Aligning R&I for a Resilient Mediterranean Region.
From Policy Integration to Solutions

Future4PRIMA Workshop – WP6

Research, scientific diplomacy and shared knowledge for the Mediterranean - The PRIMA Initiative

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PARTNERSHIP FOR RESEARCH AND INNOVATION IN THE MEDITERRANEAN AREA

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SIXTH ASSESSMENT REPORT IPCC

Future Global Climate Risks



Heat Stress

Exposure to heatwaves will continue to increase with additional warming.



Water Scarcity

At 2°C of warming, regions that rely on snowmelt could experience a 20% decline in water availability for agriculture after 2050.



Food Security

Climate change will increasingly undermine food security.



Flood Risk

About one billion people living in low-lying coastal cities and on small islands could be at risk from sea-level rise by mid-century.

The MED Area is a hot spot of climate change

Warming, drying and extreme events are reshaping our societies, economies and the operating conditions of the food system

Warming faster

Summer warming has exceeded 2°C

47-48°C in the South

Source: MedECC (2024),

Drying effects

≈ –4% mean precipitation per +1°C global warming

150–200% droughts in Southern Mediterranean countries under a 2°C warming scenario

Source: MedECC (2024)

Consequences

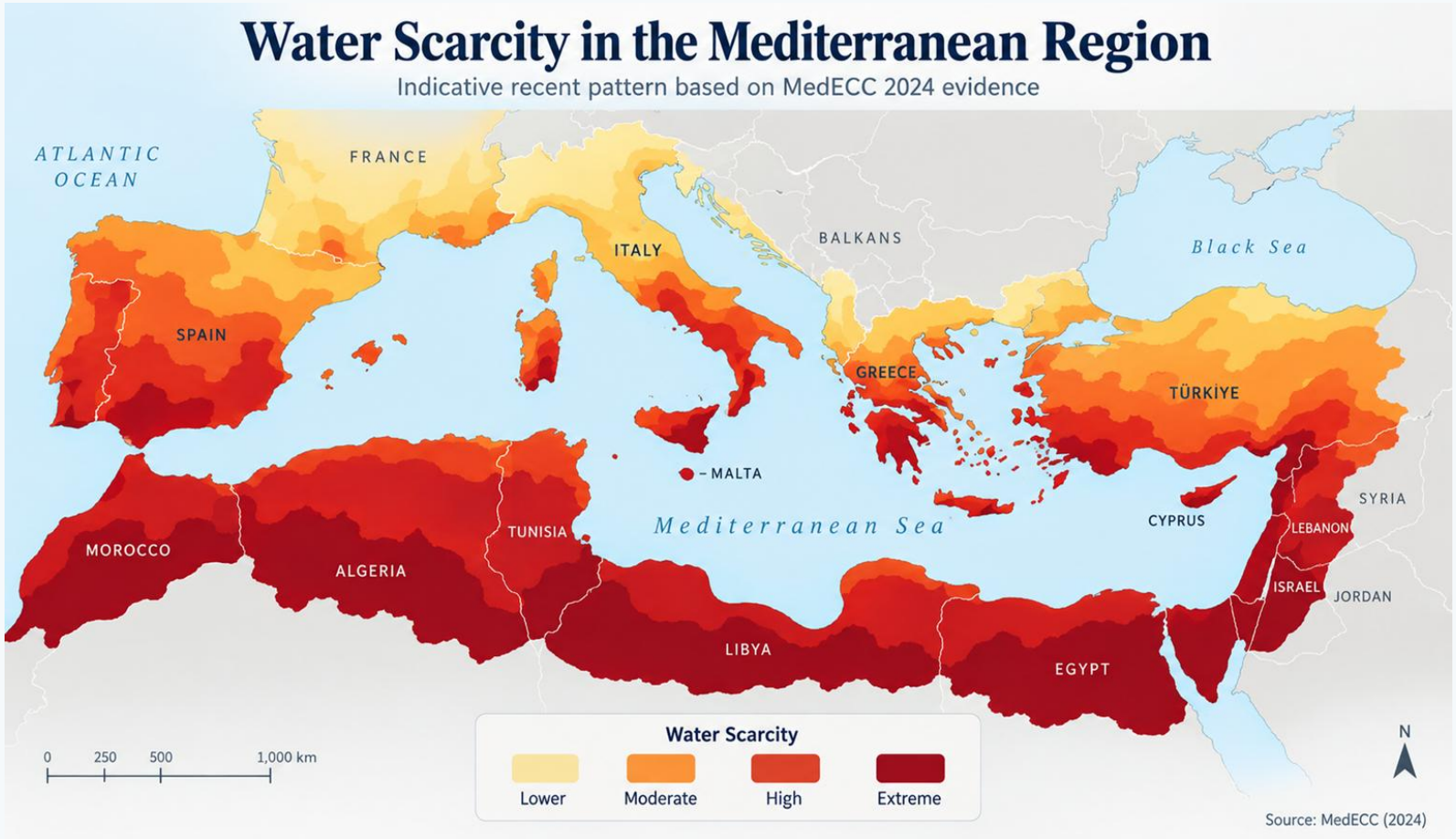
- Higher irrigation demand
- Yield volatility and reduction
- Greater wildfire & pest exposure
- Higher pressure on soils and ecosystems

Salinisation

Import exposure

They propagate through water, energy, food and ecosystems.

WATER CONSTRAINT



RESOURCE GEOGRAPHY

90% of blue water in northern countries

10% in southern countries

THE PEOPLE DIMENSION

Source: MedECC (2024)

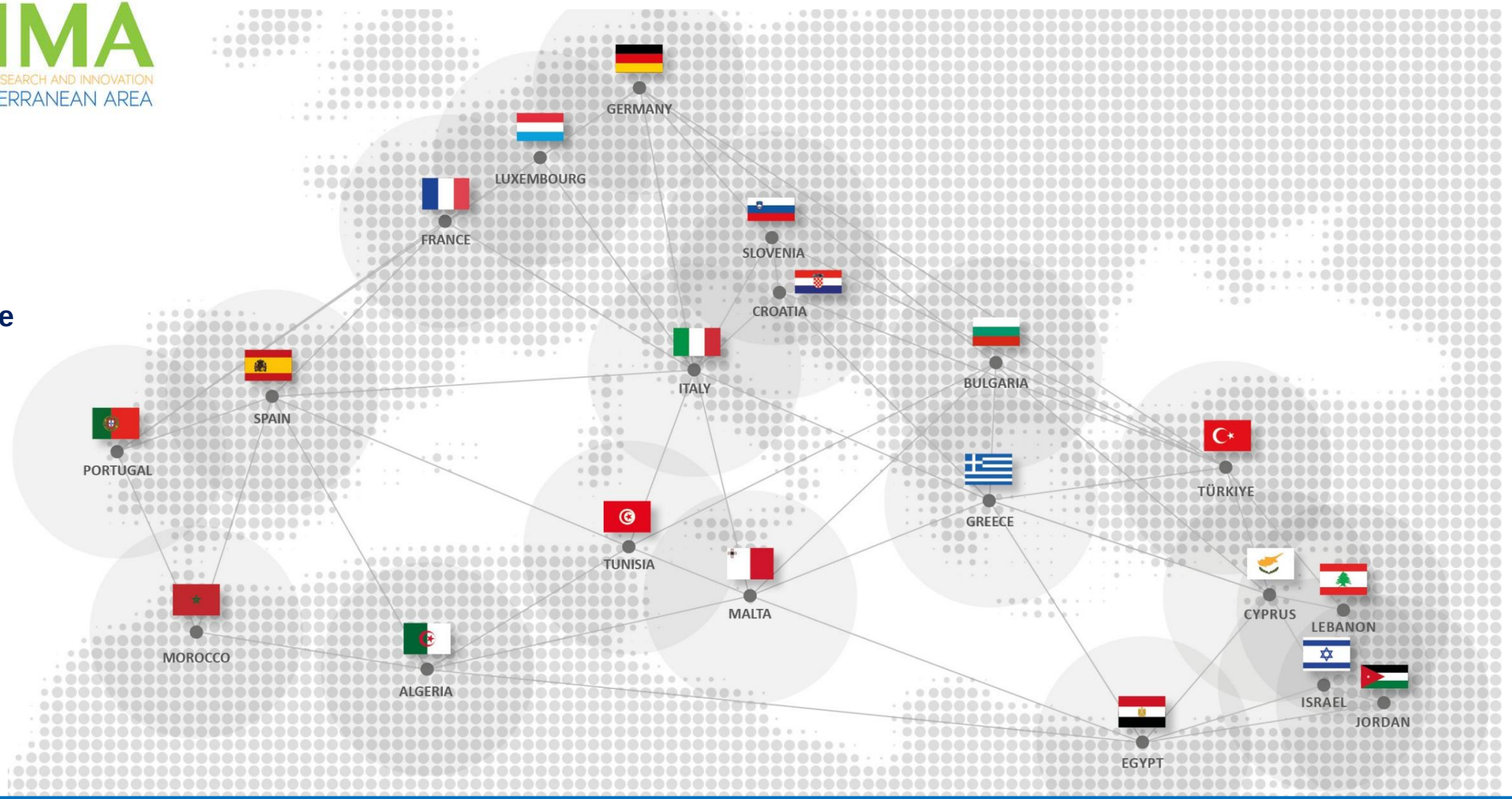
Climate vulnerability is unequal — resilience must be inclusive

FAO evidence shows that climate shocks amplify existing inequalities in rural livelihoods; this matters for Southern Mediterranean territories.

Research and innovation are key to deal with EuroMED water and food challenges

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20 Countries and the EC

Budget: € 700 million through calls, managed by a Foundation in Barcelona

Based on the principle of equal footing

PRIMA in numbers
2018 - 2025

2900+

# of total beneficiaries

305

# of funded projects

- 69 WATER PROJECTS
- 129 FARMING PROJECTS
- 95 AGRO-FOOD PROJECTS
- 12 WEFE NEXUS PROJECTS

462M€

Total Budget allocated

30%

MPC Total Budget share

20%

Budget share of private sector

PRIMA transformed a fragmented landscape into a structured Euro-Mediterranean R&I space

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The key question is not “does a solution work?” — but “what does it do to the rest of the system?”

Nexus thinking makes trade-offs visible and helps design interventions that deliver co-benefits across several sectors.

TRADE-OFF RISK

More irrigation	can secure yields…
…but raise energy use	and pressure aquifers
More bioenergy	can cut fossil use…
…but compete for land/water	and affect food security

Concept: Bidoglio (2023), slide 18; MedECC (2024), Ch. 3, p. 145.

NEXUS THINKING



TRADE-OFFS TODAY STRONGER SOLUTIONS TOMORROW

SYNERGY OPPORTUNITY

Soil-health practices	less erosion + more water retention
Renewable-powered water	lower emissions + resilient supply
Wastewater reuse	alternative water + nutrient circularity
Digital climate services	better timing + lower maladaptation risk

Examples synthesised from MedECC (2024), Ch. 3; Bidoglio (2023) Nexus framing.

PRIMA1 OUTPUTS

PRIMA moved beyond research papers to real Mediterranean experimentation

The portfolio created pilots, demonstrators, tools, data, skills and innovation communities across water, farms, food chains, digital innovation and the operationalisation of the WEFE Nexus.

Water innovation

Precision irrigation • monitoring • reuse • governance • decision support

Resilient farming

Agroecology • soil health • salinity • pests • climate adaptation

WEFE Nexus

Operationalisation • modelling • policy decision support • governance • cross-sector trade-offs

Digital & AI

Sensors • remote sensing • modelling • AI • digital twins • data platforms

Food-system innovation

Traceability • food safety • circularity • waste reduction • new value chains

PRIMA1 proved that Euro-Mediterranean cooperation can generate credible solutions under real conditions
The next challenge is to make more of them travel, scale and stick.

LESSON FROM PRIMA1

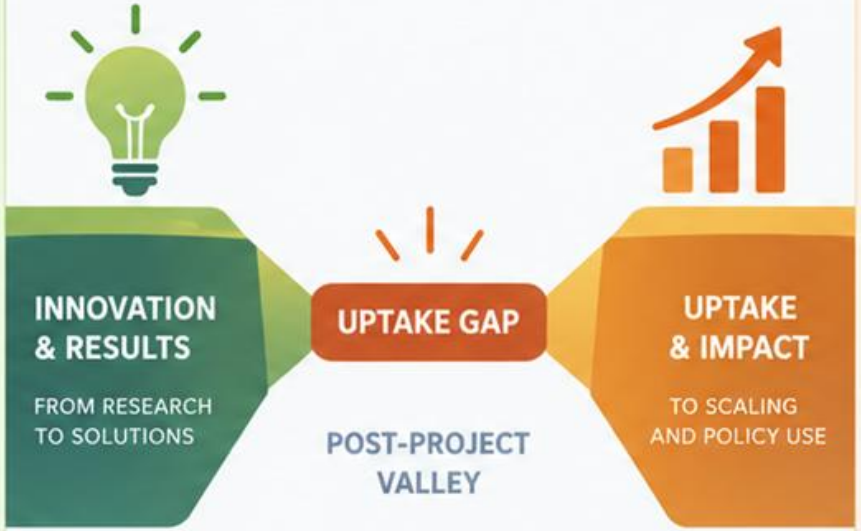
RESEARCH FOR A MORE RESILIENT MEDITERRANEAN

The bottleneck has shifted: from generating innovation to enabling uptake

PRIMA established cooperation and generated outputs, but many promising results still struggle to cross the post-project valley.

WHAT WORKED

- Structured transnational R&I cooperation
- Alignment of national research agendas
- Scientific networks, pilots and demonstrations
- Co-ownership across the Mediterranean
- Building capacity



WHAT REMAINS HARD

- Many outputs stop at proof-of-concept / pilot
- Commercial exploitation remains limited
- Uptake, replication and policy use are uneven
- Implementation fragmentation still slows follow-up

PRIMA2 MISSION

The mission evolves from “build cooperation” to “turn cooperation into usable results”

PRIMA2 keeps the Mediterranean co-ownership model while making validation, adaptation, replication and uptake-readiness explicit programme objectives.

1 

Better evidence for WEFE decisions

Make knowledge, data and R&I results more available; comparable and usable.

2 

Stronger validation & uptake-readiness

Adapt and replicate promising solutions across different Mediterranean contexts.

3 

Cumulative learning across portfolios

Reduce fragmentation; connect projects, calls, actors and funding efforts over time.

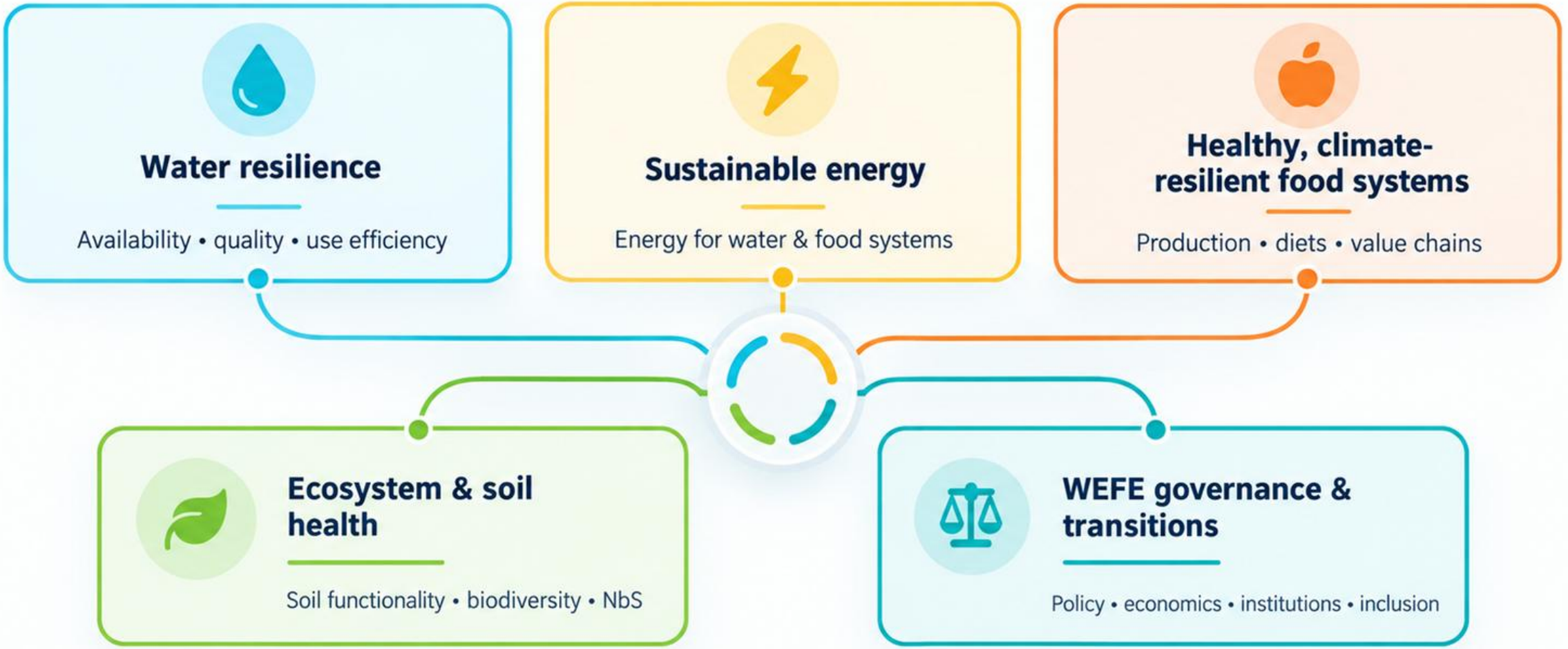
4 

Inclusive innovation capacity

Strengthen absorptive capacity and participation, especially where capabilities are weaker.

Five priority areas connect directly to today's Mediterranean risk landscape

The proposed programming orientations mirror the evidence: water stress, energy needs, climate-resilient food, ecosystem degradation and fragmented governance.



PRIMA2 would strengthen the full innovation-to-impact lifecycle

A research partnership cannot guarantee deployment — but it can dramatically improve the evidence and conditions that make uptake possible.



PRIMA2 prepares credible solutions for uptake; downstream instruments and actors decide on full deployment, procurement, investment or commercial scale-up.

A common Euro-Mediterranean R&I space for resilient water, agriculture, food and ecosystems.

Excellence in research

Scientific diplomacy

Resilient systems



Rigour and compliance with FP10 rules

Cooperation that lasts

Solutions that can be uptaken

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Thank you…

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