuracy for potential impacts on populations.

To ensure trustworthiness, we designed the AI so that experts can access feature-based comparisons for each match, enabling validation and adjustment when necessary. This interpretability supports a reliable, human-centered system for assessing damage and psychological impacts effectively. Interpretability and explainability are also based on Shapley Additive Values (SHAP) that can show the importance of each feature to experts for informed decision-making. These techniques will be refined throughout the other tasks of the project.

Task 4.2: Trustworthy AI for hydrogeological risk assessment

Activities of this task are planned to start after the period of this report

Task 4.3: Trustworthy AI, psychology, neuropsychiatry for risk awareness

This task mainly sets the groundwork for measuring risk awareness among populations in Reference Areas (RAs) by combining AI with psychology and neuropsychiatry. Our aim was to understand how individuals perceive and respond to climate risks, with a particular focus on identifying the needs of vulnerable groups, such as frail individuals and those with disabilities. While these methods offer a strong preliminary framework, future adjustments will be made as experimental data becomes available, enabling more precise assessments.

The foundational approach and methodology was as follows:

1) Psychological profiling based on data: our current AI model incorporates regional psychological and social data, analysuing factors like historical exposure to climate risks, local resilience, and community awareness programs. This initial profiling provides a snapshot of general risk awareness across RAs, facilitating early understanding of the factors that drive preparedness at the population level.

2) Considerations for vulnerable groups: integrating neuropsychiatric perspectives, we designed the model to account for the unique challenges faced by frail populations and individuals with disabilities. Factors such as cognitive load during high-stress scenarios, accessibility to emergency information, and physical limitations were incorporated to establish a baseline understanding of how these populations might perceive and respond to climate-related threats. This first design acknowledges that direct data from vulnerable groups, once available, will further refine procedures.
3) Preliminary risk awareness metrics: our AI model applies early-stage techniques, including feature analysis and predictive pattern recognition, to assess general awareness levels in RAs. Current metrics include responsiveness to awareness programs, community engagement in preparedness measures, and resilience indicators derived from socio-demographic data. These metrics allow for a broad assessment but remain adaptable to accommodate more precise population behaviors as further empirical data is integrated.

As experimental and observational data become available, these techniques will undergo further development. Insights from direct engagement with target populations will enhance the specificity of our psychological and neuropsychiatric metrics, improving our AI's ability to capture nuanced risk awareness levels and enabling us to tailor intervention.

Task 4.4:Trustworthy AI to estimate people's risk awareness levels

Activities of this task are planned to start after the period of this report.

Task 4.5: Implementation of the tool: risk assessment & awareness

Activities of this task are planned to start after the period of this report

Activities of WP4 are currently on time and contribute to the WP4 objectives.

WP5

Task 5.1: Identification of critical climate events end elements

Design hyetographs pertaining to critical climate events have been identified. Namely, a Chicago type Hyetograph is proposed for rainfall events with duration ranging from 1 to 30 hours and return period varying between 30 and 200 years.

Task 5.2: Guidelines on risk management planning for existing areas

Activities of this task are planned to start after the period of this report

Task 5.3: Guidelines on increasing risk awareness in existing areas

Activities of this task are planned to start after the period of this report

Task 5.4: Implementation of the tool: tailored guidelines

Activities of this task are planned to start after the period of this report

Activities of WP5 are currently on time and contribute to the WP5 objectives.

WP6

Task 6.1: Pilot studies: Data collection

The activities of this task started with the preparation of datasheets and manuals for collecting hydrogeological and psychological data for the real scenario. In particular, worksheets for collecting technical parameters of slopes, rivers (basins), and climate events were prepared together with documents (manuals) explaining the meaning of each technical parameter characterising each type of element/climate event.

Regarding psychological data, we created a research protocol to investigate the risk of psychological difficulties and the risk perception of floods and landslides in subjects aged 15 to over 65. Specifically, a series of measures will be administered to adolescents/youths (aged 15-18 years), adults, and the elderly (aged 18/+65) through an online survey aimed to detect socio-demographic variables PTSD vulnerability, psychological well-being, risk perception, and some variables affecting the quality of risk perception (e.g. personality, cognition, and climate change anxiety).

In addition, as for the hydraulic analyses of the real scenario, we selected three areas characterized by different responses of rivers/streams to rainfall events. These areas are in Tuscany, Italy. Namely, we identified a basin close to the city of Livorno (hilly basin), a basin in the area of Versilia (mountain basin) and a basin in the floodplain of Pisa. For such areas we collected all necessary data (i.e., rainfall, cross sections, discharge data, and topographic maps).

Task 6.2: Pilot studies: Testing of the tool in pilot areas

Activities of this task are planned to start after the period of this report.

Activities of WP6 are currently on time and contribute to the WP6 objectives.

Lists of milestones attained in the reporting period

Milestone 4: Definition of RAs,RCEs and DPs

Due date: M4

Lead participant: eCampus

Progress: Milestone 4 was achieved on time.

Lists of deliverables submitted in the reporting period

Deliverable D1.1: Kick-off meeting minutes

Due date: M2

Lead participant: eCampus

Progress: Deliverable D1.1 was submitted on time.

Deliverable D1.2: Project work plan

Due date: M2

Lead participant: eCampus

Progress: Deliverable D1.2 was submitted on time.

Deliverable D3.1: Reference areas, reference climate events, and damage parameters

Due date: M4

Lead participant: eCampus

Progress: Deliverable D3. was submitted on time.

Deliverable D1.3: Mapping of relevant initiatives within UCPM including an evaluation of potential synergies between ongoing initiatives or incorporation of existing results

Due date: M6

Lead participant: eCampus

Progress: Deliverable D1.3 was submitted on time.

Timetable

Timetable (projects up to 2 years)

Fill in the planned implementation in beige and the deviations in red. Repeat lines/columns as necessary.

Starting date:	*[12/02/2024]*																							
ACTIVITY	**MONTHS**																							
	M 1	**M 2**	**M 3**	**M 4**	**M 5**	**M 6**	**M 7**	**M 8**	**M 9**	**M 10**	**M 11**	**M 12**	**M 13**	**M 14**	**M 15**	**M 16**	**M 17**	**M 18**	**M 19**	**M 20**	**M 21**	**M 22**	**M 23**	**M 24**
Task 1.1- Start-up activities																								
Task 1.2 - Coordination of activities and internal monitoring																								
Task 1.3 - Financial management																								
Task 2.1 - Project communication strategy																								
Task 3.1 - Definition of Reference Areas (RAs)																								

Task 3.2 - Definition of Reference Climate Events (RCEs)	
Task 3.3 - Definition of Damage Parameters (DPs)	
Task 3.4 - Hydrogeological risk assessments of reference areas (RAs)	
Task 3.5 - Guidelines on risk management plans and risk awareness	
Task 4.1 - Trustworthy AI to map areas (climate events) to RAs (RCEs)	
Task 4.2 - Trustworthy AI for hydrogeological risk assessment	
Task 4.3 - Trustworthy AI, psychology, neuropsychi-atry for risk awareness	
Task 4.4 - Trustworthy AI to estimate people's risk awareness levels	
Task. 4.5 - Implementation of the tool: risk assessment & awareness	

Task 5.1 - Identification of critical climate events end elements																								
Task 5.2 - Guidelines on risk management planning for existing areas																								
Task 5.3 - Guidelines on increasing risk awareness in existing areas																								
Task 5.4 - Implementation of the tool: tailored guidelines																								
Task 6.1 - Pilot studies: Data collection																								
Task 6.2 - Pilot studies: Testing of the tool in pilot areas																								

Delays

If there are delays, identify them, explain the reasons why and how you plan to manage those delays (catch-up with / avoid further delays, impact on timetable, etc.).

#§WRK-PLA-WP§#

3. BUDGET IMPLEMENTATION

Budget implementation — Use of resources
Provide information on whether the budget consumption is in line with the advancement of the activities. Identify and justify any divergences.

The budget implementation is in line with the activities implemented so far.

The eCampus University (eCampus) - Lead partner - had incurred the following expenses:

€ 82.164,37 for staff costs

€ 4.081,78 for Travel and subsistence

€ 14.854,17 for Equipment

€ 5.627,33 Other goods, works and service

For a total of € 106.727,65 with a percentage equal to 21,91% comparing the total budget.

The University of Pisa (UNIPI) had incurred the following expenses:

€ 38.250,00 for staff costs

€ 1.215,43 for Travel and subsistence

€ 3.975,00 for Equipment

For a total of € 43.440,43 with a percentage equal to 11,08% comparing the total budget.

The Medjimurje County (MED) had incurred the following expenses:

€ 22.543,68 for staff costs

€ 2.924,84 for Travel and subsistence

For a total of € 25.468,52 with a percentage equal to 18,95% comparing the total budget.

The Ministarstvo Unutrasnjih Poslova (MUP) had incurred the following expenses:

€ 8,738.34 for staff costs

€ 3,575.00 for Travel and subsistence

€ 5,476.16 for Equipment

For a total of € 17.789,50 with a percentage equal to 13,01% comparing the total budget.

The total project budget incurred to the date of 11 November 2024 is equal to € 193.426,10, but all the partners have signed other commitments with external operators and experts in order to be in line with the financial forecast of the project.

ANNEXES

LIST OF ANNEXES

Annex 1: I Steering Committee Meeting minutes – April 9, 2024 - Rome (Italy)

Annex 2: Technical Meeting minutes - October 3rd, 2024 - Čakovec (Croatia)

Annex 3: Technical Meeting and II Steering Committee Meeting minutes - November 6th, 2024 - Budva (Montenegro)

Annex 4: Screenshots from the social media pages

Annex 5: Dissemination material and gadgets for the EFDRR event in Budva – Montenegro (6-8 November 2024)

HISTORY OF CHANGES		
VERSION	PUBLICATION DATE	CHANGE
1.0	11.11.2024	Initial version (new MFF).
2.0	05.12.2024	Modified “period covered” page 3. Added the social media links at page 8. Added URL of the project portal in the UCPKN space mentioned under WP2.1. Modified Small typo in penultimate bullet “LAFE-LAND” – page 9. Replpaced link page 41 (Annex 3): https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/common/guidance/unitcost-decision-travel_v2.0_en.pdf. Replaced Annex 4. Added Annex 5.

SAFE-LAND

Mitigating the risk of flooding and landslides via artificial intelligence with a view to extreme climate events

Deliverable 1.4: Progress Report M9

Annex 1. 1st Steering Committee Meeting minutes (Rome - April 9, 2024)

MITIGATING THE RISK OF FLOODING AND LANDSLIDES VIA ARTIFICIAL INTELLIGENCE WITH A VIEW TO EXTREME CLIMATE EVENTS

Co-funded by the European Union

Document Summary

Deliverable number: Annex D. 1.4

Annex Title: I Steering Committee Meeting Minutes (Rome - April 9, 2024)

Type: Report

Version: 1.0

Deliverable Lead: UNIVERSITA TELEMATICA E-CAMPUS (eCampus)

Related Work package: WP1

Author(s): Elisabetta Cattoni (eCampus) and Milena Rosa (eCampus)

Communication level: Public

Date: 11 November-2024

Grant Agreement Number: 101140345

Project name: SAFE-LAND

Start date of Project: 12 February 2024

Duration: 24 months

Project coordinator: Elisabetta Cattoni (eCampus)

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Abstract

This Annex shows the minutes of the SAFE-LAND Steering Committee meeting that took place in the framework of the KICK-OFF meeting in the *E- campus University, Rome headquarter - Via Matera, 18 00182 Rome, Italy* on April 9th, 2024

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

General information of the meeting

The SAFE-LAND Kick-Off meeting took place in Rome on the April 9th, 2024.
The main objective of the meeting was to introduce the overall and specific objectives of the project to the stakeholders, target groups and to have an overview of the project development and to establish the SAFE-LAND work plan for the coming months. It was also an opportunity to ensure that all the 3 partners and the main stakeholders had a common understanding of the project and their roles and to get more information on the project objectives.

After the public event, the first Steering Committee of the Project took place in the afternoon, in which the delegations of the three partner institutions participated, in order to approve the project work plan (Deliverable 1.2); plan next activities; share good practices on the administrative and financial management of activities.

The meeting was carried out at the facilities of *e- Campus University, Rome headquarter* - organized by the eCAMPUS as coordinator partner and thanks to the collaboration of the other partners: UNIVERSITA DI PISA; MEDJIMURJE COUNTY and MINISTARSTVO UNUTRASNJIH POSLOVA.

Agenda items Kick -Off Meeting

The agenda of the KoM meeting was the following:

9th April 2024

09:30 – 11:00 Opening and welcome

Elisabetta Cattoni, SAFE-LAND project Coordinator
Enzo Siviero, Rector eCampus University
Zorica Markovic, Head of department for Coordination of International Assistance and Cooperation and Project Implementation in the Rescue and Protection Directorate of the Ministry of Interior of Montenegro
Luigi Ferrara, Head of the Casa Italia Department, Delegate of the Minister for Civil Protection and Maritime Policies
Angela Corina, Paolo Putrino, National Civil Protection Delegates - Office of technical-scientific activities for risk prediction and prevention
Francesco Ponziani, Multi-risk Functional Center for Civil Protection and Emergencies Service - Monitoring and early warning systems at a regional scale for hydrogeological risk in the Umbria region
Alessandro Scuncio, Policy Advisor at European Parliament

11:00 – 11:30	Speeches by the General Secretaries of the Italian regional Basin Authorities **Gaia Checcucci,** Secretary General of the Northern Apennines Basin Authority **Vera Corbelli,** Secretary General of the Southern Apennines Basin Authority
11:30 – 12:00	Coffee break
12:00 – 13:30	Academic and research speeches **Leonardo Cascini,** Former full professor of Geotechnics at the University of Salerno. "Artificial Intelligence: which present and which future". **Luca Brocca,** Research Director at the National Research Council, Research Institute for Geo-Hydrological Protection, Perugia. A digital twin of the water cycle, a glimpse into the future for the mitigation of hydrogeological risk and the management of water resources. **Giuseppina Sgandurra,** Institute of Scientific Hospitalization and Care - Stella Maris Foundation - University of Pisa. **Vittoria Ardino,** SISST President, Italian Society for the Study of Traumatic Stress
13:30 – 15:00	Light Lunch and networking
15:00 --- 16:00	Presentation of the SAFE- LAND Project **Elisabetta Cattoni,** SAFE-LAND Project Coordinator, eCampus University **Francesco Pistolesi,** Coordinator of University of Pisa **Zorica Markovic,** Coordinator of the Ministarstvo Unutrasnjih Poslova (Montenegro) **Ida Kovac,** Coordinator of the Medjimurje County (Croatia)

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Agenda items Steering Committee Meeting

The agenda of the Steering Committe meeting was the following:

9th April 2024

16:30 – 18:00

Elisabetta Cattoni, Associate Professor, eCampus University (Italy)
Francesco Focacci, Associate Professor, eCampus University (Italy)
Francesco Pistolesi, Assistant Professor, University of Pisa(Italy)
Ida Kovac, Senior project associate in Medjimurje County (Croatia)
Zorica Markovic, Head of department for Coordination of International Assistance and Cooperation and Project Implementation in the Rescue and Protection Directorate of the Ministry of Interior of Montenegro

Attendants

The people who attend in presence to the meeting in representation of each institution are shown in the next list:

NAME	INSTITUTIONS
Elisabetta Cattoni Francesco Focacci	eCampus
Francesco Focacci	eCampus
Milena Rosa	eCampus
Francesco Pistolesi	Pisa University
Alan Resman	Medjimurje County
Marija Stankovic	Medjimurje County
Ida Kovac	Medjimurje County
Irena Novak Vabec	Medjimurje County
Zorica Markovic	Ministarstvo Unutrasnjih Poslova

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Minutes

During the meeting Elisabetta Cattoni, from the eCampus University, coordinator of the SAFE LAND project, showed all the partners an overview of the activities of competence of each institution participating in the project. Subsequently each partner explained and illustrated how they intend to implement their tasks in collaboration with the entire project consortium.

Following a round of all the participants, Elisabetta Cattoni showed in detail the first deliverables to be submitted, the first being the Kick- Off meeting report and the Project Work Plan, presenting them to the partnership and asking for any comments and approval.

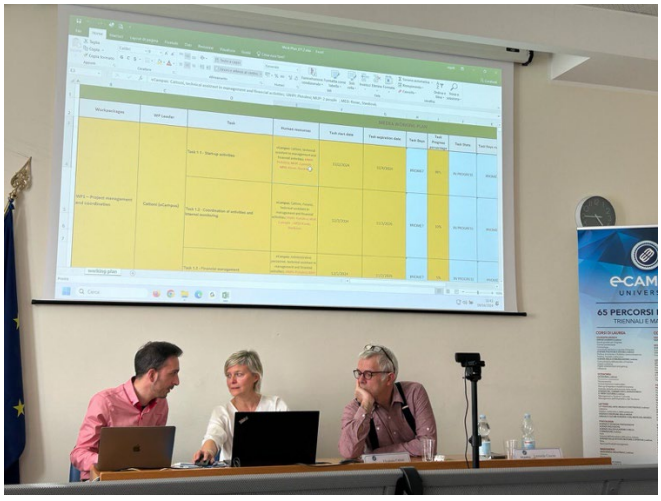
All the partners unanimously approved the two documents and gave the eCampus University the mandate to submit them to the European Commission. Subsequently the eCampus university referents showed the details of the list of deliverables to be prepared for month 6: Mapping of relevant initiatives within UCPM including an evaluation of potential synergies between ongoing initiatives or incorporation of existing results.

Elisabetta Cattoni continued to illustrate the list of all the milestones to be achieved for each project WPs.

The second part of the meeting is dedicated to the reporting rules and the correct management of the project resources.

Confirmation is asked if all the partners have received the advance payment, with a positive response, and some administrative and financial aspects that are not very clear are examined.

The project coordinator and the eCampus team provide explanations and clarifications regarding the correct use of the various financial allocations provided for by the approved grant agreement.



Picture of the SC meeting.

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SAFE-LAND

Mitigating the risk of flooding and landslides via artificial intelligence with a view to extreme climate events

Deliverable 1.4: Progress Report M9

Annex 2. Technical Meeting minutes - October 3rd, 2024 - Čakovec (Croatia)

MITIGATING THE RISK OF FLOODING AND LANDSLIDES VIA ARTIFICIAL INTELLIGENCE WITH A VIEW TO EXTREME CLIMATE EVENTS

Co-funded by the European Union

Document Summary

Deliverable number: Attachment D 1.4

Annex Title: Technical Meeting Minutes - October 3rd, 2024 - Čakovec (Croatia)

Type: Report

Version: 1.0

Deliverable Lead: UNIVERSITA TELEMATICA E-CAMPUS (eCampus)

Related Work package: WP1

Author(s): Elisabetta Cattoni (eCampus) and Francesco Focacci (eCampus)

Communication level: Public

Date: 11 November-2024

Grant Agreement Number: 101140345

Project name: SAFE-LAND

Start date of Project: 12 February 2024

Duration: 24 months

Project coordinator: Elisabetta Cattoni (eCampus)

Co-funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

Abstract

This Annex shows the minutes of the SAFE-LAND technical meeting that took place in Croatia at the *City Museum - Bedem - Čakovec (Museum of Međimurje, Trg Republike 5)* on 3 October 2024, organized in the framework of the international conference "Crisis Management and Strengthening the Civil Protection System".

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General information of the meeting

In compliance with Deliverable 1.3: “Mapping of relevant initiatives within UCPM including an evaluation of potential synergies between ongoing initiatives or incorporation of existing results” the partners of the SAFE LAND project and the MEDEA project, by virtue of their complementarities and synergies both from the point of view of the themes and from the point of view of the partners and stakeholders involved are working in synergy in order to maximize the activities and the related expected results and outputs. During the international conference organized by the partner MEDJIMURJE COUNTY (MED), a panel has been dedicated to give communication and dissemination information of the activities of the SAFE LAND project and subsequently a technical meeting was organized. The main objective of the meeting was to introduce the activities and technical parameters, in particular that regarding the element “slopes”, needed to select the case study area in Croatia

Agenda items- international conference "Crisis Management and Strengthening the Civil Protection System"

The agenda of the international conference was the following:

October 3rd, 2024

09:00 – 10:00	Participant registration and coffee break
10:00 – 12:15	Conference opening and welcome speeches
	Presentation of the National Strategy for the Development of the Civil Protection System in Croatia – Civil Protection Directorate of Croatia – Director **Dr. Damir Trut**
	Dissemination of the MEDEA Project – **Alan Resman**, Međimurje County and **Francesco Focacci**, eCampus Italy
	Presentation of the SAFE-LAND Project – **Ida Kovač**, Međimurje County and **Elisabetta Cattoni**, eCampus Italy
	Presentation of the ODZIV Project – **Sandra Majsan**, REDEA Public Institution and **Vlatka Vincetić**, Red Cross Society Čakovec
12:15 – 13:00	Round table (panel discussion)
13:00 – 14:30	Light Lunch and networking
	On Friday, October 4, 2024, from 10:00 AM to 4:00 PM, the Safety and Prevention Fair held outside the Sports Hall of the Construction School Čakovec, Športska ulica in Čakovec. As part of the fair, the Civil Protection Exercise GOC 2024 also took place.

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Agenda items- Technical Meeting – SAFE – LAND Project

The agenda of the international conference was the following:

October 3rd, 2024

15:00 – 15:15	State of the art of implementation activities of SAFE LAND project with a focus on activities where the partner MEDJIMURJE COUNTY (MED) is involved.
15:15 – 16:30	Next activities and technical parameters regarding the element "slopes" in order to select the case study area in Croatia.

Attendants

The people who attend in presence to the technical meeting in representation of each institution are shown in the next list:

NAME	INSTITUTIONS
Elisabetta Cattoni	e-Campus
Francesco Focacci	e-Campus
Marija Stankovic	Medjimurje County
Ida Kovac	Medjimurje County
Irena Novak Vabec	Medjimurje County

Minutes

Elisabetta Cattoni, SAFE-LAND Project Coordinator, eCampus University, introduced the performed technical activities of WP3 and the necessity to share with the partner Medjimurje County the technical parameters characterizing the element "slope", in order to select the real slope elements in Croatia.

In particular, attendees discuss about the geotechnical parameters needed to characterize the element "slope" and about the tools (such as GIS, DEM platforms etc..) to obtain the elevation and the slope of the soil geometry. About the knowledge of shear strength parameters of the soils, it was suggested that existing boreholes or data deriving from previous geognostic campaigns could be used to characterize the mechanical and hydraulic behavior of the soils.

About the climate events, data regarding intensity and duration of the rainfall are needed (rainfall

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hyetograph).

The attended examined in detail the parameters indicated in D3.1 for the “slope” element.

The attendees plan to meet in Budva, Montenegro in the framework of 2024 Europe and Central Asia Regional Platform for Disaster Risk Reduction organized by United Nations Office for Disaster Risk Reduction (UNDRR).

A technical meeting with all the partners will be held in order to deeply speak about technical parameters that have to be known to define the real areas in Italy, Croatia and Montenegro. The technical meeting in Budva will be followed by a Steering Committee meeting to examine and approve the D1.4 in submission, and to monitor progress toward milestones, outputs achieved according to the agreed timetable and plan the next activities.

Picture of the meeting

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SAFE-LAND

Mitigating the risk of flooding and landslides via artificial intelligence with a view to extreme climate events

Deliverable 1.4: Progress Report M9

Annex 3. Technical Meeting and II Steering Committee Meeting minutes

November 6th, 2024 - Budva (Montenegro)

MITIGATING THE RISK OF FLOODING AND LANDSLIDES VIA ARTIFICIAL INTELLIGENCE WITH A VIEW TO EXTREME CLIMATE EVENTS

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eCAMPUS UNIVERSITÀ

UNIVERSITÀ DI PISA

MEĐIMURSKA ŽUPANIJA

Document Summary

Deliverable number: Attachment D 1.4

Annex Title: Technical and SC Meetings Minutes - November 6th, 2024 - Budva (Montenegro)

Type: Report

Version: 1.0

Deliverable Lead: UNIVERSITA TELEMATICA E-CAMPUS (eCampus)

Related Work package: WP1

Author(s): Elisabetta Cattoni (eCampus) and Milena Rosa (eCampus)

Communication level: Public

Date: 11 November-2024

Grant Agreement Number: 101140345

Project name: SAFE-LAND

Start date of Project: 12 February 2024

Duration: 24 months

Project coordinator: Elisabetta Cattoni (eCampus)

Co-funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

Abstract

This Annex shows the minutes of the SAFE-LAND Technical and the II Steering Committee meetings that took place on 6 November, 2024 in hybrid format and in presence in Budva, Montenegro, in the framework of the 2024 Europe and Central Asia Regional Platform for Disaster Risk Reduction organized by United Nations Office for Disaster Risk Reduction (UNDRR).

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General information of the meeting

The Europe and Central Asia Regional Platform for Disaster Risk Reduction held in Budva, Montenegro, from 6 - 8 November 2024. The Regional Platform assess progress on the regional EFDRR Roadmap for Disaster Risk Reduction 2021-2030 and build capacities of authorities and stakeholders to accelerate the implementation of the Sendai Framework for Disaster Risk Reduction 2015-2030. Held every three years, the Regional Platform has established itself as a unique vehicle to address regional disaster risk challenges, gathering the governments of 55 Member States and stakeholders across civil society and the private sector, enabling knowledge-sharing and making commitments to reducing disaster risk tangible. In 2024, the Regional Platform was hosted by the Government of Montenegro, in collaboration with the United Nations Office for Disaster Risk Reduction, and with the support of UNDP, the European Commission, and the Council of Europe.
For more info, ref. https://efdrr.undrr.org/

The SAFE-LAND project consortium the project was chosen, after sending a detailed Application form submitted in July 2024, among hundreds of interventions and projects to be present at the event.
With the collaboration of the Montenegrin partner of the SAFE - LAND project, Ministarstvo Unutrasnjih Poslova, a show case was organized where the project had the opportunity to present its activities, activate networking with institutional stakeholders and the world of civil protection for the exchange of good practices and knowledge, provide answers using outputs and results of the project.

During the event a technical meeting was organized with technical and academic speakers from the partner institutions of the SAFE-LAND project with the aim to establish all the technical parameters to select the elements (slopes, rivers and people) of the case studies in Croatia, Italy, and Montenegro, and their expected climate events; the II Steering Committee of the project was held afterwards for the approval of the Deliverable 1.4 Progress report M9 and the planning of the next activities.

Agenda items Technical Meeting

The agenda of the technical meeting was the following:

6 November 2024

18:00 – 18:45	Opening and welcome
	Overview of the project – steps and technical activities - **Elisabetta Cattoni** -eCampus

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Definition of the EPs of an “element” (e.g. slope-river-people) that have to be known to select a real element:
Slope **Ignacio Giomi** - eCampus
River **Stefano Pagliara – Michele Palermo** - UNIPI
People **Elena Camisasca** eCampus

Definition of the climate parameters characterizing a climate event that have to be known to identify the expected climate event in the case study of real elements
Stefano Pagliara – Michele Palermo - UNIPI

Attendants

The people who attend in presence and in video conference to the meeting in representation of each institution are shown in the next list:

NAME	INSTITUTIONS
Elisabetta Cattoni	e-Campus (in presence)
Francesco Focacci	e-Campus (in presence)
Milena Rosa	e-Campus
Francesco Pistolesi	Pisa University
Alan Resman	Medjimurje County
Marija Stankovic	Medjimurje County
Ida Kovac	Medjimurje County
Irena Novak Vabec	Medjimurje County
Zorica Markovic	Ministarstvo Unutrasnjih Poslova (in presence)
Methija Kuburovic	Ministarstvo Unutrasnjih Poslova (in presence)
Civilna Zastita	Medjimurje County
Cristal Sirotich	e-Campus
Ela Vabec	Medjimurje County
Evelina Volpe	e-Campus
Ignacio Giomi	e-Campus
Fabrizio Comodini	e-Campus
Michele Palermo	Pisa University
Salvatore Verre	e-Campus
Yaser Peiro	e-Campus

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Minutes of the technical meeting

The technical meeting took place on November 6 at 18:00 in presence in Budva, Montenegro and online to the following link https://meet.google.com/hea-xevc-rce

The meeting aimed to establish all the technical parameters to select the elements (slopes, rivers and people) of the case studies in Croatia, Italy, and Montenegro, and their expected climate events.

Short and technical speeches described the characterizing parameters for each element and climatic event. After the meeting, a report/manual with a comprehensive list and description of all parameters will be prepared and shared.

Elisabetta Cattoni gave an overview of the project steps and technical activities considering what has already by done and the next steps, focusing also on the time plan as described into the project Grant Agreement, she also proposed to plan technical meetings every 2-3 weeks to update about the progress of the technical activities of each work group and all the participants agreed.

Started the panel of interventions for definition of the EPs of an "element"(e.g. slope-river-people) that have to be known to select a real element, focusing on Slope, Ignacio Giomi, gave a schematic representation of the geometrical parameters and the Physical and Mechanical soil properties, explaining the hydraulic soil properties. Stefano Pagliara and Michele Palermo gave an overview about the parameters and data to be considered for river and basin. Elena Camisasca focused on people and how floods and landslides can produce severe consequences on communities in terms of deaths, injuries, economic losses, damage to infrastructure, and mental ill-health. They explained the preliminary step for the definition of the research protocol: identification of four levels of psychological risk; identification of three levels of risk perception and identification of representative individuals considering the population descriptions and data of the Italian national institute of statistics (ISTAT), the statistical office of Montenegro, and the Croatian bureau of statistics.

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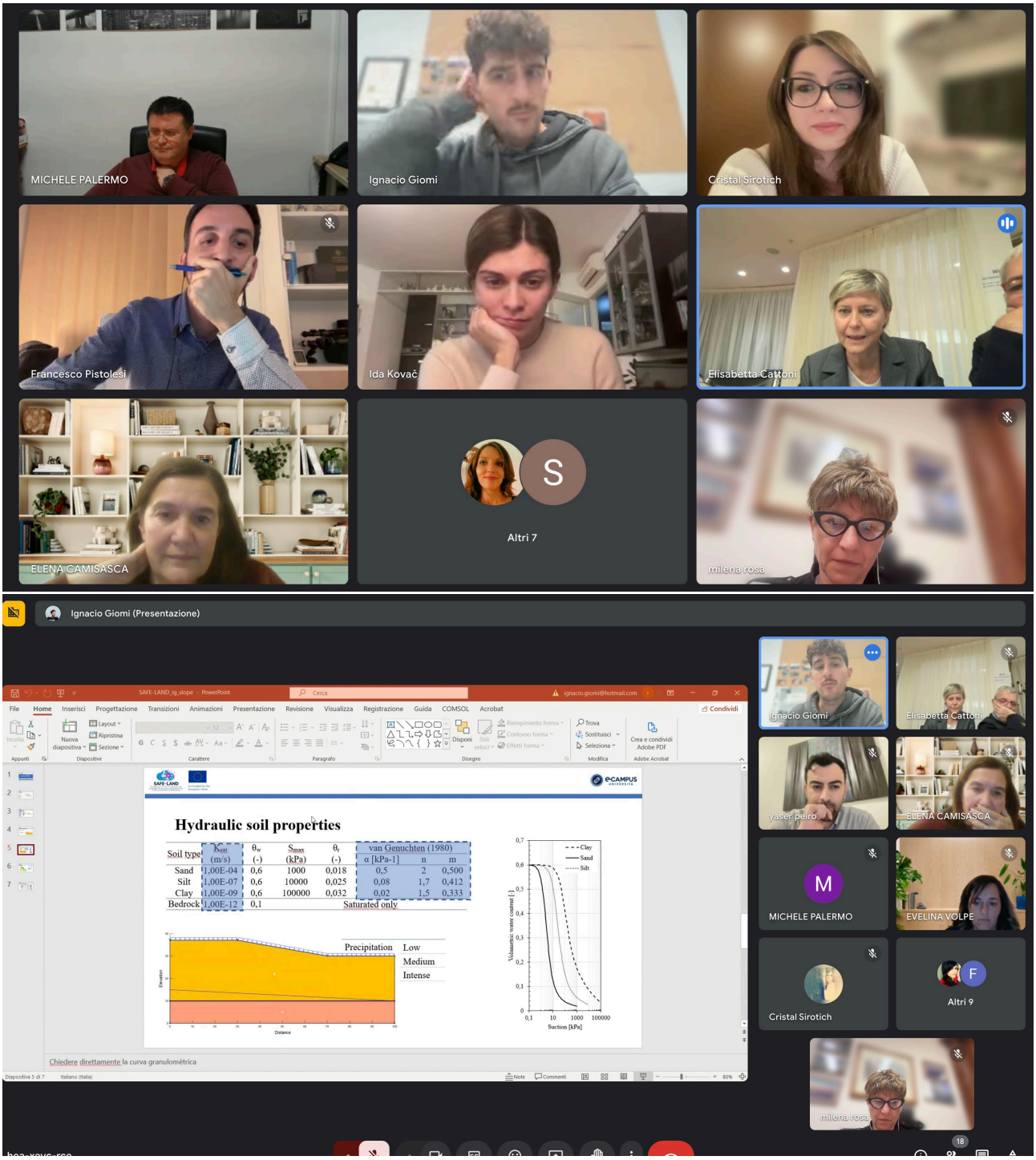

Pictures of the technical meeting

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Agenda items Steering Committee Meeting

The agenda of the Steering Committee meeting was the following:

6 November 2024

18:45 – 19:15	Monitor the progress of the project activities according to the timetable and updated work plan;
	Administrative and financial issues
	Approval of Deliverable 1.4
	AOB -Any Other Business

Attendants

The people who attend in presence and in video conference to the Steering Committee meeting in representation of each institution are shown in the next list:

NAME	INSTITUTIONS
Elisabetta Cattoni	e-Campus (in presence)
Francesco Focacci	e-Campus (in presence)
Milena Rosa	e-Campus
Francesco Pistolesi	Pisa University
Marija Stankovic	Medjimurje County
Ida Kovac	Medjimurje County
Zorica Markovic	Ministarstvo Unutrasnjih Poslova (in presence)
Methija Kuburovic	Ministarstvo Unutrasnjih Poslova (in presence)
Civilna Zastita	Medjimurje County
Ela Vabec	Medjimurje County

Minutes of the Steering Committee meeting

The Steering Committee meeting is opened by Elisabetta Cattoni, from Ecampus University and coordinator of the project, who clearly shows the results achieved by the project at November 2024, focusing on the deliverables already delivered and the milestones already reached, for each WP she shows all partners the percentage of completion and estimates the times for the activities of the various

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WPs that have yet to be started. All the members of the Steering Committee take note of the information about the implementation status of the SAFE LAND project activities.

Elisabetta Cattoni, thanking all the partners for the information requested about the financial progress of each participant, invites them to ask questions or to ask for clarifications on particular issues or cases and reminds them that they can always refer to the eCampus staff, which always guarantees coordination and financial and administrative support for any issue.

The partners are shown the Deliverable 1.4 in its final version, which will be presented to the European Commission on November 11th, thanks all those who collaborated directly within the shared folder and asks those present to express their opinion on its approval. All members of the Steering Committee approve the final version of the deliverable and give the mandate to the Project Coordinator to present it on the portal.

For the last item on the agenda of miscellaneous, Milena Rosa from the eCampus research office, clarifies to all participants that the expenses related to the missions (travel, accommodation and subsistence) must be reported in the lump sum mode and not the actual costs incurred. For the application of the lump sum, all the partners my refer to the guide prepared by the European Commission in compliance with the Grant Agreement of the SAFE-LAND project: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/common/guidance/unitcost-decision-travel_v2.0_en.pdf

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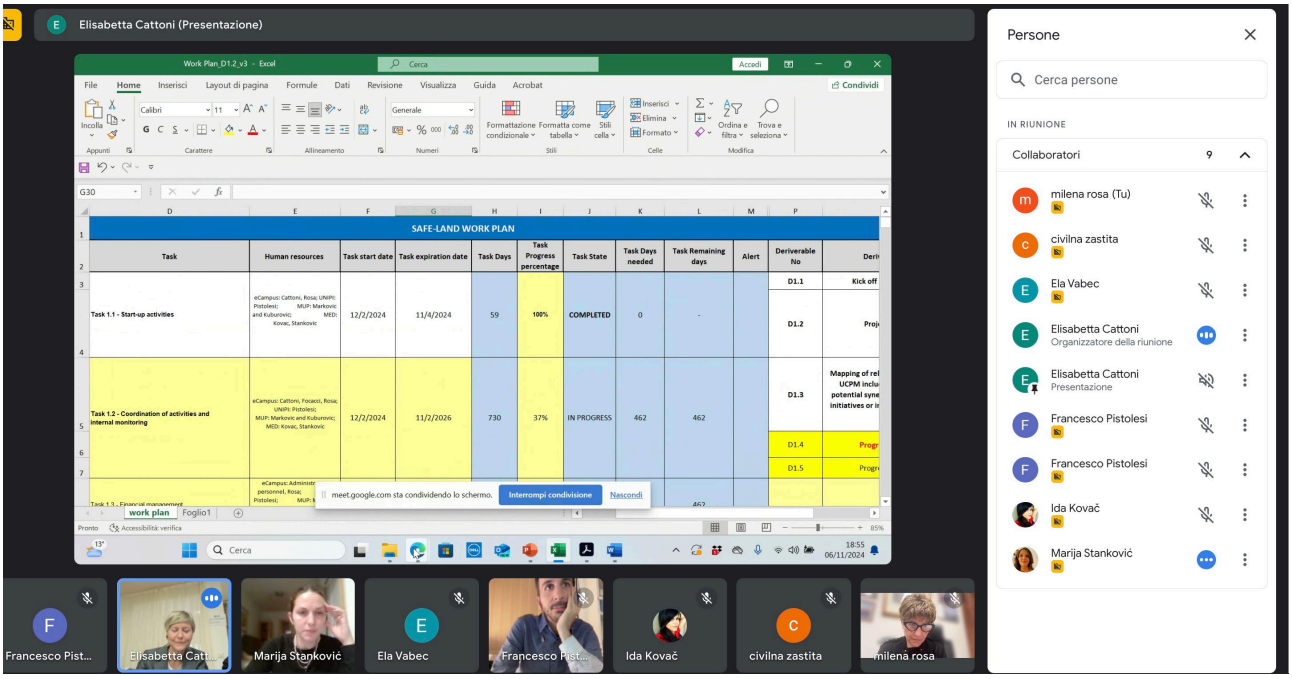

Picture of the Steering Committee meeting

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SAFE-LAND

Mitigating the risk of flooding and landslides via artificial intelligence with a view to extreme climate events

Deliverable 1.4: Progress Report M9

Annex 4. Screenshots from the social media pages

MITIGATING THE RISK OF FLOODING AND LANDSLIDES VIA ARTIFICIAL INTELLIGENCE WITH A VIEW TO EXTREME CLIMATE EVENTS

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eCAMPUS UNIVERSITÀ
UNIVERSITÀ DI PISA
MONTENEGRO
MEĐIMURSKA ŽUPANIJA

Document Summary

Deliverable number: Attachment D 1.4

Annex Title: Screenshots from social media pages

Type: Report

Version: 1.0

Deliverable Lead: UNIVERSITA TELEMATICA E-CAMPUS (eCampus)

Related Work package: WP1

Author(s): Elisabetta Cattoni (eCampus), Evelina Volpe (eCampus), and Milena Rosa (eCampus)

Communication level: Public

Date: 03 December-2024

Grant Agreement Number: 101140345

Project name: SAFE-LAND

Start date of Project: 12 February 2024

Duration: 24 months

Project coordinator: Elisabetta Cattoni (eCampus)

Co-funded by the European Union

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

Facebook page: https://www.facebook.com/safeland2023

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Instagram page: https://www.instagram.com/safe_land_p/

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SAFE-LAND

Mitigating the risk of flooding and landslides via artificial intelligence with a view to extreme climate events

Deliverable 1.4: Progress Report M9

Annex 5. Dissemination material and gadgets for the EFDRR event in Budva - Montenegro (6-8 November 2024)

MITIGATING THE RISK OF FLOODING AND LANDSLIDES VIA ARTIFICIAL INTELLIGENCE WITH A VIEW TO EXTREME CLIMATE EVENTS

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Document Summary

Deliverable number: Attachment D 1.4

Annex Title: Dissemination material and gadgets for the EFDRR event in Budva (6-8 November 2024)

Type: Report

Version: 1.0

Deliverable Lead: UNIVERSITA TELEMATICA E-CAMPUS (eCampus)

Related Work package: WP1

Author(s): Elisabetta Cattoni (eCampus), Evelina Volpe (eCampus), and Milena Rosa (eCampus)

Communication level: Public

Date: 03 December-2024

Grant Agreement Number: 101140345

Project name: SAFE-LAND

Start date of Project: 12 February 2024

Duration: 24 months

Project coordinator: Elisabetta Cattoni (eCampus)

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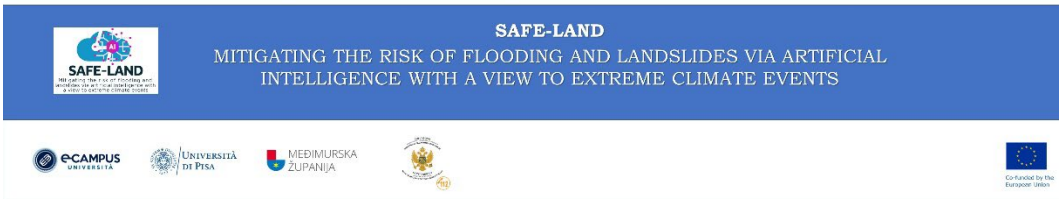
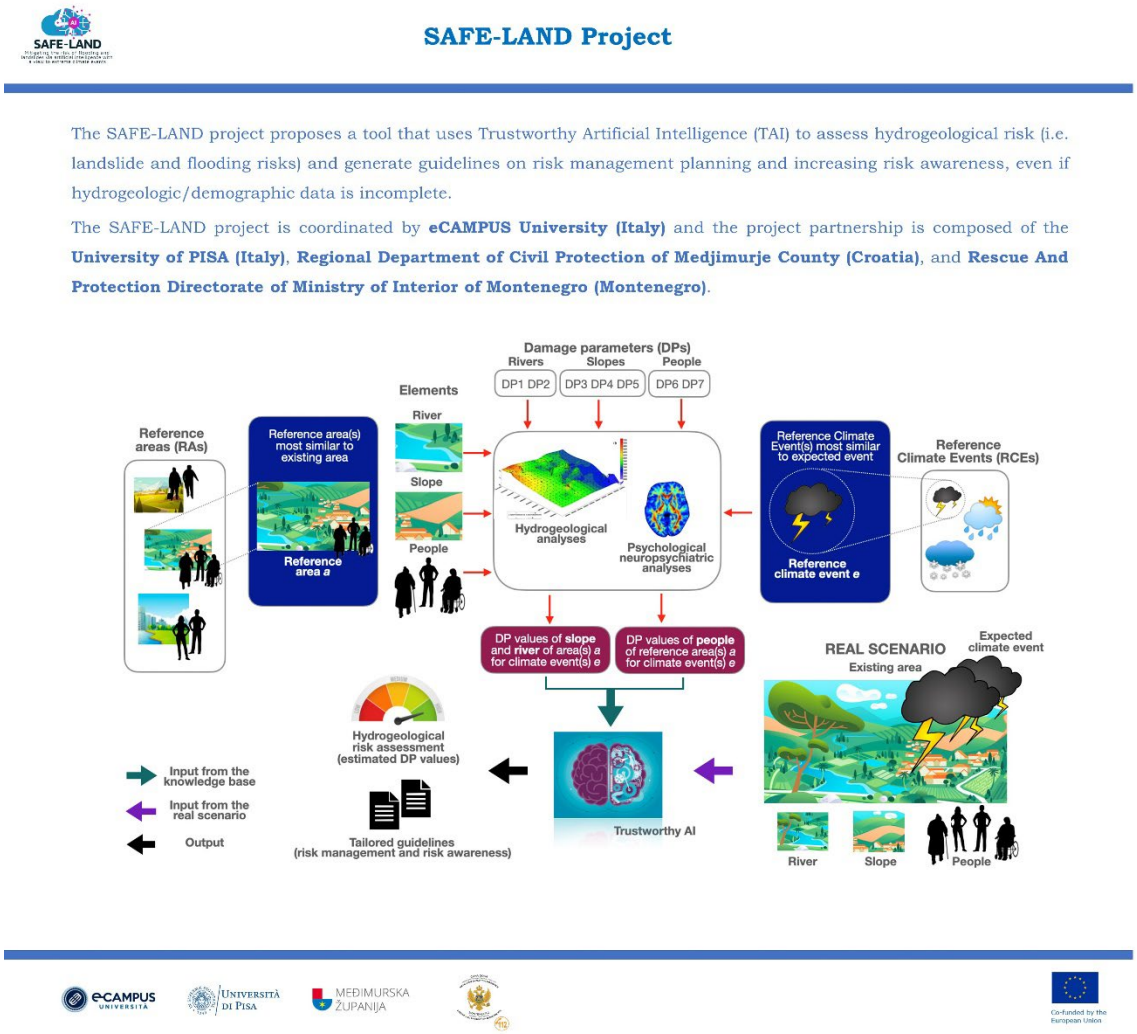
POSTER FOR THE BOOTH AT THE MARKETPLACE EXHIBITION

Upper part



Lower part



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Left part

SAFE-LAND Project

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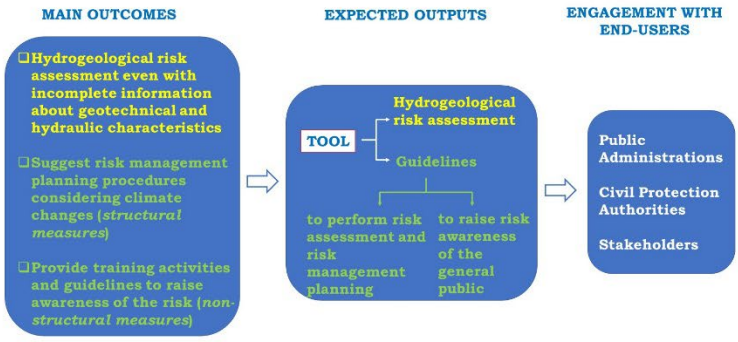

WP n.	WP name	Start month	End month	Deliverables
WP1	Project management and coordination	1	24	D1.1 – Kick off meeting minutes D1.2 – Project work plan D1.3 – Mapping of relevant initiatives within UCPM including an evaluation of potential synergies between ongoing initiatives or incorporation of existing results D1.4 – Progress report M9 D1.5 – Progress report M17
WP2	Communication	2	24	D2.1 – Dissemination plan that includes an end user and stakeholder analysis
WP3	Hydrogeological risk assessment, evaluation of people's risk awareness, and guidelines for reference areas	2	20	D3.1 – Reference areas, reference climate events, and damage parameters D3.2 – Hydrogeological risk assessment of reference areas D3.3 – Reference guidelines
WP4	Trustworthy AI for hydrogeological risk assessment and evaluation of people's risk awareness of existing areas	4	21	D4.1 – Trustworthy AI models: hydrogeological risk assessment D4.2 – Trustworthy AI models: risk awareness
WP5	Guidelines on risk management planning and on increasing risk awareness for existing areas	4	21	D5.1 – Hydrogeological risk management: guidelines D5.2 – Risk awareness: guidelines
WP6	Application to pilot areas	4	24	D6.1 – Results of the pilot studies

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Right part

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- **PROJECT FULL NAME**
  Mitigating the Risk of Flooding and Landslides via Artificial Intelligence with a view to Extreme Climate Events
- **DURATION** 2 years (February 2024 – February 2026)
- **CONSORTIUM**
  - **eCampus University – Lead Partner - (eCampus) – *Italy***
  - **University of Pisa (UNIPI) – *Italy***
  - **Regional Department of Civil Protection of Medjimurje County (MED) – *Croatia***
  - **Rescue And Protection Directorate of Ministry of Interior of Montenegro (MUP) – *Montenegro***
- **PROJECT ID** 101140345
- **TOTAL PROJECT ELEGIBLE COST** 1.150.357,15 €
- **EU FINANCIAL CONTRIBUTION** 976.500,00 € (funding rate 85%)
- **CALL** Knowledge for Action in Prevention and Preparedness (UCPM-2023-KAPP)
- **TOPIC** UCPM-2023-KAPP-PREV
- **PRIORITY**
  Priority 1: *Risk assessments, anticipation, and risk management planning*
  Priority 2: *Risk awareness*

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Elisabetta Cattoni (Coordinator)

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BROCHURE

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PROJECT FACT SHEET

Project Fact Sheet

SAFE-LAND

Mitigating the risk of flooding and landslides via artificial intelligence with a view to extreme climate events

	Quick Facts
Project Name	**SAFE LAND** MITIGATING THE RISK OF FLOODING AND LANDSLIDES VIA ARTIFICIAL INTELLIGENCE WITH A VIEW TO EXTREME CLIMATE EVENTS
Funded by	European Commission-EU under the Union Civil Protection Mechanism Program
Budget	1 150 357.15 Euro
Duration	24 months, February 2024 - February 2026
Coordinator	UNIVERSITA TELEMATICA E-CAMPUS (Italy)
Project Partners	UNIPI - UNIVERSITA DI PISA (Italy) MED - MEDJIMURJE COUNTY (Croatia) MUP - MINISTARSTVO UNUTRASNJIH POSLOVA (Montenegro)

Objective

SAFE LAND proposes a tool that uses trustworthy artificial intelligence to assess hydrogeological risk and generate guidelines on risk management planning and increasing risk awareness, even if hydrogeologic/demographic data is incomplete. The tool uses a knowledge base consisting of representative sets of reference areas and reference climate events. Each reference area has elements (slopes, rivers, people) described by hydrogeological and demographic data, whereas meteorological data characterize each reference climate event. In the knowledge base, each element of a reference area subject to a reference climate event is associated with a hydrogeological risk level, based on geotechnical, hydraulic, and psychological analyses. Reference guidelines on risk management planning and increasing risk awareness are suggested. The tool uses trustworthy artificial intelligence to estimate the hydrogeological risk levels of the elements of an existing area with reference to an expected climate event, by looking for the reference areas/reference climate events most similar to the real area/expected climate event, then inferring tailored guidelines from the reference guidelines. Tailored guidelines help experts find the best actions to reduce the risk of the elements (slopes and rivers) and implement personalized guidelines to raise awareness of the risk, prioritizing vulnerable groups and people with disabilities.

Key Activities

- Hydrogeological risk assessment, evaluation of people's risk awareness, and guidelines for reference areas
- Trustworthy AI for hydrogeological risk assessment and evaluation of people's risk awareness of existing areas
- Guidelines on risk management planning and on increasing risk awareness for existing areas
- Application to pilot areas: data collection and testing of the tool in pilot cross-border areas

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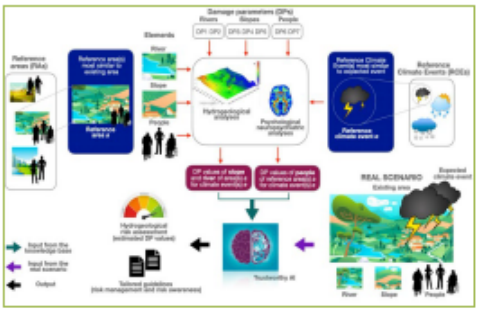
Expected Results

- Improved understanding and knowledge of current and future disaster risks.
- Enhanced availability of tools and guidelines on risk assessment and risk management planning.
- Enhanced availability of tools and guidelines on increasing risk awareness.
- Strengthened participation of volunteers and civil society in DRM, including youth, vulnerable groups, and persons with disabilities.
- Assess the hydrogeological risk and provide guidelines on risk management planning in areas in the partnership members' countries (Croatia, Italy, and Montenegro), also creating a network of competent authorities at sub-national, national and EU levels.
- Provide guidelines to raise awareness of the risk tailored to everybody's human factors and risk perception and propensity levels, including vulnerable groups and people with disabilities



Target groups and Final Beneficiaries

Policy makers, Competent Authorities, Public Administrations and Committees at different levels (local, national and international) from EU countries.

Stakeholders, in particular, those in cross-border areas.

Universities and Research Centers for research in hydrogeological risk assessment, and in risk awareness.

The general public, including citizens, and Non-Governmental Organizations (NGOs).

Civil Protections at regional, national, and EU scale whose objectives are:

- to foster cooperation among national civil protection authorities.
- to raise public awareness, prevention and preparedness for disasters.
- to enable quick, effective, and coordinated assistance to the individuals involved.

https://civil-protection-knowledge-network.europa.eu/projects/safe-land

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GADGETS PICTURES

Notepads and USB keys

STAKEHOLDER ENGAGEMENT GUIDE (in the USB key)

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SAFE-LAND

Mitigating the risk of flooding and landslides via artificial intelligence with a view to extreme climate events

Stakeholder Engagement Guide

MITIGATING THE RISK OF FLOODING AND LANDSLIDES VIA ARTIFICIAL INTELLIGENCE WITH A VIEW TO EXTREME CLIMATE EVENTS

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MEĐIMURSKA ŽUPANIJA

TABLE OF CONTENTS

1. INTRODUCTION 2

Description of SAFE-LAND project 2

2. Deliberative stakeholder engagement in other EU funded projects 3

3. Why consulting broader communities is important for SAFE LAND 14

4. Deliberative methods in ethical governance of SAFE LAND stakeholders 15

5. Conducting a deliberative stakeholder workshop 17

6. A user guide in three planning stages 20

7. Deliberative methods to cover more precisely the values, needs and expectations of society 23

8. Online workshops 27

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1. INTRODUCTION

Description of SAFE-LAND project

The project focuses on the development of a system that combines hydrogeological and psychological analyses with trustworthy artificial intelligence (TAI) to assess the risk of landslides and floods induced by climate events and to suggest guidelines on risk management planning and increasing risk awareness. TAI tool uses a knowledge base (KB) consisting of representative sets of reference areas (RAs) and reference climate events (RCEs). Each reference area (RA) is characterized by different elements: slopes, rivers, people. Each element is characterized by a set of element parameters (EP), i.e. hydrogeological data for slope and river elements, and demographic and psychological data for people. Meteorological and technical data characterize each reference climate event (RCE).

The landslide and flooding risk level of each element of a reference area subject to a reference climate event is evaluated by performing analytical/numerical analyses based on hydrogeological data (slope and river elements), and psychological data (people element). The results of these analyses provide the damage parameters (DPs) able to measure the consequences of RCEs to the elements of RAs and are used to train the TAI system. In this way, the TAI tool can estimate the landslide and flood risk level of an existing area with reference to an expected climate, by looking for the knowledge base (KB) reference areas (RAs) and reference climate events (RCEs) that are most similar to those of the real scenario.

A key first step of the procedure is defining of the knowledge base (KB).

The first three tasks of WP3 aimed at addressing and solving this issue. In particular, Task 3.1 aims to define representative geographical areas (RAs), their elements, e.g., slopes, rivers, and people living in the area, and each element's set of element parameters (EP). Task 3.2 aims to define the reference climate events (RCEs). Each RCE is described in terms of climate parameters. Task 3.3 aims to define and select appropriate damage parameters (DPs) for each element of each RA, able to measure the effects of RCEs on the elements of RAs.

Deliverable 3.1 provides detailed information on technical parameters that define reference areas, reference climate events and damage parameters. The document is organized as follows. Section 2 provides the description of the technical parameters used to define each element of the Reference Areas, and Section 3 describes the damage parameters selected for to evaluate the effects of the reference climate events on the safety conditions of each element. In Section 4 the parameters used to define the reference climate events are introduced.

ABSTRACT

This deliverable provides the guide for SAFE-LAND on stakeholder engagement in ethical governance of R&I. The document provides instructions for the strategic planning and conducting of a flexible deliberative workshop that can be adapted to the needs of the

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organisation. It supports stakeholder engagement to identify and address societal needs and challenges and provides orientation as well as methodological guidance on how to follow good practices in deliberative stakeholder engagement in dialogical settings

This guidance document will help you to

1. Strategically develop ethical R&I governance within your organisation
2. Engage stakeholders to assess societal needs and identify as well as relate relevant RRI keys
3. Follow good practice in deliberative stakeholder engagement in SAFE-LAND by describing success stories
4. Plan and conduct deliberative workshops in a flexible way by using adaptable dialogical methods.

2. Deliberative stakeholder engagement in other EU funded projects

SVAROG	**SVAROG**
Website	https://www.svarog2017.eu/
Funder	European Commission financial instrument Union Civil Protection Mechanism, Call for Proposals – Union Civil Protection Mechanism Exercises - GRANT AGREEMENT No: ECHO/SUB/2016/742246
Participating countries	National Protection and Rescue Directorate (DUZS) (Croatia); Entente Valabre (France); Directorate for Emergency Management of Montenegro - Ministry of Interior (Montenegro); Regional Fire Monitoring Centre (RFMC) (Former Yugoslav Republic of Macedonia); Department for Operations, Crisis and Disaster Coordination - Austrian Ministry of the Interior (Austria).
Description of project	Firefighting efforts require permanent prevention and preparedness activities aimed at an ever improving risk management and increased operational capacities. Forest fires are common threats to Croatia, Montenegro, Former Yugoslav Republic of Macedonia, Austria and France, who often share their operational know-hows and techniques. The number of fires varies and largely depends upon the weather conditions, i.e. temperature and rainfall amounts. Due to the climate change caused increase in temperature and the prolonged periods of droughts, the number of fires and their proportions are unfortunately likely to increase in near future. This clearly demonstrates the threat to the population and the environment, as well as potential detrimental effects to the

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	economy and the budget caused by forest fires. Therefore, there is a justified need for additional investments into strengthening of the transnational cooperation and assistance, aimed at a more efficient and faster response. Mediterranean states in particular, as significant tourist destinations, have additional obligation and responsibility to develop an advanced system of firefighting. In the recent years, new analogue and GIS tools have been developed with the aim to facilitate the management of large firefighting interventions by commanding officers. By using new technologies and applications technical capacities are increased, as well as the scope and efficiency of interventions. Throughout this project the partners want to share their experiences with colleagues from other countries in order to compare the tools in use and choose the optimal ones which in future that will include in the training programme of firefighting commanders. A need is there too to improve the communication between the aerial and ground forces in order to improve efficiency and safety on ground. Throughout the Union Civil Protection Mechanism funded project, Croatia, as the project coordinator and its project partners France, Montenegro and Former Yugoslav Republic of Macedonia, together with Austria as a project exercise player, organized four workshops and a table top exercise. The topic addressed by the project is the reception and coordination of international firefighting assistance in the event of a disastrous forest fire, as well as the application of a newly gained knowledge in tactical situation planning on the field. The general project objective is to train operational procedures when receiving, providing and coordinating international assistance provided by aerial and ground firefighting forces. The specific objective of the project is to make the participants familiar with modern technological tools used to better manage the fighting of forest fires and to unify new tactics and strategies for a more efficient firefighting.

NEIFLEX	**North Eastern Italy Flood Exercise**
Website	https://www.protezionecivile.gov.it/it/approfondimento/esercitazione-neiflex-2018/
Funder	European Commission financial instrument Union Civil Protection Mechanism
Participating countries	Austria – Ministry of Interior; Slovenia – Administration of the Republic of SLOVENIA for Civil Protection and Disaster Relief (ACPDR); Serbia - Sector for Emergency Management, Ministry of Interior of Serbia; Montenegro - MoI Directorate for Emergency Management; Russian Federation - EMERCOM of Russia.
Description of project	North Eastern Italy Flood Exercise (NEIFLEX) is a European project co-funded by the European Commission - DG ECHO which sees the Department as coordinator of a Consortium made up of Slovenia, Austria, Montenegro, France and Serbia.

	The project focuses on the management of flood risks, the implementation of a series of exercises dealing with "water rescue" contingencies and the organization of an extraordinary edition of the "Io Non Rischio" Campaign, in addition to sharing good practices of communication. Another purpose of the project is to consolidate an evaluation methodology carried out in the framework of the exercise with the contribution of international experts. The NEIFLEX Project represents an opportunity to ensure important support activities to local administrations and organizations by improving communication flows, the capacity for specific flood planning, including the development of scenarios for local exercises, encouraging the capacities of volunteers and local administrators on civil protection activities. The main objective of the exercise is to implement and improve the cooperation and interoperability of civil protection modules for hydraulic risk (High Capacity Pumping - HCP, Flood Rescue Using Boat - FRB), as well as international coordination activities. The exercise also aims to verify and improve the procedures for alerting, mobilizing and sending international resources, as well as increasing the knowledge and use of the tools and structures of the Union Mechanism. The exercise also represents an opportunity for testing, learning, improving technical skills and operational cooperation for all the civil protection actors involved.

BALANCE	**Large Scale Earthquake Management at Western Balkans through Joint Cross Border Cooperation Activities.**
Website	https://civil-protection-knowledge-network.europa.eu/projects/balance https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/projects-details/31082527/101017992/UCPM
Funder	European Commission financial instrument Union Civil Protection Mechanism- UCPM Full-Scale Exercises – PROJECT NO. 101017992
Participating countries	EUROPEAN UNIVERSITY - CYPRUS LTD (CYPRUS); MINISTARSTVO UNUTRASNJIH POSLOVA (Montenegro); ZAVOD ZA HIDROMETEOROLOGIJU I SEIZMOLOGIJU PODGORICA (Montenegro); MINISTRY OF INTERIOR (Cyprus); PANEPISTIMIO DYTIKIS MAKEDONIAS (Greece); PROVINCIA DI POTENZA (Italy); STOLICHNA OBSHTINA (Bulgaria); ETHNIKO ASTEROSKOPEIO ATHINON (Greece); ALPHA UNMANNED SYSTEMS SL (Spain); QENDRA PER ZHVILLIMIN DHE DEMOKRATIZIMIN E INSTITUCIONEVE (Albania); KESHILLI QARKUT LEZHE (Albania); DRUSTVO SA OGRANICENOM ODGOVORNOSCU PROJECT ADVISORY GROUP PODGORICA (Montenegro); GENERAL SECRETARIAT FOR CIVIL PROTECTION (Greece); MINISTRY OF INTERIOR (Croatia).

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Description of project	Disasters are huge challenges for societies, especially for urban areas, where most of the population and economic activity are located. This is especially true for countries such as Montenegro, located in the Western Balkans region that has a difficult geomorphology to be supported immediately in case of a major disaster. Moreover, during summer, the population at risk is more than doubled due to increased tourists flows. Earthquakes are a predominant risk in the Western Balkans and a major one (such as the one in Albania November 2019) can have severe impacts in the efforts of the Western Balkans' Governments for economic development and social wellbeing. The earthquake is the worst from point of view of damages, disruption of normality, life threatening situations and threat to societies / economies' resilience. This complex situation can be further complicated if a 2nd earthquake hits the vulnerable area (normal scenario in cases of big earthquakes) that may cause even bigger problems than the main one, leading infrastructures damaged by the main earthquake to collapse or become dysfunctional due to severe damage. Moreover, urban areas' resilience status influences major neighboring areas and sometimes the whole country. This is the case Montenegro will face if a major earthquake hits in Boka Kotorska Bay affecting big part of the country. The area is the economic center of a big territory and the functions that will be damaged, cannot be easily replaced, including Unesco World Heritage Monuments. Impacts will be severe throughout the country and last quite long. A big earthquake can create shifts in economic activities that may create serious problems in the future, as Montenegro economy is dependent on tourism and the cities have clear interdependencies among them. Montenegro resilience status (will) influence neighbouring countries and especially Albania and Croatia, calling for cross border sustainable cooperation, served by BALANCE project

L2BR	**Learn to be Resilient**
Website	https://civil-protection-knowledge-network.europa.eu/projects/l2br
Funder	European Commission financial instrument Union Civil Protection Mechanism- UCPM-2020-KN-AG-
Participating countries	NALAS – Réseau des associations d'autorités locale (France); Ministarstvo unutrašnjih poslova (Montenegro); Bashkia Tiranë (Albania); The Ss. Cyril and Methodius University (North Macedonia); Institut Za Javno Zdravlje Podgorica (Montenegro); Sveučilište u Zagrebu Građevinski fakultet (Croatia);
Description of	The L2BR aimed foster intersectoral cooperation and provided useful toolbox for improvement of prevention, preparedness,

project	and response to earthquakes in circumstances of pandemic crisis. The project consortium included a national civil protection authority, two universities, a public health institute, a local government and five local government associations, under coordination of the network of Associations of Local Authorities in South East Europe. L2BR engaged stakeholders at local, national, regional and international levels to combine scientific research and practical exercises, supporting disaster risk management actors who promote and facilitate the development, dissemination and exchange of knowledge and expertise. Through a series of case studies, feasibility studies, guidebooks and other activities, L2BR promoted cross-sectoral cooperation and provided tools to improve earthquake prevention, preparedness and response in circumstances such as a pandemic.

HOPE	**Complex Earthquake Management in South Caucasus Vulnerable Areas through Effective Planning, Reaction and Joint Operations**
Website	https://civil-protection-knowledge-network.europa.eu/projects/hope
Funder	European Commission financial instrument Union Civil Protection Mechanism- UCPM Full-Scale Exercises PROJECT NO. P101048502
Participating countries	European University Cyprus_CERIDES (Cyprus); Ministry of Emergency Situations (Armenia); Ministry of Interior / Cyprus Civil Defense (Cyprus); Protection and Rescue Directorate (North Macedonia); Ministry of Interior (Montenegro); Bureau De Recherches Geologiques Et Minieres (France); Ministry of Interior (France); General Secretariat Civil Protection (Greece). The project will also be supported by the Emergency management Service (EMS) of Georgia, and by the International Search and Rescue Advisory Group (INSARAG).
Description of project	The aim of the project is to improve civil protection preparedness and response capabilities of Armenia in dealing with large, complex disasters that require joint response coordination facilitated via the Union Civil Protection Mechanism and INSARAG. South Caucasus countries' efforts for sustainable development are clearly threatened by a devastating earthquake. Thus, sharing capacities, capabilities and resources, scientific support decision making, use of proven innovative tools, and joint training / exercising can lead to radical improvement of international cross border cooperation procedures of the Mechanism. Project HOPE had various activities and sub-activities throughout its duration which can be grouped into three major sections: a) Planning phase, b) Exercise implementation, c)

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	After-actions activities. In the planning phase the activities that were carried out achieved to identify all requirements, needs and gaps leading up to the exercise periods. Not only planning meetings / conferences with the partners were made to coordinate and monitor the progress of the project and ensure the achievement of the project objectives; but also seminars, workshops, training and dissemination activities with the objective to bring together the participating countries for exchanging their experiences, information on available equipment and team structures, whilst best practices were identified and adopted. Trainings depending on the needs of the host nation were also implemented to exchange technical expertise among the participating countries.

SEE ME	**Safe and Equal in Emergencies**
Website	https://civil-protection-knowledge-network.europa.eu/projects/see-me#inpage-section-overview
Funder	European Commission financial instrument Union Civil Protection Mechanism- Cross-border prevention and preparedness and marine pollution (Track 2)
Participating countries	Ministry of Interior of the Republic of Croatia; Uprava RS za zaščito in reševanje, Ministrstvo za obrambo (Slovenia); Ministarstvo unutrašnjih poslova (Montenegro)
Description of project	The Safe and Equal in EMErgencies (SEE ME) project aims to ensure that persons with disabilities have equal access to opportunities in emergency situations. Despite the adoption of the UN Convention on the Rights of Persons with Disabilities (2006) and the 2010-20 European Disability Strategy, persons with disabilities face inadequate access to rescue in emergency situations. This results from a lack of common standards in their protection and rescue, and their right to equal access and opportunities in emergencies is often neglected. Persons with disabilities are excluded from decision-making in the emergency planning and management process, and first responders are not trained to rescue and protect different disability groups. These barriers exacerbate the vulnerability of an already vulnerable group in society. SEE ME aims to improve the safety of persons with disabilities and ensure they have equality in emergencies by: raising awareness to equal rights in emergencies; analysing gaps and needs in the protection and rescue of persons with disabilities; collecting and exchanging best practices, expertise and planning; and developing guidelines and protocols related to assistance, protection and rescue of persons with disabilities. The project also advocates for persons with disabilities to play

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	an active role in civil protection prevention and in planning activities.

DRMCA MNE	**Disaster Risk Management Capability Assessment**
Website	https://civil-protection-knowledge-network.europa.eu/projects/disaster-risk-management-capability-assessment https://civil-protection-humanitarian-aid.ec.europa.eu/funding-evaluations/financing-civil-protection/prevention-and-preparedness-projects-civil-protection/overview-past-track-i-and-track-ii-projects/track-1-disaster-risk-management-capability-assessment-me_en
Funder	European Commission financial instrument Union Civil Protection Mechanism- Single country grants for disaster risk management (Track 1)
Participating countries	The Rescue and Protection Directorate, the Ministry of Interior of Montenegro. (Montenegro)
Description of project	The Disaster Risk Management Capability Assessment drafted by the Government of Montenegro will enable a more realistic and comprehensive overview of technical, financial and administrative capacity in Montenegro for carrying out adequate risk assessment, risk management planning for prevention and preparedness and risk prevention and preparedness measures.

CROSScade	**Cross-border cascading risk management for critical infrastructure in Sava river Basin.**
Website	https://civil-protection-knowledge-network.europa.eu/projects/crosscade
Funder	European Commission financial instrument Union Civil Protection Mechanism- Cross-border prevention and preparedness and marine pollution (Track 2)
Participating countries	Sveučilište u Zagrebu Građevinski fakultet (Croatia); INFRA Plan Konzaltnig (Croatia); Zavod za gradbeništvo Slovenije (Slovenia); Hrvatske vode (Croatia); Univerza v Ljubljani (Slovenia).
Description of project	The Cross-border cascading risk management for critical infrastructure in the Sava River Basin (CROSScade) project will focus on analysing cross-border risks between Slovenia and Croatia caused by earthquakes and floods, as well as possible subsequent cascading sequences of events along the Sava River. These two neighbouring countries are particularly vulnerable to

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	earthquakes and river flooding for two reasons. Firstly, they are near the ends of major European river systems, and secondly, their positions are in seismically active areas (the juncture of three geotectonic units: the Alps in the north and west; the Dinarides in the southern, south-western and central part; and the Pannonian Basin in the northeast). As a result of the recent earthquakes in Croatia (in March and December of 2020), the integrity of the flood protection system and transportation networks was significantly damaged. By focusing on the earthquake aftermath, critical infrastructure managers (CIMs) and Civil Protection Authorities (CPAs) overlooked the impact of floods caused by the earthquake-induced failures in the flood protection system. Therefore, CROSScade focuses on the vulnerability of the flood protection system, hydropower plant dams, and transport infrastructure, which are vital for CIMs, CPAs, and disaster relief operations. The project will deliver a cross-border risk assessment methodology and action plans that will increase the structural resilience of critical infrastructure and enhance transboundary communication between CIMs and CPAs. The methodology will be demonstrated in the cross-border pilot area of the Sava River Basin. Action plans will be formulated to increase resilience in the region. The consortium includes five partners from Croatia and Slovenia who have a proven track record in collaboration in previous H2020 and EU Civil Protection Mechanism (UCPM) projects (the most relevant being oVERFLOw and BORIS) in addition to the design and post-hazard integrity assessment of critical infrastructure.

DrawData	**Drafting Disaster Risk Reduction Awareness Raising Guidelines and Disaster Loss Data & Assessment System**
Website	https://civil-protection-knowledge-network.europa.eu/projects/drawdata
Funder	European Commission financial instrument Union Civil Protection Mechanism- Single country grants for disaster risk management (Track 1)
Participating countries	Ministry of Interior of the Republic of Croatia
Description of project	The project aims to develop a disaster risk reduction framework. Developing the framework will include drafting the first national raising awareness guidelines through discussions with all relevant disaster risk management stakeholders as well as implementing one of the guideline's activities – developing and distributing raising awareness material for children, young persons and visually impaired persons. Monitoring the effectiveness of raising awareness and education activities is

	crucial to their improvement and to reaching the overall goal: risk aware population. That is why one of the project's activities will include developing a sustainable awareness monitoring system. Risk awareness must be based on data and accurate information for it to be better accepted by the public and to enhance public's trust in disaster risk management and awareness of the importance of the disaster risk reduction measures. The project includes developing a bottom up disaster loss data collection and damage and loss assessment system. This system will be developed, local and national stakeholders educated and the system tested in 4 pilot areas in 4 regions in the country. The culmination of the project will manifest through local level and civil protection officials implementing collected disaster loss data into the raising awareness activities and materials for greater impact – making the information more relevant and relatable for the citizens of each of the pilot areas.

ALTER112	**Strengthening the human and technical aspects of public warning and crisis communication**
Website	https://civilna-zastita.gov.hr/jacanje-ljudskih-i-tehnickih-aspekata-javnog-upozoravanja-i-kriznog-komuniciranja-alter112/6679
Funder	European Commission financial instrument Union Civil Protection Mechanism- Single country grants for disaster risk management
Participating countries	Ministry of the Interior - Directorate of Civil Protection (Croatia)
Description of project	The goal of the ALTER 112 Project (Aspects of Human and Technical Development of System 112) is to strengthen the human and technical aspects of public alarm and warning and communication in crisis (emergency) situations in the Republic of Croatia. The first part refers to the development of the competences of the operators of the 112 centers and the revision of the existing ones and the creation of proposals for new standard operating procedures and other operating documents. The second part will provide easier access to the financing of investments in disaster risk management through the creation of a conceptual project for the modernization of the public alarm and warning system using sirens. The conceptual project will include technical specifications for the upgrade and modernization of existing sirens and the selection of locations for the installation of new electronic sirens. By achieving the goal of the project, improved capabilities of 112 center operators will be achieved (in terms of knowledge of regulations, communication skills, especially with people with disabilities, knowledge of psychological aspects of behavior and

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	stress reduction, use of new communication technologies, cooperation with emergency services, etc.), revision of existing and the development of new standard operating procedures and other operational documents that regulate and standardize the operational procedures for various extraordinary events, as well as the technical documentation for the public procurement procedure for the Concept Project and, ultimately, the delivered Concept Project for the modernization of the public alarm and warning system using sirens .

ROSES	**Cross Border Risk Awareness in Western Balkans**
Website	https://civil-protection-knowledge-network.europa.eu/projects/roses#inpage-section-overview
Funder	European Commission financial instrument Union Civil Protection Mechanism- Cross-border prevention and preparedness and marine pollution (Track 2)
Participating countries	University of Western Macedonia (Greece); Ministarstvo unutrašnjih poslova (Montenegro); Ministry of Security of Bosnia and Herzegovina (Bosnia and Herzegovina); European University Cyprus (Cyprus); The Centre for Development and Democratization of Institutions (CDDI) (Albania); Agjencia Kombëtare e Mbrojtjes Civile (Albania); Direkcija za zastita Spasuvanje (North Macedonia); The General Secretariat for Civil Protection – Greece; Etaireia Meleton Ypiresion Kai Logismikou Geochorikis Pliroforias I.K.E (Greece).
Description of project	The project aims to raise and enhance risk awareness in the Western Balkans cross border areas, by sharing best practices on risk communication, elaborating actions in the fields of host nation support in cross-border areas, empowering of local communities for joint disaster risk reduction and management, activating collaboration in bilateral agreements, public engagement and inclusion of vulnerable groups, risk awareness in educational structures, innovative processes in the protection of cultural heritage, as well as shedding light upon the issues in disaster preparedness and business continuity in cross-border areas. While cross-border cooperation is relatively well-established in the area of emergency response, cross-border cooperation during the prevention and preparedness phases can be further enhanced. This is especially true for the Western Balkans region with a difficult geomorphology which can hinder an immediate support in case of a major disaster.

FloodNorthALB	**Managing Complex Floods in North Albania through Cross Border Host Nation Support and Joint Cooperation.**

Website	https://civil-protection-knowledge-network.europa.eu/projects/floodnorthalb
Funder	European Commission financial instrument Union Civil Protection Mechanism- Full-scale exercises
Participating countries	Agjencia Kombëtare e Mbrojtjes Civile- Albania; European University Cyprus; Ministarstvo unutrašnjih poslova – Montenegro; Qëndra për Zhvillimin dhe Demokratizimin e Institucioneve (QZHDI) – Albania; The General Secretariat for Civil Protection – Greece; European Education Initiative -Albania; Ministry of Interior – Cyprus; Croce Rossa Italiana – Italy.
Description of project	Natural disasters pose a high risk to citizens' lives, property, environment and cultural heritage monuments, especially in developing countries such as Albania. The entire process of economic and social development of a country is at risk often incurring high costs that countries cannot bear. The recent initiatives for a unified market establishment in Western Balkans –as EU has- is one example of emblematic political economic initiatives that must be secured from major disasters. With FloodNorthALB project we address complex floods in the Region of Shkodra, that suffers regularly from severe floods- at the borders with Montenegro (also impacted by those floods). The region of Shkodra is a characteristic example of susceptive area to severe floods risk, repeatedly, with a complex system to deal with. The conditions is getting worse due to climate crisis that is already present in Northwestern Albania. The aim of the FloodNorthALB FSX project is to improve civil protection preparedness and response capabilities of ALBANIA in dealing with large, complex disasters that require joint response coordination facilitated via the Union Civil Protection Mechanism. Western Balkans integrated economic efforts face serious threaten by a major disaster and FloodNorthALB aims to strengthen the whole regional civil protection system of Western Balkans, through the active participation in the full scale exercise of all national civil protection authorities of the WB countries and neighbouring ones. The focus will be in creating the framework for sharing capacities, capabilities and resources, scientific support decision making, use of proven innovative tools, and joint training / exercising that can lead to radical improvement of international regional /cross border cooperation procedures of the UCPM. Albania the recently entered the mechanism can play a leading role in the area.

MEDEA	**Multidimensional seismic risk assessment combining structural damages and psychological consequences using explainable artificial intelligence.**
Website	https://civil-protection-knowledge-

	network.europa.eu/projects/medea#inpage-section-project-content
Funder	European Commission financial instrument Union Civil Protection Mechanism- Cross-border prevention and preparedness and marine pollution (Track 2)
Participating countries	Università Telematica eCampus- Italy; Università di Pisa- Italy; Medjimurje County- Croatia; Gasilska Zveza Slovenije – Slovenia.
Description of project	The project aims to build a system for multidimensional seismic risk assessment in cross-border areas, whose dimensions are the damage to structures and the psychological consequences for the individuals involved. The system has a knowledge base containing reference structures and reference families represented using technical and psychological parameters, which serve as a representative set of the structures and families in existing areas. With reference to an earthquake that has occurred or may occur in existing areas where the knowledge of structures(families) may also be incomplete, the system associates existing structures(families) to similar reference structures(families) of the KB based on available data. The system then combines analytical/numerical methods with explainable Artificial Intelligence models to estimate the damage to structures, the losses, and the psychological consequences for the individuals involved. The system will be available for competent authorities for free, as a web app, and will help civil protection authorities when planning mitigation strategies to reduce damages and losses.

3. Why consulting broader communities is important for SAFE LAND

Have you ever asked yourself what you can achieve through stakeholder deliberation in R&I governance? You can consult broader communities to practice ethical stakeholder inclusion and jointly think through the steps and resources for realising your planned RRI activity, identify societal values, needs and expectations and take them into account in R&I governance. Participatory events are thus high-quality participatory processes that can be considered an effective means of gathering informed public views and opinions on complex issues, especially in cases where traditional opinion research struggles to provide relevant insights or where polarised views exist (cf. Andersson et al. 2015, 12f.). By engaging in a trustworthy, fair and open dialogue with relevant stakeholders, you promote ethical governance from within your organisation. Giving stakeholders a say in open discussions raises self-awareness, builds on the existing knowledge of various actors and allows responding to possible societal contributions of

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R&I in terms of social values, needs and expectations.

Although different actors with different expertise, legitimacy claims, etc. reveal a wide range of perspectives and a variety of relevant issues in the deliberation process, there are topics for which as of today there is a broad consensus that, due to their social relevance, discussion involving relevant stakeholders is necessary. These include:

- Sustainability/ protecting of environment
- Data Protection/ privacy/ protection of human rights New Technologies: AI/ robotics
- Health (including psychological health and well-being)

4. Deliberative methods in ethical governance of SAFE LAND stakeholders

Deliberative activities are "[…] trying to make sense of value in the public sector and civil society, providing a bridge between the complex patterns of public demands and needs, as expressed through political and other processes, and the changing production system that keep people healthy, educated and safe" (Mulgan et al. 2019, 8).

The SAFE - LAND project noticed an increased interest in deliberative methods. This is because involving wider populations in participatory events offers new opportunities to define recommendations and to define best practices. By considering different options for complex issues, better informed decisions can be made. Nevertheless, deliberative methods have a long history. Since the 1970s and 80s, deliberative engagement has been applied to a variety of scientific and technical issues (cf. Andersson et al. 2015, 12). "[T]here has been a shift of PE [public engagement] from traditional models of public communication and consultation, where dialogue between decision makers and the public is narrow and restricted, to public deliberation where such dialogue is intensive and influential" (Rask et al. 2017, 19).

"Active engagement that requires citizens' cognitive attention during participation in the research process is favoured over limited interaction" (Haklay et al. 2020, 4).

This transition also relates to the fact that deliberative methods differ greatly in terms of e.g., duration, costs, target group or number of participants. SAFE LAND considers public deliberation as one approach with different sub-types and points to a more nuanced classification of public engagement processes:

> ***"Deliberative methods are characterised by their focus on ensuring high quality deliberative dialogues, where participants are given time and opportunity to listen to evidence, as unbiased as possible, discuss the issues with other citizens and/or stakeholders, and form their views" (Andersson et al. 2015, 12).***

- Deliberative research
- Deliberative dialogue
- Deliberative decision making

Relevant stakeholders may be engaged in SAFE LAND activities primarily through deliberative dialogue in participatory workshops. Such workshops allow you to employ engagement methods and techniques that are appropriate to the aims for civil protection activities. By using a variety of deliberative engagement techniques, you can also prevent stakeholder fatigue. This includes a set of different methods and techniques that may help you diversify stakeholder events. An important benefit of various forms of group discussions guided by a skilled facilitator is that they allow participants to discuss contested issues in depth, challenge opinions and iteratively refine their arguments to arrive at an informed perspective. In this way, participants can also build and improve mutual relationships and acquire new knowledge and skills.

> ***Deliberative methods place much importance "[…] on a proper, stratified selection process to ensure that the participants reflect the demographics of wider society or are broadly representative of a particular target group, depending on the purpose of the process" (Andersson et al. 2015, 10).***

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5. Conducting a deliberative stakeholder workshop

A deliberative workshop is a targeted participatory event, aimed at sharing information, transferring knowledge and exchanging experience. It enables in-depth discussion, challenging views, and developing understanding. The potential stakeholder engagement in deliberative workshops is considered to be at the level of involvement and collaboration. The aim of conducting a deliberative workshop is to promote and guide the involvement of relevant actors in the ethical governance of R&I in focused discussions between different groups of stakeholders. In this process, stakeholders should refer to the RRI key areas research integrity, gender perspective, public engagement, open access and to societal challenges relevant to the planned project activities.

Societal challenges the deliberative workshop method can be used to address

- Health, demographic change and wellbeing
- Civil protection, sustainable agriculture, marine and maritime research and the bio-economy
- Secure, clean and efficient energy
- Climate action, resource efficiency and raw materials
- Inclusive, innovative and reflective societies
- Secure societies to protect freedom and security of Europe and its citizens
- Others

Process

Typically, workshop participants are engaged through written materials, videos or expert presentations (cf. Prikken/ Burall 2012, 22). In case the workshop format involves experts presenting information, they should be briefed beforehand so that they clearly understand their role as presenters. However, the majority of the time should be allocated to the participants' discussions. These can take the form of plenary and/or small group discussions. Moderators ensure that all participants have enough time to express their values, expectations, interests and concerns. The discussions are carefully recorded, for example by a person taking notes. Various methods and techniques can be used, the choice of which depends, among other things, on the size of the group and the nature of the topic. Ideally, the ways in which participants can express their opinions should vary during the workshop.

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Deliberative workshops have been used to:

- Understand how people's views about a controversial scientific research or policy can change as they are given new information or deliberate over an issue;
- Explore how policies, or new activities, would impact communities and stakeholders, as well as to develop alternatives that result in better-informed decisions;
- Consult on conflicting beliefs or values around certain policies;
- Stimulate interest in specific scientific or societal issues among participants;
- Provide valuable insight and input into the concerns of peers and the wider public about an emerging, controversial research or policy agenda which may have impacts on wider society in the future;
- Enhance understanding and the relationship between science and wider society" (http://actioncatalogue.eu/method/7388).

Target group

The target group depends on the purpose of the workshop. The selection of participants depends on the issue at hand, but for a deliberative workshop, participants should be selected according to the quadruple helix model (QHM). In this way, you build a group of relevant stakeholders that includes different perspectives and reflects relevant aspects of your project activity. In addition to interest groups or demographic criteria, random selection is often used to avoid bias. (cf. http://actioncatalogue.eu/method/7388).

Stakeholder participation is not a goal in itself. So, keep in mind the benefits and limits of participatory events. How do participatory activities help to reach the objectives of your planned project activities? Why are stakeholders involved? To define the objectives, to interpret collected data or other?

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When considering who should be involved and why, the limitations of participation should also be taken into account, e.g., the complexity of the issues, as overly complex issues may not be suitable for less experienced stakeholders. The geographical scope also needs to be considered when determining who should be involved, as this aspect poses budgetary and logistical challenges. Online activities (e.g., video conferencing, online workshops, focus groups) can possibly help to overcome geographical limitations.

So, start planning the event and engaging the relevant stakeholders you want to involve as early as possible. Motivate potential participants for the topic and establish contact by promoting a culture of openness, transparency and participation. This can be realised by clearly articulating the objectives, expectations, but also limitations of participation in the project activity. Provide relevant and clear information to participants and clarify the extent to which participants can influence outcomes.

When choosing your methods, take into account that participants will vary depending on the issue and the scope. The methods and techniques should therefore be oriented towards the knowledge, experience and skills of the participants. Also, ensure that structures are created that ensure all voices are heard. In your participatory event, create a space with a pleasant atmosphere that allows participants to talk openly about their needs, wishes and concerns and to listen to each other.

Number of participants

The number of participants should not exceed 8-16 people in a single workshop group so that a discussion can take place and everyone gets a chance to have their say. However, it is possible to include several group discussions in a workshop and thereby engage more participants.

Time expense

The duration of a deliberative workshop depends on the topic and intended outcome. It may vary between 3 hours if the topic is narrow and the intended outcomes are circumscribed on the low end and several days if the topic is broad or particularly contentious and the intended outcomes are highly ambitious on the high end. Importantly, longer workshops are not inherently superior to shorter ones: what matters is that objectives and methods are aligned.

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Provide enough time to discuss what is on the agenda, allow stakeholders to have their say and ad- dress their values, needs and expectations as well as their potential concerns. Set a concrete focus. This will allow you to actually get answers to relevant questions and discuss issues in depth.

Costs

Low – Medium, depending on the number of participants, duration of the event, venue hire, catering, transportation costs etc.

6. A user guide in three planning stages

… before the workshop

- ✓ Identify stakeholders you would like to invite to the participatory event, ask yourself guiding questions for planning a deliberative workshop, and consult valuable tips other projects.
- ✓ Think about the objectives and desired outcomes of the workshop. Consider why the participation of relevant stakeholders is necessary and what contribution they should make. This step will guide the selection of methods, lead participatory activities and set criteria for evaluation (cf. Russo et al. 2018, 27).
- ✓ Draft an agenda: Brody et al. recommend that participation programmes should target relevant stakeholders. In this regard, the agenda should ensure both "breadth and depth" of stakeholder knowledge and input. "It is possible to overcome problems of citizen apathy and disinterest in the planning process by crafting lively and engaging participation programs" (Brody et al. 2003, 260f.).
- ✓ Send an invitation to relevant stakeholders and include important documents and guiding questions in advance. Ask participants about drivers and barriers for addressing societal values, needs and expectations in RRI activities in their institutions.

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"The planning of engagement activities or project[s] should identify the phases and time- line of implementation. The phases include such necessary steps as identification of pro- spective participants, development of an invitation list, development and distribution of the invitation message, preparation of guidelines/scenario of the event, preparation of written materials (if needed), and other" (Russo et al. 2018, 30).

… during the workshop

- ✓ Moderate the event, keep to the schedule and ensure that the programme runs smoothly. Be prepared as much as possible for all eventualities, e.g., possible technical difficulties.
- ✓ Provide basic information, explaining what a deliberative workshop is about and who is running it.
- ✓ Explain the purpose of the workshop and how the results will be used.
- ✓ Outline the process that led to a deliberative workshop, and why you are having one.
- ✓ You might want to share information such as names, bios and photos that require consent from workshop participants. Circulate a privacy statement including your commitment to the GDPR and explaining the channels available should anyone who has submitted personal information wish to withdraw their consent.
- ✓ Guide participants through the methods and techniques used in the workshop and provide assistance.
- ✓ Share a code of practice or principles outlining the behaviour you expect from workshop participants, online and face to face (cf. Crow et al. 2019, 7f.). Possible codes of conduct to share with participants could be the ideal typical criteria for stakeholder dialogue.
- ✓ Provide access to evidence that is presented in the workshop: This is very important for transparency and will include e.g., any slides or videos of presentations (Crow et al. 2019, 8).
- ✓ Record your results to reflect on the process and draw conclusions. You might wish to use the notes being taken to write a report of the event and share relevant results with participants or the wider public afterwards.
- ✓ Close the workshop session with final remarks and words of farewell. You can also mention upcoming activities and further opportunities for engagement. To summarise the event, you can refer back to exploration questions:
  - Were the objectives of the workshop achieved?
  - What difficulties were encountered?
  - How were they tried to be solved?

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– What should be discussed at the next event?

"Expert facilitation is important to guarantee as much as possible a level-playing field within the public engagement space and to manage issues of power, accessibility and confidence in the context of public engagement" (The Engage2020 Consortium 2015, 73).

… after the workshop

✓ Let people know what their input is used for, share documents (e.g., send draft or interim report) or let them comment on the workshop results again.

Once the workshop is over and a report has been written, you might want to share it on different platforms, including a summary on the website of your organisation to make your project activity more visible. You might also consider blog posts from members or interviews with them.

✓ Draw conclusions for your planned project activity. What went well, what would you like to do differently at the next event? Also consider doing a brief survey with participants to ask them about their experience of the event. Have their expectations been met?

✓ Update your stakeholder map, as the workshop may have changed the way you want to engage relevant stakeholders in your project activity. Therefore, prioritise stakeholders again if necessary and keep your map up to date. This will make it easier for you to recruit relevant stakeholders at the next participatory event

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7. Deliberative methods to cover more precisely the values, needs and expectations of society

You can for example use a set of criteria when deciding on which methods to employ in deliberative workshops. Templates from the guide e.g., the template for stakeholder analysis, can help you with this.

- Objectives: Ask why stakeholders should be involved and what the expected outcomes are.
- Topic: Ask e.g., about the nature and scope of the problem and specify the topic for precise guiding questions.
- Contextual situation: Ask e.g., about time and duration available.
- Resources available: Ask e.g., about the financing of the event and all related costs.
- Stakeholders: Ask about the potential role of the participants, e.g., their knowledge about relevant RRI key areas or their commitment to responding to the values, needs and expectations of society (cf. Russo et al. 2018, 29).

Using a mix of methods in deliberative workshops means you can potentially reach a wider range of people, giving them various opportunities to get involved.

In the following section, you will get to know a series of methods that you can use flexibly to design deliberative workshops. The methods are listed according to different areas of application, for example “getting to know the topic”, “identifying different perspectives”, “connecting ideas”, “entering into a dialogue”, “finding solutions to problems” or “reducing conflicts”. All methods are described in such a way that you can select, adapt and use them for planning and conducting de- liberative workshops in your organization. The examples of methods aim at self-reflective, creative and dialogical learning, critical thinking and decision-making and can thus contribute to the democratization of project activities. When choosing a method, make sure that it fits your Project activity, enables you to achieve your objectives and allows you to engage relevant stakeholders in the most suitable way.

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My personal business card

Goal: Get to know each other, reduce insecurities and establish a connection to the topic

Instruction: Grab a piece of paper or use a virtual whiteboard. Write down your name, your institution and your background to create your personal business card. Also assign yourself to one or more of the project key areas. Now spread out in the room or come together in virtual break- out sessions and get to know each other better.

Complete phrases like:

- I consider the relevance of open science to be …
- For me, gender equality means …
- Research integrity is what I encounter through …
- I am interested in the topic of public engagement, in that …

Collaborative mind map

Goal: Encourage creative working techniques to bring together ideas from the workshop group, to associate and collect them and to identify and link different aspects of project topic

- ✓ **Instruction:** Participants share thoughts, ideas and contexts with the group without a strict structure, so that the workshop moderator can assign the ideas and write them on a whiteboard. You can see the most important terms and contexts of project topic at a glance.

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Four corners method

Goal: Start a conversation and working on a variety of project issues at the same time. Ideas and approaches can be transferred or linked

Instruction: Participants discuss specific questions in small groups at different stations in the room. The four corners of the room (at an online event this can be virtual breakout rooms or a virtual white- board) are assigned to issues concerning your project activity. As a workshop participant, allocate yourself to one of the four thematic areas. Exchange views on the project topic and identify similarities as well as differences with other stakeholders and try to find solutions to problems. If time allows, you can also rotate. In that case, the discussion per station lasts for five minutes, then participants move on to the next station. At each rotation, new results are added to the discussion so that the debate is broadened. Discuss ideas in the plenum.

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World Café

Goal: Promote a creative approach, generate input, share knowledge, stimulate innovative thinking and explore action to a defined topic concerning your project activity

Instruction: Participants divide into small teams of no more than four people and discuss a given topic as if they were sitting around a table in a café. They note their results on their table cover by hand, which can later be taped to a wall so that everyone can see them. The discussion of the results takes place in at least three rounds of 20 minutes each, with all but one participant moving from table to table. In this way, one person always remains at the table as an expert and ensures that the discussion continues to develop. Experts from the respective tables present the results in the plenum. It is recommended to prepare the tables in a comfortable way, to provide tea, coffee or biscuits, to put a blanket on the tables, etc.

"Explore Questions That Matter!

The question(s) addressed in a Café conversation are critical to the success of the event. Your Café may explore a single question or several questions may be developed to support a logical progression of discovery throughout several rounds of dialogue. […]

A Powerful Question:

- is simple and clear
- is thought provoking
- generates energy
- focuses inquiry
- surfaces unconscious assumptions
- opens new possibilities
- seeks what is useful"

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Additional Resources:

❱ Brown, J./ World Café Community. (2002): The world café: A resource guide for host- ing conversations that matter. Mill Valley, CA: Whole Systems Associates. Available at: http://www.meadowlark.co/world_cafe_resource_guide.pdf.

❱ Slocum, N. (2003): Participatory Methods Toolkit. A practitioner's manual. Available at: https://cris.unu.edu/sites/cris.unu.edu/files/Toolkit.pdf.

❱ The World Café website: http://www.theworldcafe.com

8. Online workshops

There are also options to conduct deliberative workshops online. However, digital technologies in deliberative stakeholder engagement divide the field, with many practitioners seeing online engagement as inferior, while others consider digital options as the avenue of the future.

One area where deliberative online workshops may prove useful is in ensuring anonymity (cf. Andersson et al. 2015, 19).

Other things you might want to consider when conducting a deliberative workshop online:

❱ Appoint a technical facilitator, who can be contacted directly via the chat if technical difficulties occur

❱ Specify rules at the beginning (e.g., raising hand before asking questions, unmute before talking, mute when not talking etc.)

❱ Ask participants to use the chat for questions

❱ Start with an introduction round

❱ Moderate the online event, keep to the schedule and ensure that the program runs smoothly

❱ Have a break! Participants should be able to take a short break and "recharge their batteries" even in online formats

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❱ Choose deliberative methods and adapt to the online environment

Need an example?

Apply the World Café method digitally, e.g., by using the breakout room function. Divide participants into groups of four so that they come together in small discussion rounds. The technical facilitator can rotate the groups after 20 minutes so that other stakeholders can come together and share ideas. In the online version of the workshop, notes can be taken on a virtual whiteboard. The table expert remains in place, as in the face-to-face variant, and passes on the results achieved so far to participants entering the room. The technical facilitator finally ends the group sessions and allows participants to come back together in the main session, where they can have a plenary discussion together with all workshop participants.

Online whiteboards are virtual workplaces where people can work in real time and asynchronously. Meetings and brainstorming sessions function as if participants were all in the same room. Whiteboard applications might even be included in the software of the video conference itself, e.g., in Zoom.

Possible online collaborative whiteboards:

Etherpad	https://etherpad.org/
Jamboard	https://jamboard.google.com/
Miro	https://miro.com/
Mural	https://www.mural.co/
WBO	https://wbo.ophir.dev/?lang=en

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