

Deliverable Phase 3 – Climate risk management

Climate risk analysis and adaptation strategy for the Mediterranean region of La Foia de Castalla (CLIMAAX4CAAST)

Spain, Excma. Diputación Provincial de Alicante

July 2026

HORIZON-MISS-2021-CLIMA-02-01 - Development of climate change risk assessments in European regions and communities based on a transparent and harmonised Climate Risk Assessment approach

Summary of evaluation criteria for this deliverable

The below text is provided for your information and should be removed before submitting the deliverable. We summarize our expectations for a good quality report. Shortcomings in one of the below criteria may result in a (too) low evaluation score for your report.

- The document is well-structured and technically sound

- Data included is relevant and sources are traceable

- Results are clearly presented and described

- A solid and well-documented interpretation of the results is given (how can the climate risk assessment in Phase 2 connect to climate risk management for the region, are the results in line with expectations / earlier assessments)

- It is clear from the deliverable what extra work has been conducted in this phase compared to the previous phases

- The report reflects on shortcomings, potential improvements and the value of the outcomes for the region

Document Information

Deliverable Title	Phase 3 – Climate risk management
Brief Description	This deliverable translates the results of the Climate Risk Analysis (Phase 2) for the La Foia de Castalla region into an operational risk management framework (CRM). It identifies adaptation objectives, key stakeholders, enabling factors, and a set of structural, non-structural, nature-based, social, and governance measures to address heat waves and drought (relative and agricultural), prioritized in previous phases. The document concludes with a proposal for integrating the results into municipal and provincial planning, and with a monitoring and evaluation system.
Project name	Climate risk analysis and adaptation strategy for the Mediterranean region of La Foia de Castalla (CLIMAAX4CAST)
Country	Spain
Region/Municipality	Excma. Diputación Provincial de Alicante (DPA)
Leading Institution	Excma. Diputación Provincial de Alicante (DPA)
Author(s)	• Débora Sorolla Rosario (AIJU) • Joaquín Vilaplana Cerdá (AIJU) • Dionisio Cartagena González (AIJU) • Miguel Fernández Mejuto (DPA)
Deliverable submission date	31/07/2026
Final version delivery date	dd/mm/yyyy
Nature of the Deliverable	R – Report
Dissemination Level	PU - Public

Version	Date	Change editors	Changes
1.0	…	AIJU	Deliverable submitted
2.0	…		
5.0	…		Final version to be submitted

Table of Contents

Contenido

Summary of evaluation criteria for this deliverable 2
Document Information 3
List of figures 6
List of tables 6
Abbreviations and acronyms 6
Executive summary 8
1 Introduction 9
1.1 Main objectives of the project 9
1.2 Project team 9
1.3 Outline of the document's structure 9
2 Local profile 10
2.1 Summary of Key Risk Assessment results 10
2.2 Key implementation mechanisms and policy context for CRM 11
European level 12
National and regional level 12
Private and sectoral level 13
2.3 Key actors and systems for CRM 13
2.4 Lessons learned from past events 17
3 Climate risk management – phase 3 17
3.1 CRM objectives 17
3.2 Supportive elements for effective CRM 19
3.3 Potential CRM measures 21
3.4 Integration into planning and decision making 24
4 Project Evaluation 24
4.1 Usability of the results 24
4.2 Lessons learned 25
5 Conclusions Phase 3 26
6 Progress evaluation 27
6.1 Project outputs 27

List of figures

Figure 1 Key Risk Assessment Evaluation Dashboard obtained in Phase 2 10
Figure 2 CLIMAAX4CAST results dissemination and one of the Mentimeter question 28
Figure 3 list of attendees 29
Figure 4 Dissemination event in I MED 29

List of tables

Table 1 the current capacity level and the stakeholders who took part in its assessment during Phase 2 11
Table 2 Stakeholders involved in developing and implementing climate risk management in the county 14
Table 3 Indicators for each objective 17
Table 4 Current situation in La Foia de Castalla 20
Table 5 CRM measures 21
Table 6 Overview key performance indicators 27
Table 7 Overview milestones 30

Abbreviations and acronyms

Abbreviation / acronym	Description
ADAPTECCA	Spanish Platform for Adaptation to Climate Change
AIJU	Technological Institute for Children's Products and Leisure
CRA	Climate Risk Assessment
CRM	Climate Risk Management
CHJ	Júcar River Basin Authority
DPA	Excma. Diputación Provincial de Alicante
EPSAR	Public Entity for Wastewater Treatment of the Valencian Community
ERDF / FEDER	European Regional Development Fund
FAO-56	FAO methodology for calculating crop evapotranspiration
MCA	Multi-Criteria Analysis
M&E	Monitoring & Evaluation
PAM	Municipal Action Plan
RCP	Representative Concentration Pathway
WASP	Weighted Anomaly of Standardised Precipitation
WUI	Wildland-Urban Interface

Executive summary

Phase 3 of the CLIMAAX4CAST project puts into practice the results obtained in the two previous phases of climate risk assessment for the county of La Foia de Castalla (Ibi, Onil, Castalla and Tibi, province of Alicante). Phase 1 identified heatwaves and drought as the most relevant climate threats for the county, while Phase 2 quantified these risks with high-resolution local data, concluding that heatwaves constitute a very high/critical priority risk and drought a high priority risk, with estimated annual agricultural losses of €4.1 million and a structural water deficit in the Hoya de Castalla aquifers.

This document develops the link between this risk assessment (CRA) and an operational climate risk management (CRM) framework, as required by the CLIMAAX methodology. To this end, a local profile has been produced summarising the county's resilience capacity against each priority risk, key stakeholders have been identified (administrations, the agricultural sector, the health sector, the industrial sector and vulnerable groups), and the municipal and provincial planning instruments that can support the implementation of adaptation measures have been reviewed.

Based on this diagnosis, climate risk management objectives with measurable indicators are proposed, the necessary enabling elements are identified (knowledge and data, infrastructure, social behaviour, citizen participation, financing and governance), and a set of concrete measures is defined —structural, non-structural, nature-based, social and governance-related— to reduce the risk of heatwaves and drought in the county. Proposed measures include the creation of urban green corridors and climate shelters in Ibi and Onil, the implementation of efficient irrigation systems and reclaimed water for rainfed crops in Castalla and Onil, the strengthening of piezometric monitoring of the Hoya de Castalla aquifers, and the launch of an early health-warning protocol against heatwaves for the elderly population of the four municipalities.

The document concludes with a proposal for integrating these measures into the urban and sectoral planning of the four municipalities, together with the design of a monitoring and evaluation system ("Key Risk Dashboard") that will allow annual review of progress towards the adaptation objectives. Taken together, this Phase 3 positions La Foia de Castalla to apply for European resilience funds (ERDF, Adaptation Fund) and to move from reactive emergency management towards proactive investment in climate adaptation.

1 Introduction

1.1 Main objectives of the project

The main objective of Phase 3 of the CLIMAAX4CAST project is to transform the climate risk diagnosis produced in Phase 2 (focused on heatwaves and drought (relative and agricultural) in the county of La Foia de Castalla) into an operational climate risk management (CRM) strategy. While the previous phases answered the question "what climate risks affect the county and to what extent?", this phase answers the question "what should the county do about it, who should do it, and with what tools?".

Specifically, this phase aims to:

- Link the priority risks identified in Phase 2 (very high/critical heatwaves; high drought) with the planning and governance instruments existing in the four municipalities and in the Alicante Provincial Council.
- Define measurable climate risk management objectives aligned with regional development priorities (agriculture, public health, water management).
- Identify the enabling elements (knowledge, infrastructure, social behaviour, financing and governance) needed for effective implementation.
- Propose a catalogue of concrete adaptation measures, with their expected effectiveness, timeframes, responsible parties and possible adaptation limits.
- Lay the foundations of a monitoring and evaluation system that allows tracking the county's progress towards climate resilience.

1.2 Project team

The Phase 3 team maintains the composition of the previous phases of the CLIMAAX4CAST project. Débora Sorolla Rosario, Joaquín Vilaplana Cerdá and Dionisio Cartagena González (AIJU) have led the technical translation of the Phase 2 results into adaptation measures, with the support of Miguel Fernández Mejuto (Alicante Provincial Council), head of the Water Technologies Unit of the provincial Water Cycle department, who has contributed technical knowledge on the Hoya de Castalla aquifer system and on the Júcar hydrological planning instruments. The team has worked in close coordination with the municipal technicians of Ibi, Onil, Castalla and Tibi to ensure that the proposed measures are consistent with their municipal action plans and implementation capacities.

1.3 Outline of the document's structure

The document is organised into seven main sections. Following this introduction, section 2 (Local profile) summarises the key results of the Phase 2 risk assessment, describes the regulatory framework and available implementation mechanisms, identifies the key stakeholders for risk management and draws lessons from past events. Section 3 (Climate risk management – Phase 3) constitutes the core of the deliverable: it defines the CRM objectives, the enabling elements, the catalogue of proposed measures and their integration into planning. Section 4 assesses the usefulness of the project's results and the lessons learned. Section 5 sets out the conclusions of this phase, section 6 assesses the project's progress against the planned indicators and milestones, and sections 7 and 8 contain the supporting documentation and bibliographic references.

2 Local profile

2.1 Summary of Key Risk Assessment results

Phase 2 of the project identified heatwaves and drought (in its relative and agricultural forms) as the priority climate risks for the county of La Foia de Castalla. The following table reproduces the Key Risk Assessment Evaluation Dashboard obtained in Phase 2:

Risk Workflow	Severity	Urgency	Capacity (Resilience/CRM)	Risk Priority
Heatwaves	High / Critical	High (Immediate health impact)	Limited (Especially in vulnerable groups)	Very High / Critical
Drought	High / Very High	Medium-High (Structural trend)	Moderate (Critical aquifer dependence)	High

Severity	Urgency	Resilience Capacity	Risk Ranking
Critical	Immediate action needed	High	Very high
Substantial	More action needed	Substantial	High
Moderate	Watching brief	Medium	Moderate
Limited	No action needed	Low	Low

Figure 1 Key Risk Assessment Evaluation Dashboard obtained in Phase 2

The quantitative results underpinning this prioritisation are as follows:

- Heatwaves: under the RCP 8.5 scenario (2041-2070), warm days (Tmax ≥ 35 °C) could rise from 7.8 days/year (1950-2014) to 46.9 days/year (+501%), warm nights (Tmin ≥ 20 °C) from 7.5 to 48.4 nights/year (+545%), and the average duration of heatwaves from 4.7 to 27.8 days per episode.
- Agricultural drought: the FAO-56 water balance shows water deficits of 869 to 985 mm/year in the 2046-2050 horizon, with yield losses of 72% in rainfed vineyards and 41% in olive groves, equivalent to estimated annual economic losses of €4.1 million (37.8% of the current value of agricultural production).
- Relative drought: the WASP index shows a transition of drought from an episodic to a structural phenomenon, with an increase in drought risk of up to 37% (RCP 4.5) and 57% (RCP 8.5) by the end of the century compared with the historical period, with Ibi and Castalla being the municipalities with the highest absolute risk and Tibi the municipality with the highest relative vulnerability.
- Groundwater resources: the Hoya de Castalla aquifer shows a surplus of only 2.21 hm³/year, sustained by a system of five carbonate aquifers (Reconco, Onil, Favanella, Biscoy and Maigmó) that is close to a critical tipping point.

Regarding resilience capacity against these risks, the following table details, for each priority risk, the current capacity level and the stakeholders who took part in its assessment during Phase 2:

Table 1 the current capacity level and the stakeholders who took part in its assessment during Phase 2

Priority climate risk	*Resilience capacity (low, medium, substantial, high)*	*Description of the resilience capacity (such as existing knowledge, planned measures, gaps)*	*Stakeholders, experts and priority groups involved in the key risk assessment & modality of engagement*
Heatwaves	*Low*	Basic health and civil protection services exist, but there is no specific design for the expected increase (×5-6) in extreme events. Dedicated urban infrastructure is lacking (climate shelters, functional green spaces), as are specific protocols to protect the elderly and outdoor workers.	AIJU – technical validation of heatwave indicators (ongoing expert consultation). Municipal technicians of Ibi and Onil – documentary review of their Local Climate Change Strategy. Elderly associations and AFEM – identified as a priority group. Agricultural and industrial workers – informal consultations on occupational heat exposure.
Relative and agricultural drought	*Medium*	The county has historical experience in water management and piezometric monitoring of the aquifer, but its resilience is limited by structural dependence on groundwater, limited diversification of sources and insufficient investment in efficient irrigation.	Alicante Provincial Council (Water Technologies Unit) – ongoing technical consultation and methodological validation. Júcar River Basin Authority – review of public consultation reports for the 2022-2027 Hydrological Plan. Cooperatives and farmers from Castalla, Onil and Tibi – informal consultations for qualitative validation of agricultural risk. Tibi Town Council – documentary analysis of its Water Emergency Plan.

2.2 Key implementation mechanisms and policy context for CRM

Climate risk management in La Foia de Castalla is shaped by a heterogeneous set of policy instruments and implementation mechanisms that operate at different territorial scales — from the EU to individual businesses — and across several sectors, including water, agriculture, biodiversity, public health, industry and spatial planning. These mechanisms differ in nature: some set binding regulatory standards (e.g. aquifer abstraction limits), others operate through zoning and spatial planning rules (e.g. municipal urban development plans), others establish sectoral mandates or funding conditions (e.g. agricultural grant schemes), and others rely on voluntary or market-based mechanisms (e.g. private insurance, corporate environmental management systems). The policy goals underlying these instruments (decarbonization, water security, rural income support, biodiversity conservation and public health protection) converge, to varying degrees, with the objectives of climate risk management defined in section 3.1, and together they form the framework within which the measures proposed in this document must be implemented.

European level

- European Green Deal and EU Climate Change Adaptation Strategy (regulatory framework and funding mechanism): set the overarching EU policy goal of climate neutrality and resilience, and guide the availability of funds (ERDF, Adaptation Fund) that the county can apply for using this risk assessment as a "technical passport".
- Common Agricultural Policy (sectoral mandate and funding conditionality, agriculture): channels direct payments and rural development aid, with direct implications for support to vulnerable rainfed crops (olive, vine) in Onil and Castalla, and increasing conditionality tied to water-efficient and climate-resilient farming practices.
- EU Biodiversity Strategy for 2030 and Nature Restoration Regulation (regulatory standard, biodiversity): set binding EU-wide targets for ecosystem restoration and green infrastructure, providing a policy rationale and potential funding avenue for the urban green corridors and climate shelters proposed for Ibi and Onil (section 3.3.1).

National and regional level

- Climate Change and Energy Transition Act and National Climate Change Adaptation Plan – PNACC (regulatory framework, cross-sectoral): establish Spain's binding decarbonization targets and the national reference framework and reporting obligations for local adaptation planning.
- Júcar River Basin District Hydrological Plan 2022-2027, Júcar River Basin Authority (regulatory standard, water sector): regulates abstraction rights and exploitation limits for the Hoya de Castalla aquifer and constrains any measure to increase irrigation, making it the single most binding external constraint on the drought-related measures in section 3.3.2.
- Special Drought Management Plan of the Júcar basin (regulatory mandate, water sector): defines the indicators and thresholds that trigger pre-alert, alert and emergency restriction measures for water users, directly affecting the timing and feasibility of supplementary irrigation measures proposed for Onil and Castalla.
- Climate Change Adaptation Strategy of the Region of Valencia and the ADAPTECCA platform (policy framework and data infrastructure, cross-sectoral): set regional adaptation priorities and were used as a source of climate projections in Phases 1 and 2 of this project.
- Regional Forestry Territorial Action Plan (PATFOR) and the Natura 2000 network in the Region of Valencia (zoning and regulatory standard, biodiversity/forestry): govern land use and fire-prevention silviculture in the Sierra del Maigmó, relevant to the combined drought-heat-fire risk addressed by the updated Municipal Action Plan of Castalla (section 3.3.2).
- Municipal Action Plans (PAM) against forest fires, Castalla (sectoral mandate, emergency management/biodiversity): directly relevant to the combined drought and heatwave risk in the wildland-urban interface (WUI).
- Local Climate Change Strategy of Ibi (policy framework, industry/public health): focused on thermal stress in industrial areas and on adaptation priorities for the municipality's manufacturing base.

- Strategic Agricultural Grants Plan of Onil (funding mechanism, agriculture): channels municipal support towards rainfed olive groves and is a direct implementation vehicle for the supplementary-irrigation subsidy proposed in section 3.3.2.
- Water Emergency Plan of Tibi (regulatory mandate, water sector): focused on the decline of piezometric levels and on triggering local restriction and response measures.
- General Urban Development Plans (PGOU) of the four municipalities (zoning and spatial planning, cross-sectoral): govern land use, permeable surfaces and green space provision, and are the main spatial-planning lever through which climate shelters, green corridors and denaturalized industrial roofs and facades (sections 3.3.1 and 3.4) can be formalized.

Private and sectoral level

- Agricultural insurance schemes (Agroseguro / combined agricultural insurance) (market-based mechanism, agriculture): offer drought-related yield-loss cover to farmers in Castalla, Onil and Tibi, complementing — rather than substituting for — the structural adaptation measures proposed in this document.
- Corporate water and energy efficiency commitments and environmental management systems (e.g. ISO 14001) (voluntary sectoral mandate, industry): adopted unevenly by manufacturing companies in the toy, plastics and automotive-component sectors of Ibi and Onil, and a key entry point for the industrial denaturalization and consumption-data-sharing measures discussed in sections 2.3 and 3.3.1.
- Public-private water-reclamation agreements between EPSAR, agricultural cooperatives and industrial users (funding and operational mechanism, water/industry): underpin the water circular-economy measures already promoted since 2025 and the reclaimed-water irrigation measure proposed for Castalla and Onil (section 3.3.2).

These instruments (spanning regulatory standards, zoning and spatial planning rules, sectoral mandates and voluntary private commitments, across the water, agriculture, biodiversity, industry and public-health sectors) form the basis on which the measures proposed in section 3.3 of this document rest. Rather than creating new instruments from scratch, the proposed CRM strategy seeks to strengthen and add climate content to these existing public and private mechanisms, aligning their underlying policy goals (water security, rural income support, decarbonization, biodiversity conservation and public health protection) with the county's climate adaptation priorities.

2.3 Key actors and systems for CRM

The following table identifies the main stakeholders involved in developing and implementing climate risk management in the county, their role, motivations, opportunities and barriers to their involvement, as well as the type of relationship maintained during the project:

Table 2 Stakeholders involved in developing and implementing climate risk management in the county

Key actors	*Role and responsibility*	*Motivation and needs*	*Opportunities related to their active involvement in CRM*	*Barriers related to their active involvement in CRM*	*Type of engagement*
Alicante Provincial Council (DPA)	Regional coordination, water strategy, infrastructure financing	Justify investment to European funds; coordinate the four municipalities	Consolidated institutional leadership; access to ERDF funds	Coordination of political and technical agendas across several municipalities	Ongoing technical consultations; presentation of results (Nov. 2025); participation in the provincial outreach event of April 2026
Town councils of Ibi, Onil, Castalla and Tibi	Local implementation, bylaws, municipal action plans	Protect the population and maintain local economic activity	Access to climate funding; reinforcement of existing plans	Bureaucratic burden; limited technical resources, especially in Tibi	Documentary analysis of municipal plans; outreach meeting (19 Nov. 2025); participation in the provincial event “Local adaptation and mitigation strategies against extreme climate events” (21 April 2026, AIJU headquarters), with representation from Ibi, Castalla and Tibi; and in the I MED Regions Resilience Forum (14 May 2026, Casa Mediterráneo, Alicante)
AIJU	Technical and methodological support, scientific validation	Generate knowledge that is applied and transferable to the territory	Reinforcement of its role as a territorial innovation agent	Limited human resources for continuous monitoring	Technical leadership across the three phases of the project
Júcar River Basin Authority (CHJ) and EPSAR	Planning and regulation of public water resources, sanitation	Ensure the sustainability of the resource at basin scale	Synergies with the water circular economy (June 2025 workshop)	Lengthy administrative procedures for authorisations	Participation in regional workshops on the water circular economy
Agricultural sector (cooperatives, rainfed farmers)	Management of olive, vine and almond crops; water use	Maintain the economic viability of their holdings	Improved profitability through subsidised efficient irrigation	Limited individual investment capacity; ageing of the sector	Informal consultations; analysis of Onil's Strategic Grants Plan

Industrial sector (toys, plastics, automotive)	Main economic driver of Ibi and Onil; major water and energy consumer	Operational continuity in the face of water restrictions and thermal stress	Sharing consumption data to improve risk modelling	Reluctance to share sensitive consumption data	Participation in the November 2025 technical outreach day
Elderly population and vulnerable groups (AFEM, retiree associations, Cruz Roja)	Those most affected by heatwaves	Health protection and maintaining quality of life	Participatory design of climate shelters and adapted schedules	Difficulty of direct participation due to mobility and availability	Identification as a priority group; bilateral consultations
Fundación Crecer Jugando	Non-profit foundation based in Ibi devoted to defending children's right to play; runs national toy reuse and donation campaigns	Promote children's wellbeing and support families in vulnerable situations through play and sustainable reuse of toys	Link CRM outreach to existing sustainability and reuse campaigns; raise climate awareness among families and children	Its mandate centres on child welfare rather than climate risk management; limited technical capacity on CRM issues	Potential collaboration on awareness-raising and outreach activities targeting families and children
Consorcio TERRA	Inter-municipal consortium (including Ibi) responsible for waste management, ecoparks and circular economy initiatives	Improve waste management efficiency and meet regional and EU circular-economy and climate targets (Agenda 2030, PIRCV)	Synergies between circular economy, resource efficiency and climate risk management (e.g. emissions reduction)	Waste management mandate is distinct from CRM; coordination required across numerous member municipalities	Coordination on synergies between circular economy and climate adaptation measures

Jardín Torretes (CIBIO – Universidad de Alicante)	Biological station and botanical garden in Ibi, managed by the CIBIO Research Institute (University of Alicante) under agreement with Ibi Town Council; dedicated to research, conservation and outreach on Mediterranean biodiversity	Advance scientific knowledge, conservation and public education on biodiversity and ecosystem resilience	Scientific expertise on climate impacts on ecosystems; potential monitoring site and educational venue for CRM	Primarily research-oriented; limited direct role in urban and water-infrastructure planning aspects of CRM	Technical and scientific collaboration and knowledge exchange
Asociación ecologista Amics de les Muntanyes	Local excursionist and environmental association in Ibi, active in the defence of surrounding natural areas and representative in the Font Roja Natural Park	Protection of local natural heritage, mountain landscapes and water-related environmental values	Civil-society ally for raising awareness of climate risks affecting natural areas; local watchdog on land-use and water-related impacts	Volunteer-based association with limited resources; focus on conservation advocacy rather than technical CRM planning	Participation in public consultations, awareness-raising and joint environmental-defence actions

2.4 Lessons learned from past events

Although the county does not yet have a systematic record of damage associated with extreme climate events, the analysis of municipal adaptation and emergency plans (Phase 2, section 2.4.1) allows several lessons relevant to risk management to be drawn:

- False perception of heat preparedness: municipal emergency protocols have historically focused on forest fire risk (Castalla's PAM), but lack specific indicators on the public health impact of torrid nights, a gap that Phase 2 addressed through the "Torrid Nights" methodological extension introduced from the Tibi and Onil plans.
- Unanticipated indirect impacts: the combination of drought and high temperatures increases fire risk in the wildland-urban interface of Castalla and the Maigmó mountain range, a cascading effect that has only been addressed qualitatively to date and requires specific analysis in future phases.
- Diffuse responsibilities and delays in action: coordination among the four municipalities for joint management of the Hoya de Castalla aquifer has been hindered by the fragmentation of competences and local data, delaying the adoption of joint demand-management measures.
- Value of economic quantification: the farmers and municipal technicians consulted have shown greater sensitivity to the annual economic loss figure (€4.1 million) than to temperature or rainfall projections, confirming the usefulness of translating climate risks into economic terms to support decision-making.
- Recent wildfire near-misses: in 2025 a forest fire affected the Font Roja Natural Park, and in April 2026 an incipient fire broke out near the Maigmó mountain range. Although both were brought under control quickly, they revealed a very significant risk of severe damage to the valley's entire forest mass, underlining how critical rapid-response capacity is, together with forest-clearing works to reduce biomass and dry fuel loads. It also points to the need to improve surveillance and early-detection systems and rapid-intervention resources, with forest clearing and maintenance activities as the priority action.

3 Climate risk management – phase 3

3.1 CRM objectives

The climate risk management objectives for La Foia de Castalla have been defined based on the priority risks identified in Phase 2 (heatwaves and drought) and on regional development priorities (rainfed agriculture, industry, public health and water availability). A distinction is made between primary objectives, directly linked to climate risks, and additional objectives that bring complementary benefits to the county.

Table 3 Indicators for each objective

Primary objectives	Measurable assessment indicators (baseline → target)
Reduce the health risk associated with heatwaves	Health-alert protocol activation (days/year with protocol triggered). Baseline: 0 – no formal protocol currently in force. Exposure baseline:

	7.8 warm days/year, Tmax ≥35°C (1950-2014) → projected 46.9 days/year by 2041-2070 (RCP8.5, Phase 2). Target: protocol operational and triggered on 100% of warm days by 2027 (short term). Heat-related hospital admissions, population ≥65. Baseline: data gap – no locally disaggregated record currently available. Target: establish a 2027 baseline once the alert protocol is active, then track annual reduction. Population ≥65 with a climate shelter within 500 m (%). Baseline: 0% – no dedicated climate shelters currently exist (section 2.1). Target: 100% coverage in the urban centres of Ibi and Onil by 2028 (medium term, measure 3.3.1). Self-assessed municipal preparedness for extreme climate events (1-10 scale). Baseline: 3.8/10 (Mentimeter survey, 20 respondents, provincial event, 21 April 2026). Target: ≥7/10 by 2030.
Reduce the economic risk of agricultural drought	Annual agricultural economic loss (M€/year). Baseline: €4.1M/year, 37.8% of current agricultural production value (FAO-56 balance, 2046-2050 horizon, RCP8.5, Phase 2). Target: limit loss to ≤€2.0M/year (≤50% of baseline) by 2035. Rainfed vineyard yield loss vs. historical (%). Baseline: -72% (2046-2050 horizon). Target: ≤40% loss by 2035 through supplementary irrigation (cost-benefit ratio 5.2:1, measure 3.3.2). Rainfed olive-grove yield loss vs. historical (%). Baseline: -41% (2046-2050 horizon). Target: ≤25% loss by 2035 (cost-benefit ratio 0.7:1, requires public co-financing, measure 3.3.2). Eligible rainfed area with access to supplementary irrigation (%). Baseline: 0% – no widespread efficient irrigation currently installed (section 3.2). Target: to be quantified once eligible parcels in Onil and Castalla are mapped; interim milestone: first pilot plots connected (short term).
Ensure the sustainability of the groundwater resource	Water balance of the Hoya de Castalla aquifer (hm³/year). Baseline: +2.21 hm³/year surplus, assessed as close to a critical tipping point (Phase 2). Target: maintain a positive balance ≥2 hm³/year despite projected increases in irrigation demand. Average piezometric level, Tibi monitoring wells (m). Baseline: data gap – not yet systematised at well level. Target: first quantified reading within the short term, via the strengthened piezometric monitoring measure (3.3.2). Projected relative-drought risk increase, WASP index (%, vs. historical). Baseline (current trajectory): up to +57% by end of century under RCP8.5. Target: contain the increase to the RCP4.5 pathway (≤+37%) through the combined effect of the measures in section 3.3.
Maintain the viability of agricultural and industrial activity	Average agricultural income per holding (€/year). Baseline: data gap – no disaggregated figure currently available. Target: establish baseline

	via a cooperative income survey in the short term, then track stabilisation relative to the pre-drought trend. Unplanned industrial water-supply interruptions (no./year), Ibi and Onil. Baseline: 0 recorded to date. Target: maintain at 0 despite increasing aquifer stress.

Additional objectives	Measurable assessment indicators (baseline → target)
Public health	Emergency-service demand attributable to heat (calls/year). Baseline: data gap – no cause-disaggregated record currently available. Target: establish a 2027 baseline once the health-alert protocol (measure 3.3.1) is operational, then track year-on-year reduction.
Social wellbeing and territorial cohesion	Green space and shaded area per inhabitant, urban centres of Ibi and Onil (m²/inhabitant). Baseline: data gap – no current municipal-scale mapping. Target: progress towards the WHO reference value of ≥9 m² green space per inhabitant by 2030.
Environmental quality and water circularity	Reclaimed water reused for agricultural irrigation, Castalla and Onil (%). Baseline: data gap at county scale – regional EPSAR figures exist but are not currently disaggregated for the four municipalities. Target: first quantified target to be set once the reclaimed-water irrigation measure (3.3.2) becomes operational.
Justice and equity	Coverage of specific adaptation measures for the elderly (Ibi, Onil) and agricultural/industrial workers and low-income households (Tibi) (%). Baseline: 0% – no such measures currently implemented. Target: 100% coverage of the registered vulnerable population by 2030, prioritised in the first implementation phase of the measures in section 3.3.

The justice and equity dimension has been made explicit and measurable rather than purely descriptive: the elderly population of Ibi and Onil (higher density of population exposed to heat, currently 0% covered by any dedicated climate shelter or heat-shelter protocol) and the rainfed farmers of Tibi and other low-income, agriculture-dependent households (lower income, greater economic dependence on rainfed crops and lower individual capacity to invest in irrigation) are tracked through a dedicated equity indicator — “coverage of specific adaptation measures for these groups” — with a baseline of 0% and a target of 100% coverage of the registered vulnerable population by 2030 (Table 3.2, additional objectives). This ensures that equity is not treated as a side consideration but is assessed with the same rigour as the primary climate-risk objectives.

3.2 Supportive elements for effective CRM

The effectiveness of the climate risk management strategy depends largely on the existence of an appropriate supportive environment. The following table summarises the county's current situation with regard to the main supportive elements identified in the CLIMAAX methodology:

Table 4 Current situation in La Foia de Castalla

Supportive element	Description of the current situation in La Foia de Castalla
Knowledge and data	High-resolution climate projections are available (ADAPTECCA, EURO-CORDEX), as is a crop-level calibrated FAO-56 water balance. Gaps remain in water consumption data disaggregated by sector (agricultural/industrial) and in monitoring cascading effects (drought-fire).
Technology and infrastructure	Piezometric monitoring of the Hoya de Castalla aquifer exists, but there are no early health-warning systems against heat, insufficient urban green/blue infrastructure, nor widespread precision irrigation systems in the rainfed areas of Onil and Castalla.
Social and behavioural aspects	There is a good level of technical knowledge among farmers and high sensitivity to the quantified economic impact; however, general public awareness of the risk of torrid nights is still limited.
Citizen participation	Participation in this phase has expanded significantly compared with the initial technical and documentary consultations. On 21 April 2026, the provincial event "Local adaptation and mitigation strategies against extreme climate events" was held at AIJU's headquarters, with around 40 attendees from public administrations, the private sector and academia, where the priority risks identified in Phase 2 (heat and drought) were validated through a real-time survey (Mentimeter) and citizen proposals for measures were collected (more tree cover, shade, sustainable drainage, pedestrianisation). The results also revealed low confidence (only 3 of 19 responses) that the available technical information is being used for real decision-making, and a very low rating (3.8/10) of municipal preparedness for extreme events, reinforcing the need to strengthen shared governance (see section 4.2). On 14 May 2026, the project was also presented at the I MED Regions Resilience Forum, held at Casa Mediterráneo (Alicante), before institutional and technical representatives from the Region of Valencia, the Region of Murcia and Mediterranean regions of France, Italy, Morocco, Tunisia and Malta, broadening the project's international visibility.
Financing and resources	The CLIMAAX4CAST project acts as a "technical passport" for accessing ERDF funds and European resilience funds; however, none of the four municipalities yet has a specific municipal budget line for climate adaptation.
Governance and political leadership	Alicante Provincial Council exercises clear leadership in regional coordination, and there is a proposed collaboration agreement among the four town councils (November 2025) still pending formalisation, which for now limits joint action on the shared aquifer.

3.3 Potential CRM measures

Based on the priority risks and the supportive elements described the adaptation measures for the county of La Foia de Castalla are proposed below. Structural, non-structural, nature-based, social and governance measures have been included, reflecting in each case the possible co-benefits and the adaptation limits that could make the measure insufficient under extreme climate scenarios (RCP 8.5).

Table 5 CRM measures

Risk	CRM measure	Effectiveness	Contribution to objectives	Co-benefits	Timeframe	Responsible party	Adaptation limits
Heatwaves	Early health-warning system and action protocol against extreme heat, aimed at people over 65	High	Reduction in hospitalizations; 100% coverage of the elderly population of Ibi and Onil	Strengthens coordination between social and health services	Short term	Town councils + health sector/civil protection	Effectiveness decreases if torrid nights sustainedly prevent night-time thermal recovery
Heatwaves	Urban green corridors and climate shelters (shade, fountains, cool spaces) in the town centres of Ibi and Onil	Medium-high	Reduction of the urban heat island effect; improved social wellbeing	Greater environmental quality, promotion of active mobility	Medium term	Ibi and Onil town councils + DPA (ERDF co-financing)	Limited availability of public land in dense historic centers
Heatwaves	Adaptation of outdoor working hours (agricultural and industrial) during heatwave episodes	Medium	Reduction of occupational exposure to extreme heat	Greater workplace safety and productivity	Medium term	Industrial sector companies; agricultural cooperatives	With heatwave durations exceeding 25-28 days (RCP 8.5), thermal stress risk becomes unmanageable even at night
Heatwaves	Renaturalisation of roofs and facades in industrial buildings in Ibi and Onil	Medium	Reduction in cooling demand; reduction of the heat island effect	Energy savings; improved environmental image of the industrial fabric	Long term	Industrial sector + town councils (bylaws)	High investment cost for SMEs; requires public incentives

Agricultural drought	Implementation of efficient supplementary irrigation (drip, solar power) for rainfed vineyards in Onil and Castalla	High	Significant reduction in yield loss (currently 72%); favourable cost-benefit ratio (5.2:1)	Energy savings; reduction of evaporation losses	Short term	Agricultural cooperatives + DPA (grant)	Depends on aquifer water availability; does not resolve the structural deficit
Agricultural drought	Public subsidy for supplementary irrigation in rainfed olive groves (cost-benefit ratio 0.7:1, requires public support)	Medium	Maintenance of the economic viability of olive groves (currently 41% loss)	Preservation of the agricultural landscape and the Protected Designation of Origin	Medium term	Onil Town Council (Grants Plan) + DPA + CAP funds	Under RCP 8.5, supplementary irrigation may not fully offset the loss; needs to be combined with more resistant varieties
Relative drought	Strengthening of piezometric monitoring and modelling of the Hoya de Castalla aquifer and its five associated aquifers	High	Improved knowledge base for demand management; early warning of overexploitation	Benefits all four municipalities and the CHJ	Short term	DPA (Water Technologies Unit) + CHJ	Does not reduce risk on its own; must be combined with demand-management measures
Relative drought	Reclaimed water for agricultural irrigation in Castalla and Onil (water circular economy)	Medium-high	Reduction of pressure on the aquifer; diversification of sources	Aligned with the municipal collaboration agreement proposed in November 2025	Medium term	EPSAR + town councils + cooperatives	Distribution infrastructure cost; quality of reclaimed water for certain crops
Relative drought	Tibi Water Emergency Plan: update with climate risk thresholds and intermunicipal	Medium	Reduction of response time to severe drought episodes; greater equity for the most	Strengthening of territorial cohesion among the four municipalities	Short term	Tibi Town Council + DPA	Effectiveness depends on the formalisation of the collaboration agreement among municipalities, still pending

	coordination mechanisms		vulnerable municipality				
Relative / agricultural drought	Training and technical support programme for farmers on water management and selection of drought-resistant varieties	Medium	Improved adaptive capacity of the agricultural sector; reduced social vulnerability in Tibi	Strengthening of human capital and agricultural cooperation networks	Medium term	AIJU + cooperatives + Regional Ministry of Agriculture	Limited by the ageing of the sector and low generational renewal
Drought + heatwaves (combined risk)	Update of Castalla's Municipal Action Plan against forest fires, incorporating the drought and extreme-heat scenarios from Phase 2	Medium-high	Reduction of fire risk in the wildland-urban interface (Maigmó mountain range)	Protection of forest ecosystems and air quality	Short-to-medium term	Castalla Town Council + provincial fire-fighting services	Does not eliminate the risk of simultaneous extreme events (compound events); requires specific cascading-effects analysis
Heatwaves + drought	Formalisation of the intermunicipal collaboration agreement proposed in November 2025, with a common climate risk management framework	High	Effective coordination of shared aquifer management and joint health alerts	Greater joint negotiating capacity vis-à-vis European funds	Short term	The four town councils + DPA	Risk of deadlock due to political or agenda differences among municipalities
Heatwaves + drought	Creation of a Key Risk Dashboard with annual review, integrated into municipal services	High	Enables continuous monitoring of progress towards CRM objectives	Improves transparency and accountability to citizens	Short term	AIJU + DPA + town councils	Requires stable technical resources for its maintenance (risk of discontinuity after the project ends)

3.4 Integration into planning and decision making

The results of the climate risk assessment (Phase 2) and the measures proposed in this document are intended to be integrated into the following planning instruments:

- Revision of the Municipal Action Plans against forest fires (Castalla) and of the local climate strategies (Ibi), incorporating the quantified risk thresholds (warm days, heatwave duration, water deficit) as protocol activation criteria.
- Update of Onil's Strategic Agricultural Grants Plan and of CAP support lines, prioritising investment in supplementary irrigation for rainfed olive groves and vineyards.
- Revision of Tibi's Water Emergency Plan, incorporating the RCP 4.5/RCP 8.5 scenarios and the piezometric thresholds defined in Phase 2.
- Incorporation of green infrastructure and climate shelter criteria into the urban planning of Ibi and Onil, in coordination with future revisions of the General Urban Development Plan (PGOU).
- Use of this deliverable as a technical supporting document for applications to ERDF funds and European resilience funds by the Alicante Provincial Council.

Among the synergies identified, the possibility stands out of linking water circular-economy measures (already jointly promoted with the Júcar River Basin Authority and EPSAR since 2025) with supplementary agricultural irrigation, simultaneously reducing pressure on the aquifer and crop yield losses. The main tension identified is the need to reconcile the urgency of action on health matters (heatwaves) with the longer administrative timeframes associated with water and green infrastructure investments.

To better understand the risks, the county needs to progress on three fronts already identified in Phase 2: under-monitoring of water consumption by sector (agricultural/industrial), quantitative analysis of the cascading effects between drought, extreme heat and fire risk, and strengthening local geographic information system (GIS) capabilities for more granular risk management at the municipal scale.

Regarding monitoring, it is proposed to consolidate the “Key Risk Dashboard” mentioned in section 3.3 as the county's monitoring and evaluation system: a living document, reviewed annually, that compares the indicators in Table 3.1 with observed values, incorporating “post-event” reviews after each heatwave or severe drought episode, and serving as the basis for the periodic update of adaptation measures.

4 Project Evaluation

4.1 Usability of the results

The CLIMAAX4CAST project has provided La Foia de Castalla with high-resolution technical knowledge of its priority climate risks that did not previously exist at municipal scale. The main benefits identified are:

- Generation of new knowledge: for the first time, an economic quantification of agricultural drought risk (€4.1M/year) and heatwave projections disaggregated by emissions scenario are available at county scale, not only provincial scale.
- Public policy implications: the results provide an objective technical basis to justify investment in supplementary irrigation, urban green infrastructure and health warning systems for future European funding calls.
- Possible regulatory updates: the project has highlighted the need to revise municipal action and emergency plans to explicitly incorporate the RCP 4.5/RCP 8.5 climate scenarios, as well as to move towards urban planning that includes green infrastructure as an adaptation element.
- Institutional strengthening: the project has facilitated the transition from a reactive emergency-management approach towards proactive investment in adaptation, laying the groundwork for formalising the intermunicipal collaboration agreement.
- International visibility and outreach: the project was presented as a practical case study at the I MED Regions Resilience Forum (14 May 2026, Casa Mediterráneo, Alicante), before institutional and technical representatives from the Region of Valencia, the Region of Murcia and Mediterranean regions of France, Italy, Morocco, Tunisia and Malta, positioning La Foia de Castalla as a benchmark for local climate governance within the Mediterranean resilience agenda promoted by the Regional Government of Valencia (Generalitat Valenciana).

4.2 Lessons learned

Among the main lessons learned during this third phase of the project, the following stand out:

- The greatest difficulty encountered has been translating technically complex climate indicators (WASP index, FAO-56 balance) into concrete measures that are understandable and actionable for local stakeholders, particularly in the case of shared aquifer governance.
- Local stakeholders (farmers, health technicians, civil protection) act as genuine “sensors” of the monitoring system: their feedback confirms that they value concrete economic and health indicators more than abstract climate projections, which has guided the design of the indicators in Table 3.1.
- Learning is ensured through the iterative nature of the CLIMAAX process: the Key Risk Dashboard proposed in section 3.3 institutionalises the annual review of results and the incorporation of “post-event” reviews.
- Communication of results has relied on the channels already used in previous phases (the "AIJU Informa" newsletter, social media, and technical conferences), to which this phase adds "Climate Risk Summaries" aimed at the public and specific technical workshops for municipal officials. Looking ahead, a long-term communication plan will be maintained to continuously raise awareness among society and public administrations. This includes tailored awareness initiatives for the educational community (both students and teachers) and social entities, the creation of local administration working groups, and the long-term vision to establish a regional SDG observatory.
- The April 2026 outreach event confirmed, through a real-time survey, a significant disconnect between the availability of technical information and local stakeholders' confidence in its

effective use for decision-making (only 3 of 19 affirmative responses), as well as a very low rating of current municipal preparedness (3.8 out of 10). This lesson underscores that the challenge is not only to generate more technical knowledge, but to improve the governance channels that translate that knowledge into decisions, in line with the overall conclusion of this phase (section 5).

- What has worked well has been the combination of climate science and local economic data, which generated a high impact/effort ratio; what has worked less well has been the timeline for engaging political stakeholders, constrained by the simultaneous coordination of four municipalities.
- Project resources have been used efficiently thanks to the use of open-source CLIMAAX tools, although the heavy workload of data cleaning and processing has affected delivery timelines.
- The impact of this phase on risk understanding is rated as high: it has increased public awareness, provided municipalities with a standardised protocol to justify climate funding applications, and positioned the project as a "technical passport" for future European resilience funding calls.

5 Conclusions Phase 3

Phase 3 of the CLIMAAX4CAST project has made it possible to systematically connect the results of the Phase 2 climate risk assessment with an operational risk management (CRM) framework for the county of La Foia de Castalla. The following main conclusions can be drawn from this process:

1. Double priority confirmed: heatwaves (very high/critical priority) and relative and agricultural drought (high priority) are confirmed as the county's two structural climate risks, and both require differentiated strategies: immediate health action in the case of heat, and structural transformation of water and agricultural management in the case of drought.
2. The proposed measures are viable but require shared governance: much of the effectiveness of the adaptation measures (particularly those relating to the Hoya de Castalla aquifer and supplementary agricultural irrigation) depends on the formalisation of the intermunicipal collaboration agreement, which is still pending.
3. The economic dimension is the most effective lever for change: the quantification of losses (€4.1M/year in agriculture) and cost-benefit ratios (5.2:1 for vineyards, 0.7:1 for olive groves) has proven to be the most persuasive argument for local stakeholders, and should remain a central pillar of results communication in future phases.
4. Significant adaptation limits persist: under the RCP 8.5 scenario, several of the proposed measures (particularly those related to outdoor work and supplementary irrigation for olive groves) could become insufficient from the mid-century onward, underscoring the need to combine adaptation with mitigation efforts at global and regional scale.

Among the challenges addressed in this phase are the translation of Phase 2 technical indicators into risk management objectives and measures understandable to local stakeholders, and the systematic identification of key stakeholders and the supportive elements needed for implementation. Among the challenges that remain open are the quantification of cascading effects between drought, extreme heat and fire risk, obtaining water consumption data disaggregated by sector, and the effective formalisation of intermunicipal governance of the shared aquifer.

Overall, the main findings of this phase confirm that La Foia de Castalla already has the technical foundation needed to move from assessment to action, and that the main bottleneck for implementing the proposed measures is not technical in nature, but relates to governance and financing.

A concrete outcome of this phase is that the diagnostic and adaptation strategy developed under CLIMAAX4CAST is directly enabling and shaping a new project: FOIA 2030 ("Territorial Sandbox for Circularity, Resilience and SDG Governance"). The climate risk assessment, priority-setting and CRM measures identified through CLIMAAX4CAST have provided the technical evidence base and justification on which FOIA 2030 has been built, and specifically its Climate Resilience and Nature-Based Solutions pilot (Activity A5). Thanks to the results obtained in CLIMAAX4CAST, this pilot will translate the heat and drought adaptation priorities identified in this project into a Renaturalisation and Climate Adaptation Strategy and five demonstrative micro-actions per participating municipality, moving the territory from diagnosis to actual, funded implementation. In this sense, CLIMAAX4CAST has acted as the technical foundation and "launching pad" for FOIA 2030, confirming the project's role as a "technical passport" for accessing further European and national resilience funding, and resolving the governance and financing bottleneck identified above.

6 Progress evaluation

6.1 Project outputs

The following table summarises the key performance indicators (KPIs) planned for this phase of the project, in line with the CLIMAAX4CAST Individual Monitoring Plan:

Table 6 Overview key performance indicators

Key performance indicator	Progress
Communication actions taken to share results with stakeholders, including social (cumulative progress towards the target of 15; **1** action already reported at the end of Phase 1, **8** actions at the end of Phase 2) **6** actions done in Phase 3	13/01/2026.- Publication in AIJU's magazine https://www.aiju.es/2026/01/13/jornada-sobre-sostenibilidad-avances-normativos-economia-circular-y-proyectos-estrategicos/ 13/02/2026.- Post in Cátedra del Agua blog https://catedradelaguaua.org/blog/2026/02/13/jornada-estrategias-locales-de-adaptacion-y-mitigacion-frente-fenomenos-climaticos-extremos/ 22/04/2026.- Publication in COAMBCV (College of Environmental Scientists of the Valencian Community) web https://coambcv.com/noticias/el-coambcv-participa-en-la-jornada-estrategias-locales-de-adaptacion-y-mitigacion-frente-a-fenomenos-climaticos-extremos/ 05/2026.- Post in AIJU's LinkedIn, Facebook and other social https://www.linkedin.com/posts/aiju-instituto-tecnologico_climaax-cambioclimaertico-resilienciaclimaertica-activity-7452633570554163200-5tGq?utm_source=share&utm_medium=member_desktop&rcm=ACoAAAmqvkYBbGcWCa70_lFLFkruzca4QkQ2ln0 29/06/2026.- Publication in AIJU's magazine

	https://www.aiju.es/2026/06/29/del-diagnostico-a-la-accion-como-afrontar-los-riesgos-climaticos-extremos-a-nivel-local/ 17/07/2026.- Publication in regional newspaper La Diputación analiza en Ibi estrategias locales ante los fenómenos climáticos extremos | ALICANTE PRESS | Noticias de Alicante
Dissemination action(s) at regional level (cumulative progress towards the target of 4; **1** action already reported at the end of Phase 1, **1** action at the end of Phase 2) **2** actions done in Phase 3	21/04/2026: Provincial dissemination event "Local adaptation and mitigation strategies against extreme climate events", AIJU headquarters. 14/05/2026: Presentation at the I MED Regions Resilience Forum, Casa Mediterráneo, Alicante.

As part of the project's dissemination activities, the provincial event "Local adaptation and mitigation strategies against extreme climate events" took place on April 21th, 2026, at AIJU headquarters with around 50 assistants. The session brought together key stakeholders from across the province to discuss territorial resilience and collect direct feedback from attendees through interactive dynamics.

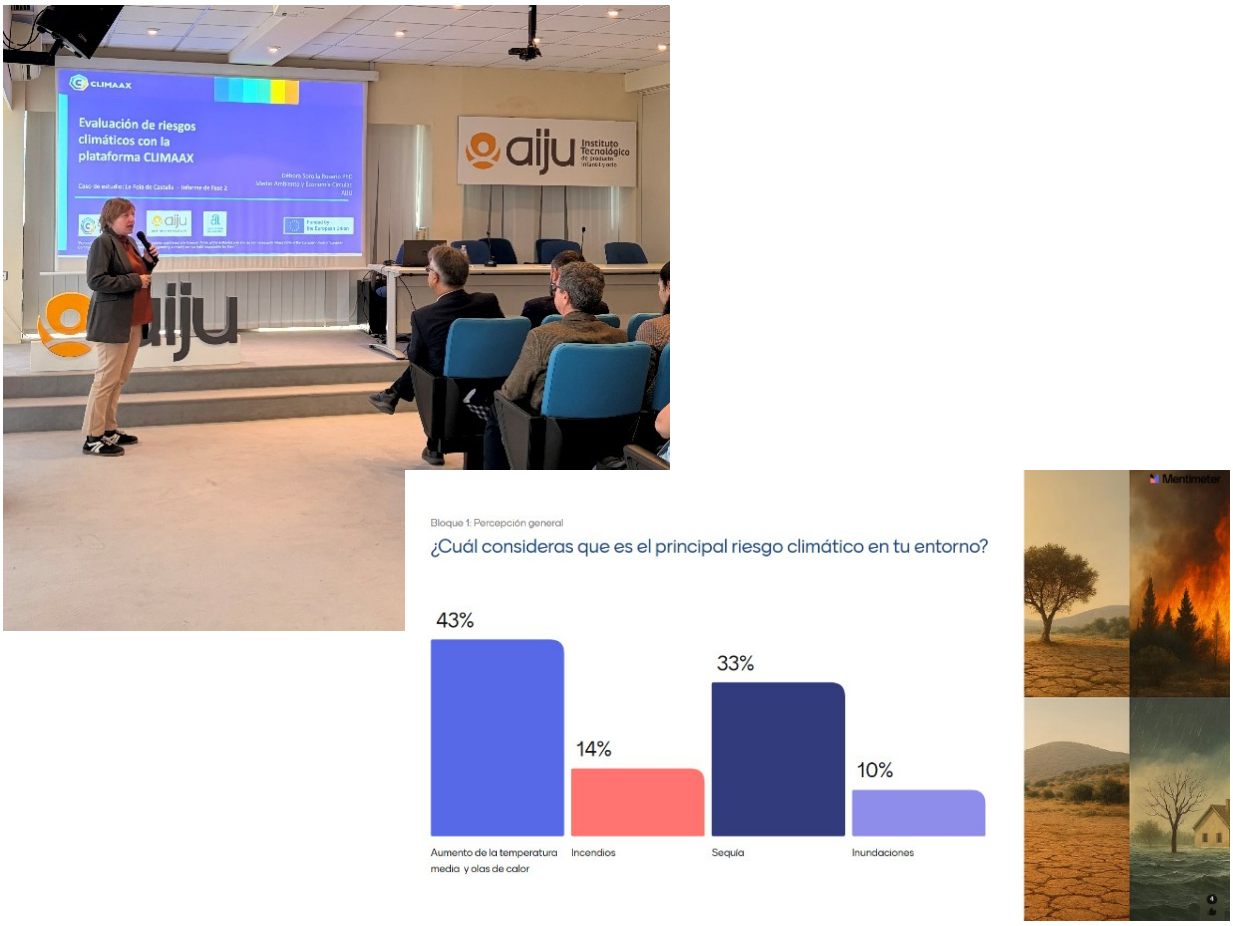


Figure 2 CLIMAAX4CAST results dissemination and one of the Mentimeter question



Figure 3 list of attendees

Building on this dissemination strategy, project advances and outcomes were presented on May 14, 2026, at the *I MED Regions Resilience Forum*, hosted at Casa Mediterráneo in Alicante. This forum provided an ideal setting to strengthen regional networks and exchange best practices on climate adaptation across the Mediterranean basin.



Figure 4 Dissemination event in I MED

The following table sets out the milestones associated with this phase:

Table 7 Overview milestones

Milestone	Progress
Mlst6: Third dissemination meeting with stakeholders in our region (Phase 2 and Phase 3)	**Completed**: this milestone, rescheduled at the end of Phase 2 to the first quarter of 2026, was fulfilled through the provincial event “Local adaptation and mitigation strategies against extreme climate events” held at AIJU's headquarters on 21 April 2026, with representation from Ibi, Castalla and Tibi.
Mlst7: Fourth dissemination meeting with stakeholders in our region (Phase 3)	**Completed**: this milestone was fulfilled through the project's presentation at the I MED Regions Resilience Forum on 14 May 2026 (Casa Mediterráneo, Alicante), which substituted the originally envisaged fourth regional stakeholder meeting with a higher-visibility international dissemination action, reaching institutional and technical representatives from the Region of Valencia, the Region of Murcia and Mediterranean regions of France, Italy, Morocco, Tunisia and Malta.
Mlst8: Attend the CLIMAAX workshop held in Brussels	It will take place from Tuesday, 19 January 2027 until Wednesday, 20 January 2027