



**CrossEU**

# D6.6 Impact Monitoring and Evaluation Plan (Version 1)

WP6 - Task 6.3  
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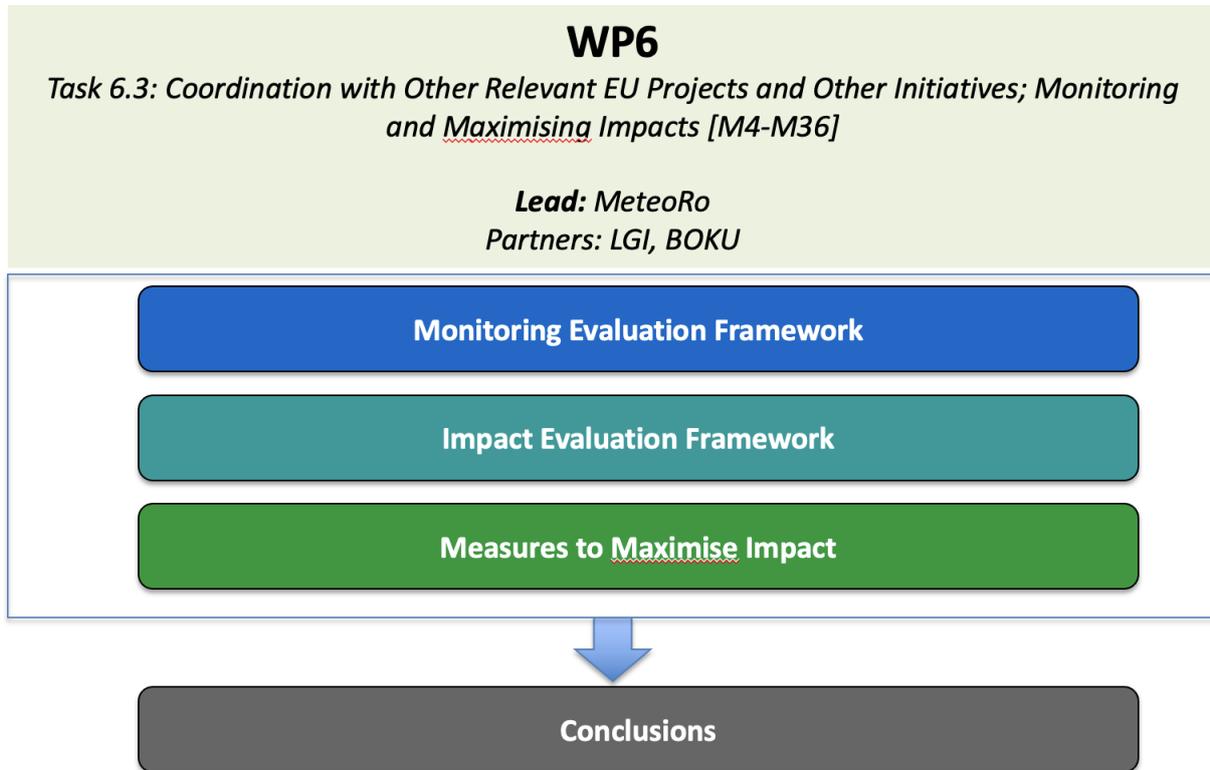
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## Executive Summary



Deliverable D6.6 titled “Impact Monitoring and Evaluation Plan” is a key component of the CROSSEU project’s strategy to track and assess the project’s impact pathways and collaboration with national and international initiatives. As part of Task T6.3, it focuses on coordinating with other EU projects to maximize synergies and overall impact.

The Integrated Monitoring and Evaluation Plan (IMEP) systematically monitors progress toward the project’s expected outcomes, ensuring that scientific, social, and practical elements are effectively integrated. CROSSEU aims to enhance the understanding and management of climate change impacts across Europe, specifically addressing socio-economic risks and adaptation strategies.

Central to CROSSEU is the development of the Impact Data Repository, which supports the Decision Support System by providing critical data for risk modelling. The project has established strong communication and dissemination efforts, engaging stakeholders through workshops, mapping, and digital platforms.

By adopting an interdisciplinary, user-focused approach, CROSSEU ensures its outputs—such as risk indicators and decision tools—are both



scientifically sound and relevant to practitioners and policymakers. Through capacity building and scenario development, the project improves climate resilience planning across multiple sectors. By Month 17, CROSSEU has notably advanced understanding of climate-related socio-economic risks, positioning itself as a valuable resource for future European climate adaptation strategies.

## Keywords

Impact evaluation; Impact Monitoring; Impact Pathways; Evaluation Plan; Socioeconomic (SE) Impacts; Socioeconomic (SE) Risks; Decision Support System (DSS); Data Repository; Key Performance Indicators (KPIs); Stakeholder Requirements; Stakeholder Engagement; Exploitation; Communication; Dissemination; Risks;

## Abbreviations and acronyms

Acronym	Description
BGP	Biogeophysical
CCH	Climate Change Hotspots
CGE	Computable General Equilibrium
CROSSEU	Cross-sectoral Framework for Socio-Economic Resilience to Climate Change and Extreme Events in Europe
CSA	Case Study Area
CSO	Civil Society Organization
DoA	Description of the Action
DSS	Decision Support System
EAB	External Advisory Board
EC	European Commission
EU	European Union
FAIR	Findable, Accessible, Interoperable, and Reusable
GA	Grant Agreement
HDR	Harmonised Data Repository
IAM	Integrated Assessment Model
IMEP	Impact Monitoring and Evaluation Plan
KPIs	Key Performance Indicators
LD	Lower Danube
M&A	Mitigation and Adaptation
M&E	Monitoring and Evaluation
MEF	Monitoring and Evaluation Framework
NGO	Non-Governmental Organization
PC/GA	Project Coordinator/Grant Agreement



RCP	Representative Concentration Pathway
RDI	Research, Development, and Innovation
SE	Socioeconomic
SEE	South-Eastern Europe
SSH	Social Sciences and Humanities
SSP	Shared Socioeconomic Pathway
STL	Storyline Event
WP	Work Package



## 1. Introduction

### 1.1 Overview of the CROSSEU Project

The CROSSEU project was launched in response to growing societal needs for effective climate action and stronger socio-economic resilience. As climate change continues to impact our world, it becomes crucial to understand and manage its complex effects.

#### Project Objectives

CROSSEU aims to respond to increasing societal needs to reduce climate-damaging actions, adapt to the expected consequences, and increase socio-economic resilience.

The main ambition of the project is to provide a science based and ready to use Decision Support System (DSS) built on enhanced understanding of the biogeophysical (BGP) risks from climate change, and their socioeconomic (SE) impacts in Europe. The DSS will be fully co-produced and implemented with practice stakeholders (practitioners, field workers, service providers) to ensure its uptake, and support effective coping with sectoral and cross sectoral climate risks within the context of the European green transition.

The project will deliver a climate-sensitive framework, including a ready-to-use decision support system platform and technical recommendations, to inform investment decisions, cost-effective adaptation and mitigation options and policy response to climate change.

The project contributes to advancing the understanding of the socio-economic risks and response options associated with climate change impact in Europe in different timeframes, including the post-COVID-19 societal-environmental transformation, and derive practical recommendations for political and societal action.

The solutions proposed are based on an extensive assessment of the socio-economic risks of climate change in a cross-sectoral hierarchical approach, based on storylines addressing key categories of climate hazards in different socio-economic sectors and climate change-sensitive areas across countries and European regions.

The project offers a ready-to-use solution (i.e., DSS) that integrates complex information from available climate risk data sets and non-climatic sectoral data collected during the project implementation and derived through modelling based on demand-driven climate-socio-economic pathways.

## 1.2 Purpose and Scope of deliverable D6.6: Impact Monitoring and Evaluation Plan

The CROSSEU consortium consists of 15 partners from 9 European countries. MeteoRo is leading D6.6: Impact Monitoring and Evaluation Plan, and LGI and BOKU are contributors to this task.

Deliverable D6.6, titled “Impact Monitoring and Evaluation Plan: Report on Monitoring Key Impact Pathways and Cooperation with National and International Initiatives and Projects”, plays a crucial role in the project’s broader strategy. Its purpose is to track and evaluate the impact pathways and cooperation efforts with relevant stakeholders, ensuring that the project's objectives are being met and its impact is maximized.

D6.6 is part of Task T6.3 “Coordination with Other Relevant EU Projects and Other Initiatives; Monitoring and Maximizing Impacts” which has the objective to facilitate the coordination, and develop synergies, with other EU projects and initiatives.

In this context, D6.6 serves as a key tool in achieving the task's objectives by providing insights into the coordination processes and impact maximization strategies across various related initiatives as well as by providing information about current efforts to enhancing the project’s impact and to ensuring effective collaboration at national and international levels

## 1.3 Link between Impact M&E Plan and Project Outcomes

D6.6 Impact Monitoring and Evaluation Plan (IMEP) is essential in tracking the progress and effectiveness of CROSSEU project against the outlined expected outcomes. The IMEP provides a clear framework for assessing the impact of CROSSEU efforts.

Link between the IMEP and project outcomes:

1. Decision Support System: The IMEP traces the development of the DSS by monitoring how well it integrates the understanding of biogeophysical risks from climate change and their socioeconomic impacts in Europe. It will also assess the system's co-production with practice stakeholders to ensure its uptake.
2. EU-wide Impact: The IMEP will evaluate how the project contributes to enhancing the overall impact of the Destination-Climate initiative across the EU, including assessing its alignment with other relevant national and international initiatives.



3. Understanding Climate Risks: The IMEP will focus on monitoring progress towards improving the understanding of climate change-driven hazards and their socioeconomic impacts at different warming levels, with or without adaptation.

4. Social Sciences and Humanities Integration: The IMEP will also monitor the integration of social sciences and humanities perspectives throughout the project, ensuring that the project engages stakeholders, such as communities, policymakers, businesses, and the scientific community, in a meaningful way.

The IMEP will help ensure that the project remains on track to meet these expected outcomes by regularly monitoring and evaluating the key impact pathways and cooperation efforts.

By systematically tracking and evaluating these areas, the IMEP will provide insights into how the project is contributing to achieving its expected outcomes and ensuring the successful integration of scientific, social, and practical elements into the project's framework.

## 2. Monitoring and Evaluation Framework (MEF)

The primary aim of the CROSSEU project's MEF is to evaluate and assess the overall impact of CROSSEU. The MEF is essential for keeping the project aligned and successfully reaching its objectives, as well as the expected outcomes and impact. It helps assess the current state of progress and measure how well activities are being carried out. Through monitoring, challenges can be identified early, allowing for timely solutions to be found. It ensures that the project stays on the right path and that resources are being utilized effectively. Additionally, monitoring enables informed decision-making, providing the coordination teams with the necessary insights to adjust plans or make improvements when needed. Ultimately, monitoring fosters transparency and accountability, ensuring that the project is being managed efficiently and responsibly.

1. Output monitoring – examines whether the execution of each project element suit the original targets stipulated in Grant Agreement (GA) or not – that is comparing our actions (or outputs) within the framework of the project;
2. Impact/Outcomes monitoring – examines how our actions affected the 'outside world' – that is comparing our outreach (or impact), external to the project.

As a first step, the partners are recording the actions and activities carried out within CROSSEU—this includes all outputs generated, such as workshops, publications, databases, social media posts (e.g., tweets), and more. Next, the partners evaluate and analyse the impact of CROSSEU by tracking indicators such as the number of clicks, likes, stakeholder subscriptions to our database, and media coverage. Finally, by comparing the actual results to the initial expectations, we aim to identify and interpret possible causal links between outputs and impacts, allowing us to evaluate the effectiveness and efficiency of our work.

The results of the analysis can serve the two (internal and external) functions of monitoring:

- Internal – as a continuous or periodic self-reflection on our own work that enables us to better understand our results and improve our practices within the (duration of the) project;
- External – as a tool to produce the data for outputs (reports, videos, articles, presentations, policy briefs) for the dissemination of the results of the project for external actors (stakeholders, etc.) aimed at expressing the value of the consortium's work.



The created framework develops adequate processes, tools, indicators for monitoring the outputs and impacts of the project aimed at fulfilling the internal and external functions of monitoring as described above.

The PC/GA will monitor the project' progress and impacts, and will issue regular correspondence and reports on the implementation status which will be internally or publicly distributed, including an Impact Monitoring and Evaluation (M&E) Plan in line with the Key Impact Pathways, as described in the GA.

The MEF also defines which partner is responsible for monitoring each activity, ensuring accountability and clarity. It sets out when monitoring activities will take place, providing a timeline for assessments. Furthermore, the framework details how monitoring is carried out, including the methods and tools that will be used. It also identifies the necessary resources to ensure the monitoring process runs smoothly and effectively. Overall, a clear and well-defined MEF is essential for carrying out monitoring activities in a structured, consistent, and efficient manner. MEF has two components: monitoring and evaluation.

## 2.1 Monitoring framework

### 2.1.1. Quantitative indicators

Table 1 provides a structured overview of the planned actions, the tangible outputs they aim to produce, and the indicators that will be used to measure progress and assess the achievement of objectives.

Table 1: Key actions, expected outputs, and corresponding indicators for monitoring progress

ACTION	OUTPUT	INDICATOR
Contacting stakeholders	Stakeholders on 'Internal list of stakeholders' contacted	<ul style="list-style-type: none"> <li>• Number of people receiving invitations (personal, e-mail, through social media platforms);</li> <li>• Number of people registered to the event;</li> <li>• Number of actual participants;</li> <li>• Composition of the participating stakeholders;</li> </ul>
Events and workshop	Stakeholders engaged	<ul style="list-style-type: none"> <li>• Number of invited stakeholders</li> <li>• Number of registered stakeholders to the organised events and workshops</li> </ul>



		<ul style="list-style-type: none"> <li>• Number of CROSSEU target stakeholder groups covered by each event</li> </ul>
EAB Meetings	Insights provided	<ul style="list-style-type: none"> <li>• Number of EAB meeting organised</li> <li>• Number of EAB members attending project meetings</li> <li>• Participation rate (number of EAB members attending/total number of EAB members * 100)</li> </ul>
GA Meetings	<ul style="list-style-type: none"> <li>• Alignment on project direction and milestones</li> <li>• Approval of deliverables, budgets, and work plans</li> <li>• Decisions on governance, risks, and major changes</li> <li>• Confirmation of roles, responsibilities, and next steps</li> </ul>	<ul style="list-style-type: none"> <li>• Number of GA meetings organised</li> <li>• Partner participation rate (number of partners attending/total number of partners in the project * 100)</li> <li>• Number of key decisions (i.e., strategic, financial, operational /research) made per GA meeting</li> </ul>
Consortium (progress) meetings	<ul style="list-style-type: none"> <li>• Project progress updates from partners and work packages</li> <li>• Agreement on practical issues and task coordination</li> <li>• Planning of upcoming activities and deadlines</li> <li>• Assignment of responsibilities and action points</li> </ul>	<ul style="list-style-type: none"> <li>• Number of consortium meetings organised</li> <li>• Partner participation rate (number of partners attending/total number of partners in the project * 100)</li> <li>• Average number of project member participation per meeting</li> </ul>

### 2.1.2. Qualitative empirical research

The "qualitative indicators" in the CROSSEU project refer to the qualitative data collected through highest levels of transparency to ensure intersubjective traceability of findings. This data is intended to provide relevant input for co-designing the project's methodological framework and the CROSSEU DSS and is collected via surveys, interviews, focus groups and workshops.

Events provide excellent opportunities for interacting with stakeholders (and partners) and for gathering attendees' information/opinions about the specific event as well as about the CROSSEU project/network in general. Assessment questionnaires should be filled, collected and used for all or at least most events (online and on paper, depending on the event).



The partners provide different kinds of questions, concerning:

- Opinions about the event (organisation, relevance to our work, usefulness, understanding of main issues, expertise, etc.).
- Opinions about the CROSSEU initiative, the CROSSEU network and the CROSSEU platforms (relevance, awareness, efficiency of network building, etc.) and their effect on the greater community.

Annex 1 of this report provides an example of a questionnaire for this purpose.

The first stakeholders engaged were at a local/regional level in all the Case Study Areas, as defined in the Grant Agreement. As detailed in figures 1 and 2, they were solicited early in the project to understand their needs. These exchanges with the stakeholders are at the basis of the tools and framework built by the partners of CROSSEU, to ensure they are real-life based and fit their needs.

To ensure that the project gather enough engagement from the stakeholders, a Key Performance Indicator (KPI) have been defined and is to be achieved by the end of the project (Table 2).

Table 2: Key Performance Indicator

KPI	Means of verification and target value
A ready-to-use science-based DSS, Operational at the end of the project, delivering actionable co-developed knowledge	Downloads/visits, stakeholder endorsements; About 500 registered sectoral users from at least 20 countries

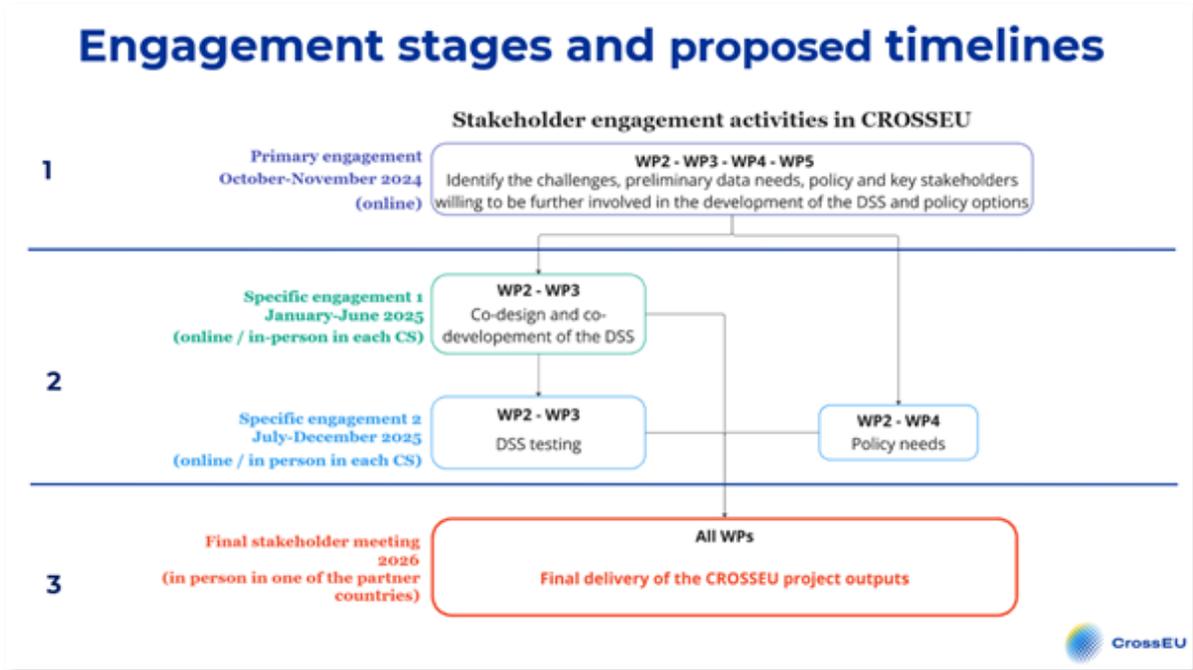


Figure 1: Timeline for stakeholder engagement activities<sup>1</sup>

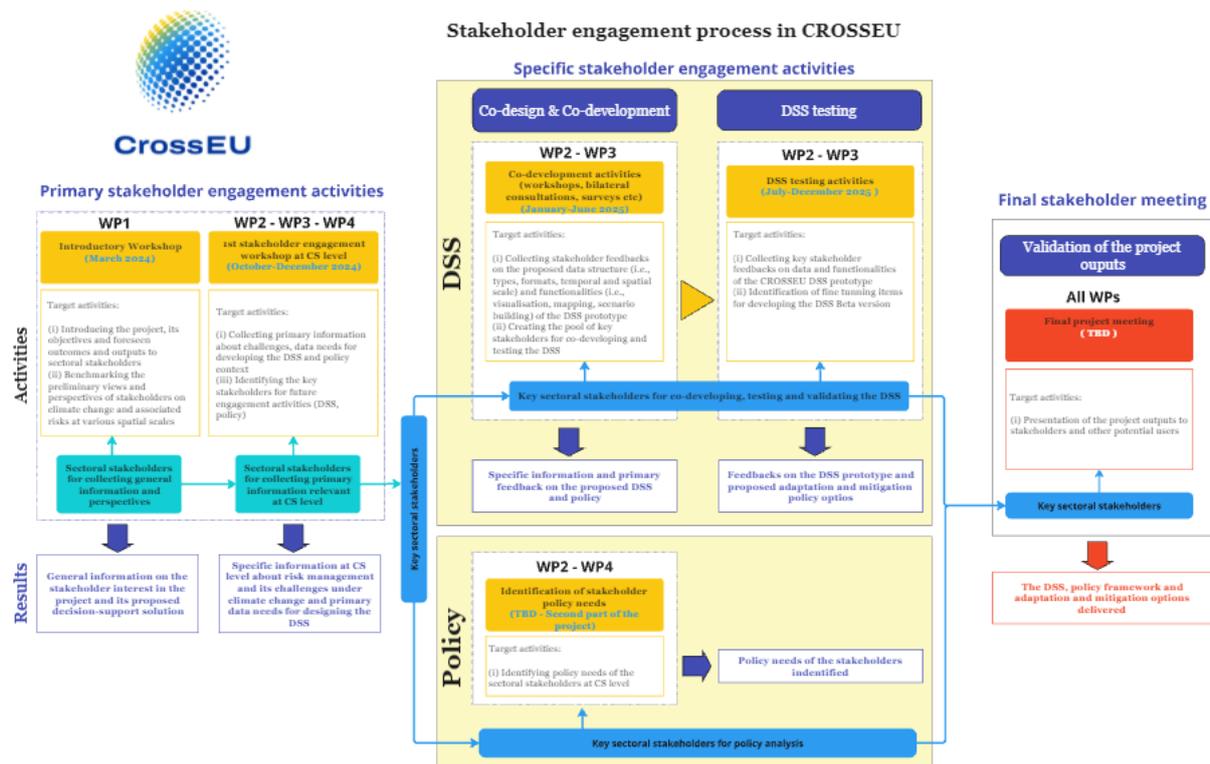


Figure 2: Detailed phases of the engagement activities in CROSSEU<sup>2</sup>

<sup>1</sup> Deliverable 5.1 – Stakeholder Mapping and Engagement Plan v2 (March 2025)

<sup>2</sup> Idem<sup>1</sup>



The EU and UK stakeholders will also be solicited to harmonise, upscale and disseminate the DSS and make sure that the M&A strategies and policies can be transferred to similar regions in the EU/UK.

As this project aims to be cross-sectoral and address a wide variety of actors, the stakeholders are categorised by sectors. Each CS brings a specific focus on defined sectors, particularly impacted by CC and the risks it implies.

### 2.1.2.1 Online stakeholder surveys (optional – partner level)

The project employs two main approaches:

- Personalised questionnaire directed to the registered users to the CROSSEU newsletter about the CROSSEU process, impact, etc.
- Simple questionnaire to stakeholders (from non-public databases of consortium partners and other sources, on the project’s social media platforms and partner institutions SM accounts, etc.) testing awareness and opinion of CROSSEU outcomes etc.

### 2.1.2.2 Expert interviews with stakeholders (optional – partner level)

The most relevant stakeholders from each case study area (CSA) (Table 3) are engaged in the key project activities (i.e., co-design of the DSS, validation of some project results, feedback on the DSS functionalities), through structured interviews, structured conversations to assess more complex effects of CROSSEU actions and maximise the project impact and uptake. Further details on the stakeholder engaged in each case study can be found in the internal CROSSEU document, Deliverable 5.1 – Stakeholder Mapping and Engagement Plan (Version 2, March 2025), which is regularly updated.

Table 3: CROSSEU Case Studies

CS1 – Heat: The impact of the unprecedentedly hot decade (2010–2019) on the health sectors in the United Kingdom and Czech Republic
CS2 – Drought: The impact of the 2018-2022 multi-year drought on agriculture and food security in Central and South-Eastern Europe (SEE)
CS3 – Storm: Storm damages in Southwestern Denmark and Northern Germany
CS4 – Storm: Valuation of social benefits of floods and flash floods adaptation and mitigation in Northeastern Italy

CS5: Snow: Snow-related hazard risks in the European Alps and Carpathians under different climate scenarios and impacts on the tourism sector and mountain communities

CS6 – Indirect: Shifting climate seasonality and water availability: risks for socio-ecological systems in the Lower Danube (LD)

CS7 - Impacts on energy demand and energy security in systems with high shares of renewable energy from heatwaves, droughts and storms concurrent climate hazards on energy systems in Europe

CS8 - Transboundary effects on agriculture and labour productivity due to climate impacts in the rest of the world

### 2.1.3. Monitoring tools in the CROSSEU Project

Effective monitoring is essential to ensure that the CROSSEU Project progresses in line with GA and its initially proposed objectives, timeline, and quality standards. A suite of monitoring tools is implemented to support coordination, track performance, and enable adaptive management across work packages (WP) and partner institutions. These tools facilitate continuous oversight of activities, outcomes, and risks, while also supporting transparency, accountability, and evidence-based decision-making. The monitoring tools implemented in the CROSSEU project include:

- Progress monitoring indicators – including centralised metrics that track the overall progress in milestones, deliverables and work package outputs (i.e., proportion of deliverables submitted by the contractual deadline, number of project milestones completed versus planned at a given point, share of planned WP outputs (e.g. tasks, models, services) delivered on time, average delay in days for submitted deliverables, % of deliverables reviewed internally before submission, number of completed tasks vs total in the WP)
- Work package progress indicators – including centralised metrics that track the progress in each WP (i.e., share of completed tasks vs. total planned tasks in the WP, milestones reached within the scheduled timeline, number of internal WP coordination meetings held, proportion of contributing WP partners attending the WP meetings, visual status for each task green = on track, yellow = delayed, red = critical)
- Risk monitoring register – including living reports that identifies, assesses, and follows up on project risks. This register includes likelihood, impact, mitigation measures, and risk owners (per WP and associated tasks).

- Stakeholder engagement log – this tool tracks external engagement activities (e.g. EAB meetings, workshops) and monitor participation rates, feedback, and integration of input into the project.
- Communication and dissemination tracker – this tool monitors KPIs related to outreach (publications, website visits, social media, policy briefs, etc.) and ensures alignment with the project's impact and visibility objectives.
- Financial Monitoring Tool – it oversees budget consumption by partner and work package for the EC reporting periods.

#### 2.1.4. Data Sources for Indicators and Methodology for Collecting Data

This section describes the approach used to monitor project indicators through well-defined data sources and collection methods. Data is gathered from both qualitative and quantitative inputs to ensure a robust understanding of progress and impact. The methodology ensures that each indicator is backed by verifiable evidence, and the process allows for consistency, traceability, and transparency.

Primary Data Sources Include:

- Internal reports – periodic progress and technical reports submitted by partners.
- Meeting minutes – records from internal coordination and work package meetings.
- Workshops and training sessions – participation logs, evaluations, and summaries.
- Standardized forms and templates – used across the consortium for uniform data submission.
- Email exchanges and partner communications – supporting documentation for coordination and decision-making.
- Documentation of dissemination events – photos, attendance lists, agendas, and feedback forms.
- Online tools/platform analytics – usage data from project platforms and tools.

Data Collection Methods:

- Surveys – conducted among stakeholders and participants to gather structured feedback.



- Document reviews – analysis of submitted reports, minutes, and workshop materials.
- Meeting analyses – extraction of key actions and outcomes from meeting documentation.

#### Information Analysis:

- The collected data is reviewed for accuracy, synthesized, and used to assess indicator progress.
- Findings are compared against predefined benchmarks or targets where applicable.
- Outcomes are reported in a format aligned with the reporting guidelines of the project and the funding body.

### 3. Impact Evaluation Framework

#### 3.1 Project’s pathways towards impact: description of the project's expected impact

The "Key Impact Pathways" (KIP) in the CROSSEU project refer to the development of a comprehensive "CROSSEU Impact Data Repository" that will provide input data for modelling and direct use in the project's Decision Support System (DSS). This data repository is intended to support the project's ambition to provide a science-based, ready-to-use DSS that is built on an enhanced understanding of the biogeophysical and socio-economic risks of climate change in Europe [Deliverable 6.1 Data Management Plan version 1].

##### 3.1.1. Key Performance Indicators (KPIs) for project implementation

The table below (Table 4) presents the Key Performance Indicators (KPIs) associated with the project implementation, structured by specific categories aligned with the activities and objectives outlined in the Grant Agreement.

Table 4: KPIs associated with the project implementation, by categories (Cat): Overall project implementation (OV), Modelling (MD), Case Study implementation (CS), Stakeholder engagement (ST), Exploitation (EX), Communication (CO)

SO/OV	KPIs	Means of verification and target value	WPs
SO1/OV	1.1: Harmonised database of datasets, indicators and model outputs for effective sectoral M&A options under different CC scenarios	CROSSEU harmonised data repository; > 1,500 registered users during the lifetime of the project	WP1 WP2
SO1/MD	1.2: Improved version of PAGE2020 (IAM)	Model updates and report	WP1
SO1/MD	1.3: Improved geographical representation of ENGAGE (CGE) model to accommodate assessment of policy impacts	Model updates and report	WP1 WP2
SO1/MD	1.4: Improved econometric modelling and representation of sectoral climate risks on SE outcomes, including income inequality	Open access journal publications, Public presentations, Conferences, Technical reports; >100 customer satisfaction surveys filled	WP1 WP4 WP5

SO1/MD	1.5: Improved monetization of loss/decreasing of social benefits caused by biodiversity damages	Open access journal publications, Public presentations, Conferences; Survey data collected from at least 2,000 citizens	WP1 WP2
SO2/CS	2.1: Number of high-impact extreme weather events addressed in CCH and event-based STLs	> 50 info-cards for CCH areas (at least one per CC sector); 8 event-based STLs; Open access journal publications (one / case study, and cross cutting results); > 600 local decision makers and other stakeholders registered in the web-platform	WP1 WP2
SO2/OV	2.2: Number of BGP-SE impact and risk metrics available to end-users through the DSS	Collection of impact and risk metrics; Over 40 impact and risk metrics available to end-users	WP2
SO3/OV	3.1: A web-based geographical information system included in the DSS to support (cross-) sectoral applications at national and regional scale	At least 10 stakeholders/EU country (on average) and at least 20 EU and international organisations registered	WP1 WP2 WP3
SO3/ST	3.2: A ready-to-use science-based DSS, operational at the end of the project, delivering actionable co-developed knowledge	Downloads/visits, stakeholder endorsements; About 500 registered sectoral users from at least 20 countries	WP1 WP2 WP3
SO3/CS	3.4: Number of stakeholders/users engaged in the co-production DSS process	>500 /stakeholders/users from >20 countries participating in co-production workshops, webinars or direct dialogues; 40-70 interviews with sectoral experts	WP2 WP3 WP4
SO4/OV	4.1: Cross-sectoral climate policies analysed in EU countries and UK	35 EU and 75 national policies from 12 sectors	WP4



		included; At least 70 key-informants consulted (EU and UK)	
SO4/OV	4.2: CROSSEU results published extensively internationally	>16 Open-access publications submitted, Public presentations, Conferences	All
SO4/EX	4.3: Number of target audience groups involved in project communication activities	Target audience groups exponents profiles; 6 target groups covering the policy, science community, citizens	WP5
SO4/CO	4.4: Improved coordination and synergies with other relevant EU projects and initiatives, including CL5-2021-D1-01-05 and JRC	Report on synergistic networking actions with other EU projects and initiatives; 3 joint workshops, 2 joint publications	WP5 WP6

### 3.1.2. Key Performance Indicators (KPIs) for promotion and dissemination

During the first reporting period, the partners focused on establishing a robust communication and dissemination strategy for the CROSSEU project. Key achievements include delivering stakeholder mapping and engagement plans, launching a comprehensive visual identity, and creating active communication channels, such as a website and social media platforms.

The partners participated in significant events, initiated collaborative stakeholder engagement activities and launched the first annual newsletter. All partners have put in place communication tools aimed at reaching the defined audience groups, in line with the KPIs outlined in the Grant Agreement. While significant progress has been made, it is important to note that some KPIs are scheduled for completion by the end of the project. Therefore, efforts are still ongoing to meet the targeted thresholds. Table 5 highlights the KPIs as defined in the Grant Agreement (GA).

Table 5: Communication tools, audience groups and KPIs (by the end of the project). Due date in months from the beginning as per the GA

Channel Tool	Action Purpose	Audience	Due Date	KPIs
Visual identity: project logo and templates	Ensure brand consistency, recognition and visibility in the stakeholder community	All target groups	M3	1 project logo identity kit; Used in all deliverables/materials
Website	Main digital tool to promote and bring visibility to the project: e.g. consortium, objectives, activities, deliverables, publications, newsletter, news/events	All target groups	M4	At least 9,000 total visits by the end of the project
Flyer & roll up	Will contain CROSSEU's objectives, expected impacts, consortium members and contact information and will be used at events, conferences and workshops to promote the project	All target groups	M6	At least 5 events where the roll-up is displayed and 200 flyers are distributed (including digital flyers online)
LinkedIn	To build an online project community in the field of CC M&A	All target groups	M1-M36	At least 300 followers by the end of the project
Twitter	To build an online project community in the field of CC and M&A	All target groups	M1-M36	At least 250 followers by the end of the project
Project promotional video	To promote the CROSSEU key activities, data products and tools in an easy-	Decision- and Policy- makers; Local, national and regional governments;	M24	At least 300 views by the end of the project



	to-understand way a Pitchy video will be created	NGOs; Practitioners; Research & Academia		
E-Newsletter	To inform the CROSSEU community about key project achievements, outcomes and upcoming relevant events	All target groups	M12, M24 & M36	At least 200 subscribers by the end of the project
Scientific publications	To disseminate the project's results among leading scientific journals	Research & Academia community; NGOs; Practitioners	M6-M36	10 journal submissions; conference papers
Participation in scientific and business events	To disseminate the project's objectives and results and to establish synergies with other RDI projects from different programmes (e.g. Horizon, COST, Interreg, and LIFE+)	Research & Academia; Decision- and Policymakers; NGOs; Practitioners; Business and Industry	M1-M36	12 events and conferences attended by the end of the project; 3 joint meeting with other RDI projects
Booklet and factsheets	To describe and explain the project's climate risk storylines and case studies explored within the project in an attractive way for target audiences	All target groups	M30	At least 250 views by the end of the project
Webinars	To facilitate stakeholder the user uptake of the DSS by presenting the key functionalities of	Decision and Policy makers; Business and Industry, Practitioners, Civil society and NGOs; Research	M18-M36	At least 3 webinars with participants from at least 10 EU countries



	the DSS prototype	& Academia community		
Workshops (face-to-face, online, hybrid)	To engage key stakeholders in the co-design and co-development of the DSS, to identify upscaling opportunities and to maximise the user uptake of the DSS	Decision- and Policymakers; Local, national and regional governments; Business and Industry, Practitioners; NGOs; Research & Academia community	M4-M7  M18-M36	At least 3 co-design and co-production events  3 user uptake events

### 3.1.3. Summary of impacts in relation to the DoA items

#### 3.1.3.1 Impacts related to specific needs

The CROSSEU project has strategically aligned its objectives with the specific needs identified at both European and regional levels regarding climate change resilience and socio-economic adaptation. Through its interdisciplinary and multi-sectoral approach, the project directly responds to key user requirements and sectoral demands captured across its case study areas (CSAs), as highlighted in Deliverable D3.1, dedicated to the inventory of user requirements and support system processing workflow and functionalities. This alignment ensures that the knowledge and tools generated under CROSSEU are not only scientifically robust but also practically relevant and user-driven.

A key impact has been the systematic identification and prioritisation of user needs across diverse sectors addressed by the project. This process was undertaken through structured stakeholder engagement and co-design methodologies detailed in deliverables D1.1 and D3.1, enabling the project to capture granular insights on the specific adaptation and risk management challenges faced at the local and regional scales. For example, in CSA5 (Snow), stakeholders emphasized the necessity for spatially explicit hazard indicators and real-time decision-making tools to support operational risk reduction—demands that are now being met through the CROSSEU DSS.

Another major impact is the integration of these user requirements into the modelling workflows and outputs of the project, particularly the CROSSEU DSS and Harmonised Data Repository (HDR). The DSS offers tailored visualisation tools, risk scenarios, and adaptation pathways that are directly linked to sector-specific decision-making processes. This user-centric approach enhances the relevance and applicability of the DSS in

supporting cost-effective climate resilience strategies at both strategic and operational levels. Furthermore, the cross-sectoral nature of the CROSSEU framework allows for identifying interdependencies between sectors—such as between tourism and transport or forestry and disaster risk reduction—thereby addressing system-level vulnerabilities. This integrated assessment capability directly addresses the need for holistic, rather than siloed, approaches to climate adaptation.

From a capacity-building standpoint, the CROSSEU project aims to support awareness and skill development among practitioners, policymakers, and technical staff through stakeholder workshops, scenario co-development, and iterative feedback loops. These participatory activities foresee to improve the stakeholders' understanding of the socio-economic risks of climate change, data interpretation, and the use of tools for strategic planning.

Overall, by explicitly responding to and co-developing solutions based on stakeholder-defined needs, CROSSEU has demonstrated significant impact in increasing the usability, uptake, and long-term value of its outputs for climate adaptation planning, thus fulfilling a key pillar of its expected outcomes under the Grant Agreement.

### 3.1.3.2. Impact related to dissemination, exploitation and communication measures to CROSSEU public

The key objectives of CROSSEU in terms of public communication are the to:

- Widely promote and ensure the visibility of the CROSSEU project through a website, social media accounts, and other communication tools;

Promotion of the CROSSEU Project on the futures4europe platform, developed within Eye of Europe WIDERA Project (HORIZON-WIDERA-2023-ERA-01-02);

- *The project Eye of Europe is funded by the European Union under the action “Widening Participation and Spreading Excellence” - Horizon Europe and aims to strengthen research and innovation capacity for countries lagging. As a Coordination and Support Action, “Eye of Europe” aims to enhance the integration of foresight practices into Research and Innovation (R&I) policy making across Europe. Ultimately, the project envisions a more cohesive and influential R&I foresight community that contributes significantly, as a collective intelligence, to shaping and guiding policy decisions.*

Table 6 below presents the main communication channels used throughout the project and the corresponding indicators to monitor



outreach and engagement. These metrics reflect the cumulative results achieved so far in terms of audience growth and visibility:

Table 6: Specific indicators to be monitored on CROSSEU platforms

Platform	Indicators to be monitored	Unit/Value
Website	Visitors	Total number of visitors
Twitter	Followers	Total number of followers
LinkedIn	Followers	Total number of followers
Newsletter	Subscribers	Total number of subscribers

- Disseminate and discuss project results among target groups through newsletters, open access publications, participation in joint events, and visually attractive materials

The CROSSEU project was presented online within MAGDA Project.

- *The workshop aimed the dissemination of new knowledge, products and services for agriculture, the participants being both farmers (including representatives of various farmers' organizations) and researchers; the results of the MAGDA project (in which the MeteoRo is a partner) were presented in terms of improving the forecast of irrigation needs, as well as a series of satellite products for monitoring soil moisture and vegetation status; with the presentation of the CROSSEU project, the transition from the local scale of interest in MAGDA to the regional/national/European scale was made, and the presentation of the drought case study highlighted the importance of the socio-economic impact of the drought phenomena. Within the meeting, the attention was also brought to the involvement of the private sector in agricultural research. (<https://www.magdaproject.eu/>).*

- Create synergies with similar projects under topic CL5-2021-D1-01-05 through joint meetings;

CROSSEU Project Coordinator participated in the Thematic Working Group on Climate Services of the Mission Implementation Platform (MIP4Adapt) championed by the projects Valorada and Climateurope2

- *Interview on Climate Services and business innovation (Climateurope2) delivered by coordinator of the CROSSEU Project (MeteoRo);*

Participation on "Flood Risk, Financial Stability and Flood Insurance"

- *Online workshop on 20 March 2025, within sister project ACCREU*



There is still a need for joint activities with ACCREU and SPARCLE – connections have been established, but joint activities have not yet been developed.

- Achieve stakeholder engagement, identify upscaling opportunities and present the results through webinars presenting the DSS;

The detailed Dissemination and Communication plan (D5.2) developed within the project describes all the activities to be undertaken, including the identification of key stakeholders, the partner’s participations in international, European and national conferences, relevant publication channels (networks, platforms and journals), opportunities for collaboration and cooperation with other projects and initiatives, and joint dissemination activities and outputs. In addition to the dissemination and communication strategy, a stakeholder mapping was developed at the beginning of the project to identify key stakeholders that can provide inputs to the DSS and use the results. A Stakeholder Mapping and Engagement Plan outlines the activities planned with these target groups.

The following table presents the timeline to engage with the stakeholders throughout the whole project. The activities are divided over the three years of the project:

Table 7: Stakeholder engagement timeline

2024 (October-November)	A first engagement activity was conducted to identify the challenges, data and policy needs, and key stakeholders to further involve in the next steps of the project.
2025	January-June 2025: co-design and co-development of the DSS  July-December 2025: DSS testing and policy needs
2026	Final stakeholder mapping in person for the final delivery of CROSSEU outputs.

- Promote a sustainable exploitation of the project results and maximise the impact of the project.

The CROSSEU DSS co-designed with users and benefitting from the Event-based STLs is supported by a set of tools (interdisciplinary database and models) and methodologies and used to select user scale options for increasing the cross-sectoral climate resilience in Europe. The DSS leads to policy recommendations integrating the SE risks of CC into policies and investment decisions that will boost the implementation of M&A options across sectors, countries and regions.

### 3.1.3.3. Impacts related to target groups

The CROSSEU project has generated wide-ranging and measurable impacts across all target groups identified in the Grant Agreement and further defined in Deliverables D1.1 and D3.1. These include policymakers, local authorities, practitioners, business and industry actors, civil society organisations, the research and academic community, and other Horizon Europe (RDI) projects. The project’s co-design and user engagement strategy has ensured that each group benefits from outputs tailored to their specific role in climate change adaptation and socio-economic risk governance.

As of Month 17, the project has contributed to an improved understanding among various target groups (e.g., decision-makers, practitioners, NGOs, researchers, and academia) of climate-related socio-economic risks by providing science-based insights, actionable knowledge as synthesised in D2.2 (Key-findings in climate change hotspots and storylines). CROSSEU implemented an integrated engagement strategy, ensuring that each target group benefits from relevant project outputs, capacity-building opportunities, and knowledge co-creation processes. This approach is intended to strengthen climate resilience planning and risk management practices across scales, sectors, and communities. Table 8 synthesises the expected impacts for each target group of stakeholders and other interested actors in understanding and managing the socio-economic risks of climate change from both sectoral and cross-sectoral perspectives.

Table 8: Expected impacts for each target group of stakeholders and other interested actors

Target groups	Target audiences	Expected impact
Decision and policy makers at the European and national/regional levels	<ul style="list-style-type: none"> <li>Decision actors and policy influencers</li> <li>Ministries</li> <li>EC offices</li> <li>Transnational agencies</li> <li>National hydromet services</li> </ul>	Provide a better understanding of socio-economic risks related to climate change
Local and regional authorities	<ul style="list-style-type: none"> <li>Regional governments</li> <li>Municipalities</li> <li>Other public authorities at the regional and local levels</li> </ul>	<p>Provide a better understanding of socio-economic risks related to climate change</p> <p>Benefit from the project's tools and database</p>



		Integrate feedback and support local strategies to enhance resilience to climate-driven risks
Practitioners	<ul style="list-style-type: none"> <li>• Climate experts</li> <li>• Climate service providers and users</li> <li>• Sectoral stakeholders</li> </ul>	<p>Provide a better understanding of socio-economic risks related to climate change</p> <p>Benefit from the project's tools, database, papers and reports, aiding in climate-smart decisions, policy anticipation, and impact mitigation, while advancing climate hazard research and adaptation policies</p>
Business and Industry members	<ul style="list-style-type: none"> <li>• Public and private investors</li> <li>• Industry players and associations</li> </ul>	<p>Provide a better understanding of socio-economic risks related to climate change</p> <p>Provide vital insights for informed investment decisions, leveraging actionable knowledge from relevant case studies and the DSS</p>
Civil Society, NGOs	<ul style="list-style-type: none"> <li>• Citizen communities</li> <li>• Societal/environmental NGOs/CSOs</li> </ul>	<p>Provide a better understanding of socio-economic risks related to climate change</p> <p>Benefit from tailored climate-related knowledge and information to mitigate losses and</p>



		enhance protection, fostering multidisciplinary understanding and skill development for the public
Research and Academia community	<ul style="list-style-type: none"> <li>• Universities</li> <li>• Research institutions</li> <li>• Research Networks</li> </ul>	Deepen the understanding of climate change-related socio-economic risks, fostering skill development for the next generation of experts through various educational activities
Other RDI projects	Specific relevant projects in the frame of Horizon Europe, COST, Interreg and LIFE+	Have access to project-generated data, tools, guidelines, and practice reports, facilitating future projects and initiatives in the same field and fostering innovative advancements

### 3.1.3.4. Impacts related to expected outcomes

*Outcome 1: A comprehensive SE evaluation of future CC impacts across sectors, countries/regions, timescales and climate building on SE scenarios with improved sectoral, cross-sectoral and spatial resolution of impact projections*

CROSSEU has made significant progress in enhancing the scientific understanding of climate-related physical risks and their socio-economic implications across multiple spatial and sectoral scales. Central to this achievement is the project's integrative approach to risk assessment, which explicitly links climate hazards, sector-specific exposure, and socio-economic vulnerability through a harmonised, multi-hazard modelling framework. Deliverables D1.6 and D2.1 demonstrate the operationalisation of this framework through the development of sector-specific risk indicators, informed by both biogeophysical drivers (e.g. flood, heatwaves, droughts, avalanches) and socioeconomic impact pathways. These

indicators are applied across the CROSSEU case study areas (CSAs), where data from climate reanalysis (e.g. CERRA), EUROSTAT, CORINE, and other authoritative sources are downscaled and processed to produce high-resolution, spatially explicit risk assessments.

Using climate scenarios (RCPs/SSPs), the project simulates the evolution of hazard intensity and exposure and examines how associated potential risks could manifest across different European regions under climate change. This is further reinforced by the storyline approach presented in Deliverable D2.1, which contextualises risk progression over time and supports communication with both technical and non-technical audiences.

*Outcome 2: Improved CC related decision support based on better understanding (and quantification) of the SE risks (and opportunities), associated with CC impact, for both sudden onset extreme events and slow onset processes.*

The CROSSEU project is actively contributing to advancing scientific tools, data access, and decision-making capabilities that support climate adaptation and risk reduction across diverse regions and sectors. Key to this impact has been the development of the CROSSEU Integrated Assessment Framework (IAF) and DSS, that will be built on a harmonised methodological approach for multi-hazard risk and vulnerability assessment, as established in Deliverables D1.1, D1.6, and D2.1. These tools have been designed for Europe-wide applicability, with modelling techniques that are transferable beyond the six case study areas (CSAs) to any EU region facing compound climate-related risks. The DAFNI-hosted Harmonised Data Repository (HDR) supports open data practices in line with FAIR principles, ensuring long-term accessibility and reusability of project outputs at the European level.

*Outcome 3: Better evidence for an ambitious climate policy response, both in terms of M&A measures, based on better understanding of SE risks in the absence of adequate M&A efforts (...).*

The CROSSEU DSS enables users to explore the potential socio-economic impacts across sectors (e.g. tourism, agriculture, health, transport) for understanding the contexts of prioritisation of investment in climate resilience strategies for the sectors addressed by the project.

In addition, CROSSEU addresses the systemic dimension of risk by mapping climate change hotspots (CCHs) and storyline events (STLs), geographic and temporal concentrations of hazard conditions and losses, which could serve as focal points for understanding compound and cross-sectoral risks. This spatial-temporal framing is essential for decision-making at both local and transboundary scales.

By embedding these tools in a co-design and stakeholder feedback loop (as evidenced in D1.1 and D3.1), the project ensures that the results are not only scientifically robust but also aligned with real-world decision processes. This creates a tangible bridge between climate impact science and operational risk governance, addressing knowledge gaps in current planning and enhancing institutional readiness.

**OUTCOME 4: Actionable insights based on data at the appropriate level of geographical scale and spatial resolution for decision-makers in public and private sectors, including national and regional level estimations, leading to enhanced adaptation efforts and to a more resilient Europe.**

Since the project launch, substantial progress has been achieved in developing a robust, science-based DSS that aligns with the goals outlined in the DoA. The development process of the DSS has been strategically embedded in CROSSEU's WP1, where the co-design and operationalisation of the project's methodology has been thoroughly documented (see D1.1). The co-production of the CROSSEU DSS with end-users has been implemented through a series of stakeholder engagement workshops conducted in all CSA regions, as outlined in D1.1 and D3.1. These workshops served both to identify user needs and preferences and to validate the methodological assumptions and interface requirements.

Targeted consultations ensured that sectoral stakeholders—including those from tourism, forestry, energy, transport, and local governance—contributed directly to the definition of functionality, usability, and application scope for the DSS. Furthermore, through Deliverable D3.1, the project inventoried and analysed stakeholder requirements, ensuring that the DSS is not only technically sound but also aligned with real-world policy and planning challenges across Europe. Early versions of the DSS structure will be demonstrated via webinars and engagement sessions as described in WP5, with further refinements based on feedback loops built into the project timeline.

The CROSSEU DSS is also reinforced by thematic storylines and climate change hotspot analyses developed under WP2 (D2.1), which feed into the system's spatial and sectoral relevance. These case studies ensure that the DSS reflects the complexity of European regional disparities in vulnerability and exposure to climate-related hazards, as described in D2.2.

Stakeholder engagement is embedded across all Work Packages, from the formulation of storyline events in WP2 to the development and testing of indicators and visualisation tools in WP3 and WP4. As outlined in Deliverable D3.1, CROSSEU mapped the knowledge needs of various actor groups and ensured that communication is tailored accordingly.

*OUTCOME 5: Better integration of climate change risks in public and private sectors' investment decisions – from property, through infrastructure up to regional and national supply chains – leading to increased long-term resilience.*

The CROSSEU project has placed the integration of social sciences and humanities (SSH) at the core of its methodological and operational framework, recognising that technical excellence in climate risk assessment must be coupled with social relevance, inclusiveness, and co-creation to drive meaningful change. This integration is reflected both in the project design and in the actions implemented to date, as documented in Deliverables D1.1 and D3.1, and aligns with the principles laid out in the Consortium Agreement.

The inclusion of SSH perspectives also strengthens the project's understanding of institutional and behavioural dimensions of adaptation, particularly in terms of perceived risks, decision barriers, and implementation readiness. This is particularly evident in the evaluation of adaptive capacity indicators and the framing of DSS outputs to support deliberative processes and participatory governance models. Moreover, the project's communication and dissemination strategy (as coordinated under WP5) integrates social media channels, stakeholder networks, and public-facing platforms to ensure that engagement is continuous and not limited to isolated consultations. This approach builds trust, increases visibility, and supports the long-term adoption of project tools and findings beyond the research consortium.

*OUTCOME 6: Enhanced coordination with JRC on research concerning climate impacts and adaptation modelling*

The project delivers added value by embedding climate risk into sectoral and territorial policy dialogues, ensuring that adaptation strategies are informed by integrated assessments that span from local to EU-wide scale. Through structured engagement with EU-level stakeholders, policy makers, and networks (e.g. regional adaptation platforms, European Environment Agency contributors), CROSSEU supports evidence-based decision-making aligned with climate mainstreaming across European policy domains.

Deliverable D3.1 further demonstrates how stakeholder requirements are being translated into usable, science-based products that directly respond to the information needs of local authorities, national planners, and EU governance actors. The thematic coverage across CSAs showcases the project's potential to inform adaptation planning across a broad spectrum of climate risks.

### *OUTCOME 7: Provision of authoritative knowledge to inform the activities of the HEU Mission on Adaptation to climate change including societal transformation.*

The CROSSEU DSS enables users to explore the potential socio-economic impacts across sectors (e.g. tourism, agriculture, health, transport) for understanding the contexts of prioritisation of investment in climate resilience strategies for the sectors addressed by the project.

In addition, CROSSEU addresses the systemic dimension of risk by mapping climate change hotspots (CCHs) and storyline events (STLs), geographic and temporal concentrations of hazard conditions and losses, which could serve as focal points for understanding compound and cross-sectoral risks. This spatial-temporal framing is essential for decision-making at both local and transboundary scales.

By embedding these tools in a co-design and stakeholder feedback loop (as evidenced in D1.1 and D3.1), the project ensures that the results are not only scientifically robust but also aligned with real-world decision processes. This creates a tangible bridge between climate impact science and operational risk governance, addressing knowledge gaps in current planning and enhancing institutional readiness.

#### 3.1.3.5. Scientific, Technologic, and Economic Impacts

The CROSSEU Project is expected to generate several joint results that will contribute to scientific, technological, and economic impact.

- Scientifically, the project will support the development of improved biogeophysical and socio-economic risk scenario tools, as well as cross-case storyline assessments of climate change hotspots. These outputs will lead to publications, policy briefs, and teaching materials.
- Technologically, a harmonised impact data repository and transferable methodologies will be created, with potential for replication in other contexts and upscaling, including in the Global South.
- From an economic perspective, the results may be exploited through open licence, integration in other existing platforms, benefiting a wide range of stakeholders such as researchers, policymakers, communities, and industries. The DSS may be exploited through open license, integration in other existing platform, institutionalisation in partners's services, licensing, or commercial exploitation.

## 3.2. Requirements and barriers

A preliminary analysis of the requirements essential to reaching expected impacts and potential barriers arising from factors beyond the scope and duration of the project identified adequate mitigation actions to ensure



successful project outcomes and uptake of provided solutions and recommendations beyond its end (Table 9).

The main requirements include Scientific (e.g., availability of high quality CC data and improved impact models to better represent climate change damages and adaptation; improved top-down and bottom-up understanding of climate driven SE risks stakeholders involved in co-production of actionable knowledge and tools for decision making and M&A policy options), Societal (e.g., active involvement of various groups of stakeholders and end users in co-design and co-development, integration of SSH in the SE risks analysis; representative case studies for the regional and local level challenges; all dimensions of sustainability are addressed i.e. ecological, economic, social, institutional) with specific focus on governance frameworks, policies, economic and social aspects), and Economic (e.g. improved policy framework for the major economic sectors with science-based knowledge of SE risks integrated; dedicated and co-design DSS for decision-making to address climate-driven SE risks from a sectoral and cross-sectoral perspective and the finance and policy instruments challenges).

Table 9: Potential barriers to the success of the project and suggested mitigation actions

Potential barrier	Mitigation Action
<p>Limited interest in using the DSS beyond the project end (i.e. targeted markets)</p>	<p>At the beginning of the project, CROSSEU will carry out a stakeholder mapping to identify key groups to involve them in the development of the DSS following a clear engagement plan. Direct contacts of Consortium partners will be used to identify their needs in the early stages of the project. This action has a high probability of success, since several partners are chairs of international committees or representatives of leading climate policy-making authorities (e.g., WMO/WHO). The CROSSEU DSS will be co-designed as a demand driven tool, with modular components dedicated to decision-making in CC-sensitive sectors and systems (areas), where M&amp;A is urgently needed according to the STL and CCH analysis outputs. The upscaling facilitates the uptake of the DSS in other areas where adverse CC effects and associated SE risks are expected, requiring actions for climate adaptation and societal resilience. A co-design workshop (M4) facilitates the interactions between project partners and stakeholders and stakeholder engagement from the early stage of the project. If limited interest shows up, then direct dialogues with selected stakeholders will be used to identify new ways of engaging stakeholders.</p>

	Stakeholder engagement activities and workshops will be carried out under WP3 and WP5 to help mitigate the risk of limited uptake of the DSS after the project concludes.
Ineffective knowledge transfer and communication related to uncertainties associated with extreme weather events.	<p>The communication of uncertainties associated with the modelling process are tailored to maximise the understanding of target audiences. The project uses consistent and harmonised projections in all modelling stages, accounting for uncertainties and historical simulation biases for its quantification in a systematic way. The uncertainties are communicated internally in the project team, as well as in the scientific literature through the dissemination and communication activities.</p> <p>The communication of uncertainties are tailored to maximise the understanding of each stakeholder group to ensure the provision of a more realistic understanding and challenges of expected climate-driven SE risks to foster M&amp;A.</p>
Different other RDI in projects/studies work within and beyond HEU.	CROSSEU benefits from knowledge transfer from and to other relevant RDI projects and initiatives (incl. those in which some partners have participated), based on an active communication strategy (i.e. joint forums, workshops, and cluster and network meetings), that promote and facilitate mutual expertise reinforcing and networking, further contributing to the spread of science-based know-how across EU regions for an improved policy response.
The delivery of data and modelling results for other tasks are delayed	The subsequent activities are starting as planned with more simplified data and afterwards

### 3.3. Scale and significance

CROSSEU project co-generates a variety of scientific, economic, and societal outcomes and impacts mainly in the areas and countries directly covered by the research, which will be shared and upscaled across all European regions.

The foreseen scale and significance of the results, outcomes and impacts are summarised in Table 10. Considering the complexity of the approach (i.e. analysis at NUTS3 scale with results applicable from property to country and regional scales; provision of user-oriented co-implemented solutions, applicable both in separate sectors and in cross sectoral analysis; data integration and harmonisation and inclusion of short-, medium-, and long-

term socio-economic and climate scenarios to fundament recommendation and policies) and the high relevance of selected case studies, the outcomes and impacts of the project are highly significant and applicable at European level (EU and UK).

Table 10 provides a structured overview of the expected progression from short-term results to medium-term outcomes and long-term impacts across the identified Impact Areas (IAs) as per the GA. It also outlines the corresponding Key Impact Pathways (KIPs) and associated indicators, offering a clear view of how scale and significance will be monitored and evaluated throughout the project lifecycle. This framework ensures alignment with strategic objectives and supports continuous impact assessment.

Table 10: Results (Short-term), outcomes (Medium-term), impacts (Long-term) and indicators (scale & significance) for Impact Areas (IA) & Key Impact Pathways (KIPs)

IA	KIPs	Results/Indicators	Outcomes/Indicators	Impacts/Indicators
Scientific	Creating highquality new knowledge	Science-based DSS using a harmonised database including biogeophysical and SE indicators relevant for vulnerable sectors in different social and CC scenarios / >500 users.	CROSSEU DSS-based solution used as a benchmark for other projects and initiatives / at least 12 submissions of publications in outstanding international journals.	Improved awareness on the SE impact of environmental monitoring / constant increase of the number of website visitors, increasing number of citations.
	Strengthening human capital in CC R&I	Consolidating skills and knowledge specific to the SE impact of CC / ca. 100 researchers involved.	Contributing to specific scientific advances, across and within disciplines / 5 Ph.D. thesis based on the project outcomes.	Effective practice of an inter-and trans-disciplinary approach and contributing to strengthening the European Research Area on CC.
	Fostering diffusion of knowledge and Open source	The results will be submitted to published toin open access	High use of CROSSEU scientific advances	Refinements in interdisciplinary climate



		journals and data will be made freely available / at least 12 papers submitted open source.	published and cited in Open Science; Access to open databases / > 500 registered users.	impact modelling, overall advancing knowledge and better understanding of climate-ecosystems interactions.
Societal	Addressing EU policy priorities and global challenges through R&I	Policy framework, sectoral, social and finance related policies /at least 35 policy documents in 12 policies; Delivering policy options for core EU policy fields and investment planning related to major climate risks /at least 6 policy fields; Knowledge transfer / 2 EU level stakeholder Ws.	CROSSEU framework will support the mainstreaming of climate proofing action into investment decisions, to maximise lasting societal benefits. CROSSEU will provide authoritative knowledge to inform the activities of the HEU Mission on Adaptation to CC including societal transformation.	Contribute to the EU climate adaptation strategy and implementation of the COP21 Paris Agreement; Support EU Strategy on adaptation to climate in promoting better informed decision-making and building a resilient Europe. Contributing to key international assessments, e.g. IPCC, EEA, JRC.
	Delivering benefits and impact through R&I missions	Testing and validating the functionalities of the CROSSEU DSS with exponents of relevant target groups actively involved in the development of the DSS /6 target groups / >100	E-learning user specific training and support materials to strengthen the capabilities for integrating CC risks information in decision making and investment decisions / one training event for each	Improved transparency and support of CC resilience building in climate sensitive areas of the EU regions through the uptake of new science-based solutions for CC adaptation.



		persons involved.	storyline / > 30 participants/ event.	
	Strengthening the uptake of research and innovation in society (in relation to CC)	Increased active involvement of business, civil society, citizens, and public authorities in R&I at the regional and local levels (for citizens going beyond a “social acceptance” approach) / >100 participants covering the EU regions (e.g. the 12 Climate-Adapt transnational regions).	CROSSEU DSS solution used by target users as a decision support system to compare (and integrate where relevant) mitigation and adaptation options / >100 users from identified CC hotspot areas.	Increased trust and practical usability of the knowledge base on CC through tailored tools and climate policy response, addressing the local needs for adaptation and mitigation.
Economic	Generating innovationbased growth	Providing tools for evaluating the impact of climate risks across various sectors, including categories that cannot be directly monetised /Decision support for climate investments with assessment models and specific recommendations.	The demand-driven, codesigned science-based DSS will be used in operational environments across Europe / users from at least 10 countries; Strengthening climate-oriented investments.	Stimulating growth in combined innovation and climate oriented areas in support of the European green transition, both in sectors and in inter-sectoral applications and technologies.



	<p>Creating more and better jobs</p>	<p>Several partners will open jobs dedicated to different tasks of the project.</p>	<p>Business processes will be improved in 12 sectors by creating jobs referring to the CC impacts.</p>	<p>Our improved projections and models of biophysical and socio-economic risks will help improve our understanding of CC impacts and inform adaptation/mitigation efforts to build more resilient labour markets and business environments in Europe. Increasing profits due to better resilience of sectoral business to SE impact of CC.</p>
	<p>Leveraging investment in R&amp;I area</p>	<p>Enhance established integrated assessment model, i.e. PAGE 2020, to better represent CC impact and adaptation, including the effects of extreme weather events.</p>	<p>Improve analysis of the SE costs and benefits of mitigation and adaptation to CC and associated hazards.</p>	<p>Provide policy recommendations for the EU and UK that reduce the costs of both adaptation and mitigation policies.</p>

## 4. Measures to maximise impact

### Communication

To maximise impact, CROSSEU will employ targeted communication tools, each linked to specific audience groups and accompanied by measurable indicators. These tools will be regularly assessed for effectiveness based on predefined quantitative targets. If targets are not met, corrective measures will be taken to optimise outreach and engagement. The Communication and Dissemination Plan will be revised in M20, based on impact monitoring results and stakeholder feedback.

### Dissemination

The scientific, economic and societal impacts will be discussed with the Advisory Board (to foster the partnerships with other initiatives and maximise the impacts of the project). To maximise the project impact, cooperation with other national and international initiatives and projects is envisaged. The PC/GA cooperate with different professional networks to establish inter-project cooperation leading to additional scientific outputs, and usable outcomes, and long-standing, post-project exchange of results. A potential cooperation with JRC is also considered.

- **Dissemination Beyond Europe**  
Following the Progress Project feedback, we aim to strengthen dissemination efforts beyond the European Union:
  - Identifying contacts and institutions in Africa, Asia, North America, and South America.
  - Encouraging international subscriptions to the project newsletter.
  - Sharing dissemination materials, such as fact sheets, with global stakeholders.
  - Participating in international events to extend outreach.
  - Stakeholder workshops, as a virtual or hybrid events to maximise international participation.

Dissemination will also include:

- Holding a series of interactive webinars, which can facilitate dialogues with stakeholders and can presenting the DSS and the results of the project;



- Establishing close collaboration and synergies with related projects, networks, clusters and initiatives at the European, international, national and regional level;
- Drafting and distribution of a yearly newsletter to disseminate the progress and results of the project to stakeholders. Each newsletter includes an editorial note by the coordinator, a highlight per work package, significant milestones reached and other project updates such as news and events.
- Design of a series of visual elements to showcase and disseminate CROSSEU results: a booklet and factsheets is developed to present the project's climate risk STLs and the case studies in an attractive way;
- Participation of partners in conferences and events to disseminate the project's results (WEMC): e.g. ICERCCEM, NORDIWA, ICAMUHI, ICRC, ISEE, EGU assemblies.
- Publications in open access/peer-reviewed journals: e.g. Nature Climate Change, Nature Sustainability, Lancet Planetary Health, Science of the Total Environment, Environmental Research Letters, Global Environmental Change, Agricultural Systems.
- Wide dissemination of all public reports and publications

## Exploitation

To maximise its impact, the CROSSEU DSS—co-designed in close collaboration with end users and enriched by STLs—is underpinned by a robust set of tools including interdisciplinary databases, models, and methodologies. These enable the selection of user-relevant, scalable solutions to enhance cross-sectoral climate resilience across Europe.

The DSS directly supports the development of policy recommendations that integrate socio-economic risks of climate change into policies and investment decisions, thus accelerating the implementation of M&A measures across sectors, countries, and regions.

To further support long-term impact, a Strategy for the Uptake and Dissemination of the DSS will guide its promotion and use among relevant stakeholders, ensuring it reaches key decision-makers, practitioners, and end users.

## 5. CONCLUSIONS

The CROSSEU project presents significant progress in addressing the complex challenges posed by CC, particularly in the context of socio-economic risks and adaptation strategies across Europe. By implementing the IMEP, the project ensures that it remains aligned with its expected outcomes through regular assessment of key impact pathways and collaborative efforts. This structured approach not only enhances transparency and accountability but also fosters an iterative learning process that informs future project actions and strategies.

A cornerstone of CROSSEU's methodology is the development of the "CROSSEU Impact Data Repository," which plays a critical role in underpinning the project's Decision Support System (DSS). This repository is designed to provide comprehensive input data for modeling, enabling a nuanced understanding of both biogeophysical and SE risks associated with CC. The establishment of KPIs has further facilitated the monitoring of project implementation, ensuring that progress is tracked against predefined objectives.

Throughout the first reporting period, the CROSSEU partners made substantial strides in establishing a robust communication and dissemination strategy. Achievements such as stakeholder mapping, the launch of a cohesive visual identity, and the activation of diverse communication channels—including a dedicated website and social media accounts—underscore the project's commitment to engaging with its target audiences effectively. The annual newsletter and participation in key events demonstrate a proactive approach to stakeholder engagement, which is vital for fostering collaboration and disseminating insights.

Moreover, the project has adeptly aligned its objectives with the pressing needs identified at both European and regional levels regarding climate change resilience. By employing an interdisciplinary and multi-sectoral approach, CROSSEU has been able to respond directly to user requirements articulated through structured stakeholder engagement methodologies. This alignment ensures that the outputs generated—ranging from risk indicators to decision support tools—are not only scientifically rigorous but also practically relevant to the users they are designed to serve.

A significant impact of CROSSEU has been the prioritization of user needs across various sectors. Through extensive stakeholder engagement, the project has captured detailed insights into the specific challenges related to adaptation and risk management. The project has responded by integrating these requirements into the DSS, which now offers tailored

visualization tools and risk scenarios aligned with sector-specific decision-making processes.

The capacity-building aspect of CROSSEU is equally noteworthy. Through stakeholder workshops and collaborative scenario development, the project enhances the skills and awareness of practitioners, policymakers, and technical staff. These participatory activities are designed to deepen understanding of socio-economic risks related to climate change and improve the strategic planning capabilities of stakeholders.

In addition to these operational achievements, CROSSEU has adhered to its communication objectives, which include promoting project visibility, disseminating results through various channels, and creating synergies with similar initiatives. The detailed Dissemination and Communication Plan has outlined activities to engage key stakeholders, ensuring that the project's outputs are broadly accessible and impactful.

By the end of Month 17, CROSSEU has demonstrated measurable impacts across its identified target groups, including policymakers, local authorities, practitioners, and the academic community. The project's integrated engagement strategy has ensured that each group benefits from relevant outputs, ultimately strengthening climate resilience planning and risk management practices. The synthesis of expected impacts for each stakeholder group illustrates the project's comprehensive approach to addressing climate-related socio-economic risks.

In summary, CROSSEU has made significant progress in enhancing understanding and management of climate change impacts through a user-centric, interdisciplinary framework. The project's ongoing commitment to stakeholder engagement, capacity building, and integration of social sciences into climate risk assessments positions it as a model for future initiatives aimed at fostering resilience in a rapidly changing climate. As CROSSEU continues to evolve, its lessons and outputs will undoubtedly contribute to more effective climate adaptation strategies and improved socio-economic resilience across Europe.



## 6. ANNEXES

### Annex 1: Questions to be addressed within the CROSSEU 1st stakeholder engagement co-design WS

1. Name of your organisation: \_\_\_\_\_

2. What is your organisation's activity sector?

- a) Health
- b) Social Justice
- c) Migration
- d) Finance
- e) Insurance
- f) Energy
- g) Tourism
- h) Transport
- i) Biodiversity and ecosystem services
- j) Forestry
- k) Agriculture and food security
- l) Water management
- m) Other \_\_\_\_\_

3. What are the climatic hazards affecting your organisation's activity?

Heat

Drought

Storm

Snow

Other: \_\_\_\_\_

4. What specific information or data do you feel is lacking for your organisation's activity regarding climatic hazards?

\_\_\_\_\_

5. Is your activity sector subject to socio-economic impacts induced by climate change?

Yes

No

6. Could this impact have financial impact?

Yes

No



7. To which extent are the socio-economic risks of climate change included in the national policies relevant for your sector?

Fully included

Partially included

Not included

Unsure

8. Do you use any science-based results in your organisation's activity?

Yes

No

9. Is your organisation using a decision support system (DSS) to make decisions?

Yes

No

10. Do you consider beneficial the use of a DSS in your organisation's activity?

Yes

No

11. Has your organisation established collaborative activities with organisations from other sectors for decision-making?

Yes

No

12. What specific information or data do you feel is lacking when you address the climate change-related risks in your sector?

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13. What is the level of engagement would you agree to be considered within the CROSSEU project?

Inform (informed on the proceedings of the process)

Consult (informed on the proceedings of the process and can phrase his concerns with respect to the project.)

Advice (asked for advice on the project)

Co-create (actively work on the development of the plan together with the project team)

Co-decide (steer the process of the project development)



14. What communication channels and methods would you prefer for keeping you engaged in the CROSSEU project?

Face-to-face dialogue

Videoconferencing

Emails

Project newsletters

e) Other: \_\_\_\_\_

15. Would you like to participate in an online workshop to be organised within the CROSSEU project at European level at the end of April 2024?

Yes

No



## Bibliography

Deliverable 5.1 – Stakeholder Mapping and Engagement Plan v2 (March 2025)

## CROSSEU Partners

 <p><b>Meteo Romania</b></p>	 <p><b>UEA</b> University of East Anglia</p>	 <p><b>WORLD METEOROLOGICAL ORGANIZATION</b></p>
 <p><b>TESAF</b></p>	 <p><b>UCL</b></p>	 <p><b>K&amp;I</b> Conoscenza e Innovazione</p>
 <p><b>hereon</b></p>	 <p><b>LGi</b> sustainable innovation</p>	 <p><b>edf</b></p>
 <p><b>BOKU</b></p>	 <p><b>DTU</b></p>	 <p><b>WEMC</b> World Energy &amp; Meteorology Council</p>
 <p><b>UK Research and Innovation</b></p>	 <p><b>UNIVERSITY OF BUCHAREST</b> VIRTUTE ET SAPIENTIA</p>	 <p><b>CEU</b></p>