

**Interreg
Euro-MED**



Co-funded by
the European Union

Germ of Life



Interreg Euro-MED Project GERM OF LIFE

“Digital Drought Risk Management enabling the drought mitigation and adaptation strategies for the restoration of the ecosystem equilibrium in Mediterranean European Countries”.

**Test Project (Thematic Project)
Mission: NATURAL HERITAGE**

**Duration: 33 months from 01/01/2024
Coordinator: UNIVERSITY OF PATRAS**

Deliverable ID.:	D.3.2.1
Deliverable title:	Joint action plan model
Planned delivery date:	30/06/2026
Actual delivery date:	30/06/2026
Deliverable leader:	LAMORO
Contributing partners:	UPatras, RWG, LAMORO, EDIA S.A., Junta Andalucía, DOTSOFT
Dissemination Level:	X EX = External;



This project has received funding from the European Interreg Euro-MED programme under Subsidy Contract (VI.mars.2022)- Project n°Euro-MED0200878

This deliverable reflects only the authors' view and the Commission is not responsible for any use that may be made of the information it contains.



	IN = Internal
--	---------------

Document information and history

Deliverable description¹ (from AF)
It describes the necessary actions and responsible bodies involved in the drought risk preventive approach and decision making in the Med Area.

Please refer to the Project Board indications (pending to define the framework) for guidance on the review process and the release numbering scheme to be used in the project.

Version N.	Date	Author [Person and Organisation]	Reviewer [Person and Organisation]	Notes
1	5/2/2026	LAMORO (PP4)		
2	27/2/2026	LAMORO (PP4)		

¹ The document was circulated and discussed with the project partners in order to receive their feedback before finalisation.



Table of contents

1	Executive Summary	3
1.1	Role of deliverable D.3.2.1.....	3
1.2	Relationship to other GERM OF LIFE deliverables	4
2	JOINT ACTION PLAN MODEL.....	5
2.1	Introduction and Context	6
2.2	Objectives and Priorities.....	7
2.3	SWOT Analysis.....	8
2.4	Planned Actions	8
2.5	Communication and Awareness.....	9
2.6	Validation and Institutional Endorsement.....	9
3	CONCLUSIONS.....	10
	Annex 1. Templates and Examples.....	11
	Annex 1.1 Example - Stakeholder Mapping.....	11
	Annex 1.2 Example – Proposed Actions.....	12
	Annex 2. Checklist For Project Partners	13



1 Executive Summary

In line with the objectives of the WP3 on the amplification and transferability of the project results so as to enhance the regional and national drought prevention and management policies, the Joint Action Plan Model provides a structured framework to support project partners and drought risk management stakeholders across the Mediterranean region in the development of local Action Plans addressing drought risk prevention and decision-making processes. It aims to ensure coherence across partner territories while allowing flexibility to reflect local specificities, governance structures and territorial contexts.

The Joint Action Plan Model is specifically designed to support the implementation, institutional integration and scaling-up of the Germ of Life drought risk management proactive solutions. By embedding the project's technologies, methodologies and preventive approaches into local planning processes, the Model enables partners to translate tested project solutions into concrete, operational and sustainable territorial strategies for long-term drought resilience.

The Model is specifically drafted for project partners and can serve as a reference for local authorities, water management bodies and policymakers. While it establishes a common structure for the Plans, partners are encouraged to adapt content according to territorial specificities, governance arrangements and risk profiles. Beyond the partnership, the Model may also support uptake and scaling-up by other relevant actors across the Mediterranean area, thanks to its flexible and transferable design.

1.1 Role of deliverable D.3.2.1

Within WP3, the Joint Action Plan Model serves as a guiding instrument enabling project partners to translate project outputs into concrete territorial strategies.

It supports the development of coherent local Action Plans by providing a shared structure, methodological guidance and content explanations.

Deliverable D.3.2.1 plays a central operational role within WP3 by translating the strategic vision and transferability principles defined in Deliverable D.3.1.1 ("Germ of Life Amplification and Transferability Strategy") into a concrete and applicable framework for territorial implementation.

On one hand, the Amplification and Transferability Strategy (D.3.1.1) sets out long-term objectives, defining the benefits of a proactive drought risk management approach while also outlining the strategic value of Nature-Based Solutions (NBS) and the key support of technological tools. On the other hand, the Joint Action Plan Model provides



a practical structure allowing the integration of said values and tools within the regional and local policy instruments.

Specifically, D.3.2.1 supports the development of four territorial Action Plans by guiding partners in the identification of preventive actions, responsible institutions, governance arrangements and implementation mechanisms. It ensures the systematic uptake of the Germ of Life solution, including data collection through monitoring stations, vulnerability assessment methodologies, key performance indicators and comprehensive NBS and technological solutions available through the innovation procurement platform.

In doing so, Deliverable D.3.2.1 contributes to ensuring the sustainability, scalability and policy impact of the GoL project results.

1.2 Relationship to other GERM OF LIFE deliverables

Deliverable D.3.2.1 is strongly interconnected with the technical, pilot and strategic outputs developed across WP1, WP2 and WP3, ensuring the coherent transfer of project knowledge into concrete policy-oriented Action Plans.

The Joint Action Plan Model builds upon the analytical foundations provided by WP1 Outputs, particularly the Drought Risk Prediction solution (Output 1.1), the Vulnerability Assessment tool (Output 1.2) and the Innovation Procurement Platform (Output 1.3). These outputs supply the data, technological tools and solution repositories that are directly integrated into the Action Plan framework for risk prediction, vulnerability assessment and the identification of appropriate Nature-Based Solutions and technological interventions.

Furthermore, D.3.2.1 capitalises on the testing tools and results developed within WP2, including the Germ of Life Solutions test protocol (D.2.1.1), the territorial uptake and user evaluation of the solutions (D.2.2.1), and the performance assessment against existing drought monitoring services (D.2.3.1). The evidence generated through pilot actions and testing activities informs the selection of actions, governance arrangements and implementation priorities within the Action Plans, ensuring their feasibility, effectiveness and evidence-based orientation.

Deliverable D.3.2.1 draws from the long-term vision and transferability principles defined in the Germ of Life Amplification and Transferability Strategy (D.3.1.1), translating strategic objectives into concrete territorial implementation frameworks.

Through these linkages, D.3.2.1 functions as the integrative mechanism that connects technological development, pilot validation and strategic policy enhancement, enabling the sustainable uptake and scaling-up of the Germ of Life solutions within regional and national drought risk management policies.



2 JOINT ACTION PLAN MODEL

The Model aims to:

- identify the actions needed to prevent and mitigate drought risk;
- clarify roles and responsibilities among involved actors (including institutions, authorities and technical bodies);
- support decision-making processes related to drought risk management;
- ensure applicability and replicability across countries in the Mediterranean area.

The following [table of contents](#) is proposed as a suggested structure for the Action Plan. It outlines the key sections to be addressed, serving as a reference for the drafting process:

- **Introduction and Context** – Overview of the relevant climatic and ecological characteristics, drought-related challenges and stakeholders involved.
- **Objectives and Priorities** – Strategic aims of the Action Plan and key intervention priorities.
- **SWOT Analysis** – Assessment of strengths, weaknesses, opportunities, and threats related to drought management.
- **Planned Actions** – Specific measures, interventions, and responsibilities to address identified challenges.
- **Communication and Awareness** – Strategies for stakeholder engagement, awareness-raising, and knowledge dissemination.
- **Validation and Institutional Endorsement** – Plans for validation, institutional integration and post-project implementation.

Action Plans translate strategic objectives into clearly defined, operationally feasible measures, ensuring effective implementation and measurable project outcomes.

The Action Plans are expected to strike a balance between strategic orientation and operational feasibility. While they should clearly outline long-term objectives, they must also include sufficiently concrete and actionable measures to ensure practical implementation.

Each Action Plan should therefore include:

- Short, medium and long-term goals related to drought prevention in the pilot areas;
- **At least one concrete proposed action** to achieve the abovementioned goals. When outlining the action to be carried out, the project partners should include:
 - ✓ expected outcomes
 - ✓ timelines
 - ✓ responsible authorities



- ✓ monitoring indicators
- ✓ estimated costs and funding sources (where applicable)

The Plans are not intended to function as high-level technical implementation manuals; however, they should provide a sufficiently operational framework to enable institutional uptake and progressive integration into existing policy instruments.

2.1 Introduction and Context

This section of the Action Plan should first describe the territory typology and its key climatic and ecological characteristics, as a basis for a comprehensive overview of the drought-related key challenges affecting the area. It should then outline the main climatic trends, past drought events and their socio-economic and environmental impacts, highlighting vulnerable sectors such as agriculture, water supply systems, ecosystems and local communities.

Furthermore, outlining the relevant regulatory and legislative frameworks at local, regional and national levels is recommended, as these frameworks shape drought management and climate adaptation policies and influence preventive approaches and emergency responses.

A clear mapping of stakeholders affected by drought risk and involved in decision-making processes should also be included. This should cover public authorities at different administrative levels, technical agencies, municipalities, farmers' organisations, civil society groups, businesses and citizens. The roles, responsibilities and interactions among these actors should be briefly described to highlight governance dynamics.



2.2.1. Stakeholder Mapping

Stakeholders in Drought Risk Management



Finally, this section should summarise the key lessons learnt from the tested project solutions. Partners should reflect on available data and related findings.

2.2 Objectives and Priorities

The Action Plan should define its overall objectives in relation to drought risk prevention, while clearly supporting the implementation and scaling-up of the Germ of Life proactive solutions developed within the project. The objectives should reflect both strategic policy goals and the operational deployment of the project’s technologies, methodologies and governance know-how aimed at enhancing drought resilience.

These objectives should be translated into specific and measurable goals, supported by quantitative or qualitative indicators where possible.

In addition, partners should identify short-term, medium-term and long-term priorities, ensuring a coherent timeline for implementation that progressively embeds the Germ of Life solutions into local planning and decision-making processes. The strategic orientation of the Action Plan should demonstrate alignment with relevant national climate adaptation strategies, European policy frameworks and international commitments such as the European Green Deal and the United Nations Sustainable



Development Goals, in order to ensure policy coherence, long-term relevance and sustainability of the project results.

2.3 SWOT Analysis

The SWOT analysis should provide an evidence-based assessment of the territorial context in relation to drought risk management.

Strengths should highlight existing tools, expertise, institutional capacities, data availability - specifically acquired through the pilot site in the Germ of Life project, and local, regional or national cooperation mechanisms that support effective drought prevention. **Weaknesses** should address gaps such as fragmented governance responsibilities, institutional constraints, limited technical infrastructure, insufficient data, and low level of awareness on the topic. **Opportunities** should consider external factors that can enhance drought risk management, including interregional cooperation, access to funding programmes, research initiatives and the use of digital tools for risk assessment and monitoring. **Threats** should focus on challenges such as climate change impacts, increasing competition for water resources, financial limitations and resistance to behavioural or institutional change.

This analysis should support the identification of realistic and strategic actions in the subsequent sections of the Action Plan.

2.4 Planned Actions

This section should describe the concrete measures for the adoption and potential scale-up of the tested project solutions within the Germ of Life project. Each action should clearly outline its objectives, scope, and expected outcomes.

It is crucial to define governance, coordination, and management arrangements, specifying the responsible institutions, decision-making processes, and mechanisms for inter-institutional cooperation. In addition, a timeline should be provided, indicating the key milestones and phases of action delivery.

The financial framework should include estimated costs for each action, existing funding sources and additional resources required for full implementation. This should be complemented by a monitoring and evaluation system, defining performance indicators, data collection methods and review procedures to track progress and effectiveness.

Potential challenges and risks related to implementation should also be identified, along with mitigation measures to ensure the sustainability and resilience of the Action Plan.



2.5 Communication and Awareness

The Action Plan should include a dedicated communication strategy aimed at increasing awareness of drought risks and promoting stakeholder engagement. This should define target groups, including public authorities, technical agencies, farmers, businesses, civil society organisations and citizens, taking into account their specific roles, information needs and levels of influence in decision-making processes.

Key messages should address both the urgency of drought risk prevention and the concrete benefits of adopting the Germ of Life technologies and governance approaches, highlighting evidence and results generated through the project's pilot actions.

Appropriate communication tools and channels should be selected according to target audiences and may include workshops, public consultations, digital platforms, policy briefs, training sessions, social media campaigns and local outreach initiatives.

2.6 Validation and Institutional Endorsement

To strengthen policy uptake and long-term sustainability of the proposed actions, partners are encouraged to seek formal or informal validation of the Action Plans by the competent local or regional authorities.

Where feasible, this may include:

- official endorsement by the relevant authority;
- integration into existing strategic or sectoral plans;
- formal presentation to regional councils or governing boards;
- written expressions of support and dissemination efforts from relevant institutions.

Such validation processes enhance the legitimacy of the Action Plans and increase the likelihood of their institutional integration and post-project implementation.



CONCLUSIONS

In conclusion, the development of well-structured Action Plans is essential for territories to effectively address drought risks.

By defining concrete measures, clarifying roles and responsibilities, setting out timelines and resources needed as well as considering options for institutional validation and endorsement, the Action Plans provide a practical framework to guide decision-making, enhance coordination among relevant actors, and ensure that interventions are feasible, evidence-based and sustainable in the long run.

The four Action Plans developed within the Germ of Life project — covering the pilot areas in Italy, Portugal, Greece and Spain — collectively demonstrate the practical applicability and transferability of the project's drought risk management approach across diverse Mediterranean contexts. Despite the differences in ecological settings, institutional frameworks and territorial characteristics, all plans share a common foundation: the integration of monitoring data and digital tools into decision-making processes, the engagement of relevant stakeholders, the definition of concrete post-project continuity arrangements, and the alignment with EU and national policy frameworks on climate adaptation, biodiversity and water management. Taken together, they confirm that the Germ of Life solutions are not only technically sound but also institutionally adaptable, providing a replicable model for other Mediterranean regions committed to strengthening drought resilience and ecosystem sustainability.



Annex 1. Templates and Examples

The following provides concrete examples of how the Action Plans could develop key content sections, including **Stakeholder Mapping** and the description of **Proposed Actions**.

Annex 1.1 Example - Stakeholder Mapping

Stakeholder	Type	Role in Drought Management	Level of Influence	Interaction with Other Actors
Regional Environmental Authority	Public authority	Strategic planning and policy integration	High	Coordinates municipalities and technical agencies
Water Management Agency	Technical body	Data collection, monitoring and technical assessments	High	Provides data to regional authority and municipalities
Municipalities	Local authority	Local implementation of drought measures	Medium	Liaise with citizens, associations and local businesses
Farmers' Association	Private / Civil society	Adoption of preventive irrigation practices / Advocacy	Medium	Collaborates with water agencies and municipalities
Civil Protection Unit	Public body	Emergency response during severe drought events	Medium	Coordinates with regional authority



Annex 1.2 Example – Proposed Actions

Below is an example of how the Proposed Actions, suggested by the partners within the pilot areas, could be described and elaborated.

- **Action Proposed n.1:**

Title: Installation of additional soil moisture monitoring points in cultivated areas.

- **Objective:**

Improve early drought detection and support data-driven irrigation planning.

- **Scope:**

Installation of 5 monitoring sensors in priority agricultural zones.

- **Responsible Authority:**

Regional Environmental Agency in cooperation with the relevant municipalities.

- **Timeline:**

6 months

- **Estimated Cost:**

€45,000 (regional funds)

- **Expected Impact / Expected Results:**

More efficient irrigation planning based on real-time data

- **Methodology / Implementation Approach:**

Sensors will be installed following standardized protocols and integrated into the regional monitoring system for continuous data collection and analysis.

- **Monitoring Indicator:**

- *Number of operational monitoring stations installed*
- *% increase in real-time soil moisture data coverage*
- *Changes in the irrigation planning approach*



Annex 2. Checklist For Project Partners

The following checklist is designed to support project partners and verify that the main components of the Action Plan (AP) have been adequately included before submission.

Partners are encouraged to use this tool as a self-assessment instrument to ensure completeness, coherence and alignment with the Germ of Life objectives and WP3 goals.

- The **link between the AP and the Germ of Life** proactive drought risk management approach is clearly outlined in the executive summary.
- The **territory typology** and key **climatic characteristics** are fully described.
- Sectors vulnerable** to drought are identified.
- Relevant **regulatory and policy frameworks** (local, regional, national, EU level) are referenced.
- A **stakeholder mapping** is included, identifying key actors in drought management and their responsibilities.
- Findings from the **GoL pilot testing** are summarized and contextualized.
- Short-, medium- and long-term **objectives** of the AP are mentioned.
- A comprehensive **SWOT analysis** is included, either in graphic or textual format.

Each proposed action specifies:

- Clear objectives and expected outcomes;
 - Defined scope;
 - Responsible authorities;
 - A realistic **timeline** for implementation;
 - Estimated **costs** and **funding sources** are indicated (if applicable);
 - Monitoring and evaluation **indicators** are defined.
- Communication** actions and target groups for **dissemination** are identified.