

Regions kick-off webinar

4 October 2024



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Agenda

TIME	SPEAKER	TOPICS
11:00 - 11:05	Davide Michielin (CMCC)	Welcome
11:05 - 11:25	Frederiek Sperna Weiland (Deltares)	Project goals
	Dana Stuparu (Deltares)	CLIMAAX project pillars
11:25 - 11:45	Erika Meléndez (UPC) Gisela Vilalta (UPC)	Starting applicants
10:45 - 11:00	Davide Michielin (CMCC)	Q&A



Housekeeping



This session is recorded



Raise your hand to ask a question during
dedicated Q&A moment or write in the
chat



CLIMAAX

*CLIM*ate risk and vulnerability *Assessment framework and toolbox*

Frederiek Sperna Weiland (Deltares)
Project coordinator

CLIMAAX objectives
4th of October 2024



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ADAPTATION TO CLIMATE CHANGE



EU Mission on Adaptation

Aims to support EU regions, cities and local authorities in their efforts to build resilience against the impacts of climate change

By 2030 support for at least 150 European regions and communities

CLIMAAX one of the ways

➡ Improved understanding of climate risks - now and in the future



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CLIMAAX objectives



Bring existing tools / services beyond state-of-the-art by prioritizing further development of accessibility, guidance, tuning to local contexts

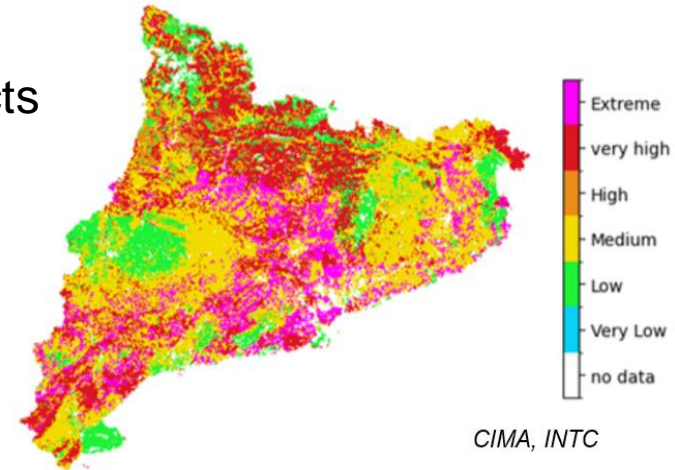
Exploit the market potential

CRA standardization and connection to European policies

Getting prepared for the operational phase

Project started January 2023, first 1.5 years focused on:

- Development of multi-hazard CRA handbook –Toolbox and Framework
- Pilot applications to test the CRA workflows: *Zilina, Finland, Catalunya, Setubal, Latvia*
- Getting prepared for the first batch of FSTP projects



CLIMAAX - key elements

Dana Stuparu (Deltares)
Project manager

4th of October 2024



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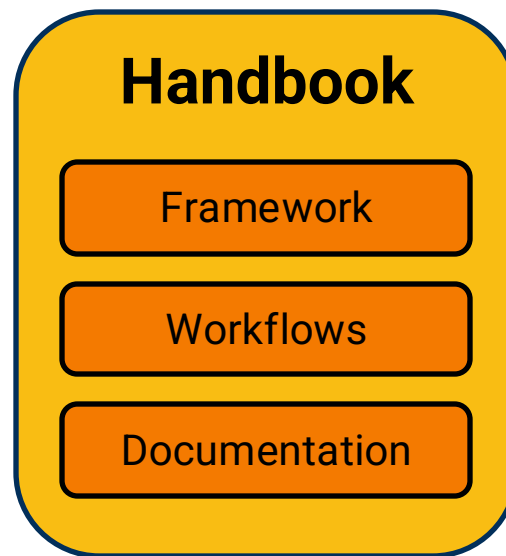


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CLIMAAX Handbook

Website: handbook.climaax.eu

- **Climate Risk Assessment (CRA)** resource
- Created by CRA experts
- Conceptual and technical guidance
- Experience from pilot regions



CLIMAAX Framework and substeps

Norms & principles

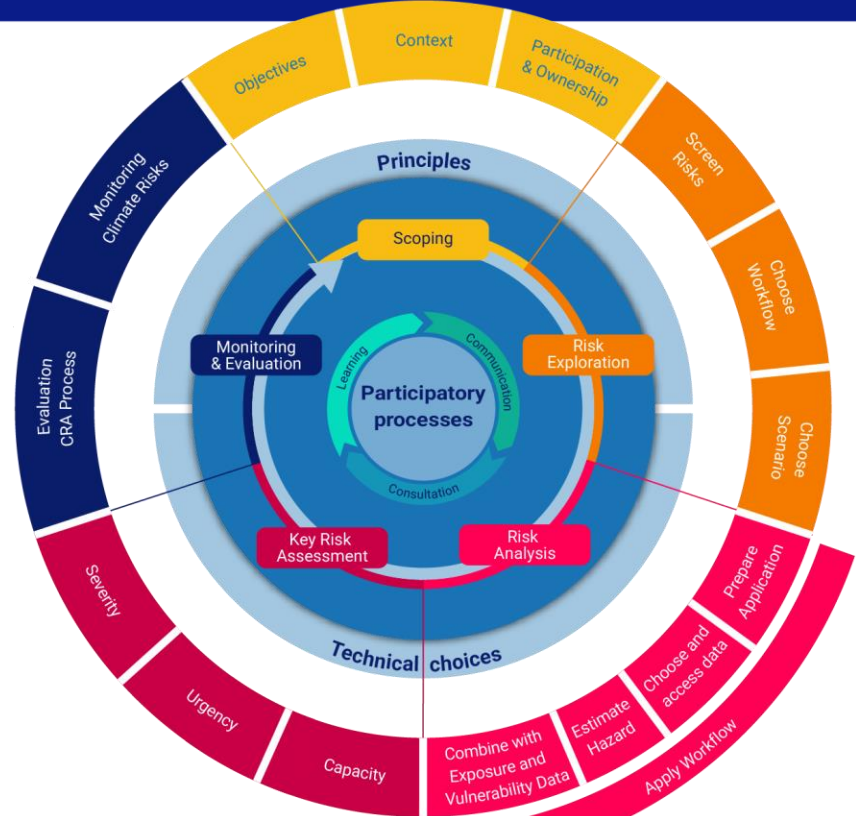
- Inventory of experience, best practices
- Consultation in regions & sectors

Practical guidance

- Quality assurance
- Comparability for multi-risks
- Guiding questions

Follow-up

- uptake into DRM and climate adaptation strategy



Webinar 11th of October 2024



CLIMAAX Framework



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About us

The CLIMAAX project
Funding opportunities

CRA Steps

What is the CLIMAAX Framework?
Before you start
Risk Exploration
CRA Datasets
Risk Analysis
Key Risk Assessment
Monitoring and Evaluation
Connect CLIMAAX with Climate Risk Management

Risk workflows

How to use risk workflows

- RIVER & COASTAL FLOODS
- HEAVY RAINFALL
- HEATWAVES
- DROUGHTS
- FIRE
- SNOW
- WIND

Resources

Coding resources
Glossary



Contents

Risk Exploration



Carrying out the Risk Exploration step kicks off a comprehensive process that starts with identifying hazards and risks that are most apparent or of significant concern to key stakeholders and the wider public. Leveraging current knowledge, including insights from experts and stakeholders identified in the scoping phase, allows a first identification of impacted sectors (including activities, supply chains, processes, and infrastructure) and geographic areas at risk (such as ecosystems, landscapes, and communities). It is useful for stakeholders to consider past and ongoing impacts on different sectors, areas and vulnerable groups, and connect them to specific hazards and risks to make "risk" more tangible at this early stage of the CRA process. A deeper dive into the system aspects may concretize affected entities (key systems, elements, sectors, communities, social groups, sub-regions), functions or processes that hold significant value in the local context (e.g. stakeholder interests, community priorities or public agenda) and a priori reveal (transboundary) connections or dependencies. These considerations are key for exploring risk in more depth and to choose Risk Workflows. From this step, potential risks can be narrowed down and prioritized by broadly exploring hazards, exposures

Guiding questions

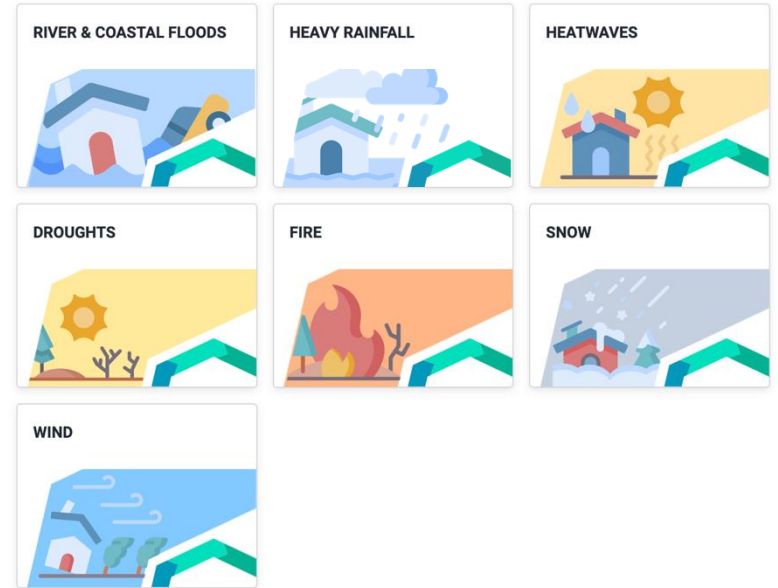
- How is the scoping phase applied? Which parts of the scoping phase are relevant for the workflow and scenario selection?
- How does the existing stakeholder knowledge come into play?



CLIMAAX Workflows

- Implementation of **Risk Analysis**
- Risk = Hazard × Exposure × Vulnerability

- Grouped by **hazard**
- **Starting point**, building blocks, examples
- **To be adapted to the local context**



CLIMAAX Workflows: Implementation

- **Python** programming language
- Jupyter notebooks
 - Data retrieval, processing and visualization
 - **Documentation, code and output** in one place
- Standard data formats



Note

The risk category for each region is always relative to the other regions considered in the workflow (here: country level) and therefore not directly comparable between datasets. This means that the risk category of one region may be higher or lower compared to the other regions, but not between e.g. historical vs. future datasets. Please refer to the risk assessment workflow for more details on how drought risk is calculated.

```
x_nuts, y_nuts = gpd.GeoSeries(nuts.geometry).unary_union.centroid.xy
slcted = nuts.loc[nuts['NUTS_ID'].str.slice(0,4) == focal, 'NUTS_ID']

fig = px.choropleth_mapbox(df_, geojson=nuts.geometry, locations='Location', colors='risk_cat',
                           animation_frame = 'data', color_continuous_scale='reds', range_color = [1,
                           mapbox_style='open-street-map'])

# Customize line properties for selected polygons
fig.update_geos(fitbounds="locations", visible=False)

fig.update_layout(title="Current and projected drought risk",
                   mapbox_center = {"lat": list(y_nuts)[0], "lon": list(x_nuts)[0]},
                   mapbox_zoom=4,
                   height=700,
                   coloraxis_colorbar=dict(
                       title="Risk category",
                       tickvals = [1, 2, 3, 4, 5],
                       ticktext = [1, 2, 3, 4, 5]
                   ))

fig.show()
```

Current and projected drought risk



Project support

- **Support desk** for JupyterHub, Workflows and Framework
- Forum (public)
- Friday drop-in sessions
- Explanatory videos

Title

Description

Aa ▾ B I ... ☰ ▾ 🔗 @ + ▾

Attachment *(optional)*

📎 Drag and drop files, paste screenshots, or browse

Please specify the impact of your issue *(optional)*

None ▾

For urgent operational issues needing immediate 24/7 assistance choose Impact 1

Which service is your request related to? *(optional)*

None

CAMS / C3S

Energy Hub

Health Hub

CLIMAAX

Other

Create Request

Webinar 18th of October 2024



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Starting applicants

Erika Meléndez (UPC)
Gisela Vilalta (UPC)

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LIST OF SELECT BENEFICIARIES

32 projects from 13 countries

Nomenclature of Territorial Units for Statistics 2

- Romania (Nord-Vest, Centru and Sud-Est) (3)
- Bulgaria (Severen tsentralen, Severoiztochen and Yugozapaden) (4)
- Italy (Lombardia and Marche) (2)
- Slovakia (Stredné Slovensko and Vychodné Slovensko) (2)
- Portugal (Norte, Centro, Alentejo and Regiao Autónoma de Madeira) (4)
- Hungary (Budapest) (1)
- Spain (Comunitat Valenciana) (2)
- Greece (Attiki, Kriti, Kentriki Makedonia, and Anatoliki Makedonia, Thraki) (6)
- France (La Réunion) (1)

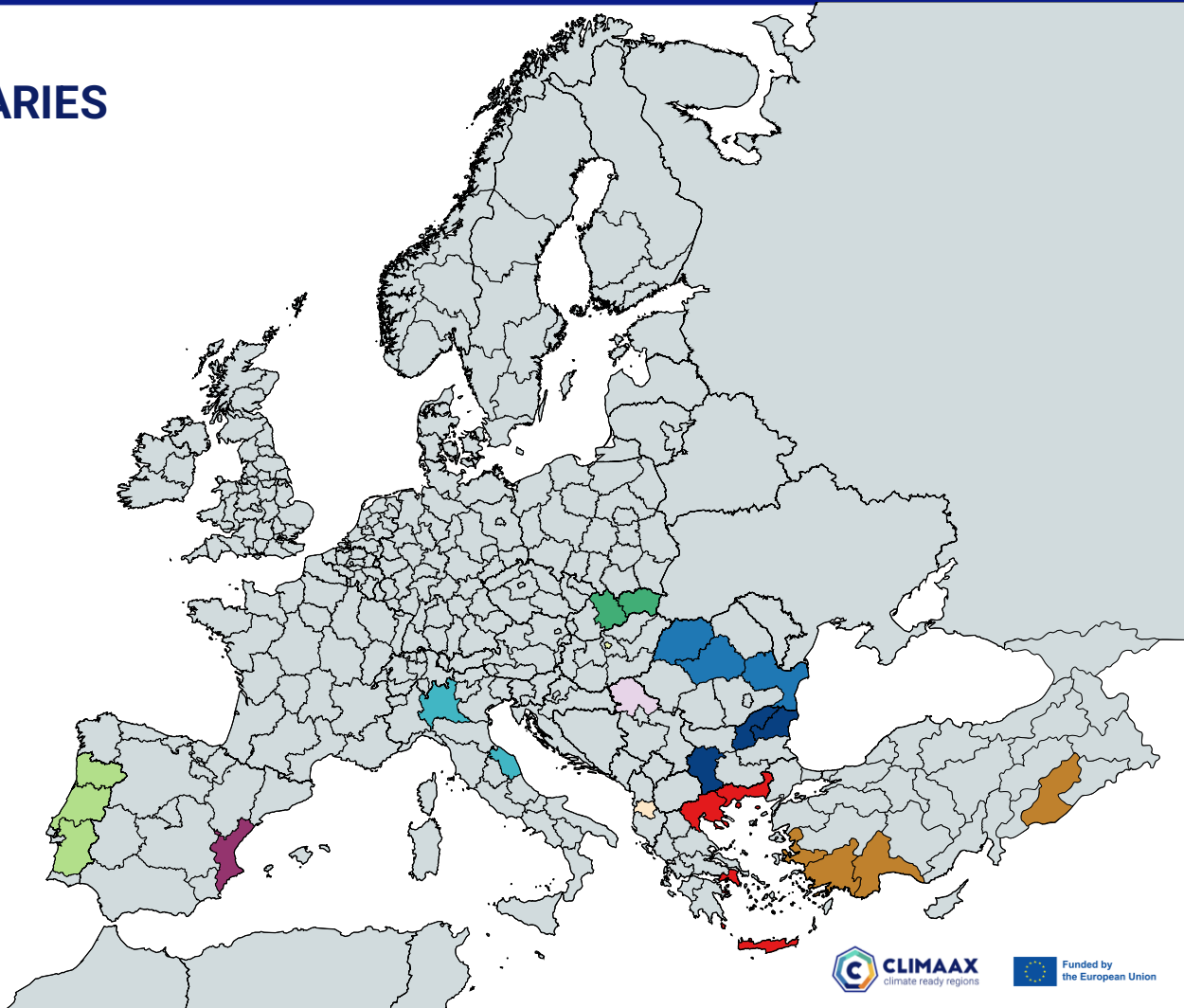
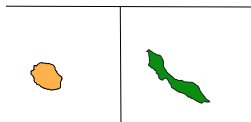
Associated countries

- Türkiye (Sanliurfa, Antalya, Aydin and Izmir) (4)
- Albania (Central Albania) (1)
- Serbia (Vojvodina) (1)

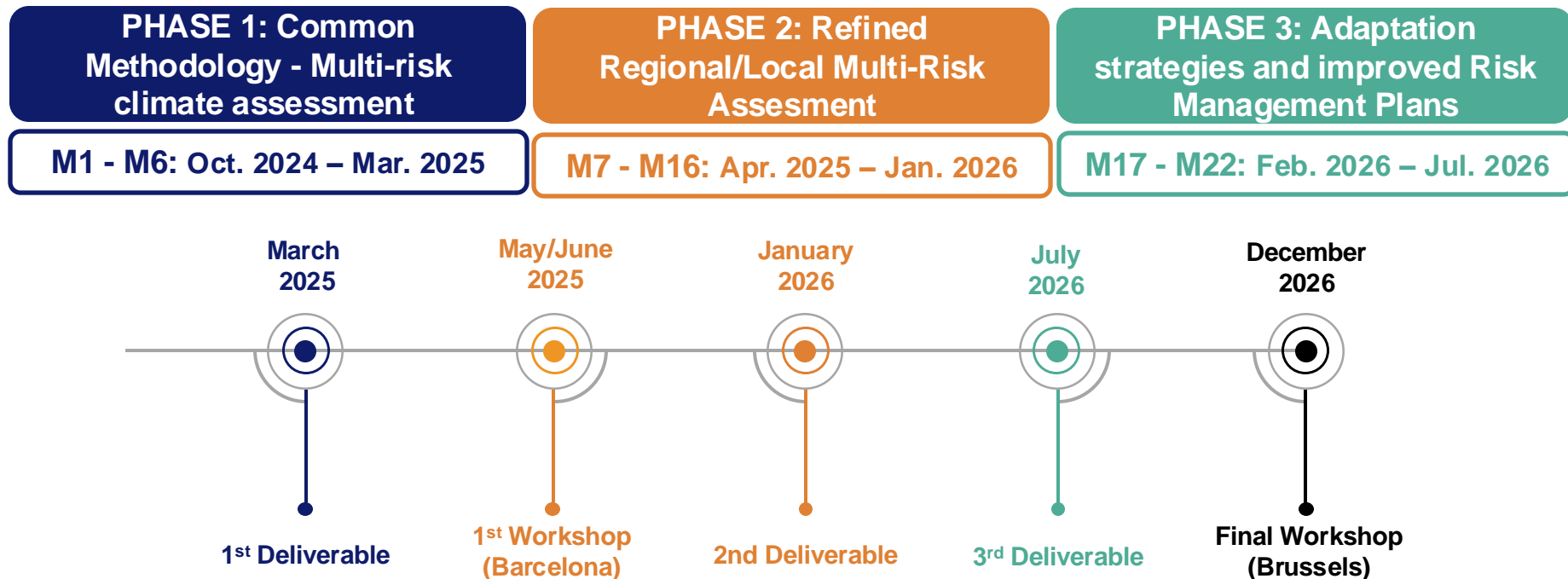
Overseas countries and territories

- Netherlands Antilles (Curaçao) (1)

Total budget: €5.438.891,28

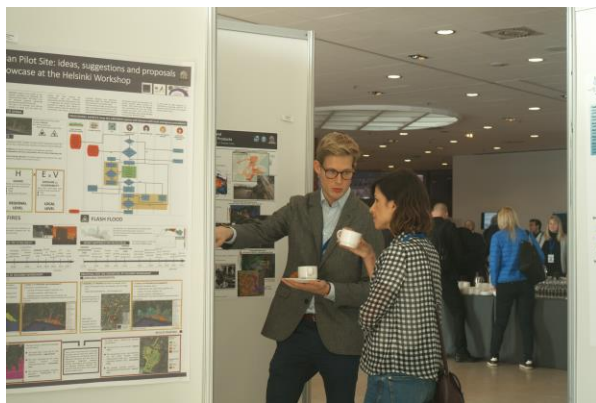


Project planning and timeline



Expected live meetings

**1° Workshop (Barcelona, ES):
May/June 2025 – Organised by
Interior Catalunya**
Pilot sites and FSTP beneficiaries to
present experiences, challenges and
Phase 1 results.



**Final Workshop (Brussels, BE):
December 2026 – Organised by
Deltares**

Beneficiaries to present all Phases
final results .



Deliverables review

**PHASE 1: Common
Methodology - Multi-risk
climate assessment**

M6: March 2025

**PHASE 2: Refined
Regional/Local Multi-Risk
Assesment**

M16: January 2026

**PHASE 3: Adaptation
strategies and improved Risk
Management Plans**

M22: July 2026

Deliverable 1. Implementation of the CLIMAAX common methodology for multi-risk assessment and analysis of the results

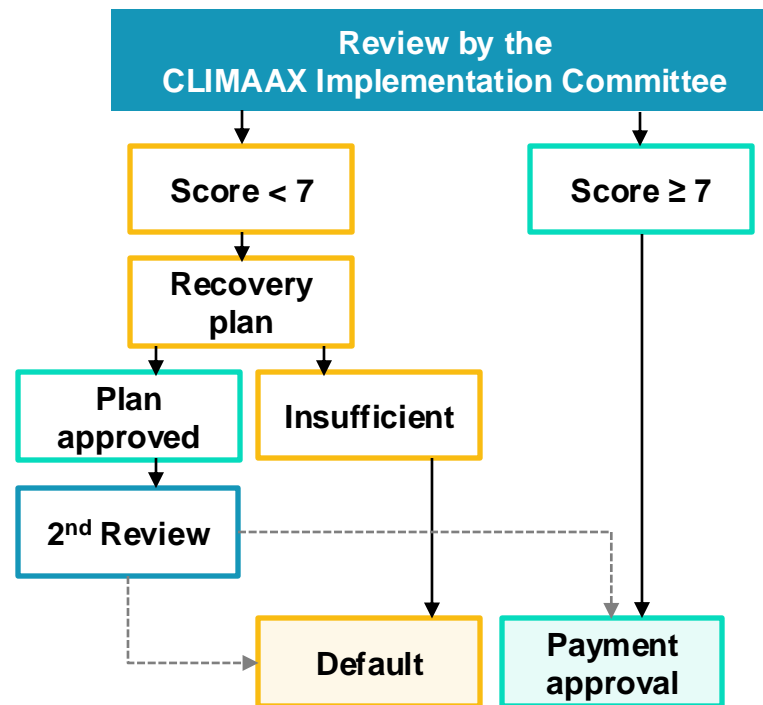
Deliverable 2. Refined regional/local high-resolution analysis and risk assessment and comparison of results

Deliverable 3. Contribution to local adaptation strategies and improved risk management plans



Deliverables review

- Beneficiaries submit the Deliverables to the **CLIMAAX Implementation Committee**.
- The evaluation will be done based on the following criteria included in the SGA:
 - **Deliverable quality - 40%**
 - **Performance indicators - 50%**
 - **Deadline Compliance - 10%**
- Each criterion will be scored from 0 to 10.
- The **threshold** to continue with the next phase is **7 points**.
- If the Deliverable does not reach the threshold, a recovery plan will be asked.



Payments

- The payments will follow a lump sum scheme.

PAYMENT MILESTONES	DELIVERABLE	DATE	% TOTAL GRANT
Phase 1 CLIMAAX methodology	Multi-risk climate assessment	M6	30%
Phase 2 Refined local high-resolution risk assessment	Refined regional/local multi-risk assessment	M16	40%
Phase 3 Exploration of local adaptation strategies, and improved risk management plans	Adaptation and improved risk management report	M22	15%
Final payment	Final payment (delayed payment mechanism)	Est. November 2027	15%
TOTAL			100%

- Following the rules of the Horizon Europe program, a delayed payment mechanism will be applied to the 15% of the financial support amount awarded to each sub-project, which will be paid to the beneficiaries once the whole CLIMAAX project is completed.
- This should happen within 9 months after the end of the CLIMAAX project, expected on the 28th of February 2027.



Q&A SESSION

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