

CLIMEMPOWER DISSEMINATION MATERIALS

ClimEmpower Work Package 5, D5.5, v1



Project ClimEmpower: User Driven Climate Applications Empowering Regional Resilience

Work package 5, Deliverable D5.5

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Executive summary (publishable)

This deliverable provides a consolidated overview of the dissemination materials developed throughout the ClimEmpower project to communicate its objectives, activities, results and key lessons to different target audiences. The materials were developed progressively, in parallel with project implementation and the availability of new scientific, technical, regional and policy-oriented results. While some materials were initially created primarily to support project visibility and awareness raising, they also contribute to the wider transfer and dissemination of ClimEmpower knowledge and are therefore included in the overall dissemination portfolio.

The portfolio covers a broad range of formats designed for different audiences and levels of technical knowledge. It includes the **ClimEmpower visual identity, promotional presentation and project flyers; visual dissemination materials such as infographics and the *Did You Know?* series; project-level, regional and scientific factsheets; dedicated trial materials; web-based dissemination through the ClimEmpower website and its Results section; educational and knowledge-transfer resources; and policy-oriented dissemination materials in the form of Policy Letters**.

As project results matured, increasing emphasis was placed on translating complex scientific and technical outputs into accessible and reusable formats. The dissemination materials address key ClimEmpower topics such as regional climate risks and vulnerabilities, climate and Earth observation data, resilience indicators, local climate intelligence, adaptation measures, the ClimEmpower Toolbox and the transition from resilience assessment to policy action. Dedicated materials also communicate consolidated project findings, common lessons from the five pilot regions and region-specific climate-resilience challenges and needs.

A significant part of the dissemination portfolio is dedicated to knowledge transfer. The **ClimEmpower Educational Library** provides access to project-generated learning resources as well as a curated collection of more than 200 external educational resources, supported by different navigation approaches, including the Hazard–Sector Matrix, User-Dimension Matrix and Knowledge Hubs. Alternative learning formats, including mind maps, infographics, slides, video presentations, audio discussions, flash cards and quizzes, further support different learning preferences and facilitate access to complex project results.

At the policy level, ClimEmpower developed **10 Policy Letters** translating selected resilience recommendations into concise and implementation-oriented guidance for regional and local decision-makers. These materials connect project evidence and resilience indicators with priority policy actions, implementation roadmaps, funding opportunities and expected co-benefits, thereby supporting the practical uptake of ClimEmpower results.

The materials presented in this deliverable demonstrate a gradual progression from general project awareness towards the dissemination of concrete, actionable and reusable project knowledge. By addressing the needs of the wider public, regional and local authorities, practitioners, researchers, educators and other climate-adaptation stakeholders, the dissemination portfolio supports the visibility, understanding, uptake and potential replication of ClimEmpower results during and beyond the project lifetime.

Together, these materials contribute to increasing the visibility of ClimEmpower, facilitating access to project knowledge and results, and supporting their understanding, uptake and potential replication beyond the project pilot regions. The following chapters present the dissemination materials by category, outlining their purpose, main content and intended audiences.

1. ClimEmpower summary

ClimEmpower is a Horizon Europe collaborative research project dedicated to addressing the ongoing Climate Crisis in Europe by empowering the regional stakeholders in some of the most vulnerable European regions (Figure 1).

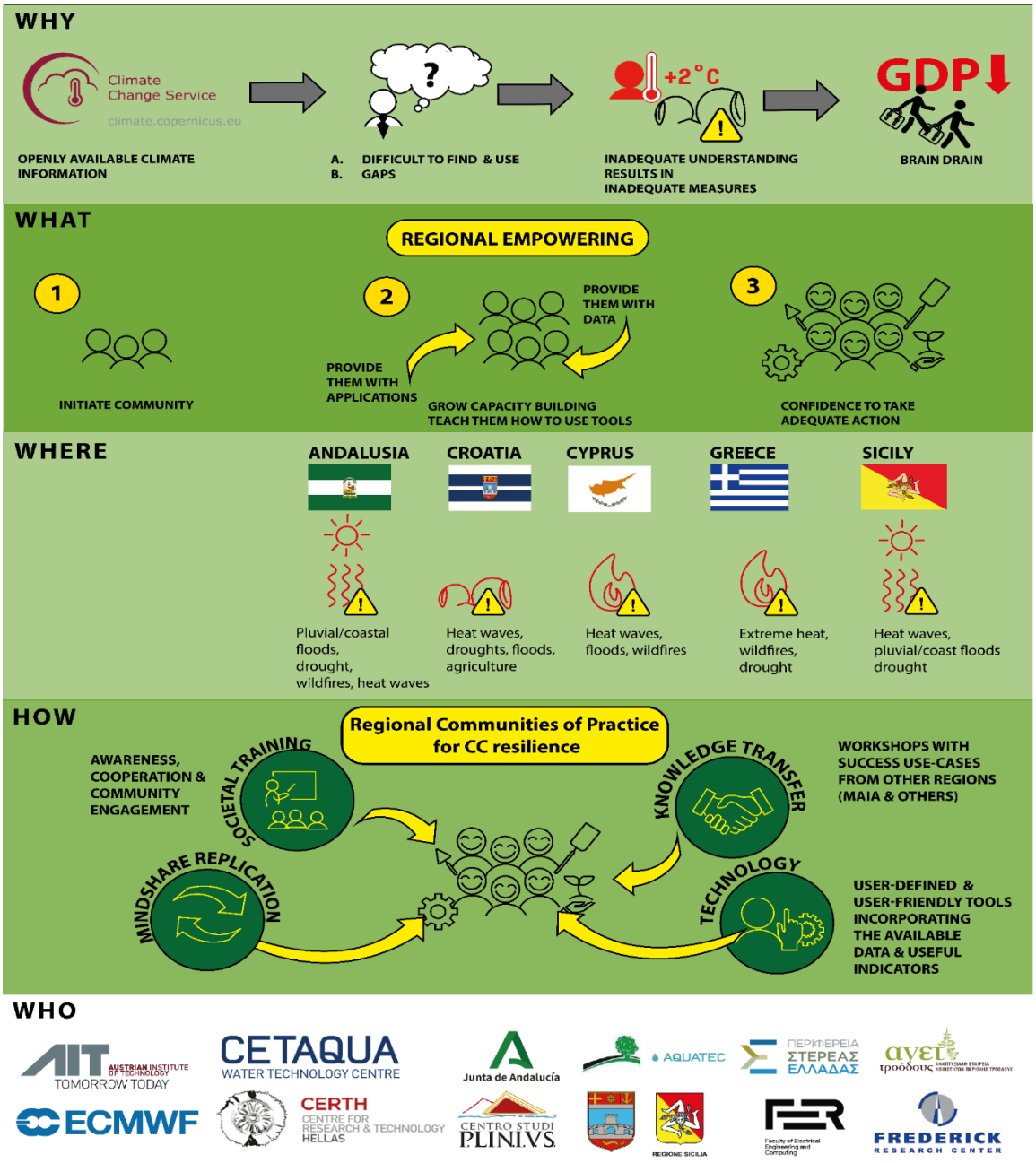
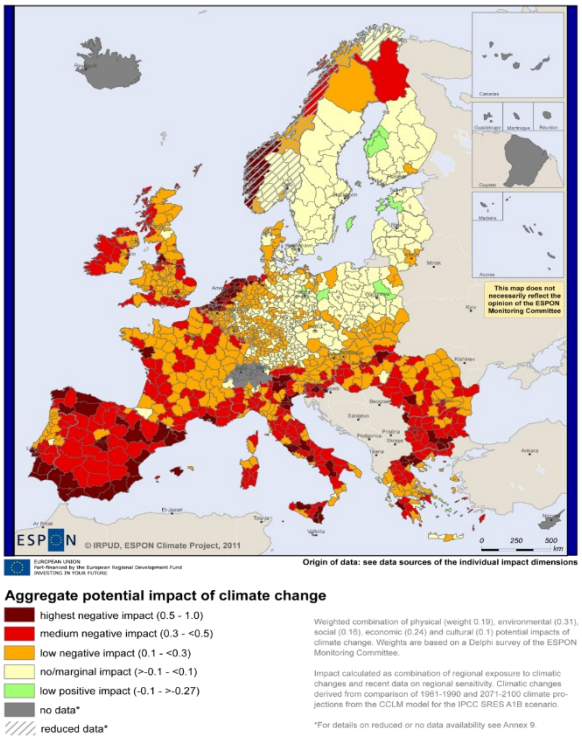
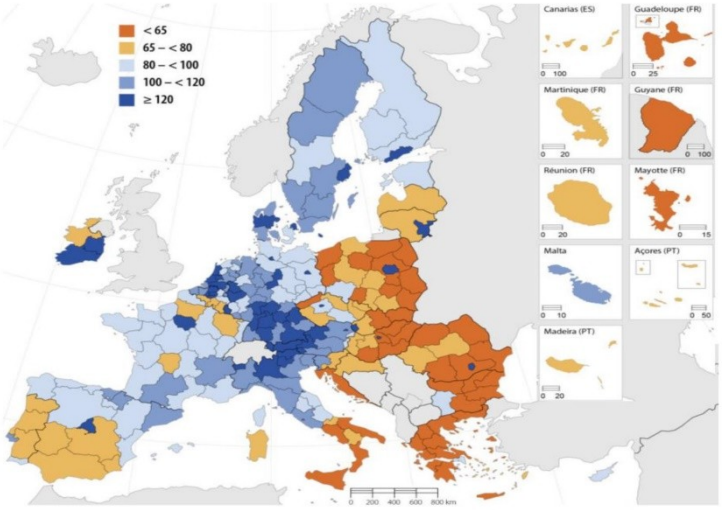


Figure 1.: ClimEmpower at a glance: why, what, where, how and who.

1.1 Project Context

Climate risks results from a a combination of a hazard, exposure, and vulnerability (REF). Addressing all three aspects is crucial for effective increase of regional resilience. However, exposure, vulnerability, and related aspects, such as adaptive capacity, strongly depend on available knowledge and climate literacy. Consequently, global climate crisis frequently has a higher impact on socioeconomically vulnerable regions, thanks to a higher human and economic potential for addressing the issue in more affluent regions. To maximize its impact, ClimEmpower has therefore chosen to address the EU regions featuring a combination of high potential CC impacts and low and/or stagnant regional GDP/capita. This is mainly the case for regions in South and Southeast Europe (Figure 2).





GDP/capita

Figure 2.: Aaggregated potential impact of climate change (https://www.espon.eu/climate-2012); GDP/capita (based on https://ec.europa.eu/eurostat/web/products-eurostat-news/-/ddn-20210303-1

The context the project addresses is thus one of an ongoing global warming, high regional vulnerability and low coping capacity of the participating regions, and the **overarching strategic objective of ClimEmpower** is to empower the Regional Authorities (RAs) and other Mission Users (MUs) in five EU-regions featuring a combination of exceptionally high climate hazards and exceptionally low coping capacity by improving their collective understanding of the Climate Change (CC) hazards, risks and resilient development pathways and supporting their knowledge-based regional planning and development through provision of relevant data, knowledge and user-defined and user-friendly decision support applications.

1.2 Project Objectives

To achieve this overarching goal, **ClimEmpower has identified six SMART[1] Strategic Objectives (SO)**, each one related to one or several work packages. The SOs have also been classified according to different categories: societal, contributing to improved dialogue, awareness, cooperation and community engagement as highlighted by the European Climate Pact (SO1, SO5); scientific, corresponding to research activities for advances beyond the state of the art (SO2, SO3); technological, suggesting and/or developing novel solutions, integrating state-of-the art and digital advances (SO4); and outreach, aimed at sharing ClimEmpower results to a broader scientific and non-scientific audience, including additional regions and communities, to maximize project impact (SO6).

- SO1 Understand regional background, challenges and expectation (WP1, societal)
- SO2 Addressing the gaps in availability and usability of CC data and services (WP2 and WP4, scientific)
- SO3 Identification, definition, estimating, and communication of climate impact/resilience indicators suitable for local end-users (WP2 and WP4, scientific)
- SO4 Simplify access to CC data and development of end user applications (WP3, technological)
- SO5 Empower the regions to activate and enhance their potential for addressing the climate change challenge. (WP4, societal)
- SO6 Ensure the use and impact of the ClimEmpower outputs (WP4 and WP5, scientific and societal)

ClimEmpower's key ambition is to **prove beyond doubt that CC-resilience should, and can, be an integral part of regional development everywhere in EU and beyond it**. That is, we anticipate that the regional stakeholders will recognise that CC-resilient development pathways offer multiple benefits to them, including but not limited to higher quality of life and reviving economy, and that these can be understood using available data, tools, and services. Second key ambition of the project is to **help the regions address the CC resilience in key community systems addressed in five ClimEmpower trials**.

Underlying philosophy of the project is to "**help the regions to help themselves**". This will be achieved through various mechanisms, including co-creation and mediation of the regional "**Communities of Practice**", provision of the **Climate Change -resilience training materials**, as well as in provision and training in use of the user-centric data and services – including those that have already been made available through previous research projects and EU initiatives.

[1] Specific (related to WPs), Measurable (by relevant KPIs), Achievable (the WPs in which they will be achieved are listed), Realistic (since they are referred and explained in the methodology section), and Timebound (each KPI is related to a deliverable and a month of achievement).

2 Introduction

2.1 Deliverable summary

This Deliverable is part of **WP5 – Dissemination and Communication** and provides a consolidated overview of the dissemination materials developed throughout the ClimEmpower project. It brings together the main communication and dissemination outputs produced during the project, including promotional presentations and flyers, infographics, the *Did You Know?* series, press materials, web-based resources, educational materials and Policy Letters.

The Deliverable demonstrates how ClimEmpower results have been translated into accessible and audience-oriented formats supporting communication with regional authorities, practitioners, researchers, stakeholders and the wider public. In particular, it contributes to **SO6 – Ensure the use and impact of ClimEmpower outputs**, by supporting the visibility, accessibility, dissemination and potential reuse of project results. It also contributes to **SO1**, by supporting awareness, dialogue and stakeholder engagement, and to **SO5**, by facilitating access to knowledge and practical project outputs that can support regional climate resilience.

Through these activities, the Deliverable contributes to the expected project impacts by increasing awareness of ClimEmpower results, facilitating knowledge transfer, supporting the uptake of project tools and recommendations, and enabling their wider dissemination and potential replication beyond the five pilot regions.

2.2 Relation to other work

This Deliverable builds on activities and results produced across the ClimEmpower project. Its content reflects the regional needs and challenges identified through **WP1**, the climate data, resilience indicators and methodological work developed in **WP2**, the ClimEmpower Toolbox and decision-support services developed in **WP3**, as well as on the educational resources, regional trials and resilience recommendations produced in **WP4**. It is also closely linked to the dissemination and communication strategy developed within **WP5**, which provided the overall framework for defining target audiences, key messages, communication channels and appropriate dissemination formats.

The materials presented in this Deliverable were developed progressively and in parallel with project implementation. As new results became available, they were translated into suitable dissemination formats, ranging from general promotional materials and awareness-raising content to infographics, educational resources and policy-oriented materials communicating specific project findings. The work was also closely connected with stakeholder engagement activities and Communities of Practice, which helped ensure that the materials addressed relevant regional needs and were appropriate for different user groups.

The dissemination materials are intended to support the continued visibility, understanding and uptake of ClimEmpower results during and beyond the project lifetime. Regional authorities and other stakeholders can reuse them for awareness raising, knowledge transfer, training and climate adaptation planning, while other European regions, projects and organisations can use or adapt the materials to communicate ClimEmpower approaches, tools and lessons learned. Their continued availability through the ClimEmpower website and other project repositories supports wider access, replication and long-term exploitation of project results.

2.3 Data, security, and ethics

No new data sets relevant for the ClimEmpower Data Management Plan were used or produced in preparation of this deliverable.

The dissemination materials presented in this deliverable were developed using existing ClimEmpower project outputs, including public deliverables, project results, educational resources, resilience recommendations and information published through the ClimEmpower website and related project repositories.

Where applicable, the dissemination materials refer to or summarise data and results already documented and managed within the corresponding technical and scientific deliverables. No new underlying research datasets were generated through the preparation of the dissemination materials themselves.

2.3.1 Security and Ethics

The work performed in this deliverable and the dissemination materials presented do not raise any specific ethical or security concerns. No personal or sensitive data were collected or processed specifically for the preparation of this deliverable.

3 ClimEmpower dissemination materials

3.1 Overview of dissemination materials

ClimEmpower dissemination materials were developed continuously throughout the project, in parallel with the implementation of project activities and the gradual availability of project results. In the early stages, the materials primarily supported project visibility and awareness raising, presenting the project objectives, pilot regions and overall approach. As the project progressed, the dissemination focus increasingly shifted towards communicating concrete findings, tools, methodologies, educational resources and policy recommendations.

The materials were designed for different target audiences and levels of technical knowledge, ranging from the wider public to regional and local authorities, practitioners, researchers and other climate adaptation stakeholders. Accordingly, different formats were used to make project information and results accessible, understandable and suitable for further dissemination and reuse. **Although some of the materials presented in this deliverable were initially developed primarily for communication and awareness-raising purposes, they also support the transfer and wider dissemination of project knowledge and are therefore included as part of the overall dissemination portfolio.**

The following sections present the main dissemination materials developed during the project, grouped into **project presentation and promotional materials, visual dissemination materials, factsheets, press and media materials, web-based dissemination materials, educational and knowledge-transfer materials, and policy-oriented dissemination materials**.

3.2 Visual identity and core promotional materials

3.2.1 ClimEmpower logo and colour palette

The ClimEmpower visual identity was developed to ensure a consistent and recognisable presentation of the project across its dissemination materials. The project logo and colour palette were used throughout presentations, flyers, infographics, factsheets, educational resources and other visual outputs, helping to create a coherent visual language across different formats and target audiences.

The dominant green tones reflect the project's focus on climate resilience, adaptation and sustainable regional development, while the accompanying neutral and lighter shades support readability and visual consistency. The logo and colour palette served as the basis for the design of project dissemination materials throughout the project.



Figure 3.: ClimEmpower logo



Figure 4.: ClimEmpower set of icons



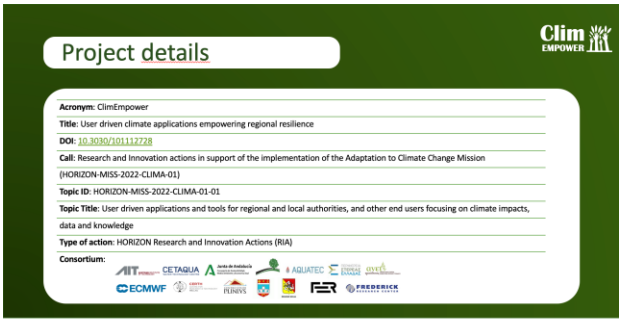
Figure 5.: ClimEmpower colour palette

3.2.2 Promotional project presentation

The ClimEmpower promotional presentation was developed as a concise and reusable overview of the project, summarising its objectives, pilot regions, overall approach, key activities and expected results. It was regularly used as a complete or near-complete presentation material for external meetings, events and presentations involving stakeholders outside the consortium.

Because it brought together the most important project information in a structured and visually consistent format, the presentation served as a practical dissemination tool that could be easily adapted to different audiences and presentation contexts. It also helped ensure consistency in the way ClimEmpower was introduced and presented by project partners throughout the project.

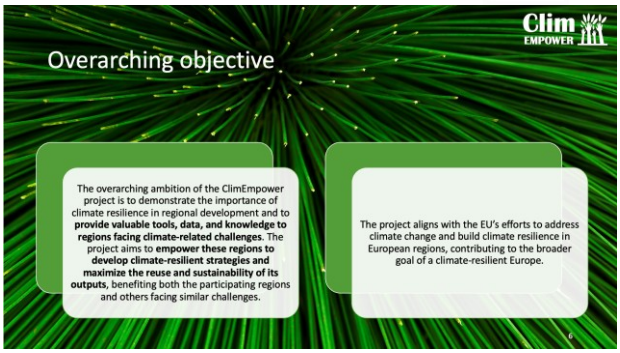

Clim
EMPOWER
USER DRIVEN CLIMATE APPLICATIONS EMPOWERING REGIONAL RESILIENCE
Denis Havlik, AIT Austrian Institute of Technology GmbH
denis.havlik@ait.ac.at
Date:
Funding:
Consortium:


Project details
Clim
EMPOWER
Acronym: ClimEmpower
Title: User driven climate applications empowering regional resilience
DOI: 10.3030/101112728
Call: Research and Innovation actions in support of the implementation of the Adaptation to Climate Change Mission
(HORIZON-MISS-2022-CLIMA-01)
Topic ID: HORIZON-MISS-2022-CLIMA-01-01
Topic Title: User driven applications and tools for regional and local authorities, and other end users focusing on climate impacts,
data and knowledge
Type of action: HORIZON Research and Innovation Actions (RIA)
Consortium:


WHAT?
Clim
EMPOWER
Empower 5 south-European regions with high Climate Change (CC) risk and exceptionally low adaptive capacity to enhance their CC-resilience, establish the regional Communities of Practice (CoP) and co-create the resilient development strategies adapted to the regional needs and potentials.
Project team will aid the regional administration in organizing the regional CoPs, where representatives of "quadruple helix" stakeholders will discuss their Climate Adaptation needs and capabilities, assess potential pathways towards CC-resilient, societally just, and sustainable future and elect sustainable and CC-resilient regional development pathways that are best suited to their needs and capabilities.
This activity will be supported by provision of the data driven Decision Support service(s) for strategic CC-adaptation planning, as well as through provision of easy to understand educational materials illustrating the CC risks and possible technological, natural and societal adaptation options and strategies, explaining the use of the project tools, as well as knowledge transfer on existing data, tools and best practices in climate adaptation from successful EU projects and regions with higher adaptive capacity.
ClimEmpower will also develop new generic interface to C3S Climate Data Store, data driven CC-hazard and -risk assessment services, and semi-semi-quantitative ("screening") services allowing the users to compare different adaptation strategies.

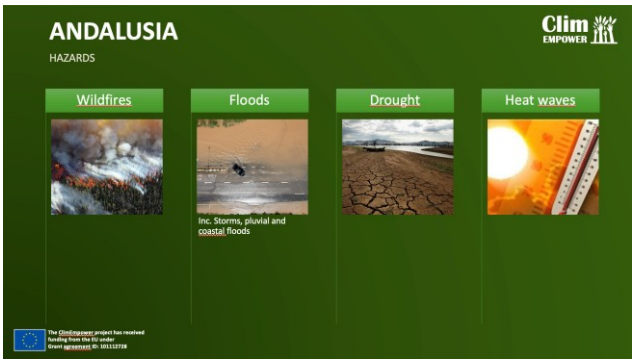

Relation to EU Missions
Clim
EMPOWER
Mission: Adaptation to Climate Change
Cancer: Improving the lives of more than 3 million people by 2030 through prevention, cure and for those affected by cancer including their families, to live longer and better.
Mission "Restore our Ocean and Waters" Healthy oceans, seas, coastal & inland waters
Mission: Climate-Neutral and Smart Cities
Mission 'A Soil Deal for Europe'
Funded by the European Union


Facts & figures
Clim
EMPOWER
14 Partners
Location:
5 Regions
(refer to next slide)
3M€
Duration:
36 months
Consortium:


Overarching objective
Clim
EMPOWER
The overarching ambition of the ClimEmpower project is to demonstrate the importance of climate resilience in regional development and to provide valuable tools, data, and knowledge to regions facing climate-related challenges. The project aims to empower these regions to develop climate-resilient strategies and maximize the reuse and sustainability of its outputs, benefiting both the participating regions and others facing similar challenges.
The project aligns with the EU's efforts to address climate change and build climate resilience in European regions, contributing to the broader goal of a climate-resilient Europe.


Strategic Objectives
Clim
EMPOWER
SO1 – Understand regional background, challenges, and expectations
SO2 – Addressing the gaps in availability and usability of CC data and services:
SO3 – Identification, definition, estimating, and communication of climate impact/resilience indicators suitable for local end-users:
SO4 – Simplify access to CC data and development of end-user applications:
SO5 – Empower the regions to activate and enhance their potential for addressing the climate change challenges
SO6 – Ensure the use and impact of the ClimEmpower outputs


5 Southern regions
Clim
EMPOWER
Central Greece
Pluvial/flash floods
Water contamination
Sicily
Heatwaves
Urban floods
Drought
Interace fires
Andalusia
Floods, storm, droughts
Water demand
Forest fires
Pluvial & costal floods
Heat waves
Trodos (Cyprus)
Wildfires
Heat waves
Croatia
Extremely high temperatures
Desiccation of farming land
Disappearance of protected areas
Severe impact on plant and animal life
Consortium:


ANDALUSIA
HAZARDS
Clim
EMPOWER
Wildfires
Floods
Drought
Heat waves
inc. Storms, pluvial and coastal floods


ANDALUSIA
Regional profile and expectations
Clim
EMPOWER
HAZARDS IDENTIFICATON
GAPS AND BARRIERS
TOOLS AND SERVICES
PREVIOUS EXPERIENCES
EXPECTATIONS
CONTRIBUTIONS
NEEDS AND SOLUTIONS
OTHER COMMENTS



Figure 6.: ClimEmpower promotional presentation

The presentation provides a structured overview of the project, including key project facts and figures, links to relevant EU Missions, the overarching and strategic objectives, and the role of the five pilot regions. It also introduces the main climate hazards addressed in each region and summarises regional profiles, expectations, identified gaps and barriers, available tools and services, and stakeholder needs. In this way, the presentation provides both a general introduction to ClimEmpower and a concise overview of the specific regional contexts in which the project activities are implemented.

3.2.3 Project flyers

Project flyers, downloadable from https://climempower.eu/downloads/#education-material were developed as concise and visually accessible materials for presenting ClimEmpower to external audiences. They were designed to communicate essential project information in a compact format that could be easily distributed at events, meetings, workshops and other stakeholder engagement activities.

The flyers complemented the promotional presentation by providing a stand-alone overview of the project and selected themes in a format suitable for both printed and digital dissemination. Their content and visual structure were adapted to support quick understanding of key messages while maintaining consistency with the ClimEmpower visual identity.





Figure 7.: ClimEmpower flyer #1





Figure 8.: ClimEmpower flyer #2





Figure 9.: ClimEmpower flyer #3

Three versions of the ClimEmpower project flyer were developed, following the same visual identity and overall content structure while using different cover imagery. The alternative visual versions enabled flexible use of the flyer in different dissemination contexts, while maintaining consistency in the presentation of the project and its key messages.

All three flyers provide a concise overview of ClimEmpower, including the project mission, main objectives, key scientific and technical results, expected recommendations and information on the five pilot regions. The regional dimension is presented through a map and short descriptions of the main climate-related challenges addressed in the pilot areas. The flyers also include project and consortium information, EU funding acknowledgement and QR codes providing direct access to relevant ClimEmpower online resources.

The three versions differ primarily in their **front-cover visual**, each reflecting a different aspect of climate change and resilience:

- **Flyer #1** uses an image of dry and cracked soil, visually emphasising climate-related pressures such as drought, water scarcity and land degradation.
- **Flyer #2** uses a green landscape and tree imagery, placing greater visual emphasis on ecosystems, environmental resilience and the positive dimension of climate adaptation.
- **Flyer #3** uses imagery of a hand interacting with a young plant, highlighting action, care, restoration and the human role in building climate resilience.

Despite these visual differences, the flyers were designed as a coherent set and communicate the same core ClimEmpower messages. Their compact format makes them suitable for distribution at conferences, workshops, stakeholder meetings and other external events, as well as for digital dissemination.

3.3 Visual dissemination materials

Visual dissemination materials were developed to translate key ClimEmpower findings, concepts and project results into concise, accessible and visually engaging formats. Their purpose was to support rapid understanding of complex topics and to make project knowledge easier to communicate to a broad range of audiences, including non-specialist stakeholders.

These materials complemented more detailed project outputs by highlighting essential messages, results and practical implications in a format suitable for events, presentations, online dissemination and wider stakeholder outreach.

3.3.1 Infographics

Infographics, downloadable from https://climempower.eu/downloads/#education-material were used throughout the project to present scientific, technical and policy-related results in a simplified and visually structured form. They focused on selected ClimEmpower topics and outputs, including climate risk, resilience indicators, climate data and downscaling, resilience measures, the ClimEmpower Toolbox, policy recommendations and consolidated project results.

By combining short explanatory texts, key figures, visual elements and process-oriented representations, the infographics helped communicate complex project content in a way that was understandable to both specialist and non-specialist audiences. They were designed as stand-alone dissemination materials that could be reused across different project activities and dissemination channels.

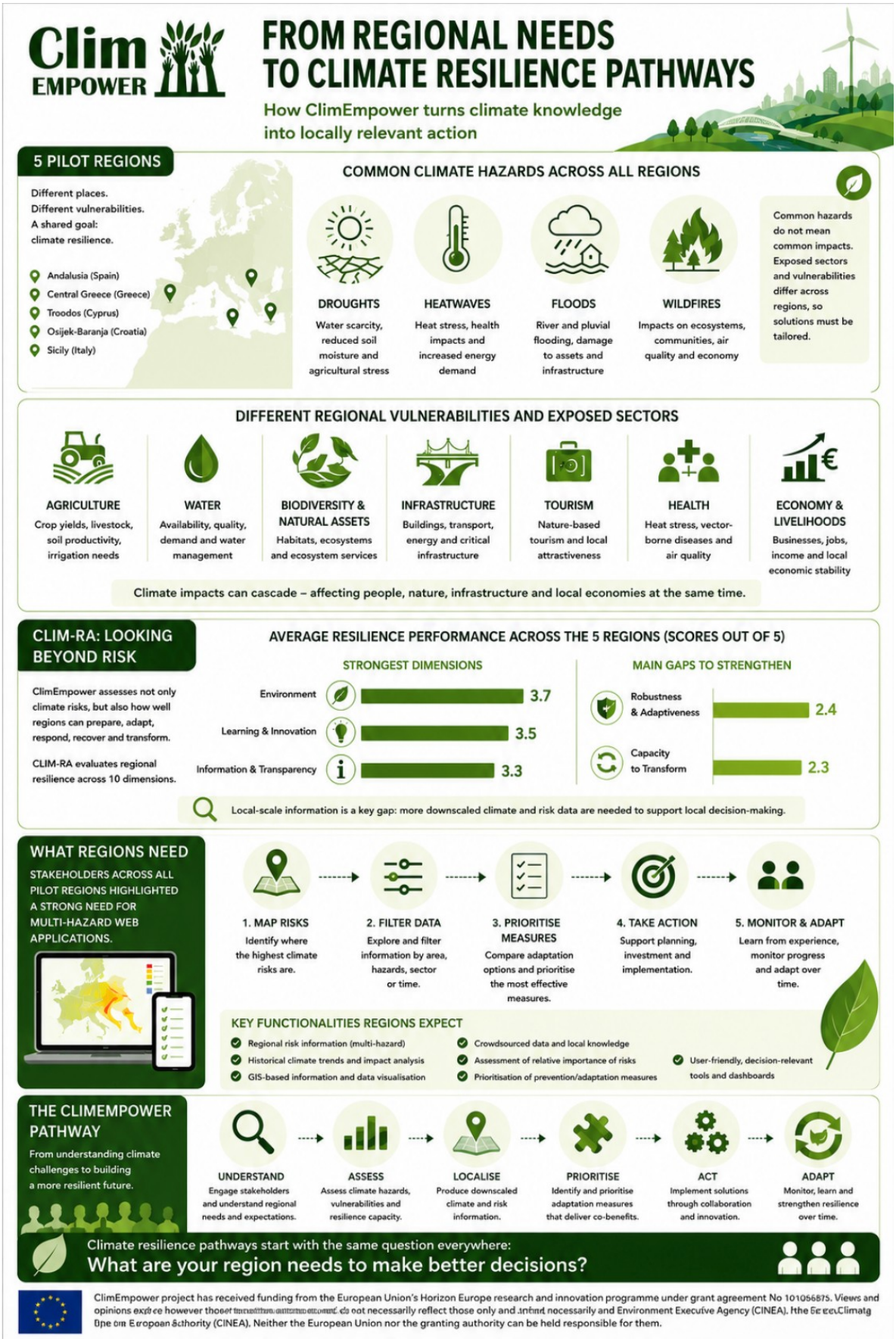


Figure 10.: ClimEmpower infographics #1

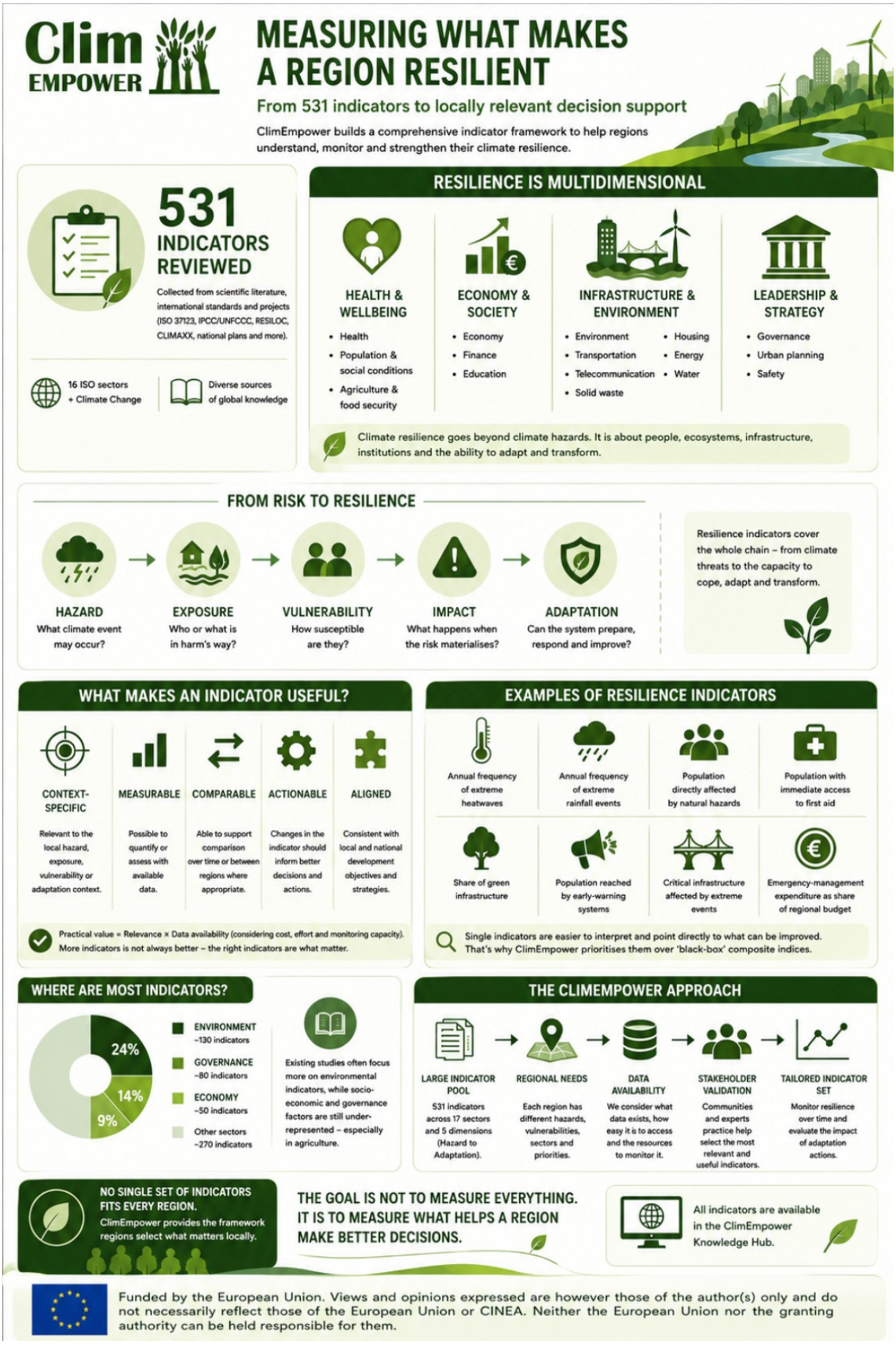


Figure 11.: ClimEmpower infographics #2

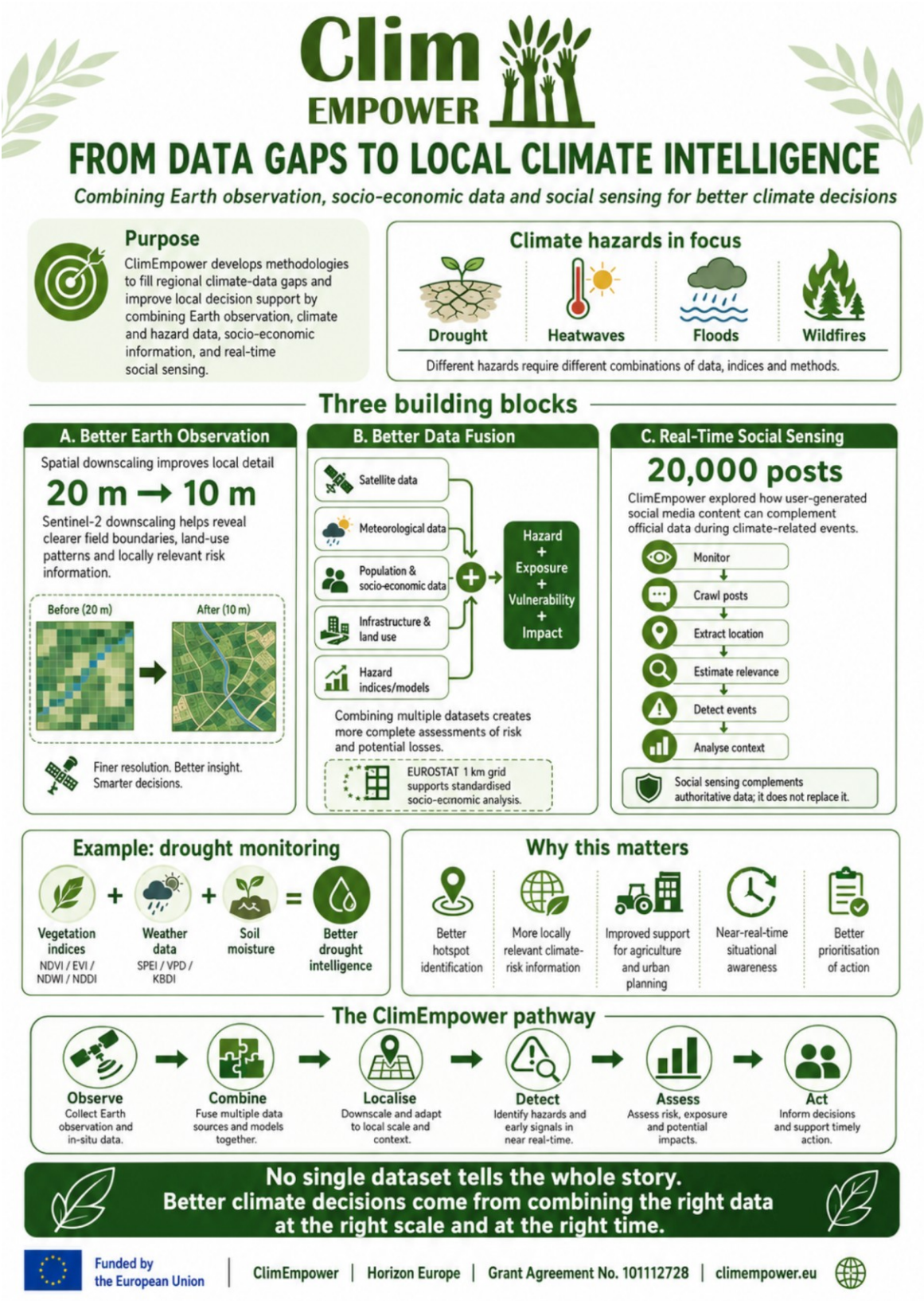


Figure 12.: ClimEmpower infographics #3

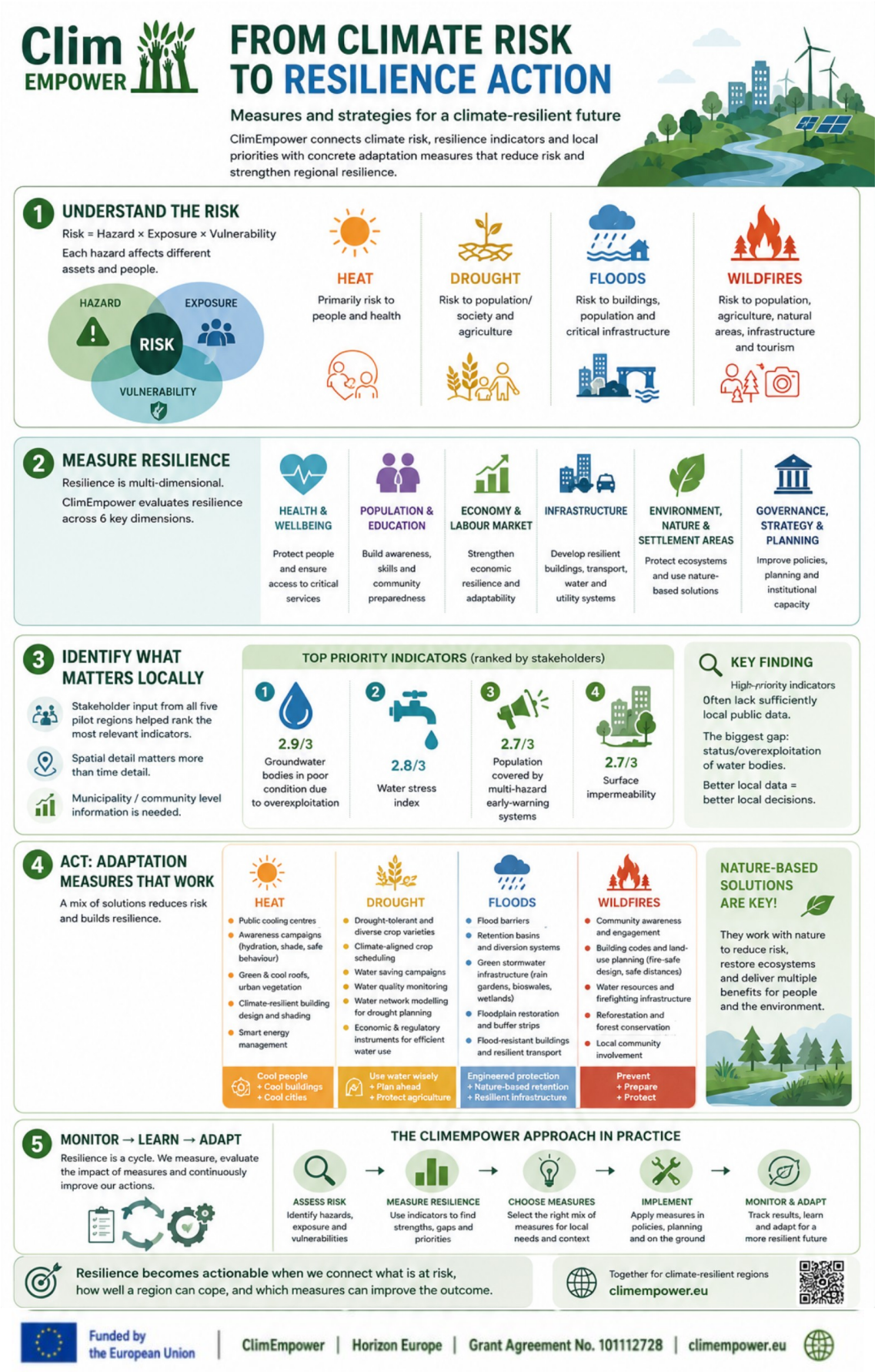


Figure 13.: ClimEmpower infographics #4

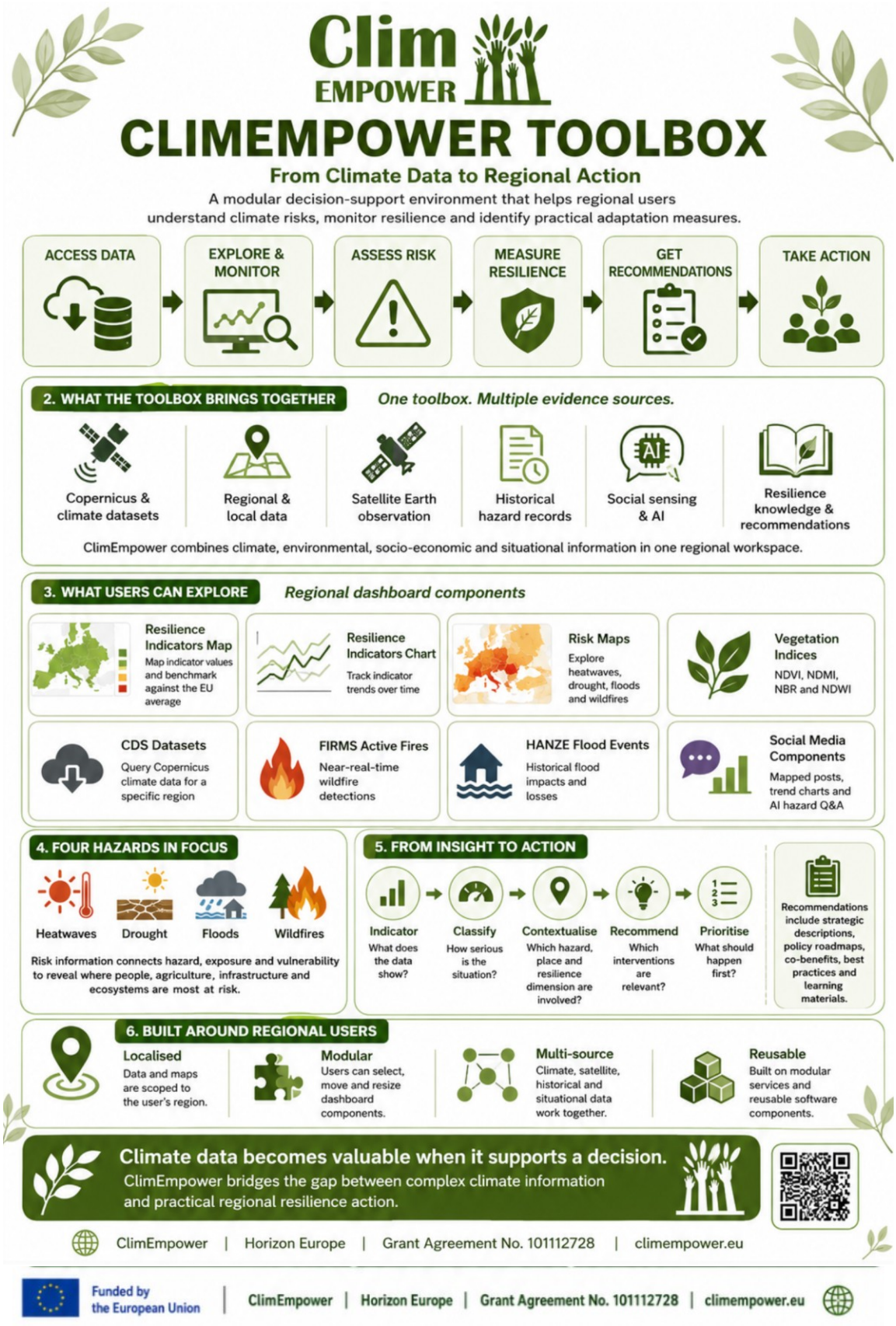


Figure 14.: ClimEmpower infographics #5

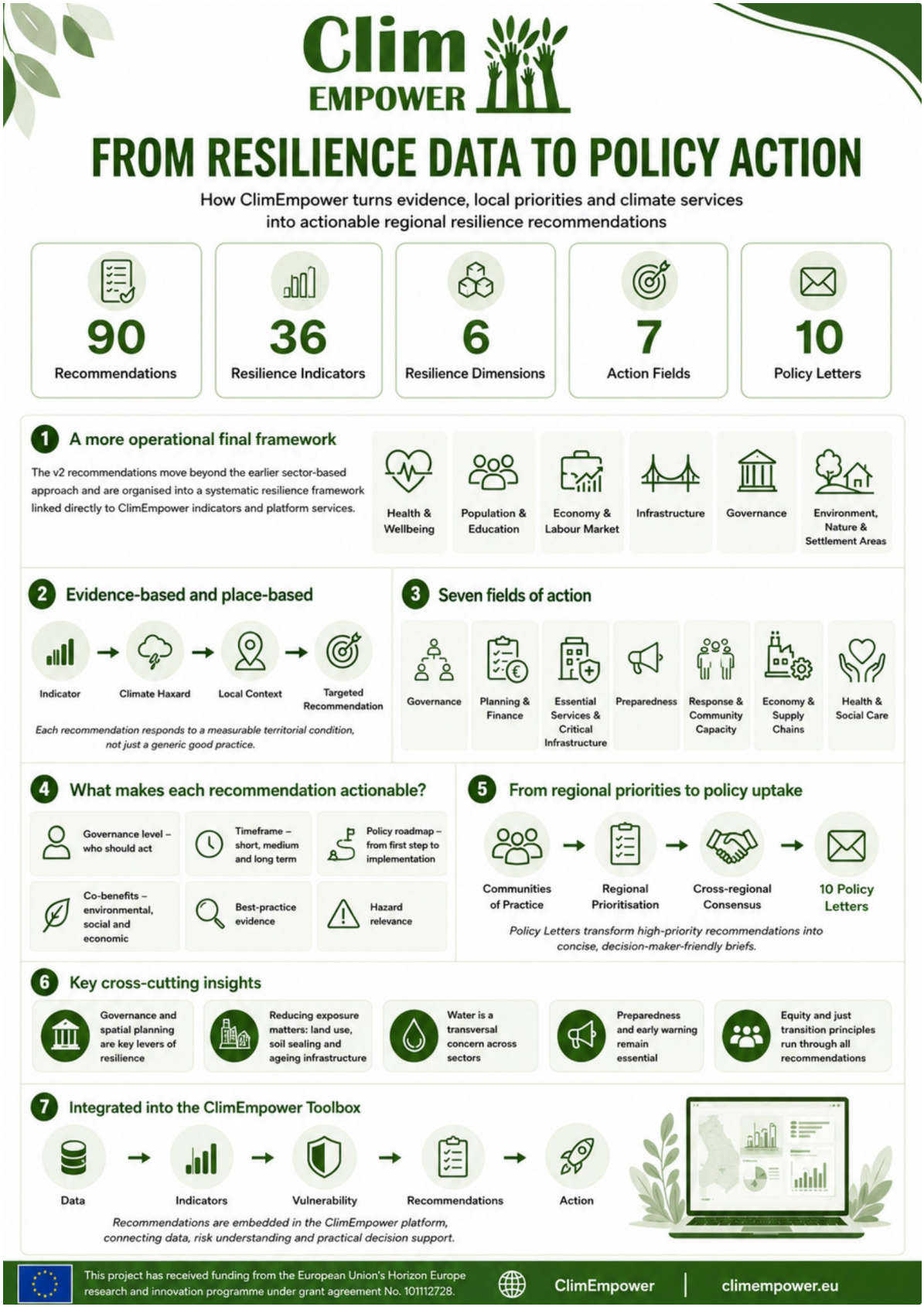


Figure 15.: ClimEmpower infographics #6



Figure 16.: ClimEmpower infographics #7

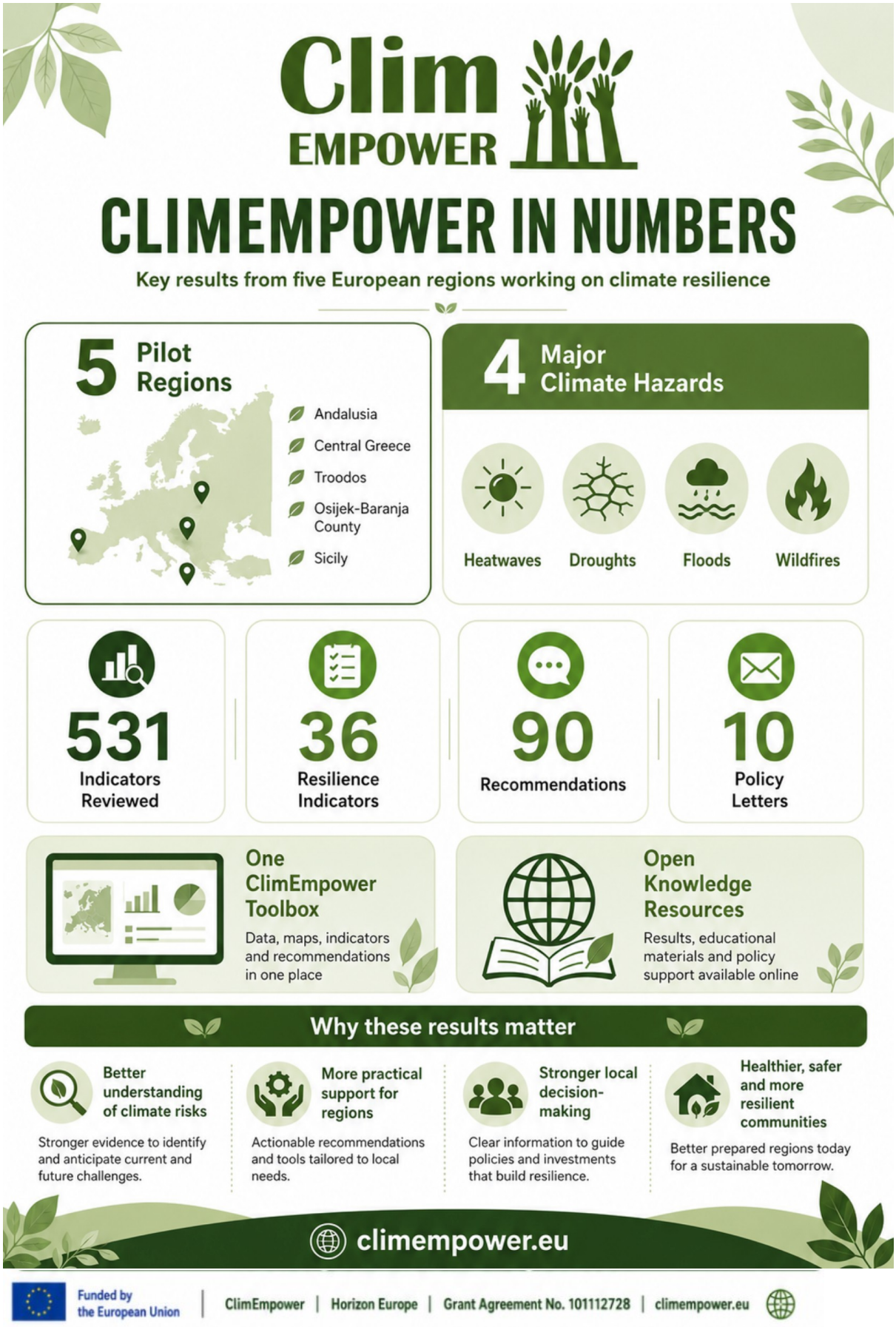


Figure 17.: ClimEmpower infographics #8

The selected infographics illustrate the progression of ClimEmpower from understanding regional climate challenges to developing practical tools, recommendations and policy-oriented outputs. They draw on results generated across different work packages and translate technical findings into stand-alone visual materials that can be understood without consulting the underlying project deliverables.

The infographic series presented above covers the following topics:

- **From Regional Needs to Climate Resilience Pathways** presents the project's place-based approach across the five pilot regions. It highlights common climate hazards alongside different regional vulnerabilities and exposed sectors, introduces the ClimEmpower resilience assessment approach, and summarises the types of information and functionalities regions need to support better climate-resilience decisions. The infographic illustrates the progression from understanding local needs and assessing risks to prioritising measures, taking action and adapting over time.
- **Measuring What Makes a Region Resilient** summarises ClimEmpower's work on climate resilience indicators. It highlights the review of **531 indicators**, presents resilience as a multidimensional concept extending beyond climate hazards alone, and explains the relationship between hazard, exposure, vulnerability, impact and adaptation. It also introduces criteria for useful indicators and provides examples of indicators relevant to regional climate-resilience assessment.
- **From Data Gaps to Local Climate Intelligence** explains the project's approach to improving locally relevant climate information by combining Earth observation, climate and meteorological data, socio-economic information and social sensing. It presents spatial downscaling, multi-source data fusion and the use of approximately **20,000 social media posts** in the social-sensing proof of concept, as well as an example of multi-indicator drought monitoring. The central message is that effective climate decisions depend on combining different data sources at the appropriate spatial scale and time.
- **From Climate Risk to Resilience Action** demonstrates how climate-risk assessment can be translated into concrete adaptation measures. It connects the four major hazards addressed by ClimEmpower – heatwaves, droughts, floods and wildfires – with the people, sectors and assets most affected, resilience dimensions and locally relevant indicators. The infographic also presents examples of adaptation measures and emphasises the importance of nature-based solutions, stakeholder priorities and continuous monitoring and adaptation.
- **ClimEmpower Toolbox – From Climate Data to Regional Action** provides an overview of the ClimEmpower digital decision-support environment. It shows how different evidence sources – including climate datasets, regional data, satellite Earth observation, historical hazard records, social sensing and resilience knowledge – are brought together in one modular environment. The infographic presents the main dashboard components and illustrates the user pathway from accessing and exploring data to assessing risk, measuring resilience, receiving recommendations and supporting action.
- **From Resilience Data to Policy Action** presents the final ClimEmpower resilience recommendation framework. It highlights the development of **90 recommendations linked to 36 resilience indicators**, organised across **six resilience dimensions and seven fields of action**. It also explains how recommendations are contextualised through climate hazards and local conditions, enriched with implementation information and co-benefits, prioritised with regional stakeholders and ultimately translated into **10 Policy Letters** supporting policy uptake.
- **From Climate Challenge to Regional Action** provides a simplified overview of the complete ClimEmpower intervention logic for a wider audience. It follows six steps – listening to regional

needs, understanding climate risks, measuring resilience, defining solutions, supporting decisions and taking action – and emphasises the environmental, social and economic co-benefits of climate adaptation. It also highlights the place-based, evidence-based, co-created and action-oriented nature of the ClimEmpower approach.

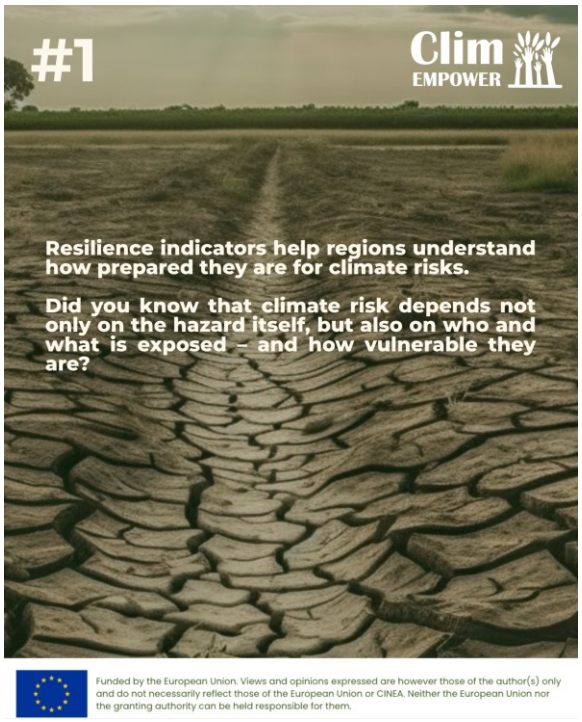
- **ClimEmpower in Numbers** provides a concise numerical summary of key project outputs and achievements. It brings together the five pilot regions, four major climate hazards, **531 resilience indicators reviewed, 36 resilience indicators linked to recommendations, 90 recommendations and 10 Policy Letters**, together with the ClimEmpower Toolbox and open knowledge resources. It was designed as an easily accessible overview of the project's main results and their relevance for regional climate resilience.

Taken together, the eight infographics form a coherent visual narrative of the ClimEmpower project. The first materials explain **regional needs, climate risk, data and resilience assessment**, while the later infographics focus increasingly on **adaptation measures, digital decision support, recommendations, policy uptake and consolidated project results**. This progression reflects the development of ClimEmpower itself, from understanding regional challenges to providing actionable knowledge and tools that can support climate-resilience planning and implementation.

3.3.2 Did you know? series

The *Did You Know?* Series, downloadable from https://climempower.eu/downloads/#education-material was developed as a short-form dissemination format to communicate selected ClimEmpower facts, findings and key messages in a simple and visually engaging way. Each item focuses on a single piece of information or insight, making the series suitable for quick dissemination and for audiences that may not engage with more detailed project materials.





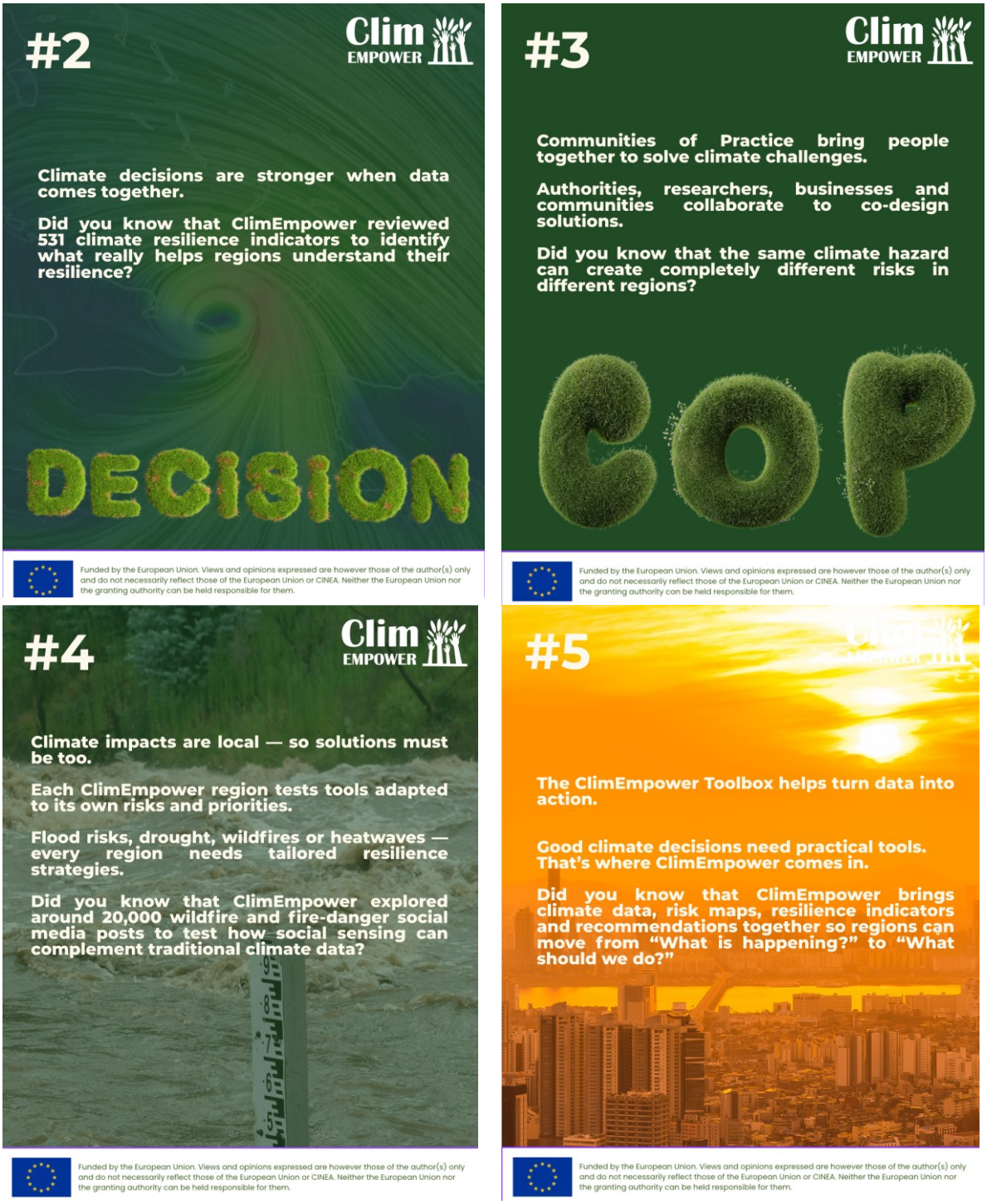


Figure 18.: Did you know? Series

The *Did You Know?* series was designed as a numbered set of short, visually consistent dissemination materials, each focusing on one key ClimEmpower finding or message. The format combines a short explanatory statement with an engaging "Did you know?" question, allowing scientific and technical project results to be communicated in an accessible way without losing their connection to the underlying project work. The use of a common visual identity, project logo and EU funding acknowledgement ensures consistency across the series.

The first materials in the series address the following topics:

- **#1 – Understanding climate risk** explains that climate risk is determined not only by the hazard itself, but also by exposure and vulnerability, introducing one of the core concepts behind ClimEmpower risk assessment.
- **#2 – Measuring resilience** highlights the review of **531 climate resilience indicators** and the project's effort to identify indicators that can meaningfully support regional resilience assessment and decision-making.
- **#3 – Local differences and co-creation** emphasises the role of Communities of Practice and the fact that the same climate hazard can create very different risks depending on regional circumstances, reinforcing the need for place-based solutions.
- **#4 – Local climate intelligence and social sensing** focuses on the importance of locally relevant information and introduces ClimEmpower's exploration of approximately **20,000 wildfire and fire-danger social media posts** to assess how social sensing can complement conventional climate data.
- **#5 – From data to action** presents the ClimEmpower Toolbox as a means of bringing together climate data, risk maps, resilience indicators and recommendations in order to help regions move from understanding what is happening to identifying what can be done.

3.4 Factsheets

3.4.1 Project-level and thematic factsheets

Project-level and thematic factsheets (https://climempower.eu/downloads/#education-material) were developed to provide concise but more detailed summaries of key ClimEmpower results, approaches and lessons learned. They were designed as stand-alone materials for a broad audience, combining explanatory text with selected figures, key messages and visual elements in order to make project knowledge accessible without requiring consultation of the underlying technical deliverables.

The factsheets in this category address the overall project results, common lessons emerging from the five pilot regions, and the pathway from climate data and regional needs to resilience assessment, recommendations and action.

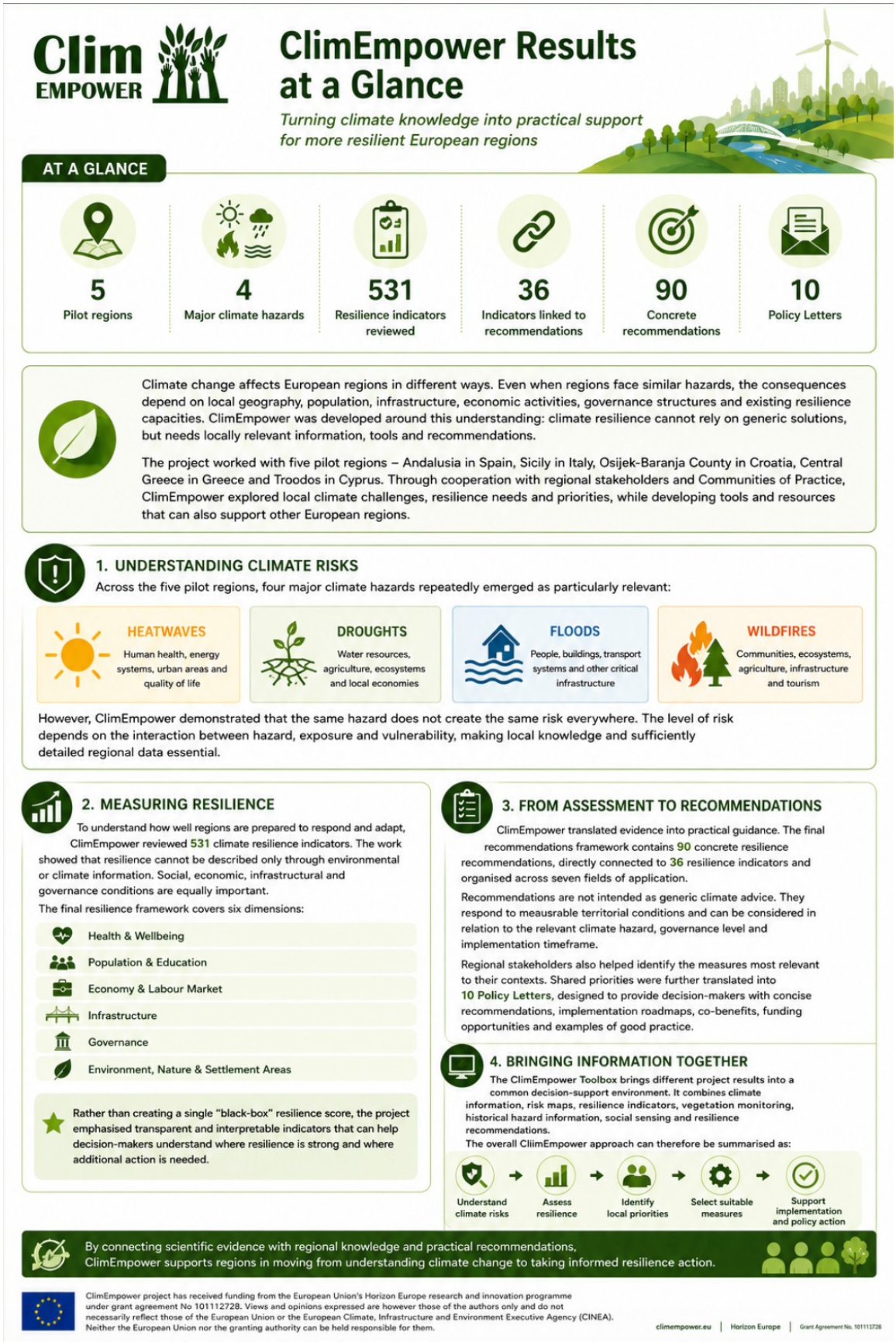


Figure 19: ClimEmpower results at glance – part 1

The **ClimEmpower Results at a Glance** factsheet provides a concise project-level overview of the main ClimEmpower results and their relevance for regional climate resilience. It combines key quantitative results with short explanatory sections on climate risks, resilience assessment, recommendations and the ClimEmpower Toolbox, allowing readers to understand both the scope of the project and the logic connecting its main outputs.

The factsheet highlights the five pilot regions, four major climate hazards, the review of **531 resilience indicators**, the **36 indicators linked to recommendations**, **90 concrete resilience recommendations** and **10 Policy Letters**. It also explains the project's multidimensional approach to resilience, the role of locally relevant data and the transition from risk and resilience assessment to practical recommendations and policy action.

Designed for a broad audience, the factsheet serves as a stand-alone summary of ClimEmpower and provides an accessible entry point to the project's more detailed scientific, technical and policy-oriented outputs.



Figure 20.: What we learned across five European region

The **What We Learned Across Five European Regions** factsheet synthesises the main cross-regional lessons emerging from ClimEmpower's work with the five pilot regions. Rather than focusing on individual regional results, it highlights common patterns and challenges that proved relevant across different geographical, climatic, social and economic contexts.

The factsheet emphasises six key lessons: that similar climate hazards can lead to very different impacts, that local-scale data is essential for meaningful decision-making, that water is a cross-cutting resilience issue, that governance and spatial planning are major resilience levers, that preparedness and early-warning capacity remain critical, and that climate resilience must also be socially fair and inclusive.

It also underlines the value of adaptation measures that generate multiple co-benefits. Examples such as blue-green infrastructure illustrate how one intervention can simultaneously reduce climate risk, support biodiversity, improve quality of life and help limit future economic losses.

Overall, the factsheet translates complex cross-regional findings into a concise and accessible format, providing stakeholders with a clear overview of the broader lessons that can support climate-resilience planning beyond the five ClimEmpower pilot regions.



Figure 21.: From climate data to regional action

The **From Climate Data to Regional Action** factsheet presents the complete ClimEmpower pathway from identifying regional needs to supporting policy action. It explains how the project connects stakeholder input, climate and Earth observation data, risk assessment, resilience indicators, recommendations and decision-support tools within one coherent process.

The factsheet is structured around six steps: starting from regional needs, combining multiple sources of information, understanding climate risk, measuring resilience, linking indicators with targeted actions and supporting policy uptake.

A final section presents the ClimEmpower Toolbox as the digital environment that brings these components together and supports continued use of project results. Overall, the factsheet demonstrates how ClimEmpower moves beyond climate data as an end product and uses it as the basis for evidence-informed, place-based and actionable regional resilience planning.

3.4.2 Regional factsheets

Regional factsheets were developed to present ClimEmpower findings and priorities in the specific context of each pilot region. They summarise locally relevant climate hazards, vulnerabilities, stakeholder needs, expectations and regional priorities, providing a concise overview of how the broader ClimEmpower approach translates into different territorial contexts.

By focusing on region-specific challenges and perspectives, these materials support place-based dissemination and make project results more directly relevant to regional and local stakeholders.



Figure 22.: Factsheets Croatia and Spain



Figure 23- ClimEmpower regional factsheets – Cyprus, Italy and Greece

The **regional factsheets** provide summaries of the specific climate resilience context in each of the five ClimEmpower pilot regions: **Osijek-Baranja County, Western Costa del Sol, Troodos Mountain Range, Sicily and Central Greece**. Each factsheet follows a common structure, allowing the regional situations to be compared while preserving the specific priorities, vulnerabilities and adaptation needs of each territory.

The materials summarise the **regional context, key climate hazards, main challenges and gaps, critical assets and vulnerable sectors, and priority adaptation needs** identified through ClimEmpower activities and stakeholder engagement. They show that, although several hazards recur across regions – particularly droughts, floods, heatwaves and wildfires – their consequences differ depending on local environmental, economic and social conditions.

The factsheets highlight, for example, the importance of **agriculture, water resources and biodiversity in Osijek-Baranja County; water scarcity, tourism and coastal infrastructure in the Western Costa del Sol; wildfire and water-related pressures in the Troodos Mountain Range; urban flooding, heatwaves, drought and wildfire risk in Sicily; and flood, drought and wildfire-related vulnerabilities in Central Greece**. They also identify region-specific gaps such as limited local climate data, fragmented monitoring, insufficient coordination, limited preparedness and the need for stronger early-warning and decision-support systems.

3.4.3 Integrated Methods for Regional Climate Risk and Resilience

The factsheet was developed for researchers, technical experts and other audiences interested in the methodological foundations of ClimEmpower. It provides a more detailed synthesis of the project's integrated approach to climate-risk assessment, data integration, spatial downscaling, resilience indicators, social sensing, recommendation development and decision-support tools.

Unlike the project-level and regional factsheets, this material places greater emphasis on methods, data sources, analytical approaches and the scientific relevance and reuse potential of ClimEmpower results, while retaining a concise and accessible factsheet format.

Integrated Methods for Regional Climate Risk and Resilience

Data integration, risk assessment, resilience indicators and decision support in ClimEmpower

Key contributions

5	4	531	36	90
pilot regions	major climate hazards	resilience indicators reviewed	indicators linked to recommendations	actionable recommendations

ClimEmpower develops and integrates methods for transforming heterogeneous climate and territorial information into regionally relevant evidence for resilience planning. The scientific work combines climate and Earth observation data, socio-economic and infrastructure information, hazard modelling, resilience indicators, social sensing and stakeholder knowledge. The result is a multi-layered approach that links diagnosis of climate risk and resilience with practical decision support.

1. Integrated climate-risk framework

The project treats climate risk as the interaction between hazard, exposure and vulnerability. This allows the same climatic event to be interpreted differently depending on the people, assets, systems and sectors that are exposed and on their capacity to cope or adapt.

Hazard × Exposure × Vulnerability → Climate Risk

Hazard	Exposure	Vulnerability	Risk
Heatwaves, droughts, floods and wildfires	Population, buildings, infrastructure, agriculture, ecosystems and other assets	Sensitivity, adaptive capacity and local territorial conditions	Asset- and context-specific consequences requiring targeted action

Risk mapping is therefore not treated as a purely climatological task. For floods and wildfires, for example, hazard information can be combined with population, land-use, infrastructure and socio-economic data to derive more decision-relevant risk information. The same logic supports asset-specific risk profiles across sectors.

2. Multi-source climate intelligence and spatial downscaling

A central methodological challenge addressed by ClimEmpower is the mismatch between the spatial scale of many climate datasets and the scale at which regional or local decisions are made. The project therefore investigated methods for integrating multiple data sources and increasing the spatial usefulness of available information.

- **Climate data:** Climate and meteorological data, including Copernicus Climate Data Store resources and regional information.
- **Earth observation:** Satellite-derived vegetation and moisture information, including NDVI, EVI, NDWI, NDDI and related indices.
- **Socio-economic data:** Population and socio-economic information, including standardised gridded data such as the EUROSTAT 1 km grid.
- **Exposure data:** Infrastructure, land-use and other territorial datasets needed to characterise exposure.

- **Historical hazards:** Historical event records and hazard-specific sources, including fire and flood event information.
- **Social sensing:** Locally relevant online information used as a complementary source for event detection and contextualisation.

For Sentinel-2 data, ClimEmpower tested spatial downscaling from 20 m to 10 m using Brovey, IHS, Wavelet and PNN methods. Brovey, IHS and PNN produced the strongest visual results in the project tests, while the Wavelet approach showed weaker performance and more visible artefacts. The work demonstrates the potential value of enhanced spatial resolution for applications such as agriculture, urban planning and local climate-risk analysis.

3. Multi-indicator drought monitoring

Drought monitoring illustrates the value of combining complementary indicators rather than relying on a single signal. ClimEmpower considered information from vegetation condition, atmospheric demand and soil moisture to capture different dimensions of drought.

Vegetation response	Meteorological stress	Soil conditions
NDVI, EVI, NDWI, NDDI and related satellite indicators	SPEI, vapour pressure deficit (VPD), KBDI and related indices	Soil-moisture information supporting interpretation of agricultural and ecosystem stress

4. Resilience assessment: from indicator review to actionable evidence

ClimEmpower reviewed 531 resilience indicators and used this evidence base to support a structured regional resilience framework. The work showed that resilience cannot be represented adequately through environmental indicators alone; social, economic, infrastructural and governance conditions are also essential.

The final framework covers six resilience dimensions:

- Health & Wellbeing
- Population & Education
- Economy & Labour Market
- Infrastructure
- Governance
- Environment, Nature & Settlement Areas

The methodological emphasis is on interpretable individual indicators rather than opaque composite indices. Useful indicators should be context-specific, measurable, comparable and actionable, while their practical value depends strongly on the availability of sufficiently local data.

5. Linking resilience indicators to recommendations

A key integration step in the final ClimEmpower framework is the direct link between resilience indicators and resilience recommendations. The project developed 90 concrete recommendations mapped to 36 resilience indicators, across seven fields of application and six resilience dimensions.

Indicator condition → Relevant hazard → Local context → Targeted recommendation

This tiered decision-support logic allows the system to move from a broad diagnosis of low resilience to increasingly context-specific recommendations. Recommendations are further characterised by governance level, implementation timeframe, policy roadmap, hazard relevance, environmental/social/economic co-benefits and best-practice evidence.

6. Social sensing and AI-assisted contextualisation

ClimEmpower explored social sensing as a complementary source of information for understanding climate-related events. The workflow includes monitoring and crawling online posts, extracting location information, estimating relevance, detecting events and analysing context.

Localized search terms were developed in English, Croatian, Italian, Spanish and Greek. A proof-of-concept used approximately 20,000 wildfire and fire-danger social posts in Greece together with large-language-model and retrieval-augmented-generation techniques. The approach is intended to complement, not replace, authoritative climate and hazard datasets.

7. Integration in the ClimEmpower Toolbox

The ClimEmpower Toolbox provides a common decision-support environment in which scientific outputs can be explored together. Its modular architecture connects climate data access, risk visualisation, resilience indicators, vegetation monitoring, historical hazard information, social sensing and resilience recommendations.

ACCESS DATA	EXPLORE & MONITOR	ASSESS RISK	MEASURE RESILIENCE	GET RECOMMENDATIONS	TAKE ACTION

Scientific relevance and reuse potential

The scientific contribution of ClimEmpower lies primarily in the integration of methods rather than in a single model or dataset. The project demonstrates how heterogeneous climate, Earth observation, socio-economic and stakeholder information can be combined within a transparent workflow that connects risk, resilience and action.

- **Methodological reuse:** Testing and comparison of spatial downscaling methods for local-scale Earth-observation use.
- **Indicator reuse:** A transparent resilience-indicator framework that can be adapted to different regional contexts.
- **Decision-support reuse:** A structured linkage between measurable resilience conditions and targeted recommendations.
- **Technical reuse:** Modular services and workflows that support integration into broader climate-service and decision-support environments.
- **Transferability:** A place-based approach that combines scientific evidence with regional validation and stakeholder knowledge.

Scientific value emerges from connecting data at the right spatial scale with interpretable indicators, context-specific risk assessment and decision-relevant recommendations.

Funded by the European Union | ClimEmpower | Horizon Europe | Grant Agreement No. 101112728 | climempower.eu

Figure 24.: Integrated Methods for Regional Climate Risk and Resilience

The **Integrated Methods for Regional Climate Risk and Resilience** factsheet provides a more technical synthesis of the main methodological approaches developed and combined within ClimEmpower. It presents the project's scientific logic for connecting climate-risk assessment, multi-source data integration, resilience indicators and decision support in a single regional resilience framework.

The factsheet explains the **hazard–exposure–vulnerability approach to climate risk**, the integration of climate, Earth observation, socio-economic, infrastructure and historical hazard data, and the use of spatial downscaling to improve the local relevance of available information. It also presents examples of multi-indicator drought monitoring and the use of social sensing as a complementary source of information for climate-related event detection and contextualisation.

A further section summarises the resilience assessment framework, including the review of **531 resilience indicators**, and explains how measurable resilience conditions are linked to **90 targeted recommendations through 36 selected indicators**. The factsheet also shows how these scientific and methodological components are integrated within the ClimEmpower Toolbox to support the transition from data and risk assessment to regionally relevant recommendations and action.

This factsheet highlights the value of ClimEmpower as an **integrated methodological framework**, combining multiple evidence sources, transparent indicators and place-based decision support. It is

intended primarily for researchers, technical experts and other specialist audiences interested in the scientific basis, transferability and potential reuse of ClimEmpower methods and results.

3.5 Trials materials

Specific dissemination materials were developed to support the communication of ClimEmpower trial activities and their results. These materials were tailored to present the practical implementation of project solutions in an accessible format and included both visual and media-oriented outputs.

The trial materials comprised an infographic summarising key aspects and outcomes of the trial activities, as well as a press release prepared to communicate the trials and their relevance to a broader external audience.

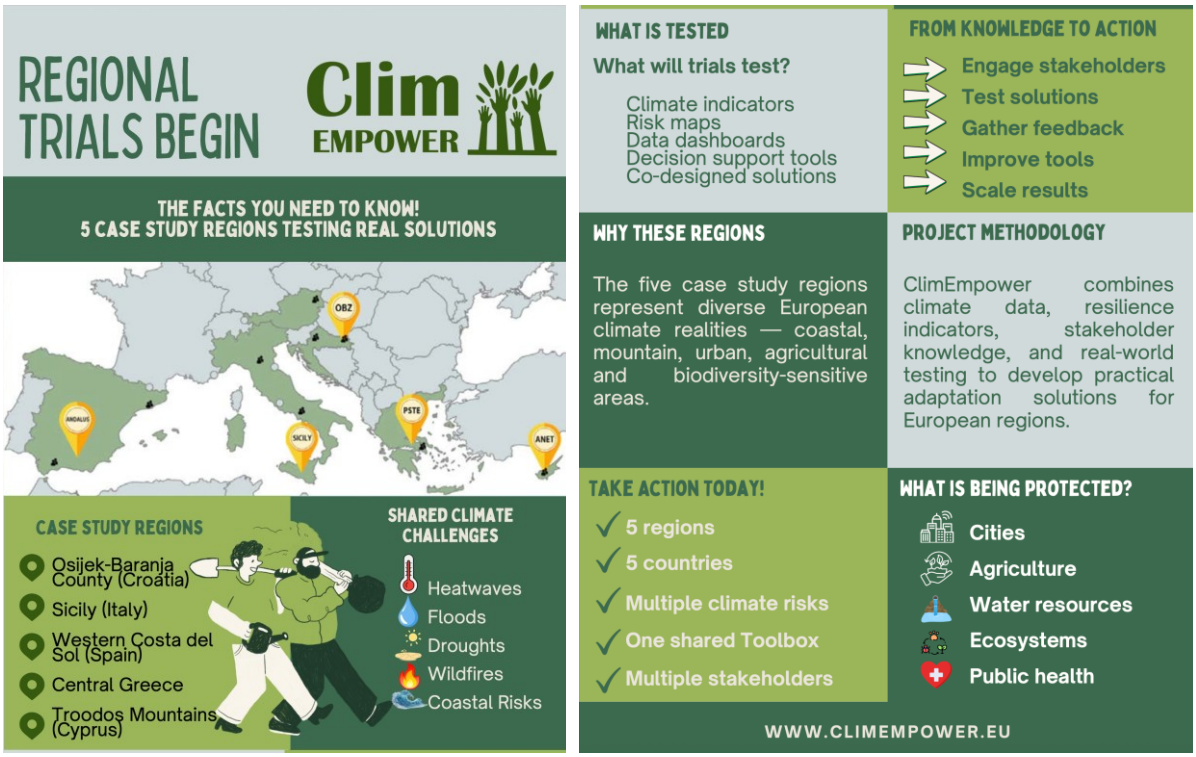


Figure 25.: ClimEmpower regional trials

The **regional trials infographic** provides a concise visual overview of the five case study regions and the common climate challenges addressed, including heatwaves, floods, droughts, wildfires and coastal risks. It also summarises what is being tested – climate indicators, risk maps, data dashboards, decision-support tools and co-designed solutions – and presents the trial methodology as a progression from stakeholder engagement and solution testing to feedback collection, tool improvement and scaling of results. The material further highlights the diversity of the pilot contexts, covering coastal, mountain, urban, agricultural and biodiversity-sensitive areas, and shows how ClimEmpower combines climate data, resilience indicators, stakeholder knowledge and real-world testing to develop practical adaptation solutions.

PRESS RELEASE TRIALS

ClimEmpower Launches Regional Trials to Strengthen Climate Resilience Across Europe

Regional pilot activities begin in five European case study areas to test practical tools and solutions for climate adaptation.

The ClimEmpower project is entering a major new phase with the launch of regional trials across five European case study regions: Osijek-Baranja County (Croatia), Sicily (Italy), Western Costa del Sol (Spain), Central Greece, and the Troodos Mountain Range (Cyprus). These trials mark an important milestone in the project, moving from research and co-design into real-world testing of tools, data services, and resilience solutions developed to help regions better prepare for climate risks.

Across Europe, communities are increasingly affected by heatwaves, floods, droughts, wildfires, and water scarcity. ClimEmpower responds to these challenges by developing a practical, user-oriented Toolbox that supports regional and local authorities, stakeholders, and communities in climate adaptation planning and decision-making.

Testing solutions in real regional contexts

During the trial phase, each participating region will test selected ClimEmpower tools and methodologies based on its specific climate risks, priorities, and local needs.

- Osijek-Baranja County: drought and flood risk management for agriculture and wetlands
- Sicily: urban flooding, heatwaves, and infrastructure resilience
- Western Costa del Sol: water scarcity, coastal flooding, and tourism pressures
- Central Greece: flood preparedness, drought resilience, and wildfire-related risks
- Troodos Mountains: wildfire prevention, drought management, and community preparedness

The trials are being implemented in close cooperation with regional stakeholders through Communities of Practice (CoPs), which bring together public authorities, experts, researchers, businesses, and civil society representatives.



A collaborative approach to climate resilience

ClimEmpower places people at the centre of climate adaptation. Through workshops, stakeholder meetings, training activities, and collaborative testing, the project ensures that developed solutions are practical, accessible, and tailored to real users.
The trial phase will also generate valuable insights for other European regions interested in replicating successful approaches.

Supporting regions across Europe

By combining climate data, resilience indicators, risk modelling, and stakeholder knowledge, ClimEmpower helps regions turn information into action and build long-term adaptive capacity.
The project will continue sharing updates, regional stories, and trial results throughout the coming months.



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Figure 26.: Regional trials press release

The accompanying **press release, "ClimEmpower Launches Regional Trials to Strengthen Climate Resilience Across Europe,"** provides a more detailed narrative for external audiences and explains the relevance of the trial phase within the overall project. It outlines the specific focus of each region,

from drought and flood management in Osijek-Baranja County to urban flooding and heatwaves in Sicily, water scarcity and coastal flooding in the Western Costa del Sol, flood and wildfire preparedness in Central Greece, and wildfire prevention and drought management in the Troodos Mountains. It also emphasises the collaborative role of Communities of Practice and the involvement of public authorities, experts, researchers, businesses and civil society in testing and refining the solutions.

3.6 Web-based dissemination materials

The **Results** section (https://climempower.eu/results/) of the ClimEmpower website was developed as the main online access point to project outputs and resources. It provides users with a structured pathway from a general overview of the project results to more detailed scientific, technical and policy-oriented outputs. The section is organised into three dedicated submenus: **Deliverables, Resilience Recommendations and Risk Map Information**, allowing users to access different types of ClimEmpower results according to their interests and needs.

At the beginning of the main Results page, a **descriptive overview of the ClimEmpower results** provides a high-level orientation for users. It identifies the principal audiences of the project results – **Public Services, Academia, Industry and Civil Society** – and presents a structured Results Inventory showing the main categories of outputs generated across the project. These include regional scenarios and knowledge, climate data and gap assessments, user-centric climate-resilience services, educational resources, resilience recommendations, stakeholder-engagement outputs and software components.

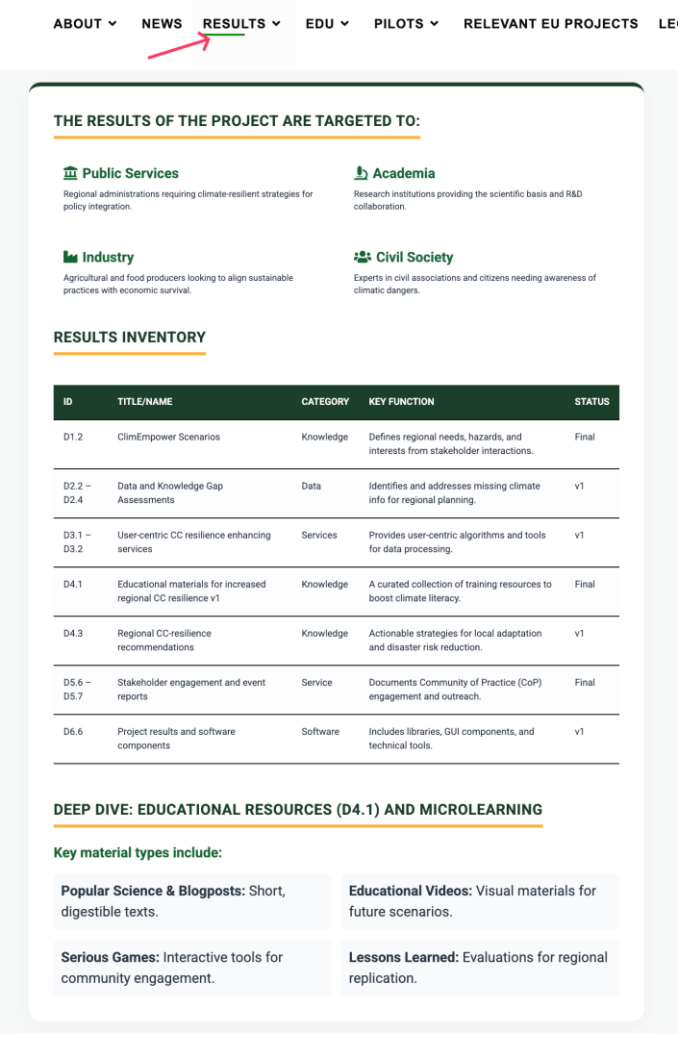


Figure 27.: ClimEmpower results page

The Deliverables submenu (https://climempower.eu/deliverables/) provides direct access to publicly available project outputs covering the major stages of the ClimEmpower methodology and implementation. These include the ClimEmpower Scenarios, climate-change resilience indicators, spatial data downscaling methodology, measures and strategies for resilience, application architecture, reusable libraries and services, educational materials, Knowledge Hubs, resilience recommendations, stakeholder-engagement plans and innovation-management outputs. This enables external users to move beyond short dissemination summaries and consult the more detailed scientific and technical documentation produced by the project.

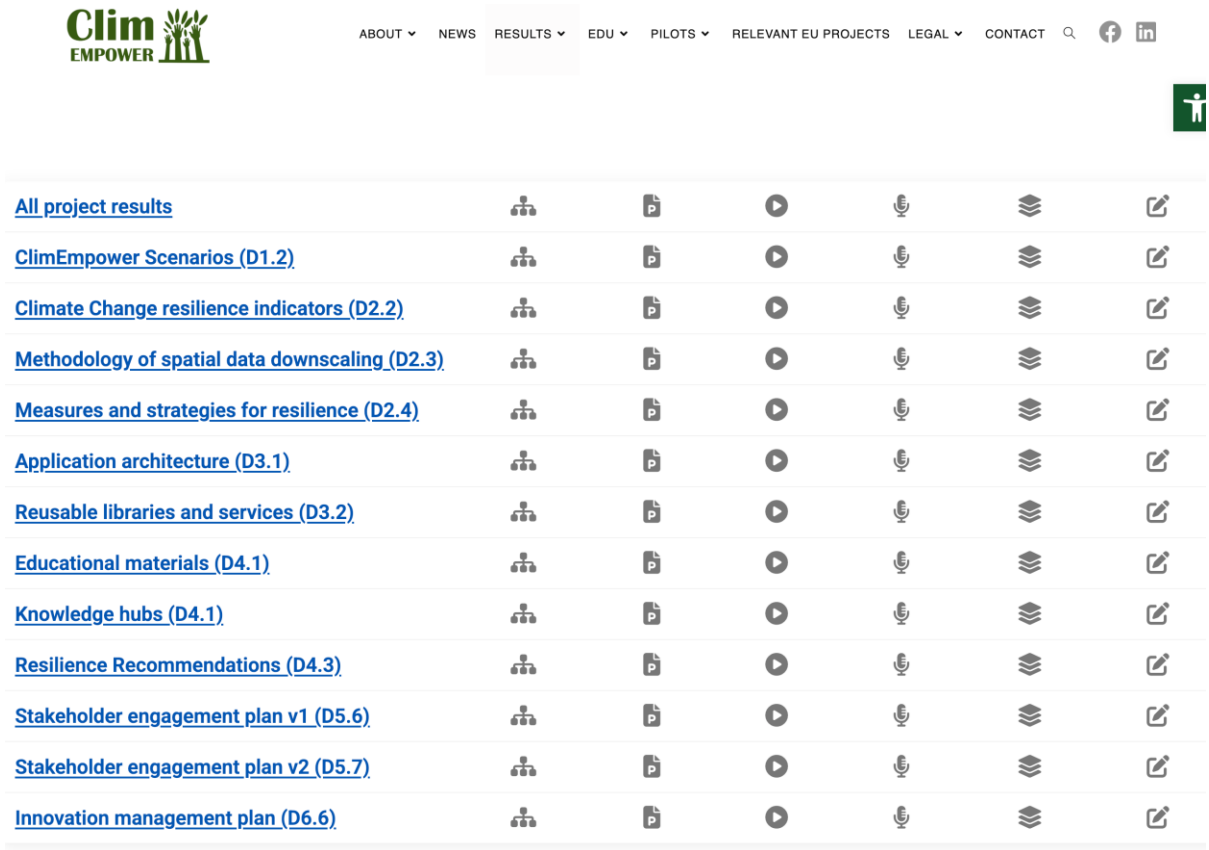


Figure 28.: Deliverables subsection

The **Resilience Recommendations** submenu (https://climempower.eu/recommendations-presentation/) provides dedicated access to the project's recommendation-related results, supporting the transition from resilience assessment to practical and policy-relevant action. The **Risk Map Information** submenu complements this by providing access to information related to climate-risk mapping and the spatial representation of risks addressed within ClimEmpower. Together, these three result areas create a clear progression from detailed project evidence and methodologies, through understanding climate risks, to identifying possible resilience actions.

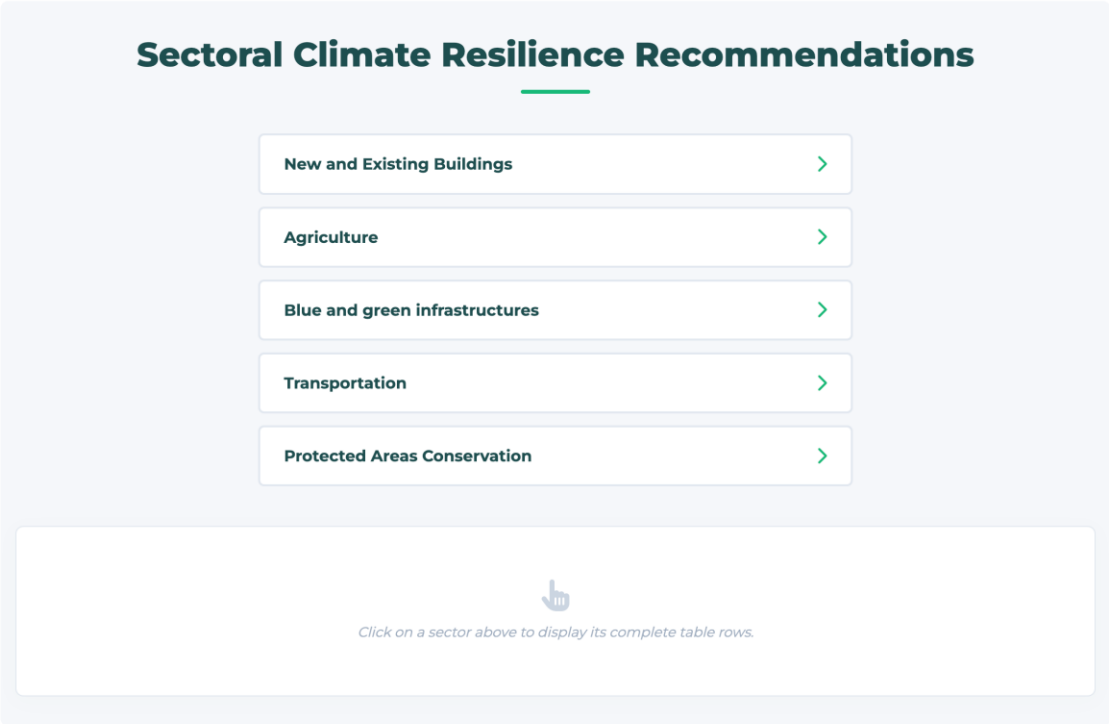


Figure 29.: Resilience recommendations submenu

The **Risk Map Information** submenu complements this by providing access to information related to climate-risk mapping and the spatial representation of risks addressed within ClimEmpower. Together, these three result areas create a clear progression from detailed project evidence and methodologies, through understanding climate risks, to identifying possible resilience actions.

In this way, the Results section serves as a **central digital dissemination gateway** rather than simply a repository of documents. Its structure enables different user groups to first understand the overall scope of ClimEmpower results and then navigate towards the level of detail most relevant to them, supporting accessibility, continued use and potential uptake of project outputs beyond the project lifetime.

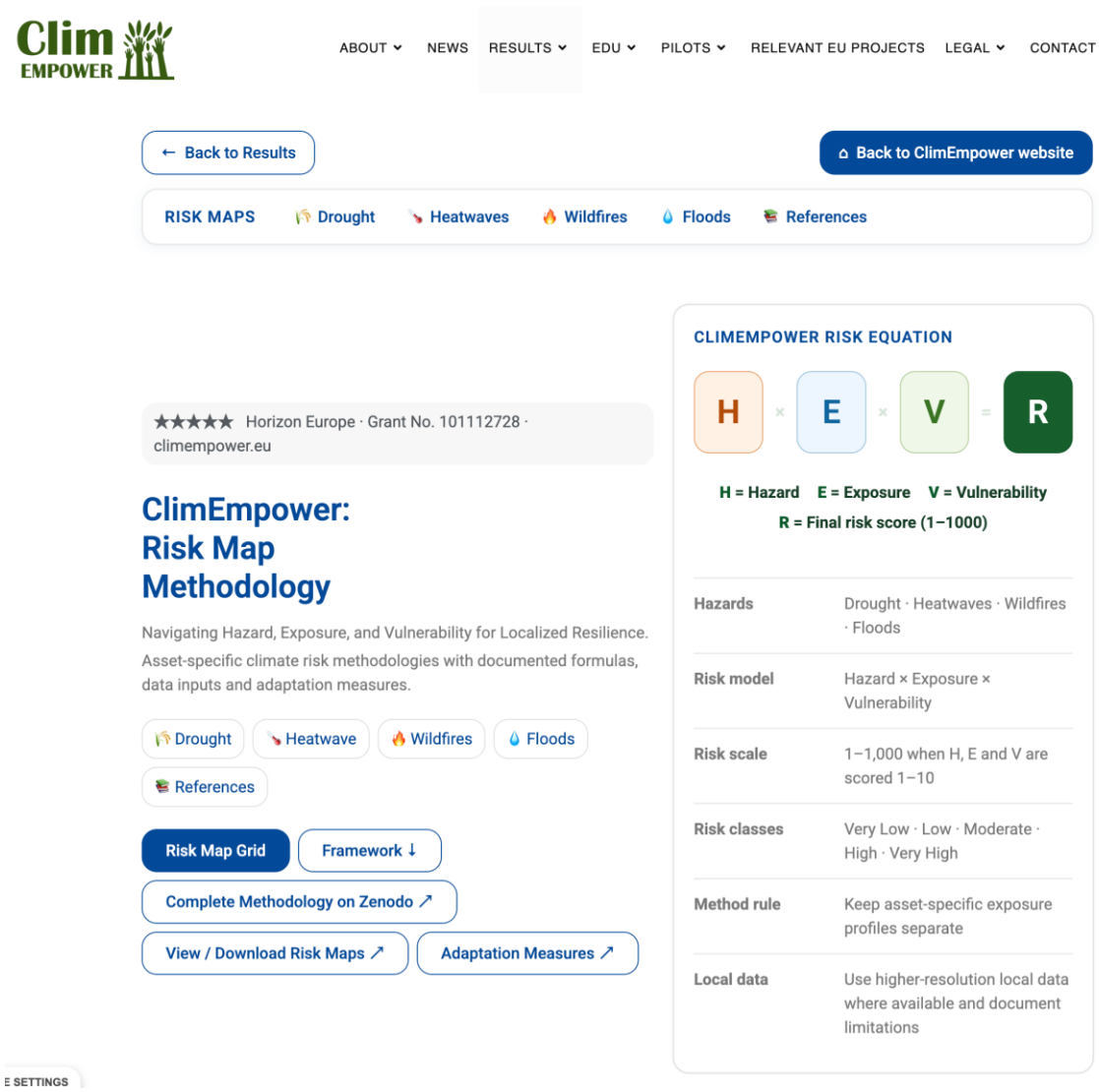


Figure 30.: Risk maps information submenu

3.7 Educational and knowledge-transfer materials

Educational and knowledge-transfer materials were developed to make ClimEmpower knowledge, project results and relevant external climate-adaptation resources easier to find, understand and use by different audiences. The educational component follows the project's broader ambition to "help the regions to help themselves" by providing knowledge, training materials, tools and guidance that can support stakeholders in understanding climate-change risks, preparing for their consequences and using available methods and data in their own fields of work.

The educational resources were designed for a broad range of users, including the general public, educators, decision-makers, leaders, strategic planners, scientists, implementers, farmers and businesspeople. Particular attention was given to organising the content around practical user interests such as climate risks, hazards, resilience, socio-economic sectors and climate dimensions.

3.7.1 Educational materials

ClimEmpower educational materials were developed as structured learning resources supporting different levels of knowledge and professional backgrounds. Individual educational reports can specify their intended target audience, estimated reading time, learning level – introductory, intermediate or

advanced – and any prerequisites needed to use the material effectively. This structure allows users to identify resources that are appropriate for their level of expertise and intended use.

The materials aim to support users in understanding key climate-change concepts, challenges and risks, planning and preparing for their consequences, and using relevant methods, tools and datasets in their areas of work or responsibility. They therefore serve not only as awareness-raising resources, but also as practical knowledge-transfer materials intended to strengthen the capacity of different user groups to engage with climate adaptation and resilience.

Educational content is presented in several forms, including **popular-science texts, educational videos, lessons learned and case studies, serious games, scientific articles, tutorials, adaptation plans, courses and other learning resources**.

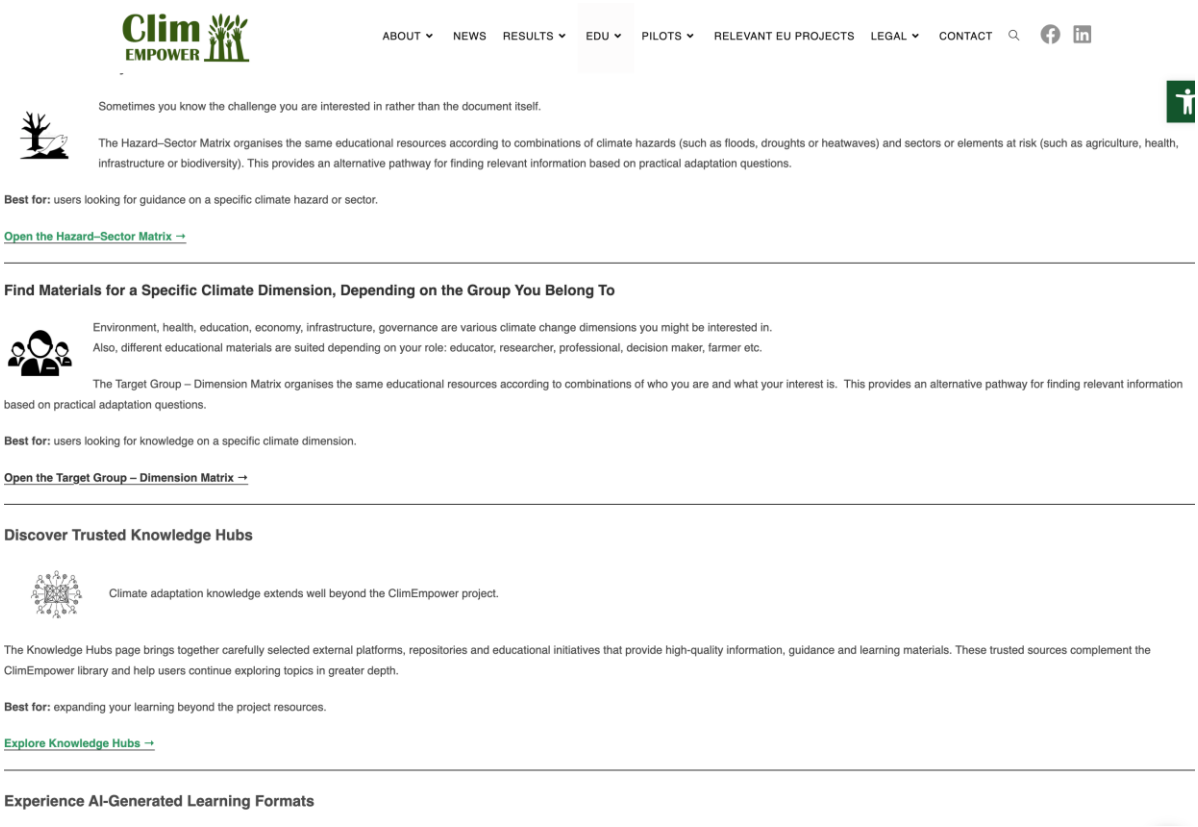


Figure 31.: ClimEmpower Education materials

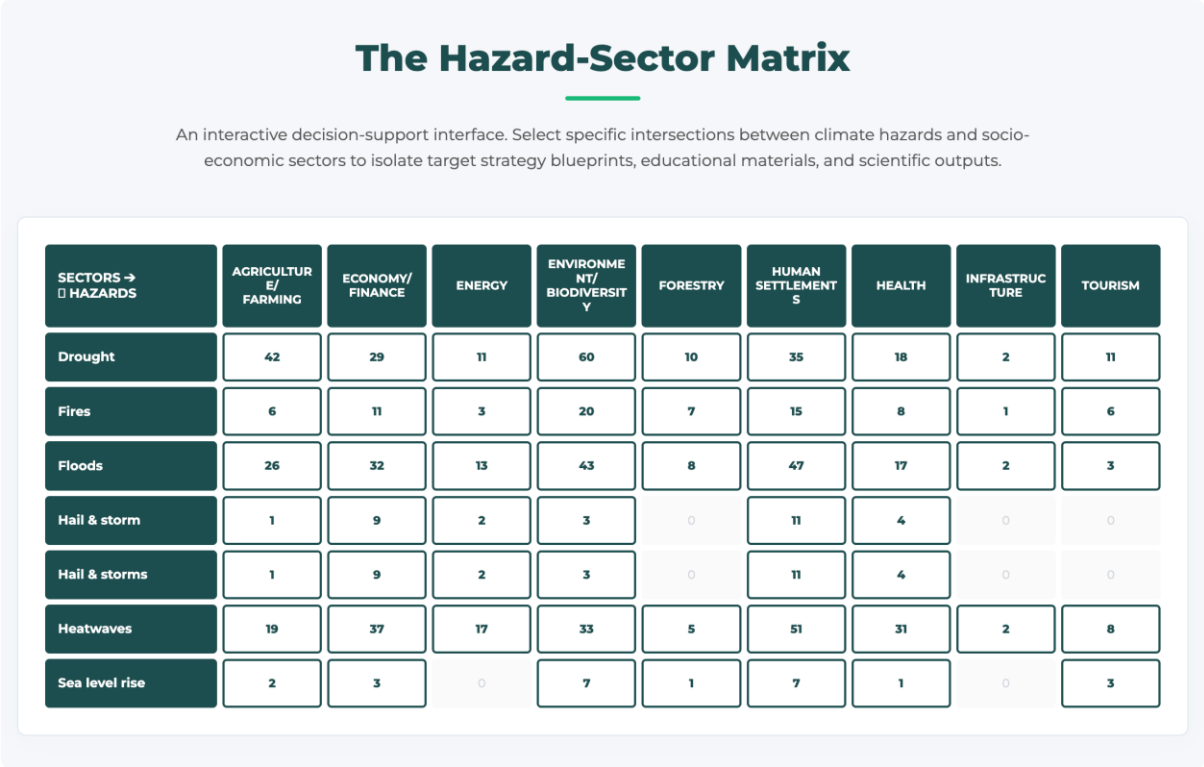
3.7.2 Educational Library / EDU resources

The **ClimEmpower Educational Library**, available through the EDU section of the project website, acts as the central access point for the project's educational and knowledge-transfer resources. It brings together learning materials produced within ClimEmpower as well as a curated collection of **more than 200 freely available third-party educational resources** identified by subject-matter experts from across the project consortium. The purpose of the library is not only to collect resources, but also to help users identify the materials most relevant to their specific needs.

To support different ways of searching for knowledge, the EDU environment offers several complementary navigation approaches.

Browse Educational Materials (https://climempower.eu/education-about-cc/) provides a structured catalogue organised by material type and topic. Resources are presented with information such as title, intended target audience and language, while short summaries and information on their relevance can be displayed to help users decide whether a resource is useful before opening it.

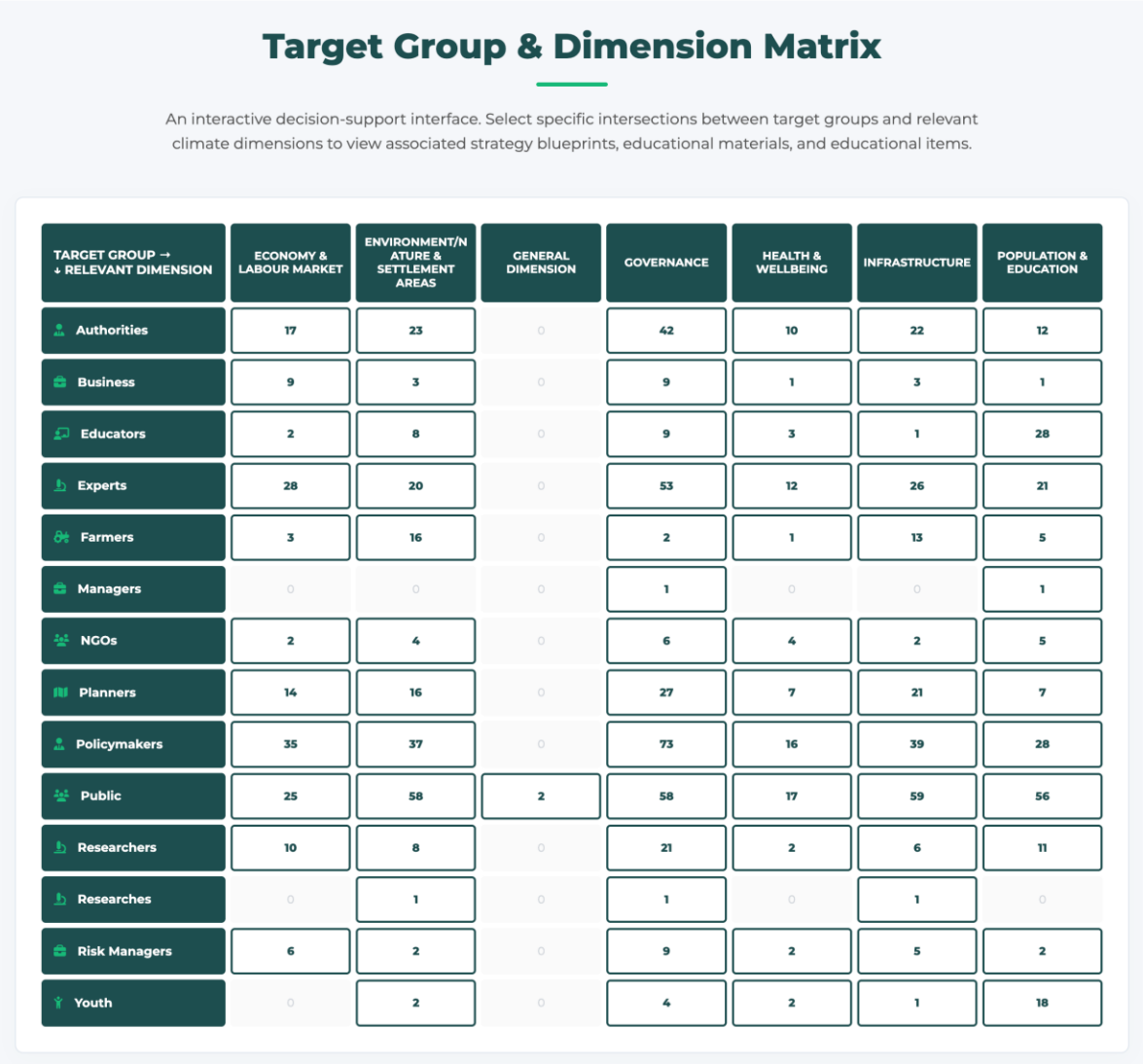
The **Hazard–Sector Matrix** (https://climempower.eu/edu-hazard-sector-matrix/) enables users to search for educational resources according to combinations of climate hazards and socio-economic sectors. Hazards include drought, fires, floods, hail and storms, heatwaves and sea-level rise, while sectors include agriculture, economy, energy, environment, forestry, human settlements, health, infrastructure and tourism. The matrix shows the number of relevant resources available for each combination and allows users to open and further filter the corresponding list of materials.



SECTORS → HAZARDS	AGRICULTURE/ FARMING	ECONOMY/ FINANCE	ENERGY	ENVIRONMENT/ BIODIVERSITY	FORESTRY	HUMAN SETTLEMENTS	HEALTH	INFRASTRUCTURE	TOURISM
Drought	42	29	11	60	10	35	18	2	11
Fires	6	11	3	20	7	15	8	1	6
Floods	26	32	13	43	8	47	17	2	3
Hail & storm	1	9	2	3	0	11	4	0	0
Hail & storms	1	9	2	3	0	11	4	0	0
Heatwaves	19	37	17	33	5	51	31	2	8
Sea level rise	2	3	0	7	1	7	1	0	3

Figure 32.: Hazard-sector matrix

The **User-Dimension Matrix** (https://climempower.eu/edu-user-dimension-matrix/) provides an alternative audience-oriented pathway. It organises educational materials according to the user group – including authorities, businesses, educators, experts, farmers, managers, NGOs, planners, policymakers, the public, researchers, risk managers and youth – and according to climate-related dimensions such as economy, environment, settlement areas, governance, health, infrastructure, population and education. This allows users to approach the same knowledge base according to both **who they are** and **what topic they are interested in**.

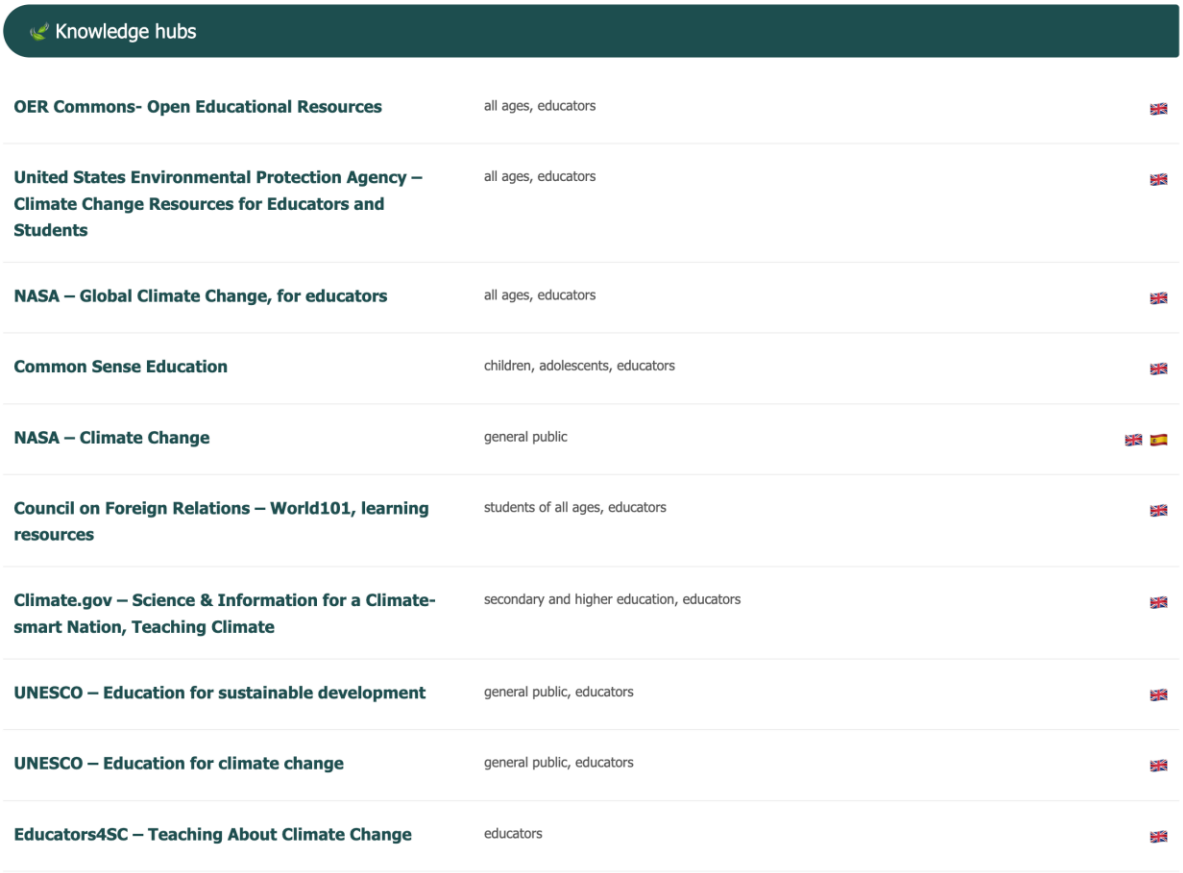


TARGET GROUP → ↓ RELEVANT DIMENSION	ECONOMY & LABOUR MARKET	ENVIRONMENT/NATURE & SETTLEMENT AREAS	GENERAL DIMENSION	GOVERNANCE	HEALTH & WELLBEING	INFRASTRUCTURE	POPULATION & EDUCATION
Authorities	17	23	0	42	10	22	12
Business	9	3	0	9	1	3	1
Educators	2	8	0	9	3	1	28
Experts	28	20	0	53	12	26	21
Farmers	3	16	0	2	1	13	5
Managers	0	0	0	1	0	0	1
NGOs	2	4	0	6	4	2	5
Planners	14	16	0	27	7	21	7
Policymakers	35	37	0	73	16	39	28
Public	25	58	2	58	17	59	56
Researchers	10	8	0	21	2	6	11
Researches	0	1	0	1	0	1	0
Risk Managers	6	2	0	9	2	5	2
Youth	0	2	0	4	2	1	18

Figure 33.: User-dimension matrix

The **Knowledge Hubs** section (https://climempower.eu/knowledge-hubs/) extends the library beyond resources collected directly within ClimEmpower. It provides access to selected external platforms, repositories and educational initiatives identified by consortium experts as valuable sources of high-quality climate-change and adaptation knowledge, enabling users to continue exploring topics in greater depth.

Educational Materials Library



Knowledge hubs		
OER Commons- Open Educational Resources	all ages, educators	
United States Environmental Protection Agency – Climate Change Resources for Educators and Students	all ages, educators	
NASA – Global Climate Change, for educators	all ages, educators	
Common Sense Education	children, adolescents, educators	
NASA – Climate Change	general public	
Council on Foreign Relations – World101, learning resources	students of all ages, educators	
Climate.gov – Science & Information for a Climate-smart Nation, Teaching Climate	secondary and higher education, educators	
UNESCO – Education for sustainable development	general public, educators	
UNESCO – Education for climate change	general public, educators	
Educators4SC – Teaching About Climate Change	educators	

Figure 34.: Knowledge hubs

ClimEmpower also explored **alternative and AI-generated learning formats** to make complex technical project results easier to understand and more suitable for different learning preferences. Deliverable content can be interpreted through formats such as **mind maps, infographics, slides, video presentations, audio interviews or discussions, flash cards and quizzes**. These formats complement rather than replace the original technical documents and are intended to improve accessibility and support different styles of learning.

3.8 Policy-oriented dissemination materials

As part of the final ClimEmpower resilience recommendation framework, **10 Policy Letters** were developed to translate selected resilience recommendations into concise, practical and policy-oriented guidance for regional and local decision-makers. Each Policy Letter focuses on a specific resilience issue and links the underlying evidence and indicator to concrete policy actions, implementation steps, relevant funding opportunities and expected co-benefits.

The complete set of Policy Letters covers the following topics:

1) Strengthening Climate-Resilient Hospital Bed Capacity and Emergency Preparedness at Community Level
2) Integrating Nature-Based Solutions to Enhance Natural Storage and Water Quality
3) Diversifying Water Storage Capacity

4) Reducing Population Exposure to Climate Hazards
5) Strengthening Local Agri-Food Supply Chains
6) Promoting Climate-Smart Agriculture
7) Keeping Hazard Maps Updated and Relevant for Decision-Making
8) Protecting Natural Areas and Ecosystems
9) Reducing Groundwater Overexploitation
10) Reducing Residential Exposure to Climate Risks

The Policy Letters follow a common structure to make the recommendations easy to understand and use. They typically present the relevant resilience indicator and field of application, the main challenge, examples of good practice, priority policy actions, an implementation roadmap and potential funding sources. This structure transforms the broader ClimEmpower recommendation framework into a practical format that can be directly consulted by policymakers and other regional stakeholders.

For this deliverable, **two representative Policy Letters are presented as examples**.

The first example, **Strengthening Climate-Resilient Hospital Bed Capacity and Emergency Preparedness at Community Level**, focuses on the ability of health systems to remain operational during heatwaves, floods, wildfires and other extreme events. It recommends linking hospital capacity planning with climate-risk scenarios, demographic vulnerability and seasonal demand, while also strengthening healthcare infrastructure, emergency coordination and surge capacity. The Policy Letter additionally provides a four-phase implementation roadmap and identifies potential funding sources such as ERDF, EU4Health, National Recovery and Resilience Plans and Horizon Europe.

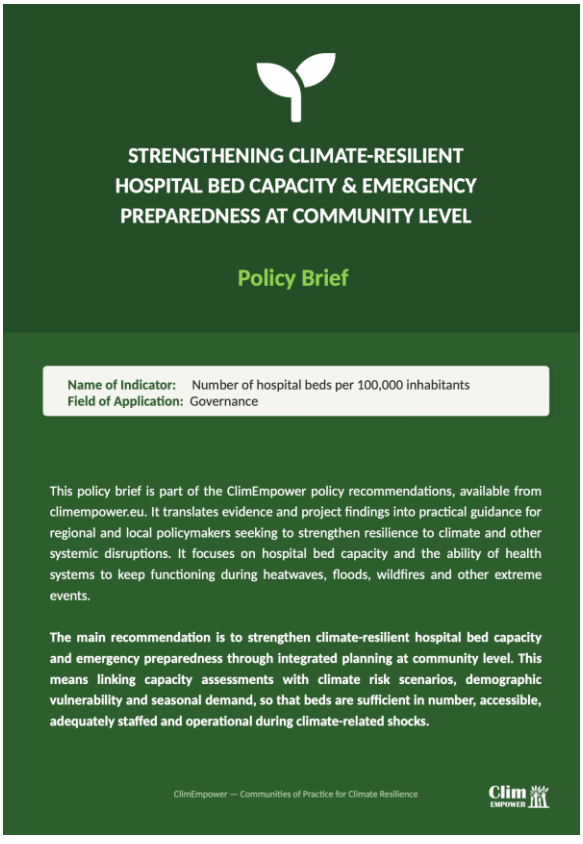






Figure 35.: Policy letter – healthcare infrastructure

The second example, **Integrating Nature-Based Solutions to Enhance Natural Storage and Water Quality**, addresses water storage capacity and the role of wetlands, floodplains and green infrastructure in retaining water, supporting groundwater recharge and improving water quality. It recommends recognising nature-based storage as a formal component of water and spatial planning alongside conventional infrastructure. The proposed actions include catchment mapping, wetland and floodplain restoration, integration into spatial and water-management plans, alignment with EU water and nature objectives and monitoring of groundwater recharge and ecosystem services.



Figure 36.: Policy letter water storage

Together, the 10 Policy Letters represent the most policy-oriented layer of ClimEmpower dissemination, providing a bridge between project evidence, regional priorities and concrete implementation pathways.

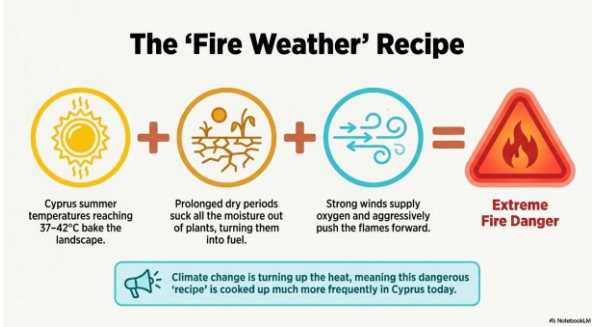
3.9 AI generated edu materials on wildfires (English and Greek)

As part of ClimEmpower's educational and awareness-raising activities, **three educational brochures for children aged 10–14 were developed with the support of NotebookLM**. The materials focus on **wildfire risk, prevention and preparedness in Cyprus, with reference to the Troodos Mountain area**, and translate climate-resilience concepts into an accessible and visually engaging format suitable for younger audiences.

The brochures combine short explanations, illustrations, practical examples and activity-based content to help children understand **how wildfires start and spread, how climate and human activities influence wildfire risk, why some communities and landscapes are particularly vulnerable, and what individuals and communities can do to reduce risk and improve preparedness**. In addition to increasing climate-risk awareness, the materials aim to encourage observation, responsible behaviour and community participation.









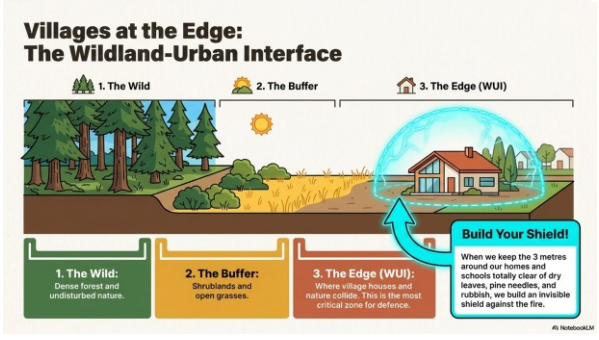






Figure 37.: AI generated brochure about wildfires (English) #1

Two complementary brochures were prepared in **English**, while a more comprehensive educational guide was developed in **Greek**, supporting accessibility for children and educators in the local context.

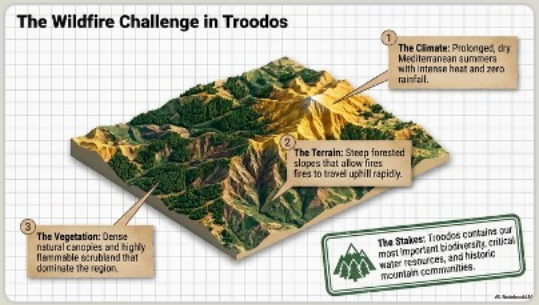
Brochure #1 provides a concise visual introduction to wildfire resilience in the Troodos Mountains. It explains wildfire conditions and risk factors, introduces the wildland–urban interface, and presents practical actions that communities and individuals can take to become better prepared. The material places particular emphasis on moving from awareness of wildfire risk towards **preparedness and community empowerment**.


Fire-Ready Troodos: The Prevention Detective's Field Guide
Mission Brief
Empowering communities to protect our forests, wildlife, and homes.
Target Operatives: Family, citizens, and future forest defenders.

1


From Fear to Action: Your Mission Brief
The Threat
The Situation: Wildfires are not just unavoidable natural disasters. They are understandable, predictable, and largely preventable.
Your Detective Work
The Goal
Your Mission: Learn the science of fire, investigate the human causes, and map out concrete solutions to harden your home and school against climate-exacerbated risks.
Fires require specific ingredients to burn. If we remove the ingredients, we stop the fire.

2


The Wildfire Challenge in Troodos
1 The Climate: Prolonged, dry Mediterranean summers with intense heat and zero rainfall.
2 The Terrain: Steep forested slopes that allow fires fires to travel uphill rapidly.
3 The Vegetation: Dense natural canopies and highly flammable scrubland that dominate the region.
The Stakes: Troodos contains our most important biodiversity, critical water resources, and historic mountain communities.

3


The Science of the Spark: Our Local Fire Triangle
Heat
Cyprus Summer Sun (frequently exceeding 35°C)
Warning Orange
Oxygen
Strong, shifting summer winds that fan sparks
Fuel
Ladder Fuels: Dry grass, pine needles, and low shrubs
Mediterranean Blue
Dry Summer Gold
The Detective's Rule:
We cannot easily control the sun or the wind. Therefore, we must control the fuel.
Ladder Fuels act as a vertical ladder, allowing ground flames to climb high into the forest canopy.

4


Fire Ecology: The Good, The Bad, and The Managed
Good Fire: Prescribed & Natural
Low intensity, clears dead wood
Regenerates fire-adapted Mediterranean species
Creates animal habitats in dead snags
Bad Fire: Megafires
High intensity, destroys healthy canopies
Threatens human settlements (WUI)
Sterilizes the soil and prevents regeneration
Takeaway
We fight fire with fire. Prescribed burning reduces fuel build-up, preventing the Bad fires.

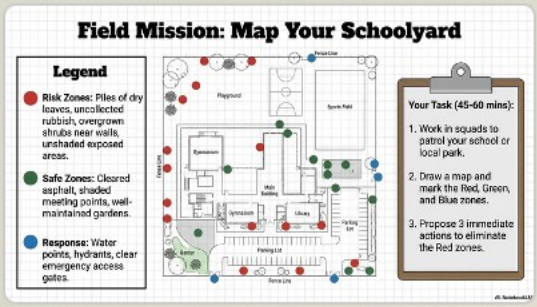
5


The Human Element: We Are The Ignition
9 out of 10 forest fires in Cyprus are caused by human activities.
The Evidence:
Careless agricultural stubble burning
Unattended barbecues outside designated zones
Discarded cigarette butts

6


The Flammable Landscape: The Wildland-Urban Interface
Traditional Managed Landscape
The Abandoned Landscape (WUI)
Status: Low Flammability. The mosaic landscape of farms and pastures acts as a natural firebreak.
Status: A Powder Barrel. Rural depopulation means less grazing and farming, causing a massive build-up of unbroken fuel lines straight into communities.

7


Field Mission: Map Your Schoolyard
Legend
Risk Zones: Piles of dry leaves, uncollected rubbish, overgrown shrubs near walls, unshaded exposed areas.
Safe Zones: Cleared asphalt, shaded meeting points, well-maintained gardens.
Response: Water points, hydrants, clear emergency access gates.
Your Task (45-60 mins):
1. Work in squads to patrol your school or local park.
2. Draw a map and mark the Red, Green, and Blue zones.
3. Propose 3 immediate actions to eliminate the Red zones.

8



Figure 38.: AI generated brochure about wildfires (English) #2

Brochure #2 follows a more activity-oriented approach. It introduces wildfire risk through a structured "field mission" format and covers topics such as the fire triangle, fire ecology, the role of human activity, vulnerable landscapes and defensible space. Practical exercises, including observation and mapping activities, encourage children to apply the concepts to their own surroundings and consider how communities can reduce wildfire exposure.

The **Greek-language brochure** provides a broader educational overview of wildfire-related topics, using age-appropriate explanations and visual material to introduce forests and their importance, the basic mechanisms of fire ignition and spread, the influence of weather conditions and climate change, and actions that can contribute to wildfire prevention and preparedness. Its use of the local language makes it particularly suitable for awareness-raising and educational activities with children in Cyprus.

Those brochures extend ClimEmpower's educational materials to a **younger target audience**, complementing the project's technical and stakeholder-oriented resources with content intended to build climate awareness and resilience from an early age.

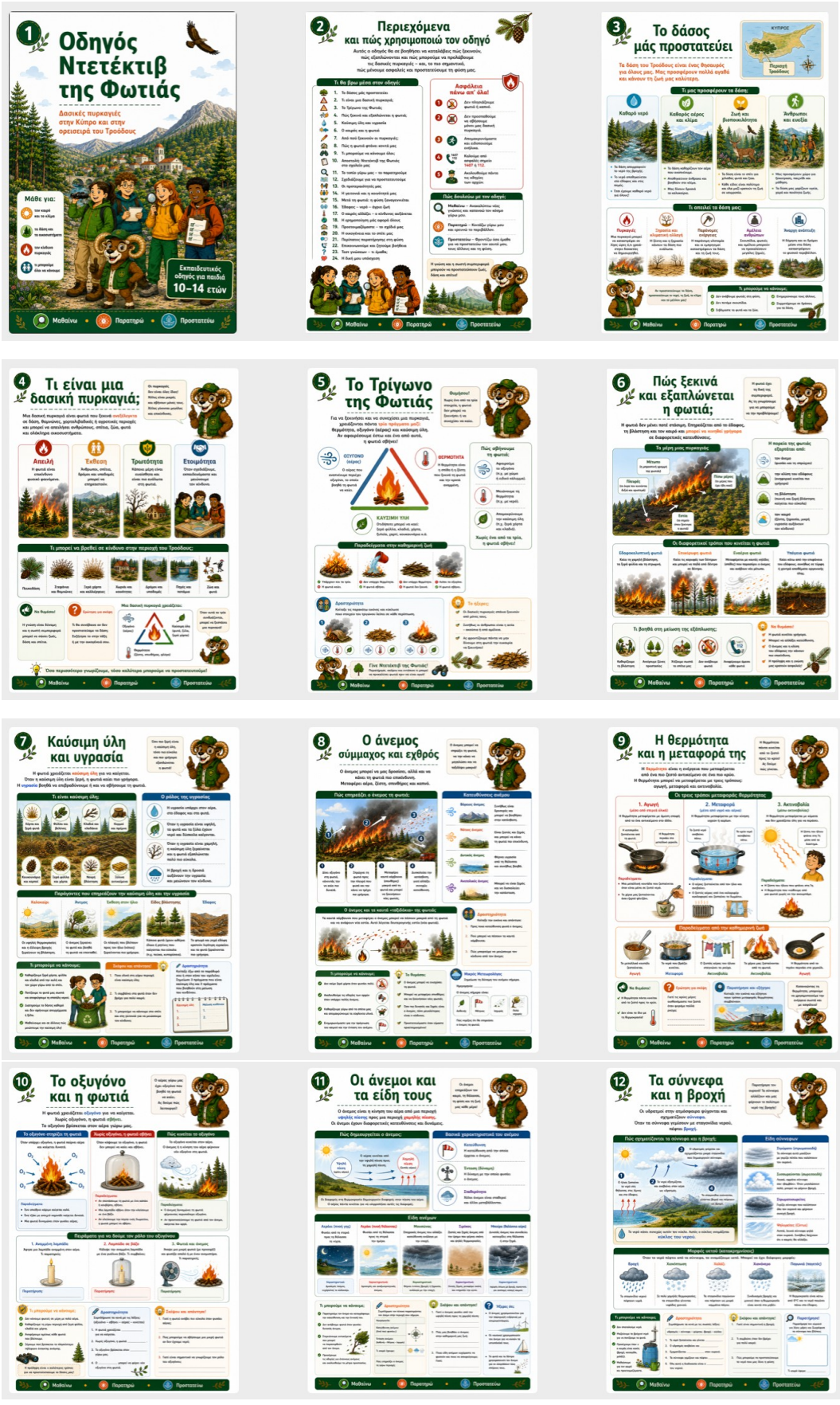


Figure 39.: Excerpt from AI generated brochure about wildfires (Greek)

3.10 ClimEmpower Final conference

The **ClimEmpower Final Conference – "Turning Climate Science into Regional Action"** was held on **24 July 2026** in a **hybrid format**, enabling both on-site and online participation via Microsoft Teams. The event marked the closing stage of the ClimEmpower project and provided an opportunity to present and discuss the project's main scientific, technical, regional and policy-oriented achievements, as well as its expected longer-term impact.

The conference brought together representatives of the ClimEmpower consortium, the five pilot regions, researchers, technical experts and other stakeholders involved in climate adaptation and regional resilience. Its main objective was to demonstrate how the knowledge, methodologies and tools developed during the project can support European regions in moving from climate-risk understanding towards practical resilience action.

The Final Conference was designed to:

- present the main scientific and engineering achievements of ClimEmpower;
- demonstrate how project methodologies, indicators, services and the ClimEmpower Toolbox support regional climate-resilience planning;
- share experiences and lessons learned from the five pilot regions and their Communities of Practice;
- discuss the co-creation of regional resilience recommendations and policy-oriented outputs;
- explore opportunities for sustainability, replication and further use of ClimEmpower results beyond the project lifetime; and
- provide space for interaction between project partners, regional representatives and external stakeholders.

Following the introductory session, the conference presented the project's main **scientific and engineering achievements**. The session focused on the methodological and technical results produced during the project, including regional climate-risk mapping, actionable resilience indicators, strategic risk-specific and resilience recommendations, technical services, rapid prototyping approaches and the interactive decision-support environment developed within ClimEmpower.

Attention was given to the challenge of transforming heterogeneous climate, environmental and territorial information into outputs that can be meaningfully used by regional decision-makers. The session also provided space for discussion on remaining data gaps, weighting approaches in risk assessments and opportunities to accelerate prototyping and development in future research and innovation projects.

The second main session focused on **Regional Empowerment** and the practical experience gained through collaboration with the five ClimEmpower pilot regions.

The discussion highlighted the role of the regional **Communities of Practice (CoPs)** in bringing together local authorities, experts, researchers, businesses and other relevant stakeholders. Through this co-creation approach, regional knowledge and stakeholder priorities were incorporated into the development and validation of ClimEmpower tools, educational resources and resilience recommendations.

The session also presented experiences related to the **ClimEmpower Educational Hub**, including alternative and AI-supported approaches to knowledge extraction, microlearning and educational

content development. In addition, the process through which regional priorities were translated into policy recommendations and Policy Letters was discussed.

Regional representatives were invited to reflect on lessons learned through project participation and on the potential impact of ClimEmpower beyond the formal project period.

The **Beyond ClimEmpower** session addressed sustainability, synergies and possible follow-up activities after the end of the project. The session explored opportunities for connecting ClimEmpower results with ongoing European initiatives and for ensuring that the tools, methodologies and knowledge generated within the project remain useful beyond the project lifetime. Topics included the longer-term sustainability and possible exploitation of project results, future research questions, opportunities for continued collaboration and synergies with related climate-adaptation initiatives.

Interaction with participants was incorporated throughout the event through panel discussions and Q&A sessions. The hybrid format supported participation beyond the physical event location and allowed stakeholders who were unable to attend in person to follow and contribute to the conference remotely.

The conference concluded with a final wrap-up led by **project manager**. The event demonstrated the progression of ClimEmpower from research and methodological development towards practical regional application, bringing together climate data, risk assessment, resilience indicators, stakeholder knowledge, educational resources, decision-support tools and policy recommendations.

The Final Conference therefore served as an important **dissemination, knowledge-transfer and stakeholder-engagement activity**, connecting the project's scientific and technical results with the regional actors expected to use and further develop them.

The central message of the event reflected the overall ambition of ClimEmpower: **climate science creates the greatest value when it can be translated into locally relevant knowledge, practical decisions and concrete regional resilience action.**



Figure 40.: ClimEmpower final conference agenda and invitation

4 Conclusions

This deliverable provides a **consolidated overview of the dissemination materials developed throughout the ClimEmpower project** and demonstrates how project knowledge and results were progressively translated into formats suitable for different audiences. The dissemination portfolio evolved from general project presentation and promotional materials towards increasingly result-oriented outputs, including infographics, the *Did You Know?* series, project-level, regional and scientific factsheets, trial materials, web-based resources, educational materials and Policy Letters.

A key characteristic of the ClimEmpower dissemination approach was the **adaptation of content to different levels of technical knowledge and different user needs**. Complex scientific and methodological results were presented in accessible visual and textual formats for wider audiences, while more detailed factsheets, educational resources and policy-oriented materials supported practitioners, researchers, regional authorities and decision-makers. The ClimEmpower website and Educational Library further strengthened this approach by providing structured and continued access to project outputs, learning resources and tools.

The dissemination materials also **reflect the overall progression of the project**: from understanding regional climate risks and needs, through data integration, resilience assessment and stakeholder co-creation, to the development of practical recommendations, decision-support tools and policy-oriented guidance. In this way, dissemination was not treated only as a means of increasing project visibility, but as an important mechanism for transferring knowledge, supporting uptake and enabling wider use of project results.

Dissemination materials presented in this deliverable contribute to the continued visibility, accessibility and usability of ClimEmpower results beyond the project lifetime. By making project findings available in reusable and audience-appropriate formats, they support knowledge transfer, stakeholder engagement, replication of project approaches and the broader objective of strengthening climate resilience across European regions.