

A project labelled by the UfM



Union for the Mediterranean  
Union pour la Méditerranée  
الاتحاد من أجل المتوسط

# Welcome to the Innovative Sustainable Economy Mission

## 3rd Innovation Camp – DAY 2

### Olhão 23-24 October 2025



Innovative  
sustainable economy

Interreg  
Euro-MED



Co-funded by  
the European Union

# INNOVATION SHOWCASE: MED projects' solutions



Innovative  
sustainable economy

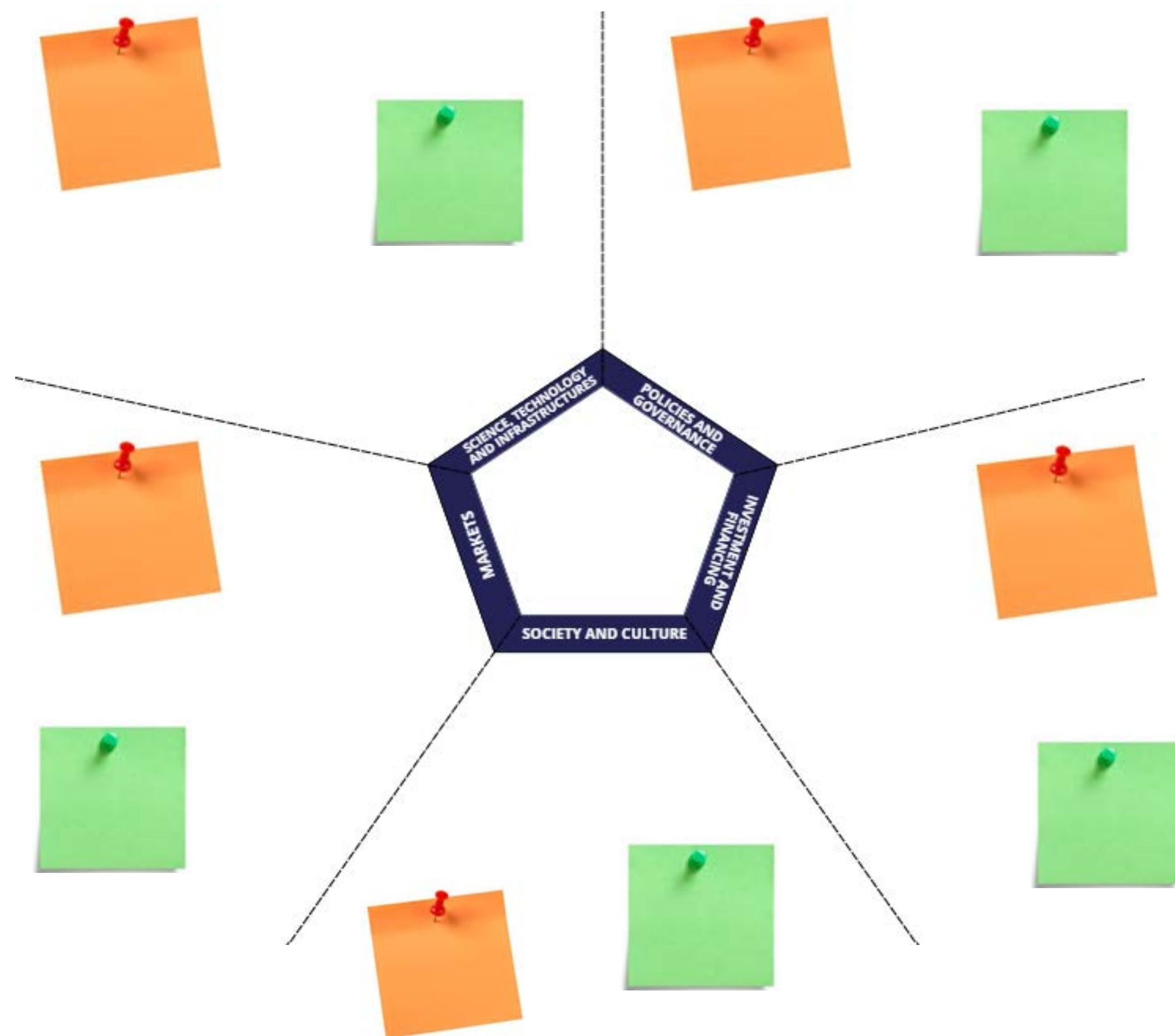
Interreg  
Euro-MED



Co-funded by  
the European Union



# What we discussed yesterday?



## Space Experimentation

Future Shared Vision

Inhibitors and facilitators (What's blocking us ? What could help us?)



**Inhibitors:** the structural, cultural or institutional factors that currently block or slow down the transformation we aim for

**Facilitators:** the conditions, resources or dynamics that enable, accelerate or reinforce the transformation we aim for



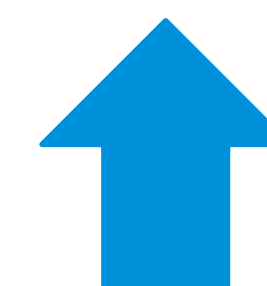
### Place-based (local) experimentation space

Characteristics of the space

Tools and instruments to enable collaborative responses to place-based challenges

Stakeholders' engagement (who and how?)

Illustrative actions or initiatives we would like to see emerge



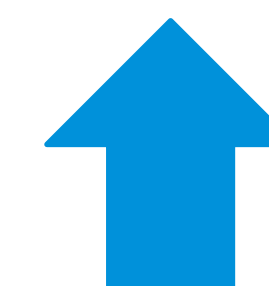
### Interregional experimentation space (collaborative experimentation across regions)

Characteristics of the space

Tools and instruments to enable collaborative responses to place-based challenges

Stakeholders' engagement (who and how?)

Illustrative actions or initiatives we would like to see emerge



Innovative  
sustainable economy

Interreg  
Euro-MED



Co-funded by  
the European Union



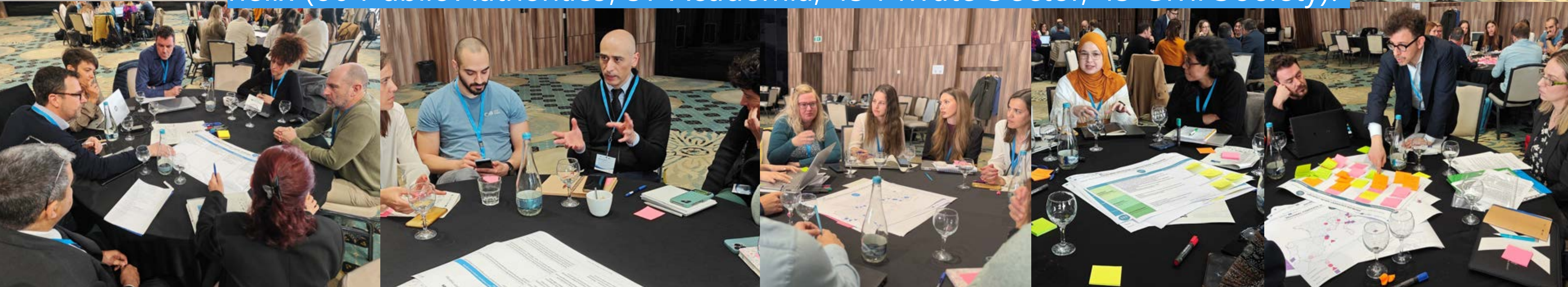


# Who we are?

*Community of 2 Governance Projects & 23 Thematic Projects!*

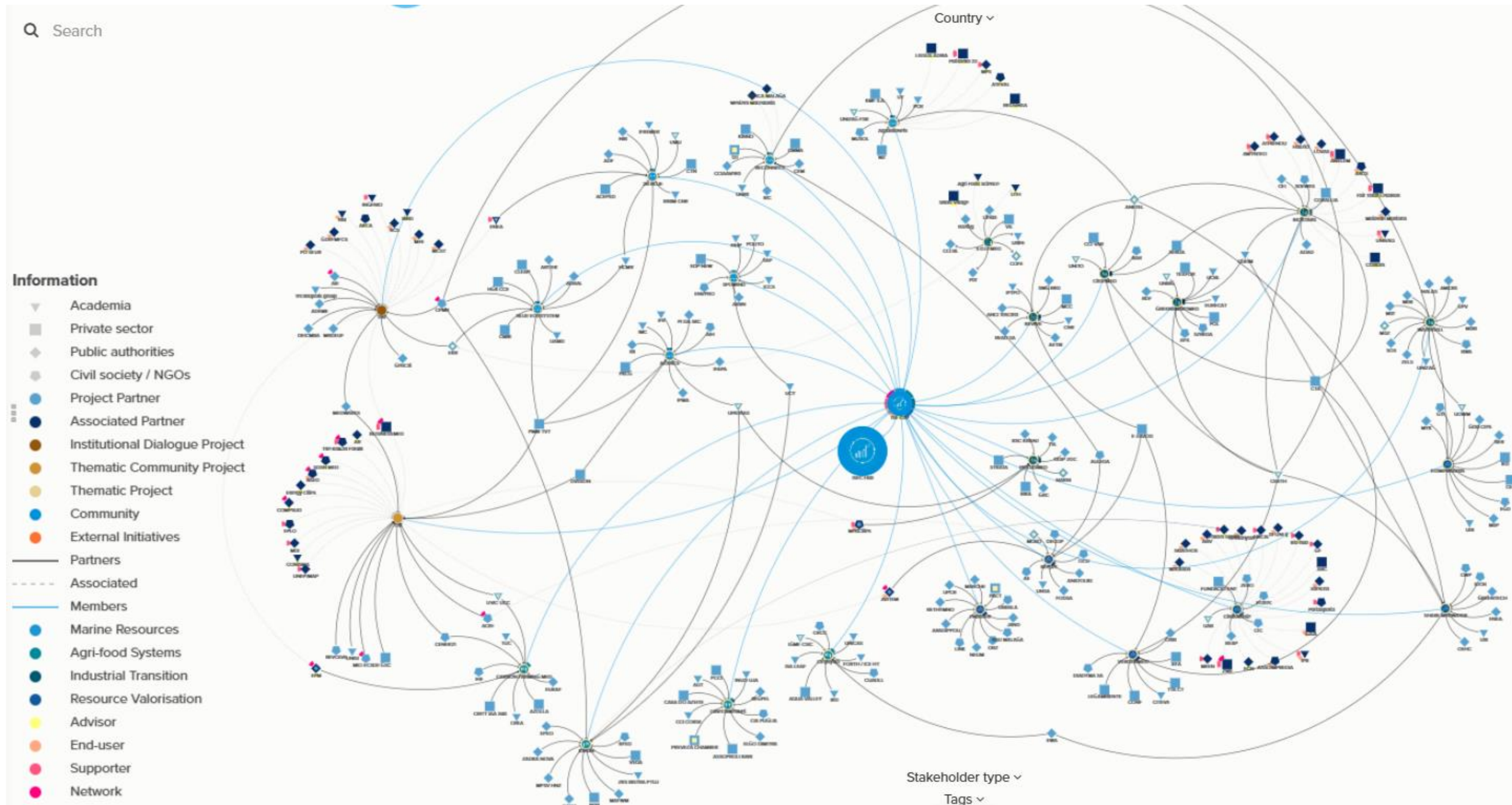


We are currently **231 connected partners** from **18 countries** with a well representation of the **4-ple helix** (86 Public Authorities; 57 Academia; 45 Private Sector; 43 Civil Society).





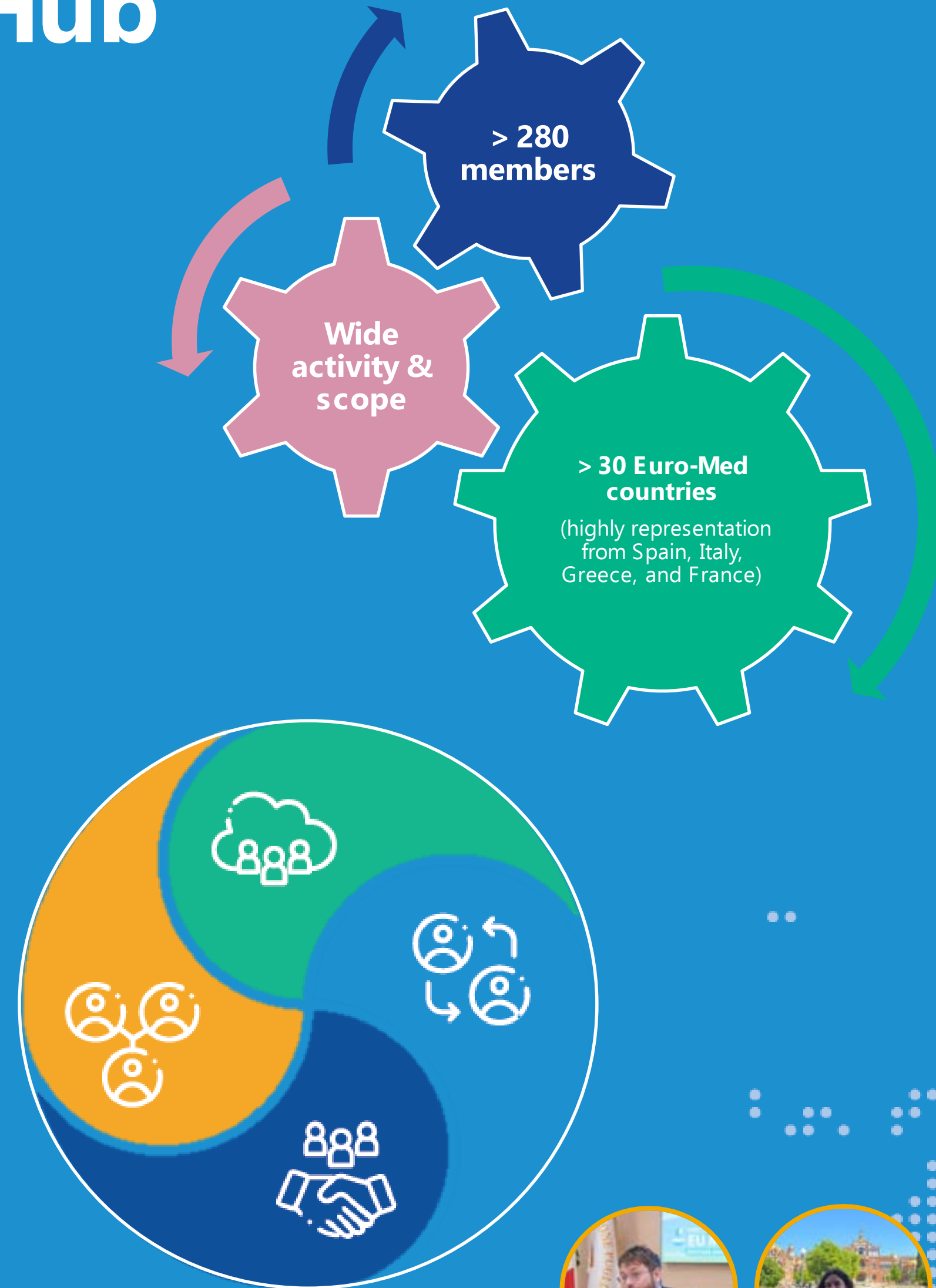
# ISE CoP Interactive Map



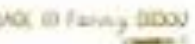


# Innovative Sustainable Economy Community Hub

<https://innovative-sustainable-economy.interreg-euro-med.eu/hub/>



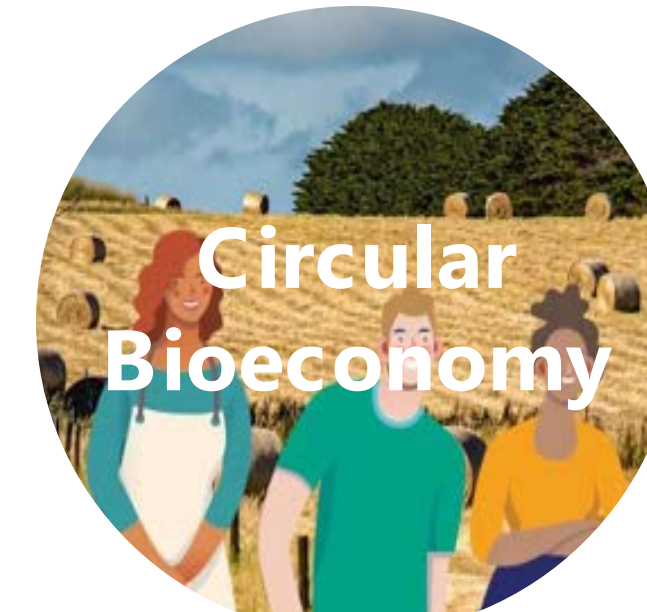






# A taste of innovative solutions!

The objectives of the showroom is to present **place-based transformative solutions**



*Two rounds: 4-min pitch*

*1<sup>st</sup> Round*

*2<sup>nd</sup> Round*

**Solutions tested on the ground**

**Other initiatives and PA regions**



Innovative  
sustainable economy

Interreg  
Euro-MED



Co-funded by  
the European Union



# 1<sup>st</sup> Round

## SOLUTIONS TESTED ON THE GROUND



SHARE.MedWATER

CARBON FARMING MED

GREENSMARTMED

REVIVE

AgroCedrus

IDRON

Clepsydra

Sea of Change

Germ of Life

ITI Água e Ecossistemas de Paisagem



Innovative  
sustainable economy

Interreg  
Euro-MED



Co-funded by  
the European Union



# GAMIFIED ACTIVITY

Scan the QR code

Or go to



[www.menti.com](https://www.menti.com)  
**1128 9145**



Innovative  
sustainable economy

Interreg  
Euro-MED



Co-funded by  
the European Union





# **Strategic Harmonization and Resource Enhancement in the ME Diterranean: Advancing Water Management and Innovation through Non-Conventional Resources.**

## **SHARE.MedWATER**

ISE 3rd Innovation Camp  
23-24 October 2025  
Olhao, Portugal



**SHARE-MedWATER**

**Interreg**  
Euro-MED



Co-funded by  
the European Union





## SOME INTERESTING FACTS

**What is the average water consumption per person in Europe?**

**125 to 150 liters per person per day**

**What is the average water losses in Europe?**

**Between 30% and 50% of water is lost**

***More than 40 % of the EU's population  
is already experiencing water scarcity***



**SHARE-MedWATER**

**Interreg  
Euro-MED**



Co-funded by  
the European Union



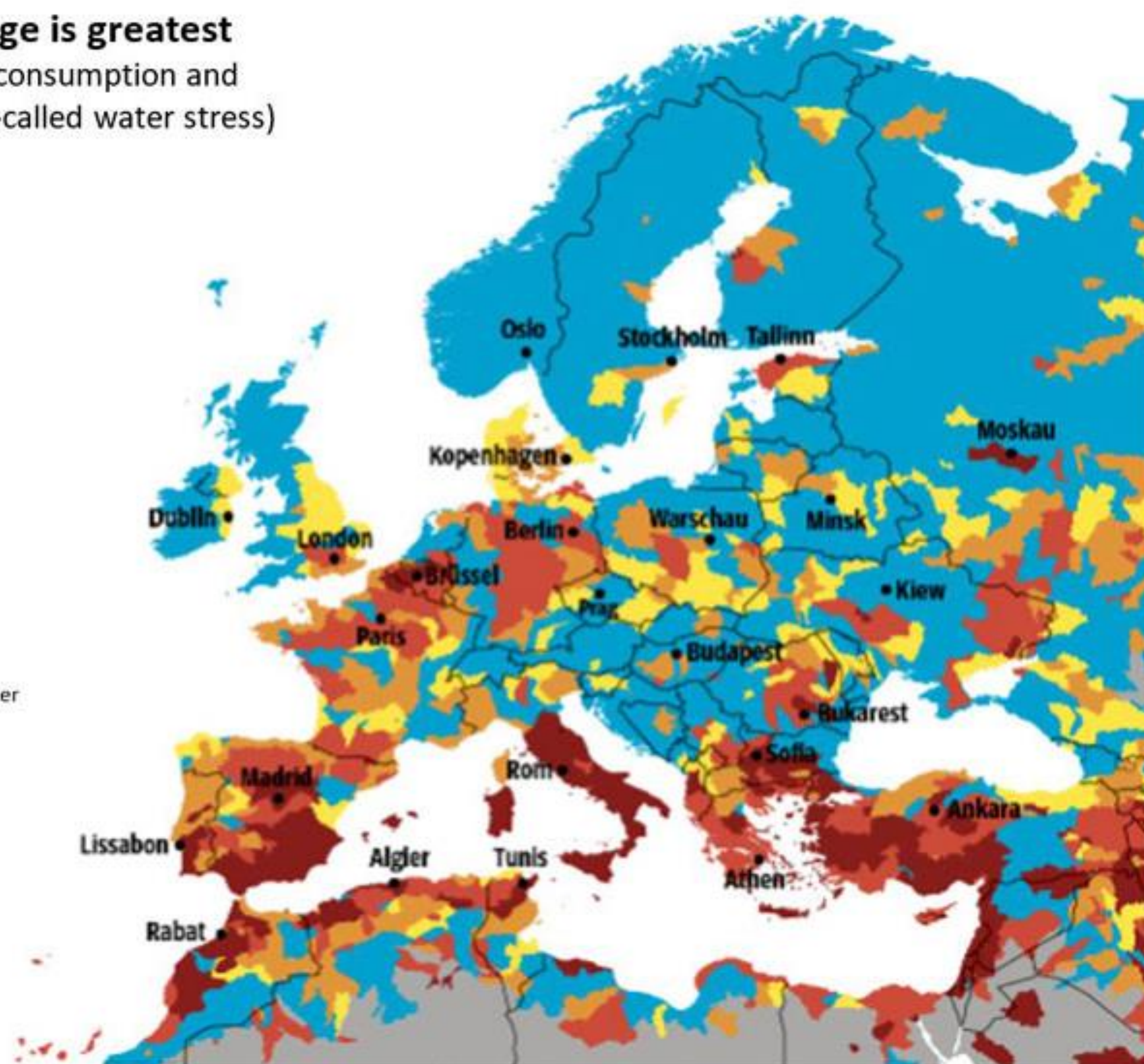


# SOME INTERESTING FACTS

## Where the shortage is greatest

Ratio between water consumption and existing resources (so-called water stress)

- Low stress level**  
less than 10%
- Low to average**  
10 to 20%
- Average to high**  
20 to 40%
- Very high**  
40 to 80%
- Extremely high**  
more than 80%
- Water-scarce areas, low water consumption or no data



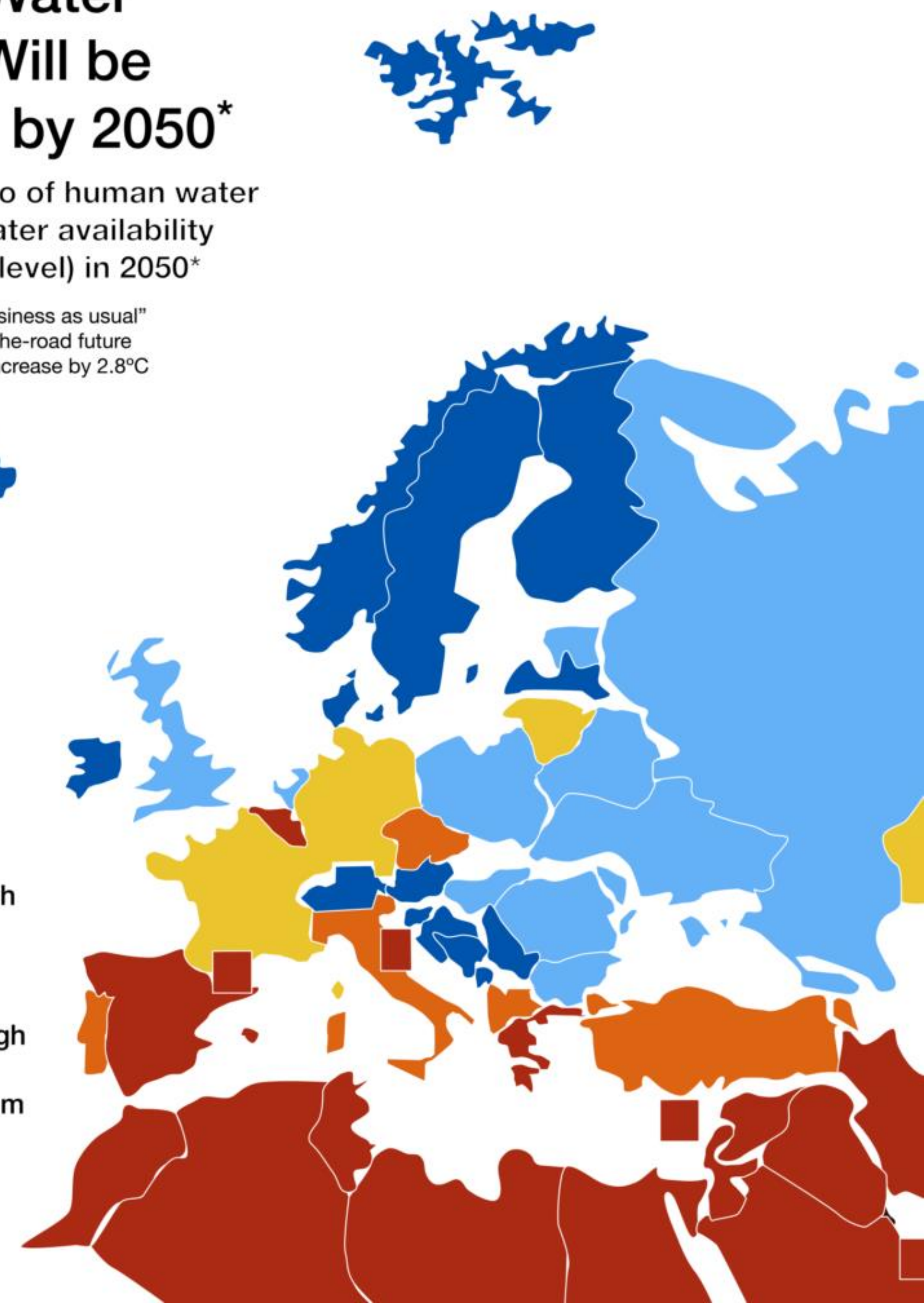
SZ MAP; SOURCE: WORLD RESOURCES INSTITUTE

## Where Water Stress Will be Highest by 2050\*

Projected ratio of human water demand to water availability (water stress level) in 2050\*

\*According to the "business as usual" scenario=middle-of-the-road future where temperature increase by 2.8°C to 4.6°C BY 2100.

- Extremely high**  
(<80%)
- High**  
(40-80%)
- Medium to high**  
(20-39%)
- Low to medium**  
(10-19%)
- Low**  
(<10%)



SHARE-MedWATER

Interreg  
Euro-MED



Co-funded by  
the European U





# SOME INTERESTING FACTS

NEWS ANNOUNCEMENT | 23 June 2025 | Joint Research Centre | 2 min read

## Escalating drought threatens Europe's ecosystems and agriculture

WEATHER AND NATURAL DISASTERS

**Italy has declared a state of emergency because of drought: 'There is no doubt that climate change is having an effect,' the prime minister said**

PUBLISHED TUE, JUL 5 2022-11:15 AM EDT | UPDATED TUE, JUL 5 2022-11:52 AM EDT

NBC NEWS

Cyprus turns off taps to farmers as fresh water levels drop

SHARE & SAVE - f X e ...

GLOBAL POWER

### Cyprus turns off taps to farmers as fresh water levels drop

Countries in the eastern Mediterranean are increasingly vulnerable to drought as the changing climate brings higher temperatures and less precipitation.

The New York Times

### *A Glimpse Into Spain's Future, Where Water Comes by Truck, Not Tap*

Residents of Pozoblanco and 22 other villages in the country's south have had to get their drinking water from tankers since April, when the reservoir serving the area dried up.

Reuters World Business Markets Sustainability Legal Commentary Technology Investigation

### Greek islands face water crisis as tourist season peaks



SHARE-MedWATER

Interreg  
Euro-MED



Co-funded by  
the European Union





# Overall Objective

SHARE.MedWATER main objectives are **to tackle water scarcity** by fostering the **reuse of unconventional water sources** through **innovative treatment technologies, circular water strategies**, and participatory governance models, promoting **community-based approaches, knowledge sharing**, and **policy integration** and supporting **sustainable and resilient water management in the Euro-MED region**.



SHARE-MedWATER

**Interreg**  
Euro-MED



Co-funded by  
the European Union





# How SHARE.MedWATER will tackle this challenges?

- ✓ **Integrating non-conventional water reuse** (rainwater, greywater, wastewater)
- ✓ **Addressing regulatory gaps**
- ✓ Bridging local and district scales: **link decentralized (community) and centralized (district) water reuse models** while **addressing the lack of structured policies** for decentralized water reuse.
- ✓ A **decision-support tool** that will guide stakeholders in **evaluating and optimizing unconventional water integration** (economic, environmental, social factors).
- ✓ **7 pilot community projects**
  - Greece - Rainwater Treatment for Farming and Potable Use
  - Cyprus - Assessment and development of a community-based model for grey water treatment and reuse
  - Albania - Heritage-driven Rainwaters Community-based Reuse
  - Italy - Rainfall collection and treatment in REC community of Cervia
  - Spain - Rice field water reuse for protection of coastal areas in Delta del Ebro
  - Malta - Restoration of Historical Rainwater Harvesting Reservoirs in Vittoriosa
  - France - Sustainable Wastewater Reuse for a Smart Valley in Lozzi, Corsica



**SHARE-MedWATER**

**Interreg**  
Euro-MED



Co-funded by  
the European Union





# How SHARE.MedWATER will tackle this challenges?

## SHARE.MedWATER Community Model



## SHARE.MEDWATER DISTRICT

**Outputs: Hydro-economic models, DSS tools, recommendations for policy/strategy integration.**



SHARE-MedWATER

**Interreg**  
Euro-MED



Co-funded by  
the European Union





**Thank you for your attention!!!**



**Source: Food and Agriculture Organization of the United Nations: FAO**



**SHARE-MedWATER**

**Interreg**  
Euro-MED



Co-funded by  
the European Union





**CARBON  
FARMING MED**

**Interreg  
Euro-MED**



Co-funded by  
the European Union



# **Carbon Farming MED: Local Action for Systemic Change**

Carlos A. Torres-Guerrero  
Beta Tech Centre, UVIC-UCC

**Innovative Sustainable Economy Mission 3rd Innovation Camp**

Faro, Portugal

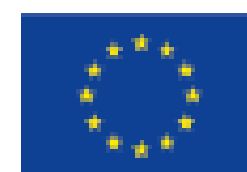
October 24-25th, 2025





**CARBON  
FARMING MED**

**Interreg  
Euro-MED**



Co-funded by  
the European Union



**Regenerative  
67.5 Mt CO<sub>2</sub>-eq/yr**



**Agroforestry  
35 Mt CO<sub>2</sub>-eq/yr**

“Mediterranean soils could capture over 300 Mt CO<sub>2</sub>/year — but we’re not using that potential.”

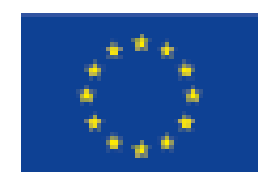
**Carbon farming is not just a climate solution — it’s a rural opportunity.**





**CARBON  
FARMING MED**

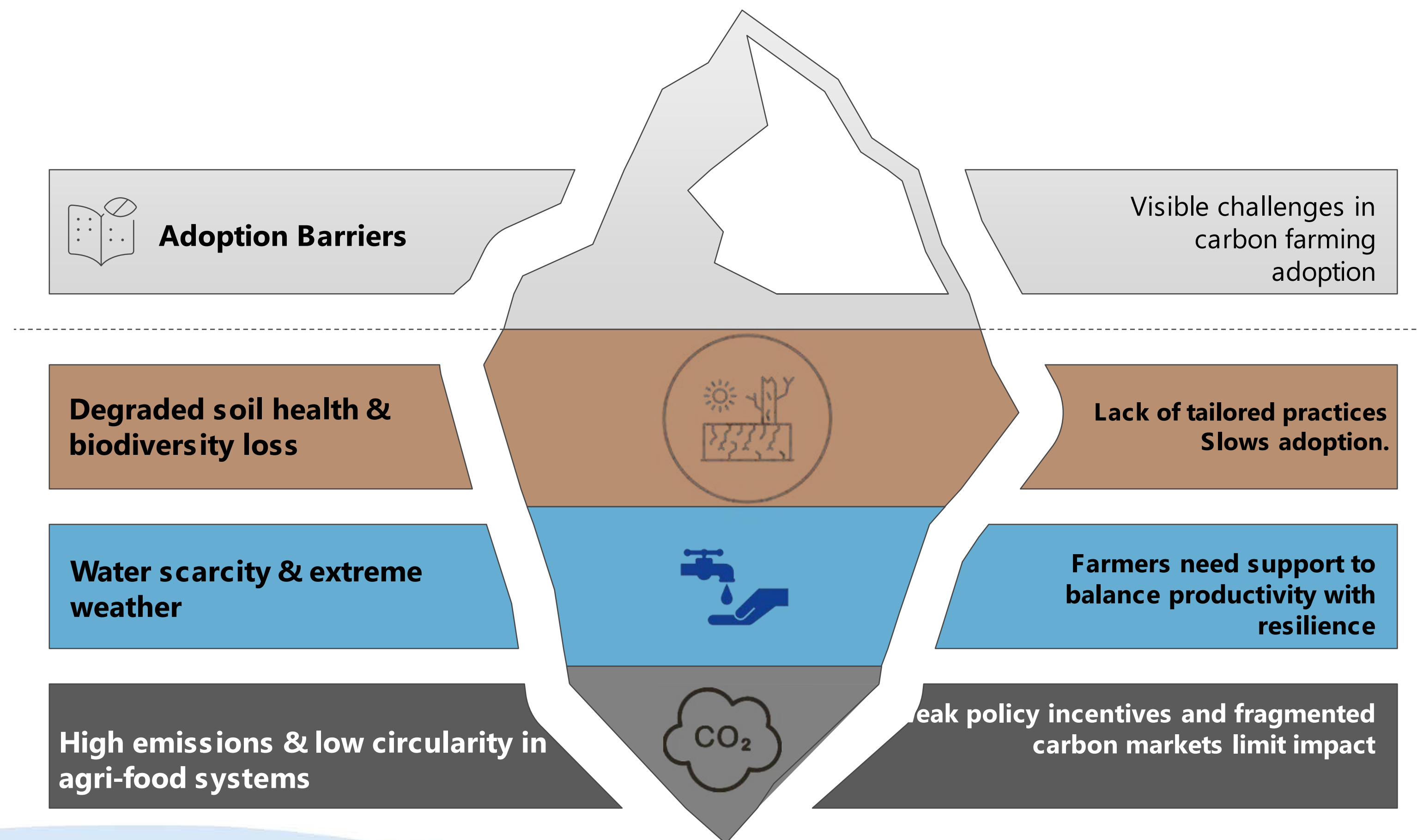
**Interreg  
Euro-MED**



Co-funded by  
the European Union



## But... why Carbon Farming Isn't Scaling Yet?



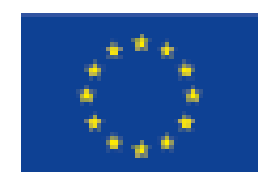
*Carbon farming faces systemic barriers that mirror the Mediterranean's climate challenges*





**CARBON  
FARMING MED**

**Interreg  
Euro-MED**



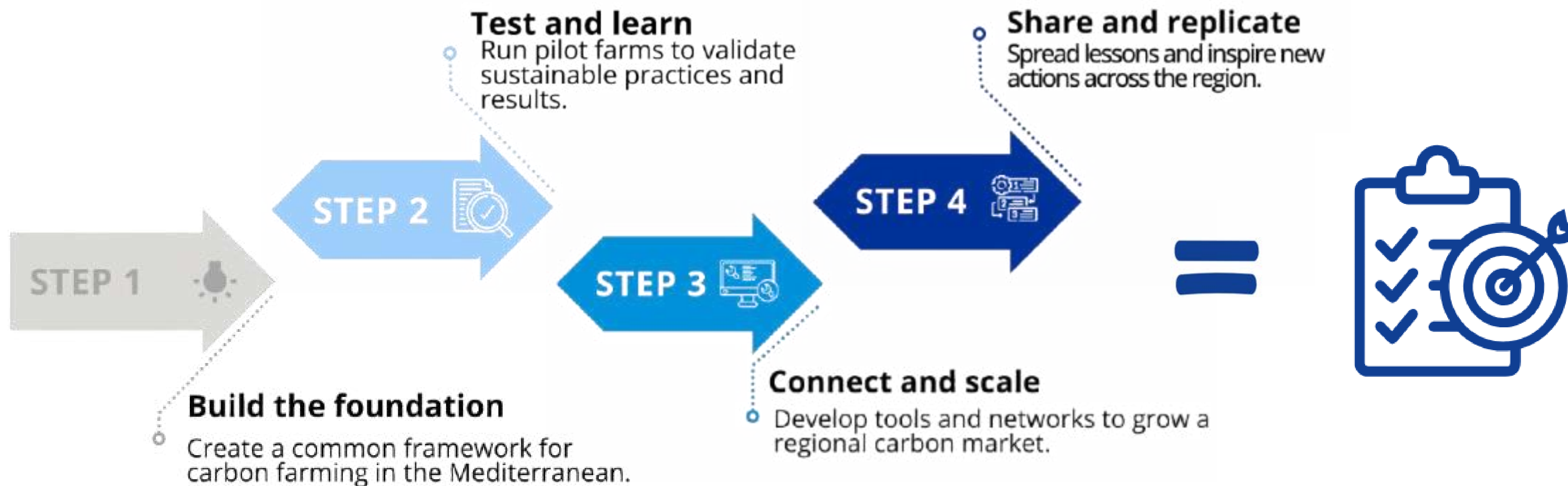
Co-funded by  
the European Union



## Carbon Farming MED

Aimed to develop a resilient Mediterranean agriculture system and to help farmers to implement **carbon farming** as a new **green business model** to obtain **additional revenues**, optimizing **regenerative agricultural** and **agroforestry** practices and providing the necessary tools to facilitate the carbon **credits'** market adoption.

### The roadmap to achieve it:

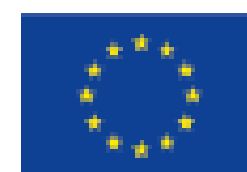






**CARBON  
FARMING MED**

**Interreg  
Euro-MED**



Co-funded by  
the European Union



## Our solutions:

### Framework of Good Practices & Business Opportunities



A practical guide co-developed with farmers to implement regenerative agriculture and agroforestry, while identifying new income streams.

CARBON FARMING MED | Interreg Euro-MED | Co-funded by the European Union

**Mission**  
Innovative Sustainable Economy

**Report on Carbon Farming as a business model.**

June 2024



September 2025

**REPORT ON EXTERNALITIES TO BE INCLUDED IN CARBON CREDITS**

<https://carbonfarmingmed.interreg-euro-med.eu/>

### Carbon Credit Calculation Platform



A digital tool to quantify soil organic carbon and GHG reductions, aligned with EU methodologies and ready for market integration.



### Scaling Strategy & Market Access



A roadmap to connect farmers with carbon buyers, cooperatives, and public incentives — enabling replication across the Mediterranean.

CARBON FARMING MED | Interreg Euro-MED | Co-funded by the European Union

**Mission**  
Innovative Sustainable Economy

**CARBON FARMING PROJECTS CATALOGUE**

June 2024



**Call for tenders!**

*Help define the Carbon Farming MED Exploitation Strategy for the benefit of agriculture and the environment.*

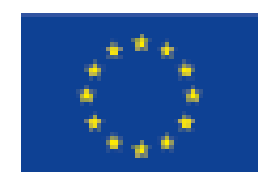
**Apply before 1 November 2025**





**CARBON  
FARMING MED**

**Interreg  
Euro-MED**



Co-funded by  
the European Union



## Pilot Farms Driving Regional Transformation



*Our pilot farms are the starting point for place-based innovation. By testing, validating, and sharing regenerative practices, we connect local action with Mediterranean-wide strategies for climate resilience and sustainable agriculture.*





**CARBON  
FARMING MED**

**Interreg  
Euro-MED**



Co-funded by  
the European Union

# Thank you!



<https://carbonfarmingmed.interreg-euro-med.eu>



**Follow us!**



**Carlos A. Torres Guerrero** carlosalberto.torres@u







**GREENSMARTMED**

**Interreg**  
**Euro-MED**



Co-funded by  
the European Union

**GREENSMARTMED**

**Green and Resilient European Excellence Network for Smart  
MED SMEs**

Innovation Showcase: Transformative Solutions in Action

---

ISE 3<sup>rd</sup> Innovation Camp  
24<sup>th</sup> October 2025

Chrysovalantis Ketikidis  
Senior Researcher

Maria Zaragoza & Martina Griful  
Innovation Consultant



**CERTH**  
CENTRE FOR  
RESEARCH & TECHNOLOGY  
HELLAS





# The Challenge

## Obstacles for SMEs

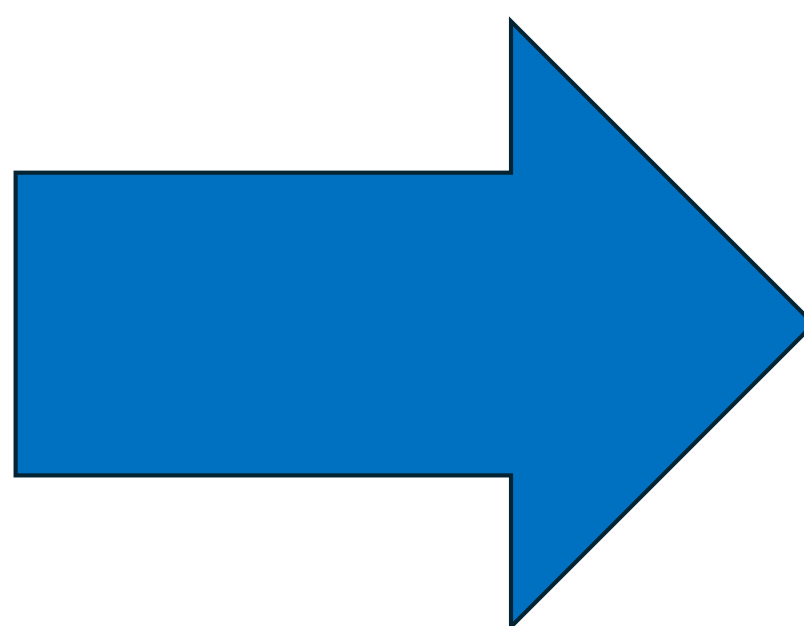
Limited access to  
financing

Lack of knowledge and  
expertise

Unclear policy frameworks

Lack of infrastructure

Limited collaboration



Non-circular,  
high emission in  
agri-food supply chains



**CERTH**  
CENTRE FOR  
RESEARCH & TECHNOLOGY  
HELLAS



**GREENSMARTMED**

**Interreg**  
Euro-MED

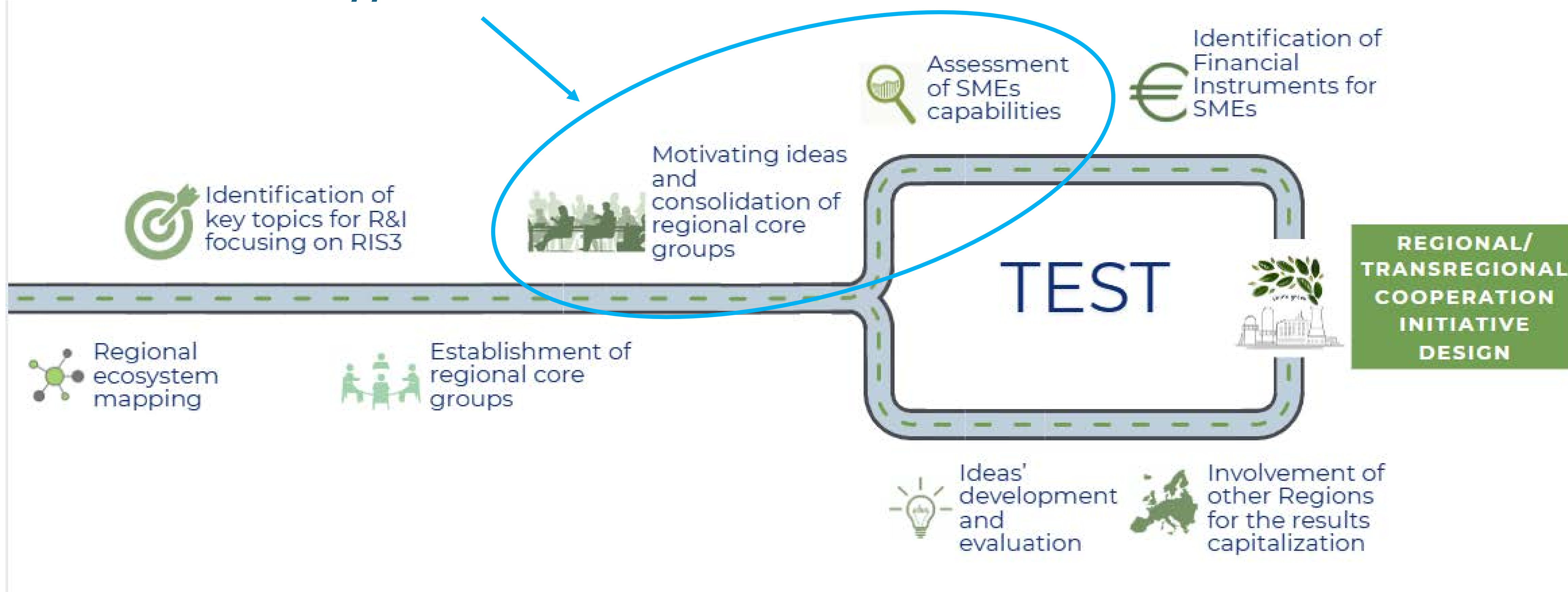


Co-funded by  
the European Union



# The GREENSMARTMED Methodology

## 4-helix approach



**CERTH**  
CENTRE FOR  
RESEARCH & TECHNOLOGY  
HELLAS



**GREENSMARTMED**

**Interreg**  
Euro-MED



Co-funded by  
the European Union





**GREENSMARTMED**

**Interreg**  
**Euro-MED**

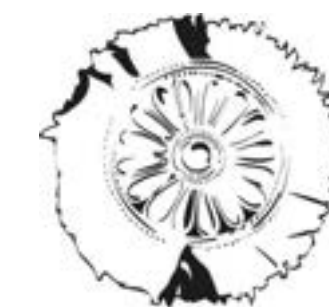


**Co-funded by  
the European Union**

# **THE GREEK CASE EXAMPLE**

---

Chrysovalantis Ketikidis  
Senior Researcher



**CERTH**  
CENTRE FOR  
RESEARCH & TECHNOLOGY  
HELLAS

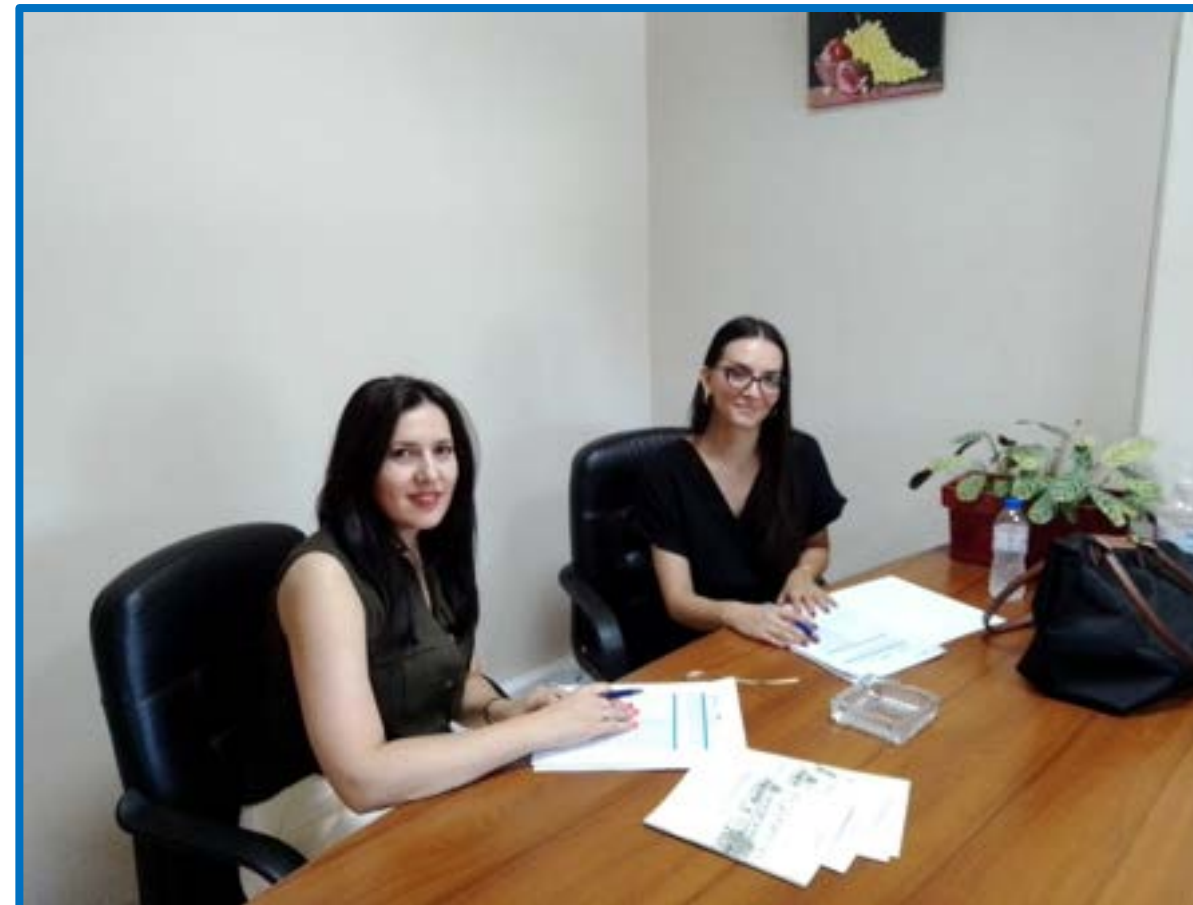


# Regional Core Groups - The Greek Case Example

*In person meetings*



*Identification of SMEs needs*



*Assessment of SMEs capabilities*



*Ideas development  
with a regional impact*

*Matching with appropriate financial tools*



**CERTH**  
CENTRE FOR  
RESEARCH & TECHNOLOGY  
HELLAS



**GREENSMARTMED**

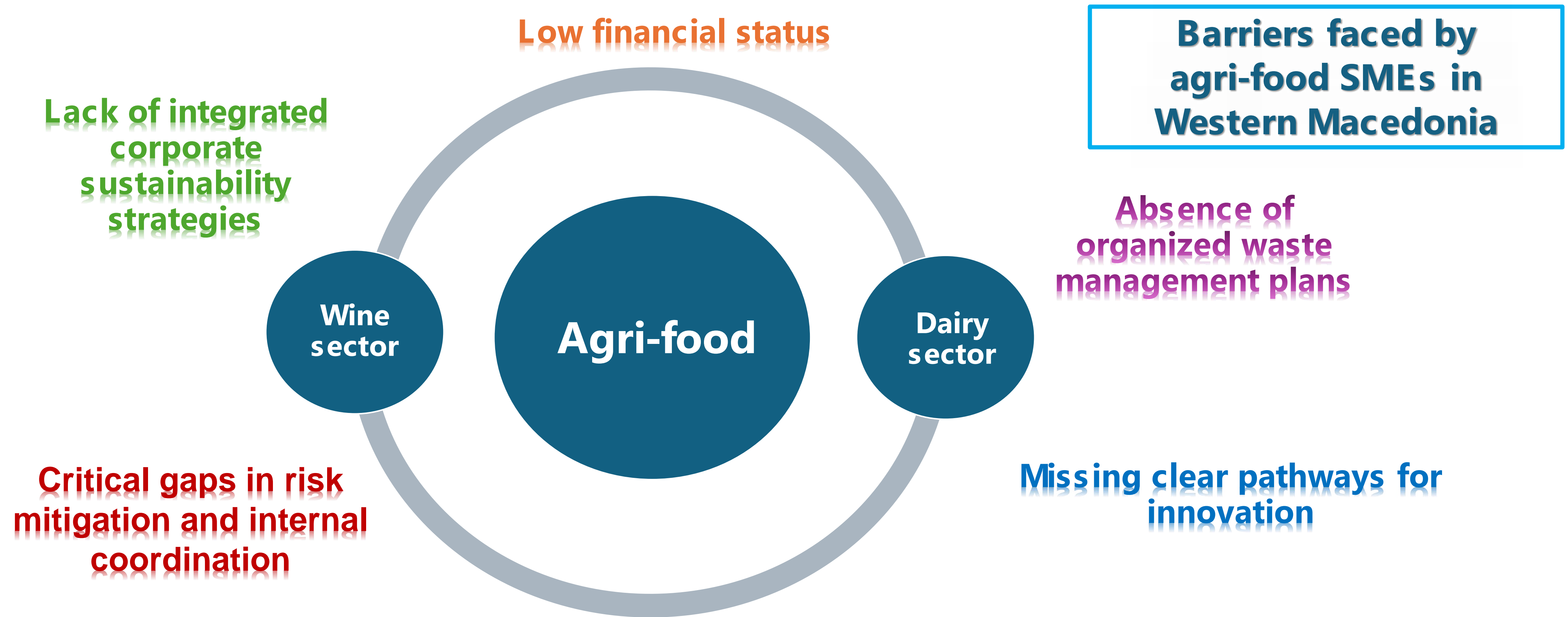
**Interreg**  
Euro-MED



Co-funded by  
the European Union



# SMEs Barriers - The Greek Case Example



**CERTH**  
CENTRE FOR  
RESEARCH & TECHNOLOGY  
HELLAS



**GREENSMARTMED**

**Interreg**  
Euro-MED



Co-funded by  
the European Union



# Impact & Outlook – The Greek Case Example

Tangible Impact – *What has been achieved?*

Strategic Outlook – *Where we go next?*

SMEs needs and capabilities in sustainability and circular economy identified

Regional-level projects, creating entirely new circular loops identified

Matching projects, ideas and needs with financial tools

Composting Unit

RES installation

Involvement of other Regions in circular ideas development

Transregional Collaboration



**CERTH**  
CENTRE FOR  
RESEARCH & TECHNOLOGY  
HELLAS



**GREENSMARTMED**

**Interreg**  
Euro-MED

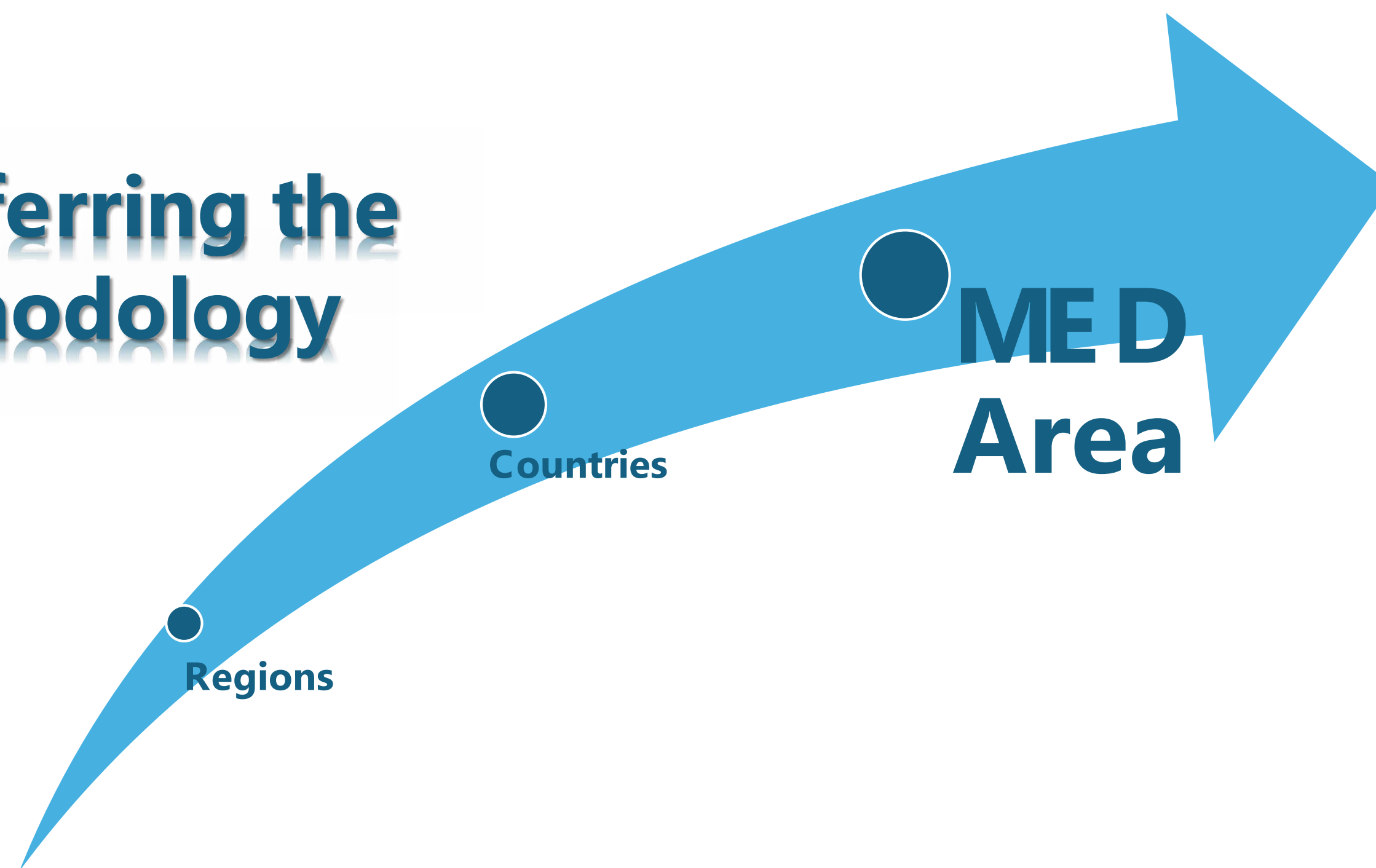


Co-funded by  
the European Union



# Call for Action

**Transferring the  
Methodology**



**Join us to unlock green innovation across the MED area, turning proven results into regional policy and competitive advantage!!!**



**CERTH**  
CENTRE FOR  
RESEARCH & TECHNOLOGY  
HELLAS



**GREENSMARTMED**

**Interreg**  
Euro-MED



Co-funded by  
the European Union





**GREENSMARTMED**

**Interreg**  
**Euro-MED**



Co-funded by  
the European Union

# THE CATALAN CASE EXAMPLE

---

Maria Zaragoza & Martina Griful  
Innovation Consultant





# REGIONAL CORE GROUP CATALONIA: FRAMEWORK

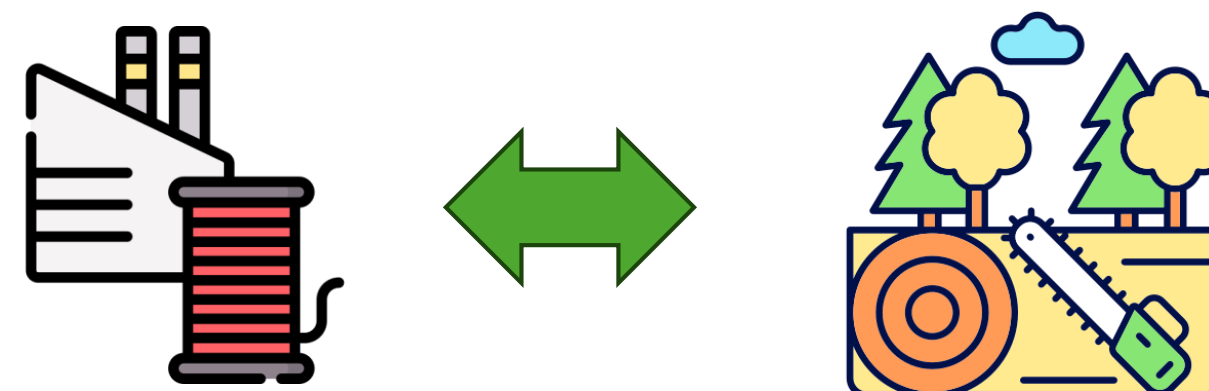


GREENSMARTMED

**RIS3CAT 2030**

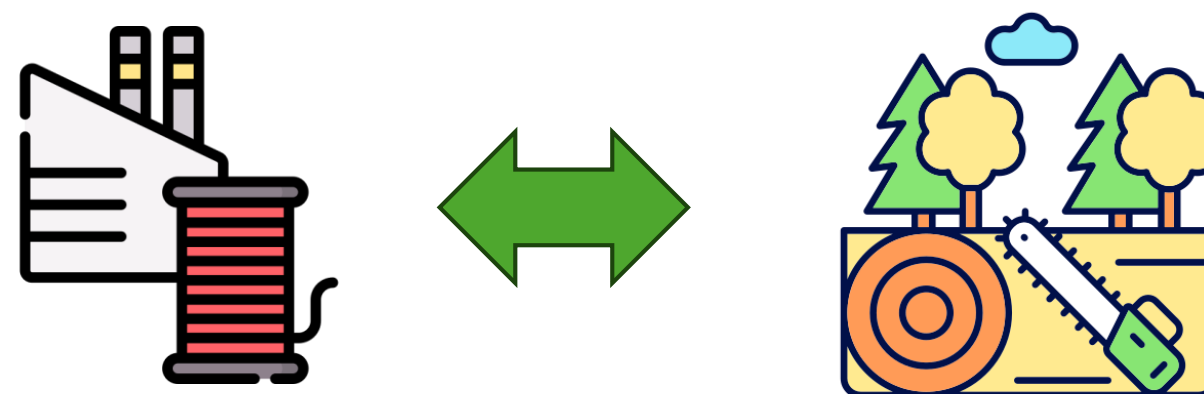
**GTR [Regional Core Group] Catalunya**

"Addressing the Cellulose Gap"





# REGIONAL CORE GROUP CATALONIA: MISSION

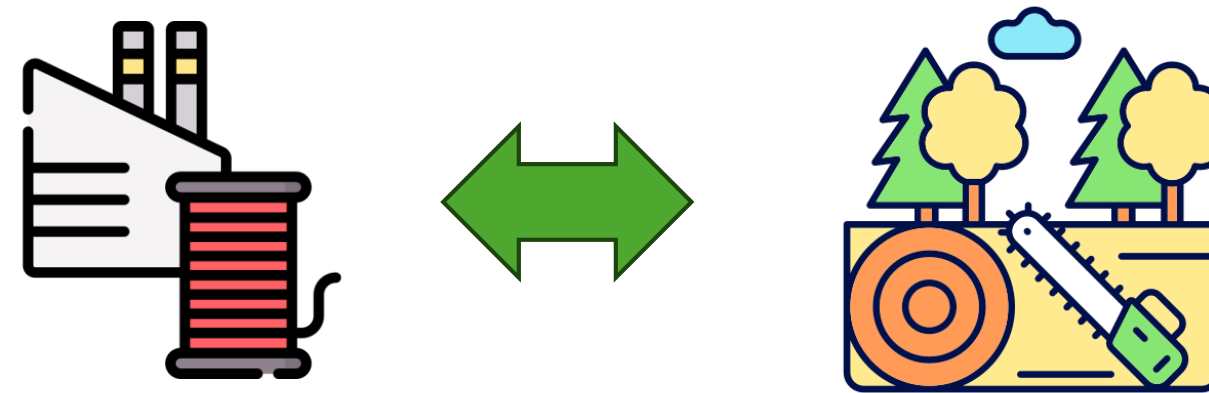


**Strategic collaboration between the textile and forestry sector** to study the use of forestry subproducts to produce plant-based textile fibers (e.g., cellulose) in a sustainable and non-polluting way, aligned with decarbonization goals.



# REGIONAL CORE GROUP CATALONIA: PARTICIPANTS

## 20 Participants:



- 8 SME s
- 1 Association of SME s
- 1 University research group
- 3 Association of SME s
- 1 Associated Partner (CTFC )

### OTHERS (policymakers):

- Waste Cluster of Catalonia
- Hub of Bioeconomy of Catalonia
- Bioenergy Cluster of Catalonia
- 1 Associated Partner (Regional Government of Catalonia)



# REGIONAL CORE GROUP CATALONIA: NEXT STEPS

| SESSION | OBJECTIVE  |
|---------|--|
| 1       | Establish a shared understanding of the challenge between forestry & textile industries and co-create an initial collective vision for the future along the "new" value chain. |

➡ 27th Oct



Co-funded by  
the European Union





**GREENSMARTMED**

**Interreg**  
Euro-MED



Co-funded by  
the European Union

**GREENSMARTMED**

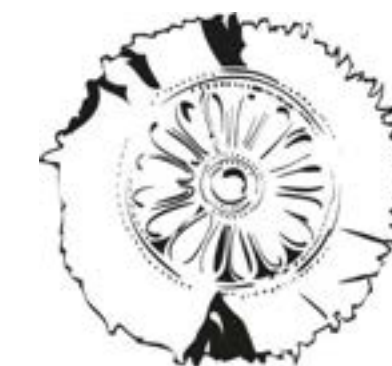
**Green and Resilient European Excellence Network for Smart  
MED SMEs**

---

***THANKS!***

Chrysovalantis Ketikidis  
[ketikidis@certh.gr](mailto:ketikidis@certh.gr)

Maria Zaragoza & Martina Griful  
[maria.zaragoza@eurecat.org](mailto:maria.zaragoza@eurecat.org)  
[martina.griful@eurecat.org](mailto:martina.griful@eurecat.org)



**CERTH**  
CENTRE FOR  
RESEARCH & TECHNOLOGY  
HELLAS







# Developing Community Based Innovative Business Models for the Revival of Internal Areas in the Mediterranean – REVIVE



**REVIVE**

**Interreg**  
Euro-MED



Co-funded by  
the European Union



Institut za poljoprivredu  
i turizam



Institute of Agriculture  
and Tourism



Chamber of Commerce  
Mallorca







# Project objective

Implement innovative solutions for a sustainable economy  
with the aim of *accelerating the transition towards  
competitive, sustainable and resilient ecosystems in the  
internal areas* of the Mediterranean Regions



Source: <https://geofolk.ge/en/article/oriode-sityva-makedoniis-folkloruli-tradiciebis-shesakheb/106>



Source: <https://caserma.gr/en/information-about-caserma-of-herbs-in-leros-island/>



Source: <https://www.agrotourism.com.cy/women-association-rural-larnaka>



Source: <https://www.brdawines.com/>



Source: <https://www.ecomuseopt.it/itineraries/th-e-daily-life/?lang=en>



Source: <https://ipsa-maslinovaulja.com/proizvodnja/>



Source: <https://plademallorcaturismo.es/en/experiences/turismo-rural-y-agroturismo/>



REVIVE

Interreg  
Euro-MED



Co-funded by  
the European Union







# Pilot area



Lamaca and Famagusta District Development Agency  
(Cyprus)

National Research Council – CNR (Italy)

Institute of Agriculture and Tourism – IPTPO (Croatia)

Official Chamber of Commerce, Industry, Services and  
Navigation of Mallorca – MCC (Spain)

National Association of Italian Municipalities – Tuscany  
– ANCI Toscana (Italy)

Regional Rural Development Standing Working Group  
in South East Europe – SWG RRD (North Macedonia)

Development Agency of South Aegean Region – READ  
S.A. (Greece)

Balearic Islands Agency for Tourism – AETIB (Spain)

E-institute – Ezavod (Slovenia)



REVIVE

Interreg  
Euro-MED



Co-funded by  
the European Union







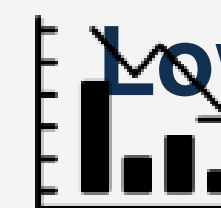
Limited collaboration

# CHALLENGES



Poor digitalization

Lack of job 



Low economic dynamism



Depopulation



REVIVE

Interreg  
Euro-MED



Co-funded by  
the European Union



Consiglio Nazionale  
delle Ricerche

Institut za poljoprivredu  
i turizam



Institute of Agriculture  
and Tourism



Chamber of Commerce  
Mallorca

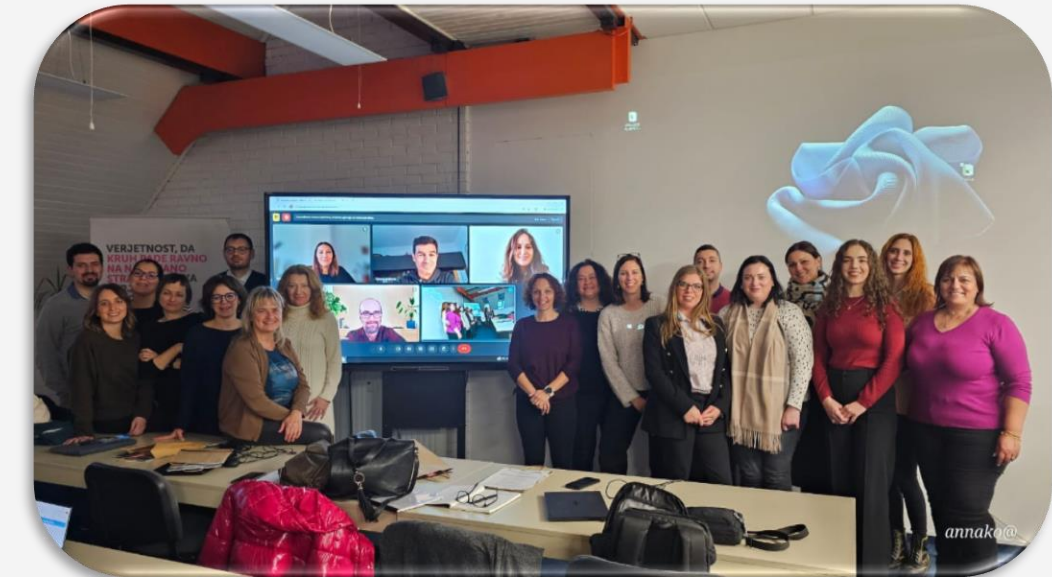






*Innovative  
Community  
Cooperative*

*Digital  
Innovation  
Hubs*



*7 pilot  
areas  
=  
7  
solutions*



□ Definition of a methodological framework

Engaging and working together with the local communities

□ Creation of the REVIVE cluster of Innovative Community Cooperatives

□ Digital Innovation Hubs for improving digital skills

7 pilots testing new collaborative business models and solutions of advanced technologies

Transferability and sustainability of project results



REVIVE

Interreg  
Euro-MED



Co-funded by  
the European Union







Thank  
you for  
your  
attention!

Teuta Benčić, IPTPO  
On the behalf of the REVIVE  
partners



Presented By:  
Georges Youssef



[www.agrocedrus.com](http://www.agrocedrus.com)  
[@agrocedrus](https://twitter.com/agrocedrus)

# Turning Carob into a Catalyst for Climate-Smart Agriculture





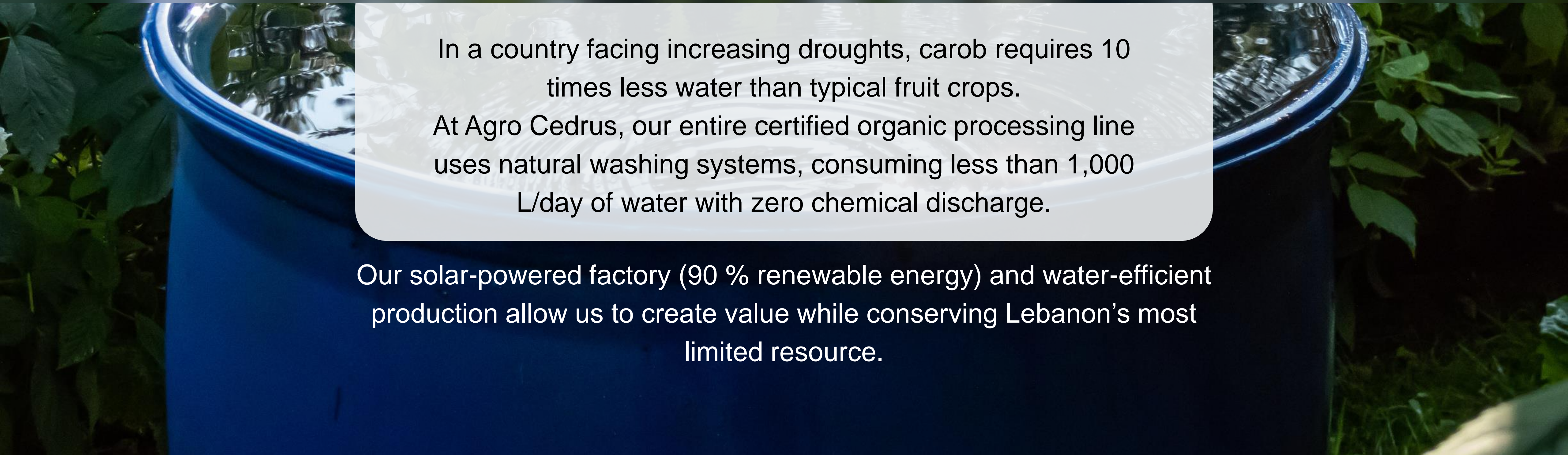
# 1. Restoring Soil Health, Biodiversity, & Climate Resilience

- Carob and olive trees are natural soil protectors.
- They prevent erosion, fix nitrogen, and sequester over **1000 tons of CO<sub>2</sub>** per year from our **4,000-tree plantations**.
- In 2019, Agro Cedrus planted more than **15 varieties of aromatic plants** among the carob and olive trees.
- Through reforestation and training farmers in organic agroforestry, Agro Cedrus restores degraded lands and biodiversity in northern Lebanon.
- We aim to plant **10,000 new trees** by 2029, turning dry and marginal areas into green, productive ecosystems.





## 2. Tackling Water Scarcity



In a country facing increasing droughts, carob requires 10 times less water than typical fruit crops. At Agro Cedrus, our entire certified organic processing line uses natural washing systems, consuming less than 1,000 L/day of water with zero chemical discharge.

Our solar-powered factory (90 % renewable energy) and water-efficient production allow us to create value while conserving Lebanon's most limited resource.





### 3. Closing the Loop From Waste to Value

- Every year, carob molasses production **leaves over 70 tons of residue** or pomace that used to be discarded.
- We turned this challenge into an opportunity by developing **Lebanon's first organic carob-based livestock feed**, rich in fibers, sugars, and antioxidants.
- This innovation **transforms agri-waste** into a climate-friendly alternative to imported soy and corn feed, reducing emissions, costs, and dependency on fossil-fuel-intensive imports.





# 4. Social & Economic Impact

- Our model creates local jobs, raises farmer incomes by up to 30 %, and empowers women, who make up 30 % of our team.
- We work hand-in-hand with smallholders, providing training, fair pricing, and access to organic certification, turning farming into a path for resilience, not survival.





# Looking Ahead



**By 2026, Agro Cedrus aims to scale up the feed production line and replicate our zero-waste model across the Mediterranean.**



2025



# THANK YOU

Do you have any questions ?  
Come and visit our farm

!





IDRON

Interreg  
Euro-MED



Co-funded by  
the European Union

## IDRON

Every summer, millions of farmers across the Mediterranean face the same fear: **running out of water.**

Drought has already cut crop yields in some rural areas by 30-40%, threatening agriculture and entire rural economies.





IDRON

Interreg  
Euro-MED



Co-funded by  
the European Union

## Problem Statement



Rural Mediterranean communities are on the front lines of climate challenge



Water scarcity is no longer seasonal — it's chronic.



Groundwater tables dropping, rainfall less predictable, traditional irrigation wasting up to half the water



The result? Reduced productivity, abandoned farmlands, and unstable rural livelihoods





**IDRON**

**Interreg**  
**Euro-MED**



Co-funded by  
the European Union

## Our Solution - IDRON



At IDRON, we are building resilient water systems that make every drop count



Our solution combines innovation and tradition—creating new water sources and optimizing how water is used in agriculture



We integrate smart irrigation, aquifer recharge, water harvesting and reuse





IDRON

Interreg  
Euro-MED



Co-funded by  
the European Union

## Our Solution - IDRON



What we  
integrate:

- Smart irrigation systems powered by real-time IoT and AI data
- Aquifer recharge technologies that store excess rainwater underground
- Rainwater harvesting and wastewater reuse to supplement supply—all adapted to local Med conditions.





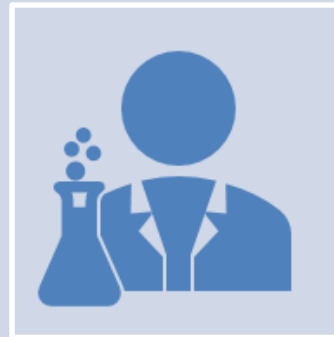
IDRON

Interreg  
Euro-MED

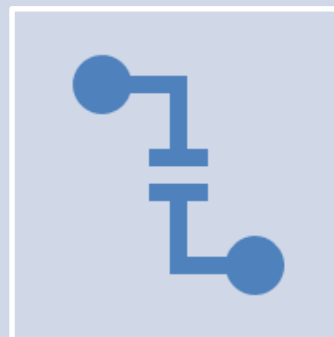


Co-funded by  
the European Union

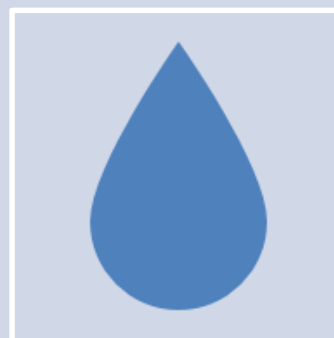
# How it Works



**1. Sensors & drones** continuously monitor soil moisture, weather, water quality



**2. Decision Support System (DSS)** translates data into smart irrigation commands—delivers right amount of water, at right time, right crop



**3. Treated wastewater and collected rainwater** safely recharge aquifers and support irrigation, closing local water loop.





IDRON

Interreg  
Euro-MED



Co-funded by  
the European Union

# Conclusion



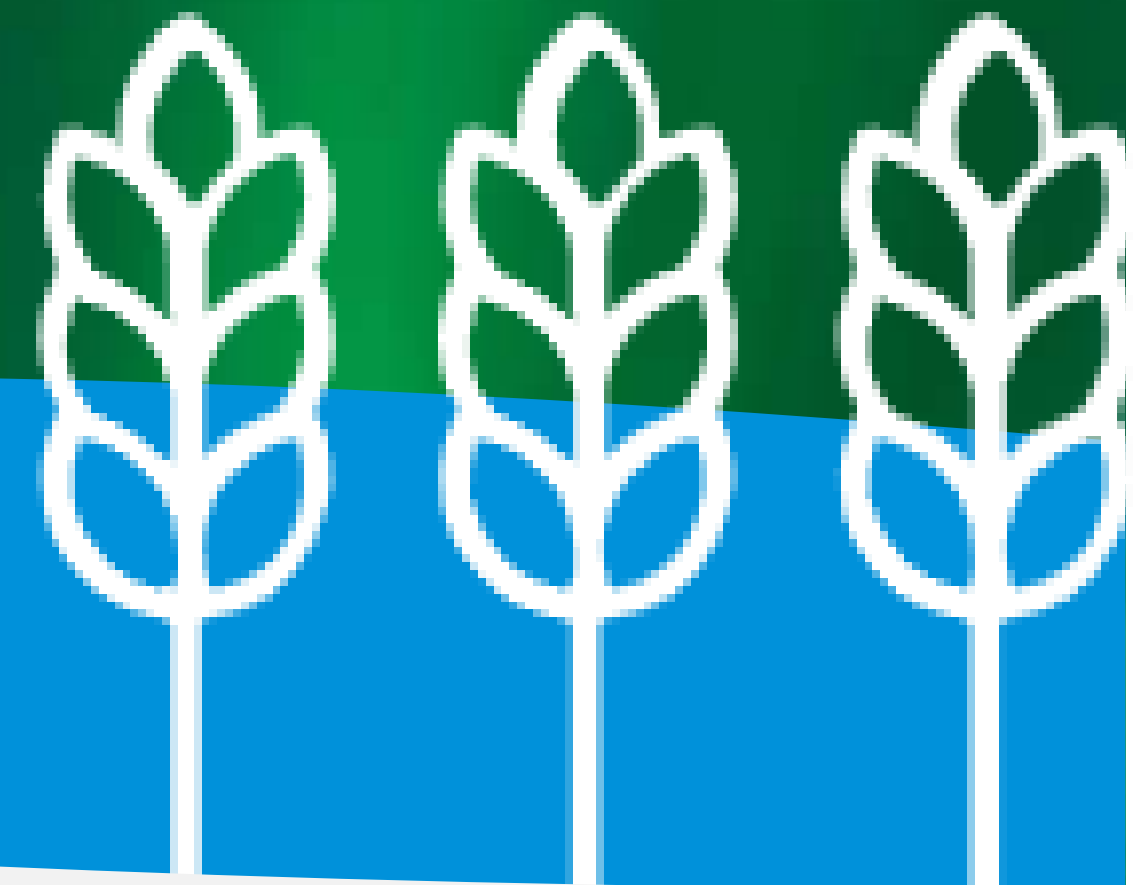
IDRON is a living system – not just a technology



IDRON is hope for rural communities across the  
Mediterranean.



# Clepsydra



**Clepsydra**

**Interreg**  
Euro-MED



Co-funded by  
the European Union

# Preserving European



# Groundwater – invisible to the eye, yet essential to life

It supplies 75% of our drinking water in many Mediterranean regions, but this hidden resource is under growing threat from climate change, pollution, and intensive agriculture. CLEPSYDRA is here to turn the tide.”





Aquifers provide essential drinking water, irrigation, and river sustenance. Yet they remain **poorly understood** and managed





# Clepsydra is:



## Living Labs

Create 4 labs involving public authorities, industry, academics, and civil society.



## Data Protocol

Design collection and screening protocols for groundwater networks.



## Decision Support System

Develop DSS to help water users make informed decisions.



## Educational Tools

Create pedagogic resources about aquifer behavior.







## Data Protocol

Design collection and screening protocols for groundwater networks.

Not all questions related to groundwater status can be answered with the same data set... else monitoring data are just numbers.

Scope of monitoring will define the layout of the monitoring network, sampling procedure...

**Trends**

**Impacts GGPP**

**Climate Change**

**Agri-Food System**

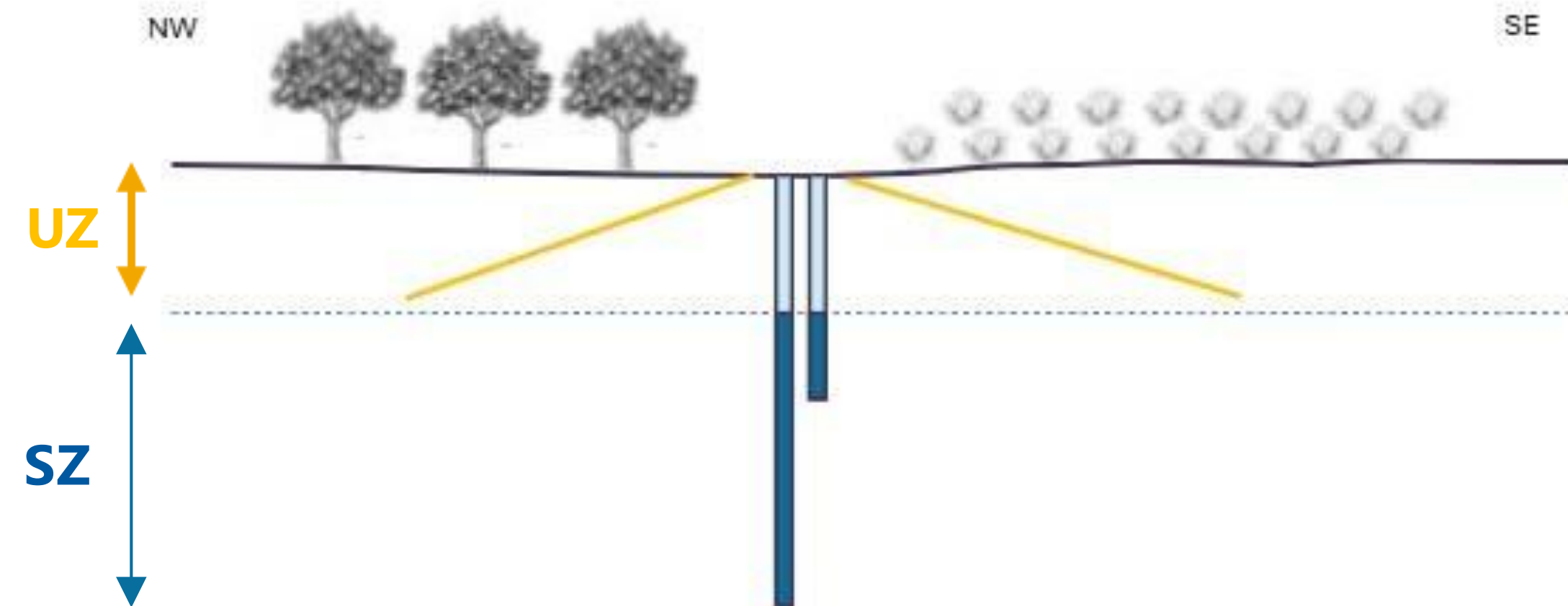




Explain the key steps or methodology behind your project, showcasing how it interacts with it. Focus on its efficiency, sustainability, and impact.

# Unsaturated Zone monitoring

Monitoring of the unsaturated zone is essential for protecting groundwater.



Agri-Food System







## Unsaturated Zone monitoring

UZ monitoring network permits the assessment of variations in nitrate content of recharge water (in the soil) by crop-type and time.

Monitoring results allow us to assess the nitrate flux promoted by rainfall and/or by irrigation infiltration.

Good  
agricultural  
practices

Climate  
Change

**Agri-Food System**







Clepsydra

Interreg  
Euro-MED



Co-funded by  
the European Union

# Thanks!!!

José Luis García Aróstegui  
[j.arostegui@igme.es](mailto:j.arostegui@igme.es)

Virginia María Robles Arenas  
[v.robles@igme.es](mailto:v.robles@igme.es)



Comunidad de  
Regantes  
Campo de Cartagena



UNIVERSIDADE  
DE LISBOA



INSTITUTO  
SUPERIOR DE  
AGRONOMIA





SEATHECHANGE.EU

# SEAS<sub>1.0</sub>



Software for Environmental Aquatic Solutions

Powered By



Sea the Change





Innovative startup connecting  
corporate sustainability to ocean  
conservation and local communities.

We enhance companies' **ESG**  
**performance** and create **value** for the  
**territory.**

**PEOPLE | PLANET | OCEANS**

**> 4 year**

Experience in Blue  
economy sector

**> 20**

Satisfied clients

**> 15**

Impact solutions

**> 90%**

retention





# TEAM



**Luca Barani**  
**Founder CEO**

Project manager  
+15 project managed



**Alberto Carpanese**  
**Founder CCO/CFO**

Economics & BA  
+5y corporate exp



**Francesco Suzzi**  
**Founder CSO**

4.5 € milion successfully  
managed from EU funds



**Elena Semenzato**  
**Communication  
Manager**

Social & Marketing  
specialist  
+20 business supported



**Alex Nicolini**  
**Carbon Manager**

Environmental  
engeener  
+ 6y exp



**Camilla Bertolini**  
**Head of R&D**

PhD in Marine Ecology  
Marie Curie Fellowship  
+10y research exp



**Silvia Santato**  
**Partnership Manager**

PhD in Management  
of Climate Change  
+10y research exp



**Federica Mazzanti**  
**Project Manager**

EU global studies



**Andrea Massmo Murari**  
**Project Manager**

Environmental  
Economist





# WHY SEA?

**+30%**

Global Emission Capture

**90%**

Excess heat absorbed

**3 TRILLION \$**

Value Blue economy 2030

**149 BILLIONS \$**

gap of annual investment to achieve  
SDG 14 of Agenda 2030



## THE GLOBAL GOALS







## ENTRA IN SEAS 1.0

Email

Password

ACCEDI

*Password dimenticata?*

Non hai un account? [Registrati](#)

Powered by Sea the Change

SEAS leverages a **proprietary algorithm** and **two internal methodologies** to create a company's ESG strategy matching local community needs.

It also provides an integrated, standardized **reporting system**, thereby simplifying impact communication and reducing the company's operational complexity.





# HOME SEAS



Request support

HOME

MARKETPLACE

DASHBOARD



DISCOVER VERIFIED HIGH-IMPACT  
PROJECTS

PROPOSE A PROJECT



Click on BECOME A PARTNER to join the Sea the Change network





# BECOME PARTNER



PROJECT



ENVIRONMENT



COMMUNITY



OPENNESS & INNOVATION



PROJECT MATURITY



ECONOMIC AND  
COMMERCIAL ASPECTS



OPERATIONAL AUTONOMY

## ECO Index: the assessment methodology

The index provides a scientific, quantitative, and qualitative assessment of the impacts generated across the following areas:

- **Environment:** environmental impact.
- **Communities:** social impact on local communities.

**Open Innovation:** the capacity to generate open and collaborative innovation.

This methodology allows us to precisely match each client with the project best suited to satisfy their specific sustainability needs and objectives.





# HOME SEAS



Request support

HOME

MARKETPLACE

DASHBOARD



DISCOVER VERIFIED HIGH-IMPACT  
PROJECTS



PROPOSE A PROJECT

Click on DISCOVER IMPACT PROJECTS to identify the impact strategy that aligns best with your ESG goals.





# BUILD YOUR IMPACT PROFILE

## ENVIRONMENT

Reduction, protection, regeneration. Where would you start?

## SOCIAL IMPACT

Social impact starts with responsible choices.

## TEAM

Empower your team to drive positive change.

## COMMUNICATION

Transparency builds trust. Who do you want to reach?

## IMPACT AREA

Local, national or global: every action matters.

Answering the questionnaire's questions helps us **understand your ESG needs**. This enables us to direct you towards the **most appropriate impact strategy** for your company.






# MARKETPLACE

By aligning your responses with project ratings based on the ECO Index, you will identify the projects that are most suitable for your company!

## SUGGESTED FOR YOU




60%

Spain

### Poseidon

POSEIDON è un progetto per mappare, monitorare e proteggere le praterie di Posidonia oceanica nella costa di fronte a Barcellona: rilievi georeferenziati, raccolta dati su biodiversità e inserimento nelle carte nautiche, con monitoraggi...

[View details](#)




40%

Emilia-Romagna

### Fishing for litter

Fishing for Litter è un progetto di Fondazione Cetacea, in collaborazione con Sea the Change, che coinvolge i pescatori della Romagna nel recupero dei rifiuti dai fondali dell'Adriatico. Durante uscite dedicate, i materiali raccolti vengono pesati,...

[View details](#)



20%

Italy Worldwide

### Gestione sostenibilità evento

[View details](#)






# CREATE YOUR OWN STRATEGY

Select the project and complementary services. A consultant will contact you with the best proposal for your company.

|                                     |  |
|-------------------------------------|--|
| <input type="checkbox"/>            | Compensazione con Blu Carbon Credit - Generati in laguna veneziana |
| <input checked="" type="checkbox"/> | Report d'impatto   |
| <input type="checkbox"/>            | Campagna social a impatto  |
| <input type="checkbox"/>            | Reels a impatto  |
| <input checked="" type="checkbox"/> | Video a impatto  |
| <input type="checkbox"/>            | Podcast a impatto  |
| <input checked="" type="checkbox"/> | Teambuilding a tema  |



**ESRS**  
**GRI**  
**SDGS**





# DIGITAL TOOLS

In the Sea the Change ecosystem, you will have the opportunity to use digital tools that allow you to boost your sustainability processes.

- **EVENT CARBON FOOTPRINT**
- **ENVIRONMENTAL MONITORING TOOL ISO 14001**
- **SEA FOOTPRINT**



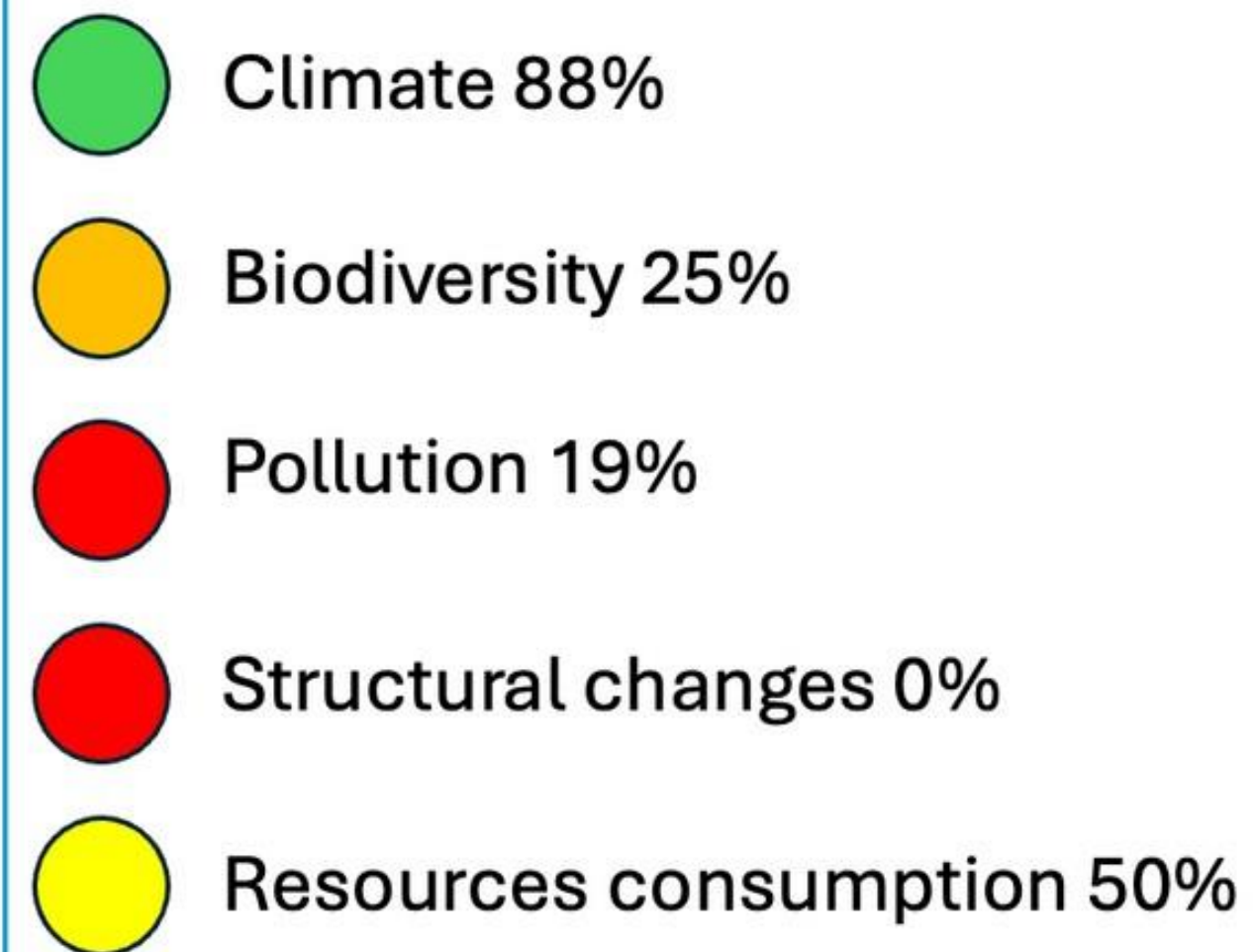


# SEA FOOTPRINT

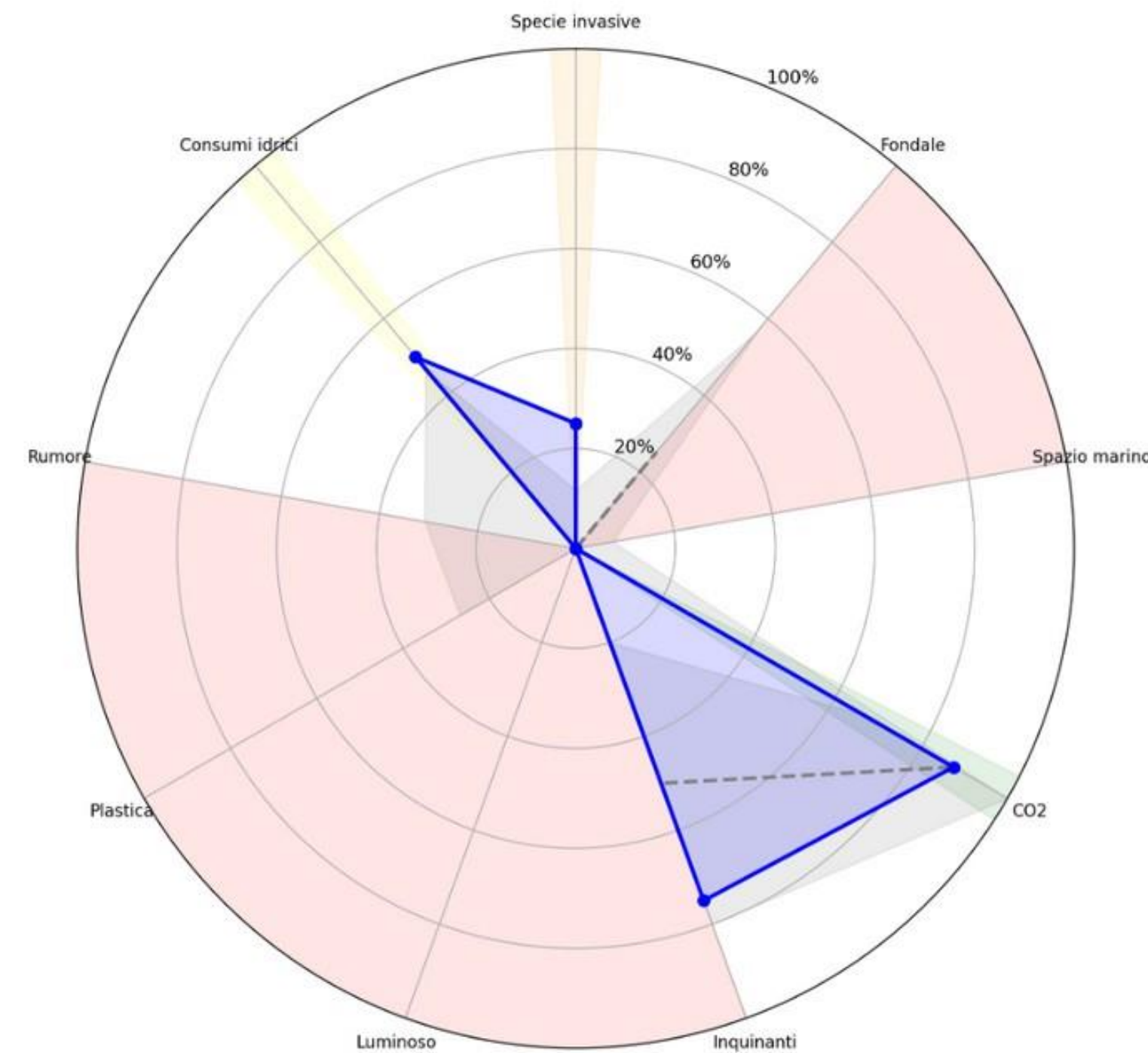
This software enables companies to identify their impact on marine ecosystems and develop a strategy that delivers a positive environmental, social, and economic return for the company, its stakeholders and the planet.

## PHASE 1

### Macroarea analysis



### Radar plot sectorial comparison





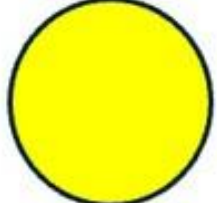
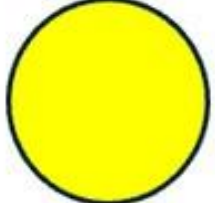
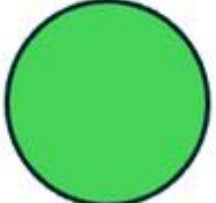
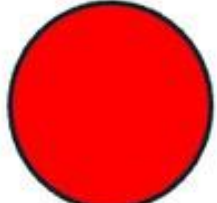

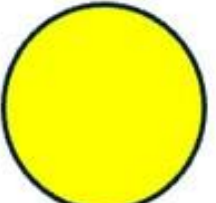

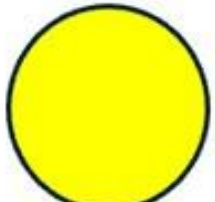
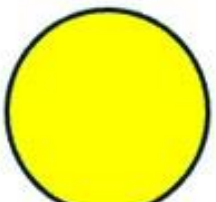
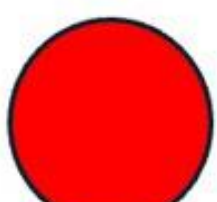
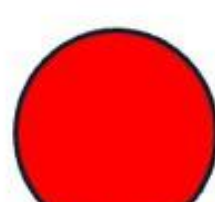

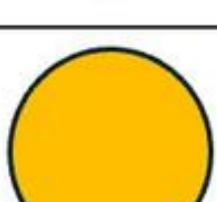
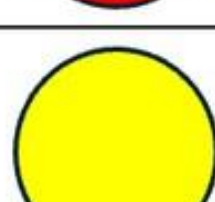
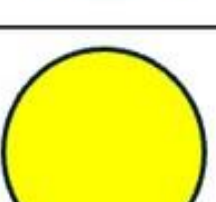
# SEA FOOTPRINT

**Phase 2** represents the next step: a **quantitative and time-comparable measurement**.

This phase allows companies to:

- **Monitor** the company's key marine environmental impacts;
- **Verify** if the current reduction strategies are effective;
- **Compare** the data with desirable targets (regulatory or scientific);
- **Evaluate** the consistency of their journey with a tangible environmental improvement.

Progress of the reduction process compared with current regulations

| Macroarea             | Anno 1  | Anno 2  | Anno 3  |
|-----------------------|---|---|---|
| Climate               |    |    |    |
| Biodiversity          |   |   |   |
| Pollution             |  |  |  |
| Structural changes    |  |  |  |
| Resources consumption |  |  |  |





# AWARDS AND NETWORK





CONTACT ME

[PARTNERSHIP@SEATHECHANGE.EU](mailto:PARTNERSHIP@SEATHECHANGE.EU)



DIVE INTO IMPACTFUL SUSTAINABILITY





Photograph: Katia Christodoulou/epa/Corbis



CHALLENGE :  
Water scarcity in a context of  
extreme weather conditions

180 Million people impacted  
already

ENVIRONMENT • CLIMATE CHANGE

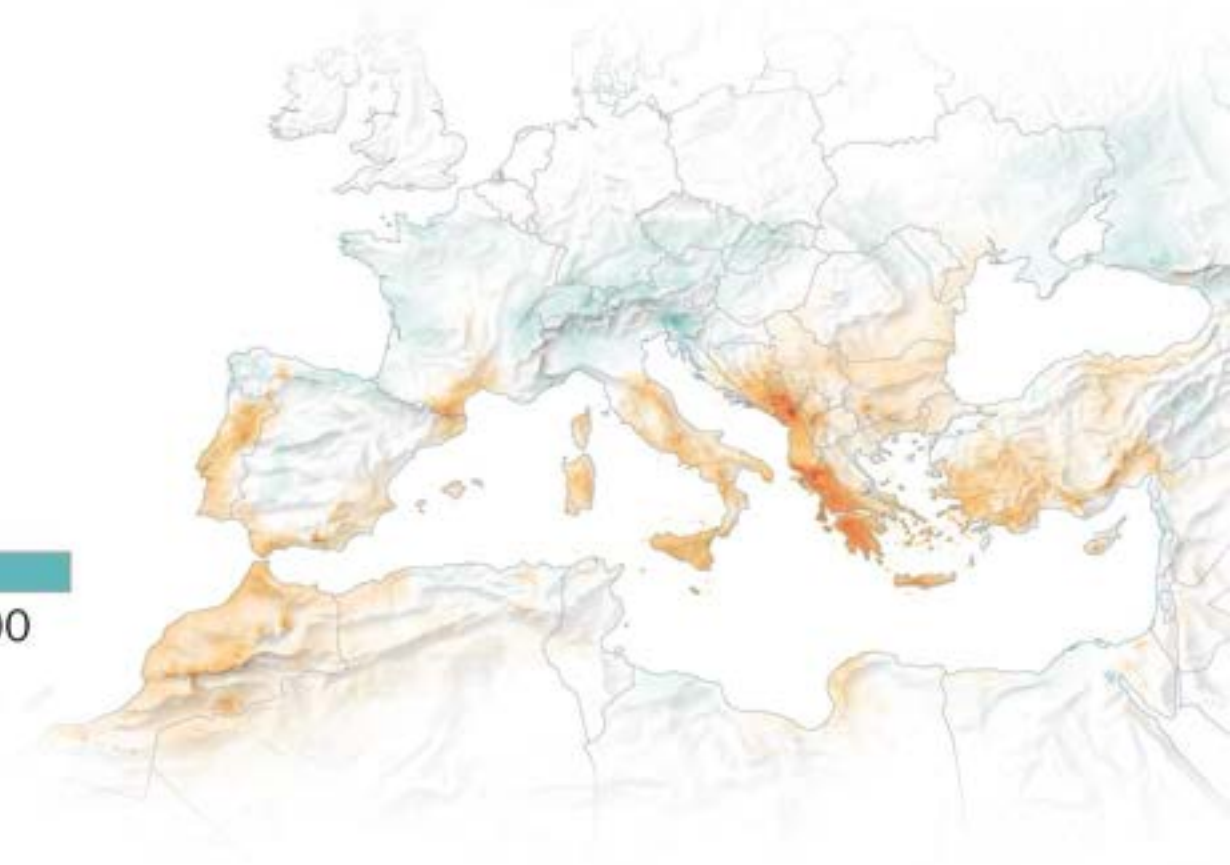
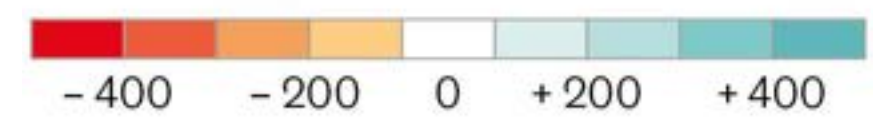
# Lasting drought takes hold of Mediterranean region

Water shortages are affecting areas stretching from North Africa to Italy, as well as Portugal, Spain, France, Malta, Romania and Greece.

By Martine Valo  
Published on March 19, 2024, at 3:49 pm (Paris), updated on March 19, 2024, at 4:01 pm • 4 min read • [Lire en français](#)

Drought in the Mediterranean Basin

Precipitation anomalies, in millimeters, during the last three months (December 2023 to February 2024), compared to the average for the same three months between 1980 and 2010







**Germ of Life**

**Interreg  
Euro-MED**



**Co-funded by  
the European Union**



**UNIVERSITY OF  
PATRAS**  
ΠΑΝΕΠΙΣΤΗΜΙΟ ΠΑΤΡΩΝ



**REGION  
OF WESTERN  
GREECE**  
*full of contrast!*



**cmcc**  
Centro Euro-Mediterraneo  
sui Cambiamenti Climatici



**UbiTel**

**Atos**



**EDIA** Empresa de Desenvolvimento  
e Infra-estruturas do Alqueva, S.A.



**Junta de Andalucía**  
Consejería de Sostenibilidad,  
Medio Ambiente y Economía Azul

**DOTSOFT**  
TECHNOLOGY + PROJECTS + SOLUTIONS



Visit our website <https://germoflife.interreg-euro-med.eu>

Follow us on our social media





**Our solution**

Vulnerability Assessment Tool



**Drought Prediction Tool**



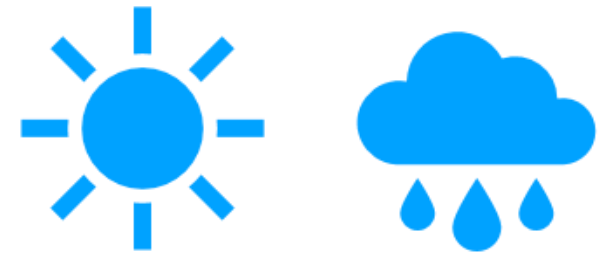
Innovation Procurement Platform  
(Nature Based Solutions)





What type of drought are we tackling exactly?

# Selected drought indicators



Meteorological drought  
(SPEI)



Stressed vegetation  
(NDVI)



Crop stress  
(CWSI)

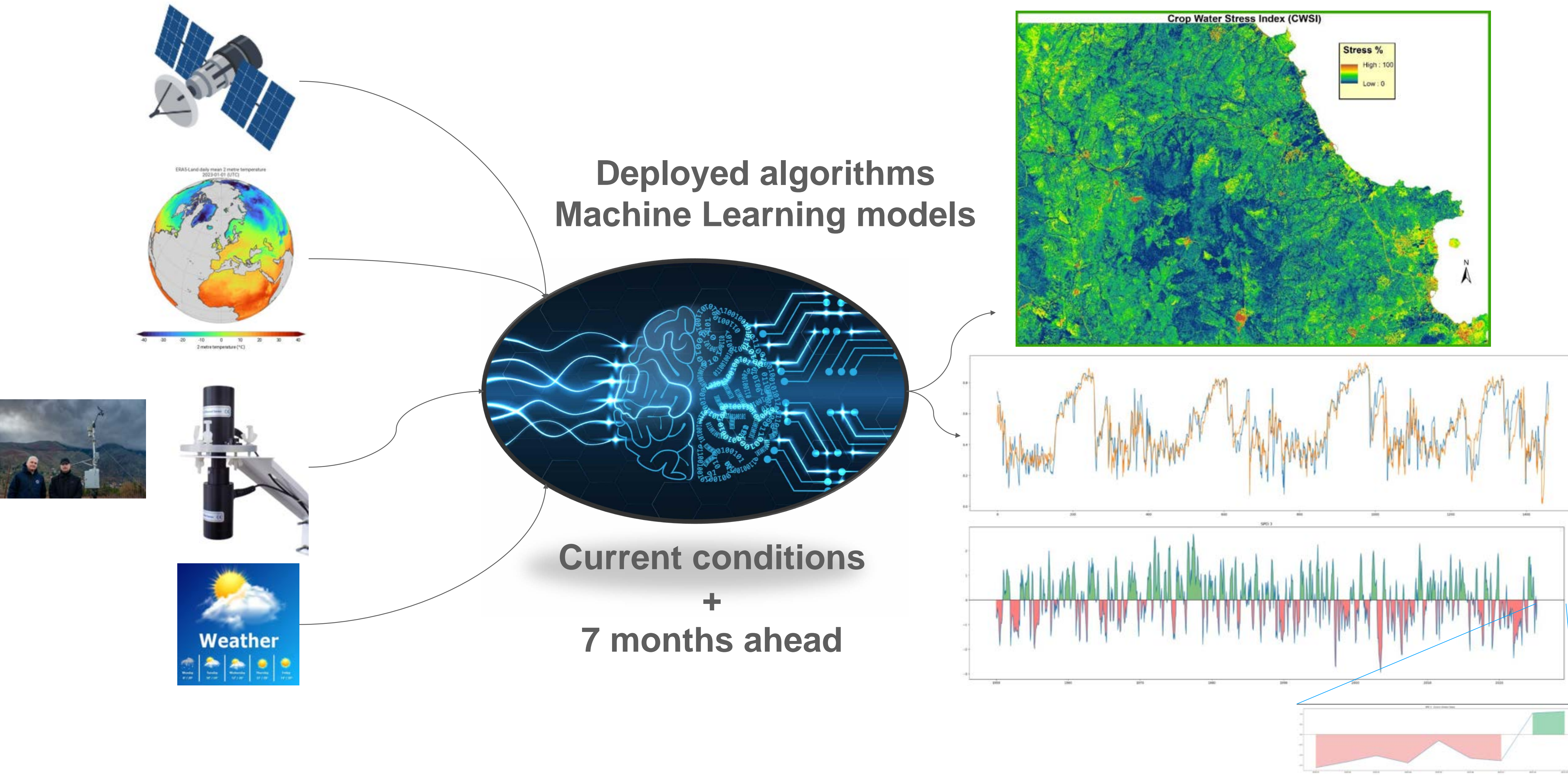


Combined new indicator :  
DHI = Drought Hazard Index





# How we forecast drought conditions





**Thank** You.

# Germ of Life

Visit our website

<https://germoflife.interreg-euro-med.eu>

Contact : Léa DURAN  
lea.duran@atos.net

Follow us on our social media





# ITI Água e Ecossistemas de Paisagem

Innovative Sustainable Economy BootCamp

Interreg EuroMED

24<sup>th</sup> of oct 2025





# Context Indicators

96400 residents  
-1,5% than in  
2011

In 2021: 678.6 thousand residents,  
¼ are seniors

26,2% with 65 or  
+ yr  
223 aging index

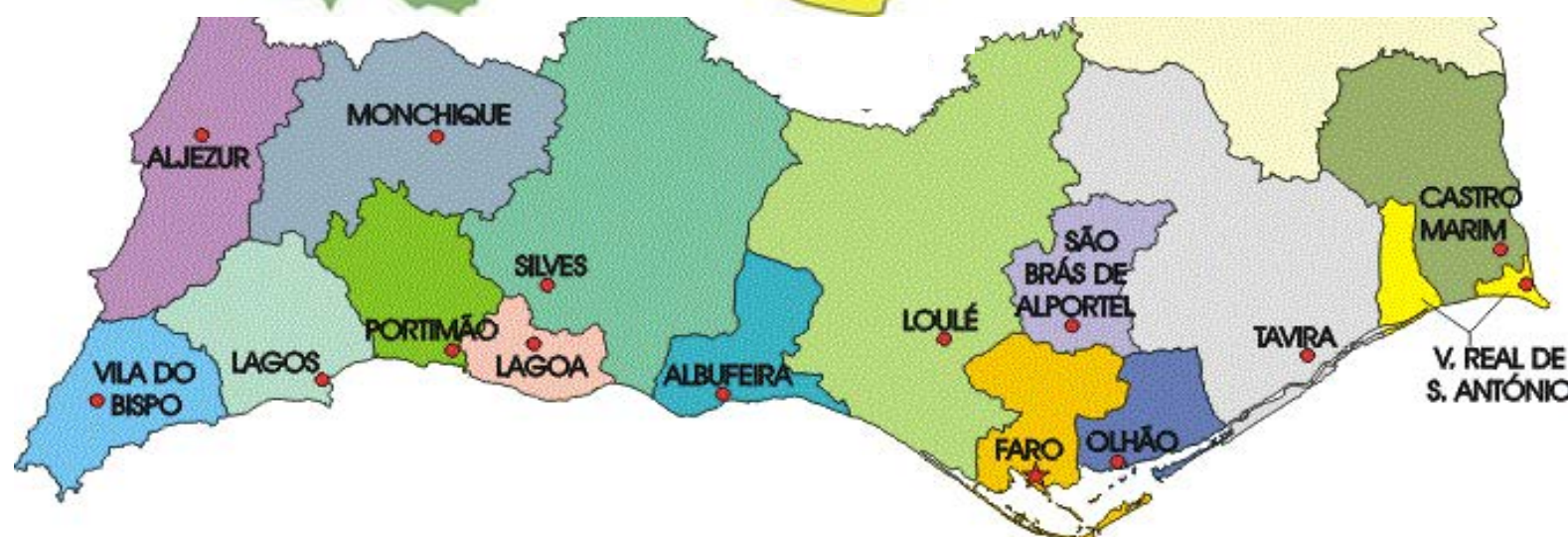
49,9%  
rate



114900 residents  
-9,3% than in 2011

27,6% com 65 ou + anos  
218 aging index

45,8% employment rate



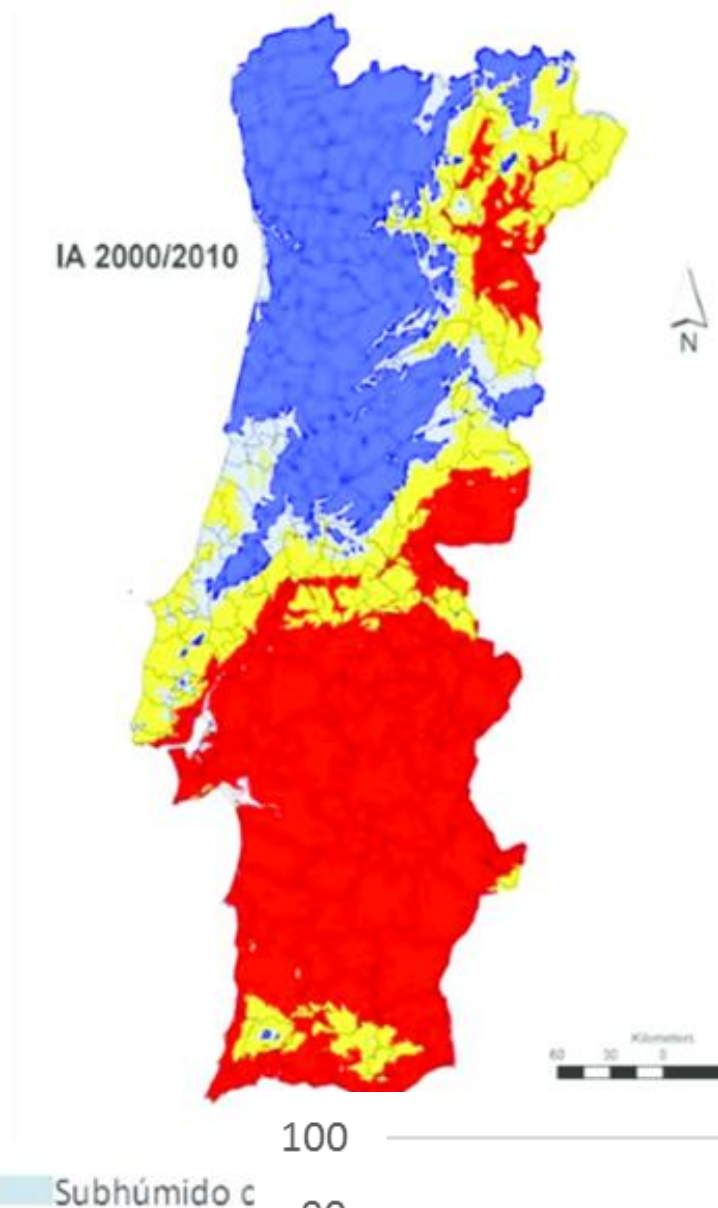
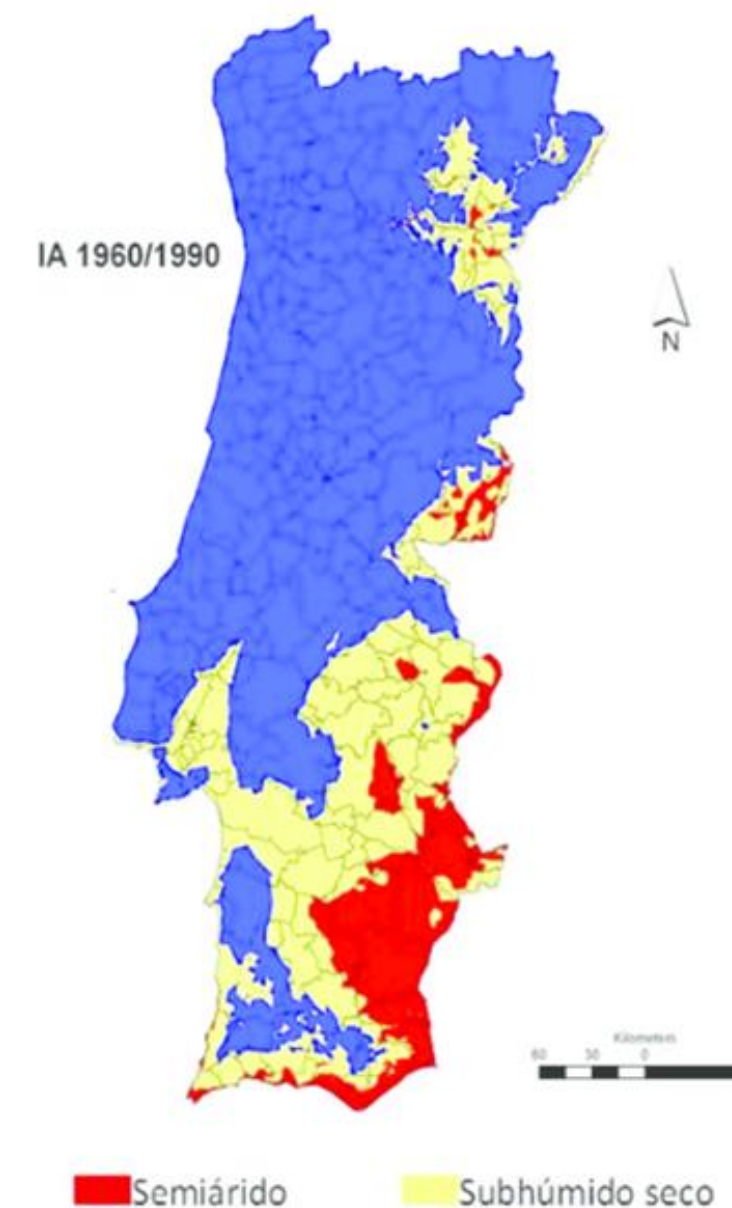
467300 residents  
+3,6% than in 2011

23,7% with 65 or +  
yr  
177 aging index

46,5% employment  
rate

Fonte: Recenseamento da População 2021, INE

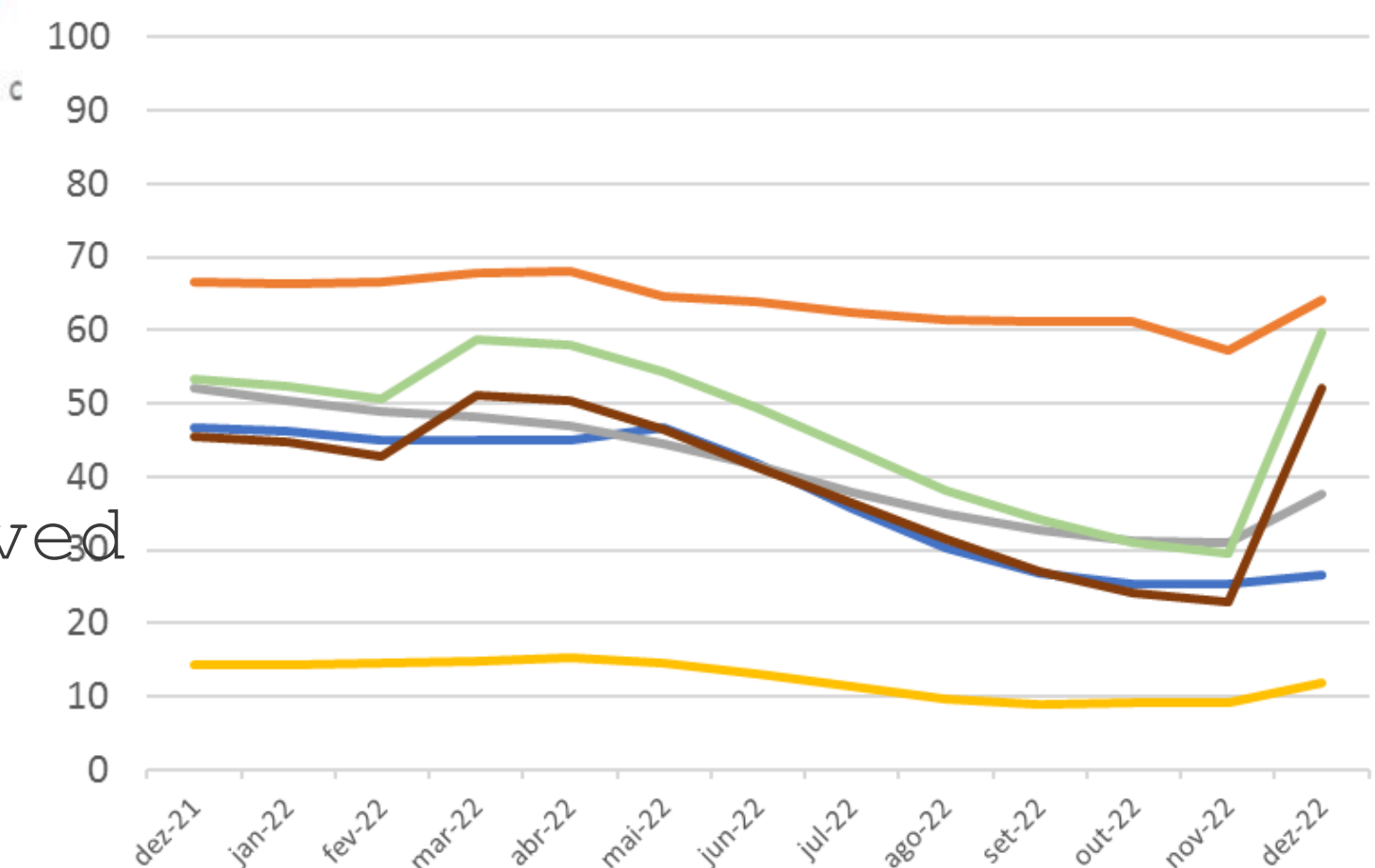
Nota: Mapas com escala



Aridity index: Evaluates  
the relationship between  
precipitation values (P)  
and potential  
evapotranspiration (ETP)

Storage observed  
in reservoirs  
(%)

in: SNIRH





RCM 97/2020 of 13 November, in its paragraphs a) and b) of number 9, indicates that flexible models of territorial-based programming can be defined to respond to specific territorial problems, aiming at *"solving specific structural weaknesses of certain territories, including economic, social and environmental and, from a selectivity perspective, privileging functional territories for strategies of territorial competitiveness and economic valorization of resources endogenous"*.

The implementation of structuring strategies and investments should ensure the involvement

2 NUTS II

3 NUTS III

17 Concelhos

Problems overlap  
administrative  
boundaries

Innovative approach  
in European terms

Background  
Green Cord  
Project/Cordão Verde



## - Strategic Planning-

### EREI ALGARVE

Tourism  
Economy of the Sea  
Endogenous Terrestrial Resources  
Health, Wellness and Longevity  
Cultural and Creative Industries  
Environmental Sustainability  
Digitalization and ICT

### SOCIETAL CHALLENGES

Climate Change  
Circular Economy  
Aging  
Digitalization  
Mediterranean Diet

### EREI ALENTEJO

Sustainable bioeconomy  
Tourism and Hospitality  
Social Innovation and  
Citizenship  
Cultural Ecosystems  
Mobility and Logistics  
Sustainable energy

Innovation | Research & Development | Transfer



## Action Plan

### From the Strategy(s) to the Action Plan:



Public Session for the Presentation of  
the Action Plan, 02 February 2024,  
Messines

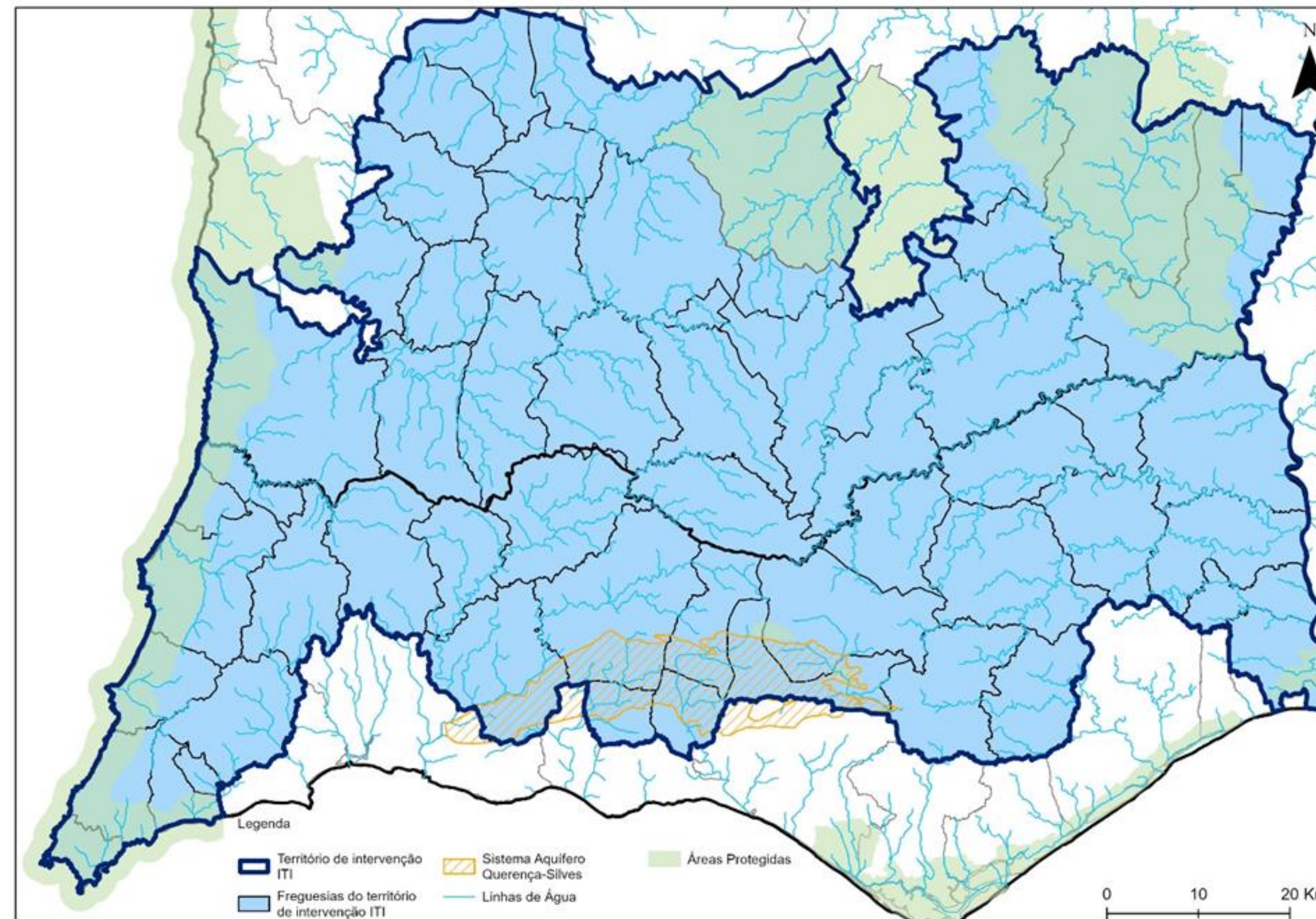


# - Theme and Territory-

## Water and Landscape Ecosystems

Sustentabilidade

Competitividade



Water and  
Biodiversity  
Smart Management

ITI ÁGUA e ECOSSISTEMAS DE PAISAGEM | 52,8 M€

77,7 M€ Estimates of investment intentions



## Thematic areas of intervention



53 Intervention

Typologies



# – ITI Água e Ecossistemas de Paisagem – Action Plan – Participatory Sessions

Santa Clara - Odemira (24/05)



Odelouca - Monchique (29/05)



Azinhal - Castro Marim (30/05)



Paderne - Albufeira (30/05)



Ourique (2/06)



Almodôvar (2/06)



Querença (26/06)





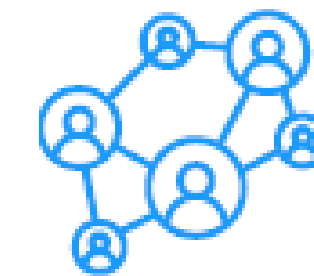
# – ITI Água e Ecossistemas de Paisagem – Plano de Ação

## Project Sheets - Collection of Contributions



Investimento Territorial Integrado Água e Ecossistemas de Paisagem

| Projetos estruturantes/ Iniciativas  | [Nome do projeto]   |
|--|---|
| <b>Descrição:</b><br>[Breve enquadramento e descrição do projeto]<br><br>[Fundamentação da classificação do projeto estruturante]<br><br><b>Objetivos gerais:</b> <ul style="list-style-type: none"><li>▶ [Objetivo]</li><li>▶ [Objetivo]</li><li>▶ [Objetivo]</li></ul> |   |
| <b>Promotor:</b> <ul style="list-style-type: none"><li>▶ [Nome da entidade]</li></ul>  | <b>Potenciais parceiros:</b> <ul style="list-style-type: none"><li>▶ [Nome do parceiro]</li><li>▶ [Nome do parceiro]</li></ul>  |
| <b>Período de implementação:</b> <ul style="list-style-type: none"><li>▶ AAAA – AAAA</li></ul>   | <b>Maturidade do projeto:</b> <ul style="list-style-type: none"><li>▶ [grau de maturidade do projeto]</li></ul>   |
| <b>Localização:</b> <ul style="list-style-type: none"><li>▶ [Concelho(s)]</li></ul>  | <b>Montante de investimento:</b> <ul style="list-style-type: none"><li>▶ [Até €1M]</li><li>▶ [Entre €1M e €5M]</li><li>▶ [Entre €5 e €10M]</li><li>▶ [Mais de €10M]</li></ul> |



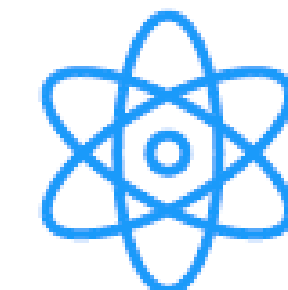
**123** entidades que  
contribuíram para o PA



**63%** entidades do  
setor público que  
contribuíram



**25%** entidades do  
setor associativo que  
contribuíram



**12%** entidades da  
academia e centros de  
I&D associativo que  
contribuíram



## - ITI Água e Ecossistemas de Paisagem | Financing -

**ITI ÁGUA e ECOSSISTEMAS DE PAISAGEM | 52,8 M€**

**PR ALGARVE 2030**  
32,5 M€

**PR ALENTEJO 2030**  
20,3 M€

OE 1.1: Investigação e Inovação  
OE 1.3: Crescimento e Competitividade das PME  
OE 1.4: Especialização Inteligente

OE 2.4: Alterações Climáticas e Riscos  
OE 2.6: Economia Circular  
OE 2.7: Proteção da Natureza e Biodiversidade

OE 5.2: Desenvolvimento Zonas Não Urbanas

OE 2.4: Alterações Climáticas e Riscos  
OE 2.7: Proteção da Natureza e Biodiversidade

OE 5.2: Desenvolvimento Zonas Não Urbanas





# CALLS – ALGARVE 2030 Regional Programme



Adaptation to Climate Change ITI Water and Landscape Ecosystems – Algarve and Alentejo.

**Call Code:** ALGARVE-2025-7

**Envelope:** €5,500,000

**End Date:** 2026-03-31

Water Resources Management – ITI Water and Landscape Ecosystems – Algarve and Alentejo

**Call Code:** ALGARVE-2024-35

**Envelope :** €8,000,000

**End Date:** 2025-07-29

Conservation of nature, biodiversity and natural heritage – ITI Water and Landscape Ecosystems – Algarve and Alentejo

**Call Code:** ALGARVE-2025-8

**Envelope :** €10,000,000

**End Date:** 2026-03-31



## OPEN CALLS

## Alentejo 2030 Regional Program



Water Resources Management  
(Protection against floods and  
floods) - ITI Water and  
Landscape Ecosystems - Algarve  
and Alentejo

**Call Code:** ALT2030-2025-6

**Envelope:** 825 000 €

**End:** 2025-12-19

Water Resources Management  
(Monitoring Actions and  
Studies) - ITI Water and  
Landscape Ecosystems -  
Algarve and Alentejo

**Call Code:** ALT2030-2025-7

**Envelope:** 1 650 000 €

**End:** 2025-12-19

Water Resources Management  
- ITI Water and Landscape  
Ecosystems - Algarve and  
Alentejo

**Call Code:** ALT2030-2024-39

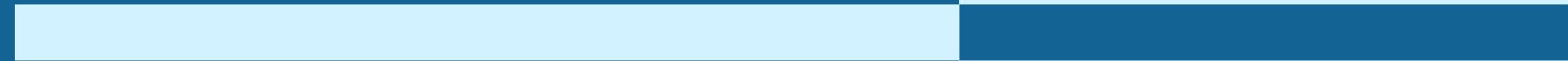
**Envelope:** 825 000 €

**End:** 2025-09-26



Governance Model

ITI Água e Ecossistemas de  
Paisagem





Coordination Committee (in place on the  
2nd of oct 2024)  
Advisory Board

strong collaboration,  
cooperation and  
mobilization of the  
various actors involved  
with the theme and  
present in the  
intervention territory.

assume that coherence  
between the operations to  
be financed by the Action  
Plan will be ensured.

**Keywords:** Multilevel |  
Participation | Wrapping  
Up | Commitment | Co-  
Responsibility |  
Assessment | Monitoring

## Meetings:

Castro Verde - 31 October 2024 (thematic **working groups**)

**1** - Innovation, research, knowledge, circular economy and business

**2** - Hydrographic Network, protection, resource management

**3** - Climate Change and Terrestrial Ecosystems - Water Resources

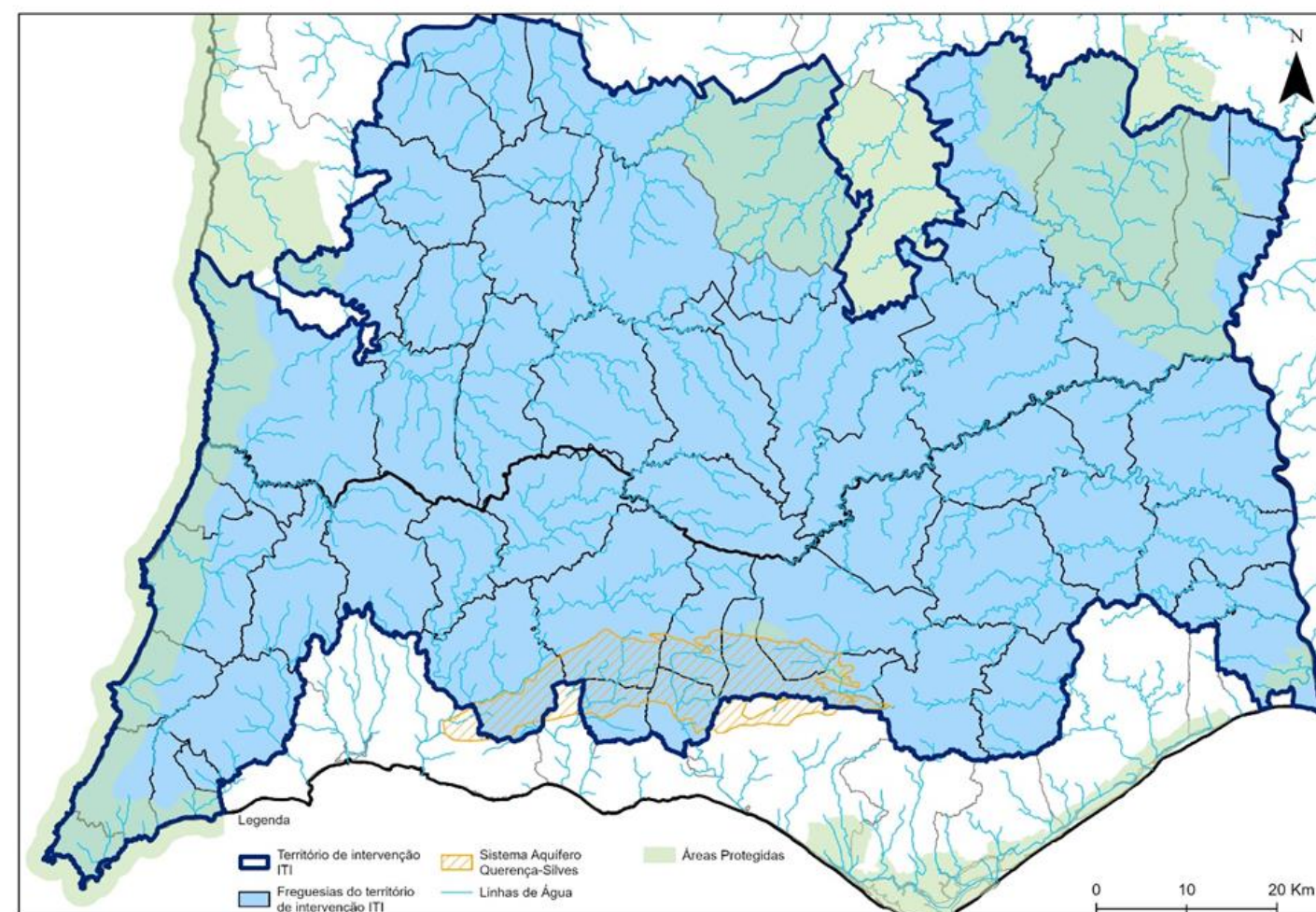
**4** - Climate Change and Terrestrial Ecosystems - Biodiversity and Nature Conservation

**5** and **6** - Cordão Verde Bio-region of the Algarve and Alentejo and Capacity Building

Silves, São Bartolomeu de Messines - 15 January 2025

Monchique - 19 March 2025



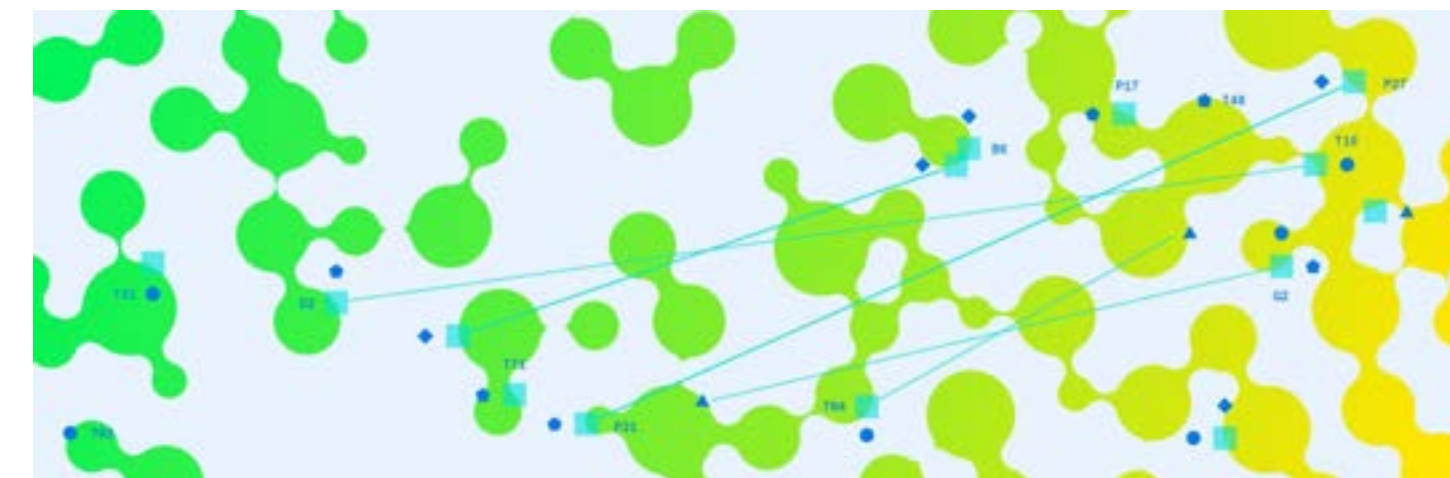


Muito Obrigado



# 2<sup>nd</sup> Round

## MED ecosystem & PA regions



Azores, Portugal  
Catalunya, Spain  
Ankara, Turkey



Innovative  
sustainable economy

Interreg  
Euro-MED



Co-funded by  
the European Union



# GAMIFIED ACTIVITY

Scan the QR code

Or go to



[www.menti.com](https://www.menti.com)  
1128 9145



Innovative  
sustainable economy

Interreg  
Euro-MED



Co-funded by  
the European Union





Redesigning the Primary Sector for Maximizing  
Bioeconomy Development



Co-funded by  
the European Union



# PRIMED at a glance

## Title

Redesigning the Primary Sector for Maximizing Bioeconomy Development

36

MONTHS



13

PARTNERS



8

COUNTRIES



4M

FUNDING



## Partners



LLab2 - Bio-Silica Lab

LLab4 - BioEire Lab

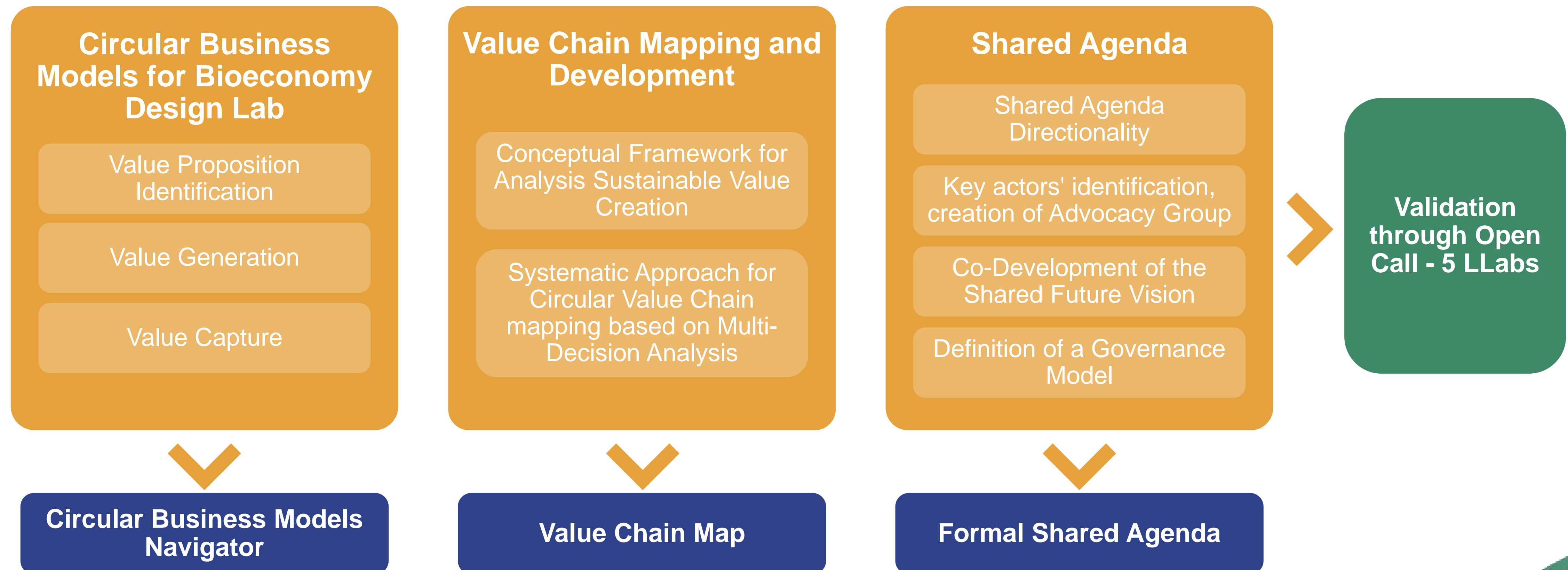
LLab5 - CellFactory

LLab3 - Liguria Bio-Lab

LLab1 - ALC Bio-Lab



# PRIMED CONCEPT - Multi-actor co-creation approach





# The aim

To **co-create** innovative forms of **cooperation** to integrate **primary producers** in novel bioeconomy value chains with a **multi-actor approach** with an **Open Access knowledge hub**.



# Objectives



**Demonstration of bio-based processes, process characterization, and impact monitoring.**

(Produce 15 high-value bio-based materials and products and validate at least 10 value chains)



**Circular business models development.**

(10 new bio-based CBMB and 15 value chains)



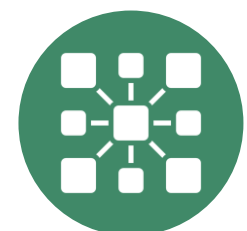
**Lessons learned, policy recommendations, and exploitation.**

(project website, open-access repositories, conferences, and 3 policy workshops, and 5 training sessions.)



**Creation of the collaborative ecosystem for circular business models co-creation.**

(25 workshops, 200 platform users.)



**Establishing framework conditions.**

(100 researchers using the online Toolbox after the project)



# Living Labs

## Living Labs



**LLab1:**  
**ALC Bio-Lab**  
**(ES)**



**LLab2: Bio-Silica**  
**Lab (PT)**



**LLab3: Liguria**  
**Bio-Lab (IT)**



**LLab4: BioEire**  
**Lab (IE)**



**LLab5:**  
**CellFactory Lab**  
**(FI)**

## Biomass sector

Farming

Forestry &  
Agri-food

Fisheries &  
Agri-food

Farming &  
Forestry

Agri-food

## Feedstock



## Innovative Technologies

Anaerobic Digestion and  
biochemical transformation

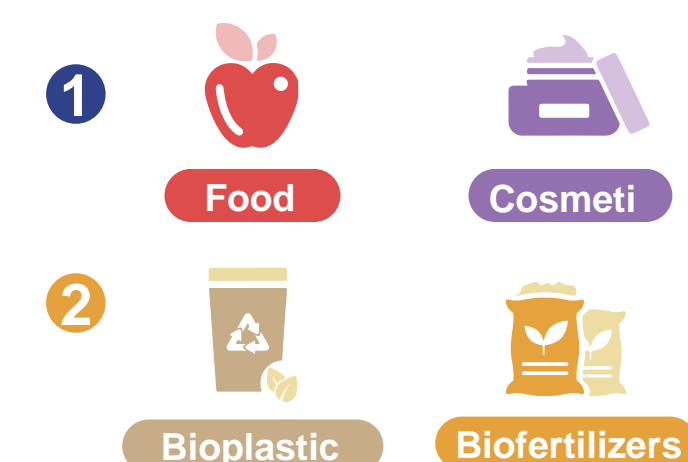
Functional silica nanoparticles

Biomass pre-treatment and  
bioconversion and  
biodegradable films  
technologies

Fermentation and pyrolysis

Plant cell culture technology

## End products





# Shared Agendas development

(M1 Q1)

Table 25. Initial maturity of Living Labs [M4] and definition level of key aspects of the Shared Agendas [M17]. ML: Maturity level of the Living Lab at month 4. CH: Territorial challenges. OP: mapping of opportunities. AL: establishment of alliances. AS: priority assets. FV: future vision.

| ST4.1.3. THE SHARED AGENDA DEVELOPMENT |       |         |                         |                         |                         |                    |                         |
|--|-------|---------|-------------------------|-------------------------|-------------------------|--------------------|-------------------------|
| #                                      | LL    | ML (M4) | CH (M17)                | OP (M17)                | AL (M17)                | AS (M17)           | FV (M17)                |
| LL1                                    | ALC   | 5 - 6   | Defined and Prioritized | Broadly Defined         | Strong Network          | Operational Assets | Validated Shared Agenda |
| LL2                                    | CENTI | 1 - 2   | Key Ones Listed         | Key Ones Listed         | Connections established | Unmapped Assets    | Second draft            |
| LL3                                    | FILSE | 3 - 4   | Defined and Prioritized | Defined and Prioritized | Sectoral Networks       | Mobilized Assets   | First draft             |
| LL4                                    | IBF   | 3 - 4   | Defined and Prioritized | Defined and Prioritized | Emerging Network        | Mobilized Assets   | First draft             |
| LL5                                    | VTT   | 1 - 2   | Key Ones Listed         | Key Ones Listed         | Connections established | Unmapped Assets    | First draft             |





Co-funded by  
the European Union



Redesigning the Primary Sector for Maximizing  
Bioeconomy Development



**CONCAT LL:**  
**Collaborative mONitoring and Climate AdapTation:**  
**A Living Lab for enhancing the resilience of agriculture in Catalonia**





# Region in focus: Catalonia

Between 2022–2024, Catalan agriculture entered a **new climate regime**

Catalonia’s agriculture (20% of industrial GDP) has faced **unprecedented droughts and heatwaves** since 2022.

The period 2022–2024 registered the **lowest rainfall in over 40 years**, leading to **massive yield losses**, particularly in the Ebro basin and Lleida plain.

## Product

## Main Impacts

**Olives**

**Worst harvest in 15 years**; yields dropped by >50%

**Apples**

Yields down 30–40% in Lleida (2023)  
Quality worsened.

**Wheat & Barley**

Reduced yields up to 40%.  
Soil erosion and nutrient loss intensified.

**Poultry**

Heat stress episodes increased mortality and reduced feed efficiency and egg production.

**Aquacultured Fish**

Rising estuary temperatures and reduced water quality stressed fish stocks.





## Collaborative mONitoring and Climate AdapTation

A Living Lab for enhancing the resilience of agriculture in Catalonia

Identify and assess the ***vulnerabilities of the Catalan agri-food sector*** and system.

Currently centering on **5 products**, joining IRTA's R&D capabilities with the local cooperatives' knowledge.

Develop **climate scenarios** that project the possible impacts of climate change on food security.

**Adaptive strategies** to address immediate and long-term challenges, with focus on food sustainability and resilience.

**Improve agricultural resilience** to climate shocks, and develop strategies that reduce climate impact.

**Olives**



**Apples**



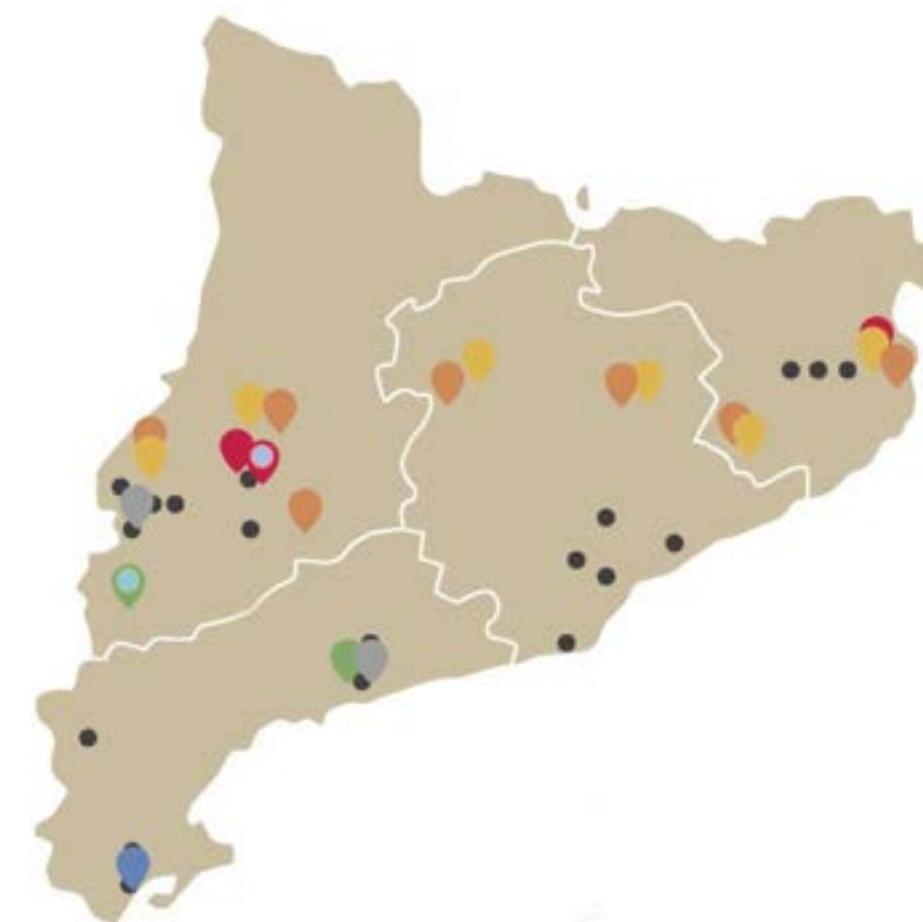
**Wheat**



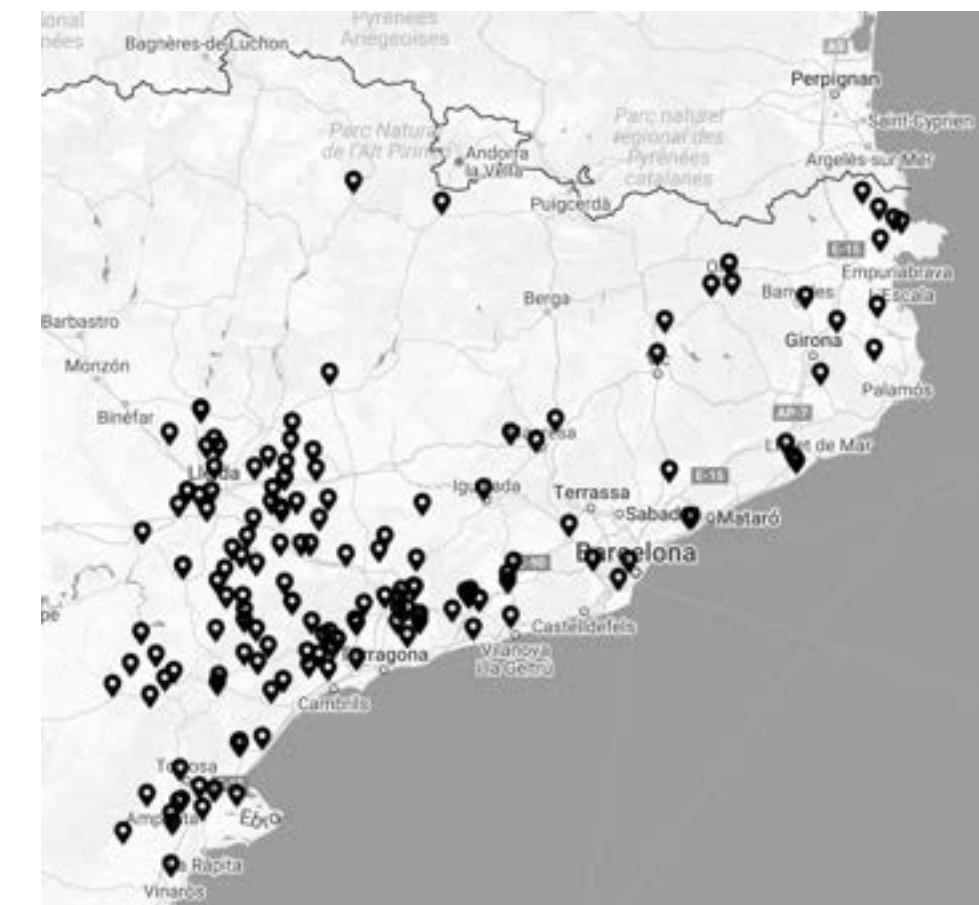
**Mullet**



**Poultry**



**IRTA's centers Wfield stations**



**Catalan agricultural cooperatives**



# CONCAT LL Workshop on Resilience and Climate Change Mitigation in the Agrifood Sector

Date: October 3th, 2024.

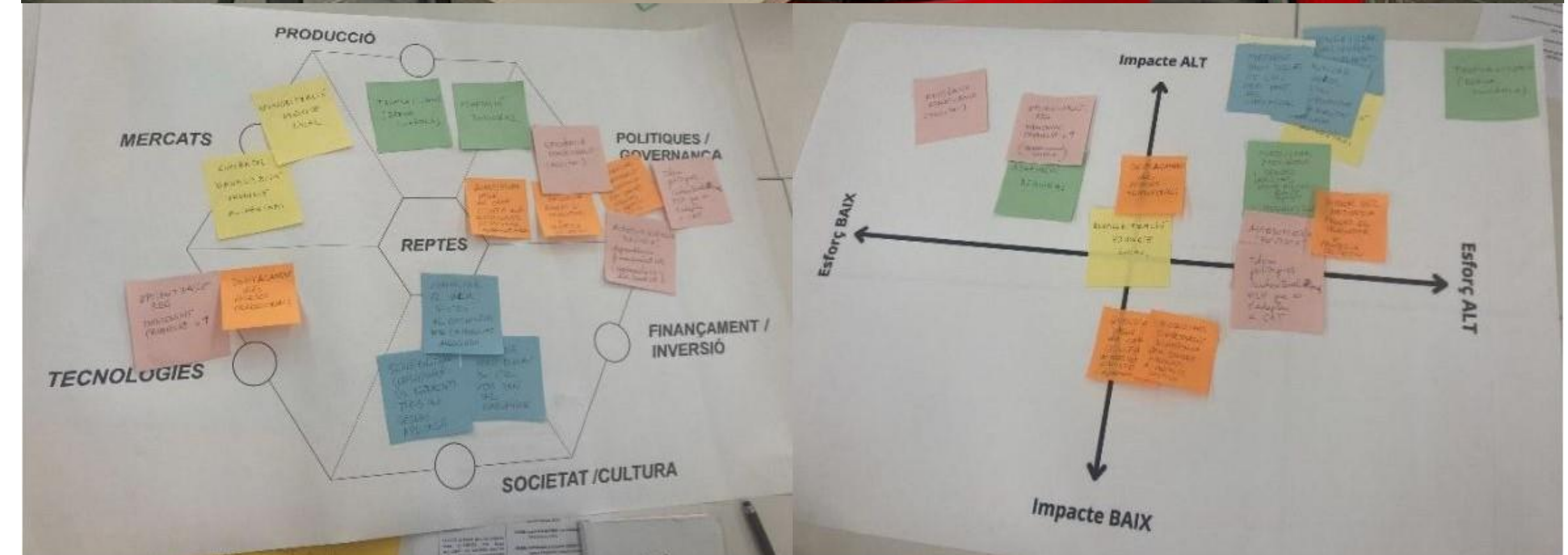
This workshop aims is to consolidate the Living Lab community to gather the necessary knowledge and information, conduct experiments, and define contingency and action plans.

## **Program:**

- 09:00 – Reception of Participants
- 09:30 – Welcome (Jordi Gené, IRTA)
- 09:35 – Resilience in Catalan Agriculture (Ramon Sarroca, FCAC)
- 09:45 – IRTA's Role in Agricultural Resilience (Sònia Llorens, IRTA)
- 09:55 – Introduction to the CONCAT LL (Ayman Moghnieh, Naked Innovations)
- 10:05 – Introduction to IRTA's Five Labs (IRTA Researchers)
- 11:00 – Parallel Work Sessions
  - Key Climate Change Challenges
  - Potential Mitigation Strategies
- 12:30 – Closing Remarks and Next Steps (Jordi Gené, IRTA)
- 13:00 – Lunch and Networking

## **Participants:** 31 people

- Farmers / Producers: 5
- Food Processing Companies: 1
- Agrifood Cooperatives and Federations: 5
- Agricultural Technicians: 2
- Agrifood Researchers: 8
- Physics / Meteorology Researchers: 2
- Agrifood Consultants: 4
- Retailers: 1
- Policy-Makers: 3





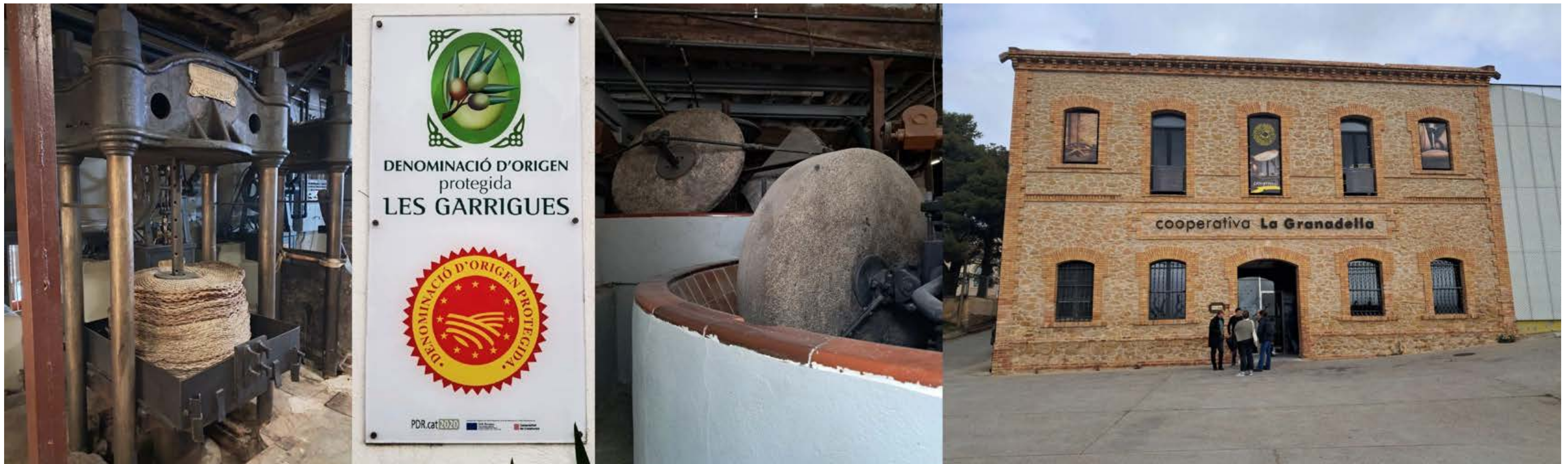
# Understanding Local Challenges: A Tour of Olive Cooperatives

## Context and Purpose

CONCAT LL team conducted a tour of olive cooperatives to validate the outcomes of scientific work & workshop:

### ***Main conclusions:***

- Farmers remain disconnected from innovation and lack effective support.
- Product valorization is hindered by EU regulations.
- Market access is limited, prices are unstable, and profitability is low.
- Mitigation strategies must focus on farmers' financial well-being and empowerment.





# Key Research Results by Product

## Olives:

- Set up experimental orchards (Maials, Constantí) comparing *Arbequina* and 71 native cultivars.
- Identified **varietal differences in drought resilience and oil quality**.
- Ongoing irrigation strategy trials to optimize water use efficiency.

## Apples:

- Conducted **climate tunnel and lysimeter experiments** simulating drought and heat conditions.
- Discovered **resilient apple varieties** (e.g., *Crimson Crisp*, *Inogo*) with lower sunburn and fruit-drop rates.

## Wheat:

- Multi-location trials across Lleida, Solsona, Girona identified **high-yield, drought-tolerant varieties**.
- Dataset integrated into the ECO-READY Observatory for climate scenario modeling.

## Poultry:

- Developed **controlled-environment facilities** to study heat-stress impacts on broilers.
- Generated guidelines for improved **ventilation, feeding, and housing systems** under extreme temperatures.

## Aquaponics:

- Validated **aquaponics as a climate-resilient fish production model**.  
Produced early metrics on water quality, feed conversion, and energy use in integrated systems.



# Living-Labs for Mitigating Climate Change in Agriculture

24th - 25th April 2025  
Espai Bital, Barcelona

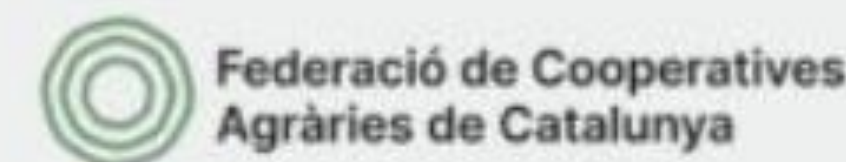
EU Living Labs &  
Associated Stakeholders:

Tech Centres  
Universities  
Farmers

R&D Projects  
Policymakers  
Researchers



Funded by  
the European Union





# CONCAT's LIGHTHOUSE EVENT

This two-day conference, organized by Naked Innovations, EcoReady, PRIMED, REFOREST, and Interreg Euro-MED flagship projects, with support from key regional and European partners, focused on advancing climate resilience in agriculture and food systems.

The event brought together researchers, policymakers, businesses, and civil society to explore innovative, collaborative approaches through Living Labs.

Key aims included enhancing the agri-food sector's contribution to climate mitigation, and strengthening Living Labs as catalysts for change.

Participants engaged in four working groups on:

- **Regenerative agriculture**
- **Water security**
- **Nature-based solutions**
- **Climate-smart food systems & circular bioeconomy**

The conference laid the groundwork for future joint action on climate challenges across the region.



April 24-25, 2025 | Espai Bital,  
Barcelona

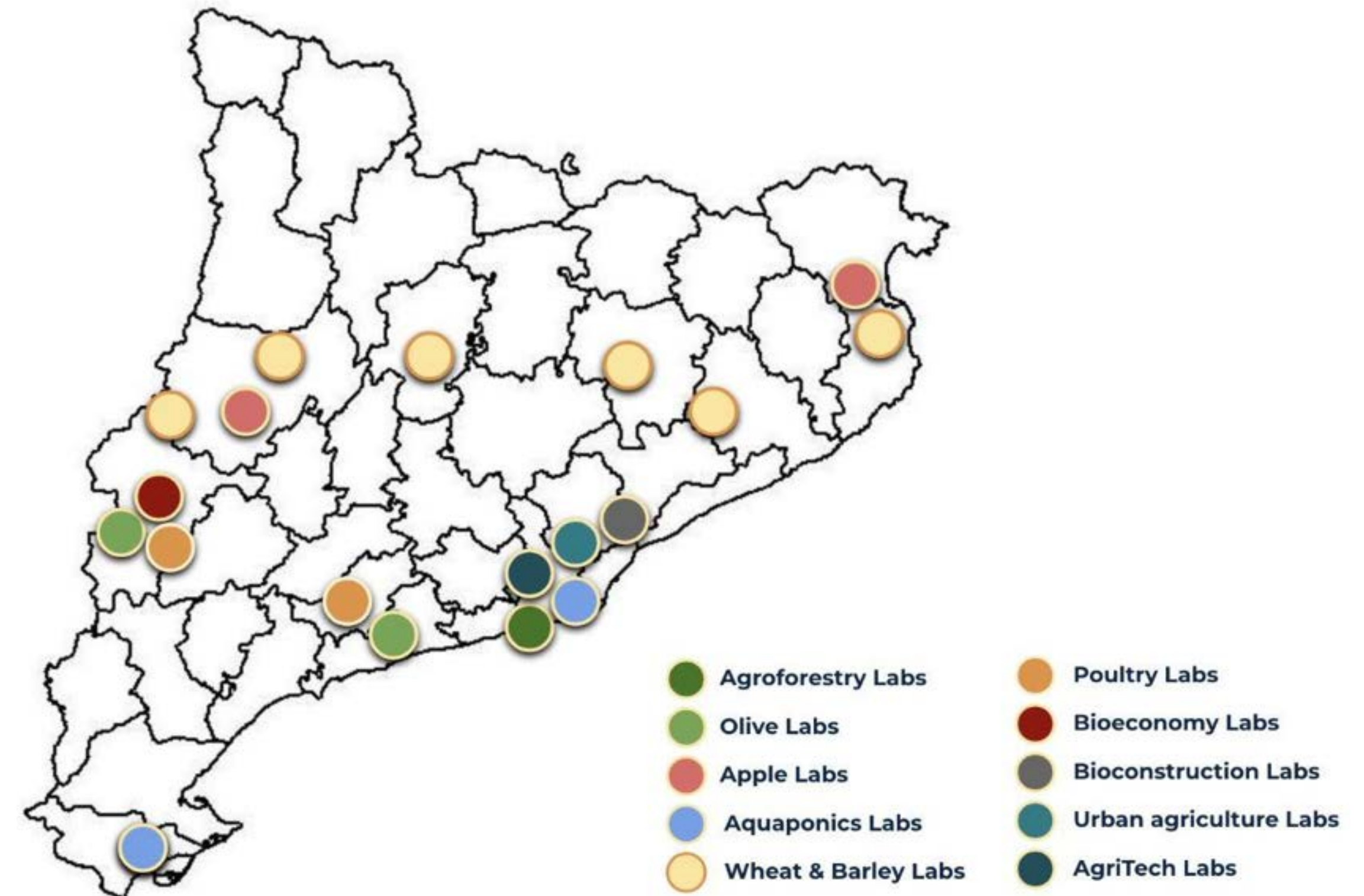




## THE LIVING LAB PROGRAM IN CATALONIA

We partner with a dynamic 4-helix network, combining technical, scientific, social, economic, cultural, business, and legislative expertise, to advance agriculture, agri-food, and bioeconomy in Catalonia.

- Analyze the **challenges** of the territories and regions.
- Build a **strong communities** of active stakeholders.
- Envision and **co-design** transformative projects.
- Launch **strategic pilots** to validate impact & scalability.
- Facilitate **tech-transfer** and tech adoption.
- Exchange **knowledge** and coordinate actions.
- Organize **lighthouse events** to engage citizens.





# THANK YOU

For more information on the Living Lab Program  
[ayman@nakedinnovations.eu](mailto:ayman@nakedinnovations.eu)



# Our societies depend on food and water

**This simple truth united 19 Mediterranean countries and the European Union under a shared vision.  
Thus, PRIMA was born, a single seed sprouting from a common concern.**

 **2018: PRIMA first call of proposals launched**





**The increased complexity and multidimensionality of the social, economic and environmental implications of agro-food systems and water resources challenges demand an integrated research and innovation approach.**

*PRIMA connects researchers, innovators, governments, and communities, building bridges that break silos and foster collaboration.*





 **2018: PRIMA first call of proposals launched**



**2025: PRIMA has funded 269 projects**

## **PRIMA: a thriving community of 2,500 researchers across 20 countries, united by one purpose: securing access to food and water in the Mediterranean.**

From that one idea, **269 projects now grow**, each turning challenges into solutions:



- Resilient farming systems
- Sustainable water management
- Integrated agro-food chains





# A community guided by a common Agenda: The Strategic Research and Innovation Agenda for the Mediterranean

This agenda is the tool that allows us to harvest solutions: by aligning countries, researchers, and projects, it provides the framework to grow tangible, integrated solutions for water, food, and sustainable development across the region.





# Impact:

**Research and innovation address immediate problems, while anticipating future needs, creating long-term impact across the region.**

- ✓ 269 projects funded, connecting 2500 beneficiaries, with over €400 million invested
- ✓ Local economies strengthened, knowledge-based jobs created
- ✓ Food security and sustainable farming advanced
- ✓ Science diplomacy bridging EU and Southern Mediterranean countries



**The Future**

From a single seed, thousands of ideas and solutions continue to grow.



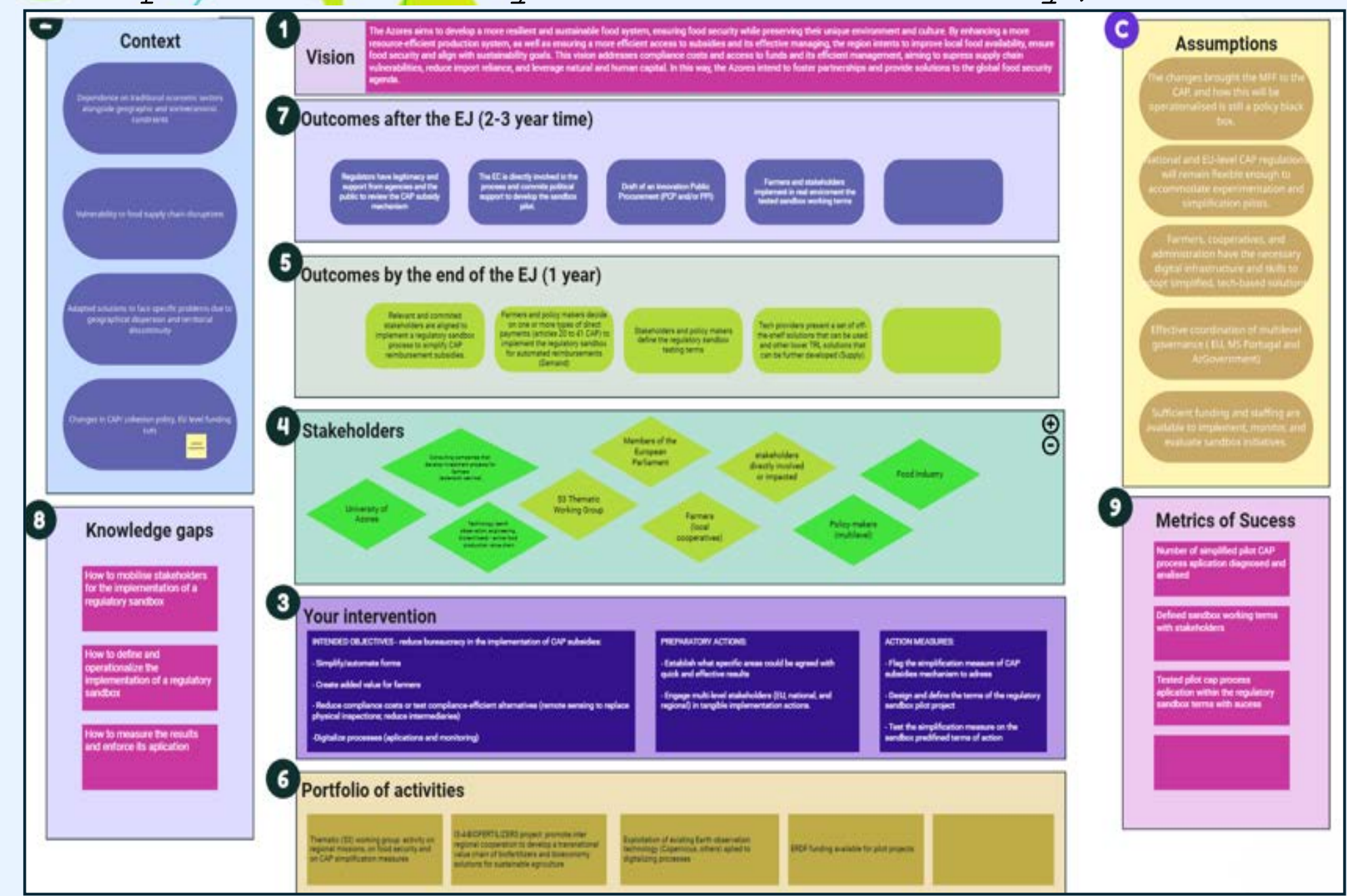




The Azores is an Atlantic nine-island Portuguese archipelago that aims to develop a more resilient and sustainable food system, ensuring food security while preserving its unique environment and culture. By providing a more efficient access to subsidies, namely eco-schemes, and their effective management, the region intends to improve local food availability, ensure food security and align with sustainability goals, as well as enhance a more resource-efficient production system. In this way, the Azores intend to foster partnerships

and provide sustainable solutions. Our ToC is based on the premise that simplifying payments under the CAP's eco-schemes using Simplified Cost Options (SCO) and Funding Not Linked to Costs (FNLC), which have already been tested in other EU programs, can attract more farmers to this type of production.

The simplification will enhance the application of a regime that is optional, improving local food availability, ensuring food security and most importantly, aligning with our shared sustainability goals. This alignment will foster a sense of commitment among the stakeholders.



Regulatory experimentations are exceptional and temporary spaces where innovative methodologies and practices are tested before wider implementation. The Azorean regulatory experiment intends to prove that the simplification of payment processes in the CAP's eco-schemes will turn an optional regime into an agent of transformation in Azorean agriculture, making it more sustainable and environmentally efficient.

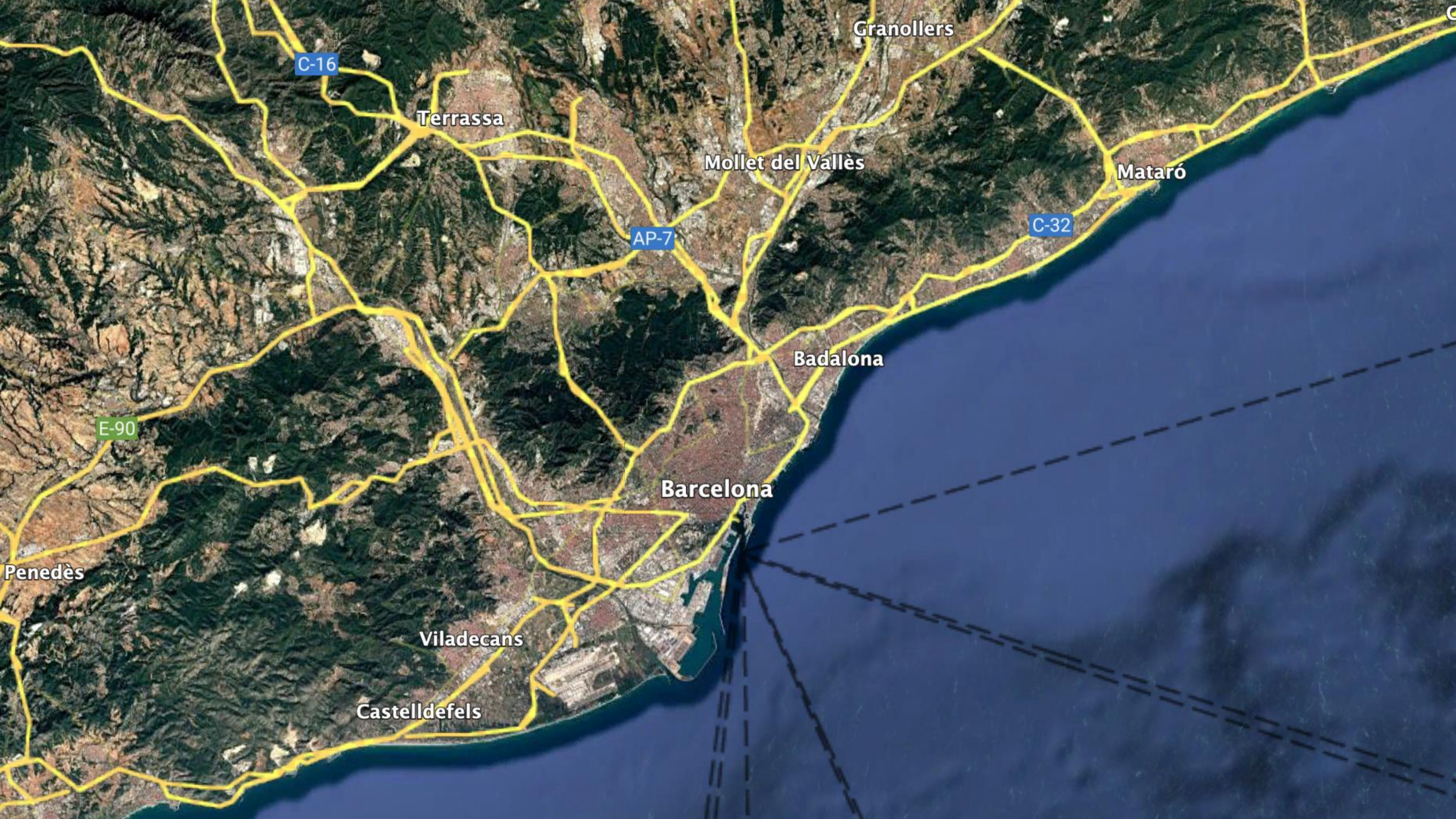
**We have learned that:**

- Stakeholders are all interested in focusing on production instead of administrative work;
- Farmers are available to implement the sandboxes and collaborate with authorities to assess their effectiveness
- Significant changes are only possible with a multigovernance engagement at the regional, national and European levels that is very complex to orchestrate.

**The following steps are:**

- To design and define the exact terms of the regulatory sandbox pilot project;
- To test the simplification measure according to the sandbox terms of action;





Granollers

C-16

Terrassa

Mollet del Vallès

Mataró

C-32

AP-7

Badalona

E-90

Barcelona

Penedès

Viladecans

Castelldefels













AgrøDeltaLab





T.C. SANAYİ VE  
TEKNOLOJİ BAKANLIĞI

#YEREL  
KALKINMA  
HAMLESİ



# Transforming Ankara's Food Systems: From Experimentation to Resilience

Dr. Coşkun ŞEREFOĞLU

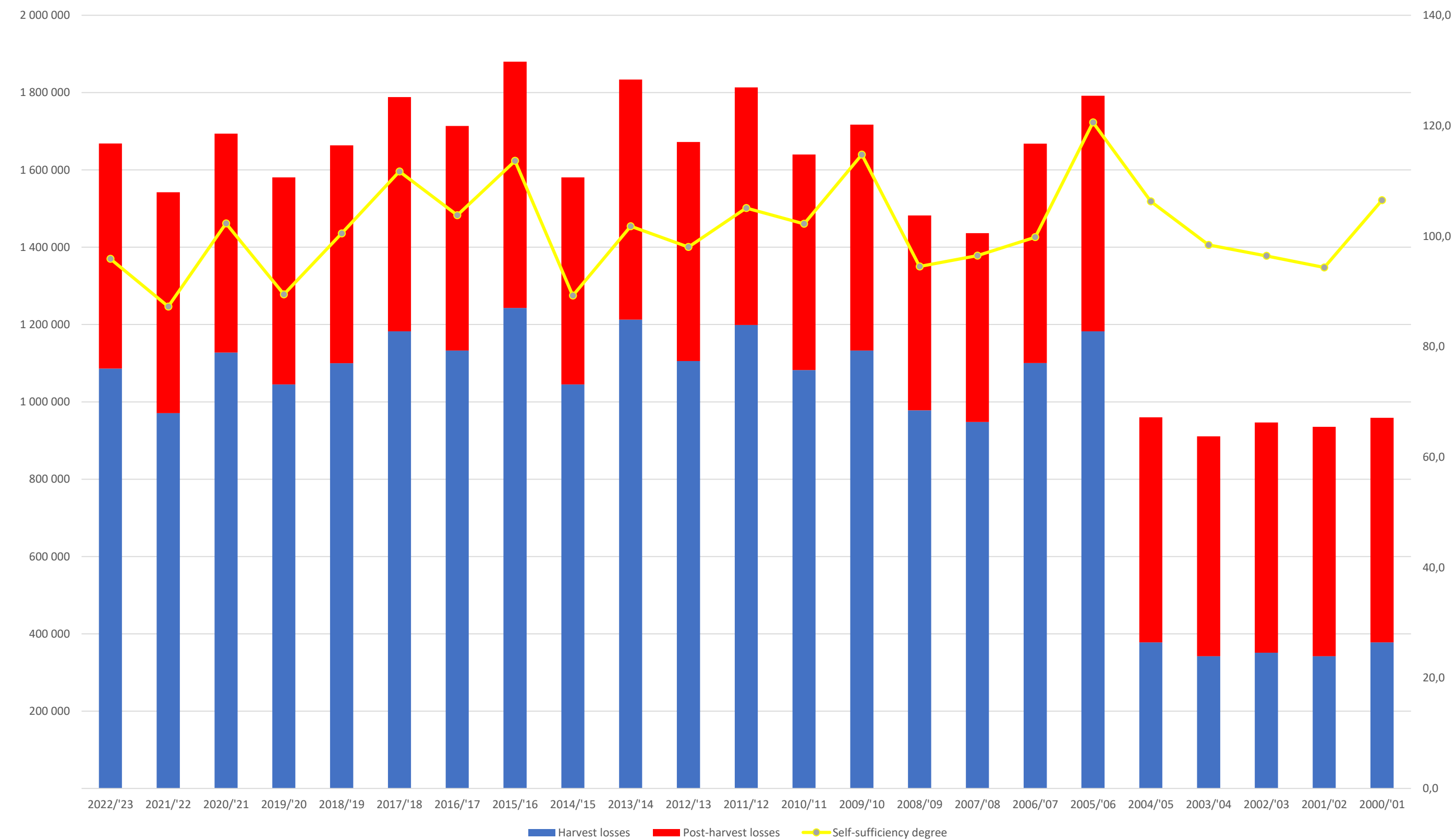
8 Aralık 2025 Pazartesi



[illegible]



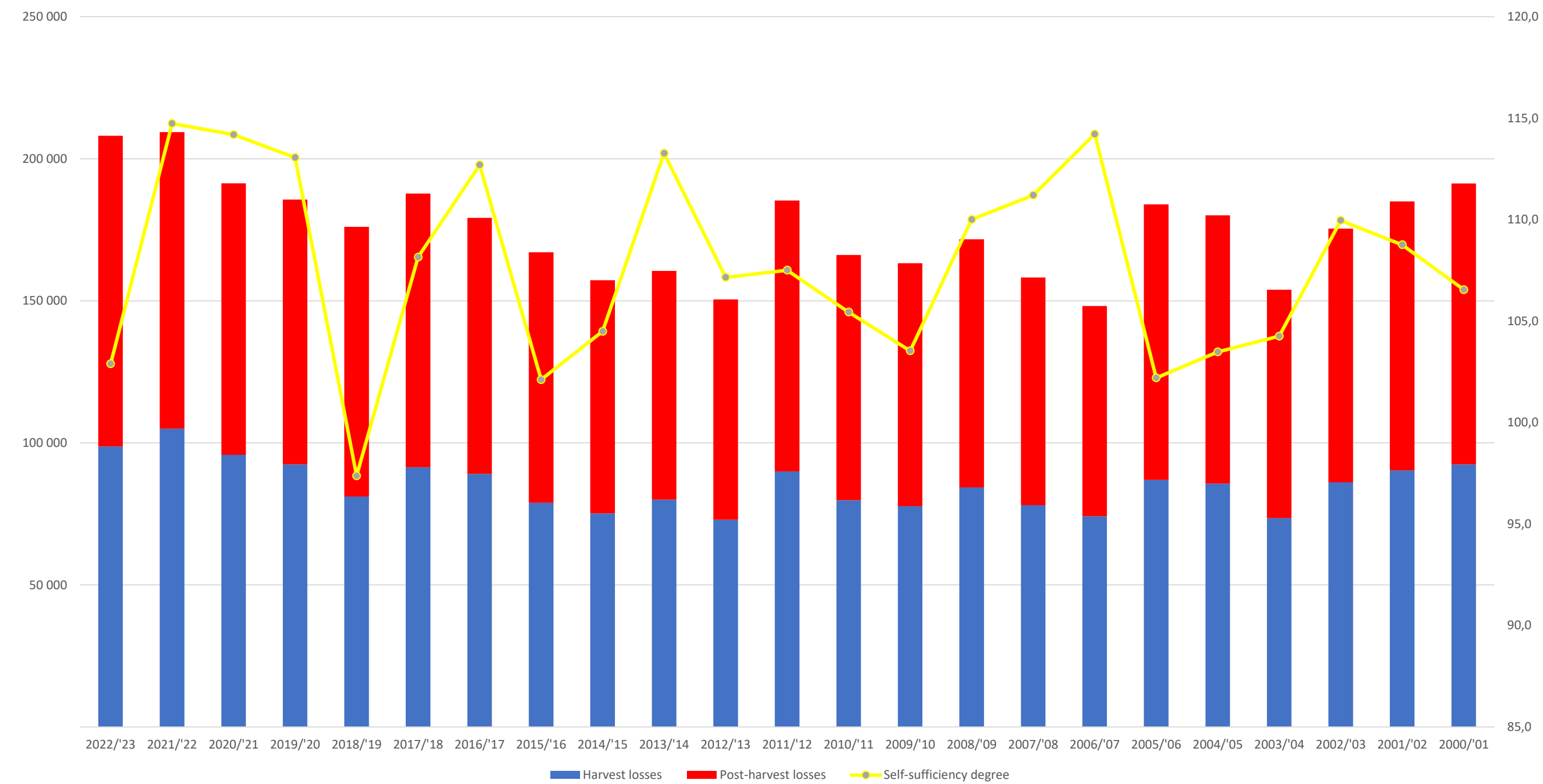
# HARVEST AND POST-HARVEST LOSSES AND SELF-SUFFICIENCY FOR WHEAT (%), TURKSTAT, 2024



Source: TURKSTAT, 2024



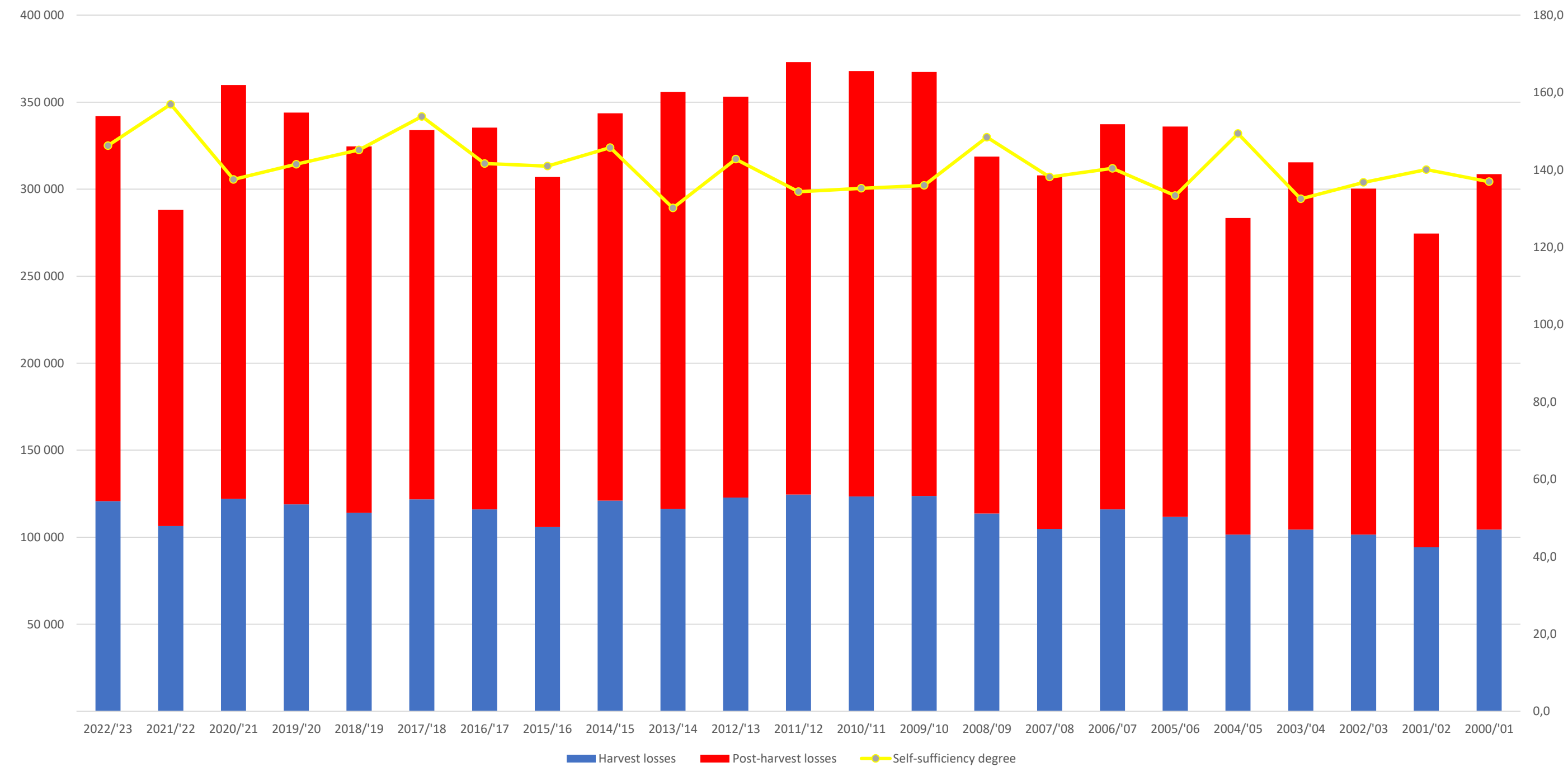
# HARVEST AND POST-HARVEST LOSSES AND SELF-SUFFICIENCY FOR ONION, (%) TURKSTAT, 2024



Source: TURKSTAT, 2024



# HARVEST AND POST-HARVEST LOSSES AND SELF-SUFFICIENCY FOR ALMOND (%) TURKSTAT, 2024



Source: TURKSTAT, 2024



# Objective

- ❑ Ankara is the capital city of Türkiye located in the central part of Anatolia The city has a population of 5,8 million.
- ❑ Ankara is second largest city after Istanbul by population. More than 92% of the population live in urban areas.
- ❑ Although the population has increased exponentially, the sown agricultural land has decreased in recent years.
- ❑ The rate of agriculture in GDP and employment in agriculture sector is less than 3% in Ankara.
- ❑ Ankara is one of the grain warehouses of Turkey and is a leading region in Turkey for many agricultural products.



## Objective

The Ankara Development Agency aims to achieve sustainable food security and resilience against climate change through place-based innovation and collaborative governance. The Theory of Change (ToC) assumes that by **mobilizing local stakeholders, introducing technological innovation, and aligning regional and national policies**, Ankara can reduce food loss and waste, improve productivity, and strengthen self-sufficiency.



## Causal pathway:

**Inputs:** EU know-how, regional innovation strategies, and local partnerships (municipalities, ministries, universities, SMEs, start-ups).

**Activities:** Conducting technical support projects, supporting agri-food innovation projects at pilot level, supporting R&D capacity, testing policy tools, and developing digital and post-harvest technologies.

**Outputs:** The number of the institutions, farmers, food firms and start ups trained, The number of prototypes validated, improved coordination mechanisms, and evidence from experimentation.

**Outcomes:** Reduced food waste, increased adoption of technology by farmers and food companies, and stronger collaboration in agri-food systems.

**Impact:** Enhanced resilience of Ankara's food systems, improved nutrition access, and contribution to EU's global food security goals.



## Core assumptions:

Collaboration between ministries, municipalities, and private innovators can localize EU food system strategies.

Evidence generated through experimentation will inform future national and EU-level policies.

Capacity building and policy learning are continuous processes that reinforce systemic change.





## Core assumptions: Learning & Next Steps

**Collaboration matters** – Multi-level governance and cross-sector dialogue are essential to make agri-food innovation work.

**Technology must meet local needs** – Pilots proved effective only when farmers, SMEs, and research institutions co-created solutions.

**Experimentation builds evidence** – Testing flexible policy tools fostered data-driven decision-making and adaptive learning.

### Next Steps

**Launch regulatory sandboxes** – To test new governance models on food loss, irrigation, and digital traceability.

**Scale cooperation with EU regions** – For shared learning, knowledge transfer, and integration into Ankara's updated innovation strategy.



# GAMIFIED ACTIVITY

Scan the QR code

Or go to



[www.menti.com](https://www.menti.com)  
1128 9145



Innovative  
sustainable economy

Interreg  
Euro-MED



Co-funded by  
the European Union



# WORKING SESSION 2



Innovative  
sustainable economy

Interreg  
Euro-MED



Co-funded by  
the European Union



# LUNCH BREAK

## 13:00 – 14:15



Innovative  
sustainable economy

Interreg  
Euro-MED



Co-funded by  
the European Union



# **PLENARY SESSION**

## **Sharing the Innovation Camp results of the Working Groups & Mentimeter**



**Innovative  
sustainable economy**

**Interreg  
Euro-MED**



Co-funded by  
the European Union



# **WRAP UP**

## **Alessandro Daraio, LP D4I**



**Innovative  
sustainable economy**

**Interreg  
Euro-MED**

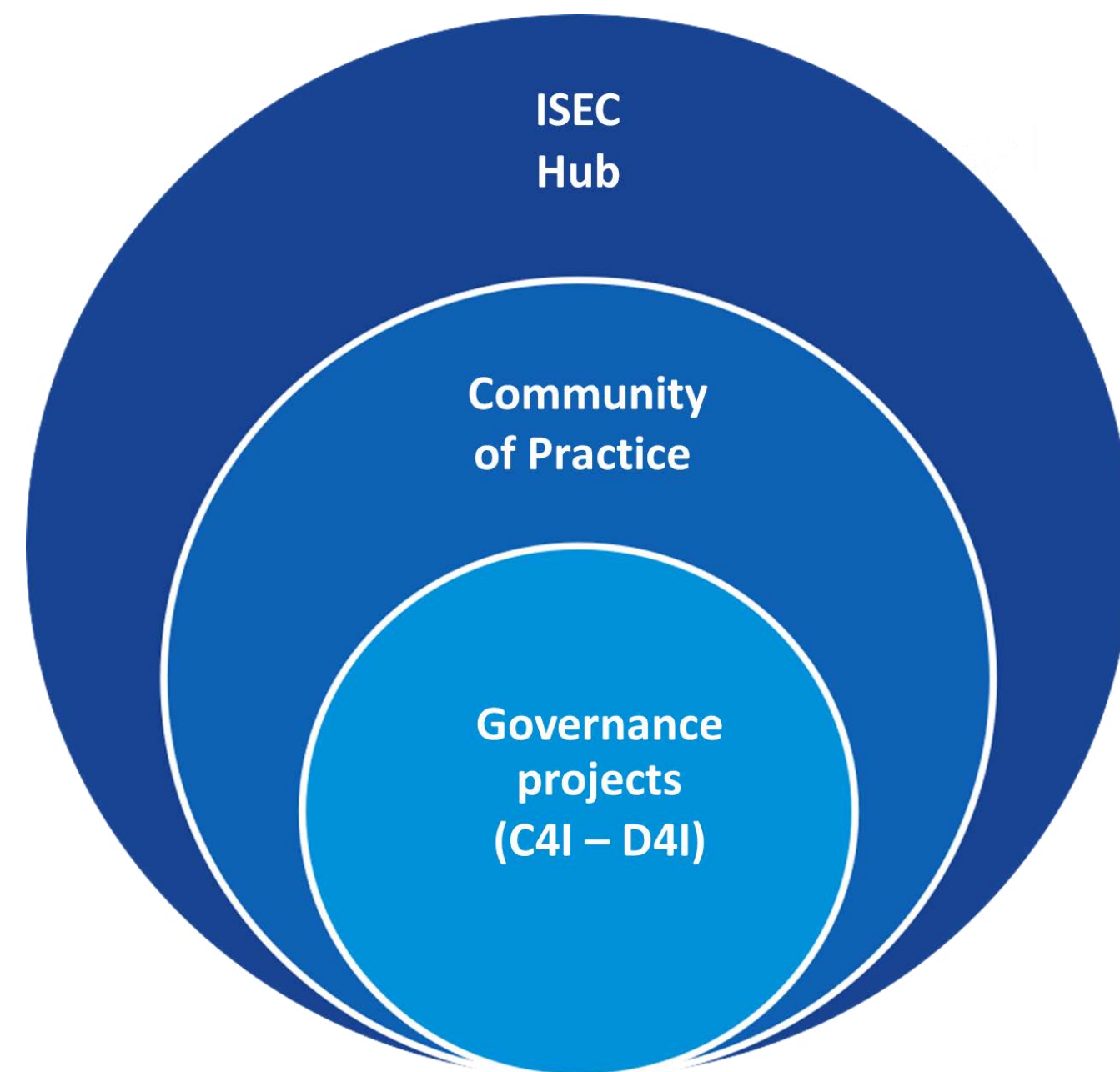


Co-funded by  
the European Union



# How to stay connected: ISEC HUB

- A meeting place for Quadruple Helix of Mediterranean stakeholders
- A way to connect Euro-MED Mission actors (projects) and external Mediterranean Stakeholders (ONGOING PROJECTS)
- A place to keep former project partners in the Mission community (COMPLETED PROJECTS)



- Online space + Linkedin group
- In-person gatherings and events

Engage with a critical mass of like-minded people from across the Mediterranean who are working towards the same sustainability goals

**KUMU: Online Networking Directory**  
**LinkedIn Online interactive space**

Stay informed about the latest institutional developments, events, and discussions related to Innovative Sustainable Economy

**MIRÓ Board : Knowledge sharing space & Rolling Calendar**

## 1. CONNECT



## 2. LEARN



## 3. SHARE



## 4. COLLABORATE



Access to innovative tools, solutions, and policy approaches that can drive positive change in your local context

**Interreg Euro-MED Academy Repo Survey : Tailored- Made mentoring Programs**

Encourage and facilitate the development of joint policy documents, enabling collective contributions to the development of coherent and impactful policy messages

**Scan 4 Hubs: Hubs Synergies Programme**  
**Scan 4 Messages : Consultations & Polls**



**Innovative  
sustainable economy**

**Interreg  
Euro-MED**



Co-funded by  
the European Union





<https://innovative-sustainable-economy.interreg-euro-med.eu>



[innovative-sustainable-economy@interreg-euro-med.eu](mailto:innovative-sustainable-economy@interreg-euro-med.eu)



<https://www.linkedin.com/company/gov4innovation/>



<https://www.youtube.com/@Gov4Innovation>



**Room Farol**

**TIPLab Methodology**

**Parallel sessions**

**Room Deserta**

**Internal meeting for PAs**



**Innovative  
sustainable economy**

**Interreg  
Euro-MED**



Co-funded by  
the European Union



A project labelled by the UfM



Union for the Mediterranean  
Union pour la Méditerranée  
الاتحاد من أجل المتوسط

# GOODBYE COFFE



Innovative  
sustainable economy

**Interreg**  
Euro-MED



Co-funded by  
the European Union