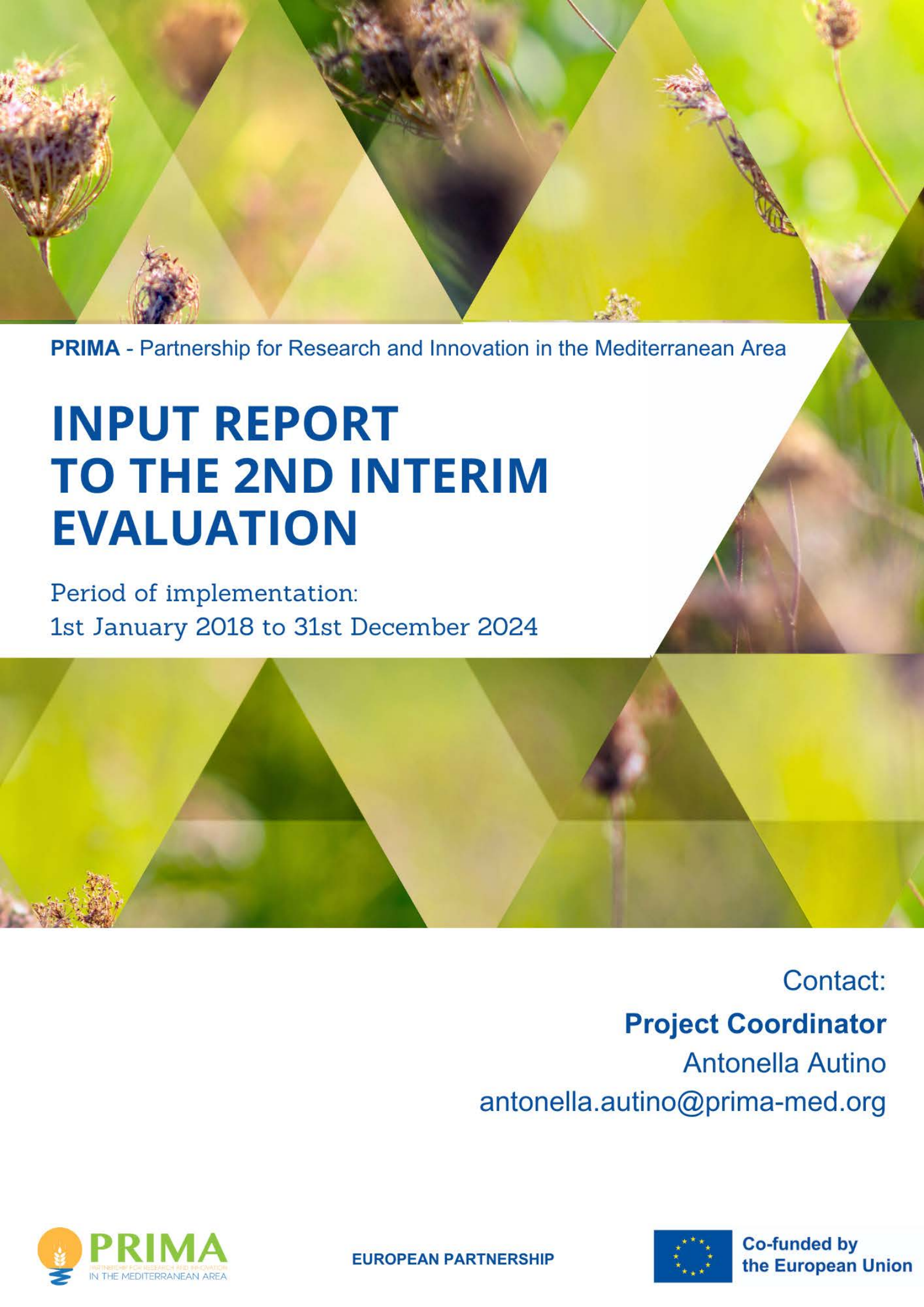




PRIMA - Partnership for Research and Innovation in the Mediterranean Area

INPUT REPORT TO THE 2ND INTERIM EVALUATION

Period of implementation:

1st January 2018 to 31st December 2024

Contact:

Project Coordinator

Antonella Autino

antonella.autino@prima-med.org

Contents

Scope of the Report and structure.....	8
Chapter 1: Executive Summary	10
Chapter 2: Introduction and Background information on PRIMA.....	23
PRIMA in a nutshell.....	23
Mediterranean challenges PRIMA intervention logic, specific problems addressed description of goals and outline of activities.....	28
Actions taken to address recommendations from interim evaluation	33
Chapter 3: Implementation (State of Play) (2018-2023) Action and activities managed by PRIMA.....	40
Distinctive Governance and Funding Model of the PRIMA Partnership	40
Definition of SRIA Priorities for Calls and Flexibility	42
Annual Work plans Roadmap Process Overview.....	42
Derogations to Horizon 2020 Rules of Participation	44
Budget Allocation and Funding Source	45
Chapter 4 Implementation (State of Play) (2018-2024).....	48
SECTION 1 and SECTION 2 Actions (Calls)	48
Submissions Overview (2018-2024) and Country Participation and Proposal Submissions to PRIMA calls (2018–2024)	48
Country Participation Trends	49
PRIMA PS Participation patterns trends and specificities in Section 1 and Section 2 calls	49
Participation of Non-EU PRIMA PS (Mediterranean Partner Countries _MPCs) in PRIMA Calls (2018–2024)	50
Participation of non- PRIMA PS in PRIMA Calls (2018–2024)	51
Funded proposals (Section 1 and Section 2 calls cumulative over years (2018-2024)	52
Trends in Project Size and Budget Allocation under PRIMA Sections 1 and 2	54
Budget Share Per Thematic area.....	55
Overview of Funded Projects, Coordination, and Budget Allocation by Participating State (2018–2024)	56
Coordination patterns per region and per country in S1 and S2 over years.....	59
Competition for Funding: Success Rates and Over-subscription	65
Gender balance and gender dimension in R&I	66
Gender Balance in Evaluation Panels	66
Gender Balance in PRIMA project participation	66
Monitoring of PRIMA Section 1 and Section 2 projects.....	68
Financial Monitoring and Checks	69

PRIMA's Monitoring Framework	69
Key Exploitable Results (KERs)	70
Ex-ante and Ex-post control	71
SECTION 3 Activities	72
Section 3 Monitoring Process of Activities (PSIAs and Other Activities).....	72
Section 3: Added Value of PSIAs	74
Section 3 Financial Contributions	78
Chapter 5 Efficiency of PRIMA Partnership (cost-effectiveness)	80
Efficiency of the Elaboration of Work Plans	80
Analysis of Call Efficiency: TTI, TTG, TTS, and TTP	81
Chapter 6: Project Outputs (Section 1 and Section 2)	87
Analysis of PRIMA calls outputs: PRIMA projects contributing to its Operational Objectives.....	88
Completed Projects and their Contributions	89
Evolution of Water Management Calls in PRIMA: Strategic Priorities and Impact (2018–2024)	90
Water Management Projects Overview (2018–2024)	91
KEY EXPLOITABLE RESULTS	93
Key Exploitable Results (KERs) from Water Projects (2018–2020): Demonstration Sites Tested	94
Evolution of Farming Systems Calls in PRIMA: Strategic Priorities and Impact (2018–2024)	95
Analysis of PRIMA Farming Systems Project Portfolio	96
Key Exploitable Results (KERs) from Farming Projects (2018–2020): Demonstration Sites Tested	96
Evolution of Agri-Food Value Chain Calls in PRIMA: Strategic Priorities and Impact (2018–2024)	97
Analysis of PRIMA Agri-Food Value Chain Project Portfolio.....	98
Key Exploitable Results (KERs) from Agri-food Value Chain Projects: Demonstration Sites Tested	99
Establishment and Evolution of WEFE Nexus in PRIMA (2019–2024)	100
Analysis of WEFE Nexus Project Portfolio	101
Key Exploitable Results (KERs) in PRIMA WEFE-Nexus theme Projects: Demonstration Sites Tested	102
Analysis of the Project Portfolio by external experts	103
Scientific and Technological Contributions	104
Synergies Among PRIMA Projects	106
Cross-Cutting Activities in PRIMA Projects.....	107
Measures to enhance the dissemination, exploitation, and communication of PRIMA projects' results.	108
Chapter 7: Programme Effectiveness	110
Analysis: PRIMA Indicators Compared to Horizon 2020 Targets (Data 2018-2023).....	115

Progress of PRIMA towards its General objective.....	115
Progress towards achievement of Specific Objectives.....	116
Progress on strengthening research and innovation (R&I) capacities	116
Progress on Improving R&I Integration & Alignment.....	118
Building a Critical Mass of Stakeholders	121
Local Impacts of PRIMA-Funded Innovations: A Thematic and Typological Analysis from PRIMA completed projects (2018-2020).....	124
Strategic Portfolio Profile	125
Contribution of PRIMA to the extension of the European Research Area beyond Europe	127
Cross-Border Collaboration and Science Diplomacy	129
Advancing the 2030 Agenda: PRIMA-SDG Tool and Key Findings.....	134
Key Findings from the application of PRIMA-SDG Tool to 57 projects revealed	135
Progress of PRIMA towards its operational objectives	137
Regional Impacts and Sustainability	140
Chapter 8: Added Value	142
Building Trust Through Science:.....	143
PRIMA's Role in Structuring Fragmented R&I Programmes.....	144
Overview of Mediterranean Sea R&I Development (2018-2024).....	145
Chapter 9: Synergies with Other EU Partnerships	147
Analysis of synergies with other EU partnerships, missions, clusters, and programmes	147
Synergies with EU Missions.....	148
Regional collaborations.....	154
International Organisations.....	155
Chapter 10: International Positioning and Visibility	159
-Overview of PRIMA's international positioning and visibility.....	159
Alignment to Global, EU and regional policies (SDGs, EU Green Deal, UfM policies)	162
Chapter 11: Phasing Out Preparedness- Phasing out strategy	167
Phasing Out Strategy and Renewal Plan for PRIMA.....	167

Annexes

- Annex 1: Action Plan for Implementing Recommendations
- Annex 2: Data on Programme Implementation (S1 and S2)
- Annex 3: Financial Management Overview
- Annex 3 bis EU_PS Matching assessment
- Annex 4: PRIMA Project Portfolio Analysis Report
- Annex 5: PRIMA Highlight Projects Factsheets
- Annex 6: Project Datasheet (2018–2024)
- Annex 7: List of Outputs: Key Exploitable Results (KERs), Publications, Patents and Policy briefs.

Glossary

Acronym	Full Form
AWP	Annual Work Plan
BoT	Board of Trustees
CSA	Coordination and Support Actions
COP	Conference of the Parties
DIS	Dedicated Implementation Structure
EC	European Commission
ERA	European Research Area
ERA-NET	European Research Area Networks
ESR	Evaluation Summary Report
ESS	Electronic Submission System
EU	European Union
F4P	FUTURE4PRIMA
FP	Framework Programme
GAP	Grant Agreement Process
GAs	Grant Agreements
GDP	Gross Domestic Product
GEP	Gender Equality Plan
H2020	Horizon 2020 (EU's Framework Partnership for Research and Innovation)
HE	Horizon Europe (EU's Framework Partnership for Research and Innovation)
HES	Higher Education Establishments
IA	Innovation Action
IS	Implementation Structure
JRC	Joint Research Centre
KER	Key Exploitable Results
KERs	Key Exploitable Results
KIP	Key Impact Pathway

PRIMA - Partnership for Research and Innovation in the Mediterranean Area

KPI	Key Performance Indicator
MEL	Monitoring and Evaluation Platform
MPC	Mediterranean Partner Countries
NBS	Nature Based Solutions
NFA	National Funding Agency
OA	Other Activities
OCT	Overseas Countries and Territories Participating States
OTH	Other Types of Organizations
PRC	Private For-Profit Organizations
PRIMA	Partnership for Research and Innovation in the Mediterranean Area
PRIMA-IS	PRIMA Implementation Structure
PS	Participating States
PSIAs	Participating States' Initiated Activities
PUB	Public Bodies
R&I	Research and Innovation
REC	Research Organizations
RIA	Research and Innovation Action based on Horizon 2020 rules
RIAs	Research and Innovation Actions
RfP	Horizon 2020 rules for participation
S1	Section 1
S2	Section 2
SAC	Scientific Advisory Committee of PRIMA Foundation
SC	Steering Committee
SDG	Sustainable Development Goal
SFS-MED	Sustainable Food Systems -Med platforms
SM PS	Southern Mediterranean Participating States
SME	Small and Medium-sized Enterprises
SRIA	Strategic Research and Innovation Agenda
SSC	South-South Cooperation
TC	Third Country

TFEU	Treaty on the Functioning of the European Union
TOF	Transfer of Funds
TOR	Terms of Reference
TRL	Technology Readiness Level
TTG	Time to Grant
TTI	Time to Inform
TTP	Time to Pay
TTS	Time to Sign
UfM	Union for the Mediterranean
WEFE	Water-Energy-Food-Ecosystems Nexus
WEFE NCoP	WEFE Nexus Community of Practice

Scope of the Report and structure

This report provides a comprehensive overview of the activities, achievements, and progress of the Partnership for Research and Innovation in the Mediterranean Area (PRIMA) from January 2018 to December 2024. It serves as a key reference for stakeholders, particularly informing the European Commission's second interim evaluation in 2025, conducted under Article 14 of the amended PRIMA Decision (Decision (EU) 2024/1167).([Decision \(EU\) 2024/1167](#)).

Drawing on [the recommendations from the European Commission's first interim evaluation in 2022](#)— which assessed PRIMA's structures, processes, and initial outcomes—this report demonstrates the partnership's evolution. At the time of the first interim evaluation, no projects had yet been completed, although early indicators showed promising initial results in addressing critical Mediterranean challenges such as water scarcity, sustainable agriculture, and food security.

This current report explicitly outlines PRIMA's strategic responses and corrective actions addressing the 2022 evaluation recommendations.

In total, between 2018 and 2024, PRIMA funded 269 projects. As of December 2024, 238 of these projects (funded from the 2018–2023 calls) had been launched and were available for assessment, while 31 projects funded in the 2024 calls commenced only in 2025. The second interim evaluation thus extensively analyses data from the 57 fully completed and validated projects, which represent approximately 24% of the projects funded up to that point. The outputs from these validated projects, which form the core evidence base for the evaluation's analysis of outcomes and impacts, are annexed to this report.

Additionally, since January 2025, five further Section 1 projects have reached completion, and another 64 projects are currently undergoing final validation. Preliminary findings from these projects nearing completion have also been integrated, providing a forward-looking perspective. Although quantitative data is accurate as of 31 December 2024, the evaluation acknowledges the 31 projects funded under the 2024 calls, despite these not having commenced at the reporting date.

To ensure transparency, detail, and accessibility, the evaluation report includes the following annexes:

Action Plan Addressing Recommendations from the First Interim Evaluation. Outlines the concrete measures implemented in response to the recommendations of the 2022 evaluation, including corrective actions and strategic adjustments.

Statistical Data on PRIMA's R&I Performance (2018–2024) Provides comprehensive trends in participation, project submissions, success rates, and funding distribution across PRIMA's annual calls.

Financial Data and Leverage Calculation

3 bis. Financial Matching Assessment: EU and Participating States Contributions (2018–December 2024) A detailed breakdown of annual contributions and financial alignment between the EU and PS, supporting transparency and regulatory compliance.

Project Portfolio Analysis Report by external experts (2024) An independent evaluation of PRIMA's funded portfolio, focusing on completed and ongoing projects. The analysis assesses alignment with the Strategic Research and Innovation Agenda (SRIA), highlights socio-environmental impacts—such as ecosystem restoration, agricultural resilience, and sustainable water management—and estimates the future potential of ongoing projects.

PRIMA Project Factsheets (Selected Projects) A curated selection of project factsheets offering detailed insights into objectives, methodologies, outcomes, and impacts. These illustrate the innovation capacity and scalability of PRIMA-funded initiatives in addressing Mediterranean challenges.

Project Datasheet (2018–2024) A consolidated dataset of all projects funded from 2018 to 2024, including basic project metadata, funding sources, implementation status, and thematic coverage.

List of Outputs: Key Exploitable Results (KERs), Publications, Patents and Policy briefs. Catalogues the main results generated by PRIMA projects, including scientific publications, intellectual property assets, and innovations with market or policy relevance.

Chapter 1: Executive Summary

The Partnership for Research and Innovation in the Mediterranean Area (PRIMA) is an EU-institutionalised public-public partnership created under and The Partnership for Research and Innovation in the Mediterranean Area (PRIMA) is an EU-institutionalised public-public partnership created under [Article 185 of the Treaty on the Functioning of the European Union \(TFEU\)](#) and supported by the Horizon 2020 Framework Programme. Article 185 facilitates collaboration among Member States, enabling them to combine nationally funded R&D programmes and invite EU participation—both financially and through governance—ensuring coordinated and coherent initiatives across the region. PRIMA operationalizes this legal framework by aligning national and European resources into a single integrated programme, fostering cooperative research and innovation throughout the Mediterranean.

Employing a nexus approach, PRIMA recognizes sectoral interdependencies, particularly their interactions with energy systems and ecosystems. Its strategic focus encompasses three main thematic areas: water management, promoting sustainable solutions adapted to the arid conditions of the Mediterranean; farming systems, enhancing agricultural resilience to environmental challenges and climate variability; and agri-food value chains, fostering sustainable, resilient, and inclusive food systems across the region.

Guided by a [Strategic Research and Innovation Agenda \(SRIA\)](#), PRIMA serves as a flagship example of **science diplomacy** in the Mediterranean, fostering cooperation based on mutual benefit, co-ownership and shared decision-making. Although initially scheduled to run from 2018 to 2024, the initiative has been extended to 2027 through an amendment to its basic act and is now aligned with Horizon Europe, reflecting the EU's continued commitment to addressing Mediterranean challenges through collaborative research and innovation and ensuring PRIMA's lasting impact and relevance in the region.

PRIMA: An Institutionalized EU Partnership with Regional Focus on the Mediterranean

The Mediterranean region faces critical and interconnected challenges, including unsustainable resource management, severe water scarcity, intensifying climate change impacts, and pronounced socio-economic disparities. Given the complexity, scale, and transnational nature of these issues, effective solutions must be developed and implemented collaboratively.

Recognising this imperative, the Partnership for Research and Innovation in the Mediterranean Area (PRIMA) brings together 20 Participating States as of 2024: 12 European Union Member States—Bulgaria (which joined in 2024 following an amendment to PRIMA's basic act), Croatia, Cyprus, France, Germany, Greece, Italy, Luxembourg, Malta, Portugal, Slovenia, and Spain—and 8 non-EU Mediterranean countries—Algeria, Egypt, Israel, Jordan, Lebanon, Morocco, Tunisia, and Türkiye. By pooling resources, knowledge, and expertise under, PRIMA fosters integrated regional cooperation, enabling the coordinated development of sustainable, inclusive, and locally adapted innovations tailored specifically to Mediterranean realities.

Funding: A Unique and Successful Funding Mechanism in EU partnerships

PRIMA employs a distinctive three-tier funding mechanism to ensure equity, balanced participation, and shared responsibility among Participating States, harmonising EU and national interests. This structured approach promotes co-ownership and co-decision-making, enabling all participating countries to have an equal voice in strategic planning and funding allocations. Such a collaborative model significantly enhances

transparency, mutual accountability, and trust—critical elements for successful cooperation between EU and non-EU countries.

The three-tier mechanism includes:

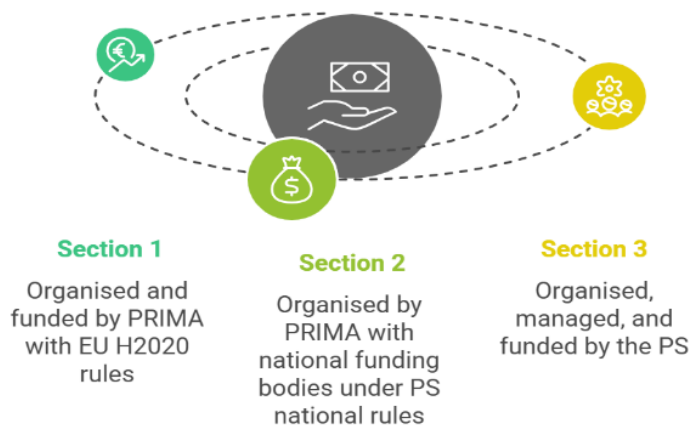
:

Section 1: Actions and activities organised, managed, and funded by the PRIMA-IS2 with EU funds according to H2020 Rules.

Section 2: Activities selected following transnational open and competitive calls for proposals organised by PRIMA-IS and funded by the national funding bodies of PS.

Section 3: Section 3 encompasses activities carried out under the national programmes of the Participating States, including transnational projects known as Participating States' Initiated Activities (PSIAs). These PSIAs may take the form of national, bilateral, or multilateral programmes implemented under the PRIMA umbrella, and are aligned with the objectives of the [PRIMA Strategic Research and Innovation Agenda \(SRIA\)](#).

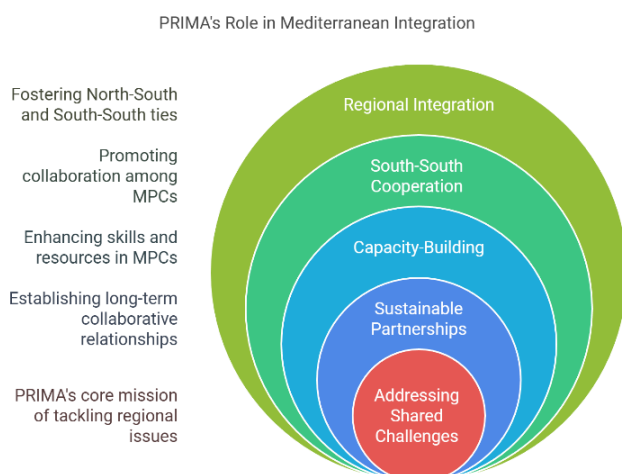
Overview of the Three-Tier Funding Mechanism



PRIMA: Pioneering Collaborative Governance for a Sustainable Mediterranean: unique PRIMA governance model

The unique governance model of PRIMA is institutionalised under Article 185 of the Treaty on the Functioning of the European Union (TFEU), establishing a robust legal foundation that ensures transparent oversight, strong financial management, and scientific coherence. This institutional framework strategically mobilises resources and expertise, producing impactful results capable of addressing the scale and complexity of sustainability challenges across the Mediterranean region.

Central to PRIMA's governance is the principle of equal footing among Participating States, reflected through co-management, co-funding, and co-decision processes. This collaborative approach is operationalised via a structured, three-tier funding mechanism comprising Section 1 (EU-funded thematic calls), Section 2 (co-funded multi-topic calls), and Section 3 (national activities aligned with PRIMA objectives). Through these complementary funding channels, PRIMA fosters transparency, shared responsibility, and mutual engagement, ensuring balanced participation and co-ownership among all partner countries. This distinctive structure enables PRIMA to effectively address complex, transnational Mediterranean challenges, setting it apart from other EU partnerships in terms of governance and operational strategy.



Fostering South-South Cooperation

PRIMA actively promotes regional integration by fostering both North-South and South-South cooperation, pooling resources, knowledge, and innovation capacities to deliver shared benefits across the Mediterranean. This collaborative approach aligns closely with broader EU strategic objectives, including geopolitical cohesion, regional resilience, and inclusive innovation, ensuring meaningful and balanced engagement among all Mediterranean stakeholders within the research and innovation ecosystem.

A significant advancement in South-South collaboration resulted from introducing additional eligibility requirements in PRIMA calls beginning in 2023, under the Horizon 2020 Derogation implemented following PRIMA's first interim evaluation. These new criteria—extended through the 2024 and 2025 calls—stipulate that each project consortium must include at least two legal entities established in Mediterranean Partner Countries (MPCs). This targeted policy change has markedly increased MPC participation, deepening collaborative ties, ownership, and mutual trust among Southern Mediterranean partners. By bolstering South-South cooperation, PRIMA directly supports socio-economic development and resilience in the Southern Neighbourhood, strengthening its overall capacity to address the Mediterranean's interconnected challenges through coordinated, collaborative, and context-specific innovation.

PRIMA's Impactful Calls rolling out the SRIA according to Annual Work Plans (AWPs)

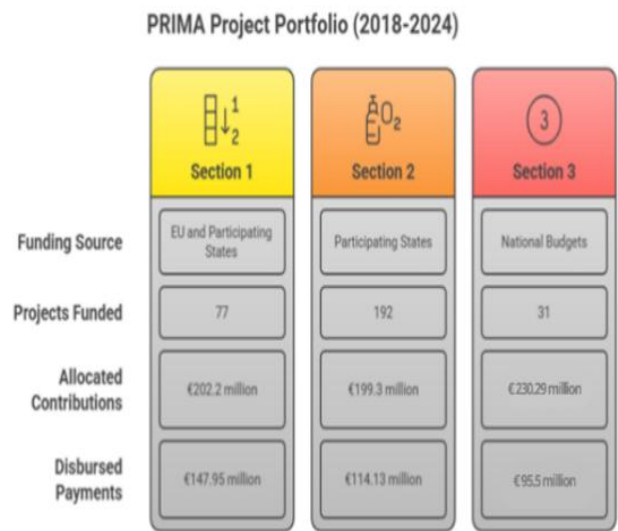
Between 2018 and 2024, PRIMA was implemented through seven Annual Work Plans (AWPs), each transforming the Strategic Research and Innovation Agenda (SRIA) into concrete actions tailored to evolving regional needs. While maintaining alignment with the SRIA's core objectives, the AWP's have consistently adapted to emerging challenges, including the COVID-19 pandemic and shifting geopolitical conditions. Throughout this period, PRIMA launched annual calls designed specifically to address the Mediterranean's most pressing sustainability issues, with the 2025 calls now ongoing under the extended programme.

PRIMA's call system operates through two complementary sections. Section 1 issues thematic calls directly targeting PRIMA's three core pillars—water management, farming systems, and agri-food value chains—while Section 2 features an annual comprehensive multi-topic call that integrates all three pillars, promoting holistic and nexus-oriented solutions. This dual structure enables PRIMA to remain agile, responding rapidly to urgent regional developments, while ensuring strategic consistency with the SRIA's long-term vision—thereby guaranteeing sustained relevance, adaptability, and impact across the Mediterranean region.

PRIMA: A Pioneer of the WEFE Nexus Approach for Sustainable Solutions in the Mediterranean

A distinctive strength of PRIMA is its pioneering adoption of the Water–Energy–Food–Ecosystems (WEFE) Nexus approach, first integrated into its Section 1 calls in 2019. By addressing water, energy, food, and ecosystems as interdependent components of a unified system, PRIMA effectively tackles the Mediterranean’s complex resource management challenges through context-specific and integrated solutions. To amplify the impact of this approach, PRIMA established the Mediterranean WEFE Community of Practice (CoP), a platform designed to connect stakeholders, facilitate knowledge sharing, and promote advancements in integrated resource management policies and practices. Additionally, PRIMA has significantly contributed to shaping the [“Strategy for the Water–Energy–Food–Ecosystems Nexus in the Mediterranean Source-to-Sea Continuum,”](#) providing a strategic regional roadmap that guides collaborative actions to alleviate pressures on water, energy, food, and ecosystems across the Mediterranean.

PRIMA Funded Projects (2018–2024): A Rich Portfolio Delivering Innovative and Sustainable Solutions



Between 2018 and 2024, PRIMA developed a comprehensive and robust portfolio, funding a total of 269 projects across two main call sections.

In **Section 1**, jointly funded by the EU and Participating States, 77 projects received approximately **€147.95 million** in EU operational grants and evaluations, with total estimated project costs reaching **€202.2 million**.

Section 2, funded exclusively by Participating States, supported 192 projects (not yet disbursed for those selected in 2024) with actual total contributions amounting to **€114.13 million** and allocated funds from funding agencies totalling **€199.3 million**.

Complementing these, **Section 3** encompasses activities conducted through national, bilateral, and multilateral initiatives, fully aligned with PRIMA objectives. From 2018 to 2024, 31 Participating States’ Initiated Activities (PSIAs)—programmes managed by national funding agencies—mobilised over **€230.29 million** (PSIAs and Other Activities) in national funds allocated to relevant projects. Of this amount, **€95.5 million** were certified as disbursed and recognised as in-kind contributions, significantly amplifying PRIMA’s strategic reach and enhancing its overall impact across the Mediterranean region.

Positive Trends in PRIMA Call Success Rates (2018–2024)

PRIMA Funding Success Rates (2018–2024)



Between 2018 and 2024, PRIMA’s call statistics demonstrated two distinct funding dynamics.

Section 1—which combines EU operational grants with national co-financing—had an average success rate of just 4.32%. After increasing from 1.97% in 2018 to 3.69% in 2021, the rate slightly decreased to 3.45% in 2024.

These rates show low success as a critical issue. In response, PRIMA introduced more focused call topics, clearer evaluation criteria, and enhanced applicant-support initiatives such as targeted training and

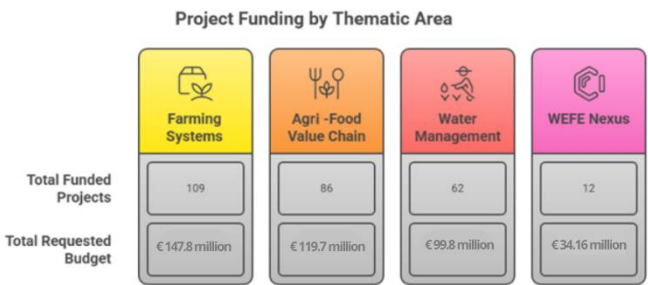
dedicated proposal-writing workshops delivered through National Contact [Points](#).

In contrast, Section 2—funded solely by national funding agencies—maintained a significantly higher average success rate of 21.48% during the same period. In 2024, this rate notably rose to 32.89%, roughly a 35.24% increase over the previous year (24.32% on 2023). This uptick reflects increased national engagement, higher-quality proposals, and improved clarity in national funding guidelines¹.

Collectively, these trends suggest that the corrective measures implemented following the interim evaluation have begun to rebalance PRIMA’s competitive environment, making the calls more accessible and effective for applicants.

Thematic Area Project Statistics

Between 2018 and 2024, PRIMA funded a total of 269 projects (including those with funding decisions finalized in 2024). The Farming Systems thematic area accounted for the largest share, with 109 projects requesting a combined €147.8 million. The Agri-Food Value Chain area followed, supporting 86 projects with requested budgets totaling €119.7 million. Water Management funded 62 projects, with requested funds amounting to €99.8 million.

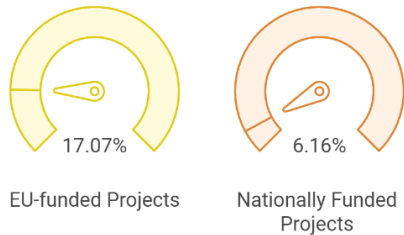


Additionally, the cross-cutting WEFE Nexus thematic window (active from 2019 to 2023) financed 12 projects requesting €34.16 million. These funding allocations highlight PRIMA’s balanced investment across its strategic priorities, while also emphasizing the increasing significance of integrated water energy-food-ecosystems solutions.

¹ More details can be found in Annex 2 of this document, Statistical Data on PRIMA’s R&I Performance (2018–2024).

SME Participation in PRIMA: Bridging Gaps for Inclusive Innovation

SME Participation in EU-funded vs
SME Participation in Funded Projects



Across the 2018–2024 period, SME participation in PRIMA projects has exhibited distinct trajectories across Sections 1 and 2.

In Section 1 (EU-funded), SMEs historically accounted for approximately **17.07%** of the total budget share. However, this figure notably decreased to **11.5%** in 2024, largely attributable to narrower call scopes and heightened competition.

In contrast, Section 2 (nationally funded projects) consistently demonstrated substantially lower SME engagement, with SMEs representing only **6.16%** of the total budget share. This suggests different participation dynamics and possibly greater barriers for SMEs within nationally funded frameworks compared to EU-funded initiatives.

Enhancing Efficiency in PRIMA implementation

Time Metrics Improvement

	<div><div><div></div><div>1</div><div>2</div></div><div>Section 1</div></div>	<div><div><div></div><div>O₂</div></div><div>Section 2</div></div>
Time to Inform	71 days (2024)	117 days (2024)
Time to Grant	186 days (2024)	279 days (2023)
Time to Sign	114 days (2024)	152 days (2023)
Time to Pay	3 days (2024)	Excellent performance

Since its initial calls, PRIMA has significantly enhanced operational timelines, progressively approaching Horizon 2020 performance benchmarks by 2024. Early in PRIMA’s implementation, diverse national procedures contributed to substantial processing delays, notably with over **180 days** required to inform applicants and more than **300 days** to finalize grant agreements in Section 1 (EU-funded). Delays were even more pronounced in Section 2 (nationally funded) due to varied country-specific rules.

A comprehensive set of reforms—including simplified templates, improvements in national schedules, and enhanced coordination with National Contact Points and Funding Agencies—resulted in consistent year-on-year improvements:

Time to Inform (TTI) significantly improved in both sections:

Section 1 reduced from ~132 days (2018) to 71 days (2024).

Section 2 dropped from 190 days (2019) to 117 days (2024), consistently below the 153-day Horizon 2020 benchmark.

Time to Grant (TTG):

Section 1 improved from 311 days (2018) to 186 days (2024), consistently meeting Horizon 2020's 240-day target. Section 2 notably decreased from 466 days (2019) to 279 days (2023), though still above the target.

Time to Sign (TTS):

Section 1 reduced from 177 days (2018) to 114 days (2024). Section 2 improved from 340 days (2018) to 152 days (2023), yet remains above the target.

Time to Pay (TTP):

Section 1 consistently excelled, remaining under 30 days, achieving a low of just 3 days in 2024, highlighting PRIMA's efficient financial processing.

PRIMA: Maximizing Leverage

PRIMA's co-funding model is rooted in the principle of financial integration between the European Union and Participating States (PS), as set out in the PRIMA Decision (EU) 2017/1324. By requiring that national contributions match EU support, this structure ensures not only financial sustainability but also shared ownership, accountability, and alignment with national priorities. From 2018 to 2024, this model enabled PRIMA to achieve a cumulative leverage ratio of 1.37, reflecting its strong capacity to mobilise national resources in addition to EU investment.

Over this period, the European Union contributed €157.59 million, comprising €147.95 million for research and innovation activities (Section 1) and €9.64 million for administrative support to the PRIMA Secretariat.

Participating States provided a total of €199.3 million in cash and €11.9 million in in-kind support, reinforcing the EU investment and demonstrating a high level of commitment to Mediterranean cooperation:

Under Section 2, which covers nationally funded transnational calls aligned with PRIMA's strategic agenda, PS disbursed €114.2 million in financial support up to the end of 2023, plus €4.42 million in in-kind support for national coordination, dissemination, and stakeholder engagement. The €114.2 million figure does not yet include 2024 payments, which will be reported in the 2026 financial cycle once certified by national authorities.

Under Section 3, devoted to Participant State Initiated Activities (PSIAs) and complementary national efforts aligned with PRIMA objectives, PS contributed €95.5 million in certified in-kind support, monitored by the PRIMA Secretariat and external evaluators. In addition, PS supported the establishment and early functioning of the PRIMA Secretariat with €1.06 million in cash (membership fees and office rent) and €212,000 in in-kind staff secondments, prior to the availability of EU administrative funding.

This integrated and balanced funding model has proven highly effective in delivering both financial and strategic value. It has allowed PRIMA to operate as a genuinely transnational programme, pooling resources from both EU and national budgets, fostering coherence in R&I investments, and strengthening Euro-Mediterranean cooperation.

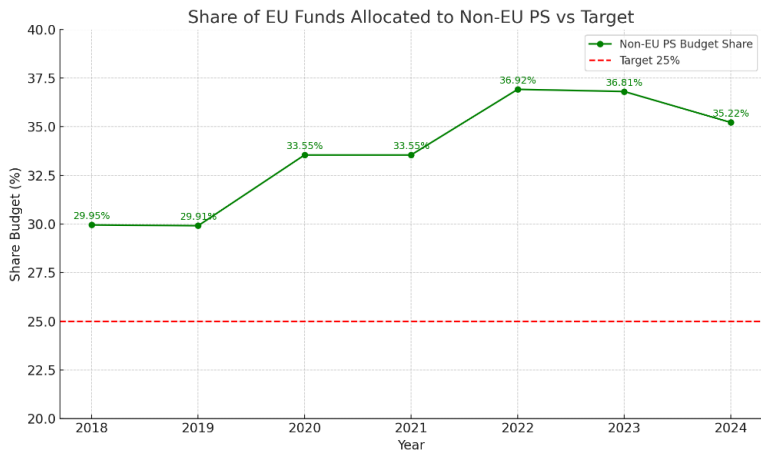
Participating States Initiated Activities (PSIAs)

Between 2018 and 2024, PRIMA's Participating States Initiated Activities (PSIAs) played a critical role in strategically aligning national research priorities with the PRIMA Strategic Research and Innovation Agenda (SRIA). PSIAs leveraged national and regional funding, totaling €269,095,483 across 31 distinct initiatives, to directly address key Mediterranean challenges such as water management, sustainable farming systems, and agri-food value chains.

These tailored national and regional programs particularly emphasized climate-smart agriculture, efficient water management, and sustainable food systems, strongly aligning with PRIMA’s strategic objectives. Additionally, PSIAs significantly strengthened local research capacities, especially benefiting smaller nations like Malta, while fostering valuable bilateral collaborations that combined diverse expertise across borders. Notably, several partnerships initially established through bilateral PSIAs have successfully transitioned into Horizon Europe projects, underscoring PSIAs' crucial role as pathways to broader, competitive European funding opportunities.

Malta and Türkiye exemplify best practices in the implementation of PSIAs. Malta effectively managed underspending risks through its five PSIAs, significantly enhancing local research capabilities and innovation in sustainable agriculture and water management. Similarly, Türkiye strategically utilized its three PSIAs to develop climate-resilient agricultural systems and sustainable technologies, efficiently addressing regional priorities and optimizing the use of allocated funds. These cases highlight PSIAs’ flexibility and effectiveness in achieving meaningful impacts and preventing underspending.

Non-EU Participation in PRIMA Surpasses Targets and Fosters Regional Collaboration



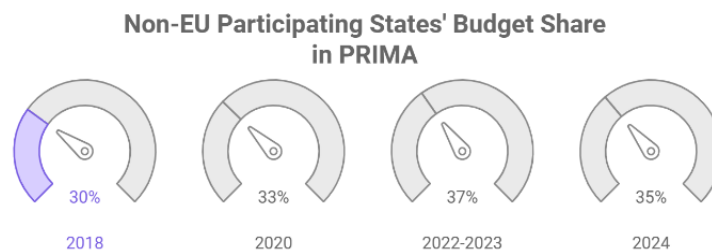
PRIMA has consistently exceeded its initial budgetary targets for funding beneficiaries in Mediterranean Partner Countries (MPCs), with EU funds as set in the Basic act surpassing the 25% threshold stipulated in the basic act of PRIMA.

In line with Decision (EU) 2017/1324 establishing PRIMA, approximately 25% of the annual Union contribution is intended to be allocated to institutions in third countries. Since 2018, this share has consistently

exceeded the target, starting at nearly 30%, surpassing 33% by 2020, and peaking at close to 37% in 2022 and 2023. In 2024, the allocation remained strong at over 35%.

This sustained upward trend highlights PRIMA’s firm commitment to supporting research and innovation in Mediterranean Partner

Countries (MPCs), exceeding its initial objectives and contributing meaningfully to the region’s sustainable development. In the graph above the green line shows consistent overachievement of the target across all years, peaking at 36.92% in 2022. The red dashed line represents the target baseline for reference.



PRIMA project outputs

Between 2018 and 2020, PRIMA-funded projects produced 170 Key Exploitable Results (KERs) across 57 projects, significantly advancing multiple domains within the Mediterranean region. These advancements span scientific knowledge (38%), market readiness (29%), environmental sustainability (30%), social improvements (8%), and policy influence (10%). Notably, 17 KERs (~10%) demonstrated explicit policy impact through citations, official requests, or pilot implementations by public institutions.

Interesting technical and organisational solutions emerging from these projects include water-efficient agricultural systems (AWESOME), advanced decentralized wastewater treatment solutions (DSWAP), digital water governance tools (IDEWA), fish authenticity and traceability solutions (SUREFISH), sustainable water productivity solutions (SUPROMED), intelligent irrigation management (INTELLIRRIS), improved climate-resilient crop varieties (IMPRESA), and comprehensive platforms for food traceability (Med Food TTHubs).

To build on these achievements, PRIMA's funding strategy for 2025–2027 prioritizes scaling up proven solutions, fostering enhanced collaboration with policy institutions, establishing larger demonstration sites, and providing targeted training and technical assistance. This integrated approach ensures broader adoption by local communities, businesses, and stakeholders.

Key metrics on 37 concluded projects PRIMA specific KPIs

PRIMA's key performance indicators (KPIs) have been revised to align with Horizon Europe's emphasis on standardized data collection. Across the 57 concluded projects, PRIMA-specific KPIs include:

22 of 57 projects ($\approx 38\%$) developed high-TRL (6–8) innovations, and five projects produced social-innovation outputs. Forty-one KERs were released as open datasets. The median end-TRL across all KERs was 6, with 54 reaching ≥ 6 . Nine KERs implemented large-scale nature-based pilots, while reported hectares from MEDWATERICE (40 000 ha), SMARTIES (30 000 ha), CONSIRS (15 000 ha), AdaMedOr (20 000 ha), SUSTAINOLIVE (15 000 ha), and smaller pilots (10 000 ha) summed to $\sim 120\,000$ ha of sustainable agricultural practice. Eight KERs described IPM techniques deployed over thousands of hectares. Seventeen KERs flagged "High policy impact" generated policy briefs, leading to nine national and three EU-level policy integrations. Four inclusive water-governance case studies emerged from GOTHAM and Sustain-COAST pilots. Finally, seven KERs with a WEFE-Nexus focus directly influenced seven distinct Nexus-oriented policy documents.

Scientific Publications (2019–2024)

From 2019 to 2024, PRIMA-funded projects produced 630 peer-reviewed publications, showcasing rapid growth in research dissemination:

2019: 3 publications

2020: 45 publications

2021: 124 publications

2022: 142 publications

2023: 151 publications

2024: 145 publications

Total= The total number of scientific publications produced by PRIMA-funded projects from 2019 to 2024 is **610**.

Showcasing Innovation: PRIMA's Transformative Demo Sites

PRIMA's 127 demonstration sites across 15 Mediterranean countries function as "living laboratories," validating technologies under real-world conditions. These sites focus on critical areas such as water treatment, groundwater governance, precision irrigation, pest management, agroecology, greenhouse automation, and aquaponics. They engage farmers, policymakers, and industry stakeholders through co-design processes, ensuring context-sensitive and scalable solutions. Demonstration activities have directly informed policy changes (e.g., irrigation regulations in Spain, reuse guidelines in Tunisia) and trained over 1,800 stakeholders, accelerating the regional adoption of sustainable practices.

Catalyzing Mediterranean Sustainability: PRIMA's Impact on the SDGs



PRIMA's portfolio of 57 completed projects has demonstrably advanced multiple Sustainable Development Goals (SDGs), particularly in scientific innovation (average impact score 41.1), resource efficiency, and ecosystem conservation. To systematically assess these contributions, PRIMA developed the PRIMA-SDG Tool, a dedicated methodology for translating project-level results into measurable SDG impact.

The analysis revealed strong alignment with key environmental and climate-related targets, including SDG 6.4 on water-use efficiency (1,404 references), SDG 12.2 on sustainable resource use (1,128), SDG 15.1 on terrestrial ecosystem protection (1,156), and SDG 13.1/13.2 on climate resilience and policy integration (1,564). Economic (score: 35.4) and social (28.7) dimensions show meaningful contributions to entrepreneurship, job creation, and inclusive innovation, while governance (16.0) emerges as a critical area for improvement. These findings echo the 2024 IPBES Nexus Assessment, which underscores the need for integrated, cross-sectoral responses to interconnected challenges in biodiversity, water, food, climate, and health—a vision PRIMA is actively advancing in the Mediterranean.

PRIMA: Added Value of Science Diplomacy in Action

PRIMA exemplifies science diplomacy by fostering collaborative research that bridges divides and addresses shared challenges. Cited as a “beacon of science diplomacy” in the European Framework for Science Diplomacy report², PRIMA shows how joint research can spark political dialogue, build trust, and tackle urgent issues in a geopolitically sensitive region.

Through projects like [EcoFuture](#) PRIMA—uniting Palestinian, Israeli, and Jordanian partners—PRIMA facilitates climate-change adaptation via the Water-Energy-Food-Ecosystem (WEFE) nexus, with pilot sites in all three countries to enhance socio-economic welfare and regional cooperation.

Likewise, the [MARA-MEDITERRA](#) project demonstrates PRIMA’s commitment to cross-border action by deploying Nature-based Solutions (NbSs) to reverse land and water degradation across the Mediterranean, engaging Lebanon, Türkiye, and Egypt. These initiatives underscore PRIMA’s unique value in building trust, strengthening scientific capacity, and addressing critical regional challenges. By aligning research efforts with global objectives, Both initiatives translate high-level science-diplomacy rhetoric into concrete actions—shared pilot sites, joint data platforms, co-authored publications, and multi-stakeholder policy forums.

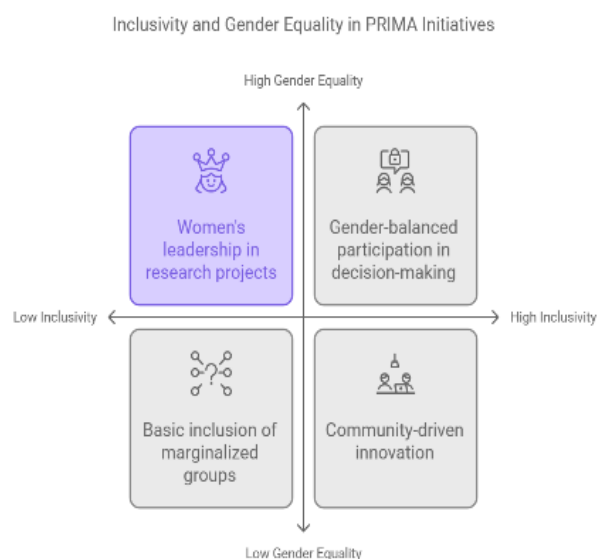
PRIMA: Building a Critical Mass through Stakeholder Engagement

PRIMA fosters deep stakeholder engagement through several complementary mechanisms. First, **Living Labs** act as dynamic, user-centered platforms where researchers, policymakers, farmers and their associations, water utilities, and local communities co-design, test, and refine innovations under real-world conditions. By emphasizing participation and inclusivity, these labs ensure that technical solutions are also socially acceptable and finely tuned to local needs. Parallel to this, PRIMA’s **Multi-Actor Approach** embeds diverse stakeholders—ranging from farmers’ cooperatives and local authorities to utility providers—at every stage of project planning, implementation, and evaluation, guaranteeing that end-user perspectives drive both problem identification and solution development. Building on these foundations, the **WEFE Community of Practice (CoP)** brings together members from across the Mediterranean basin—researchers, public agencies, private-sector partners, and civil-society actors—to share lessons, co-create best practices, and jointly troubleshoot Nexus-oriented challenges (water, energy, food, ecosystems). Especially active in southern Mediterranean contexts, these collaborative networks

² European Commission: Directorate-General for Research and Innovation, Gjedssø Bertelsen, R., Bochereau, L., Chelioti, E., Dávid, Á. et al., A European framework for science diplomacy – Recommendations of the EU Science Diplomacy Working Groups, Gjedssø Bertelsen, R.(editor), Bochereau, L.(editor), Chelioti, E.(editor), Dávid, Á.(editor), Gailiūtė-Janušonė, D.(editor), Hartl, M.(editor), Liberatore, A.(editor), Mauduit, J.-C.(editor), Müller, J. M.(editor) and Van Langenhove, L.(editor), Publications Office of the European Union, 2025

harness local knowledge, build ownership, and bridge the gap between innovation and widespread adoption, ultimately reinforcing resilience and scaling sustainable practices across the region.

PRIMA: Driving Inclusivity and Gender Equality for a Resilient Mediterranean



Recognizing the importance of addressing the needs of women, youth, and smallholder farmers—groups disproportionately impacted by challenges such as water scarcity and food insecurity—is central to this commitment. PRIMA aims to achieve a balanced representation of gender within its governance and is prioritizing gender-balanced participation across its calls. Several projects in the portfolio are integrating this aspect into their research and innovation activities. This involves incorporating the knowledge, perspectives, and experiences of women, particularly those in rural communities, so that research and innovation align more closely with local realities.

Efforts to mainstream gender perspectives have resulted in projects like HALOFARMS, which empowers women in agriculture, enhancing sustainability and equity.

By including gender considerations in its overall framework, PRIMA seeks to address systemic inequalities and enhance resilience throughout the Mediterranean region. Initiatives such as increasing women's representation in decision-making and ensuring innovations meet the needs of marginalized communities contribute to building a more inclusive and sustainable future.

Strengthening Synergies and International Positioning

PRIMA strategically aligns with key [Horizon Europe Missions](#)—such as “[A Soil Deal for Europe](#)” and “[Restore Our Ocean and Waters](#)”—to integrate its thematic priorities into broader EU sustainability goals, ensuring Mediterranean research contributes directly to Horizon Europe's 2030 objectives.

Engagement with the [Euro-MED Hub for Research and Innovation](#) and the [5+5 Dialogue](#) underscores PRIMA's role as a convener of Mediterranean stakeholders, fostering knowledge exchange and policy alignment across the region.

As an affiliated project of the One Planet Network's Sustainable Food Systems Programme, PRIMA participates in the [SFS-MED Platform](#) together with [CIHEAM](#), [FAO](#), and the [Union for the Mediterranean \(UfM\)](#). This multi-stakeholder initiative leverages the combined expertise of food-systems actors—including research institutions, farmers, and civil-society organizations—to accelerate the sustainable transformation of Mediterranean agrifood systems.

PRIMA also plays a pivotal role in defining and implementing the [Strategy for the WEFE Nexus in the Mediterranean Source-to-Sea \(S2S\) Continuum](#), a joint initiative of [UfM](#), UNEP-MAP, and the European Commission—technically supported by [GWP-Med](#), and the [PRIMA Foundation](#). Two consultative Regional Roundtables (Rabat, June 2023; Tunis, February 2024) drew on PRIMA’s expertise to refine the draft strategy, which includes references to digital transformation and is slated for presentation at the next UfM Ministerial on Water (late 2025) and the 24th Contracting Parties Meeting of the Barcelona Convention (December 2025, Egypt).

Key anticipated focus themes for the upcoming UfM Ministerial on Water—WEFE Nexus; Financing & Investments; Digitalization—align closely with PRIMA’s networks and technical contributions, positioning the initiative as a critical actor in driving cross-border, integrated resource management and climate resilience in the Mediterranean.

Chapter 2: Introduction and Background information on PRIMA

PRIMA in a nutshell

Legal basis

The Partnership for Research and Innovation in the Mediterranean Area (PRIMA) is a European Partnership established as an Institutionalized Partnership under Article 185 of the Treaty on the Functioning of the European Union (TFEU).³

This partnership fosters collaboration between the European Union and its Participating States to address shared challenges in the Mediterranean region through research and innovation, focusing on water management, sustainable farming systems, and the agri-food value chain and its interconnections through a nexus approach.

PRIMA was established with 19 Participating States under [Decision \(EU\) 2017/1324](#), with operations under Horizon 2020 originally scheduled to conclude in 2024.

To extend PRIMA's activities under the Horizon Europe framework, the European Parliament and the Council adopted [Decision \(EU\) 2024/1167](#) on April 11, 2024. This amendment extended the Union's participation in PRIMA, enabling the launch of new calls for proposals from 2025 to 2027 and the completion of all related research and innovation actions by 2031. In 2024, Bulgaria became the 20th Participating State, further expanding the partnership's network and impact.

Algeria, Egypt, Jordan, Lebanon, and Morocco signed [bilateral international agreements with the European Union](#), with the EU in 2017-2018 to participate in PRIMA.

Currently PRIMA comprises twenty Participating States pending the international agreements

EU Member States and Horizon-associated third countries: Bulgaria (joined under the amended decision), Croatia, Cyprus, France, Germany, Greece, Israel, Italy, Luxembourg, Malta, Portugal, Slovenia, Spain, Tunisia, and Türkiye.

Mediterranean Partner Countries (MPCs): Algeria, Egypt, Jordan, Lebanon, and Morocco.

Among MPCs, Egypt has achieved full [signed its Horizon Europe association agreement](#) and PRIMA participation, effective as of April–May 2025, enabling Egyptian researchers to compete on equal footing in all calls. [Lebanon](#) and [Jordan](#) have exchanged letters to extend their PRIMA participation through 2027, with agreements now being finalized. Meanwhile, Morocco and Algeria are still negotiating exchanges of letters to extend their participation in PRIMA through exchange of letters; once concluded, both will continue to be PRIMA Participating States for 2025–2027.

This report captures the implementation of PRIMA under the Horizon 2020 R&I Framework Programme, covering activities from **1st January 2018 to 31st December 2024**.

Article 185 of the Treaty on the Functioning of the European Union (TFEU) allows the EU to participate in and financially support research and development programs jointly undertaken by Member States. It facilitates collaboration and alignment of national research efforts with EU priorities, fostering transnational cooperation on shared challenges.

PRIMA Funding

The European Union has committed up to €325 million to the PRIMA Programme for the period from 7 August 2017 to 31 December 2031, comprising €220 million under Horizon 2020 and an additional €105 million under Horizon Europe.

In parallel, the Participating States collectively contribute approximately €384 million, ensuring that their financial commitments at least match or exceed the EU contribution, in accordance with the co-funding principle established under Article 185 TFEU.

In addition to direct financial contributions, Participating States also provide significant in-kind contributions, which substantially increase PRIMA's financial leverage. These in-kind resources mobilize additional capacities and enhance the effective use and impact of EU and national funding.

For detailed figures and analysis of disbursed contributions, see Annex 3 bis: Matching Assessment Between EU and PRIMA Funds.

Implementation

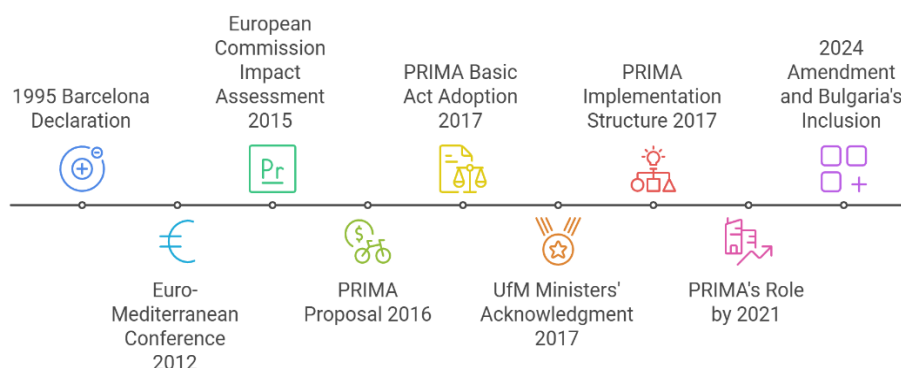
PRIMA operates under a long-term [Strategic Research and Innovation Agenda \(SRIA\)](#), which defines the strategic direction and thematic priorities guiding its activities.

The Partnership is implemented by the [PRIMA Foundation](#), whose Secretariat, based in Barcelona, plays a pivotal role in ensuring the programme's effective governance and operational execution. The Secretariat is responsible for the preparation of annual work plans, management of funding, and coordination of activities across all implementation sections.

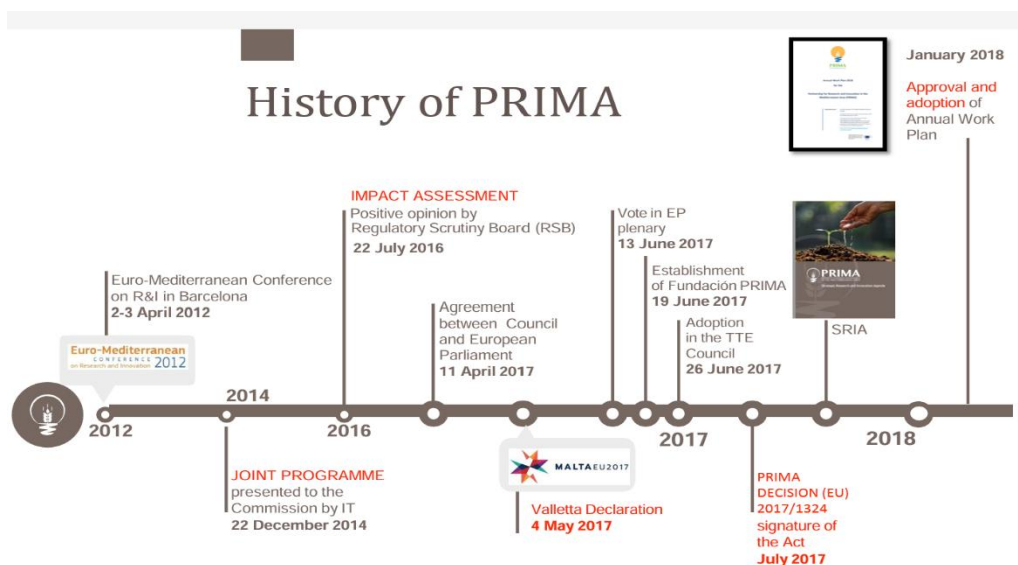
In addition to launching and managing calls for proposals and supervising the implementation of selected projects, the Secretariat ensures full compliance with EU regulations, addresses legal and administrative matters, and monitors the progress of all actions, including those under Section 3 (nationally funded activities).

Moreover, by acting as the secretariat to the programme's advisory bodies, enhancing communication and outreach, and promoting synergies with other European and international initiatives, the Secretariat supports the efficient and transparent achievement of PRIMA's objectives.

Evolution and Key Milestones



After seven years of implementation (2018–2024), PRIMA has placed itself as a cornerstone for fostering Research and Innovation cooperation across the Mediterranean. Its genesis can be traced back to the [1995 Barcelona Declaration](#), which underscored science and technology as catalysts for socioeconomic development in the Euro-Mediterranean region. Building on this vision, PRIMA was designed to tackle shared challenges—most notably water scarcity, food security, and sustainable agriculture—through a coordinated, multicountry research partnership.



A decisive moment came at the [Euro-Mediterranean Conference on Research and Innovation](#) held on 2–3 April 2012 in Barcelona, organized by the European Commission’s DG for Research and Innovation. The conference framed R&I as drivers of sustainable, inclusive economic growth and introduced the concept of a Common Knowledge and Innovation Space (CKIS), focusing on policy dialogue, capacity-building, collaborative research, and researcher mobility. By advocating these priorities, CKIS laid the groundwork for a structured regional research initiative recognized by several Participating States and the European Commission, paving the way for PRIMA’s creation.

Building on this momentum, the Cypriot Presidency of the EU Council 2013, formally proposed the establishment of a R&I Partnership, with the goal of creating a long-term, structured research and innovation partnership focused on water and food systems in the Mediterranean.

A significant political endorsement came on 5 December 2014, when the Council of the EU invited the European Commission, in line with Article 185 of the Treaty on the Functioning of the European Union (TFEU), to assess whether the Union’s participation in the PRIMA Joint Programme was justified by its objectives and scale.

Subsequently, on 22 December 2014, the Participating States submitted the [PRIMA Joint Programme proposal](#) under Horizon 2020.

In line with the Better Regulation Guidelines, the European Commission (EC) officially started the Impact Assessment (IA), in October 2015, and prepared a [Report](#) —after its positive outcomes from the EC Regulatory Scrutiny Board (RSB) —PRIMA prepared its Strategic Research and Innovation Agenda through the [4PRIMA project](#).

PRIMA's formal launch occurred during the Ministerial Conference on Strengthening Euro-Mediterranean Cooperation through Research and Innovation in Valletta on 4 May 2017, where UfM Ministers of Research explicitly identified it—via the Valletta Declaration—as the vehicle to address the Mediterranean's pressing issues. In June 2017, PRIMA established its Implementation Structure (PRIMA-IS) as a Foundation in Barcelona, rolling out its first Annual Work Plan (2018) and opening its inaugural calls for proposals.

By 2021, PRIMA had become woven into the UfM Regional Platform on Research and Innovation, aligning its annual work plans with broader regional objectives in climate change adaptation, public health resilience, and renewable energy deployment. UfM Roadmap on R&I, [Theories of Change and Impact Pathways](#) (June 2022)

At the UfM R&I Ministerial Meeting in June 2022 as referred in [the UfM Ministerial Declaration on Research and Innovation \(2022\)](#), Member States endorsed an [Implementation Plan Union for the Mediterranean \(UfM\) R&I Priorities](#) (June 2022) that translated high-level policy priorities into actionable research programs—further cementing PRIMA's strategic role. Through this continuous evolution, PRIMA functions not only as a funding mechanism but also as the principal nexus for knowledge exchange, joint capacity-building, and policy alignment across the Mediterranean.

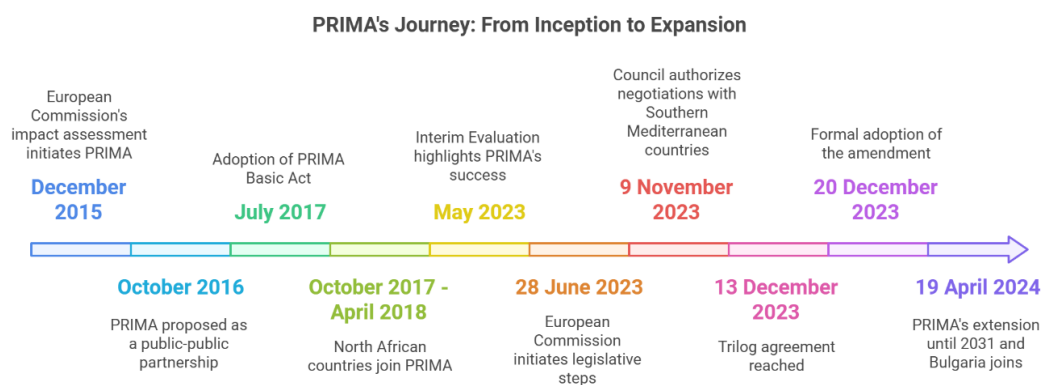
PRIMA is also included in the [Euro-Mediterranean Hub for R&I](#) for R&I a one-stop shop for research results, best practices, policy papers, and relevant publications, as well as a portfolio of R&I collaboration opportunities (funding, networks, clusters). The Hub aims to foster knowledge exchange among R&I stakeholders across the Mediterranean in health, renewable energies, and climate change.

PRIMA's Formal Journey: Interinstitutional Process and Legislative Procedure

PRIMA's formal journey began in December 2015, when the European Commission conducted an impact assessment identifying the need for an initiative dedicated to tackling water scarcity, sustainable agriculture, and food security.

In October 2016, the European Commission proposed PRIMA as a public-public partnership under Article 185 TFEU, resulting in the adoption of Decision (EU) 2017/1324 in July 2017.

Between October 2017 and April 2018, Algeria, Egypt, Jordan, Lebanon, and Morocco signed international agreements to join PRIMA, establishing a robust collaboration framework.



Following the [Interim Evaluation conducted in 2022](#) which highlighted PRIMA's success under Horizon 2020, the European Commission proposed extending PRIMA's duration under Horizon Europe. On 28 June 2023, the Commission initiated a series of legislative steps:

On 9 November 2023, the Council authorized negotiations with Southern Mediterranean countries to ensure their continued participation. A trilogue agreement was reached on 13 December 2023, leading to the formal adoption of the amendment on 20 December 2023. The amendment was approved by the European Parliament on 27 February 2024 and officially adopted as [Decision \(EU\) 2024/1167](#) on 19 April 2024, extending the program until 2031.

Contribution to EU Priorities

Under President von der Leyen's second mandate (2024–2029), the Mediterranean region has been identified as a strategic priority for geopolitical stability, sustainable development, and resilience. PRIMA aligns directly with these objectives by funding and coordinating research projects that develop water-efficient technologies, integrated water-management practices, and climate-resilient agricultural models. These efforts support the EU's ambition of building a more resilient neighborhood, as outlined in the [Political Guidelines for the Next European Commission \(2024–2029\)](#) commission.europa.eu. At the same time, PRIMA advances innovative farming practices—such as precision irrigation and drought-tolerant crop varieties—that contribute to the EU's goal of fostering a sustainable Mediterranean agri-food system. Furthermore, by channeling investment into research and innovation, strengthening cross-border industrial partnerships, and helping to close the innovation gap between EU Member States and Southern and Eastern Mediterranean countries, PRIMA exemplifies the competitiveness strategy set out in the [Draghi Report: “The Future of European Competitiveness”](#)

PRIMA is strategically designed to align closely with key EU frameworks and sectoral policies, advancing their objectives through targeted regional research and innovation solutions. It addresses priorities outlined in the [European Council's Strategic Agenda 2024–2029](#)—including security, competitiveness, the twin green-digital transition, and neighbourhood cooperation—and aligns with objectives set out in the [Competitiveness Compass](#), the forthcoming [European Life Sciences Strategy](#), and the upcoming [European Oceans Pact](#), thereby enhancing Europe's global competitiveness, life sciences advancements, and ocean sustainability respectively

In support of the [European Green Deal Implementation Package \(2023–2025\)](#), PRIMA advances drought-resilient farming, soil health, and agroecological restoration practices, also contributing crucial data for the forthcoming [Sustainable Food System Regulation](#). It actively supports the [Farm to Fork Strategy](#) and the [EU Organic Action Plan 2030](#), emphasizing resilient crop varieties and agroecological practices. Particular attention is paid to addressing the “hidden costs” of food systems, as outlined in the [FAO's 2024 State of Food and Agriculture report](#), given the high diversity and vulnerability of Mediterranean agri-food systems. In addition, PRIMA supports a forward-looking vision for agriculture that strengthens the role of farmers, promotes standards and harmonisation, and aligns with evolving EU frameworks—actions that will also contribute to the implementation of the [EU Soil Strategy for 2030](#) and complement the [EU Mission: A Soil Deal for Europe](#).

PRIMA accelerates the adoption of clean technologies by establishing pilots and living labs in desalination, solar irrigation, and agrivoltaics, aligning directly with the [Net Zero Industry Act](#), the [Critical Raw Materials Act \(2024\)](#), and the objectives of the Clean Industrial Deal

Through demonstration sites for water reuse, aquifer recharge, and digital irrigation, PRIMA contributes to the goals of the [EU Water Resilience Initiative \(WRI\)](#) and the [EU Climate Adaptation Strategy \(COM 2021/82\)](#). These actions also reinforce strategic efforts under the [EU Water Framework Directive](#) and the [Zero Pollution Action Plan](#)

Aligned with the [CAP post-2027 orientation paper \(COM\(2025\)120\)](#), PRIMA delivers context-sensitive Mediterranean solutions, focusing on agroecology and digital advisory services consistent with eco-schemes and [Agricultural Knowledge and Innovation Systems \(AKIS\)](#) reforms. These actions are adapted to the diverse policy environments, farming systems, and innovation capacities across the Mediterranean region

Supporting the [Global Gateway Investment Agenda](#) and the [Global Gateway – Blue Economy Investment Plan](#), PRIMA fosters co-investments and job creation within sustainable agricultural value chains, while enhancing product traceability in line with the [EU Forest & Deforestation-Free Commodity Regulation](#)

Moreover, PRIMA's circular economy solutions are aligned with the objectives of the [Waste Framework Directive Revision \(2023\)](#) and support biodiversity goals outlined in the [EU Biodiversity Strategy for 2030](#) and the [Nature Restoration Law](#)

Finally, PRIMA establishes strong synergies with EU Research and Innovation instruments, ensuring alignment and complementary actions across European funding programmes, including the [LIFE Programme \(2021–2027\)](#) and strategic initiatives under [Horizon Europe Clusters 5 and 6](#)

Mediterranean challenges PRIMA intervention logic, specific problems addressed description of goals and outline of activities

The Mediterranean region faces a confluence of severe environmental, economic, and [social](#) challenges that threaten its long-term sustainability and stability. Prolonged droughts and increasingly erratic rainfall patterns have diminished [water resources](#) essential for agriculture, leading to lower crop yields, degraded ecosystems, and heightened economic vulnerability for rural communities. Fragile supply chains and outdated farming systems have further exacerbated [food insecurity](#), while ongoing conflicts and global crises—such as the [COVID-19 pandemic](#) and the [war in Ukraine](#)—have destabilized populations already living on the margins.

Today, the region continues to grapple with overlapping crises, including intensifying climate change impacts, rising [geopolitical tensions](#), and [economic volatility](#). These interconnected pressures amplify existing vulnerabilities and call for coordinated, transnational responses.

To strengthen resilience and sustainability across the region, [PRIMA](#) was established to pool resources in an otherwise fragmented research and innovation (R&I) landscape and deliver practical, context-specific solutions on the ground.

Historically, R&I efforts in the Mediterranean have been fragmented, with countries engaging in bilateral collaborations or participating in time-bound EU initiatives funded under FP7, H2020 EU Framework Programme such as [ERANET-MED](#), [ARIMNET](#), (1 and 2) and [FORESTERRA](#). While valuable, these initiatives often lacked long-term strategic alignment, and individual countries frequently pursued uncoordinated programmes that led to duplication and missed opportunities for synergy. This fragmentation hindered the development of comprehensive and integrated responses to cross-cutting challenges such as water scarcity, soil degradation, and climate-induced agricultural shocks.

A structured, long-term initiative was therefore needed to promote alignment, avoid duplication, and scale up cooperation across the Mediterranean. PRIMA was built on the legacy of those earlier EU efforts—leveraging existing collaborations and networks—while introducing a more ambitious, durable, and systemic approach to fostering joint solutions.

PRIMA was conceived precisely to overcome this fragmentation by aligning national research agendas and promoting a coordinated, mission-driven strategy. It aims to generate science-based, actionable solutions that enhance resilience, inclusiveness, and sustainability across the water, agri-food, and ecosystem sectors—advancing regional cooperation and innovation uptake in response to both persistent and emerging challenges facing the Mediterranean.

PRIMA's Strategic Response:

PRIMA's Intervention Logic to the Theory of Change:

The PRIMA intervention logic provides a structured approach clearly outlining the challenges, strategic goals, objectives, and corresponding activities. The theory of change complements this logic by detailing how each element interacts systematically—from inputs and activities to outputs, outcomes, and ultimate impacts—to achieve holistic advancements in scientific, environmental, economic, and societal domains within the Mediterranean region.

The impact assessment of PRIMA, accompanying the European Commission's proposal in October 2016, identified unsustainable management of water resources and food systems, exacerbated by climate change, as the primary regional challenge. While political instability and population growth were recognized, critical underlying drivers included uneven distribution of Research & Innovation (R&I) resources among Mediterranean countries, fragmented governance structures, limited coordination of national R&I policies, and the absence of a long-term strategic agenda.

These challenges underpin PRIMA's theory of change by clearly identifying root causes and barriers that must be addressed to achieve sustainable prosperity and resilience.

Vision and Mission: PRIMA articulates a vision of transforming the Mediterranean area into a region of sustainable prosperity, climate resilience, and collaborative innovation, emphasizing efficient management of water resources and food systems, widespread adoption of sustainable practices, and equitable distribution of research and innovation capabilities. The mission operationalizes this vision by fostering robust, climate-resilient agri-food systems and integrated water management practices through collaborative research and innovation partnerships.

General Goal: The general goal of PRIMA is to build robust and resilient agri-food systems and integrated water resource management, addressing sustainability, environmental health, economic development, nutrition, food security, social stability, health, well-being, and migration challenges. This broad goal establishes clear targets for tangible outcomes within the theory of change.

.

Specific Objectives: To achieve this general goal, PRIMA's specific objectives include:

1. Formulating a shared, strategic long-term agenda for sustainable Agri-Food systems and integrated water management.
2. Aligning national research and innovation programs with this strategic agenda.
3. Engaging diverse stakeholders from public and private sectors, pooling knowledge, resources, and innovation capabilities.
4. Enhancing funding, implementation capacities, and knowledge dissemination through SMEs, academia, NGOs, and local research institutions.

These objectives explicitly inform and structure each impact pathway—scientific, environmental, economic, and societal—within the theory of change.

These operational objectives provide measurable targets directly linked to outputs and outcomes necessary for achieving the intended long-term impacts:

- Water Management ensures environmental sustainability and governance.
- Farming Systems foster sustainable productivity, benefiting economic and environmental health.
- Agri-Food Value Chain supports economic inclusivity and societal benefits.

Activities: PRIMA's strategic activities, primarily research and innovation calls, include funding collaborative projects, fostering multi-stakeholder partnerships, and promoting knowledge sharing and policy coordination. These activities generate tangible outputs that directly feed into the structured outcomes of the theory of change.

The expected outcomes of PRIMA's strategic response, linked to its intervention logic and theory of change, encompass distinct yet interconnected domains: Scientific Outcomes: Environmental Outcomes: Economic Outcomes: Societal Outcomes:

PRIMA operational objectives



Monitoring Framework: To assess and ensure progress towards these objectives, PRIMA established Key Performance Indicators (KPIs) outlined in its Strategic Research and Innovation Agenda (SRIA). In 2024, PRIMA revised the monitoring framework to enhance alignment with operational objectives, increasing its effectiveness and adaptability, and ensuring comprehensive tracking of progress toward achieving PRIMA's vision and mission.

Table 1 PRIMA's Key Elements and Objectives (2018-2023)

Section	Key Elements
Drivers	Insufficient contribution of R&I to tackling Mediterranean challenges; insufficient cross-border coordination.
General Goal	Develop innovative, sustainable solutions in water management and food systems.
Problem	Unsustainable water management of water provision and food systems in the Mediterranean region.
Specific Objectives	Alignment of R&I programs and procedures; critical mass of actors and resources; strengthened innovation capacities.
Operational Objectives	 <ol style="list-style-type: none"> 1. Water-Saving Solutions: To test and stimulate the adoption of tailored water-saving solutions, particularly in agriculture. 2. Land and Water Sustainability: To improve land and water sustainability in arid and semi-arid regions and watersheds. 3. Water Governance Systems: To elaborate and stimulate innovative policies for managing water systems. 4. Smart and Sustainable Farming: To develop farming systems that maintain natural resources and increase production efficiency. 5. Pests and Pathogens in Farming: To reduce the impact of pests and pathogens while minimizing health consequences. 6. Nutrition and Health: To innovate in Mediterranean food products and enhance the links between nutrition, physical activity, and health. 7. Reduce Losses and Wastes: To develop food chain solutions for reducing losses and waste. 8. New Agri-Food Business Models: To create and implement models for improving resource use, income growth, and job creation.
Inputs	Financial resources, human resources, operational processes, and infrastructure to facilitate project proposals and grant reviews under PRIMA funding.
Activities	<ul style="list-style-type: none"> - Programme Level: SRIA revisions, dissemination, capacity building for funders, stakeholder platforms. - RTDI Level: Training for capacity-building, mobility.
Outputs	<ul style="list-style-type: none"> - Programme Outputs: Revised SRIA, PRIMA MEL platform, guidelines, national regulations alignment. - RTDI Outputs: Scientific outputs, new tools, jobs created.
Specific Outcomes	<ul style="list-style-type: none"> - Programme Level: Aligned strategies, increased visibility, strengthened innovation ecosystem. - RTDI Level: Enhanced collaboration, improved R&I skills. <ol style="list-style-type: none"> 1. Scientific Outcomes: Enhanced research and innovation capacities within Mediterranean countries. Strengthened collaboration and coordination among national and regional R&I institutions. Increased quality, scope, and relevance of scientific outputs (publications, innovations, technologies). 2. Environmental Outcomes: Improved efficiency in water resource management, leading to reduced water stress. Increased adoption of sustainable agricultural practices, enhancing land and ecosystem sustainability.

	<p>Reduced environmental impacts through lower food waste and enhanced resource efficiency.</p> <p>3. Economic Outcomes: Greater competitiveness and resilience of Mediterranean Agri-Food economies. Increased economic opportunities and market development, particularly for SMEs and local businesses. Improved economic sustainability and inclusive growth within the agri-food value chain.</p> <p>4. Societal Outcomes: Improved nutritional quality and health outcomes from enhanced Mediterranean dietary practices. Strengthened social cohesion and stability due to better management of resources and local economic growth. Enhanced community participation and empowerment through multi-stakeholder governance models and knowledge dissemination.</p>
--	---

Actions taken to address recommendations from interim evaluation

First Interim Evaluation of PRIMA (2022)

The first interim evaluation of PRIMA, required by Article 14 of the PRIMA Basic Act (Decision (EU) 2017/1324), was conducted in 2022. This evaluation covered PRIMA's performance from 2017 to 2021, focusing on the 2018–2021 Annual Work Plans (AWPs). The European Commission and external experts led the evaluation from March to June 2022.

The evaluation offered insights into PRIMA's early successes in promoting research and innovation in the Mediterranean. It identified challenges and areas for improvement, suggesting ways to enhance PRIMA's impact on the EU and the Mediterranean. While no projects were fully completed, the evaluation focused on PRIMA's structure, processes, and early progress. It highlighted successes in addressing water scarcity, sustainable farming, and food security.

The evaluation used criteria such as effectiveness, efficiency, relevance, coherence, added value, transparency, and openness to assess PRIMA's structure, implementation processes, and progress. It focused on early achievements in water scarcity, sustainable farming, and food security as no projects had been fully completed at the time.

The PRIMA Secretariat contributed to the evaluation by preparing a comprehensive [Input PRIMA Interim Evaluation](#), which detailed the partnership's activities, achievements, and challenges during its implementation under Horizon 2020. [An independent assessment conducted by the external company CSES \(Centre for Strategy & Evaluation Services\)](#) complemented this effort, offering an objective review of PRIMA's alignment with strategic goals, operational efficiency, and the impact of its funded projects in addressing key challenges such as water scarcity, sustainable farming, and food security in the Mediterranean region.

Key Findings

Key findings are detailed in the "[report Commission Staff Working Document Interim Evaluation of PRIMA](#)" and the accompanying [report from the Commission To The European Parliament and the Council on the interim evaluation of the Partnership for Research and Innovation in the Mediterranean Area \(PRIMA\)](#). The evaluation highlighted PRIMA's contributions to research and innovation in the Mediterranean, identified challenges, and provided recommendations for improvement. Though no projects were fully completed, the

evaluation recognized PRIMA's early successes in addressing water scarcity, sustainable farming, and food security.

While the evaluation acknowledged various achievements, it also highlighted several challenges: low success rates for project proposals, insufficient alignment between national initiatives and PRIMA's strategic objectives, and the need for enhanced operational efficiency and stakeholder engagement.



PRIMA Action Plan and Implementation to address the 1st interim evaluation

Recommendations

PRIMA has developed an action plan to tackle challenges, boost efficiency, and increase its impact in the Mediterranean, aligning with EU strategic objectives per European Commission recommendations. It includes targeted actions with timelines across

Table 2: PRIMA Action Plan (2018–2023) in Response to European Commission Recommendations. This table outlines PRIMA's key actions to improve proposal success rates, operational efficiency, stakeholder engagement, capacity building, and alignment with EU policies. Each recommendation (R1–R9) specifies strategic priorities and measures to enhance PRIMA's impact in the Mediterranean region.

Recommendation	Key Area	Actions
R1	Increasing Proposal Success Rates	Reducing project budgets, issuing more focused calls, promoting private sector and SME participation
R2	Enhancing Section 3 Efficiency	Simplifying reporting requirements, raising awareness of PSiAs, improving resource allocation
R3	Streamlining Section 2 Operations	Introducing delay charts, disclaimers on potential delays, and standardized templates for regulations
R4	Fostering Synergies	Organizing Project Days, creating a library of public deliverables, allocating budgets for collaboration
R5	Building Capacity in Southern Mediterranean Countries	Facilitating financial transactions, enhancing National Contact Points (NCPs), incentivizing non-EU coordinators
R6	Monitoring Key Performance Indicators (KPIs)	Revising monitoring frameworks to align with Horizon Europe, improving KPI reporting
R7	Strengthening Communication and Dissemination	Updating communication strategy, conducting portfolio analyses, providing communication training
R8	Promoting South-South Cooperation	Introducing additional eligibility criteria, organizing matchmaking events for regional partnerships
R9	Enhancing Synergies with EU and Mediterranean Initiatives	Aligning activities with EU partnerships (Cluster 6), contributing to Horizon Europe Missions and Euro-MED Hub

The action plan features a **timeline for implementation**, assigns responsibilities, and establishes a monitoring and evaluation framework to ensure alignment with PRIMA's strategic goals and EU objectives.

Details of these actions are in the **action plan annexed to this document** (Annex 1), providing a roadmap for addressing the European Commission's evaluation recommendations. This approach highlights PRIMA's commitment to innovation, sustainability, and resilience in the Mediterranean.

The table below outlines the actions taken to address recommendations from the First Interim Evaluation of PRIMA (2022), detailing their **implementation status**, corresponding actions, and means of verification within the PRIMA Partnership framework.

Table 3 Detailed overview of implemented recommendations, corresponding actions, their status, and the means of verification within the PRIMA Partnership framework. It highlights steps taken to improve success rates, enhance effectiveness, foster

Recommendation (R)	Action (A)	Status	Means of Verification	Implemented by
R1: Increase Success Rates for Section 1 Proposals	A1: Reduce project budget to EUR 3M per project. A2: Develop more specific and focused calls. A3: Encourage private sector participation, particularly SMEs.	✓ Implemented in AWP2025	Actions implemented as reflected in AWP2025.	PRIMA Secretariat
R2: Enhancing Effectiveness in Section 3	A1: Raise awareness of PS Funding Agencies to PSiAs on Section 3. A2: Streamline Section 3 reporting requirements. A3: Raise awareness of PS Funding Agencies to Other Activities on Section 3. A4: Engage with EC to increase reporting flexibility.	✓ A1, A2, A3 implemented through bilateral meetings with NFAs and revised ad-hoc guidelines for PSiAs inclusion.	Verified through bilateral meeting records and updated guidelines.	PRIMA Secretariat and National Funding Agencies (NFAs)
R3: Increasing Efficiency of Section 2	A1: Develop a Delay Chart for Grant Agreement Signatures. A2: Include a disclaimer in National Regulations about potential delays. A3: Provide a standardized template for national regulations. A4: Propose mobility actions within projects in Section 2 using ESFRI infrastructure. A5: Address a letter from PRIMA BoT to ministries with delays. A6: Survey S2 beneficiaries.	✓ A5: A letter issued by BoT to ministers in Italy and Egypt. ✓ A6: Survey conducted by PRIMA Secretariat.	Verified via issued letters and collected survey responses from S2 beneficiaries.	PRIMA Board of Trustees (BoT) and PRIMA Secretariat
R4: Fostering Synergies Between Projects	A1: Organise Project Days with Networking Sessions. A2: Organise a Library of Public Deliverables on PRIMA Website. A3: Organise National Events by NFAs. A4: Encourage applicants to establish a budget for inter-project collaboration.	✓ A1: Project Days in 2023 and November 2024. ✓ A4: Integrated in AWP2025.	Confirmed via event agendas and AWP2025 documentation.	PRIMA Secretariat
R5: Investing in Outreach and Capacity Building	A1: Facilitate financial transactions for non-EU countries. A2: Enhance the role of NCPs to facilitate Southern Mediterranean PS engagement. A3: Provide incentives for non-EU coordinators. A4: Enhance participation through collaboration with existing networks.	Pending implementation.	Actions yet to be verified.	PRIMA Secretariat
R6: Key Performance Indicators (KPIs)	A1: Revision of the monitoring system to align with Horizon Europe legal framework requirements.	✓ New PRIMA-specific KPIs have been identified.	KPI document attached to this report.	PRIMA Secretariat

PRIMA - Partnership for Research and Innovation in the Mediterranean Area

R7: Enhancing Communication and Dissemination	A1: Update and revise the communication strategy. A2: Implement Project Portfolio Analysis. A3: Tailored communication with states/stakeholders. A4: Training on communication and dissemination. A5: Strengthen science communication on WEFE Nexus. A6: Strengthen collaboration with NFAs.	✓ A2: Portfolio analysis attached. ✓ A4: Training conducted during Project Day.	Verified through attached portfolio analysis and Project Day training reports.	PRIMA Secretariat and NFAs
R8: Strengthening South-South Cooperation	A1: Inclusion of eligibility criterion for South-South cooperation. A2: Matchmaking events for South-South cooperation in consortia.	✓ A1: Eligibility requirement included in AWP2025.	AWP2025 documentation.	PRIMA Secretariat
R9: Exploring Synergies with EU and Mediterranean Initiatives	A1: Engage in dialogue with EU partnerships. A2: Collaborate with Horizon Europe Missions. A3: Contribute to Euro-MED Hub for R&I. A4: Observer in 5+5 dialogue. A5: Strengthen collaboration with research infrastructure.	✓ All actions implemented.	Verified through PRIMA's active participation in relevant events and networks.	PRIMA Secretariat

Implemented Actions and Means of Verification

R1: Increase Success Rates for Section 1 Proposals

Actions Implemented by PRIMA Secretariat (AWP2025): The Secretariat set a €3M budget cap per project in the AWP2025. PRIMA has opted to streamline and sharpen the focus of the topics in Section 1 like "Nature-Based Solutions for Sustainable Water Management" and "Transforming Mediterranean Food Systems".

Means of Verification:

- Inclusion of budget caps and specific calls in the PRIMA Annual Work Programme (AWP2025).

R2: Enhancing Effectiveness of Section 3

Actions by NFAs and PRIMA Secretariat: They held bilateral meetings to promote PSIAs, streamlined reporting to ease administrative burdens, and enhanced collaboration with NFAs on joint activities.

R3: Increasing Efficiency of Section 2

PRIMA BoT and Secretariat Actions: The BoT sent letters to key ministries in Italy and Egypt about delays in grant agreements. In July 2024, a survey of Section 2 beneficiaries was conducted to gather feedback on funding processes, challenges, and comparisons with Section 1.

Means of Verification:

- Letters issued by the BoT.
- Survey results compiled by the PRIMA Secretariat.

R4: Fostering Synergies Between Projects

Actions by PRIMA Secretariat: The Secretariat organized Project Days (AWP2025) to facilitate knowledge exchange and ensure alignment with European Union programs. Internal synergies were promoted between projects, such as Intel-Irris & WATERMED 4.0 on irrigation tools and Sustain-COAST & InTheMED on groundwater trends. External synergies included collaborations with EU Missions like "Restore Our Ocean and Waters" and initiatives such as INTERREG NEXT MED. Additionally, applicants were required to allocate budgets for inter-project collaboration.

Means of Verification:

- Event agendas.
- Collaborative publications.
- Budget allocation records.

R6: Key Performance Indicators (KPIs)

Actions by PRIMA Secretariat: Revision of the monitoring system to align with Horizon Europe legal framework requirements.

Means of Verification:

- Inclusion of updated KPI documentation in project proposals (AWP2025).

R7: Enhancing Communication and Dissemination

Actions by PRIMA Secretariat: The Secretariat conducted a Project Portfolio Analysis to better communicate outcomes and provided training for coordinators and work package leaders on effective communication and dissemination practices.

Means of Verification:

- Portfolio analysis report.
- Training session records (AWP2025).

R8: Strengthening South-South Cooperation

Actions by PRIMA Secretariat: The Secretariat introduced an eligibility criterion requiring the inclusion of Mediterranean Partner Countries (MPCs) in consortia to enhance regional collaboration.

Means of Verification:

- Eligibility requirements outlined in the AWP2025.

R9: Exploring Synergies with EU and Mediterranean Initiatives

Actions by PRIMA Secretariat: The Secretariat engaged in dialogue and aligned activities with EU partnerships under Cluster 6. It collaborated with Horizon Europe Missions, such as "A Soil Deal for Europe" and "Adaptation to Climate Change," contributed to the Euro-MED Hub for Research and Innovation, participated as an observer with LifeWatch for biodiversity and ecosystem in the

Means of Verification:

- Records of participation in EU missions.
- [Records of involvement in the 5+5 Dialogue.](#)
- Collaboration documentation with LifeWatch5+5 Dialogue, and developed action plan research.

Chapter 3: Implementation (State of Play) (2018-2023) Action and activities managed by PRIMA

Distinctive Governance and Funding Model of the PRIMA Partnership

The PRIMA Partnership operates through a structured framework comprising three sections (S1, S2, and S3), each with distinct funding and management arrangements but collectively aligned with the objectives outlined in the PRIMA Strategic Research and Innovation Agenda (SRIA). This tripartite structure enables the alignment of regional and national priorities, supporting collaborative research and innovation to address the Mediterranean region's various challenges. By utilizing EU funding, national contributions, and coordinated efforts, PRIMA has organized resources, created synergies, and supported sustainable development across the region.

Structure and Management of PRIMA's Three Sections: Framework for Coordinating Transnational Calls and National Initiatives under Horizon 2020 (2018-2024)



The PRIMA Partnership's three-tier funding structure, combining EU funding, national contributions, and in-kind efforts, is unique among EU partnerships. This model aligns national programs with the SRIA, strengthens financial integration, and promotes shared ownership. Its flexible yet strategic framework effectively addresses the Mediterranean region's research and innovation challenges, setting it apart from other European partnerships.

The funding mechanisms include:

- **Section1 (S1):** Actions and activities organised, managed, and funded by the PRIMA-IS with EU funds according to Horizon 2020 Rules.
- **Section 2 (S2):** Section 2 (S2) of the PRIMA Partnership encompasses activities selected through transnational open and competitive calls for proposals, organized by PRIMA-IS and funded by the national funding bodies of Participating States (PS).
 - A notable distinction of S2 lies in its unique financial model: Participating States are required to provide direct cash contributions explicitly earmarked to fund these transnational research projects. This contrasts markedly with other co-funded EU Partnerships under Horizon Europe, where national contributions typically leverage existing national or regional funding streams, supplemented by European Commission top-up funds.
- **Section 3 (S3): Nationally Managed Activities (PSIAs)** Section 3 (S3): **Nationally Managed Activities (PSIAs)** Activities organized, managed, and funded by the Participating States (PS), along with in-kind contributions through Participating States' Initiated Activities (PSIAs), are comparable to models previously utilized in former EU partnerships such as **EDCTP**. The implementation of PSIAs adheres to the stringent eligibility conditions outlined in the **PSIAs Guidelines**, ensuring:
 - Alignment with PRIMA's strategic objectives,
 - Compliance with co-labelling obligations,
 - Transparency equal treatment

Participating States are required to provide comprehensive descriptions of PSIAs, including **budget commitments**, expected deliverables, and implementation timelines. Annual **technical and financial reports** ensure accountability and integration within the broader PRIMA framework.

Between 2018 and 2024, the PRIMA Partnership successfully mobilized substantial financial contributions from both the EU and Participating States (PS):

- Section 1: PRIMA, through EU funds, provided EUR 202,2 million, supporting 77 projects.
- Section 2: PRIMA, through collective financial contributions from Participating States, provided approximately EUR 199,3 million, supporting 192 projects.
- Section 3: National investments totalling EUR 230.29 million have been leveraged, contributing to PRIMA's overall financial ecosystem and enhancing the Partnership's capacity to address regional challenges.

This balanced financial framework under Sections 1 and 2 highlights PRIMA's **integrated approach**, combining EU and national investments to advance shared strategic objectives across the Mediterranean region.

Definition of SRIA Priorities for Calls and Flexibility.

The Strategic Research and Innovation Agenda (SRIA) anchors PRIMA's long-term focus on water management, sustainable farming systems and resilient Agri-Food Value chains, yet it is implemented with built-in flexibility. That adaptability proved critical during the COVID-19 crisis, when 2020–2021 funds were redirected to protect agri-food supply chains, and again in 2023 after Russia's invasion of Ukraine exposed the Mediterranean's dependence on imported cereals. PRIMA swiftly added a Section 1 topic—"Increasing resilience of the agri-food (cereal) supply-chain in the MENA region" (AWP 2023, Topic 1.3.1)—to address the conflict's supply-chain shocks and foster regional self-sufficiency. This ability to pivot keeps PRIMA's calls scientifically grounded while remaining responsive to emerging climate, economic and geopolitical disruptions.

Three projects were selected out of this call: The three projects funded under PRIMA's 2023 Section 1 call "Increasing resilience of the agri-food (cereal) supply chain in the MENA region" (see below). Their combined objectives—strengthening cereal production, improving supply-chain logistics and reducing exposure to external shocks—illustrate how PRIMA's SRIA framework remains scientifically grounded while rapidly responding to emerging climatic, economic and geopolitical disruptions.

SEEDS — *Sustaining Economies and Enhancing Dynamic Structures* (coordinated by ENCO SRL, Italy)

STAPLES — *Stable food Access and Prices and Lower Exposure to Shocks* (coordinated by Politecnico di Milano, Italy)

CERERE — *Cereals Resiliency Revolution for agile supply-chain management in the Mediterranean* (coordinated by the University of Calabria, Italy)

Annual Work plans Roadmap Process Overview.

The PRIMA Annual Work Plan (AWP) is prepared through a relatively complex multi-stage process that brings together all governance bodies to ensure strategic alignment with both PRIMA's SRIA and EU policy frameworks. It begins with a Concept Paper drafted by the Scientific Advisory Committee (SAC), which pinpoints funding gaps and emerging priorities. Using this paper as a foundation, the PRIMA Foundation Secretariat (PRIMA-IS) produces the first AWP draft, integrating SAC priorities and long-term programme objectives. The Board of Trustees (BoT) then reviews the draft to confirm consistency with the national agendas of the Participating States, which, in parallel, validate their financial commitments. A revised version is subsequently evaluated by external experts to verify that Participating States' Initiated Activities (PSIAs) and other measures are fully aligned with PRIMA's goals. Once this expert assessment is complete, the European Commission formally adopts the AWP, certifying its coherence with EU policies and budgetary rules. The BoT gives final approval, after which the work plan is published and the corresponding calls for proposals are launched, opening PRIMA's next operational cycle of targeted research and innovation for the Mediterranean region.



(01) Concept Paper Preparation: The Scientific Advisory Committee (SAC) drafts a Concept Paper highlighting priorities identified from funding gaps and the Strategic Research and Innovation Agenda (SRIA).

(02) Initial AWP Drafting: Using the Concept Paper, the PRIMA Secretariat (PRIMA-IS) develops the first draft of the AWP, integrating the strategic priorities identified.

(03) Draft Review: The Board of Trustees (BoT) reviews the initial draft to ensure alignment with the national objectives of Participating States. Concurrently, the European Commission

(EC) provides informal feedback to align the draft with EU strategies and funding priorities, and to avoid duplication with other Horizon Europe calls.

(04) External Evaluation: Following revisions based on previous feedback, PRIMA-IS submits the AWP to external experts who evaluate the scientific robustness and alignment of Participating States' Initiated Activities (PSIAs) with PRIMA's objectives.

(05) EC Adoption: After external validation, the European Commission conducts a formal assessment through an InterService Consultation, officially adopting the AWP to ensure compliance with EU policies and budgetary rules.

(06) Formal Approval: Finally, the Board of Trustees provides formal approval. The approved AWP is published, and corresponding calls for proposals are launched, marking the start of PRIMA's next cycle of targeted research and innovation activities across the Mediterranean region.

From 2018 to 2024, the Work Plans and amendments below have been produced and approved.

Table 4 Workplans (EC Funding Decisions)

Annual Work Plan	 Links to the EC Funding Decision/Date
Annual Work Plan 2018	C(2018) 371/ 12.1.2018
Amended Annual Work Plan 2018	C(2018) 3375776 /26.06.2018
Annual Work Plan 2019	C(2018) 8734 /13.12.2018
Amended Annual Work Plan 2019	C(2019) 6287 /11-09-2019
Annual Work Plan 2020	C(2020) 728 /10.2.2020
Annual Work Plan 2021	C(2021) 1390 /4.3.2021
Annual Work Plan 2022	C(2022) 49 final /14.1.2022
Annual Work Plan 2023	C(2023) 578 final /25.1.2023
Annual Work Plan 2024	C(2024) 430 final /25.1.2024

Derogations to Horizon 2020 Rules of Participation

Pursuant to Article 7 of Decision (EU) 2017/1324 of the European Parliament and of the Council establishing the PRIMA Partnership, specific derogations from the general rules of participation laid down in Article 9(1) and Article 10(1) and (2) of Regulation (EU) No 1290/2013 (Horizon 2020 Rules for Participation) were introduced. These derogations were adopted in recognition of the particular political, socio-economic, and geographical context of the Mediterranean region and were deemed essential to ensure inclusive, equitable, and context-sensitive implementation of the Partnership. Notably, they enabled broader participation of non-EU Mediterranean Partner Countries (MPCs) and adapted funding eligibility conditions to foster balanced Euro-Mediterranean cooperation.

These provisions have been explicitly preserved and revised under Article 1(6) and Article 7 of Decision (EU) 2024/1167, which amends Decision (EU) 2017/1324 in order to extend the programme's duration and align its legal framework with Regulation (EU) 2021/695 (Horizon Europe). In particular, Article 7(2) of the amended decision introduces a derogation from Article 22(2) of Regulation (EU) 2021/695, confirming that the minimum consortium composition must include:

As of 2024, PRIMA has 20 Participating States: 12 EU Member States (Croatia, Cyprus, France, Germany, Greece, Italy, Luxembourg, Malta, Portugal, Slovenia, Spain, Bulgaria) and 8 non-EU Mediterranean countries (Algeria, Egypt, Israel, Jordan, Lebanon, Morocco, Tunisia, Türkiye).

Of which at least one must be established in a Member State or a third country associated to Horizon Europe, and not falling under point (ii);

And at least one must be established in a third country listed in Article 1(2) of Decision (EU) 2017/1324, or in a third country bordering the Mediterranean Sea.

These derogations permit effective and inclusive cooperation with MPCs—ensuring that the programme reflects the diversity, asymmetries, and mutual priorities of the Euro-Mediterranean region.

Additional specific eligibility conditions in PRIMA calls to foster South-South Cooperation

In line with its strategic objective of fostering inclusive and balanced Euro-Mediterranean cooperation, the PRIMA Partnership introduced—starting with the 2023 Annual Work Plan—an additional specific eligibility condition aimed at reinforcing South-South collaboration among Mediterranean Partner Countries (MPCs). This requirement stipulated that proposals submitted under selected calls must include at least two independent legal entities established in two different MPCs, in addition to fulfilling the minimum participation requirements established in Article 7(2) of Decision (EU) 2017/1324, later amended by Decision (EU) 2024/1167.

This measure responded to the persistent weakness of South-South cooperation within the Mediterranean research and innovation landscape, where transnational collaboration among Southern Mediterranean countries has remained limited despite shared challenges and policy priorities. The introduction of this condition sought to encourage deeper integration of MPCs in joint actions by structurally incentivising their participation in consortia. It aimed to strengthen cross-border linkages and knowledge exchange among Southern Mediterranean stakeholders, expand institutional and scientific cooperation within the South, and enhance collective regional capacity to address pressing issues in water management, agriculture, and food systems.

By promoting more balanced and meaningful involvement of MPC-based entities, this eligibility condition also sought to advance inclusivity and visibility of Southern expertise, helping bridge existing gaps in research resources, funding access, and innovation leadership. It reflects PRIMA's broader commitment to building a co-owned, co-developed R&I ecosystem capable of supporting regional stability, trust, and sustainable development

Budget Allocation and Funding Source

Legal Framework and Matching Requirement

The PRIMA Partnership was established under Decision (EU) 2017/1324 and subsequently amended by Decision (EU) 2024/1167. Article 3(1), as amended, stipulates that the Union's financial contribution to PRIMA—up to a maximum of EUR 325 million (comprising EUR 220 million from Horizon 2020 and EUR 105 million from Horizon Europe)—is strictly conditional upon an equivalent financial commitment from the Participating States (PS). Specifically, it provides that:

“The Union financial contribution to PRIMA, including EEA appropriations, shall be equal to the Participating States' contributions.”

Article 4(1)(c) further reinforces this obligation by requiring:

“The commitment by the Participating States to contribute to the financing of PRIMA with a contribution from national resources relevant to the objectives of PRIMA that is at least equal to the Union financial contribution.”

Both cash and in-kind contributions from PS are eligible for matching, provided they are validated through formal annual certification.

Financial Integration and Leverage

PRIMA's funding model is built on the principle of financial integration between the EU and Participating States, ensuring shared governance, accountability, and strategic alignment with national and regional priorities. This co-funding structure has allowed PRIMA to mobilise substantial national contributions alongside EU support, reinforcing ownership and long-term sustainability.

From 2018 to 2024, the European Union disbursed €157.59 million, of which €147.95 million was allocated to operational grants and evaluations under Section 1, and €9.64 million was used to cover administrative support to the PRIMA Secretariat.

In parallel, the Participating States contributed €199.3 million in cash and €11.9 million in certified in-kind support, for a total of €211.3 million. These figures reflect all validated disbursements up to the end of 2024, including preliminary 2024 in-kind inputs, while 2024 cash contributions remain pending final certification and will be reported in the 2025 cycle.

Under Section 2, which supports nationally funded transnational calls aligned with PRIMA's objectives, PS disbursed €114.2 million in financial support up to the end of 2023, and provided €4.42 million in in-kind support for activities such as national coordination, dissemination, and NCP participation. These figures do not include 2024 payments, which will be certified and included in the 2026 reporting cycle.

Under Section 3, focused on Participant State Initiated Activities (PSIAs) and other aligned national initiatives, €115.67 million in certified in-kind contributions were disbursed. These represent implementation costs validated by PRIMA and reviewed by external experts, including actions fully aligned with PRIMA's strategic objectives.

In addition, PS provided €1.06 million in cash support (comprising €375,000 in membership fees and €800,000 in office rent covered by the Spanish government) and €212,000 in in-kind seconded staff to ensure the functioning of the Secretariat during its start-up phase.

This co-investment by the Participating States—totaling €375.39 million—compared to the EU's €157.59 million, results in a cumulative leverage ratio of 1.60. This exceeds the 1:1 matching requirement mandated under Articles 3(1) and 4(1)(c) of the PRIMA Decision and demonstrates PRIMA's strong capacity to generate complementary national investment, even in a complex and diverse trans-Mediterranean funding environment.

The Calculation Methodology

The leverage ratio is derived using the formula:

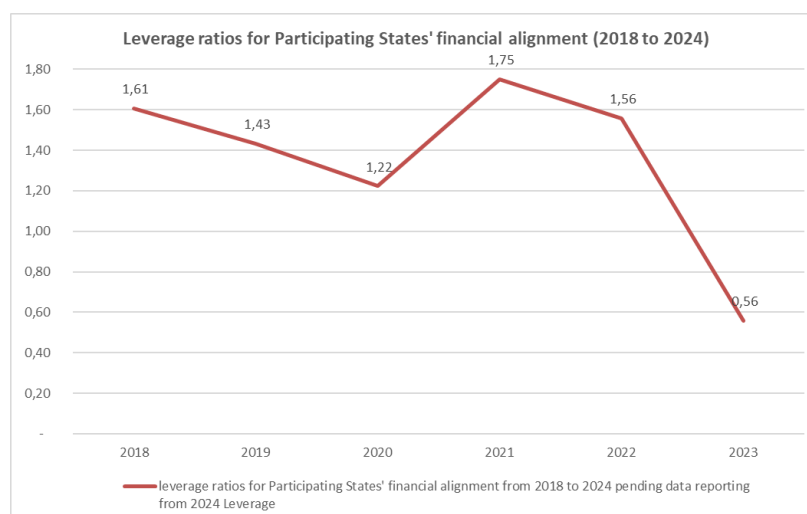
Calculation Methodology:

$$\text{Leverage Ratio} = \frac{\text{PS Contributions (Section 2 Financial + Section 2 In-Kind + Section 3 In-Kind)}}{\text{EU Contributions (Section 1 + Operational Costs)}}$$

Yearly Leverage Monitoring (2018–2024)

PRIMA annually tracks its leverage ratio based on certified national contributions relative to EU disbursements. The period 2018–2024 reveals variations in leverage performance due to administrative, political, and external factors such as the COVID-19 pandemic.

Annual leverage monitoring reveals fluctuations in PS engagement levels due to variations in national disbursement mechanisms and reporting timelines:



2018: A ratio of **1.61** was recorded, reflecting strong upfront PS commitment and timely disbursements.

2019: The ratio dropped to **1.43**, primarily due to delays in national payments and administrative constraints

2020: Ratio **1.22** exacerbated by the COVID-19 pandemic.

2021: The ratio peaked at **1.75**, reflecting accelerated disbursements and high in-kind engagement by PS.

2022: The ratio adjusted to **1.56**, indicating continued compliance despite slight slowdowns in reporting.

2023: The final leverage ratio is **0.56**

2024: pending reporting disbursements S2 in-cash and S3 in-kind

*For **2024**, national contributions are still under certification, and the final leverage figure will be confirmed in 2026 at reporting time..*

Strategic Value of In-Kind Contributions

In-kind support from PS—including seconded personnel, office space, and the execution of PSIAs—has been essential in meeting and exceeding the matching requirement. These contributions not only fulfil the formal co-financing obligation but also strengthen national research capacities, improve programme ownership, and ensure relevance at the local level. Particularly under Section 2, in-kind inputs have enhanced operational coordination and stakeholder engagement, creating a multiplier effect in both implementation and long-term policy impact.

Chapter 4 Implementation (State of Play) (2018-2024)

SECTION 1 and SECTION 2 Actions (Calls)

Submissions Overview (2018-2024) and Country Participation and Proposal Submissions to PRIMA calls (2018–2024)

Since its 2018 launch, the PRIMA Partnership has adapted to regional challenges, fostering Mediterranean collaboration. Performance metrics are in *Annex 2: Data on the Programme Implementation*.

Section 1 (EU-funded transnational calls)

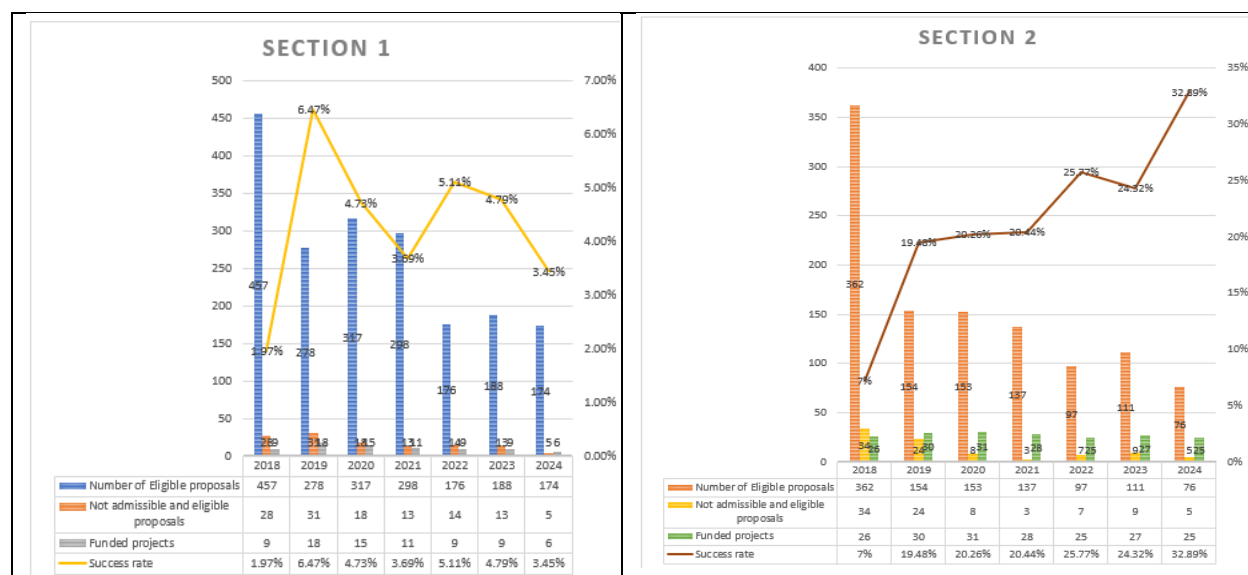
Between 2018 and 2024, Section 1 calls under PRIMA exhibited a clear downward trend in participation, with eligible proposals declining from 457 in 2018 to 174 in 2024. This trend suggests a combination of increasing selectivity, targeted call topics, and possibly applicant fatigue or strategic reorientation.

Despite fluctuations, the number of funded projects remained consistently low, ranging from 6 to 18 per year. Success rates remained modest throughout the period—between 1.97% and 6.47%—reflecting the high level of competition.

Section 2 (nationally funded transnational calls)

Between 2018 and 2024, in Section 2 calls under PRIMA the number of eligible proposals dropped significantly, from 362 in 2018 to just 76 in 2024, reflecting a strategic narrowing of participation, improved targeting, or increasing consolidation among applicants. Despite this sharp decline in submissions, the number of funded projects remained relatively stable—ranging from 25 to 31 per year—highlighting consistent investment and support for high-quality proposals.

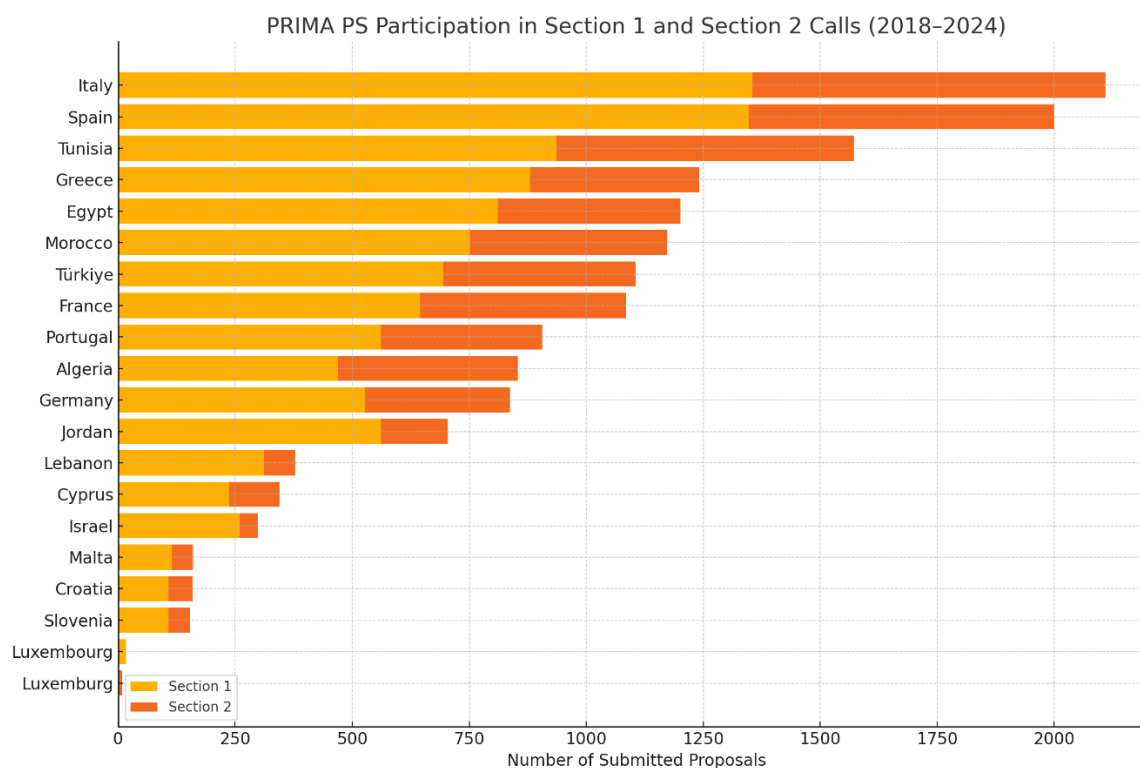
Crucially, the success rate in Section 2 increased markedly over the period, rising from 7% in 2018 to an impressive 32.89% in 2024.



Trends in the number of submissions, eligible proposals, funded projects and eligibility rates for Section 1 (S1) and Section 2 (S2) from 2018 to 2024.

Country Participation Trends

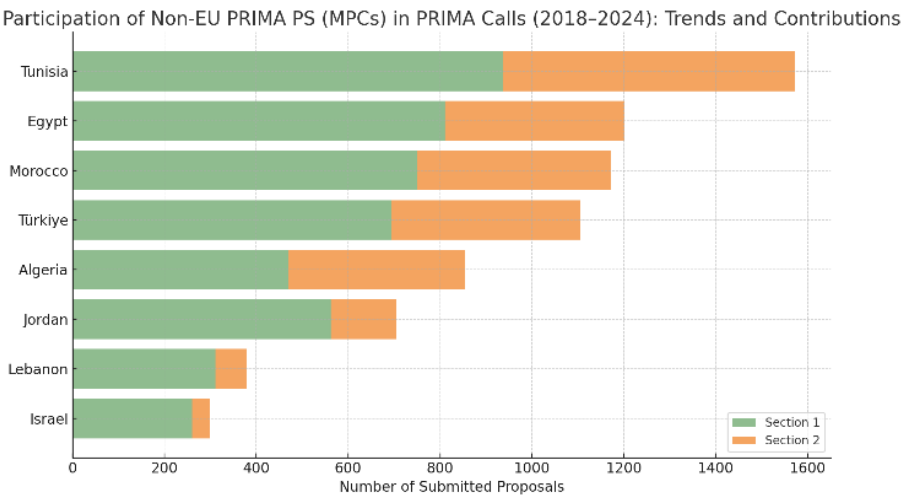
PRIMA PS Participation patterns trends and specificities in Section 1 and Section 2 calls



The cumulative submission data from 2018 to 2024 by PRIMA Participating States reveals distinct patterns of engagement across Section 1 (EU-funded, transnational) and Section 2 (nationally funded)

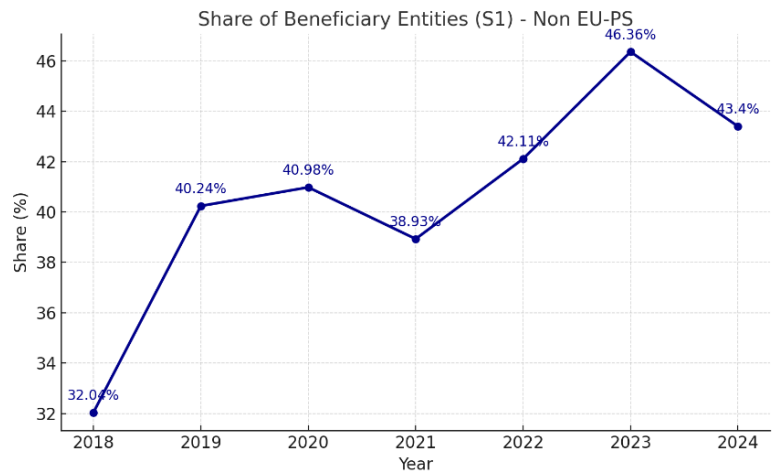
- Italy and Spain are by far the most active, each exceeding 2,000 proposals combined.
- Tunisia shows strong and balanced participation in both Sections, especially Section 2.
- Greece, Egypt, and Morocco demonstrate consistent engagement across both sections.
- Jordan and Lebanon have relatively low but growing involvement, with more weight in Section 1.
- Israel has minimal Section 2 participation, indicating a preference or limitation toward Section 1.
- Luxembourg, Malta, **Croatia**, **Slovenia** remain marginal contributors across both sections.

Participation of Non-EU PRIMA PS (Mediterranean Partner Countries _MPCs) in PRIMA Calls (2018–2024)

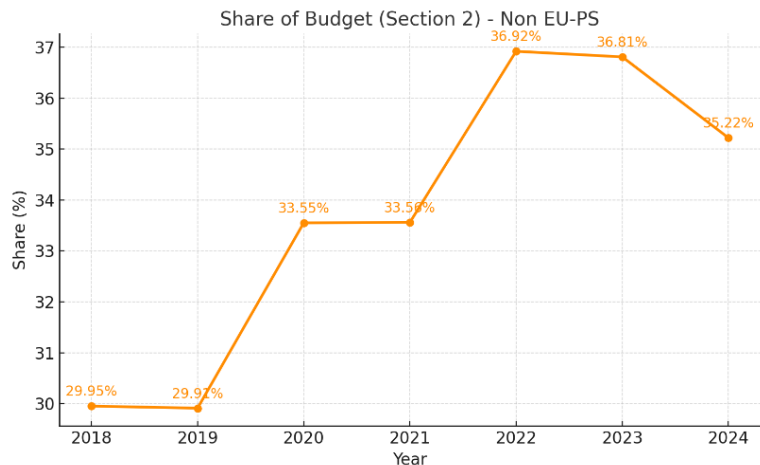


Partner Participation:

In most countries, the funding cap for partners is either equal to or lower than that for coordinators. This setup encourages participation while limiting financial risk for individual partners. In France, for instance, the cap for



Non-EU participation has been a cornerstone of PRIMA's success, steadily increasing the share of beneficiaries and budget share from Mediterranean Partner Countries (MPCs). In Section 1, non-EU participation grew from **32.04% in 2018** to **42.11% in 2022**, before peaking at **46.36% in 2023**. While there was a slight decline to **43.40% in 2024**, the figures remain significantly higher than in the early years, highlighting the sustained engagement of MPCs.

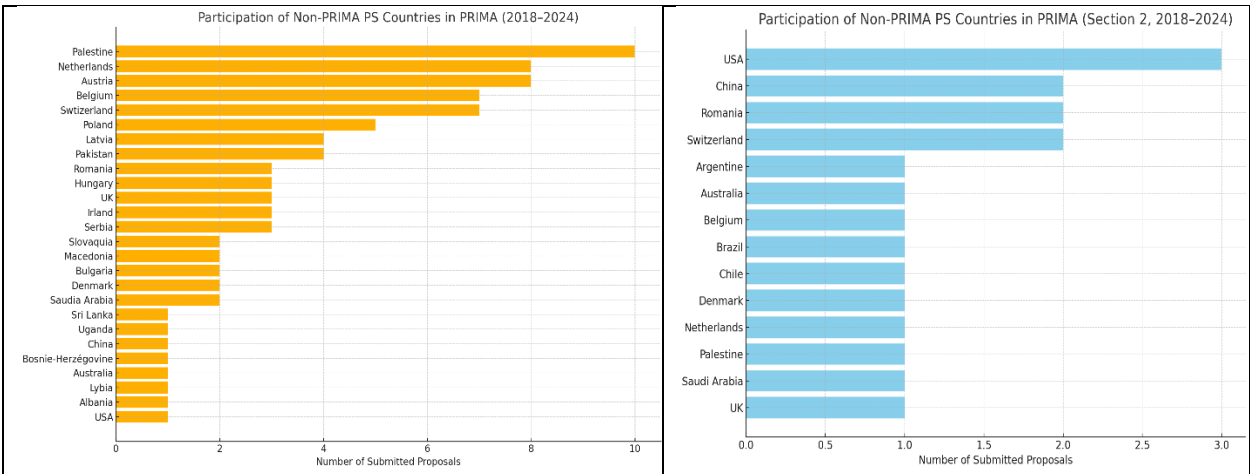


The introduction of **new eligibility conditions** in 2023, which mandate at least **two legal entities from MPCs** in the minimum consortium, has played a pivotal role in driving this growth. This measure has significantly strengthened South-South collaboration and increased the participation and visibility of MPCs within PRIMA-funded initiatives.

This participation has significantly enriched PRIMA’s research outcomes by incorporating region-specific knowledge and ensuring that solutions are tailored to the Mediterranean context.

Participation of non- PRIMA PS in PRIMA Calls (2018–2024)

Total participation of non-PRIMA PS countries in PRIMA calls from 2018 to 2024, based on the number of submitted proposals.



Non-PRIMA PS country participation in Section 1 of PRIMA (2018–2024), based on submitted proposals.

- Palestine submitted the highest number of proposals (10), despite not being a PRIMA Participating State.
- Netherlands and Austria follow closely with 8 proposals each.
- Other high contributors include Belgium (7), Switzerland (7), and Poland (5).
- Several countries, such as China, USA, Australia, and Libya, each submitted only 1 proposal.

Non-PRIMA PS country participation in Section 2 of PRIMA (2018–2024), based on submitted proposals.

- USA leads with 3 submitted proposals.
- China, Romania, and Switzerland each submitted 2 proposals.
- Several countries—such as Argentina, Brazil, Chile, and Palestine—submitted 1 proposal each.

Funded proposals (Section 1 and Section 2 calls cumulative over years (2018-2024))

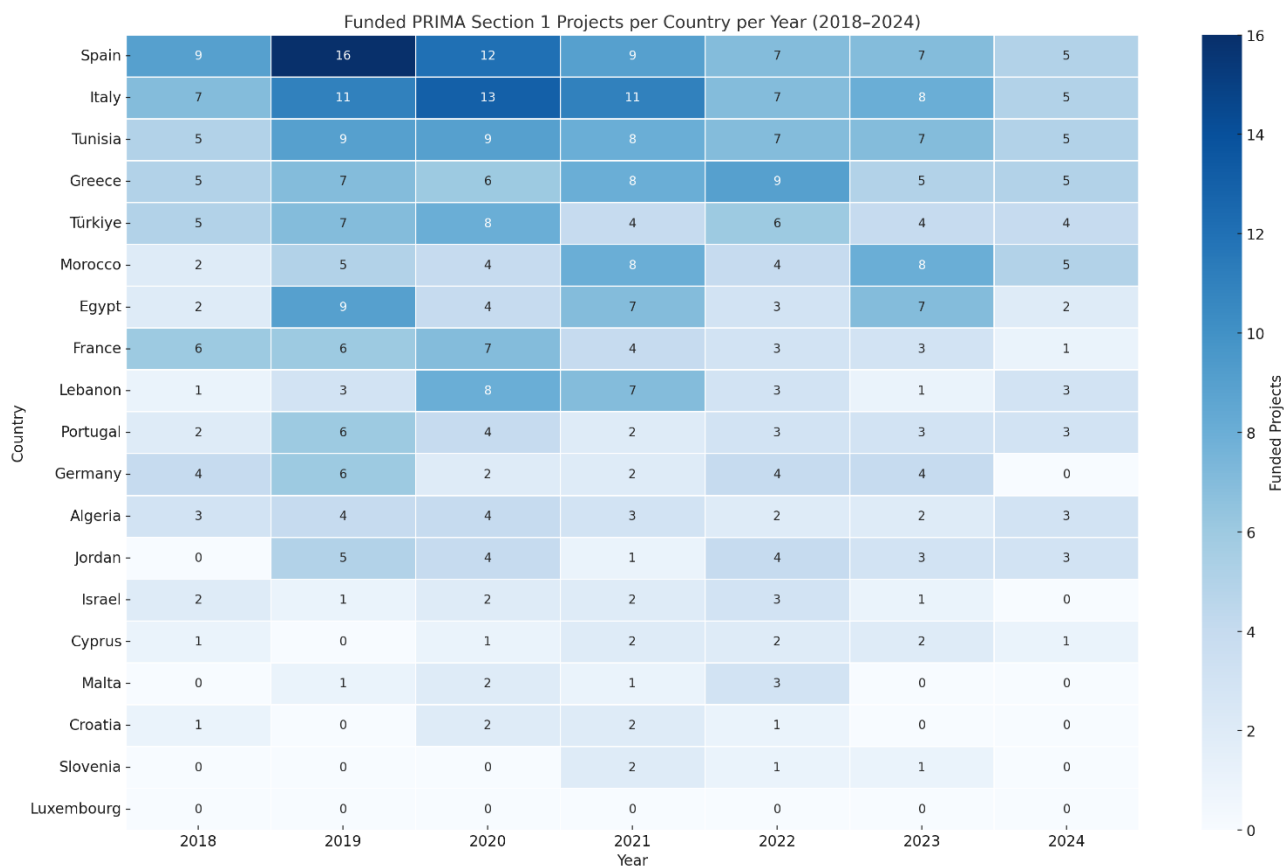
■ Section 1 (EU-funded):

Since 2018, PRIMA Section 1 has funded a total of 77 projects involving multiple countries annually, with peaks in 2019 (18 projects) and 2020 (15 projects). The most active Participating States in terms of funded projects are Spain (65) and Italy (62), both maintaining consistent leadership in coordination and participation throughout the entire period. Tunisia, Greece, and Türkiye also demonstrate sustained high engagement, reflecting strong institutional capacity and alignment with PRIMA's strategic priorities.

Among the Mediterranean Partner Countries (MPCs), Tunisia, Morocco, Egypt, and Lebanon have made notable contributions, with Tunisia standing out as a top performer, ranking third overall. Participation from Germany, France, and Portugal remains stable but more modest compared to the southern Mediterranean countries.

The data also highlights a downward trend in the total number of funded projects in the last three years (2022–2024), which may reflect budget constraints, increased competition, or a programmatic shift in priorities. Smaller countries such as Malta, Slovenia, and Croatia had limited participation, and **Luxembourg** had none.

Heatmap for Section 1 (EU-funded) projects showing the number of funded projects per country per year (2018–2024).



- Spain, Italy, and Tunisia consistently lead in project funding.
- Strong engagement from Greece, Türkiye, Morocco, and Egypt.
- Participation is stable but lower in countries like Portugal, Germany, and France.
- Luxembourg has no funded projects; Slovenia, Malta, and Croatia low number of funded projects

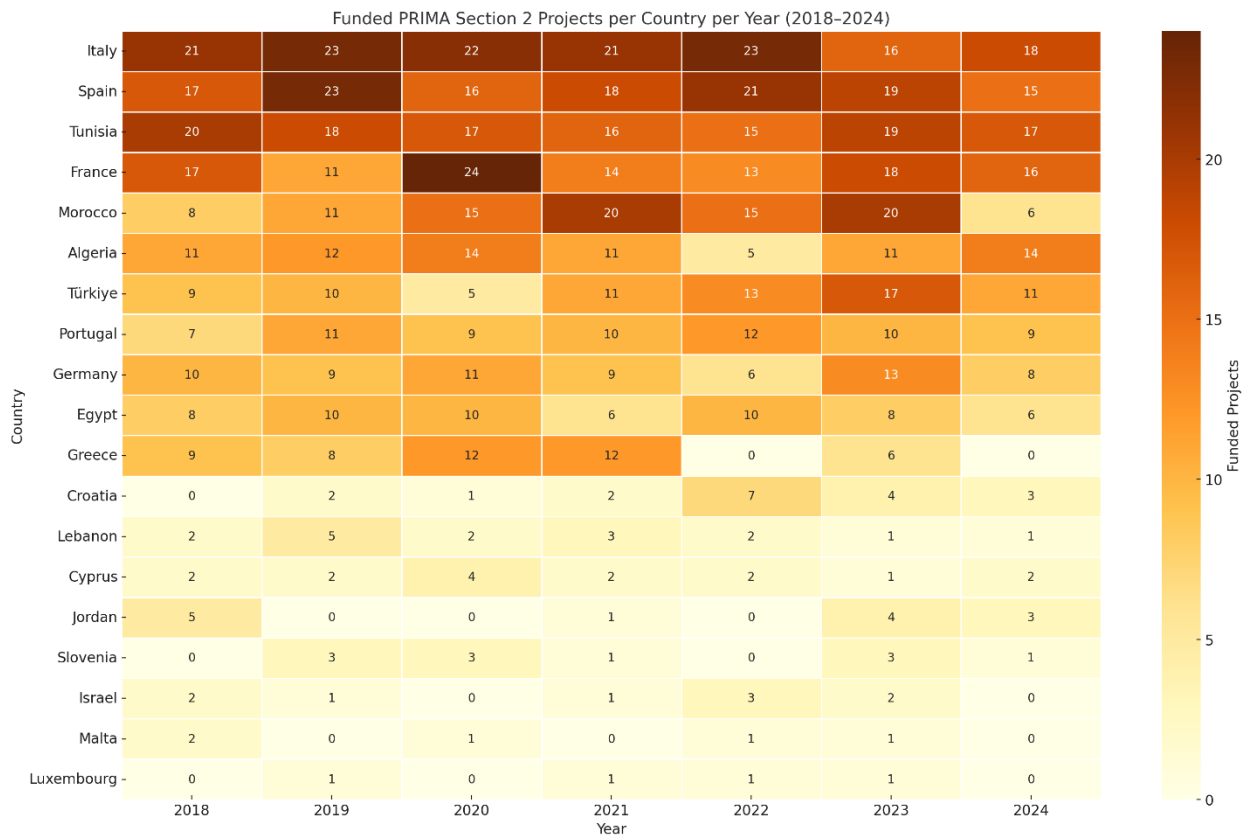
Section 2 (PS-funded):

PRIMA Section 2 has funded a total of 269 projects between 2018 and 2024, with an annual average of nearly 27 projects. The most active countries are Italy (144 projects), Spain (129), and Tunisia (122), all of which show consistent, high-level engagement across the years.

Other strong contributors include France (113), Morocco (95), and Türkiye (76), indicating well-established national funding frameworks aligned with PRIMA's objectives.

Unlike Section 1, Section 2 shows a more evenly distributed participation across North African and Eastern Mediterranean countries, especially among MPCs like Tunisia, Morocco, and Egypt.

Heatmap for Section 2 (Participating States-funded) showing the number of funded projects per country per year (2018–2024).



Trends in Project Size and Budget Allocation under PRIMA Sections 1 and 2

Between 2018 and 2024, PRIMA’s Section 1 (S1) and Section 2 (S2) projects evolved along complementary paths, reflecting the Partnership dual strategy of supporting both high-impact transnational research and locally anchored innovation.

Section 1 focused on large-scale, interdisciplinary collaborations. The number of partners per year ranged from 103 in 2018 to 183 in 2020, stabilising at 110 in 2023 and 2024. Projects consistently involved 11 to 13 partners on average, with increasing budgets—from €2.14 million in 2018 to over €3.5 million in 2022–2023—driven by the adoption of the WEF Nexus and Multi-Actor approaches. In 2024, six projects were funded, confirming the continuity of strategic investments despite slightly fewer awards.

Section 2 targeted local challenges through nationally funded projects. The total number of partners grew from 215 in 2018 to 266 in 2023, with an average of 8 to 10 partners per project. Project values remained stable, ranging from €1.05 to €1.2 million, with €30.83 million allocated across 25 projects in 2024. However, national funding caps varied widely, affecting project design and coordination capacities.

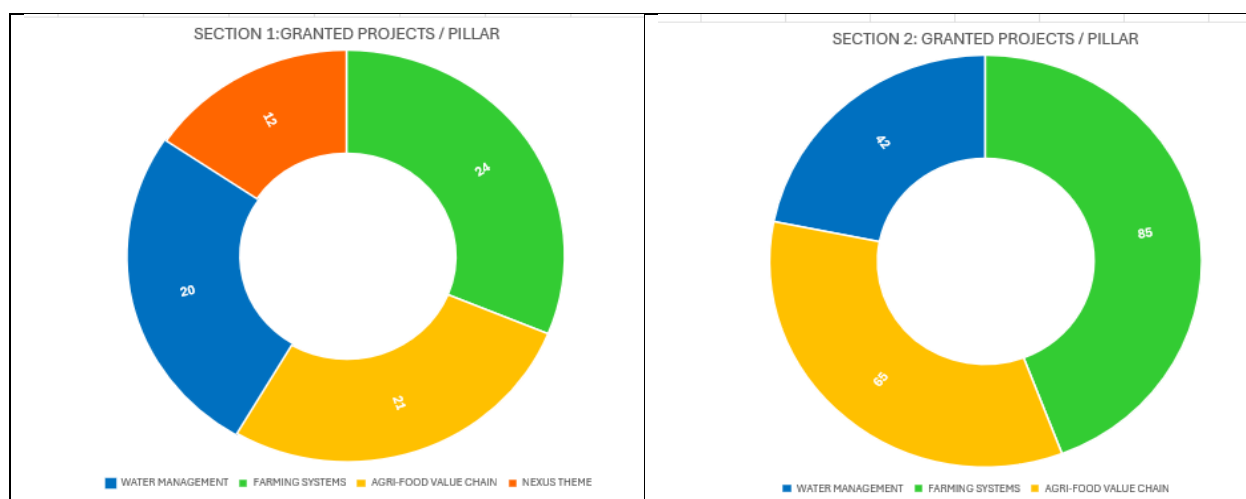
Budget Share Per Thematic area

Over the period 2018–2024, PRIMA funded a total of 269 projects: 77 under Section 1 (EU-funded) and 192 under Section 2 (PS-funded), across four main thematic areas: Water Management, Farming Systems, Agri-Food Value Chain, and the WEFE Nexus.

◆ Distribution by Thematic Area (Number of Projects)

- Farming Systems was the most addressed theme overall, with 24 projects in S1 and 85 in S2.
- Agri-Food Value Chain followed with 21 (S1) and 65 (S2) projects.
- Water Management accounted for 20 (S1) and 42 (S2) projects.

The Nexus theme—which integrates water, energy, food, and ecosystems—was addressed exclusively under Section 1, with 12 projects, none under Section 2.



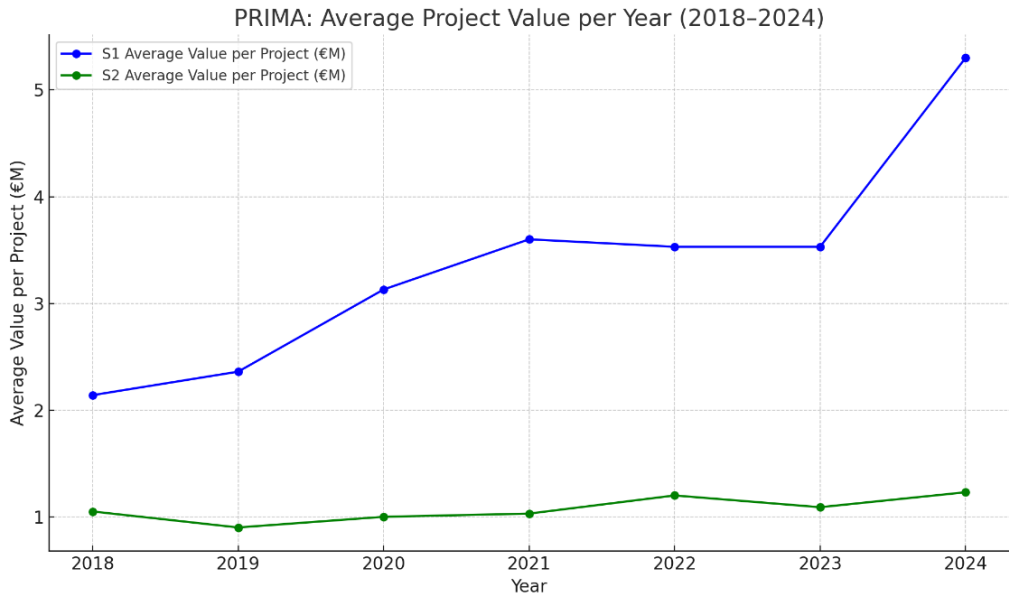
◆ Budget Allocation by Theme (€ Million)

In **Section 1**, the themes with the highest cumulative budgets were:

- Farming Systems (€60.7M)
- Agri-Food Value Chain (€53.2M)
- Water Management (€54.2M)
- Nexus (€34.2M)

In **Section 2**, the corresponding figures were:

- Farming Systems (€86.9M)
- Agri-Food Value Chain (€66.2M)
- Water Management (€45.8M)



Section 1 (EU-funded) shows a steady increase in average project value, rising from €2.14 million in 2018 to €5.3 million in 2024, reflecting a shift toward larger, more strategic transnational projects. In contrast, Section 2 (PS-funded) maintains stable project sizes, averaging around €1.1–1.2 million, shaped by varying national funding limits. These constraints lead to more participants per project, supporting broader local engagement and capacity building.

Overview of Funded Projects, Coordination, and Budget Allocation by Participating State (2018–2024)

Section 1

Between 2018 and 2024, PRIMA Section 1 funded a total of 77 projects involving 933 partners.

The countries with the highest number of funded projects were Spain (65), Italy (62), Tunisia (50), Greece (45), and Türkiye (38). Italy and Spain also recorded the highest number of beneficiaries (162 each) and the highest number of coordinated projects, with 23 and 28 respectively. Greece followed with 11 coordinated projects.

In terms of **allocated budget**, Italy received €40.57 million, Spain €39.53 million, and Greece €19.55 million.

The average budget per funded project ranged from €0.23 million (Malta, Slovenia) to €0.65 million (Italy).

Most other countries received between €0.25 million and €0.43 million per funded project.

Section 2

Between 2018 and 2024, PRIMA Section 2 supported 192 projects, involving 1657 entities across Participating States. The countries with the highest number of funded projects were Italy (144), Spain

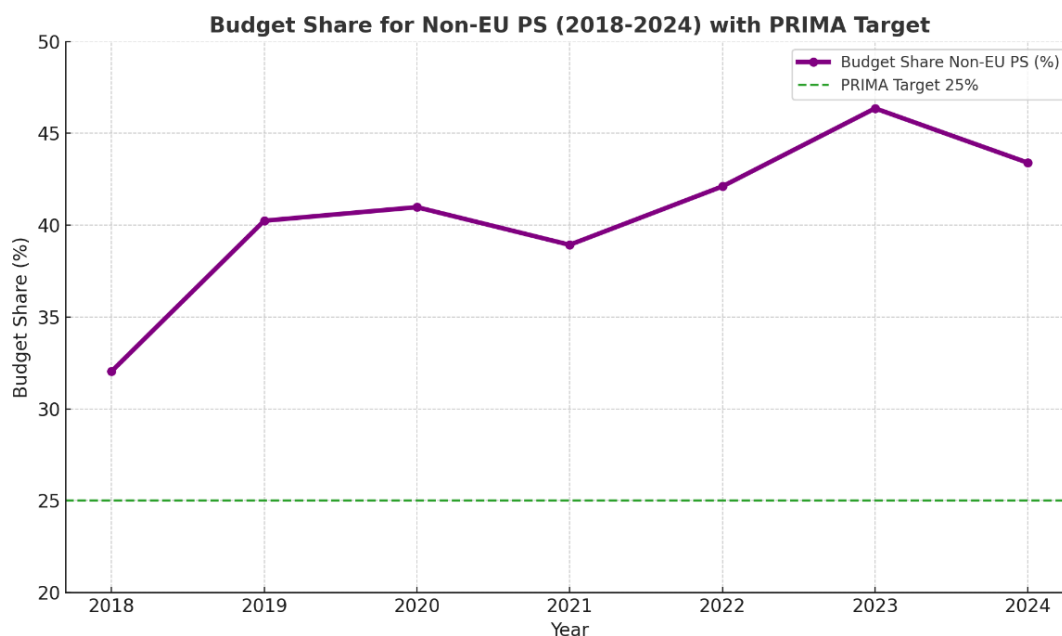
(129), Tunisia (122), and Morocco (95). Italy also recorded the highest number of project coordinations (68), followed by Spain (35), France (23), and Germany (17).

In terms of **budget allocation**, Italy received the largest cumulative funding at €49.56 million, followed by France (€29.29M), Spain (€28.86M), and Germany (€19.91M), broadly reflecting their levels of coordination and institutional participation. Italy also led in coordination roles with 68 projects, followed by Spain (35), France (23), and Germany (17), while Portugal (14) and Greece (10) also played active coordinating roles.

Regarding average budget per funded project, Malta registered the highest (€0.80M), followed by Italy (€0.34M) and Germany (€0.30M), whereas most other countries ranged between €0.10M and €0.26M. Lebanon had the lowest average at €0.01M, reflecting limited financial contribution and project participation.

Budget Share non-EU PS

Between 2018 and 2023, the budget share allocated to non-EU PS, also called Mediterranean Partner Countries (MPCs) in PRIMA projects steadily increased, reaching a peak of 46.36% in 2023. This figure substantially exceeds the 25% target set by the PRIMA Decision, which recommends that approximately one-quarter of the Union's financial contribution be allocated to legal entities in MPCs. These non-EU Participating States include Lebanon, Algeria, Egypt, Jordan, Morocco, Tunisia, Türkiye, and Israel. The observed increase reflects not only a growing financial commitment to these countries but also a strategic shift toward more balanced and inclusive regional participation within the PRIMA Partnership.



EU Budget Share for Non-EU Participating States (2018-2024) Compared to PRIMA Target. The green dashed line marks the 25% budget allocation target set by the PRIMA Decision. The graph highlights that the budget share consistently exceeded the 25% target, reaching a peak of 46.36% in 2023.

A key driver of this trend was the introduction of a new eligibility rule in the 2023 calls, requiring consortia to include at least one legal entity from a Mediterranean Partner Country. This requirement enhanced MPC involvement and contributed to the upward trend in their budget share. As shown in Figure 35, the budget share for non-EU PS consistently exceeded the 25% benchmark across the years, peaking in 2023 and underscoring PRIMA's growing emphasis on regional equity and partnership.

Participation by Type of Beneficiary Organization

In Section 1, a total of 71 coordinators were involved from various institution types representing a range of institution types aligned with the EU R&I classification categories⁴

The majority came from Higher Education Establishments (HES) (52%), followed by Public Research Centres (REC) (31%). Participation from the Private Research and Commercial (PRC) sector and Other (OTH) categories was limited, with 7 and 4 coordinators respectively. Most active countries in terms of institutional diversity were Spain, Italy, and Greece, with Spain showing the broadest spread across all categories, including commercial and non-research actors.

In Section 2, the institutional base was broader, with 167 coordinators recorded. Higher Education Establishments (HES) remained the dominant type, accounting for 67% of all coordinators. Public Research Centres (REC) represented 27%, and the rest came from OTH and PRC. Italy had the highest number of institutional coordinators (59), almost exclusively from HES, followed by Spain (32) and France (19). Unlike Section 1, where institutional participation is more concentrated, Section 2 shows a more diversified and inclusive distribution, including more representation from small and medium-sized countries and institutions.

This contrast reflects the structural differences between Sections 1 and 2:

Section 1 supports larger, EU-funded transnational consortia, typically coordinated by established universities and public research institutions.

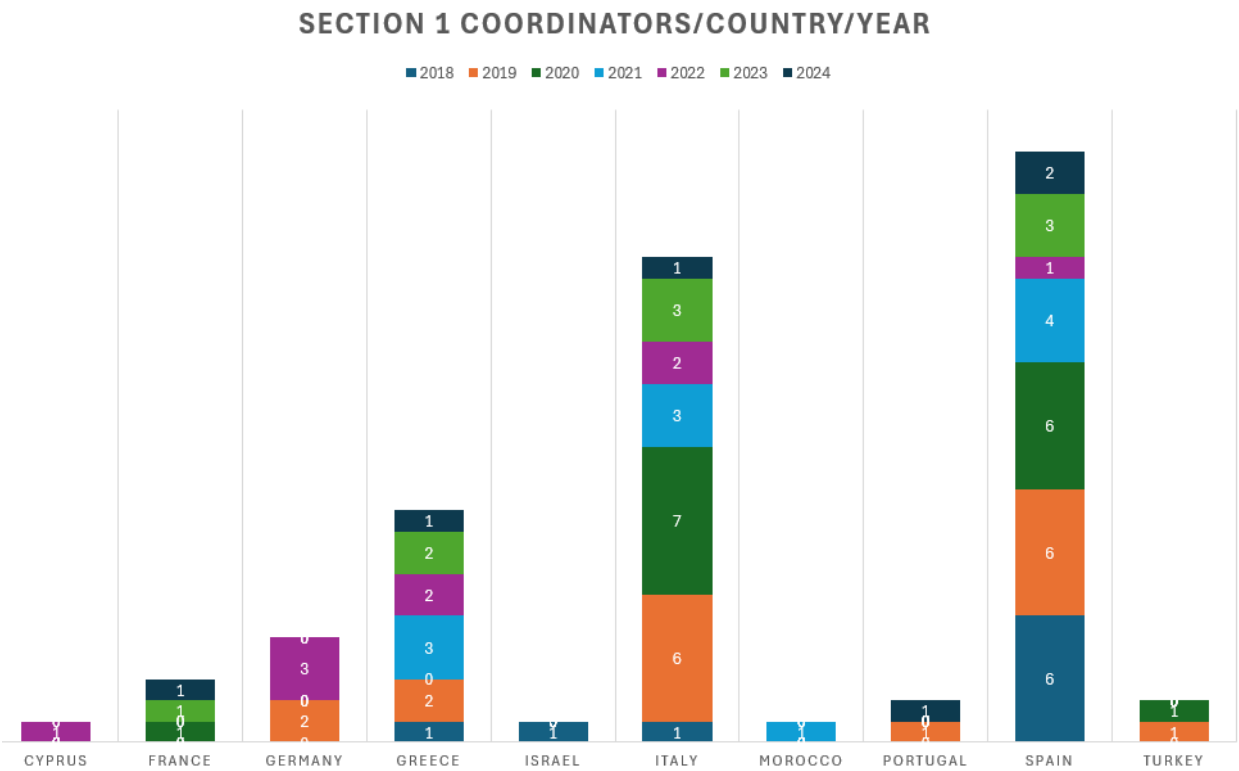
Section 2, funded by national agencies, supports a wider range of smaller-scale projects, facilitating local institutional engagement, particularly among higher education bodies and public research organisations.

⁴ EU R&I institutional categories are standard classifications used in Horizon Europe and Horizon 2020. These include: HES (Higher Education Establishments), REC (Research Organisations), PRC (Private for-profit entities, including SMEs), PUB (Public bodies, excluding education and research), and OTH (Other entities, such as NGOs, non-research international organisations, and foundations).

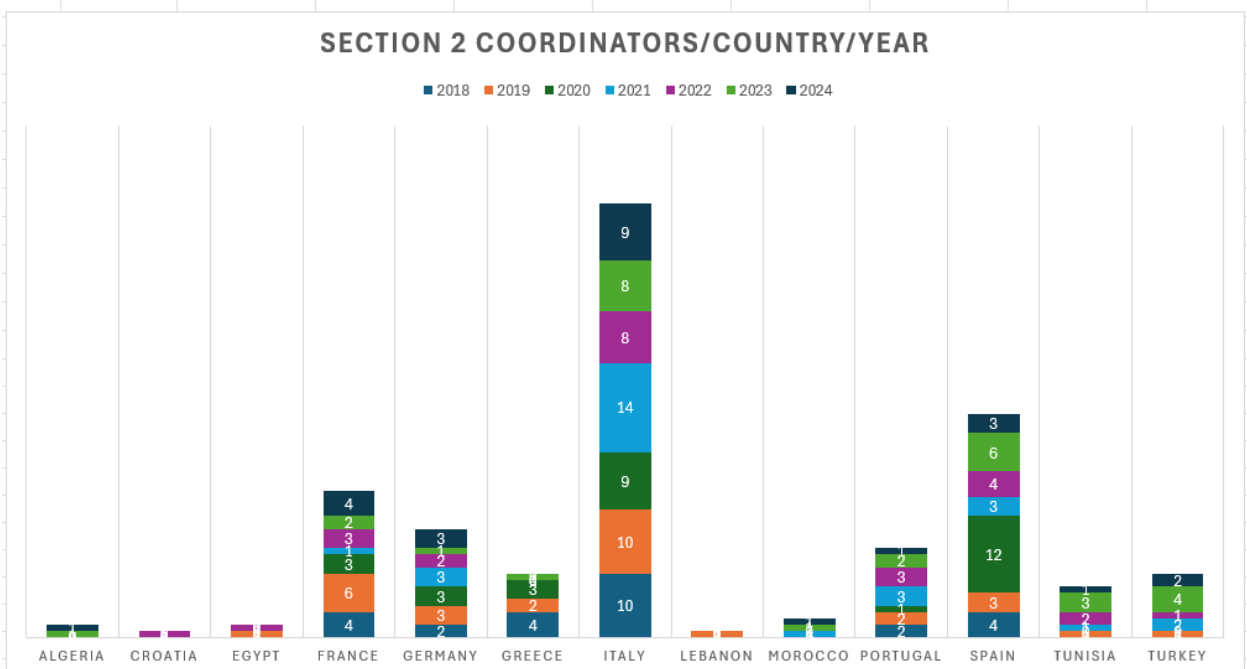
Coordination patterns per region and per country in S1 and S2 over years

Section 1:

In Section 1, coordination was highly concentrated, with Spain and Italy accounting for the largest number of coordinated projects—28 and 23 respectively—followed by Greece (11) and Germany (5). Italy and Spain.



Evolution of project coordination by country in Section 1 from 2018 to 2024



Evolution of project coordination by country in Section 2 from 2018 to 2024

In Section 2, coordination was more evenly distributed, though Italy again led with 68 coordinated projects, followed by Spain (32) and France (24). Countries such as Germany, Portugal, and Türkiye showed moderate coordination roles, while others like Algeria, Croatia, Egypt, and Lebanon had minimal or no coordination presence.

National Funding Caps and Their Implications on Project Coordination (2023–2024)

PRIMA Participating States apply national funding caps that vary significantly by country and funding agency. In 2023–2024, Italy (€500,000), France (€420,000), and Spain (CDTI: €400,000) set the highest ceilings for project coordinators, enabling them to lead larger, projects. In contrast, Algeria (€80,000), Israel (€100,000), and Tunisia (€45,000) apply much lower caps, which may limit their ability to coordinate high-budget projects.

Table 5. Ceiling caps imposed by national regulations from different PS (2023 - 2024)

Country	Funding Agency	Funding Cap Coordinator (€)	Funding Cap Partner (€)
Algeria	Ministry of Higher Education and Scientific Research	80,000	80,000
Croatia	Ministry of Science and Education	200,000	150,000
Cyprus	Research and Innovation Foundation	200,000	200,000
Egypt (ASRT)	Academy of Scientific Research and Technology	175,000	150,000

Egypt (STDF)	Science, Technology & Innovation Funding Authority	250,000	200,000
France	French National Research Agency (ANR)	420,000	310,000
Germany	Federal Ministry of Education and Research (BMBF)	No specific limit	No specific limit
Greece	General Secretariat for Research and Innovation, Ministry of development	200,000	250,000
Israel (MOST)	Ministry of Innovation, Science and Technology	100,000	100,000
Italy	Ministry of Universities and Research (MUR)	500,000	350,000
Lebanon	National Council for Scientific Research	600,000,000 (LBP)	600,000,000 (LBP) ⁵
Jordan	Higher Council for Science and Technology	Not specified	Not specified
Malta	Malta Council for Science and Technology	100,000	100,000
Morocco	Ministry of National Education, Vocational Training, Higher Education and Scientific Research	200,000	250,000 Not specified
Portugal	Fundação para a Ciência e a Tecnologia (FCT)	100,000	250,000
Slovenia	Ministry of Education, Science and Sport	200,000	200,000
Spain (AEI)	Agencia Estatal de Investigación	140,000	220,000
Spain (CDTI)	Centro para el Desarrollo Tecnológico Industrial	400,000 (minimum 175,000)	400,000 (minimum 175,000)
Tunisia	Ministry of Higher Education and Scientific Research	45,000	30,000
Türkiye	TÜBİTAK	150,000	150,000

Source PRIMA National regulations 2023

The funding caps for both coordinators and partners in PRIMA projects differ between countries, affecting the potential scale and complexity of projects. For example, Italy and France have higher caps (€500,000 and €420,000 for coordinators, respectively), allowing them to lead large, multi-national projects. Conversely, countries like Algeria (€80,000) and Israel (€100,000) may find it challenging to coordinate larger projects due to limited financial resources.

⁵ This is an indicative amount. National Regulations specifies that the Lebanese Project Budgets can reach up to 600,000,000 LBP (cost shared between the CNRS-L and Participating Institutions) It is an approximate of 6,415 euros. Exchange rate from: https://commission.europa.eu/funding-tenders/procedures-guidelines-tenders/information-contractors-and-beneficiaries/exchange-rate-infoeuro_en

Weighted Success Rate Analysis in PRIMA (2018–2024)

The Weighted Success Rate (WSR) offers a comprehensive assessment of national performance in PRIMA's Section 1 and Section 2 calls. Unlike the simple success rate, which only measures the proportion of funded proposals to submitted ones, the WSR incorporates:

- The number of proposals submitted by a country.
- The number of funded projects and granted participants.
- The country's share of total submissions and total funded projects.
- The number of national participants (beneficiaries) in funded projects.

This ensures that countries submitting more proposals or with more partners are not unfairly penalized or rewarded without considering their overall impact on the system.

$$\text{Weighted Success Rate (\%)} = \left(\frac{\text{Funded Projects}}{\text{Total Funded Projects}} \right) \times \left(\frac{\text{Funded Projects}}{\text{Total Submissions}} \times 100 \right)$$

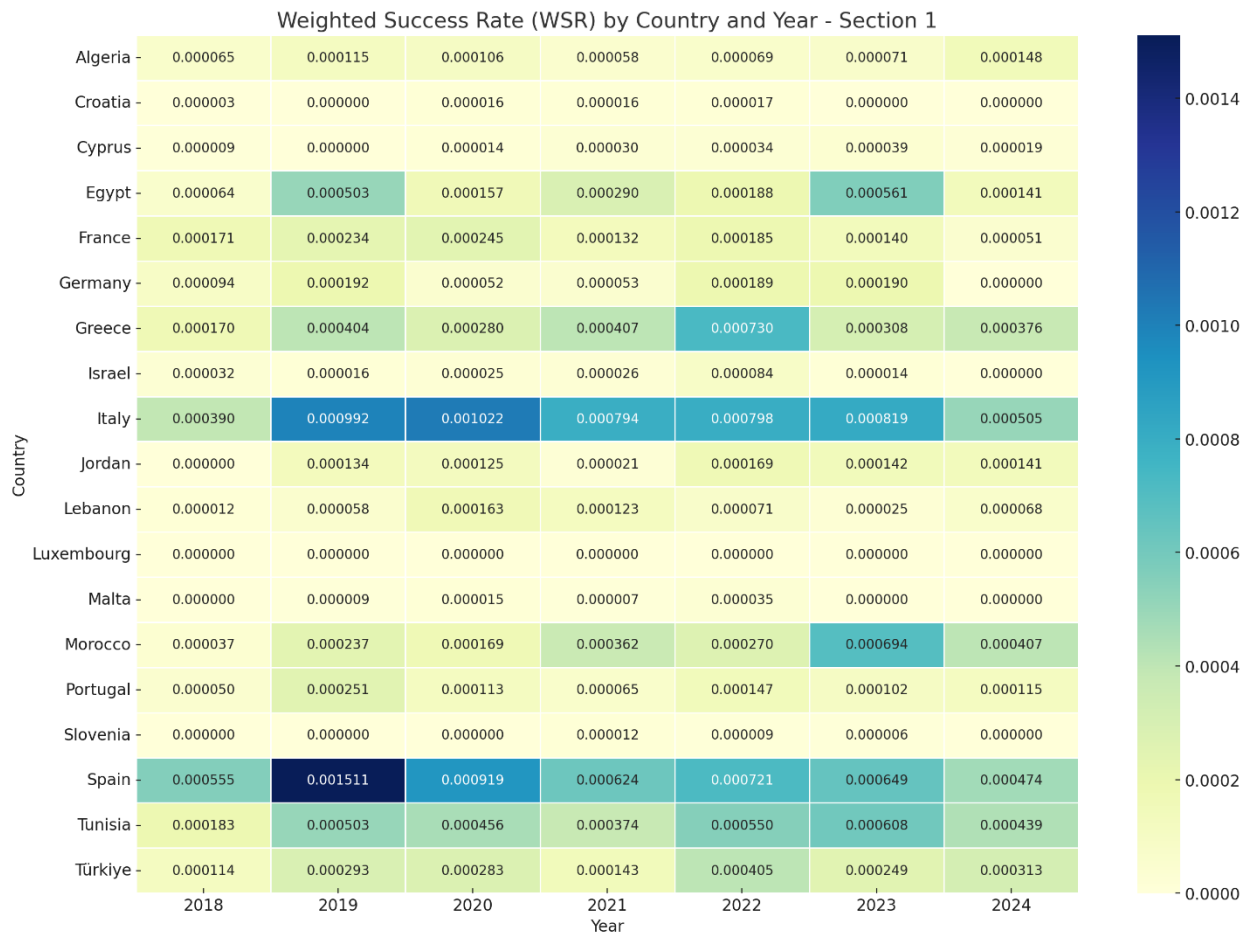
Equation 1 Weighted Success Rate for countries participating in Section 1 and Section 2 calls from 2018 to 2023

$$\text{Weighted Success Rate}_{c,y} = \left(\frac{\text{Funded Projects}_{c,y}}{\text{Submitted Projects}_{c,y}} \right) \times \left(\frac{\text{Submitted Projects}_{c,y}}{\text{Total Submitted}_y} \right) \times \left(\frac{\text{Partners in Funded Projects}_{c,y}}{\text{Total Partners in Funded}_y} \right)$$

Where:

- **Funded Projects/Submitted Projects:** measures the basic success rate of a country, but does not consider how important the country's submissions are to the overall system.
- **Submitted Projects/Total Submitted:** reflects the country's contribution to the total submissions. Countries submitting more projects contribute more to the overall system and thus have more weight.
- **Partners in Funded Projects/Total Partners in Funded** captures the role of the country's participants in funded projects. Countries with more participants in funded projects contribute more to the project's success.

Heatmap of Weighted Success Rates (WSR) by country and year (2018–2024) for PRIMA Section 1
Darker shades represent higher WSR values, indicating stronger performance relative to submissions



The heatmap of the Weighted Success Rate (WSR) for PRIMA Section 1 between 2018 and 2024 reveals several insightful trends about country-level performance in securing funding.

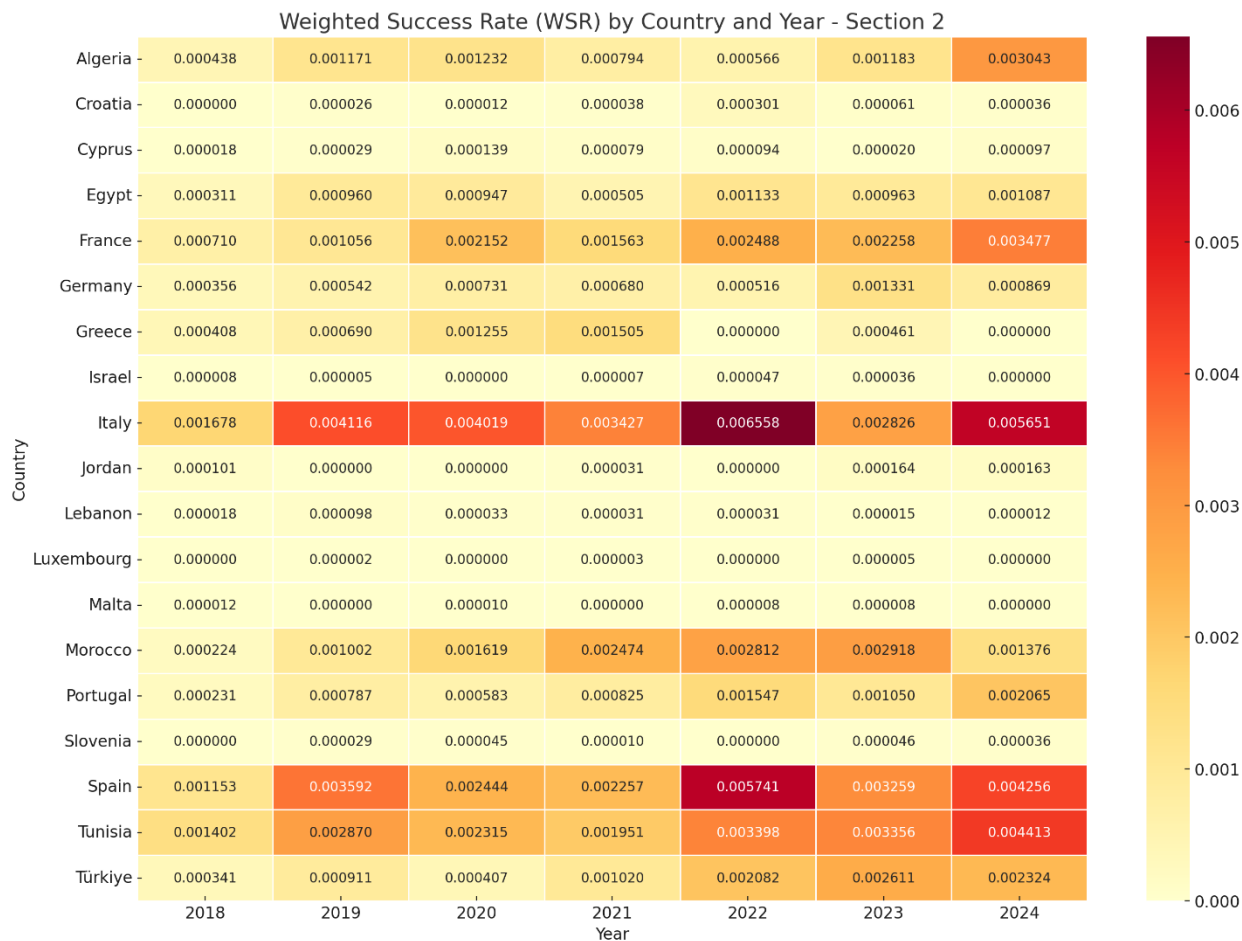
Spain consistently stands out as one of the top-performing countries, particularly in 2019, where it reached its peak WSR, indicating a highly efficient conversion of submissions into funded projects with strong partner participation. Italy also maintained a high WSR across most years, especially in 2020, reflecting both its high volume of submissions and substantial involvement in funded consortia.

Tunisia and Egypt show notable improvements over time, with Egypt reaching a local maximum in 2023,

France, Greece, and Türkiye demonstrate steady, moderate success, with fluctuations. In contrast, countries like Luxembourg, Croatia, and Slovenia exhibit very low or near-zero WSR values throughout the period.

Section 2

Heatmap of Weighted Success Rates (WSR) by country and year (2018–2024) for PRIMA Section 2
Darkers shades represent higher WSR values, indicating stronger performance relative to submissions



The heatmap of the Weighted Success Rate (WSR) for PRIMA Section 2 from 2018 to 2024 reveals a dynamic and competitive landscape, with marked differences in performance across countries and years. Italy emerges as the most consistent and dominant performer throughout the period, showing exceptionally high WSR values year after year, with a notable peak in 2022 and again in 2024.

This reflects not only Italy’s high volume of submissions but also its strong success in securing funding and playing a central role in project consortia.

Spain, Tunisia, and Morocco also show strong performance, with frequent spikes in WSR that suggest strategic engagement and effective alignment with call priorities. Spain, in particular, reached its highest WSR in 2019 and sustained above-average performance through 2024. France and Türkiye follow similar patterns, consistently maintaining competitive WSRs, particularly from 2020 onward.

Conversely, countries such as Luxembourg, Malta, and Croatia consistently show low WSR values, indicating limited success despite participating. Some countries like Greece and Egypt show a declining or fluctuating trend,

Interestingly, smaller countries such as Slovenia and Cyprus have modest yet visible participation.

Competition for Funding: Success Rates and Over-subscription

PRIMA's Section 1 and Section 2 calls show contrasting trends in oversubscription due to their thematic focus and applicant pools. Section 1 is highly competitive, attracting diverse applicants but posing challenges in equitable participation and fund distribution. Section 2, being more specialized, has fewer applicants, leading to underutilized budgets, especially in underrepresented states.

Addressing Underspensing Through Widening Actions

Some Participating States struggled with budget utilization, particularly in Section 2 calls. PRIMA introduced Widening Actions to improve inclusivity and balance participation. These allow consortia to add partners from underrepresented states during proposal submission to:

- Address geographic disparities.
- Encourage participation.
- Optimize budget use.
- Broaden PRIMA's funding impact.

Impact of Widening Actions: 2020 French Case Study and Broader Implications

In 2020, France used Widening Actions, improving project participation and budget utilization:

- Doubled projects from 31 to 60.
- Increased participating organizations to 89.
- Requested budget rose to €14.3 million.
- Fully utilized its €6.0 million budget.

This success encouraged other underspending countries to adopt Widening Actions, adding €5.2 million by 2022. However, in 2023, only three out of 27 projects used these actions, with a modest additional investment of €0.6 million.

Results and Ongoing Challenges

France and Morocco improved spending from severe underspending (2020) to moderate spending (2023). Yet, countries like Egypt, Algeria, and Jordan continue to face underspending issues, risking potential losses of €45-55 million, about 20% of committed budgets.

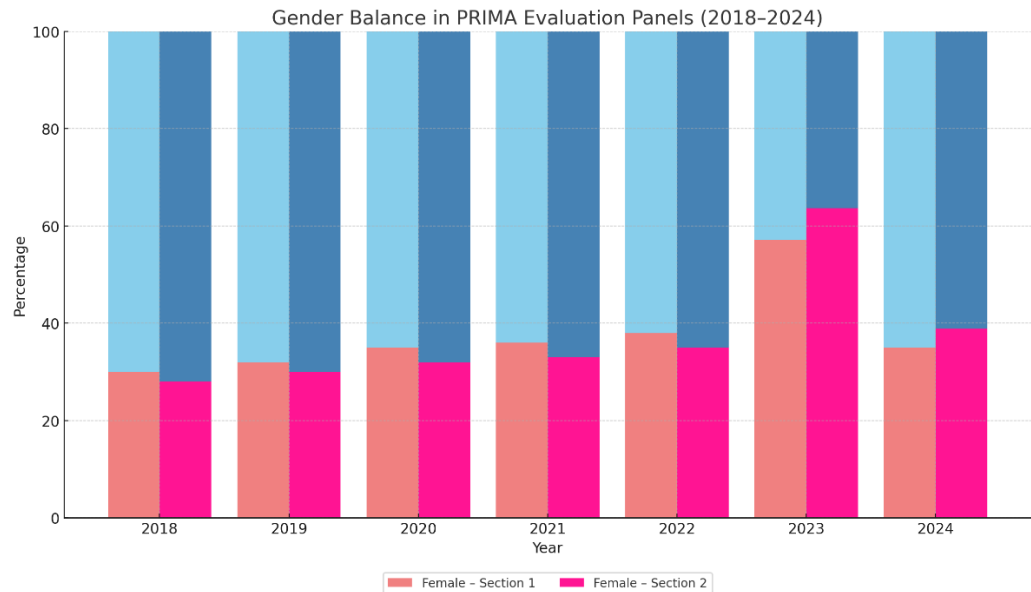
Gender balance and gender dimension in R&I

Gender Balance in Evaluation Panels

Between 2018 and 2023, PRIMA's evaluation panels consistently showed a gender imbalance, with male evaluators outnumbering female counterparts across both sections. However, recent years signal a positive shift. In 2023, for example, Section 1 Stage 1 included 42 evaluators, with 24 women (57%) and 18 men (43%), marking a rare reversal of the historical trend. Similarly, Section 2 Stage 2 counted 22 evaluators, with 14 women (64%) and 8 men (36%), reinforcing a strong commitment to gender equity in panel composition.

The 2024 data reveals continued, if more moderate, progress. In Section 1, the panel consisted of 13 men (65%) and 7 women (35%), while in Section 2, the composition was 11 men (61%) and 7 women (39%). While men remain the majority, these figures show a notable narrowing of the gap and increased consistency in female representation.

PRIMA’s trend toward gender-balanced panels reflects its broader institutional efforts to integrate gender equity into governance and decision-making structures. The near parity observed in recent years—especially in Section 2—aligns with the objectives laid out in PRIMA’s Gender Policy Brief and is a tangible step toward ensuring fairness, diversity, and inclusive excellence in the evaluation of Mediterranean R&I projects.



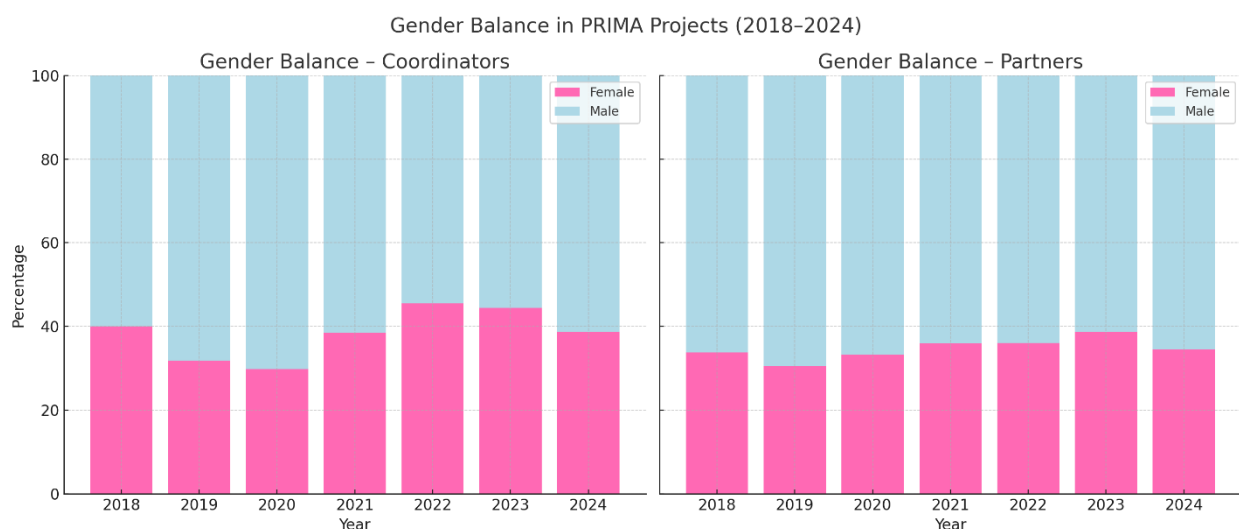
Gender Balance in PRIMA project participation

The gender balance in PRIMA project participation from 2018 to 2024 shows a persistent and notable gender gap, particularly among project coordinators, although some progress is visible over time. In 2018, women accounted for 40% of coordinators and 33.8% of partners. These figures reflect an already significant imbalance, especially in leadership roles. The gender gap widened in 2019 and 2020, when female coordinators dropped to 31.9% and 29.8% respectively, with male dominance peaking at over 70%. However, from 2021 onwards, there has been a gradual improvement. Female representation among

coordinators rose to 38.5% in 2021 and nearly reached parity in 2022 at 45.5%, the most balanced year of the period.

Among project partners, the gender gap has remained somewhat steadier, with women consistently representing around one-third of the participants. The peak female participation was 38.8% in 2023, suggesting incremental but meaningful shifts in consortium composition, although still falling short of full balance.

Overall, while there is encouraging evidence of progress, particularly in 2022 and 2023, the data confirms that men continue to be overrepresented in both coordinator and partner roles. This underscores the need for continued gender mainstreaming strategies and potentially more targeted interventions to ensure equal opportunities for leadership and engagement in research and innovation projects funded under PRIMA.



PRIMA has implemented initiatives to incorporate gender perspectives and ensure women's representation at all levels. Recognizing this imbalance, PRIMA has launched a series of initiatives to mainstream gender and foster more inclusive research environments.

A central instrument in this effort is the [Gender Policy Brief](#), which lays out recommendations to enhance women's representation in leadership, integrate gender analysis into scientific content, and ensure gender balance in decision-making bodies. Access the full brief [here](#).

Beyond policy, PRIMA has invested in capacity building, offering training sessions and webinars—notably during events such as EU Green Week 2023—to equip project leaders with tools to embed gender dimensions meaningfully. These engagements highlight the role of women in environmental sustainability and stress the need for equal opportunities across research and policy spheres. For more details, you can access the event summary [here](#)

PRIMA also actively celebrates female contributions through recognitions like the [“Woman Greening Food Systems Award”](#), underscoring the critical role women play in sustainable food systems and promoting role models within the Mediterranean R&I ecosystem. To support evidence-based action, PRIMA has conducted surveys and assessments—most recently, the [Survey report](#) on the Gender Dimension in PRIMA Projects—which reveal both areas of progress and persistent challenges. The findings indicate that while

many projects acknowledge gender, the depth of integration varies, and cultural, structural, and knowledge-related barriers persist.

Despite these challenges, PRIMA's commitment is clear: gender dimensions are now a required component of project proposals, and awareness is steadily growing. Yet the program recognizes that sustained, coherent action is needed to close the gap

Several PRIMA projects offer concrete examples of how gender mainstreaming can be successfully implemented in research and innovation initiatives related to sustainable agriculture and resource management.

Projects such as [NEXUS NESS](#) (NEXUS Nature Ecosystem Society Solutions), [LAB4SUPPLY](#) (Living Labs for Agri-food Supply Chain Sustainability), and [HALOFARMS](#) exemplify PRIMA's strategic commitment to promoting gender equality not only as a horizontal priority but as a **transformative driver** within the Mediterranean research ecosystem.

LAB4SUPPLY has adopted an inclusive Living Lab approach that actively places women in leadership and decision-making roles. This model has enabled women to play a key role in co-designing solutions to challenges in the agri-food sector, thereby improving the quality and inclusivity of decisions. The project's Deliverable 2.1 highlights gender-sensitive co-creation as a core methodological pillar. By elevating the role of women entrepreneurs and recognizing their contributions, LAB4SUPPLY has not only empowered individuals but also catalyzed broader cultural shifts, increasing gender awareness and inclusivity in innovation processes.

Similarly, **HALOFARMS** has embedded gender considerations into every stage of its work on saline agriculture. As documented on its project website, HALOFARMS promotes **equal representation of women** in stakeholder engagement and has facilitated the creation of **women-led start-ups** in marginal and saline-affected areas. The project's activities include tailored support for female farmers, thereby expanding their market access and enhancing their roles in sustainable agriculture. HALOFARMS demonstrates how gender inclusion can fuel both social equity and technical innovation, showing that when women are fully integrated, their perspectives drive more sustainable and community-responsive outcomes.

Although less detailed in public dissemination, **NEXUS NESS** also reflects a commitment to gender equity. According to the project's Deliverable D1.1 on Governance Framework, gender inclusivity is integrated into participatory governance models aimed at water-energy-food-ecosystems nexus management. The document references gender-balanced stakeholder mapping and acknowledges the importance of inclusive, community-based governance to address systemic sustainability challenges.

Monitoring of PRIMA Section 1 and Section 2 projects

Project monitoring at PRIMA has been conducted since 2019 via the Monitoring and Learning Platform (MEL), serving as the central tool for real-time data collection and analysis. MEL functions similarly to the European Commission's participants and tenders portal, designed specifically for the monitoring and reviewing of PRIMA projects. The MEL platform also incorporates a Learning Dashboard that provides an overview of the entire project portfolio, enhancing transparency and accessibility for stakeholders.

Project Monitoring and Technical Reviews Monitoring activities include continuous oversight by PRIMA Project Officers and structured Technical Reviews. These reviews are conducted by independent expert evaluators appointed by PRIMA to ensure alignment of project deliverables with their stated objectives.

Evaluations provide critical feedback regarding resource utilization, technical progress, and achievement of project milestones.

Financial Monitoring and Checks

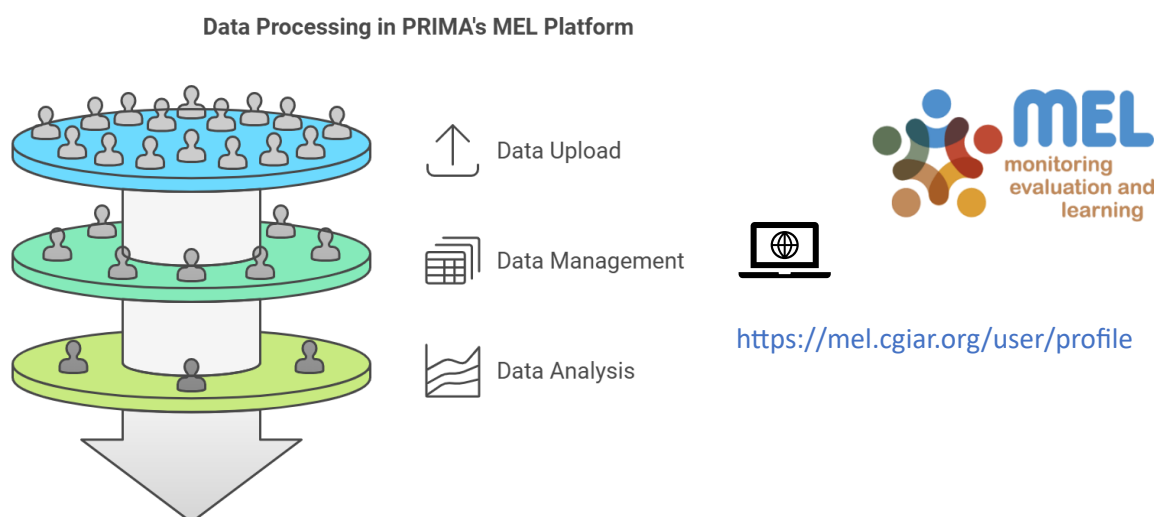
- **Section 1 Projects:** Financial monitoring and reviews are centrally managed by the PRIMA Secretariat. Financial statements submitted by project consortia undergo validation by the PRIMA Financial Department. Payments to projects are contingent upon the approval of both technical and financial reports, ensuring comprehensive compliance and accountability.
- **Section 2 Projects:** Financial oversight for Section 2 projects is decentralized and performed by the respective National Funding Agencies. These agencies follow national regulations to conduct financial checks, guaranteeing transparency and regulatory compliance.

Dashboard and Data Transparency To facilitate data collection, maintain progress tracking, and uphold transparency, the PRIMA Secretariat has developed the Intelligent Tool Dashboard. This interactive dashboard provides updated information on project participation, actions, budgets, and funding from 2018 onwards. The Dashboard is updated annually following funding decisions, ensuring it reflects the most current project participation and financial information.

Important Notes on Data Consistency While data changes in Section 1 projects are updated live on the Intelligent Tool Dashboard, Section 2 project budgets may experience adjustments by National Funding Agencies without immediate notification to the PRIMA Secretariat. Consequently, slight inconsistencies might occasionally exist between initial funding allocations at the ranking list establishment stage and the final certified budgets issued during project reporting periods.

PRIMA's Monitoring Framework

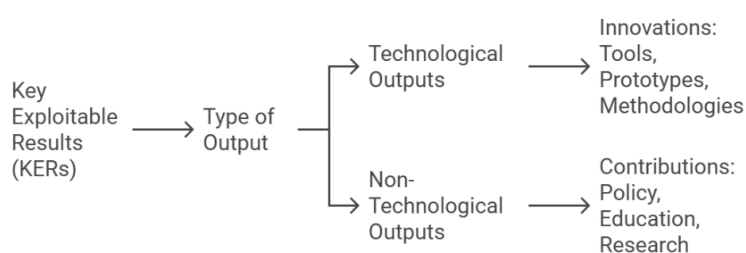
Key functionalities of MEL Monitoring and Learning Platform (MEL) include:



Key Exploitable Results (KERs)

In 2024, PRIMA added a new MEL function to gather and assess Key Exploitable Results (KERs), which are project outcomes with potential for substantial social, economic, political, scientific, or environmental benefits.

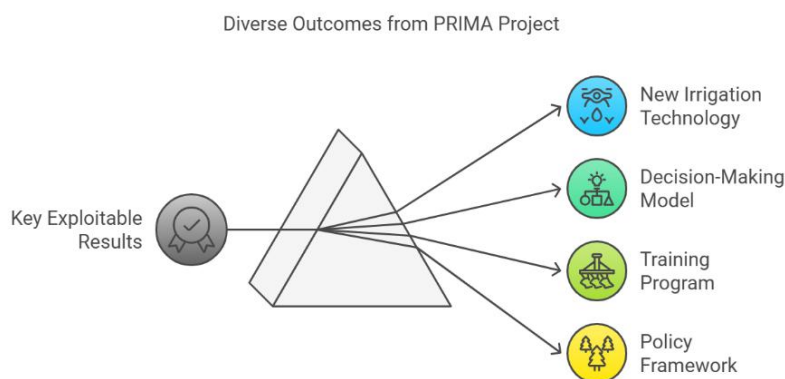
KERs are project outputs with practical value for stakeholders like researchers, policymakers, industry, civil society, and citizens. KERs can include:



Technological Outputs: Innovations such as tools, prototypes, or methodologies.

Non-Technological Outputs: Contributions to policy, education, or research, such as new knowledge or

Examples of KERs include:



A new irrigation technology that improves water use efficiency in agriculture.

A decision-making model for sustainable land use planning.

A training program for farmers on climate-resilient practices.

A policy framework to support agroecological transitions in Mediterranean regions

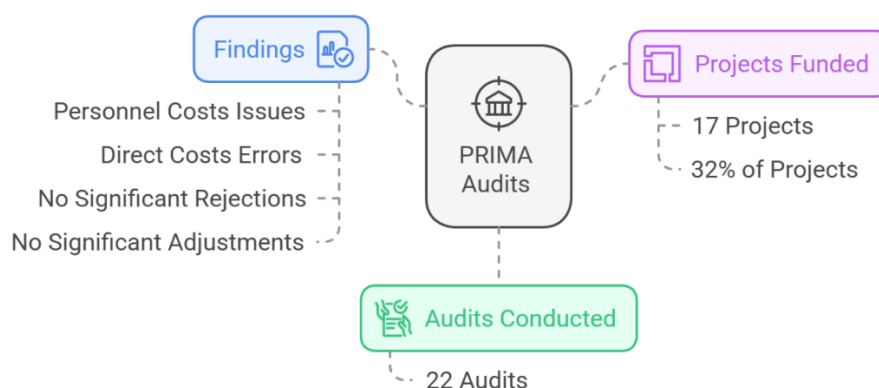
Ex-ante and Ex-post control

PRIMA manages and allocates its funding through comprehensive controls before and after grant agreements. Prior to signing any Grant Agreement, PRIMA ensures all beneficiaries have a validated Participant Identification Code (PIC) by providing specific legal and financial information. Additionally, PRIMA checks each partner against the Early Detection and Exclusion System (EDES) to ensure no ineligible beneficiaries are included in the programme. This dual-layered validation ensures compliance with legal standards and integrity of the funding processes.

Beyond these initial checks, PRIMA performs detailed ex-post controls to verify appropriate use of funds during and after project implementation. PRIMA selects beneficiaries for financial audits as part of its audit strategy, which can occur during the implementation phase or up to two years after project completion.

By the end of 2024, PRIMA have conducted 22 audits on beneficiaries, in 17 projects funded between 2018 and 2021. This sample represents 32% of the projects from the first four calls.

The findings from these audits have not shown significant rejections or adjustments, although some common issues have been identified, particularly concerning personnel costs. These include missing or incomplete timesheets, errors in hourly rate calculations, and misreporting of periods. Errors in other direct costs often result from incorrect depreciation calculations for equipment, insufficient documentation linking costs to the action, or missing records for travel expenses. Despite these discrepancies, the audits generally reflect compliance among PRIMA's beneficiaries.



SECTION 3 Activities

Section 3 of the PRIMA Partnership plays a strategic and complementary role to Sections 1 and 2 by enabling Participating States (PS) to support research and innovation through national mechanisms. Unlike Sections 1 and 2, which operate via competitive, transnational calls co-funded by the EU and PS, Section 3 is fully funded and implemented at the national level. This arrangement allows countries to align existing or new ad-hoc programmes with PRIMA's overarching objectives while preserving flexibility, national ownership, and alignment with national priorities.

Crucially, Section 3 also serves as a powerful **leverage mechanism**: national activities labelled under PRIMA count as **in-kind contributions** to the programme, significantly increasing its financial volume and strategic reach.

Section 3 encompasses two primary components:

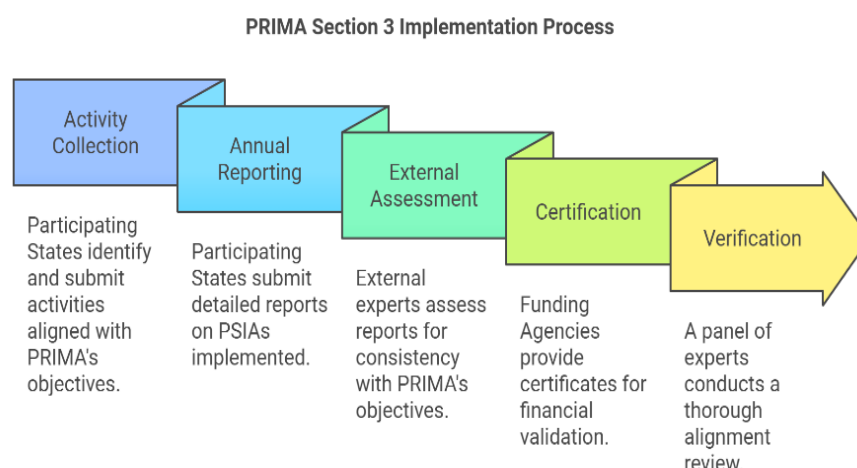
Participating States' Initiated Activities (PSIAs) – These are national bilateral or multi-lateral programmes launched by Participating States that are closely aligned with PRIMA's Strategic Research and Innovation Agenda (SRIA). Although not funded through PRIMA's EU contribution, PSIAs are formally recognized as in-kind contributions to the programme. They allow countries to integrate existing or new initiatives into the PRIMA framework, enhancing coherence and synergy while respecting national priorities. For this reason the number of PSIAs are considered metrics to ensure the alignment of National Programmes with the SRIA.

Other Activities – This category includes broader initiatives such as joint conferences, workshops, thematic networking platforms, and national coordination mechanisms such as Mutual Learning Exercise workshop that support knowledge exchange, stakeholder engagement, and policy alignment. These activities often focus on capacity building, and cross-sectoral collaboration, complementing core funding streams of Sections 1 and 2.

Between 2018 and 2024, a total of **31 Participating States' Initiated Activities (PSIAs)** and several activities (Other Activities) have been implemented, mobilising over **€256 million** in allocated funds, underscoring the deep commitment of national actors and the contribution of Section 3 to the Mediterranean research and innovation ecosystem.

Section 3 Monitoring Process of Activities (PSIAs and Other Activities)

The implementation of Section 3 is governed by a structured monitoring and verification process designed to ensure that all Participating States' activities align with PRIMA's strategic objectives and comply with its operational standards. This process is essential for guaranteeing both the credibility of the in-kind contributions reported and their eligibility for matching against EU co-funding, as stipulated by the PRIMA Basic Act.



Any Section 3 activity, either PSIA's and OA's, be considered as such must be included in AWP's with specific requisites,

The process begins each year with the preparation of the Annual Work Plans (WP). During this phase, PRIMA disseminates specific guidelines to all Participating States, which outline the rules governing Section 3 activities. These include the strategic alignment criteria, visibility and labelling requirements, and procedures for monitoring and certification. Participating States are then invited to identify and submit initiatives—known as Participating States' Initiated Activities (PSIA's)—that reflect their national or regional research and innovation priorities while being demonstrably consistent with PRIMA's Strategic Research and Innovation Agenda (SRIA).

To be eligible, PSIA's must be designed to start after the adoption from the Commission of the reference Annual Work Plans in the reference year, and must align not only in their general objectives but also in the structure of the programme calls, the thematic focus, the common principles of transparency, equal treatment and fairness, ethical principles for calls. This ensures that the leverage mechanism underpinning Section 3—whereby national investments are formally recognised as in-kind contributions to PRIMA—is grounded in a robust assessment of both strategic and operational coherence.

Once the activities have been launched, Participating States are required to submit a detailed annual report to the PRIMA Secretariat by February of the following year. These reports cover the implementation status of each PSIA, including a description of the programme calls launched, the projects funded, and their alignment with PRIMA's mission and objectives. They are subject to external expert review to assess consistency, scientific relevance, and added value to the Partnership.

A crucial element of this process is the [certification of disbursed funds](#). At the time of reporting, each national funding agency must provide PRIMA with a financial certificate signed by the competent authority. This certificate formally attests to the amount of national funds that have been effectively disbursed for the implementation of the labelled activities. These certified amounts are transmitted by PRIMA to the European Commission as part of its annual reporting obligations, and they constitute the basis for calculating the in-kind contributions provided by the Participating States.

Only disbursed and certified funds are counted as eligible in-kind contributions for the purpose of matching the EU financial contribution to PRIMA. This mechanism ensures both financial credibility and legal accountability, as it ties the recognition of national inputs directly to verifiable expenditures and tangible Partnership outputs. It also reinforces the principle of co-ownership within the PRIMA Partnership, ensuring that the value added by national efforts is properly acknowledged and integrated within the overall funding model of the initiative.

Finally, a verification phase is carried out to confirm full compliance with PRIMA's requirements. This includes an initial review by the PRIMA Secretariat and a more in-depth evaluation by a panel of independent external experts. Their assessment results in a comprehensive verification report, which confirms whether the reported activities and financial contributions meet the standards for strategic alignment, transparency, and impact, thereby completing the cycle of recognition under Section 3.

Section 3: Added Value of PSiAs

Section 3 activities, implemented primarily through Participating States' Initiated Activities (PSiAs), provide substantial added value to the PRIMA Partnership by reinforcing its strategic coherence, broadening its impact, and enhancing synergies with national and regional research and innovation systems.

Far from functioning in isolation, Section 3 represents a vital component of PRIMA's architecture—anchoring the programme in national priorities while fostering shared Mediterranean solutions.

A key strength of Section 3 lies in its ability to **promote the alignment of national and regional R&I programmes** with the PRIMA Strategic Research and Innovation Agenda (SRIA). Through PSiAs, Participating States integrate PRIMA priorities into their own research strategies and funding mechanisms, ensuring that national investments contribute to wider Mediterranean and EU goals. This alignment reinforces multi-level governance, and strengthens the relevance of PRIMA toward same goals, thus reducing duplications and fragmentation of R&I activities

National PSiAs enable countries to address their specific challenges leverage resources to contribute to common goals. This is one main added value of PSiAs which are very much aligned with the scope of an EU Partnership like PRIMA being a R&I Public-Public Partnership ex Art 185 TFEU whose goal is to join forces addressing critical challenges that (given the scale and scope).could not be appropriately be addressed on their own

In addition, bilateral and multilateral PSiAs foster joint programming, resource pooling, and transnational collaboration, allowing countries to co-develop solutions, share expertise, and strengthen regional integration. These different formats increase the flexibility of Section 3 and support PRIMA's role as a platform for cooperation tailored to diverse contexts.

The **leverage mechanism** at the core of Section 3 adds significant value by enabling Participating States to mobilise national and regional funding as in-kind contributions to PRIMA. Only the funds that are disbursed, certified by national funding agencies, and verified for alignment with PRIMA's objectives are recognised as eligible. From 2018 to 2024, over €256 million were allocated to PSiAs, with €115 million disbursed and validated as matching contributions. This mechanism boosts the financial capacity of the programme and demonstrates sustained national ownership.

Beyond financial considerations, Section 3 **enhances research and institutional capacities**, particularly in countries with smaller or emerging R&I ecosystems. PSiAs have enabled states such as Malta to build local

expertise, develop infrastructure, and increase their competitiveness in transnational funding schemes like Horizon Europe. These actions contribute to a more balanced and inclusive Mediterranean R&I landscape.

Section 3 also **facilitates bilateral and multilateral cooperation** among Participating States. Several PSIAs are structured around joint calls and coordinated initiatives, such as those between Spain and France, which have co-funded projects on agri-food resilience and climate adaptation. These initiatives foster long-term partnerships, knowledge sharing, and collective learning, strengthening the region's capacity to respond to shared challenges.

All Section 3 activities reported here have undergone structured monitoring to guarantee financial accountability, alignment with PRIMA's strategic objectives, and programme visibility. Monitoring includes verifying compliance with EU and PRIMA communication obligations, notably the appropriate use of PRIMA and EU logos.

The list of PSIAs reported below have been included in relevant Annual Work Plans (AWPs) 2018-2024 and thereby reported by Funding Agencies as implemented activities

Table 6. Summary of the Participant States Initiated Activities (PSIAs) from 2018 to 2024.

Year	Code	Country	Managing Body	Description
2018	DE.2018.	Germany	BMBF/DE	National funding activity focused on water management and agricultural innovation under PRIMA
2018	ES-2018.4	Spain	CDTI/ES	National funding activity supporting R&D in sustainable agriculture and food systems under PRIMA
2019	ES-2019-1	Spain	CDTI/ES	Large-scale R&D projects focused on enhancing Mediterranean agriculture and food chain resilience
2019	FR-2019-1	France	ANR/FR	Research initiatives addressing climate change impact on Mediterranean farming systems
2019	IL-2019-1	Israel	IIA/IL	Innovation-driven projects aimed at improving water use efficiency and sustainable farming practices
2020	ES.2020.1	Spain	CDTI/ES	Projects enhancing food security and sustainable agricultural practices across Mediterranean regions
2020	DE.2020.1	Germany	BMBF/DE	National initiatives targeting the development of climate-smart agricultural technologies
2020	FR.2020.1	France	ANR/FR	Funding activities for innovative solutions in water resource management and agri-food sectors
2021	ES.2021.1	Spain	CDTI/ES	Support for projects that integrate renewable energy into water and food management systems
2021	ES.2021.2	Spain	AEI/ES	National efforts to foster innovation in agri-food value chains with a focus on sustainability
2021	IL.2021.3	Israel	ISERD/IL	Initiatives to improve water efficiency and agricultural sustainability in arid regions

2021	MT.2021.1	Malta	XM/ML	Capacity-building projects for local researchers in PRIMA-related fields
2021	TK.2021.1	Türkiye	TUBITAK/TR	National funding aimed at advancing sustainable agricultural technologies and practices
2022	ES.2022.1	Spain	CDTI/ES	Extensive R&D projects to boost resilience and innovation in Mediterranean agri-food systems
2022	ES.2022.2	Spain	AEI/ES	Focused research on sustainable farming practices and climate change adaptation
2022	FR.2022.1	France	ANR/FR	Initiatives to improve water resource management and reduce environmental impact in agriculture
2022	IL.2022.1	Israel	MOST/IL	Research activities targeting the efficient use of water in agriculture and food production
2022	MT.2022.1	Malta	XM/MT	Local research capacity development and support for PRIMA-related proposals
2022	MT.2022.2	Malta	XM/MT	Projects aimed at fostering innovation in sustainable agricultural practices and technologies
2022	TR.2022.1	Türkiye	TUBITAK/TR	National funding to support the development of climate-resilient agricultural systems
2023	ES.2023.1	Spain	CDTI/ES	Projects focused on integrating digital technologies into sustainable farming practices
2023	FR.2023.1	France	ANR/FR	National initiatives supporting the transition to sustainable and resilient food systems
2023	MT.2023.1	Malta	XM/MT	Capacity-building initiatives for Maltese researchers in PRIMA-related disciplines
2023	MT.2023.2	Malta	XM/MT	Continued support for innovative research in water management and agricultural sustainability
2023	TR.2023.1	Türkiye	TUBITAK/TR	National efforts to enhance sustainable agricultural technologies and climate resilience.
2024	FR.2024.1	France	ANR/FR	Research projects funded by ANR under the annual national call for proposals
2024	ES.2024.1	Spain	CDTI/ES	CDTI National R/D continuous open Call
2024	ES.2024.2	Spain	AEI/ES	Annual Action Plan 2024 Focused research for generation of knowledge, improvement of social, economic and technology conditions of the Spanish society, R&D&I projects
2024	TR.2024.1	Türkiye	TUBITAK/TR	National funding aimed at advancing sustainable agricultural technologies and practices
2024	MT.2024.1	Malta	XM/MT	Local research capacity development and support for PRIMA-related proposals
2024	MT.2024.2	Malta	XM/MT	Projects aimed at fostering innovation in sustainable agricultural practices and technologies

Total PSiAs from 2018 to 2024: [31](#)

Section 3 has proven effective in mobilising both financial and in-kind contributions from Participating States. Through the implementation of Participating States' Initiated Activities (PSIAs), national programmes are aligned with PRIMA's Strategic Research and Innovation Agenda (SRIA), enabling countries to address regional and local challenges in a targeted and flexible manner. These initiatives contribute significantly to the Mediterranean R&I landscape, with a strong focus on sustainability, climate resilience, and agri-food system innovation.

Managed only by national funding agencies, PSIAs complement transnational projects funded under Sections 1 and 2 by addressing context-specific needs and priorities. For example:

Germany has supported the development of climate-smart agricultural technologies (2020).

Spain has launched extensive R&D programmes to enhance the resilience and sustainability of agri-food systems (2022) The actions funded are mainly Innovation actions involving private sector.

Türkiye has focused on sustainable agriculture and climate resilience (2021 and 2023).

Malta has prioritised capacity-building and infrastructure development, enabling stronger national participation in PRIMA and Horizon Europe calls.

A key strength of PSIAs lies in their capacity to foster bilateral cooperation among Participating States. Bilateral calls enable the pooling of expertise and resources across countries, promoting collaborative research and strengthening regional partnerships. These initiatives often serve as stepping stones toward broader transnational funding, with several projects successfully transitioning from PSIAs to Horizon Europe.

Bilateral activities are particularly impactful in addressing cross-cutting challenge while strengthening collaborations while contributing to build R&I networks.

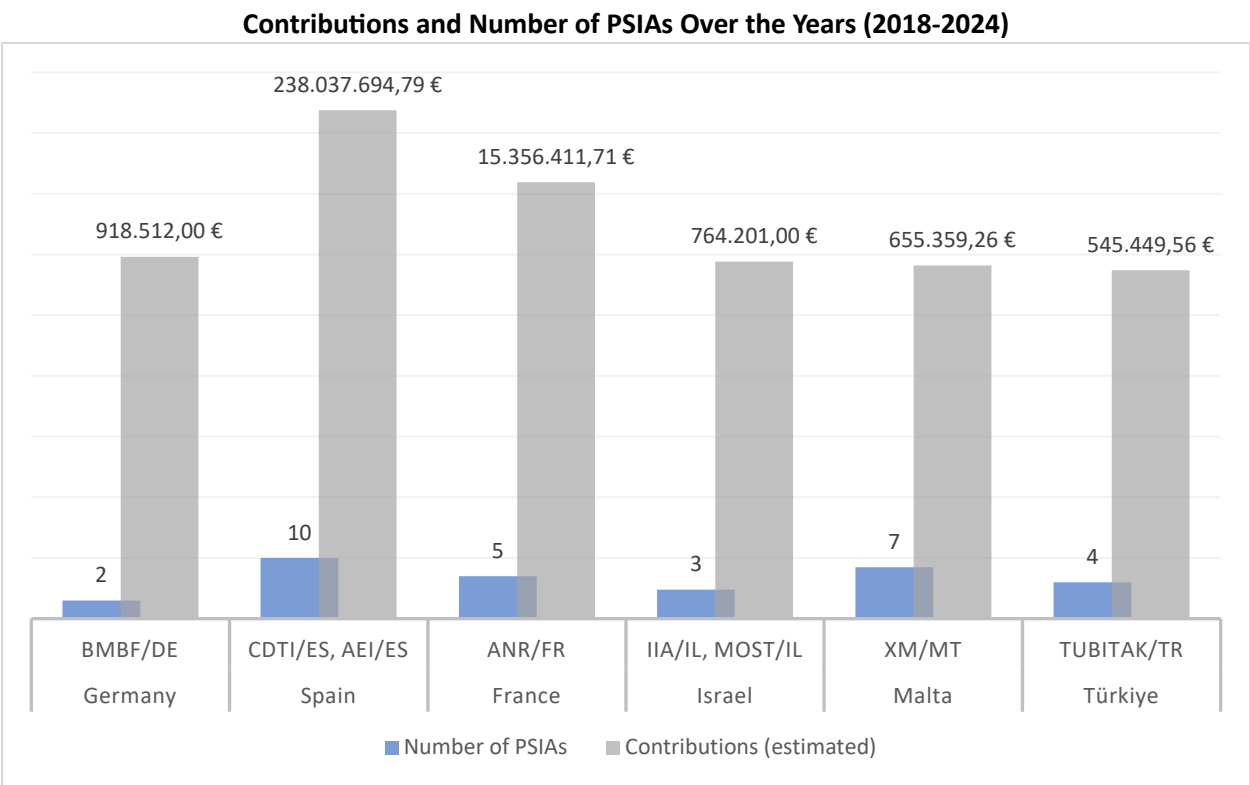
For instance, the Spain–France collaboration on resilient agri-food systems illustrates how shared priorities and complementary expertise can lead to high-impact outcomes.

PSIAs also play a vital role in capacity building, especially for smaller or emerging research systems. Malta's strategic use of PSIAs has strengthened local research capabilities, increased engagement in international networks, and enhanced the competitiveness of its scientific community. These efforts help create long-term conditions for inclusive, innovation-driven development across the Mediterranean.

Contributions per Country for PSIAs (2018-2024)

In the table below are indicated the countries proposing PSIAs, along with their respective managing bodies and the number of activities (mainly R&I programmes) they have managed:

Total Contributions Estimated: € 256.277.628



Countries such as Spain, France, Germany, Malta, Türkiye, and Israel have actively participated in this mechanism, using Section 3 to align national research and innovation agendas with PRIMA’s Mediterranean-wide priorities. **Spain** (CDTI and AEI funding agencies) leads in both the number of PSIAs (10) and total contributions, with significant investments, especially in 2022 and 2023. **France** (ANR) and **Germany** (BMBF) have consistent participation over the years, focusing on initiatives aligned with sustainable agriculture and water management. **Israel** and **Türkiye** (TUBITAK) have also actively contributed, with Israel focusing more on innovative and sustainable farming practices.

Malta (Xjenza Malta) has a significant number of PSIAs relative to its size, particularly focused on capacity-building and research support.

Section 3 Financial Contributions

All Section 3 activities undergo a structured monitoring process—comprising reporting, certification, and verification—to ensure that funds are spent transparently and that the labelled activities maintain consistency with PRIMA’s strategic and operational standards. This process also ensures full compliance with EU visibility and branding obligations, reinforcing the recognition of PRIMA’s added value at both national and European levels.

According to the data previously illustrated Participating States collectively planned a total of €269,095,483 in contributions over the seven-year period. Of this amount, €257,523,186 was formally

allocated to specific activities, and €95,419,220 was disbursed and certified by national funding agencies. These disbursed amounts represent **actual expenditures** validated through the annual reporting and certification process.

For PRIMA, the certified amounts can be therefore be recognized as eligible in-kind contributions eligible for matching with the EU's financial support under the PRIMA (EU) Decision.

Table 7 Section 3 Contributions' summary 2018-2024

AWPs	Committed funds		Allocated funds		Disbursed payments	
	PSIA	Other activities	PSIA	Other activities	PSIA	Other activities
2018	26 860 000	680 000	7 287 922	734 723	5 730 002	734 723
2019	46 000 000	275 000	33 680 827	415 078	20 054 848	415 078
2020	26 480 000	95 020	25 111 584	72 842	13 959 921	72 842
2021	46 560 000	62 800	61 773 880	4 000	33 881 474	4 000
2022	49 425 000	39 000	92 111 707	5 363	18 351 949	5 363
2023	31 375 000	25 000	9 098 776	0	2 209 020	0
2024	41 203 663	15 000	27 212 932	13 552	-	-
Sub-Total 7 years	267 903 663	1 191 820	256 277 628	1 245 558	94 187 214	1 232 006
TOTAL Section 3	269 095 483		257 523 186		95 419 220	

This leverage mechanism is central to Section 3's function within the PRIMA architecture. It enables national programmes to be counted toward the overall funding volume of the Partnership, provided that the associated activities are fully aligned with PRIMA's Strategic Research and Innovation Agenda (SRIA) and comply with the labelling, visibility, and financial accountability requirements defined in the Annual Work Plans.

Chapter 5 Efficiency of PRIMA Partnership (cost-effectiveness)

Efficiency of the Elaboration of Work Plans

The Annual Work Plan (AWP) outlines PRIMA's yearly strategic priorities, funding mechanisms, and activities. Its preparation starts around January or February and involves drafting, reviewing, and approving. The European Commission's Funding Decision followed by the BoT approval formalizes the AWP's final adoption, ensuring it aligns with EU objectives and regulations. The adoption timeline varies each year based on plan complexity and stakeholder consultations.

Timeline and Adoption of PRIMA Annual Work Plans

Table 8 Timeline for the preparation and adoption of AWP from 2018 to 2024, with hyperlinks to the corresponding adoption documents for detailed reference:

Annual Work Plans (AWPs) during implementation period 2018-2024 Decision (EU) 2017/1324				
Annual Work Plans (AWPs)	Date of Adoption	Start of Preparation (approximately)	Days for Preparation	Adoption Number
AWP 2018	12 January 2018	February 2017	345 days.	C(2018) 371
AWP 2019	13 December 2018	February 2018	315 days.	C(2018) 8734
AWP 2020	10 February 2020	February 2019	374 days.	C(2020) 728
AWP 2021	04 March 2021	February 2020	397 days.	C(2021) 1390
AWP 2022	14 January 2022	February 2021	347 days.	C(2022) 49 final
AWP 2023	25 January 2023	February 2022	358 days.	C(2023) 578 final
AWP 2024	25 January 2024	February 2023	358 days.	C(2024) 430 final
Annual Work programmes (AWPs) during implementation period 2025- 2027 Decision (EU) 2024/1167.				
AWP 2025	31 March 2025	February 2024	395 days*	C(2025) 1896 final

*The longer preparation period for the PRIMA Work Programme 2025—from February 2024 to 31 March 2025 (approx. 395 days)—was primarily due to delays in the signature of the Financial Guarantee Letters (FGLs) from the Participating States (PS). Financial Guarantee Letters are formal commitments by each Participating State confirming their national financial contributions to the Partnership. These letters are legally required before adopting the Annual Work Programme (AWP), particularly for Section 2 calls, which are funded and implemented by the PSs. Several Participating States experienced administrative and political delays in processing and signing their FGLs. Without full confirmation of national co-funding, the European Commission could not proceed with the official C(2025) 1896 final decision. This delayed adoption from the originally planned early March 2025 to 31 March 2025, thereby slightly compressing the implementation window and publication of calls.

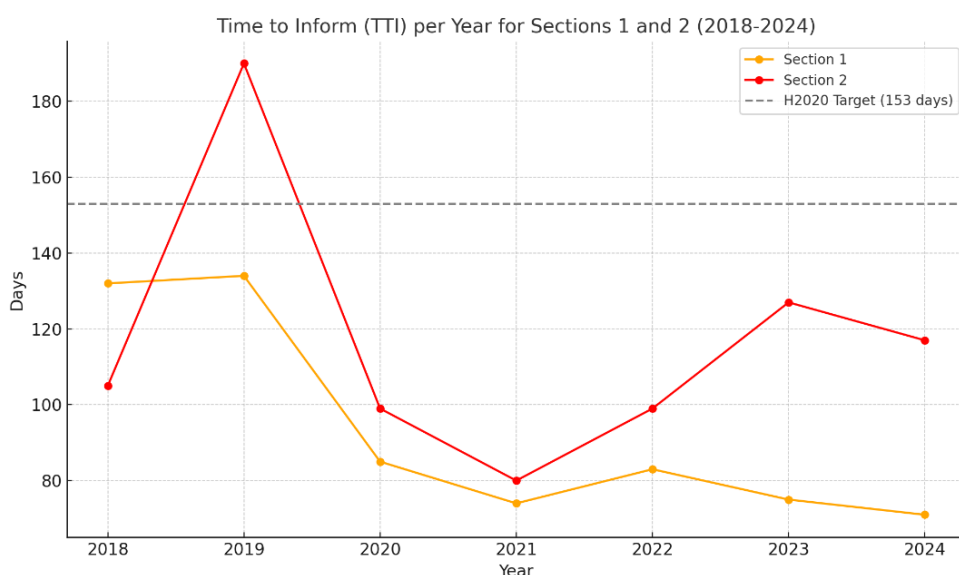
Analysis of Call Efficiency: TTI, TTG, TTS, and TTP6

The efficiency of the PRIMA Partnership in processing calls can be analyzed using key metrics such as Time to Inform (TTI), Time to Grant (TTG), Time to Signature (TTS), and Time to Payment (TTP). These metrics provide insights into how promptly and effectively the program advances from call opening to fund disbursement.

The cost-effectiveness of the PRIMA Partnership can be evaluated by looking at the key performance indicators such as Time to Inform (TTI), Time to Grant (TTG), and Time to Sign (TTS) over the years.

TTI (Time to Inform)

The figure below shows trends for Section 1 (S1) and Section 2 (S2) from 2018 to 2024:



The graph shows the Time to Inform (TTI) trends for Section 1 (yellow line) and Section 2 (orange line) over seven years (2018–2024). TTI measures the number of days from the closure of a call to the announcement of evaluation outcomes.

Section 1 (S1)

- **Time to Inform (TTI):** The number of days between the call closure and the announcement of results. This measures the efficiency of the evaluation process.
- **Time to Grant (TTG):** The total number of days from the call closure to the signing of the grant agreements. This encompasses the time required for evaluation, negotiation, and agreement finalization.
- **Time to Signature (TTS):** The number of days between the announcement of results and the signing of the grant agreements. This indicates how swiftly the administrative processes are completed after the results are known.
- **Time to Pay (TTP):** The number of days between the signing of the grant agreements and the actual payment of funds. This final metric measures the efficiency of financial processes within the program.

The Time to Inform (TTI) for Section 1 has steadily improved over recent years. Initially higher, around 130–135 days in 2018 and 2019 due to additional review steps by the Board of Trustees, the TTI significantly decreased from 132–134 days (2018–2019) to just 71 days in 2024. It has remained well below the H2020 target since 2020, showing consistent and efficient communication of results.

Section 2: (S2)

Section 2 initially recorded longer TTI periods. After a peak of 190 days in 2019, Section 2's TTI has gradually decreased to 117 days in 2024. Although it remains above Section 1, it now consistently stays under the H2020 target, reflecting marked improvement in administrative efficiency.

Proposal Evaluation Efficiency

The evaluation process for PRIMA proposals reflects a carefully calibrated balance between operational efficiency and the maintenance of rigorous quality standards.

The allocation of 7 to 8 weeks for the assessment of both Stage 1 and Stage 2 proposals demonstrates a streamlined yet comprehensive approach.

This efficiency has contributed to a marked reduction in the number of redress requests received by the PRIMA Secretariat, underscoring the robustness and reliability of the programme's evaluation procedures.

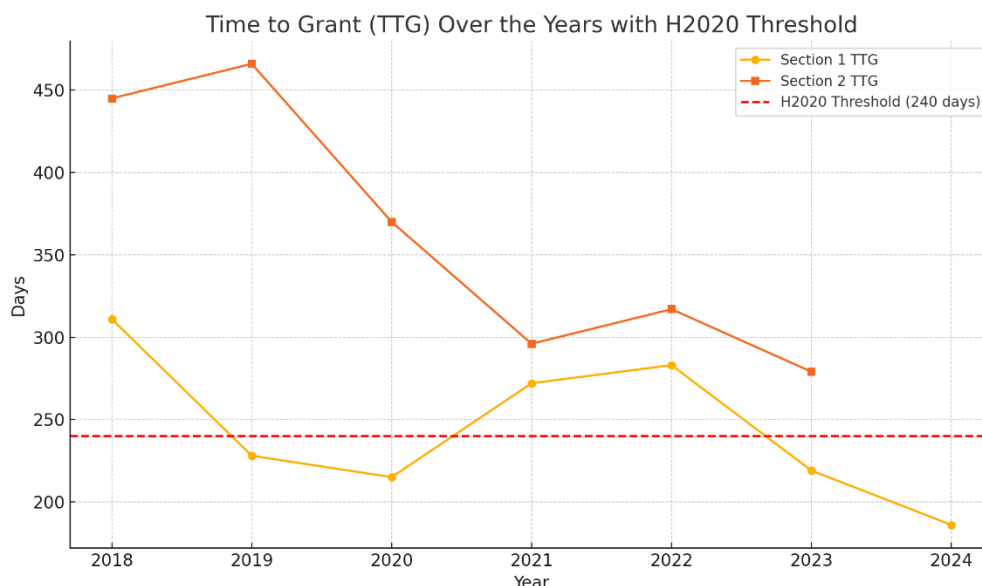
A fundamental aspect of ensuring the integrity and quality of the evaluation process lies in the meticulous management of evaluator workloads. Each expert is assigned a maximum of 12 proposals during Stage 1 and 4 to 5 proposals in Stage 2. This careful allocation enables evaluators to dedicate sufficient time and attention to each submission, thereby promoting fairness and accuracy in the assessment process. Furthermore, the incorporation of consensus meetings to address discrepancies prior to finalizing evaluations has proven to be an effective mechanism. These meetings facilitate efficient decision-making, ensure consistency in assessments, and uphold the credibility of the evaluation process.

TTG (Time to Grant)

The total number of days from the call closure to the signing of the grant agreements. This encompasses the time required for evaluation, negotiation, and agreement finalization.

TTG trends for Section 1 and Section 2 are presented below for the 2018–2024 period:

The graph shows the Time to Grant (TTG) trends for Section 1 (yellow line) and Section 2 (orange line) from 2018 to 2023. TTG represents the total number of days from call closure to the signing of the grant agreement. The red dashed line indicates the Horizon 2020 target of 240 days.



Section 1 (S1):

The Time to Grant (TTG) for Section 1 has shown continuous improvement since its peak of 311 days in 2018. From 2019 onward, TTG consistently met or remained below the internal benchmark of 240 days and the H2020 threshold of 240 days. The best performance was achieved in 2024, with a TTG of 186 days, clearly demonstrating the maturity and effectiveness of PRIMA's grant agreement and contracting processes.

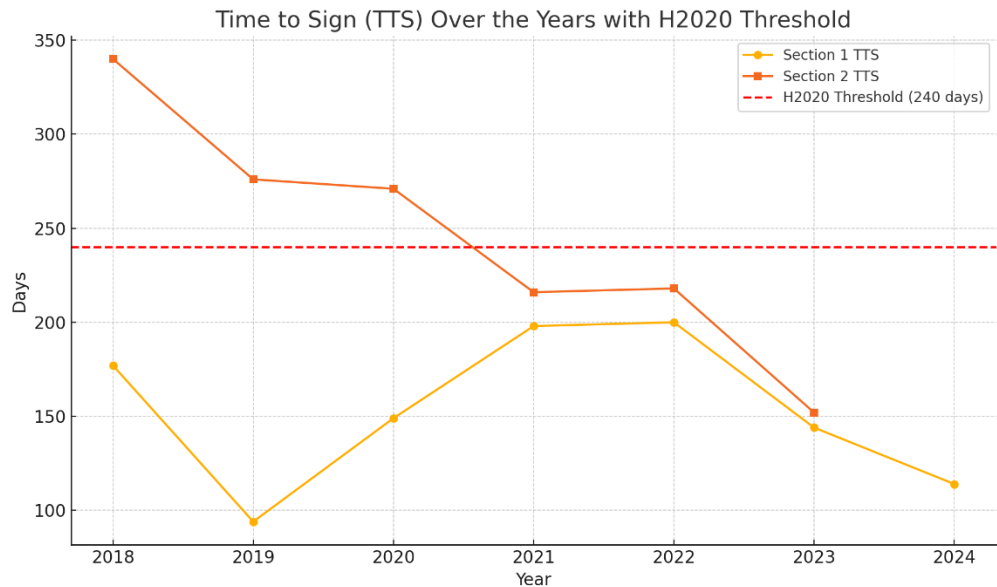
Section 2 (S2):

Section 2 initially experienced substantially higher TTG durations, peaking at 466 days in 2019. However, from 2020 onwards, a consistent and marked reduction in TTG was observed, declining to 279 days in 2023. While this figure remains above the 240-day H2020 benchmark, the positive trajectory indicates significant improvements in institutional efficiency. Data for 2024, which is not yet available, will be essential to confirm the continuation of this positive trend.

TTS (Time to Sign)

TTS, which measures the days between signing the grant agreement and the first payment:

The graph displays the Time to Sign (TTS) trends for Section 1 (yellow line) and Section 2 (orange line) over the seven-year period from 2018 to 2024. TTS measures the time from notification of evaluation outcomes to the signing of the grant agreement



Section 1 (S1):

The Time to Sign (TTS) for Section 1 peaked at 177 days in 2018 but has since exhibited significant and sustained improvement. From 2019 onward, TTS consistently remained well below the H2020 benchmark of 240 days, with yearly values ranging between 94 and 200 days. The best performance was in 2024, with a TTS of 114 days, clearly indicating a robust, efficient, and mature grant finalization process.

Section 2 (S2):

Initially considerably above the benchmark at 340 days in 2018, Section 2 demonstrated steady and substantial improvement, reducing TTS progressively to 152 days by 2023. Although this value still exceeds the H2020 target of 240 days, the clear downward trend signifies significant institutional improvements in efficiency and alignment with Section 1 practices. TTS data for 2024 is pending, but the observed trajectory suggests continued procedural enhancements and streamlined grant agreement processes.

TTP (Time to Pay)

TTP measures the number of days between the signing of the grant agreement and the actual disbursement of funds to the beneficiaries. This metric is crucial as it directly affects the cash flow of the funded projects, impacting their ability to commence work promptly.

The graph represents **Time to Pay (TTP)** for Section 1 from 2018 to 2024, with two clear benchmarks: the 20-day threshold (red dashed line) and the 30-day threshold (green dashed line).

PRIMA calculates the TTP by considering the specific provisions outlined in the Grant Agreement, which significantly influence the accuracy and efficiency of this indicator. Two critical conditions are particularly influential:

Accession Forms:

Following the signing of the Grant Agreement between PRIMA and the coordinator, all project beneficiaries must submit their signed Accession Forms within a maximum of 30 days. Only after PRIMA validates these forms can the payment process begin.

Grant Agreement Article 21.2:

According to Article 21.2, PRIMA commits to disbursing the pre-financing payment within 30 days following the latest of the following events:

The entry into force of the Grant Agreement (Article 58) and receipt of all signed Accession Forms (Article 56 and Annex 3).

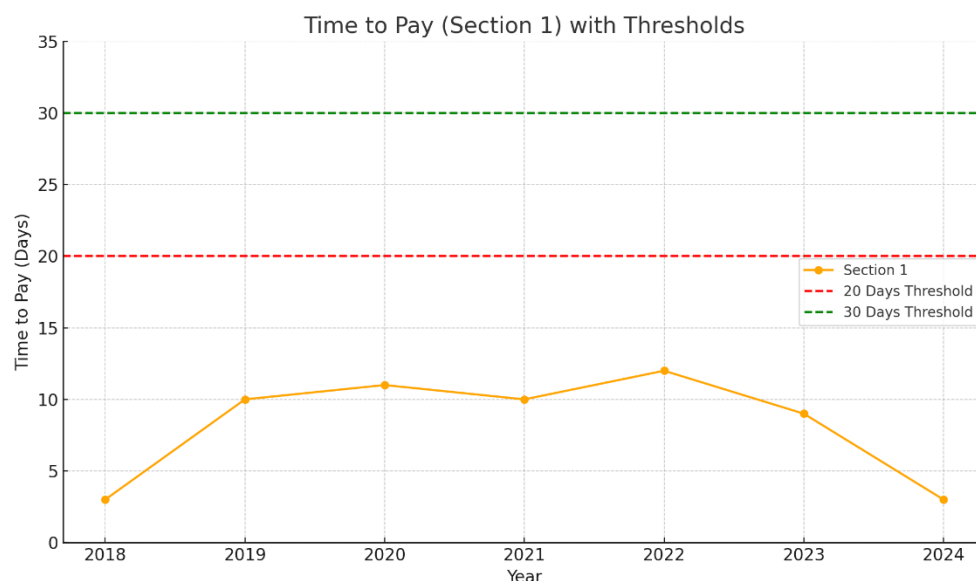
Ten days before the official project start date (Article 3).

This calculation approach significantly reduces the measured TTP, aligning the payment closely with the actual project initiation. Consequently, the observed low TTP from 2018–2024 highlights PRIMA’s effective adherence to contractual obligations, ensuring timely and accurate financial disbursements aligned directly with project start schedules.

TP has remained well below both thresholds throughout 2018–2024.

In 2024, the time to pay was just 3 days, matching the lowest recorded value (2018).

The trend confirms an efficient and consistently improving payment process.



Section 2: Lack of consistent data makes it difficult to fully assess S2’s efficiency in fund disbursement, which is a limitation in the overall evaluation.

Improved Cost-Effectiveness and Efficiency of the PRIMA Partnership

PRIMA has achieved sustained enhancements in operational efficiency across the project lifecycle:

TTI: Demonstrated strong, stable performance in both sections.

TTG: Approaching targets, with continued improvements necessary, particularly in Section 2.

TTS: Improved notably but still presents challenges, especially in Section 2, necessitating continued focus.

TTP: A standout strength, consistently efficient and timely.

Since 2019, PRIMA has implemented targeted measures including harmonized funding timelines, pre-financing strategies, and regulatory reforms (notably in Italy, Spain, Egypt) to address efficiency bottlenecks, significantly enhancing coordination and administrative effectiveness.

In summary, PRIMA continues to strengthen its operational practices, effectively reducing delays and enhancing coordination, positioning itself as a robust Mediterranean R&I partnership.

Chapter 6: Project Outputs (Section 1 and Section 2)

PRIMA's core activity revolves around launching annual calls for proposals in alignment with its Strategic Research and Innovation Agenda (SRIA). These calls are organized around three main thematic areas—Water Management, Farming Systems, and the Agri-Food Value Chain—each targeting key sustainability challenges unique to the Mediterranean region. Cross-cutting dimensions such as digitalisation, soil sustainability, and capacity development are systematically integrated to foster holistic and coordinated solutions.

In 2019, PRIMA broadened its strategic focus by introducing the Water-Energy-Food-Ecosystems (WEFE) Nexus as a standalone theme, underscoring the importance of systemic, interconnected responses over isolated sectoral interventions. By 2024, the WEFE Nexus approach was fully embedded in all thematic calls, demonstrating PRIMA's commitment to cross-sectoral, integrated problem-solving.

Between 2018 and 2024, PRIMA funded 269 projects through two funding modalities: Section 1 (EU contribution) supported 77 projects with €202.25 million, and Section 2 (Participating States' contribution) supported 192 projects with €199.04 million. From the 2024 calls alone, 31 projects were funded: 6 under Section 1 (€27.42 million) and 25 under Section 2 (€26.55 million).

Table 9 PRIMA's Annual Calls and Funded Projects (2018-2024)

Year/Calls	Section 1 Calls	Section 2 Calls	Section 1 Projects Funded	Section 2 Projects Funded	Total projects/year	Completed projects As of 31 st December 2024
2018	3 ⁷	1	9	26	35	30 (85% of total projects in 2018)
2019	4	1	18	30	48	25 (52% of total projects in 2019)
2020	4	1	15	31	46	2 (4% of total projects in 2020)
2021	4	1	11	28	39	
2022	4	1	9	25	34	
2023	4	1	9	27	36	
2024	3	1	6	25	31	
Sub-TOTAL	26	7	77	192	269	
Total	26	7	269 projects (2018-2024 calls)			

⁷ One call for each thematic area (water management, Farming systems and Agri-food Value Chain) As from 2019 the additional theme WEFE Nexus was added, and cancelled as from 2024 where the decision of mainstreaming the WEFE Nexus in all the calls was taken.

Analysis of PRIMA calls outputs: PRIMA projects contributing to its Operational Objectives

PRIMA-funded projects have generated tangible outputs that directly contribute to the Programme's Operational Objectives (OOs) and the broader expected scientific, environmental, economic, and societal outcomes defined in the SRIA:

OO1: Water-saving solutions

- Outputs: Advanced irrigation systems and water-use decision-support tools.
- Outcomes: Enhanced water efficiency, reduced costs, increased food security.

OO2: Land and water sustainability

- Outputs: Techniques for aquifer recharge, soil-water management, coastal protection.
- Outcomes: Ecosystem health, productive land use, sustainable rural development.

OO3: Water governance

- Outputs: Participatory governance models and improved policy tools.
- Outcomes: Efficient water management, empowered communities.

OO4: Smart and sustainable farming

- Outputs: Precision agriculture, resilient crops, optimized resource use.
- Outcomes: Higher productivity, sustainable practices, enhanced food security.

OO5: Pests and pathogens in farming

- Outputs: Integrated pest management, biological control techniques.
- Outcomes: Reduced agrochemical use, safer products, better ecosystem integrity.

OO6: Nutrition and health

- Outputs: Nutrition-enhancing food innovations aligned with Mediterranean diets.
- Outcomes: Public health benefits, sustainable and culturally significant diets.

OO7: Reducing losses and wastes

- Outputs: Food preservation technologies, improved logistics.
- Outcomes: Minimized waste, efficient supply chains, greater food availability.

OO8: New Agri-Food business models

- Outputs: Digital traceability platforms, inclusive market strategies.
- Outcomes: Competitive SMEs, sustainable supply chains, inclusive growth.

Cross-cutting: WEF Nexus

- Outputs: Integrated tools and frameworks for nexus-based governance.
- Outcomes: Interdisciplinary insights, balanced resource use, regional resilience.

Through these tangible outputs, PRIMA-funded projects directly fulfill the operational objectives defined in the Strategic Research and Innovation Agenda (SRIA), effectively contributing to PRIMA's overall scientific, environmental, economic, and societal outcomes.

These contributions are detailed in subsequent sections, with specific focus on project outputs, demonstration sites, strategic evolution of calls, and analysis of Key Exploitable Results (KERs). The evaluation of 57 completed projects as of December 2024 further illustrates how PRIMA-funded initiatives fulfill SRIA priorities and contribute to scientific advancements, market innovation, environmental sustainability, and policy impact across the Mediterranean region.

Completed Projects and their Contributions

Table 10 summarizes the completed PRIMA projects from 2018 to 2024, detailing their thematic areas, operational objectives, and funding sections. Each project generated tangible scientific outputs, including publications, patents, and policy briefs, alongside specific Key Exploitable Results (KERs), comprehensively documented within PRIMA's Monitoring, Evaluation, and Learning (MEL) platform. All collected KERs from the 57 completed projects—with comprehensive metadata, available publications from projects funded between 2018 and 2023 (as 2024 projects mostly have not yet started), along with the corresponding policy briefs and patents—are annexed to this document.

Notably, many PRIMA projects further translated their research into practical applications through demonstration sites. These sites serve as real-world testing grounds within specific local environments, with PRIMA strongly encouraging their establishment within Participating States (PS) and, where relevant, Mediterranean Partner States (MPS), to leverage unique climatic and local conditions effectively.

Table 10 PRIMA Completed Projects by Area, Operational Objectives, and Section (2018-2024)

AREA	OPERATIONAL OBJECTIVES	PROJECT ID	YEAR	SECTION
AGRI-FOOD	6/ NUTRITION AND HEALTH 7/ REDUCE LOSSES AND WASTES 8/ NEW AGRI-FOOD BUSINESS MODELS	ArtiSaneFood	2018	2
		Veggie-MED-Cheeses	2018	2
		MILKQUA	2018	2
		BioProMedFood	2019	2
		Fedkito	2019	2
		FRUALGAE	2019	2
		MEDISMAST	2019	2
		CAMELMILK	2018	1
		DAINME-SME	2018	1
		Med Food TTHubs	2019	1
		MEDITOMATO	2018	1
		SUREFISH	2019	1
		WildFood	2019	2
FARMING	4/ SMART AND SUSTAINABLE FARMING 5/ PESTS AND PATHOGENS IN FARMING	AdaMedOr	2019	2
		ADAPT-HERD	2018	2
		AZMUD	2019	1
		CerealMed	2019	2
		FREECLIMB	2018	2
		GENDIBAR	2018	2
		IMPRESA	2018	2
		LEGU-MED2	2019	2
		SusMedHouse	2019	1
		SUPROMED	2018	1

		SUSTAINOLIVE	2018	1
		Veg-Adapt	2018	2
		CAMA	2019	1
		FIGGEN	2019	2
		SIMTAP	2018	2
		Blue-Med	2018	2
		INTOMED	2018	2
		LAGMED	2018	2
		MED-BERRY	2018	2
		PLANT-B	2018	1
		ZeroParasitic	2019	1
WATER	1/WATER-SAVING SOLUTIONS 2/LAND AND WATER SUSTAINABILITY 3/WATER GOVERNANCE	CONSIRS	2018	2
		Dati	2020	2
		DSWAP	2018	1
		FIT4REUSE	2018	1
		IDEWA	2019	2
		INTEL-IRRIS	2020	2
		Mago	2019	1
		MEDWATERICE	2018	1
		PRECIMED	2018	2
		SmaCuMed	2019	2
		SMARTIES	2019	2
		WATERMED 4.0	2018	1
		INWAT	2018	2
		KARMA	2018	2
		MEDSAL	2018	2
		RESERVOIR	2019	1
		Sustain-COAST	2018	2
		SWATCH	2018	2
		GOTHAM	2019	1
WEFE NEXUS	9/CROSS-CUTTING NEXUS_THEME 9/Cross-cutting WEFE NEXUS_theme	InTheMED	2019	1
		AWESOME	2019	1
		PHEMAC	2019	1
		SIGMA NEXUS	2019	1

Evolution of Water Management Calls in PRIMA: Strategic Priorities and Impact (2018–2024)

Since its launch, PRIMA has progressively evolved its approach to water management. The programme has transitioned from a primary focus on technological fixes—such as irrigation and desalination—toward integrated and systemic solutions that link water to energy, food, and ecosystems. This trajectory reflects both the complexity of Mediterranean challenges and PRIMA’s commitment to innovation and governance.

From 2018 to 2024, PRIMA's annual calls have increasingly integrated cross-sectoral thinking. Early calls emphasized foundational technological advancements such as wastewater treatment, efficient irrigation systems, and desalination. By 2019, PRIMA expanded its scope to include groundwater management and integrated water resource management (IWRM), incorporating data-driven tools and modeling.

A strategic turning point occurred in 2020–2021 with the introduction of calls on water accounting, ecosystem restoration, land degradation, and desertification. This expansion signaled a clear pivot toward nature-based solutions and participatory governance, aimed at long-term ecosystem resilience. In 2022 and 2023, the focus further matured to include micro-pollutant reduction, advanced wastewater reuse, and circular resource strategies. Finally, in 2024, the Water-Energy-Food-Ecosystems (WEFE) Nexus

approach became fully embedded across all water-related calls, marking a systemic integration of cross-sectoral sustainability goals.

Over the seven-year period, PRIMA's funding reflects a deliberate progression. Initially centered on technical efficiency, the strategy has expanded to governance and resilience. Water-Saving Solutions have remained a backbone of funding, while Land and Water Sustainability and Water Governance Systems have steadily grown in priority and funding share, aligning with Mediterranean environmental needs.

Water Management Projects Overview (2018–2024)

During this period, PRIMA launched 14 targeted water calls, closely aligned with the Strategic Research and Innovation Agenda (SRIA), resulting in 62 funded projects. These projects involved 562 beneficiaries across the Mediterranean region, collectively receiving an investment of €100.3 million, averaging €178,000 per participant.

Key thematic areas addressed include

1/WATER-SAVING SOLUTIONS

Projects have significantly advanced technologies and practices in water efficiency, including:

Advanced irrigation technologies (e.g., INTEL-IRRIS, SMARTIES) aimed at reducing water use in agriculture.

Innovative wastewater treatment and reuse solutions (e.g., FIT4REUSE, WATERMED 4.0), promoting circular economy practices and water conservation.

Development of comprehensive water accounting and monitoring systems (e.g., MEDWATERICE, IDEWA), enabling more precise water management.

2/LAND AND WATER SUSTAINABILITY

Projects contributed to safeguarding ecosystems and agricultural productivity, notably:

Integrated Water Resources Management (IWRM) strategies enhancing sustainable water use across landscapes (e.g., Sustain-COAST, RESERVOIR).

Adoption of practices integrating land management and water-use efficiency, such as soil and groundwater protection and sustainable crop cultivation (e.g., MEDSAL, PRECIMED).

3/WATER GOVERNANCE

PRIMA projects enhanced decision-making and governance frameworks through:

Development and testing of innovative policy tools promoting more informed water management decisions (e.g., DSWAP, GOTHAM).

Strengthening stakeholder engagement and policy uptake through comprehensive governance models, effectively addressing socio-political barriers (e.g., CONSIRS, InTheMED, KARMA).

Starting particularly from 2024, PRIMA significantly promoted an integrated approach through the Water-Energy-Food-Ecosystem (WEFE) Nexus, effectively linking water management to energy efficiency, food system sustainability, and ecological conservation.

Timeline of thematic focus areas for water management calls under PRIMA's Section 1 and Section 2 projects from 2018 to 2024. The timeline highlights evolving priorities over the years for sustainable water and land management practices.



KEY EXPLOITABLE RESULTS

PRIMA systematically collects Key Exploitable Results (KERs) from each funded project during the final review stage. Until 2023, this data was manually collected via Smartsheet forms submitted by project coordinators. KERs are validated by the responsible PRIMA Project officer. In 2024, PRIMA transitioned to a dedicated KER reporting feature integrated within the Monitoring, Evaluation, and Learning (MEL) platform. This shift aims to increase significantly the efficiency, accuracy, and traceability of data collection, enabling real-time reporting from project teams.

Each KER detailed, structured information:

- a) Thematic Area: Classified within PRIMA's priority areas—Farming Systems, Agri-Food Value Chains, Water Management, or Natural Resources.
- b) KER Title and Description: A clear title accompanied by a detailed description of the innovation, method, product, service, or process, emphasizing its intended application and added value.
- c) Technology Readiness Level (TRL): The maturity level of the KER reported at both the project's start and end, following the standard TRL scale (TRL 2: concept formulation, to TRL 9: system proven in operational environment).
- d) KER Type: Categorised as:
 - a. SCI: Scientific discovery, model, or theoretical advancement
 - b. METH: Method, material, technology, or protocol
 - c. PROD: Product
 - d. SERV: Service (new or improved)
 - e. PROC: Process (new or improved)
- e) Exploitation Potential and Expected Impact: Qualitatively assessed:
 - a. Scientific: Advancing research and knowledge
 - b. Technological/Business/Economic: Facilitating innovation uptake and market opportunities
 - c. Societal/Environmental: Enhancing public goods, resilience, and sustainability
 - d. Policy/Regulatory: Informing policy development and regulatory frameworks
- f) Target Groups: Main beneficiaries or adopters, such as researchers, SMEs, farmers, industry partners, policy-makers, educators, NGOs, and standardisation bodies.
- g) Current and Potential Exploiters: Organisations currently exploiting or expected to use the KER, including universities, private companies, startups, public authorities, and international entities.
- h) Geographical Scope and Countries Involved: The countries where the KER was developed, tested, or piloted, spanning both EU and non-EU Mediterranean states.
- i) Policy Uptake and Relevance (if applicable): Information on the KER's integration or potential integration into local, regional, national, or Mediterranean-level policy frameworks and strategies.

Key Exploitable Results (KERs) from Water Projects (2018–2020): Demonstration Sites Tested

PRIMA-funded water projects from 2018 to 2020 have significantly advanced sustainable water management through technological innovation, scientific advancement, policy development, and societal and economic impacts. Demonstration sites play a pivotal role, serving as essential testbeds where innovations are validated and their micro-level impacts observed, directly benefiting local communities.

The **CONSIRS** project introduced key innovations such as the Closed Greenhouse Climate Control system (TRL 3–5), significantly improving resource efficiency and environmental management in greenhouse cultivation, tested across pilot sites with measurable outcomes such as reduced water consumption and enhanced crop yields. The Improved Liquid Desiccant Absorber (TRL 3–5) provided effective brine management, optimizing thermal energy recovery and environmental protection, while the Zig-Zag Greenhouse Design (TRL 3–5), validated at demonstration sites, notably increased water-use efficiency and cooling effectiveness.

The **DSWAP** project deployed impactful solutions including the Two-Staged Packed Bed Reactor (TRL 3–6), effectively removing emerging pollutants from wastewater, thereby substantially improving irrigation safety. Its Forward Osmosis–Nanofiltration System (TRL 3–6) significantly reduced the risk of crop contamination, ensuring safer water reuse. Additionally, DSWAP's Wastewater Reuse Decision Support Tool (TRL 3–6) was practically implemented at demonstration sites, aiding local stakeholders in making informed decisions for sustainable water reuse, delivering clear local economic and environmental benefits.

FIT4REUSE demonstrated substantial advancements through its Integrated Anaerobic-Membrane Treatment System (TRL 3–5), enhancing wastewater treatment for agricultural reuse, tested in diverse Mediterranean sites. Its Sustainable Desalination System (TRL 3–5), incorporating nanofiltration, reverse osmosis, and solar disinfection, markedly improved efficiency and reduced energy demands at sites in Barcelona, Spain, and Antissa, Greece. The project's Simulation and Planning Platform (TRL 3–6) and Water Reuse Sustainability Framework (TRL 3–6) provided robust tools for environmental and economic assessment, implemented effectively in local contexts such as Larnaca, Cyprus, and Chotrana, Tunisia.

PRIMA's demonstration sites across 64 locations in 15 Mediterranean countries serve as living laboratories, bridging research and practical applications. They tackle key regional challenges including water scarcity, groundwater depletion, and inefficient irrigation. Demonstration sites like those established by **MEDWATERICE** in Spain, Italy, Portugal, Turkey, and Egypt, and **PRECIMED** and **SMARTIES** in Foggia, Italy, and Mjez Elbab, Tunisia, have validated precision irrigation methods, achieving significant reductions in water use and improvements in agricultural efficiency.

These demonstration sites, through localized innovations, provide tangible benefits such as improved access to clean water, reduced farm-level water consumption, and enhanced local resource management practices. These micro-level impacts, though individually modest, collectively justify PRIMA's investment by improving local livelihoods and fostering sustainable resource management practices.

Evolution of Farming Systems Calls in PRIMA: Strategic Priorities and Impact (2018–2024)

PRIMA has proactively addressed the evolving challenges faced by Mediterranean farming systems, including environmental degradation, economic pressures, and social changes. From 2018 to 2024, the programme systematically launched 15 thematic calls, strategically focusing on critical areas such as climate adaptation, soil management, agroforestry, and renewable energy applications within agriculture. These initiatives funded a total of 96 projects, allocating an overall budget of €127 million. Of these, 22 projects (€52.1 million) were under Section 1, and 74 projects (€75.1 million) were under Section 2.

The thematic focus of these calls has progressively evolved to reflect changing regional priorities and increasing complexity. In 2018–2019, initial calls concentrated on foundational topics such as agroecology, conservation of water and soil resources, and early strategies for climate adaptation. By 2020, attention shifted towards preserving local breeds, developing innovative and sustainable animal feed alternatives, and reinforcing agroecological practices particularly in small-scale farming contexts. In 2021–2022, the programme expanded to include governance models for pastoral systems, establishing robust soil data infrastructures, and promoting sustainable agro-pastoral management practices. More recently, in 2023–2024, PRIMA emphasized transformative themes, notably land restoration, systemic adaptation to climate impacts, integrating circular economy principles into agriculture, reviving ancestral water-harvesting methods, and advancing agroforestry systems.

Timeline of Thematic Focus Areas for Farming Systems Calls under PRIMA's Section 1 and Section 2 Projects (2018–2024)



PRIMA has committed to transforming Mediterranean farming systems through sustainability, resilience, and innovation. From 2018 to 2024, they launched 15 calls—7 EU-funded and 8 Participating State-

funded—on agroecology, climate adaptation, soil management, agroforestry, and renewable energy in agriculture. These efforts funded 96 projects with EUR 127 million, including 22 projects totalling EUR 52.1 million for Section 1 and 74 projects EUR 75.1 million for Section 2.

Analysis of PRIMA Farming Systems Project Portfolio

PRIMA's farming systems portfolio contributed to the following Operational Objectives

4/ SMART AND SUSTAINABLE FARMING

13 projects (mostly 2018–2019) have advanced agroecology, precision agriculture, IoT technologies, and climate-resilient crops. Examples: CerealMed, AZMUD, AdaMedOr, FREECLIMB, SUPROMED.

5/ PESTS AND PATHOGENS IN FARMING

5 projects (e.g., INTOMED, ZeroParasitic, LAGMED, PLANT-B) target biological pest control, diagnostics, vaccines, and sustainable crop protection.

Key Exploitable Results (KERs) from Farming Projects (2018–2020): Demonstration Sites Tested

Farming-related projects funded by PRIMA between 2018 and 2020 have yielded significant technological, environmental, economic, and policy-relevant innovations. These results underscore PRIMA's dedication to advancing resilient and sustainable agricultural practices across the Mediterranean.

The **AdaMedOr project** developed a Phenology Model for Climate-Resilient Fruit Cultivation (TRL 3–5), providing valuable support for crop planning under varying climate conditions, significantly impacting scientific research and environmental management. It also generated a comprehensive Long-Term Phenology Dataset (TRL 3–5), crucial for accurately modeling climate impacts on crop development, thus enhancing both scientific understanding and environmental resilience.

The **IMPRESA project** introduced Improved Durum Wheat Lines (TRL 3–5), demonstrating optimized yield and drought tolerance, currently in the process of plant variety registration. This innovation holds substantial economic potential and environmental benefits. **LAGMED** contributed significantly by creating an RHDV Database (TRL 3–5), supporting the improved control of Rabbit Hemorrhagic Disease through enhanced surveillance and diagnostics, alongside a harmonized Manual of Experimental Procedures (TRL 3–5), which streamlined biosafety protocols and compliance, fostering economic efficiency and environmental safety.

PLANT-B project offered innovative solutions like Prototype Beeswax Combs (TRL 3–5), resistant to wax moths, promoting sustainability in beekeeping. The project also developed strategies for Valorizing Endemic Honeybee Species (TRL 3–5) and created Combo-Honey (TRL 3–5), a high-value product concept enhancing market and economic potential. Additionally, **GENDIBAR's** New Flowering Alleles (TRL 3–5) advanced genetic research aimed at developing heat-tolerant barley varieties, contributing significantly to scientific advancement and environmental resilience.

The **ZeroParasitic project** effectively deployed a Biocontrol for Broomrape (TRL 3–6), significantly reducing herbicide dependence and enhancing soil health, directly impacting both economic viability and environmental sustainability.

Demonstration sites have played a critical role as testing grounds for these innovations, offering practical validation and measurable impacts at the local level. PRIMA's farming systems projects established 45 demonstration sites across Southern and Northern Mediterranean countries, bridging the gap between research and practical application. These sites have actively promoted sustainable farming, enhanced climate resilience, and addressed regional challenges such as water scarcity, soil degradation, and pest outbreaks.

Significant trials have occurred at these sites, testing stress-tolerant crops through projects such as **FREECLIMB**, **MED-BERRY**, and **VEG-ADAPT**, evaluating crop performance under biotic and abiotic stresses like drought, salinity, and pests, thereby highlighting the necessity of crop diversification for resilience. Integrated Pest Management (IPM) practices demonstrated by **INTOMED** and ZeroParasitic successfully validated sustainable, chemical-free pest management strategies, particularly for olives and broomrape.

Agroecological practices piloted by **SUPROMED** and **SUSTAINOLIVE** demonstrated substantial improvements in soil health and biodiversity, incorporating innovative methods such as organic fertilization, livestock-soil integration, and olive pruning residue reuse. Controlled environment agriculture innovations were showcased through **AZMUD** and **SIMTAP projects** at sites in Valencia, Cairo, and the Jordan Valley, effectively demonstrating hydroponics, energy-efficient greenhouse heating, and sustainable halophyte cultivation.

Evolution of Agri-Food Value Chain Calls in PRIMA: Strategic Priorities and Impact (2018–2024)

From 2018 to 2024, PRIMA's Agri-Food Value Chain calls evolved in response to dynamic regional and global challenges. The focus expanded from valorising Agri-Food by-products to integrating digital traceability, promoting circular economy models, and enhancing the resilience of Mediterranean food systems.

The thematic progression began in 2018, emphasizing innovation in processing and by-product valorisation to reduce food system waste and environmental impact. In 2019, priorities shifted toward digital technologies and food traceability, aiming to boost transparency, food safety, and consumer confidence. By 2020, projects promoted the traditional Mediterranean diet, emphasizing its health benefits and supporting resilient short supply chains. In 2021, the programme's response to COVID-19 included supporting smallholder farmers through digitalisation and reinforcing dietary and food system resilience.

The thematic scope expanded further in 2022, encompassing alternative proteins, dual food/feed use, and education initiatives promoting healthy diets. In 2023, PRIMA reacted to global cereal price shocks by focusing calls on strengthening cereal supply chains, sustainable packaging solutions, and localized food production. Most recently, in 2024, thematic priorities have shifted toward embedding circular economy principles, increasing renewable energy use, and including the informal sector in food distribution networks.

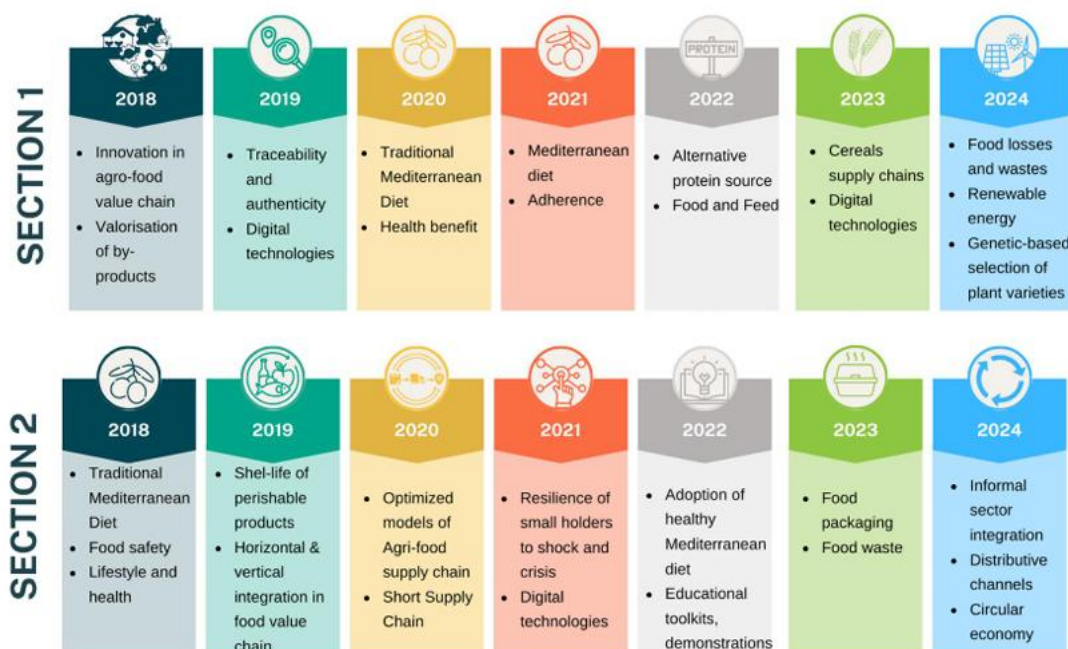


Figure 3 Timeline of Thematic Focus Areas in Agri-Food Calls under PRIMA's Section 1 and Section 2 Projects (2018–2024) PRIMA's Agri-Food portfolio, consisting of 77 projects across 7 calls, reflects a significant investment in innovation and sustainability within Mediterranean agri-food systems. The projects were supported by a total budget of 105 million EUR, distributed between 19 Section 1 projects funded with 44.1 million EUR and 58 Section 2 projects supported by 61.3 million EUR.

Analysis of PRIMA Agri-Food Value Chain Project Portfolio

Among the 77 agri-food projects funded by PRIMA, 15 completed projects contributed to the three operational objectives for agri-food systems: Nutrition and Health (OO6), Reduction of Food Losses and Waste (OO7), and New Agri-Food Business Models (OO8). These completed projects illustrate PRIMA's comprehensive and integrated approach to fostering sustainable food systems across the Mediterranean.

6/ NUTRITION AND HEALTH

The Nutrition and Health cluster includes four projects funded under Section 2 in 2018—ArtiSaneFood, MED4Youth, MILKQUA, and Veggie-MED-Cheeses. These projects promoted healthier diets and improved food safety through innovative integration of traditional Mediterranean dietary principles with modern scientific approaches, enhancing nutritional value, ensuring food safety, and reinforcing the health benefits inherent to traditional Mediterranean diets.

7/ REDUCTION OF FOOD LOSSES AND WASTE

The Reduction of Losses and Waste cluster encompasses four projects funded under Section 2 in 2019—BioProMedFood, Fedkito, FRUALGAE, and MEDISMART. These projects emphasized the circular economy, converting food by-products into valuable resources. They prioritized waste minimization through advanced processing methods, biodegradable packaging solutions, and efficient spoilage prevention techniques, thereby significantly enhancing resource efficiency throughout the food supply chain.

8/ NEW AGRI-FOOD BUSINESS MODELS

The New Agri-Food Business Models cluster includes seven projects delivering scalable, market-oriented innovations responsive to consumer demands and sustainability objectives. Projects funded under Section 1 in 2018 (CAMELMILK, DAINME-SME, MEDITOMATO) and in 2019 (Med Food TTHubs, MEDIFIT, SUREFISH), alongside one Section 2 project in 2019 (WildFood), collectively focused on critical aspects such as traceability, product authenticity, and sustainable market accessibility. These initiatives supported both niche and broader market segments, promoting innovative and sustainable business models.

Key Exploitable Results (KERs) from Agri-food Value Chain Projects: Demonstration Sites Tested

Agri-food value chain-related projects funded by PRIMA between 2018 and 2020 have generated significant technological, environmental, economic, and policy-related impacts. These KERs demonstrate substantial innovation and potential for practical application and market uptake.

The ArtiSaneFood decision support tool (TRL 3–5) enhances decision-making for food safety and production via real-time data analytics and risk assessment, delivering economic, scientific, and technological impacts. BioProMedFood developed antimicrobial and antioxidant nanocomposite films (TRL 4–7), extending food shelf-life, reducing waste, and improving safety with biodegradable packaging, contributing economically and environmentally.

CAMELMILK's project facilitated industrial adaptations for camel dairy products (TRL 4–7), fostering economic growth and social benefits through specialized dairy manufacturing. FEDKITO's colorimetric paper biosensor (TRL 3–5) significantly reduces food waste by offering accessible spoilage detection.

FRUALGAE produced multiple innovations, including a pilot-scale photobioreactor (TRL 4–7) for microalgae biomass production, metabolite markers for tomato freshness (TRL 3–5), prototype sensors for vegetable freshness monitoring (TRL 3–5), and active antimicrobial packaging systems (TRL 3–5). These technologies collectively promote environmental sustainability, economic efficiency, and reduced food waste.

Med Food TTHubs developed an e-platform (TRL 3–6) to enhance traceability and authenticity, significantly improving consumer trust, reducing fraud, and supporting sustainability. MILKQUA's nanoencapsulation of essential oils (TRL 2–4) improves animal health and food safety, reflecting technological and economic potential.

The SUREFISH blockchain platform (TRL 4–7) enhances fish traceability, reducing fraud, and boosting consumer confidence and seafood quality. VEGGIE-MED-CHEESES delivered industrial-scale prototypes of traditional cheeses (TRL 3–5) and developed a detailed business model canvas (TRL 3–5), economically promoting vegetable-based cheese production.

Meditomato introduced a low-cost Vis-NIR sensor system (TRL 3–5) for enhanced tomato quality monitoring and IoT-based irrigation systems (TRL 3–6) for substantial water and energy savings. DAINME-SME's pulse spray drying technology (TRL 5–7) significantly reduces energy consumption and environmental impacts in dairy processing.

WildFood's laboratory protocols (TRL 3–5) support the certification and marketability of wild foods. MEDISMART's microwave-based citrus canning process and advanced microwave technology (TRL 3–6) deliver healthier, marketable citrus products with improved nutritional quality and sensory attributes.

The analysis of PRIMA Agri-Food projects reveals 14 pilot initiatives within 15 completed projects. These demonstration sites showcased innovations in the Agri-Food Value chain, supporting PRIMA's goals of food sustainability, efficiency, and quality in the Mediterranean.

In food processing, the Meditomato project tested IoT systems for irrigation and fertilization using low-cost sensors and Vis-NIR spectroscopy across Italy, Spain, and Türkiye, enhancing precision agriculture. Projects like Fedkito and BioProMedFood focused on extending the shelf life of perishables and detecting contamination, using biosensors and chitosan-based films in Italy and France.

The CamelMilk project worked directly with camel herds in Algeria, Spain, Greece, and France, emphasizing the sustainable production of camel milk as a unique regional resource.

Establishment and Evolution of WEFE Nexus in PRIMA (2019–2024)

The WEFE Nexus theme was established in PRIMA in 2019, acknowledging the complex interconnections between water scarcity, energy demands, food security, and ecosystem health. The initial phase involved assessing existing methodologies and governance frameworks to identify critical gaps and opportunities.

In 2020, PRIMA transitioned from theoretical foundations to practical implementation, emphasizing resource allocation and stakeholder engagement to ensure the adaptability of the Nexus approach across varied regional contexts.

By 2021, the integration of energy considerations became central, highlighting energy-efficient solutions that could significantly enhance resource conservation and sustainability.

In 2022, PRIMA further refined the Nexus approach by closely connecting socio-economic dynamics with biophysical systems. This included using demonstration sites to adapt Nexus-based strategies to local realities, ensuring practical applicability and regional scalability. Policy and strategy development were crucial components during this phase.

In 2023, PRIMA strengthened its Nexus approach by explicitly integrating climate adaptation and mitigation strategies. This phase addressed both immediate vulnerabilities and long-term sustainability concerns, particularly focusing on critical resource thresholds and ecosystem stability.

By 2024, the WEFE Nexus principles were fully mainstreamed across PRIMA's thematic areas, reflecting their foundational integration into PRIMA's strategic objectives. This mainstreaming demonstrated PRIMA's evolution from promoting a standalone concept to embedding the WEFE Nexus as an essential aspect of all its research and innovation activities.

WEFE Nexus Calls Thematic Focus (2019–2023)



Analysis of WEFE Nexus Project Portfolio

From 2019 to 2024, PRIMA launched 4 dedicated calls specifically under the WEFE Nexus theme. Although only 12 projects were directly funded under this thematic focus, numerous additional PRIMA projects within the water, farming, and agri-food sectors have adopted WEFE Nexus principles and methodologies, demonstrating the broad relevance and impact of the approach.

Among the notable projects funded during this period are

1. AWESOME, Focus: Developing integrated assessment models to support decision-making in water-scarce regions.
2. LENSES Focus: Establishing Learning and Action Alliances to promote adaptive management of the WEFE Nexus.
3. NEXUS-NESS Focus: Demonstrating fair and sustainable resource allocation through the Nexus approach.
4. PHEMAC Focus: Enhancing innovation and technology transfer in the WEFE sectors.
5. SIGMA Nexus Focus: Developing strategies for integrated governance of the WEFE Nexus.
6. BONEX Focus: Implementing nature-based solutions to address Nexus challenges.
7. DIONYSUS Focus: Operational adaptation of Nexus-based system solutions in the Mediterranean.
8. RES-MAB Focus: Promoting Nexus-based adaptation and mitigation solutions in Mediterranean Biosphere Reserves.
9. MORFeuS Focus: Developing a resilience framework for territorial solutions based on the Nexus approach.
10. NexusLabs Focus: Establishing living labs to foster innovation in irrigated agriculture through the Nexus lens.
11. FUSION Focus: Developing sustainable technologies to reduce food loss and waste in Mediterranean food systems.
12. WEFE4MED WEFE NCoP

Key Exploitable Results (KERs) in PRIMA WEFE-Nexus theme Projects: Demonstration Sites Tested

From 2019, PRIMA incorporated the “Water-Energy-Food-Ecosystems” (WEFE) Nexus as a thematic priority, emphasizing holistic and sustainable management of interconnected resources. Although a limited number of Nexus projects have concluded, the significant results from these projects clearly demonstrate the integrated approach's scientific, economic, and environmental impacts through dedicated demonstration sites.

The **AWESOME project** introduced innovative hydroponic and aquaponic systems, significantly reducing water consumption—up to eight times lower compared to traditional methods. These systems optimize resource recycling, directly contributing to environmental sustainability and economic efficiency. Additionally, AWESOME developed a model-based WEFE Nexus Management Platform, offering decision-makers over 1000 integrated solutions across the water, energy, food, and ecosystems sectors. This tool aids stakeholders in scientifically analyzing sectoral trade-offs and identifying synergies for optimal resource use. The project also effectively enhanced stakeholder capacity through tailored educational materials and training programs, engaging professionals actively involved in the Nexus approach.

PHEMAC established an Interactive Platform (iHub), analyzing more than 300 projects, and facilitating collaboration and matchmaking among stakeholders, thus driving economic growth and practical implementation of innovations. It compiled a Best Practices Catalogue featuring over 40 practices, directly facilitating their replication and enhancing environmental and economic outcomes across the Mediterranean. Additionally, PHEMAC provided strategic policy recommendations and action plans that support long-term sustainable management practices, reinforcing the project's scientific rigor and policy influence. Stakeholder engagement activities, including extensive training programs, directly improved the innovation capabilities and skills of over 1500 stakeholders. PHEMAC further supported technology transfer, successfully commercializing approximately 50 innovations and significantly boosting regional industrial capacities.

SIGMA-Nexus developed practical tools such as a WEFE Nexus Calculator, assessing farm-level efficiency and optimizing resource management scientifically and economically. The WEFE Nexus Game, an interactive educational platform, effectively raised awareness and understanding of Nexus dynamics among students and professionals. A comprehensive policy brief further provided strategic guidance on integrating water, energy, food, and ecosystem management, thus enhancing policy effectiveness and environmental sustainability.

Demonstration sites play a critical role in validating and showcasing these innovations, translating scientific research into tangible applications. By directly engaging local stakeholders, these sites significantly boost the adoption and impact of Nexus-based solutions. The PRIMA programme further supports these initiatives by actively fostering the Mediterranean WEFE Nexus Community of Practice (NCoP) through the **WEFE4MED project** (ongoing project started in 2022) ensuring continuous engagement, dialogue, and collaborative innovation. The NCoP is strategically guided by a Core Group led by PRIMA, comprising the European Commission's Joint Research Centre (JRC), Directorate-General for Research and Innovation (DG RTD), and the Union for the Mediterranean (UfM), thus ensuring sustained strategic oversight and impactful outcomes.

The WEFE4MED initiative explicitly promotes Nexus solutions, leveraging regional demonstration sites as laboratories to refine solutions, facilitate scaling, and inform evidence-based policy. This approach, crystallized through the [WEFE Nexus Science Advances Conference](#) in 2021, emphasizes integrated

resource management's scientific, environmental, and economic value, enhancing sustainable and climate-resilient development across the Mediterranean region.

Analysis of the Project Portfolio by external experts

To assess coherence, strategic alignment, and impact, PRIMA commissioned an independent external evaluation of its funded project portfolio in relation to its Strategic Research and Innovation Agenda (SRIA) and broader EU and Mediterranean policy frameworks. The results, detailed in the annexed *Project Portfolio Analysis Report*, offer evidence-based insights to guide the design of the next phase of PRIMA under Horizon Europe FP10.

The evaluation focused on concluded projects and applied a robust methodology combining both quantitative and qualitative criteria, including alignment with PRIMA's SRIA and operational objectives, the generation of tangible outcomes and measurable results, and the contribution of projects to broader policy agendas such as the Sustainable Development Goals, the European Green Deal, the UfM Water Agenda, and the Farm to Fork Strategy.

As of December 2024, 57 projects had been technically and financially validated—30 from the 2018 call, 25 from 2019, and 2 from 2020. Of these, 23 were funded under Section 1 (EU contribution) and 34 under Section 2 (Participating States' contribution). In addition, 185 projects were ongoing and 27 were awaiting initiation.

The evaluation confirmed substantial achievements across PRIMA's three thematic areas—Water Management, Sustainable Farming, and Agro-Food Value Chains—as well as in cross-cutting themes such as digitalisation, gender equality, and the Water-Energy-Food-Ecosystem (WEFE) Nexus. In water management, projects introduced innovative solutions to improve resource efficiency and sustainability. Farming-related initiatives advanced climate-smart practices, resource optimisation, and agricultural resilience. In the food value chain, projects integrated eco-innovation to improve competitiveness, sustainability, and food safety. The integration of digital tools, including artificial intelligence, sensors, and remote monitoring, was found to have enhanced performance and traceability across sectors. The evaluation also recognised efforts to engage underrepresented groups, including smallholder farmers and marginalised communities, particularly in the southern Mediterranean, though further action is needed to ensure inclusive outcomes and equitable socio-economic impact.

The adoption of the WEFE Nexus approach has been a positive development, promoting systems-level thinking across the PRIMA portfolio. However, the evaluation found that its full potential has not yet been realised, mainly due to the absence of a clear operational definition of WEFE projects and limited integration of the energy and ecosystem dimensions. The report recommends strengthening the use of Nexus principles by clarifying project typologies, enhancing systems-based design, and addressing trade-offs more explicitly in project implementation.

Here a summary form the roject portfolion on completed and on going projects.

◆ **Portfolio Overview 2018-2024** ([See annexe 4 Project portfolio report for reference](#))

Despite operating with a moderate budget, PRIMA has successfully mobilised a vibrant R&I community across the Mediterranean. From 237 funded projects (2018–2023), including 59 completed, over 170 Key Exploitable Results (KERs) have been generated—51% at TRL 6 or higher. The programme delivers solutions across water management, agri-food systems, and sustainable farming, responding to Mediterranean challenges with strong policy alignment and impact potential.

Scientific and Technological Contributions

Publications & Policy Engagement:

 610+ peer-reviewed publications and 20+ policy briefs.

 127+ demonstration sites and pilots validate solutions regionally.

Intellectual Property & Prototypes:

6 patent applications, 8 validated prototypes.

12 licensing/tech-transfer agreements, 5 plant variety rights, and 1 spin-off (Odin Solutions from Meditomato).

Applied Tools & Systems:

Examples include **ArtiSaneFood**, **SUPROMED**, **AWESOME**, and **Med Food TTHubs**. **INTELL IRIS** (TRL 8): autonomous irrigation starter kit reducing water use by 20%, requiring no connectivity.

Technological and Market-Ready Innovations

In terms of **technological outputs**, precision irrigation systems such as SUPROMED, iGuessMed, and SMARTIES have demonstrated 25% input savings and are validated across Spain, Turkey, and Tunisia. Greenhouse innovations developed in AZMUD and SUSMEDHOUSE integrate sensors, AI, and renewable energy to reduce pesticide, water, and energy consumption. In the food sector, BioProMedFood's antimicrobial films and DAINME-SME's advanced whey-drying technologies are helping reduce spoilage and food waste, while valorising by-products.

Environmental innovation is also a defining feature of the PRIMA portfolio. Projects like FIT4Reuse and DSWAP have advanced cost-effective wastewater reuse systems, including nature-based solutions such as constructed wetlands. Aquaponics and regenerative agriculture practices are exemplified in SIMTAP and ISFERALDA. FREECLIMB, through the development of 11 climate-resilient fruit varieties, contributes to crop adaptation strategies and biodiversity enhancement.

Digitalisation and traceability are also core outcomes. Blockchain solutions developed under SUREFISH, traceability systems like those in Medifit and Med Food TTHubs, and decision-support tools such as ReTo and GTool provide valuable resources for regulators, producers, and consumers. Projects such as IDEWA and SMARTIES integrate remote sensing and IoT to improve water governance and agricultural productivity.

PRIMA has also contributed to animal and **plant health**, offering agile responses to emerging threats. For instance, the BLUE MED project developed a methodology for early detection of the Bluetongue virus during the 2024 outbreak. MED Berry, using RNAi-based techniques, addresses grey mold in strawberry crops, providing an alternative to chemical pesticides.

The **circular economy and resource valorisation** dimension is evident in initiatives like ADVAGROMED, which uses agro-waste to rear insects for poultry feed and soil enrichment. SUSTAVIANFEED and NEWFEED convert agro-industrial residues into livestock feed. DAINME-SME transforms dairy waste (whey) into protein-rich extracts, reducing both food loss and environmental impact.

Social and participatory innovation is embedded across the portfolio. Over 1,800 stakeholders have been engaged and trained through multi-actor approaches. Demonstration sites in 15 countries allow for local validation and adaptation of technologies, while Living Labs, such as those established in GOTHAM, SUSTAIN-COAST, and FIGEEN, facilitate co-creation, regional engagement, and knowledge uptake.

Projects under Section 1 of PRIMA increasingly target TRLs between 6 and 9, supported by structured guidelines that enhance ambition and clarity. Section 2 projects, while often earlier in development, enable localised innovation through national flexibility. Commercialisation pathways are emerging through technology transfer agreements, plant variety rights, and start-ups like Odin Solutions (born from MEDITOMATO). However, barriers to widespread adoption persist. These include high initial costs, as seen with AZMUD greenhouse technologies, and fragmented policy frameworks, exemplified by the MEDSAL project.

The expert evaluation of the portfolio highlighted several strategic priorities for future improvement. First, there is a need for deeper socio-economic integration in project design to ensure greater alignment with local contexts and support effective uptake. Second, projects must do more to empower marginalised groups, particularly women and rural communities. Third, successful innovations should be scaled and replicated across the region through mechanisms that promote cross-border knowledge exchange. Additionally, pathways from research to policy and market applications must be reinforced through tailored incentives and stronger engagement with economic actors.

In light of Horizon Europe FP10's increasing focus on industrial relevance and competitiveness, the experts call for PRIMA to enhance its focus on innovation uptake, entrepreneurship, and cross-sectoral partnerships. Reducing capacity disparities between EU and non-EU partner countries remains essential to ensuring balanced participation and equitable impact.

The project portfolio assessment also identified several strategic areas for improvement summarised herebelow:

Recommendations by the experts project portfolio analysis

- The expert group highlighted the need to embed stronger socio-economic integration in project design, to better align with local contexts and facilitate the uptake of innovative solutions.
- More must be done to empower marginalised groups, particularly women and rural communities, in order to increase inclusivity and maximise the societal benefits of research and innovation.
- The evaluation also emphasised the importance of scaling and replicating successful solutions, and of fostering knowledge exchange across countries to promote innovation diffusion in the Mediterranean. Mechanisms to support the transition of research outputs into policy and market applications should be strengthened, especially through tailored incentives, multi-actor involvement, and links to industry.

- In the context of Horizon Europe FP10, with its growing emphasis on industrial relevance and competitiveness, the evaluation underscores the importance of connecting PRIMA's scientific results with economic actors and value chains. It stresses the need for a more strategic focus on innovation uptake, entrepreneurship, and cross-sectoral partnerships to amplify impact.
- Addressing capacity disparities among participating countries, particularly non-EU States, will also be essential to maintaining balanced contributions and ensuring the equitable evolution of the partnership.

The full findings and strategic recommendations are presented in the annexed Project Portfolio Analysis Report, which serves as a key resource for the future programming of PRIMA.

Synergies Among PRIMA Projects

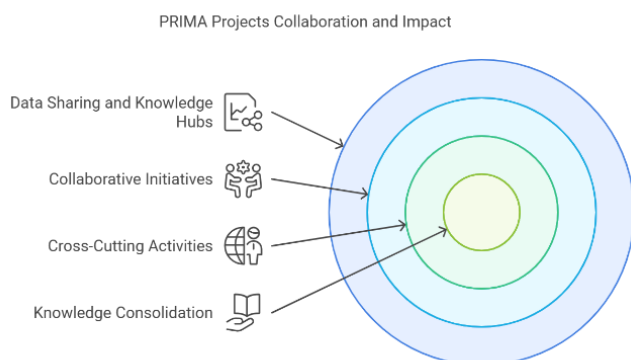
PRIMA projects leverage synergies to enhance their impact across the Mediterranean region. By fostering collaboration, they combine resources, methodologies, and expertise to address shared challenges in water management, agriculture, and food systems. These synergies help prevent fragmentation, streamline efforts, and improve research outcomes.

Synergies are evident in data and methodology sharing, as seen in the collaboration between *Intel-Irris* and other PRIMA projects such as *WATERMED 4.0* and *ReCROP*. By sharing approaches and testing intelligent irrigation systems, these projects have optimized research outcomes, demonstrating the value of collective action. Similarly, joint policy briefs have strengthened policy recommendations by combining insights from multiple projects. For example, the WEFE Nexus policy brief provided comprehensive guidance on sustainable resource management, offering evidence-based recommendations to policymakers.

OurMED, NATMed, and SALAM-MED projects have established a Working Group on Sustainable Water Management in the MED region, focusing on the Science-Policy Interface. This group brings together researchers, practitioners, and stakeholders to advance sustainable solutions while leveraging and expanding the innovative approaches developed within the projects. It aims to align and harmonize multi-sectoral policies by connecting, co-creating, and communicating knowledge, using the insights and evidence generated by each initiative.

Collaborative scientific publications also highlight the importance of synergies in PRIMA. Projects such as Sustain-COAST, InTheMED, and OurMED produced a joint study on groundwater trends in Southwestern Europe, published in *Nature Journal*. This achievement not only enhanced scientific understanding but also presented Mediterranean research on a global platform. Additionally, joint events, including webinars, workshops, and conferences, have created opportunities for disseminating solutions, fostering innovation, and promoting knowledge exchange. The **WEFE Nexus Community of Practice** serves as a platform for stakeholders across sectors to exchange experiences and co-develop integrated solutions.

Cross-Cutting Activities in PRIMA Projects



To further consolidate knowledge, avoid fragmentation, and strengthen synergies, different PRIMA projects have adopted Cross-Cutting Research Activities focused on Knowledge Hub, Digital Storytelling and Synergy Network. These initiatives aim to amplify impacts, improve coordination, and foster collaborative innovation across completed and ongoing projects.

PRIMA projects in the realms of communication, dissemination, and networking actively engage in cross-project collaborations to enhance their outreach and capacity-building efforts. The Resilient Smallholder Initiative (RSI) connects PRIMA and EU-funded projects to enhance smallholder farmer resilience through the sharing of experiences, success stories, and solutions. RSI activities emphasize dissemination, capacity building, and networking, as evidenced by its inaugural webinar, which attracted 79 participants. This effort represents the initial step in a broader strategy to expand collaboration and share innovations supporting smallholder communities.

Data sharing and the creation of knowledge hubs are integral to consolidating knowledge and maximizing the utilization of project outputs. The Sustainable Water Resources Management in the Mediterranean Working Group (SUSTAIN-MED) was jointly developed by three PRIMA projects (OurMED, NATMed, and SALAM-MED) to create a centralized knowledge hub. This platform focuses on developing standardized data-sharing protocols and repositories to facilitate the exchange of data, digital storytelling, best practices, and lessons learned, including failures to avoid. A historical groundwater database, the first repository to be included on the platform, reflects the group's commitment to improving sustainable water resource management in the Mediterranean. Additionally, a dedicated YouTube channel has been launched to support the dissemination of activities, while a website for broader engagement is currently under construction.

Another exemplar of cross-project collaboration is the Network of Young Researchers in the Mediterranean Region called NextGen4MED⁸ (Empowering the NEXT GENERation of water researchers FOR the MEDiterranean). NextGen4MED is an exciting initiative born within the SUSTAIN-MED working group. This platform aims to build a vibrant network of young researchers, fostering multidisciplinary collaboration across diverse fields of study to tackle the pressing challenges of sustainable water management in the MED hotspot. Open to all researchers under 40, regardless of their affiliation,

⁸ [NextGen4MED – SUSTAIN-MED](#)

NextGen4MED invites passionate minds to contribute their expertise and innovation to shape the future of water sustainability. The initiative aims to organize impactful events, drive cutting-edge research, and create opportunities for growth and development of all.

The synergies and cross-cutting activities developed among PRIMA projects underscore the program's strategic emphasis on collaboration, knowledge exchange, and integration of efforts. By strengthening communication, dissemination, and data sharing, PRIMA ensures that projects build on each other's results, avoid duplication, and collectively address Mediterranean challenges. Through these collaborative actions, PRIMA projects create enduring impacts, fostering innovation, knowledge consolidation, and solutions that are both sustainable and regionally relevant.

Measures to enhance the dissemination, exploitation, and communication of PRIMA projects' results.

It is a well-known fact that Research and Innovation (R&I) projects often struggle with the Dissemination, Exploitation, and Communication (DEC) of their results.

In 2022, PRIMA and [META](#) conducted a pilot study, through questionnaires and structured interviews with 17 project coordinators, to understand how funded projects dealt with DEC. The study highlighted that, despite the fact that all projects showed innovation potential, they faced difficulties in:

- describing their Unique Value Proposition (how can the project result solve a problem better than other solutions available);

- identifying their target groups and their specific problems/needs;

- clarifying how results would be used (Use Model): e.g. background for further R&D, sales of a product, process, service, new policy, etc.;

- validating data, assumptions, information, and added value of results outside the consortia, with third parties;

- planning activities & human/financial resources needed for the follow-up after the projects end.

To address these challenges, it was clear that awareness-raising and capacity-building were needed. That is why, since then, PRIMA has organised several online (webinars) and face-to-face sessions (PRIMA Project Day 2023 and 2024) to make project coordinators more aware of the importance of DEC of project results.

Moreover, PRIMA has increasingly encouraged beneficiaries of its funded projects to apply for the [Horizon Results Booster \(HRB\)](#) program, implemented by META. The latter is an initiative by the European Commission aimed at enhancing the visibility, impact, and exploitation of project results funded under the EU R&I framework programs. This service is part of the broader Horizon Europe strategy to facilitate the dissemination and uptake of research outcomes across Europe and beyond.

Between 2021 and 2024, 24 PRIMA projects applied for and benefited from the services of the HRB, namely:

- PDES – Portfolio Dissemination & Exploitation Strategy: helps identify and create a portfolio of project results, and then design and execute a dissemination and exploitation plan;

- BPD – Business Plan Development: one project KER – Key Exploitable Result is chosen for the drafting/finalisation of a related business plan;

G2M – Go to Market: includes training on project pitching, IPR, and innovation management, as well as business services and support in accessing funds.

Participation of PRIMA projects in the HRB has resulted in enhanced visibility, better exploitation of results, and increased networking opportunities. One good example is the [SUREFISH](#) project, which developed a blockchain-powered traceability platform to reduce fish fraud, ensure fish authentication, and guarantee seafood quality: the project benefited from the BPD and G2M services.

Beneficiaries learned about and identified the necessary tools to protect the IP of project results (pre-market entry strategy, IP protection dedicated budget, relevant legislation, competitor analyses...), as well as innovation management and landscapes (i.e. targetable markets and users, time needed to enter the market, related risks, SWOT...), which enabled them to define the market positioning of the innovations which stemmed from the project, as well as specific exploitation strategies and business models.

Chapter 7: Programme Effectiveness

From 2018 to 2024, PRIMA operated within the Horizon 2020 framework; however, with the amended decision on PRIMA in 2024, the Programme is transitioning to the Horizon Europe Framework. This shift introduces updated monitoring and evaluation requirements, reflecting the evolving priorities of EU research. PRIMA's framework now integrates elements of Horizon Europe, including [Horizon Europe Key Impact Pathways \(KIPs\)](#), and is incorporating Common Partnership Indicators developed by an EU expert group to align with the [Biennial Monitoring Report \(BMR\)](#) and is incorporating Common Partnership Indicators developed by an EU expert group to align with the Biennial Monitoring Report (BMR) on European Partnerships under Horizon Europe.

PRIMA's Monitoring Framework: Collection of H2020 Indicators (2018–2023)

PRIMA prioritizes monitoring to ensure accountability, transparency, and alignment with strategic goals. Since its inception, PRIMA has annually collected **Horizon 2020 (H2020) indicators** to track the progress and impact of its projects.

Table 11 Key Monitoring Data (2018–2023) (H2020 Indicators) (TO BE UPDATED) European Commission, Directorate-General for Research and Innovation, Horizon 2020 indicators : assessing the results and impact of Horizon, Publications Office, 2015, <https://data.europa.eu/doi/10.2777/71098>

KPI PRIMA H2020	2018	2019	2020	2021	2022	2023
DISSEMINATION						
# Number of Dissemination Actions in projects	2701	1798	1084	816	information not available yet	information not available yet
# Number Publications in peer-reviewed high impact journals in the area of the various societal challenges (cumulative amount)	0	3	45	124	142	151
Widening participation						
# Number of participations by EU-27 Member State	514	268	285	265	158	153
# Number of beneficiaries EU-27 Member State	207	257	279	231	202	203
% Non-EU PS participations	37%	38%	39%	39%	42%	49%
% Non-EU PS beneficiaries	35.3%	38.4%	37.9%	40.6%	41.3%	45.74%
(€ millions) Total amount of financial contribution by EU-27 Member States (S2 contribution)	22M€	21.3M€	24.7M€	20.9M€	20.9M€	22.6M€

Previous applicants vs. New comers	215 participating entities	247: 67% new comers 33% old entities	268: 52% new comers 48% old entities	235: 47% new comers 53% old entities	232: 42% new comers 58% old entities	266: 33% new comers 68% old entities
SMEs' participation						
% Percentage of EU financial contribution going to SMEs (Section 1)	32.76%	18.82%	18.31%	19.05%	14.60%	9.72%
% Percentage of financial contribution going to SMEs (Section 2)	7.78%	9.28%	12.12%	8.01%	7.34%	9.57%
Gender						
% Percentage of women participants in PRIMA projects (Female partners Section1 and Section 2)	33.8%	30.6%	33.3%	35.9%	36.1%	38.8%
% Percentage of women project coordinators in PRIMA Projects (Section 1 and Section 2)	40.0%	31.9%	29.8%	38.5%	46.5%	44.4%
% Percentage of women on boards, advisory groups, expert groups, evaluation panels, individual experts, etc	- SAC 39%	- SAC 39%	- SAC 39%	- SAC 39%	SAC 38%	38%

% Percentage of women on board of Trustees	- BoT 50 %	- BoT 50 %	- BoT 50 %	- BoT 50 %	BOT 33%	33%
% Percentage of women in Scientific evaluation panel committees Section 1 and Section 2	S1 stage 1 30% stage 2 43%	. S1 stage1 27% / stage 2 28%	. S1 stage1 50% / stage 2 50%	. S1 stage1 45% / stage 2 39%	S1&S2 EVALUATORS 46%	S1&S2 EVALUATORS 54%
International cooperation						
% Percentage of third-country participants in PRIMA calls	28%	23%	23%	23%	22%	29%
% Percentage MPCs in PRIMA calls (PS Associated to H2020+third countries)	31.06%	39.88%	40.98%	39.59%	42.10%	46.36%
% Percentage of EU financial contribution attributed to third country participants	30.5%	29.81%	34.03%	35%	36.7%	36.7%
% Percentage of EU financial contribution attributed to MPCs (PS Associated to H2020+third countries)	29.9%	29.91%	33.93%	35.11%	36.71%	36.75%
% Percentage of EU financial contribution that is climate-related in PRIMA Projects	32.2%	35.4%	42.60%	34.4%	44%	49%
% Percentage of EU financial contribution	15.2%	13.2%	28%	17.55%	25%	13%

that is biodiversity-related in PRIMA Projects						
% Percentage of projects and EU financial contribution allocated to innovation actions in Horizon 2020	33.33%	44.4%	86.6%	72.7%	66.6%	66.6%
% Percentage of PRIMA beneficiaries from the private for-profit sector (EU funds)	17%	21%	23%	19%	15%	22%
% Percentage of EU financial contribution going to private for-profit entities	38.8%	30.11%	27.7%	29.77%	23.36%	27.78%

Analysis: PRIMA Indicators Compared to Horizon 2020 Targets (Data 2018-2023)

Dissemination and Open Access PRIMA has continuously prioritized dissemination actions and peer-reviewed publications, resulting in a significant increase in scientific output. By 2024, total peer-reviewed publications reached 165, reflecting robust dissemination and outreach efforts.

- **Widening Participation EU Member State Participation:** Participation from EU-27 members steadily declined, decreasing from 514 in 2018 to 153 in 2023. The number of beneficiaries similarly declined slightly, from 207 in 2018 to 203 in 2023.
- **Non-EU Participation:** Participation by non-EU Participating States notably increased, rising from 37% in 2018 to 49% in 2023. Beneficiaries from these states increased from 35.3% to 45.74%, aligning with PRIMA's strategic commitment to broaden inclusivity in line with Horizon 2020's widening participation objectives.
- **Gender Balance Women Participants:** Participation by women consistently improved from 33.8% in 2018 to 38.8% in 2023, with participation recorded at 34.5% in 2024.
- **Women Coordinators:** The percentage of female project coordinators fluctuated, starting at 40% in 2018, reaching a peak of 46.5% in 2022, and ending at 38.7% in 2024.
- **Women in Advisory Roles:** Representation in advisory groups, boards, and evaluation panels was stable between 39% and 54%, although the Board of Trustees saw a decline to 33% during 2022–2023.
- **International Cooperation Third-Country Participation:** Participation from third countries varied, peaking at 29% in 2023.
- **EU Financial Contributions:** EU financial contributions allocated to third-country participants and Mediterranean Partner Countries (MPCs) increased from approximately 30% in 2018 to 36.7% by 2023, underscoring PRIMA's focus on international collaboration and inclusivity.
- **Sustainable Development and Climate Change Biodiversity-Related Funding:** Allocations for biodiversity-related projects peaked at 28% in 2020, subsequently declining to 13% in 2023.
- **Private Sector Participation** Private sector engagement continued to play a strategic role, significantly enhancing the practical applicability and commercial viability of PRIMA-funded innovations.

Progress of PRIMA towards its General objective

PRIMA is dedicated to fostering sustainability, resilience, and innovation in water management, farming, and food systems across the Mediterranean. The aim is to find sustainable solutions for challenges like water scarcity, food insecurity, and climate change through research and innovation, cross-border collaboration, and tailored strategies.

PRIMA focuses on enhancing water availability and promoting sustainable agricultural production, addressing the impacts of climate change, urbanization, and population growth. By encouraging cooperation and leveraging innovative approaches, PRIMA aims to ensure resilience and sustainability in Agri-Food and water systems, contributing to long-term social and environmental stability.

Advancing PRIMA's specific and operational objectives is key to achieving its overall goal. These objectives include developing a strategic agenda, aligning national R&I programs, engaging stakeholders, and strengthening capacities. Operational objectives focus on delivering tangible outcomes in areas like

nutrition, health, and land and water management, ensuring PRIMA addresses regional challenges and promotes sustainability in the Mediterranean.

Progress towards achievement of Specific Objectives

Progress on strengthening research and innovation (R&I) capacities

PRIMA's mission is to reinforce Mediterranean resilience by cultivating a strong R&I ecosystem for water management, sustainable farming and agri-food systems. Both programme-wide statistics and project-level evidence confirm that this capacity-building objective is being met.

Programme-Level Achievements

Dimension	Evidence of Progress
Cross-border collaboration	Every PRIMA country now participates in funded consortia. Researchers based in Mediterranean Partner Countries (MPCs) rose from 37–38 % (2018-20) to 46 % (2023) after a revised rule requiring an additional MPC partner, boosting South-South cooperation.
Inclusive leadership	MPC-based coordinators average 3.8 per year with a record 7 southern coordinators in 2023, signalling growing institutional maturity.
Capacity-building events	32 formal workshops/trainings delivered 2018-21 (9 in 2018; 19 in 2019; 1 in 2020; 3 in 2021) and embedded within 845+ dissemination events. 2022-23 figures pending validation.
Scientific output	Peer-reviewed papers climbed from 3 (2019) to 165 (2024). Cumulative total 630 publications demonstrate a maturing publication pipeline.
Innovation pipeline	Shift from early-stage Research & Innovation Actions (RIAs) to market-oriented Innovation Actions (IAs):
	<ul style="list-style-type: none"> • RIAs fell from 9 (2019) to 2-3 per year from 2020. • IAs stabilised at 6-8 per year with annual budgets > €22 M. • Nearly 50 % of Section-1 activities now operate at TRL 5; 29 % TRL 6, 20 % TRL 7.

Project-Level Highlights

Project	Capacity-building Contribution
AWESOME	Delivered a WEFE-Nexus management platform; bespoke trainings up-skilled 26 professionals.
PHEMAC	Engaged 1 500+ stakeholders via innovation weeks, boot camps, brokerage events; intensive training for 60+ people enabled commercial uptake of 50 innovations.
MEDSAL	Launched an online aquifer-management academy with 1 000+ registered users.
MILKQUA	Issued hands-on quality-management guides now standard for Mediterranean dairy processors.
Sustain-COAST	Produced conflict-mediation toolkits and learning resources improving participatory water governance in pilot basins.

Key Performance Indicators (KPIs)

This table summarises PRIMA's progress across its core KPIs from 2018 to 2024, reflecting systemic change in participation, capacity, scientific excellence, and innovation readiness.

KPI 1 • MPC Leadership in Coordinated Proposals**KPI 2 • Trained Researchers and Professionals****KPI 3 • High quality scientific outputs****KPI 4 • Technology readiness level**

Table 12 KPIs at programme level

KPI	Metric & Trend	Interpretation
KPI 1 – Leadership in Coordinated Proposals	• Researchers in MPCs: $\approx 38\%$ (2018-20) $\rightarrow 46.3\%$ (2021) $\rightarrow \geq 41\%$ (2022-23) • Coordinators in MPCs: min 1 (2018 & 2020) $\rightarrow$ max 7 (2023); avg 3.83 y^{-1}	Revised eligibility rules successfully broaden participation and stimulate South-South collaboration.
KPI 2 – Capacity-building events	32 formal events (2018-21) plus extensive hands-on training inside projects.	Builds skills in less-performing R&I systems.
KPI 3 – Scientific outputs	630 peer-reviewed papers (2019-24); annual count rose 3 $\rightarrow$ 165.	Confirms enhanced research productivity and dissemination.
KPI 4 – Technology readiness	Nearly 50 % TRL 5, 29 % TRL 6, 20 % TRL 7 in Section-1 portfolio; IA budget $\geq \text{€}22\text{ M yr}^{-1}$ since 2020.	Demonstrates progression from research to scalable innovation.

Consolidated Programme-Level Interpretation

The KPIs show that PRIMA is delivering structural impacts across the Mediterranean R&I landscape:

Participation is broadening through more inclusive eligibility rules and MPC leadership in project coordination.

Capacity is deepening with extensive training activities targeting weaker R&I systems.

Scientific excellence is rising, as seen in the growing volume and quality of peer-reviewed publications.

Innovation maturity is advancing, with a solid pipeline of TRL 5–7 solutions and sustained investment in Innovation Actions.

These results confirm that PRIMA's integrated approach—combining policy incentives, capacity-building, and targeted funding—is strengthening the region's research and innovation ecosystem and empowering Mediterranean actors to co-develop locally adapted, high-impact solutions to Water–Energy–Food–Ecosystem (WEFE) challenges.

Progress on Improving R&I Integration & Alignment

PRIMA actively promotes the integration and alignment of research efforts among participating countries. By fostering joint initiatives and interdisciplinary collaboration, the programme harmonises activities that target shared Mediterranean challenges such as sustainable water management, agriculture, and food security. This strategic coordination delivers common methodologies and best-practice toolkits, minimises duplication, and maximises resource use—ultimately creating a more cohesive regional R&I ecosystem.

KPI 5 • Weighted Success Rate (WSR) – Proxy for Strategic Alignment

Indicator Definition

This KPI captures the Weighted Success Rate (WSR) of Participating States (PSs) in PRIMA calls. Unlike raw success rates, the WSR combines each country's proposal success rate with its share of total funded projects, providing a nuanced measure of both proposal quality and strategic alignment with PRIMA's objectives.

Key Findings (2018–2024)

- **Top Performers**
 - Spain, Italy, and Tunisia consistently achieved WSR values of 6–7%, the highest across the partnership.
 - Spain peaked in 2019, while Italy showed strong WSRs in 2020 and again in 2024, particularly in Section 2.
 - These countries have demonstrated strong institutional alignment with PRIMA's Strategic Research and Innovation Agenda (SRIA) and consistently submitted high-quality, fundable proposals.
- **Emerging Contributors**
 - Portugal, Morocco, and Lebanon showed steady improvement over time.
 - Portugal peaked in 2021–2022 and retained competitive WSR levels in 2024.
 - Morocco exhibited frequent spikes in both Section 1 and Section 2, with strong performance in 2023–2024.
 - Lebanon, though starting from a low base, showed a clear upward trajectory.
- **Under-represented Countries**
 - Luxembourg, Slovenia, Malta, and Croatia consistently recorded very low WSRs, often close to or below 1%, highlighting limited engagement and weak alignment. These countries are priorities for tailored support and capacity development.

Strategic Targets for 2025

To improve balance and alignment across the PRIMA ecosystem, the following differentiated WSR targets have been adopted:

Table 13 Strategic targets for 2025

Country Category	WSR Target for 2030
Top performers	Maintain or exceed $\geq 6-7\%$
Emerging contributors	Reach 4–5%
Under-represented PSs	Improve to 2–3%
Programme-wide average	$\geq 6\%$

Interpretation

The Weighted Success Rate serves as a proxy for institutional maturity and programme alignment. High WSRs are associated with strategic positioning, experience, and access to networks. Through a tailored support package and differentiated targets, PRIMA aims to foster more inclusive, balanced, and high-quality participation, supporting both its 2025 alignment objective and its 2028 vision for a Mediterranean R&I ecosystem that is equitable, integrated, and impact-driven.

KPI 6 • Procedural Changes in Participating-State (PS) R&I Programmes

Indicator Definition This KPI tracks **system-level procedural reforms** initiated by Participating States (PSs) to improve the efficiency, transparency, and alignment of their national R&I programmes with PRIMA's implementation model and broader EU practices. It highlights institutional learning, regulatory adaptation, and improved administrative performance catalysed by participation in PRIMA.

Milestone Reform Italy, PRIMA's largest single funder (€70 million committed between 2018 and 2024), is implementing a comprehensive overhaul of its national grant management procedures. A forthcoming Ministerial Decree will introduce three major changes:

- Replacement of multiple ex-ante checks with a risk-based verification system, reducing administrative burden and delays
- Full digitalisation of grant processing workflows to enhance traceability and user accessibility
- Alignment of timelines and procedures with EU best practices, ensuring faster Time to Grant (TTG), Time to Sign (TTS), and Time to Pay (TTP)

These changes directly address bottlenecks identified during PRIMA project implementation—particularly delays linked to legacy accounting systems and fragmented national approval chains. Once enforced, the reform is expected to:

- Accelerate disbursement of funds for Italian beneficiaries under PRIMA and other EU co-funded partnerships
- Improve project execution timelines and financial predictability
- Enhance Italy's interoperability and leadership capacity in transnational research consortia
- Serve as a replicable model for procedural harmonisation across other Participating States

Interpretation

This procedural reform represents a significant national response to EU partnership participation, demonstrating PRIMA’s role as a driver of structural improvements within domestic R&I systems. It strengthens the enabling environment for research excellence, improves alignment with Horizon Europe standards, and increases the long-term sustainability and attractiveness of Italy’s R&I ecosystem.

KPI 7 • National Alignment through Participant State Initiated Activities (PSIAs)

Indicator Definition This KPI measures the extent to which national and regional R&I programmes have been strategically aligned with the PRIMA Strategic Research and Innovation Agenda (SRIA) through Participating States’ Initiated Activities (PSIAs). It reflects PRIMA’s ability to foster coherence, reduce fragmentation, and leverage domestic investments across the Mediterranean R&I landscape.

Metric

By the end of 2024, a total of 31 national or regional PSIAs have been formally recognised and mapped to PRIMA’s SRIA. These actions:

- Encompassed 397 nationally funded projects
- Mobilised €256 million in total
- Certified €115.7 million as eligible in-kind contributions for EU co-funding recognition

Area	Examples of alignment	Lead PSs
Water management	Harmonised monitoring & reuse pilots	Germany, Israel, France
Sustainable agriculture	Resilience & digital-farming pilots	Spain, Türkiye
Capacity-building & food security	Targeted fellowship schemes, living labs	Malta, Tunisia, Portugal

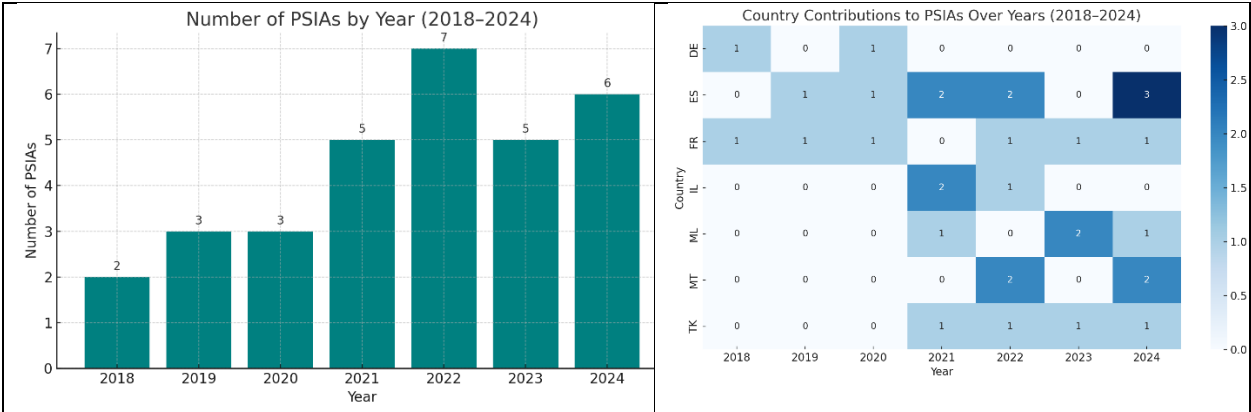
Interpretation

PRIMA has catalysed a growing convergence between national R&I priorities and its own strategic agenda. The increasing number and scope of PSIAs:

Reduces duplication and aligns resources, forming a coherent trans-Mediterranean innovation portfolio

Enables flexible bilateral and multilateral cooperation, especially in climate-smart agriculture, sustainable water management, and agri-food systems

This alignment mechanism reflects PRIMA’s unique **leverage function** as an EU Partnership under Article 185 TFEU—mobilising domestic funding while promoting EU-level coherence.



The bar chart illustrates the annual number of Participating States' Initiated Activities (PSIA's) from 2018 to 2023. The heatmap depicts the yearly contributions of specific countries to Participating States' Initiated Activities (PSIA's) from 2018 to 2023.

Building a Critical Mass of Stakeholders

PRIMA’s impact depends on mobilising a wide spectrum of Mediterranean actors—researchers, policymakers, businesses and civil-society organisations. Inclusive stakeholder engagement ensures that solutions are co-created, widely disseminated and readily adopted.

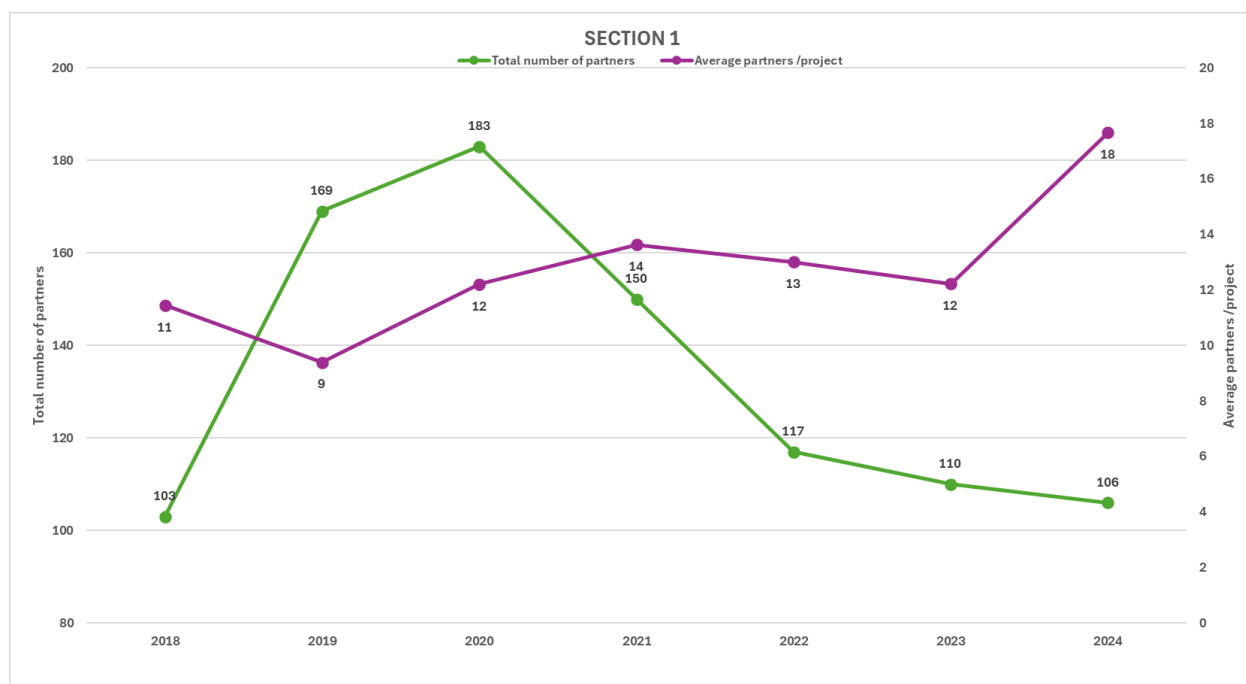
KPI 8 • Critical Mass of Beneficiaries (Research Performers)

Indicator Definition This KPI measures the total number of distinct beneficiary entities (e.g., universities, research institutes, SMEs, NGOs, etc.) involved in PRIMA-funded projects across both Section 1 and Section 2 calls. It reflects the breadth, institutional engagement, and geographic distribution of the PRIMA research and innovation ecosystem.²⁵⁹¹ The total number of beneficiary entities participated in projects funded under the 2018-2024 calls.

Section 1 – Beneficiary Entities (2018–2024)

The trend shows an initial expansion followed by a period of consolidation:

- Participation rose from 103 entities in 2018 to a peak of 183 in 2020.
- From 2021 onward, the number declined: 150 (2021), 117 (2022), 110 (2023), and 106 (2024).
- This downward trend mirrors a reduction in the number of funded projects (from 18 in 2019 to 6 in 2024) and the introduction of stricter eligibility criteria and targeted call topics post-interim evaluation



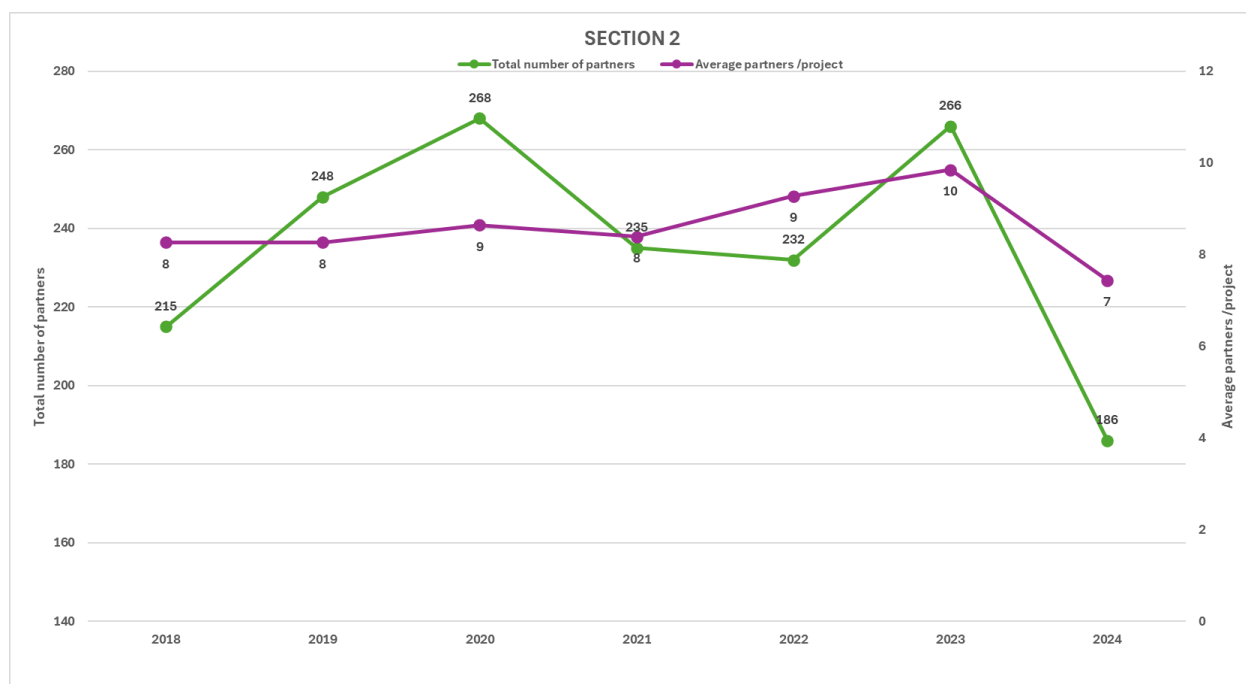
Section 2 – Beneficiary Entities (2018–2024)

The data reflects more stable and sustained institutional engagement:

Participation grew from 215 entities in 2018 to a peak of 268 in 2020.

A slight dip followed: 235 (2021) and 232 (2022).

Engagement rebounded in 2023 (266 entities) but dropped to 186 in 2024, even as the number of funded projects remained stable (25), suggesting a shift toward smaller or more consolidated consortia.



Interpretation

KPI 8 confirms that PRIMA has successfully built a **critical institutional mass**, especially among research performers. Section 1 shows a shift toward **high-performing, consolidated consortia**, while Section 2 maintains an **inclusive and resilient research community**. Together, they underpin regional knowledge integration and long-term cooperation.

KPI 9 • Public vs Private Sector Teams – Proxy for Stakeholder Diversity

Indicator

Definition

This KPI assesses the relative participation of public and private sector teams in PRIMA-funded projects. It serves as a proxy for PRIMA's capacity to mobilise a balanced, multi-actor innovation ecosystem, crucial for delivering co-designed and application-ready solutions.

Total Teams Engaged (2018–2024)

Team Type	Section 1	Section 2	Total
Public sector	487	804	1,291
Private sector	~160	~265	~425
Total Teams	~647	~1,069	~1,716

Public sector share: ~75.2%

Private sector share (incl. SMEs, firms, NGOs): ~24.8%

SME Participation – Team vs Budget Share

Metric	Section 1	Section 2
SME team share	~12–17%	~10–12%
SME budget share	17.07% (avg) → 11.5% (2024)	~6.16%

Interpretation

While the private sector constitutes a stable quarter of project teams, its **budget share is declining**—particularly in Section 2. This suggests limited leadership roles, constrained budget allocations, and potential barriers in national funding systems.

In Horizon Europe, SMEs received over €6.6 billion in the first three years (2021–2023), accounting for 20.6% of total programme funding, including both grants (€5.33 billion) and equity investments via the EIC Fund (€1.26 billion). (*Source SME participation in Horizon Europe Key figures (and key issues) in the first three years*⁹)

This level of financial support **exceeds both the Horizon 2020 benchmark** (17.7%) and **PRIMA’s declining SME budget share**, which dropped from 29% in 2018 to approximately 14% in 2024

Local Impacts of PRIMA-Funded Innovations: A Thematic and Typological Analysis from PRIMA completed projects (2018-2020)

Metrics

- **Distribution by Thematic Area:**
- **Farming Systems:** 62 KERs
- **Water Nexus:** 58 KERs
- **Agro-Food:** 39 KERs
- **WEFE Nexus (cross-thematic):** 11 KERs

Distribution by TRL (Technology Readiness Level):

- TRL 4: 3 KERs
- TRL 5: 81 KERs
- TRL 6: 66 KERs
- TRL 7: 19 KERs

TRL 8: 1 KER → **86 KERs** have reached **TRL 6 or above**, confirming the statement that about half are market-ready.

⁹ European Commission: Directorate-General for Research and Innovation, *SME participation in Horizon Europe – Key figures (and key issues) in the first three years*, Publications Office of the European Union, 2024, <https://data.europa.eu/doi/10.2777/576670>

Strategic Portfolio Profile

Between 2018 and 2020, PRIMA delivered **170 Key Exploitable Results (KERs)** through 57 completed projects. This output demonstrates a clear orientation toward practical, locally adapted innovation across the Mediterranean. The thematic allocation reflects a strategic balance: Farming Systems accounted for the largest share (62 KERs), followed by Water Nexus (58), Agro-Food (39), and WEFE Nexus (11).

Although only 16 KERs are explicitly tagged as “Scientific (SCI)” in the metadata, this underrepresents the actual scientific output. A qualitative assessment suggests significant contributions across four main domains:

Scientific (e.g., peer-reviewed research, models, knowledge generation)

Technological (e.g., tools, platforms, prototypes)

Societal (e.g., training, co-creation, capacity building)

Environmental (e.g., water/energy efficiency, biodiversity, ecosystem resilience)

Scientific Contributions

PRIMA’s research outputs are substantial and diverse. Between 2019 and 2024, over 630 peer-reviewed publications were produced, along with 20 policy briefs, 6 patent applications, and 8 validated prototypes. Projects such as AWESOME and MEDSAL provided high-quality training modules (e.g., 26 professionals trained on WEFE Nexus, 1,000 users reached on salinization management). Tools and guidelines developed by MILKQUA, ArtiSaneFood, and others are used by cooperatives, educators, and practitioners, confirming the dissemination of knowledge beyond academia.

Technological Contributions

Technological innovation is one of PRIMA’s major strengths. Projects like SUPROMED, ArtiSaneFood, and AWESOME developed decision-support tools and methodologies that address practical agricultural and environmental challenges. Water-related technologies such as FIT4REUSE’s decentralized wastewater treatment systems and DSWAP’s packed-bed reactors (operational in Cyprus and Tunisia) exemplify high TRL outputs with direct implementation. CONSIRS’ closed greenhouse system achieves up to 50% energy savings, while FRUALGAE’s active packaging doubles the shelf life of fresh vegetables.

Environmental Contributions

Environmental impact is particularly strong in the Water Nexus domain, where 43 of 58 KERs reached TRL 6 or above. PRIMA innovations such as AWESOME’s hydroponics achieved water-use efficiencies up to 8 times higher than conventional methods. Biodiversity is addressed through local crop resilience (AdaMedOr’s phenology models), sustainable materials (BioProMedFood’s biodegradable films), and marine resource protection (e.g., SUREFISH traceability). Across projects, results indicate reductions of up to 30% in greenhouse gas emissions, improvement in soil health, and protection of fragile ecosystems.

Economic Contributions

Many KERs demonstrate clear pathways to commercialisation. Technologies like CONSIRS’ greenhouse modules and AWESOME’s hydroponics improve input efficiency and competitiveness. With 86 KERs already at TRL 6 or higher, the market-readiness of PRIMA innovations is robust. Among these, several

innovations are already subject to exploitation: 12 technology transfer agreements, 5 plant variety rights (e.g., IMPRESA's wheat lines), and 1 spin-off (Odin Solutions from the MEDITOMATO project).

Societal Contributions

PRIMA has strongly supported participatory innovation. More than 1,800 stakeholders were trained through multi-actor approaches. Tools such as the ArtiSaneFood platform, designed for artisanal producers, are freely accessible and used across at least 10 countries to enhance food safety compliance and business resilience. Projects like PHEMAC and SUSTAvianFEED involve small producers in co-design processes, ensuring that innovations reflect local needs and realities.

Demonstration sites have been a cornerstone of local engagement. As of 2024, 127 demonstration sites operate in 15 Mediterranean countries—including Spain, Italy, France, Turkey, Algeria, and Tunisia—spanning rice irrigation (MEDWATERICE), smart greenhouses (CONSIRS), aquaponics (Jordan Valley), and decentralized wastewater reuse (FIT4REUSE). These real-world testbeds validate innovations, support community uptake, and enable policy experimentation.

Domain-specific Highlights from the KER Analysis

In the Agro-Food domain, half of the 39 KERs show high TRL levels, including ArtiSaneFood's support tools (TRL 5), BioProMedFood's packaging (TRL 7), and FRUALGAE's circular food packaging (TRL 5). In Farming Systems, 18 of 62 KERs reached TRL 6 or higher. Standouts include AdaMedOr's PhenoFlex (TRL 5, cited in IPCC drafts), IMPRESA's heat-tolerant wheat (subject to Plant Variety Rights), and PLANT-B's beeswax innovations.

The Water Nexus domain remains the most advanced: 43 of 58 KERs have TRLs of 6 or above, with operational deployments already occurring in Tunisia and Cyprus.

Key Policy and Social Uptake

Many innovations are already in use or embedded in local strategies. Tools from DSWAP and FIT4REUSE inform regional planning. CONSIRS' model was cited in FAO's 2024 Good Practices. Platforms like Med Food TTHubs, ArtiSaneFood, and SUREFISH promote transparency and are active in over 10 Mediterranean countries.

Conclusion

PRIMA's KERs portfolio demonstrates a consistent orientation toward practical, scalable innovation. Whether through scientific discovery, applied technology, environmental stewardship, or community empowerment, the 2018–2020 cohort of completed projects offers compelling evidence of how locally anchored R&I can deliver system-level benefits across the Mediterranean. The high TRL distribution confirms the programme's capacity to bridge research and deployment, while the thematic diversity ensures a broad relevance across the region's pressing water, food, and climate challenges.

Contribution of PRIMA to the extension of the European Research Area beyond Europe

European Research Area Contributions

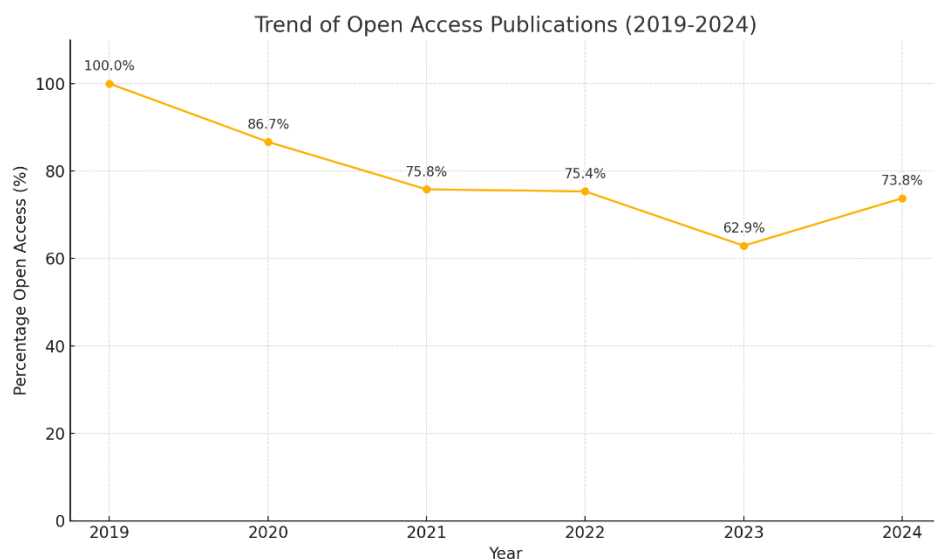
PRIMA has significantly advanced the European Research Area (ERA) by fostering collaboration and knowledge exchange across the Mediterranean. Its transnational calls have brought together research teams from both EU and non-EU member states, helping to bridge gaps in research capacity. Laboratories in Tunisia, Morocco, Egypt, and other Mediterranean countries now collaborate directly with counterparts in Spain, Italy, France, and beyond—sharing equipment, expertise, and best practices. These partnerships strengthen underrepresented research ecosystems and enable researcher mobility: early-career scientists from North Africa or the Middle East have spent time in European laboratories (e.g., Wageningen, Barcelona, Florence) before returning home with new skills and networks, while European researchers have gained first-hand experience in non-EU settings, confronting issues like water scarcity and traditional farming methods central to Mediterranean resilience.

Although PRIMA does not directly manage job listings, it encourages coordinators to advertise open positions on EURAXESS. Over the last funding period, PRIMA suggested that projects post forty research vacancies—among them a postdoctoral fellowship in “Soil Health Monitoring”—on this central ERA platform. By doing so, candidates from any participating state could find and apply for these roles, supporting ERA’s goal of seamless researcher mobility without PRIMA directly handling the announcements.

Beyond job mobility, PRIMA has forged durable links between national research infrastructures. By aligning with initiatives such as [METROFOOD-RI](#) (food-quality and safety testing) and [LifeWatch ERIC](#) (biodiversity and ecosystem e-Infrastructure), PRIMA projects gain access to broader networks of laboratories and data repositories. For example, a honey-authenticity study under the “Medifit” platform could validate new traceability methods using METROFOOD-RI’s reference labs in Italy and Portugal. Meanwhile, a water-quality monitoring effort in Cyprus might leverage LifeWatch ERIC’s remote-sensing and biodiversity datasets to complement on-site sensors. These infrastructure linkages enable smaller or emerging research centers—particularly in non-EU countries—to benefit from established tools, protocols, and quality-assurance mechanisms that embody ERA best practices.

Open science has been another cornerstone of PRIMA’s ERA strategy. Although Horizon 2020 did not strictly mandate open access, PRIMA strongly encouraged it. As a result, around 72,95% of PRIMA’s 610+ peer-reviewed articles (2019–2024) are freely available in repositories such as Zenodo and OpenAIRE

Year	Number of Publications	Open Access	Percentage Open Access (%)
2019	3	3	100.00
2020	45	39	86.67
2021	124	94	75.81
2022	142	107	75.35
2023	151	95	62.91
2024	145	107	73.79
Total	610	445	72.95



From 2019 through 2024, the percentage of open access publications shows a clear pattern of early variability, mid-phase stability, a notable decline, and a partial rebound. In 2019, all three publications were open access, but with such a small sample size this perfect rate reflected circumstances rather than a definitive trend. As total output rose sharply in 2020, the share of open access fell to about 87 percent, indicating that a growing number of papers were published in subscription or hybrid venues. The years 2021 and 2022 stabilized at roughly three quarters of all publications being open access (around 75 percent), suggesting that institutional or funder policies and author preferences maintained a steady commitment to making work freely available. In 2023, however, the proportion dipped to approximately 63 percent. Although the absolute number of open access papers increased, total publications grew faster—leading to a lower share overall. This downturn may reflect factors such as shifts in journal choices, budget constraints for article processing charges, or temporary relaxation in open access mandates. In 2024, the percentage rose again to nearly 74 percent, pointing to renewed emphasis on open access, possibly driven by updated policies, new read-and-publish agreements, or efforts to strengthen author awareness. Overall, despite fluctuations, the data indicate a broadly positive trajectory: most publications remain openly accessible, and even after a dip, open access regained momentum by 2024.

In parallel, PRIMA has championed the FAIR (Findable, Accessible, Interoperable, and Reusable) principles for research data. Each PRIMA project submits a Data Management Plan detailing how raw data—soil profiles, water-quality measurements, genomic sequences, economic surveys—will be stored, documented, and shared. Many teams now deposit georeferenced datasets in platforms such as the European Data Portal, where they can be queried by scientists engaged in climate modeling or land-use planning across Europe.

Altogether, PRIMA's recommendations to advertise on EURAXESS, its infrastructure partnerships with METROFOOD-RI and LifeWatch ERIC, its high open-access publication rate, and its adherence to FAIR data sharing have not only strengthened local research capacities but also reinforced cohesion across the broader ERA. By extending ERA's ideals—mobility, collaboration, infrastructure sharing, and open science—into the diverse socio-economic contexts of the Mediterranean, PRIMA has built sustainable bridges between EU and non-EU partners. These bridges advance scientific knowledge and create a more integrated, innovative, and resilient research landscape, tackling urgent challenges such as water scarcity, food security, and climate resilience throughout the Euro-Mediterranean region.

Cross-Border Collaboration and Science Diplomacy

PRIMA plays a central role in advancing **science diplomacy** between the European Union and Mediterranean Partner Countries—including Algeria, Egypt, Morocco, Jordan, Lebanon, Tunisia, Türkiye, and Israel. Through its **Strategic Research and Innovation Agenda (SRIA)**, PRIMA integrates non-EU countries into joint research projects, effectively bridging R&I capacity gaps and fostering sustained collaboration across political and socio-economic boundaries.

The programme supports:

Knowledge exchange and researcher mobility between EU and non-EU institutions.

Capacity-building in strategic domains such as the **Water-Energy-Food-Ecosystems (WEFE) Nexus**, sustainable agri-food systems, and climate adaptation.

These efforts align with the [European Commission's communication on a new ERA for Research and Innovation](#) by fostering a truly borderless R&I environment. PRIMA enables the mobility of researchers, facilitates knowledge exchange, and encourages synergies across diverse R&I ecosystems in the Euro-Mediterranean.

PRIMA's contribution to science diplomacy is explicitly recognised in the European Commission's [2025 report Science Diplomacy in the European Union: Challenges and Prospects](#) . The report cites PRIMA as a **model for regional R&I cooperation**, highlighting its success in operationalising diplomacy through co-designed calls, shared infrastructures, and equitable governance frameworks. These mechanisms align scientific priorities with diplomatic goals—such as trust-building, sustainable development, and regional stability.

This approach is further embodied in flagship PRIMA initiatives like **ECOFUTURE** and **Mara-Mediterra**.

ECOFUTURE enhances science–policy–society interfaces on agroecology, climate resilience, and social innovation.

MaraMediterra supports marine and coastal cooperation on biodiversity, food systems, and sustainability in the Mediterranean.

Both projects exemplify **science diplomacy in action**, bringing together researchers, public authorities, and local communities to co-develop knowledge, strengthen regional networks, and deliver context-specific solutions to transboundary challenges.

Supporting ERA's Objectives

PRIMA actively contributes to the ERA's goals, particularly in advancing the **green and digital transitions**:

Climate Neutrality: Projects like [PRECIMED](#) foster climate-resilient farming systems and sustainable water management, aligning with EU climate goals.

Digital Leadership: Initiatives like [SUREFISH](#) leverage digital technologies for food traceability, supporting ERA's digital innovation agenda..

At the same time, PRIMA strengthens resilience in the Mediterranean region by addressing critical issues such as food security and water scarcity, particularly in the face of global disruptions like pandemics and conflicts. For example, projects such as [SEEDS](#) focus on ensuring sustainable food supply chains, reinforcing ERA's emphasis on preparedness and sustainability.

Progress in Generating science with and for society (how scientific research is being tailored to address societal needs and concerns)

PRIMA has achieved remarkable progress in aligning scientific research with societal needs and concerns by fostering collaboration between researchers, stakeholders, and communities. By addressing pressing regional challenges such as water scarcity, sustainable agriculture, climate resilience, and gender inclusion, PRIMA projects are delivering impactful solutions that directly benefit Mediterranean societies.

Participatory Approaches

Projects like **MAGO** and **LENSES** engage local stakeholders through dialogue platforms and Learning and Action Alliances, aligning research with community priorities. Similarly, **PHEMAC** and **AWESOME** have created tools to enhance access to innovative solutions, promoting informed decision-making and adoption by end-users.

Gender-Inclusive Strategies

The **HALOFARMS** project enhanced PRIMA's societal impact by involving women in saline agriculture. Women participated in workshops, training, and leadership roles. A notable result was a Tunisian woman's start-up for halophyte nurseries. Additionally, a women-led NGO created cooperative networks among farmers, promoting inclusive business models and economic opportunities for local women.

PRIMA serves as a cornerstone for translating research into actionable policy across the Mediterranean by aligning its portfolio of projects with key EU and regional frameworks. Through targeted calls, PRIMA funds initiatives that generate the evidence, tools, and pilot demonstrations needed to implement EU objectives on soil health, water quality, food sustainability, and the Water-Energy-Food-Ecosystems (WEFE) Nexus. In particular, PRIMA projects support the **European Green Deal**, the **Farm to Fork Strategy**, and the **Water Framework Directive** by delivering locally adapted solutions in southern Mediterranean neighbourhood countries. They also directly contribute to the newly adopted **European Water Resilience Strategy** (2025) by piloting nature-based water-retention, reuse, and groundwater management solutions. Likewise, PRIMA projects bolster **coastal resilience** under the **European Ocean Pact** (2025) by integrating coastal aquifer protection and pollution-reduction measures. By co-designing solutions with local stakeholders, adopting FAIR data principles, and partnering with Union for the Mediterranean (UfM) and FAO frameworks, PRIMA ensures that its scientific outputs feed into both EU policy instruments and regional strategies like the **UfM WEFE Nexus Regional Strategy**. Moreover, several PRIMA calls have been co-drafted to foster synergies with Horizon Europe Missions such as **A Soil Deal for Europe**, **Adaptation to Climate Change, including Societal Transformation**, and **Healthy Oceans, Seas, Coastal and Inland Waters**.

Below are examples of how a broader range of PRIMA projects (beyond the initially mentioned “flagships”) extend the reach of these strategies:

1. European Water Resilience Strategy (2025)

FIT4REUSE (TRL 5–7): Piloted constructed wetland and membrane-bioreactor systems at agro-industrial sites in Algeria and Tunisia, achieving > 85 % removal of nitrates, phosphates, and emerging contaminants (e.g., pesticides, pharmaceuticals). Its “Reuse-Safe Protocol,” which integrates real-time water-quality sensors and risk-assessment modules, has been shared with local water authorities and cited in draft DG ENV/DG SANTE guidelines on non-conventional water use. By ensuring treated effluent meets “good

status” thresholds, FIT4REUSE supports southern neighbourhood compliance with the **Water Framework Directive** and helps national drought-resilience plans under the **Water Resilience Strategy**.

MEDWATERICE (TRL 7–9): Developed precision irrigation strategies and alternate-wetting-drying techniques for Mediterranean rice systems, demonstrating 15 % water-use savings across 10 demo sites (Spain, Italy, Egypt). These findings inform the **Water Framework Directive’s** “good ecological status” objectives and contribute data to water-scarcity indicators under the **Water Resilience Strategy**.

CONSIRS (TRL 4–7): Implemented closed-loop greenhouse systems combining evapo-condensation and water-recycling techniques. Field tests in Morocco and Lebanon showed 20 % reduction in freshwater withdrawals for protected horticulture. By validating these technologies in water-stressed zones, CONSIRS directly supports “nature-based” retention and recycling targets in the **Water Resilience Strategy**.

SMARTIES & INTEL-IRRIS (TRL 6–8): Deployed IoT-based soil-moisture sensors and weather-based controllers in 15 farms across Tunisia and Algeria. These precision irrigation tools reduced irrigation volumes by 25 % while maintaining or improving yields. Their demonstration sites have been incorporated into national water-management guidelines, aligning with the **Water Resilience Strategy’s** emphasis on “smart water use” in agriculture.

MAGO (TRL 5–7): Built a web-GIS “Irrigation & Drainage” decision-support platform leveraging remote-sensing data and stakeholder-driven dashboards. Pilot deployments in Jordan and Palestine enabled 30 % more accurate water-allocation planning, feeding directly into pilot climate-resilience plans under the **Water Resilience Strategy**.

INWAT (TRL 5–6): Developed hydrological, chemical, and ecological status tools for Mediterranean “intermittent waterways,” integrated into a decision-support system used by local authorities in Morocco. These methods inform “drought-cycle” indicators in the **Water Resilience Strategy**, particularly for seasonal watercourses.

MEDSAL (TRL 5–7) and KARMA (TRL 5–7): MEDSAL’s web-GIS service maps coastal-aquifer salinization across 20 sites in Egypt and Tunisia, while KARMA’s Karst Aquifer Map and vulnerability indices guide sustainable abstraction. Both projects feed data into ground-water resilience metrics under the **Water Resilience Strategy**.

RESERVOIR (TRL 5–7): Combined Earth-Observation (EO) monitoring and subsidence risk modeling for North African aquifers. Its open-access dashboards are now used by Algeria’s water directorates to prioritize groundwater conservation measures under the **Water Resilience Strategy**.

2. European Ocean Pact (2025) – Coastal Resilience

SUSTAINCOAST (TRL 5–7): Deployed salinity-monitoring sensor networks and piloted three managed aquifer recharge (MAR) basins in Morocco, Egypt, and Lebanon. Its multi-criteria Decision Support System (DSS) integrates remote sensing, hydrodynamic models, and socio-economic assessments to project sea-level-induced saltwater intrusion under RCP 4.5/8.5. By demonstrating a 20 % improvement in groundwater quality through community-managed MAR, SUSTAINCOAST informs “groundwater protection” measures in the **Water Framework Directive’s** groundwater annex and underpins coastal-resilience indicators in the **Ocean Pact**. · Its adaptation pathways (e.g., seasonal MAR operations) have been adopted by Tunisian and Egyptian climate offices to meet “coastal water quality” targets.

MEDWATERICE & MARA-MEDITERRA (TRL 7–9): Beyond water resilience, both projects quantify downstream nutrient-runoff reductions—≈ 20 % lower loads reaching coastal zones—thereby contributing

to “clean, healthy, productive coastal waters” goals of the **Ocean Pact**. MARA-MEDITERRA’s Living Lab approach in a river basin straddling Spain, Morocco, and Algeria demonstrates best-practice buffer-strip guidelines that limit coastal eutrophication.

AWESOME (TRL 5–7): Developed a WEFE Nexus Management Platform integrating hydroponic/aquaponic systems to reduce pressure on freshwater and terrestrial ecosystems. Case studies in Egypt’s Nile Delta demonstrate how aquaponics lower coastal nutrient loads, feeding directly into Pact objectives on “marine ecosystem restoration.”

InTheMED (TRL 5–7): Created high-resolution monitoring and remediation strategies for Mediterranean aquifers, with a focus on coastal zones in Lebanon and Italy. Its governance frameworks (e.g., “Living Labs”) advance best practices in coastal aquifer protection, aligning with the **Ocean Pact**’s call to “restore salinized coastal aquifers.”

FIT4REUSE & MEDSAL: By extending wastewater reuse away from coasts, FIT4REUSE reduces direct discharges into near-shore waters. Paired with MEDSAL’s aquifer-salinization maps, these efforts help coastal municipalities adopt “zero-discharge” policies demanded by the **Ocean Pact**.

3. A Soil Deal for Europe (Mission 2021), Farm to Fork Strategy & EU Soil Strategy for 2030

HALOFARMS (TRL 5–7): Tested saline-tolerant genotypes and organic amendments (biochar, compost blends) at eight pilot sites in North Africa and the Levant, demonstrating a 35 % increase in soil organic carbon and halting salinization on 1 500 ha of degraded land. Its bioremediation protocols directly feed into “Soil Organic Carbon Conservation” and “Salinization Prevention” indicators of the **Soil Deal** and the **EU Soil Strategy for 2030**, while also supporting **Farm to Fork** goals on reducing chemical inputs (– 20 % fertilizer use) and enhancing on-farm biodiversity (+ 25 % species richness).

REVINE (TRL 5): Deployed phytoremediation plots at five polluted sites in Tunisia and Egypt, achieving a 40 % reduction in heavy-metal concentrations (e.g., Cd, Pb) through hyperaccumulator crops and microbial consortia. Its “Soil Pollution Remediation” protocols are cited in national **Soil Deal** action plans and support **Farm to Fork**’s objective of safe, sustainable food production.

4CEMED (TRL 6–7): Established conservation-agriculture trials across three Mediterranean countries, combining cover cropping, reduced tillage, and legume-cereal rotations. By enhancing soil structure and reducing erosion by 30 %, 4CEMED strengthens “Erosion Prevention” targets under the **Soil Deal** and informs **CAP Post-2027** eco-scheme design on soil-health payments.

SUSTAINOLIVE (TRL 6): Promoted biochar and compost use in olive groves at five sites in Morocco and Tunisia. Demonstrated 20 % increase in soil water-holding capacity and a 15 % yield boost. Its farmer-training modules feed directly into **Soil Deal** capacity-building targets and support **European Organic Action Plan 2030** by validating organic soil-amendment protocols under high-salinity stress.

TRANSITION (TRL 5–6) & SUSFORAGE (TRL 6): Developed agroecological restoration guidelines (e.g., cover-crop species selection) and tested them in Spain and Greece, reducing topsoil erosion by 25 %. Their protocols inform “Soil Restoration” indicators in both the **Soil Deal** and the **EU Soil Strategy for 2030**, while also linking to **Farm to Fork**’s “hidden-cost” assessments of nutrient leaching.

4. Restore Our Ocean and Waters (Mission 2021) & Zero Pollution Action Plan

FIT4REUSE (TRL 5–7): By removing 85 % of nitrates, phosphates, and pesticides in treated effluent, FIT4REUSE contributes to the **Zero Pollution Action Plan**’s target to halve chemical pollution by 2030. Its

nature-based systems inform national water-quality standards in Lebanon and Tunisia, aiding progress toward the **Restore Our Ocean and Waters** Mission’s “good status” for aquatic ecosystems.

MARA-MEDITERRA (TRL 7–9): Its multi-sectoral decision-support platform quantifies nutrient loads from upstream agriculture, demonstrating a 28 % reduction in nitrate leaching when agroecological buffer strips are applied. This evidence supports **Restore Our Ocean** goals to cut nutrient runoff by 50 % and helps shape River Basin Management Plans in EU (Spain) and non-EU (Algeria, Morocco) riparian areas.

SUSTAINCOAST (TRL 5–7): By showing how managed aquifer recharge (MAR) dilutes nutrient loads before they reach the coast, SUSTAINCOAST aligns with the **Zero Pollution Action Plan** and supports coastal water-quality objectives under the **Restore Our Ocean** Mission. Its community governance models have been adopted in Egypt’s Red Sea governorates to meet “good ecological status” targets for coastal aquifers.

5. Adaptation to Climate Change, including Societal Transformation (Mission 2021)

VEG-ADAPT (TRL 5–7): Developed and field-tested drought- and heat-tolerant vegetable varieties (e.g., tomato, melon) in Egypt, Tunisia, and Spain. Paired with on-farm demonstration sites, these stress-resilient genotypes inform national climate adaptation plans and support “climate-smart agriculture” targets of the **Adaptation Mission**.

FREECLIMB (TRL 5–6): Created genomic selection tools for climate-resilient fruit crops in Morocco and Algeria. Its breeding protocols for heat-tolerant citrus and stone fruit directly feed into adaptation indicators under the **Adaptation Mission**, offering a blueprint to scale resilient varietal development across North Africa.

AWESOME (TRL 5–7): Beyond water reuse, AWESOME’s aquaponic/aeroponic hydroponic systems in Egypt demonstrate how alternative food-production methods can increase adaptive capacity under extreme drought. By showcasing a 30 % water-use reduction compared to conventional open-field irrigation, AWESOME informs “agro-hydro” adaptation strategies within the Mission.

ADAPT-HERD (TRL 4–5): Generated management strategies for small ruminants under heat stress across Jordan and Lebanon. By identifying feed-regime adjustments that reduce heat-stress–related mortality by 20 %, ADAPT-HERD’s guidelines support “climate-resilient livestock” objectives of the **Adaptation Mission**, complementing crop-focused adaptation efforts.

6. Synergies with Other EU Missions & Regional/FAO Frameworks

Healthy Oceans, Seas, Coastal and Inland Waters (Mission 2021):

MARA-MEDITERRA & **SUSTAINCOAST** serve as WEFE “Living Labs” that demonstrate how integrated agriculture-to-coast measures can restore inland and near-shore waters. Their governance models have been highlighted in UfM consultations on the **WEFE Nexus Regional Strategy** as templates for transboundary “blue-water” management.

FIT4REUSE and **MEDWATERICE** have been cited in FAO workshops (Cairo, March 2024) for “Risk-Based Wastewater Reuse” and “Sustainable Rice Ecosystems,” contributing case studies to **FAO SOFA 2024**. By quantifying “hidden costs” of pollution and demonstrating mitigation pathways, these projects enrich FAO’s nexus capacity-building curricula.

A Soil Deal for Europe (Mission 2021):

HALOFARMS, **REVINE**, and **4CEMED** provide “soil restoration protocols” that are incorporated into **Soil Deal** pilot projects in southern France and northern Tunisia. Their organic amendment trials (e.g., biochar,

compost) helped refine **Soil Deal** guidance on “land-degradation neutrality” and “carbon sequestration targets.”

Adaptation to Climate Change, including Societal Transformation (Mission 2021):

VEG-ADAPT and **FREECLIMB** have shared drought-tolerance gene-marker data with the EU Commission’s “Climate-Resilient Varieties Platform,” informing cross-mission breeding roadmaps.

ADAPT-HERD’s heat-stress mitigation guidelines are referenced in the Commission’s “Livestock Climate Resilience Toolkit.”

UfM WEFE Nexus Regional Strategy (2021 Roadmap):

PRIMA’s **MARA-MEDITERRA**, **SUSTAINCOAST**, **InTheMED**, and **AWESOME** have been formally recognized as flagship “Nexus Living Labs” by the UfM. By co-creating policy briefs with local ministries (e.g., Jordan’s Water Authority, Morocco’s Department of Agriculture), these projects help embed WEFE trade-off analyses into UfM Water Agenda recommendations.

HALOFARMS and **REVINE** feed into UfM’s “Soil Health Initiative” under the GreenerMed Agenda by providing validated protocols for salinization remediation and heavy-metal detoxification, slated for scaling in North Africa under the UfM’s Mediterranean Soil Partnership.

FAO WEFE Nexus Guidance (2018) & SOFA 2024:

FIT4REUSE and **SUSTAINCOAST** adopted FAO’s “Risk-Based Wastewater Reuse” and “Managed Aquifer Recharge” guidelines. Their case studies have been cited in **FAO SOFA 2024** as exemplars for “Safe Irrigation Under Scarcity.”

HALOFARMS, **REVINE**, and **4CEMED** contributed “hidden-cost” metrics (e.g., €600 ha⁻¹ yr⁻¹ in yield loss due to salinization; €350 ha⁻¹ yr⁻¹ in remediation costs) to FAO’s **Externality Valuation Module**, strengthening FAO’s policy guidance on sustainable land management in North Africa and the Levant.

Advancing the 2030 Agenda: PRIMA-SDG Tool and Key Findings

PRIMA’s commitment to innovative, inclusive, and socially impactful science is reflected in its alignment with the Sustainable Development Goals (SDGs). PRIMA projects respond to key societal needs by collaboratively developing and testing solutions tailored to the Mediterranean context. To quantify their contributions to the 2030 Agenda, PRIMA applied a dedicated assessment instrument—the **PRIMA-SDG Tool**—to a portfolio of 57 completed projects.

The tool is based on a two-stage methodology designed to translate project-level data into measurable SDG contributions. It consists of:

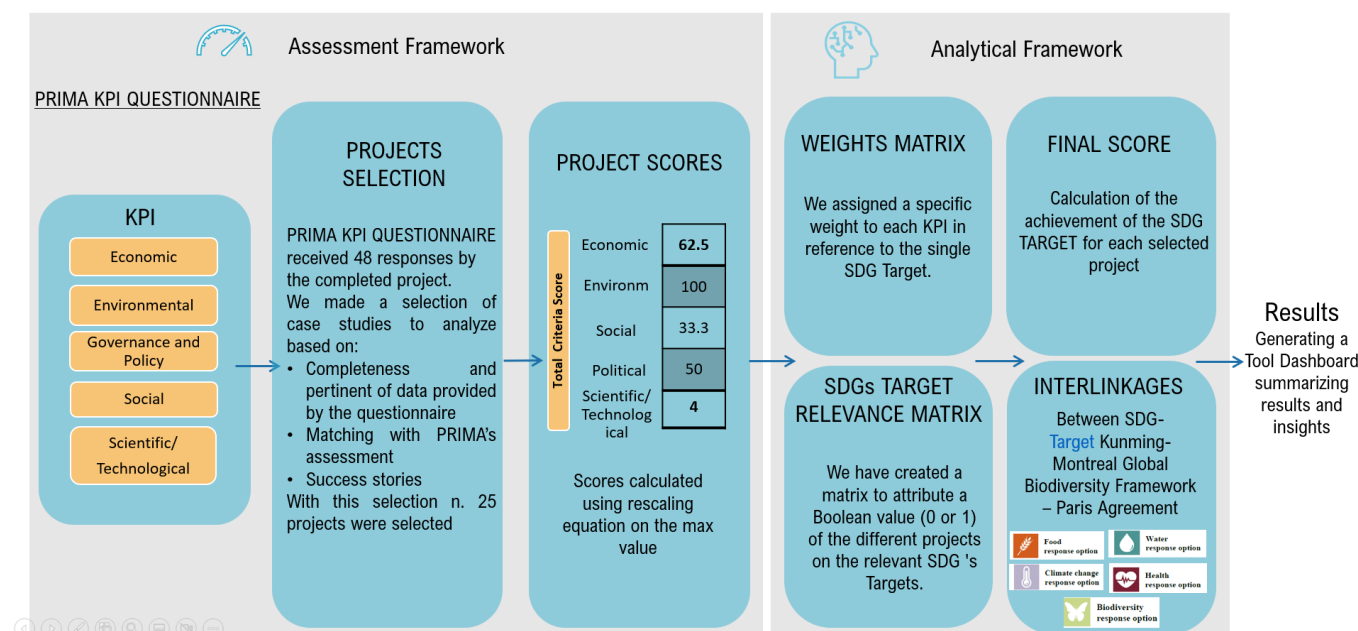
Assessment Framework: Calculates normalized scores across five impact dimensions—Economic, Environmental, Governance & Policy, Social, and Scientific/Technological—based on data collected via a Key Performance Indicator (KPI) questionnaire.

Analytical Framework: Maps these scores to SDG targets using a Weights Matrix (assigning relative importance to each impact dimension) and a Target Relevance Matrix (linking dimensions to specific SDG targets).

This methodology is implemented through a standalone Python-based software application (*PRIMA_SDG_Projects_v6.exe*), which generates structured outputs for visualization in an interactive

Power BI dashboard. Users can modify weightings and relevance parameters, enabling dynamic scenario analysis and comparative project assessments. The tool also supports exploration of cross-cutting interlinkages between domains such as food, biodiversity, water, climate, and health, in line with the [IPBES Nexus Assessment](#).

Infographic of the PRIMA-SDG-Tool structure for project-level SDG assessment



The SDG Evaluation Tool (SDG) was developed using Python and is distributed in an executable format (PRIMA_SDG_Projects_v6.exe). This allows it to be used on any computer, even those without a Python installation. The executable also enables users to modify weights and relevance matrices that are accessed by the algorithms according to their needs. Upon execution, the tool automatically generates the file output_SDG_for_PRIMA.xlsx in the output folder, which serves as the input for the interactive dashboard created in Microsoft Power BI. The users before a new run can change the weights and relevance matrices, and launch the executable to obtain a new output file.

Key Findings from the application of PRIMA-SDG Tool to 57 projects revealed

The application of the PRIMA-SDG Tool to 57 projects revealed a diverse impact profile:

Highest impact was recorded in Scientific & Technological domains, with an average score of 41.1, reflecting a strong emphasis on research excellence and innovation. This aligns with SDG 9, particularly target 9.5 (enhancing R&D capacity).

Moderate performance was observed in Economic (35.4) and Social (28.7) dimensions, while Environmental (26.8) and especially Governance & Policy Impact (16.0) scored lower, highlighting gaps in institutional integration and long-term sustainability anchoring.

SDG Target Contributions:

Projects demonstrated strong alignment with several critical SDG targets, especially those related to water, ecosystems, and climate:

- SDG 6.4 – Water use efficiency: 1,404 references (~24.6 per project)
- SDG 12.2 – Sustainable use of natural resources: 1,128 references (~19.8 per project)
- SDG 15.1 – Ecosystem conservation: 1,156 references (~20.3 per project)
- SDG 13.1 & 13.2 – Climate resilience and integration: 1,564 references (~27.4 per project)
- Interlinkages and Systemic Synergies:

The interlinkage analysis showed the strongest cross-sector synergies in:

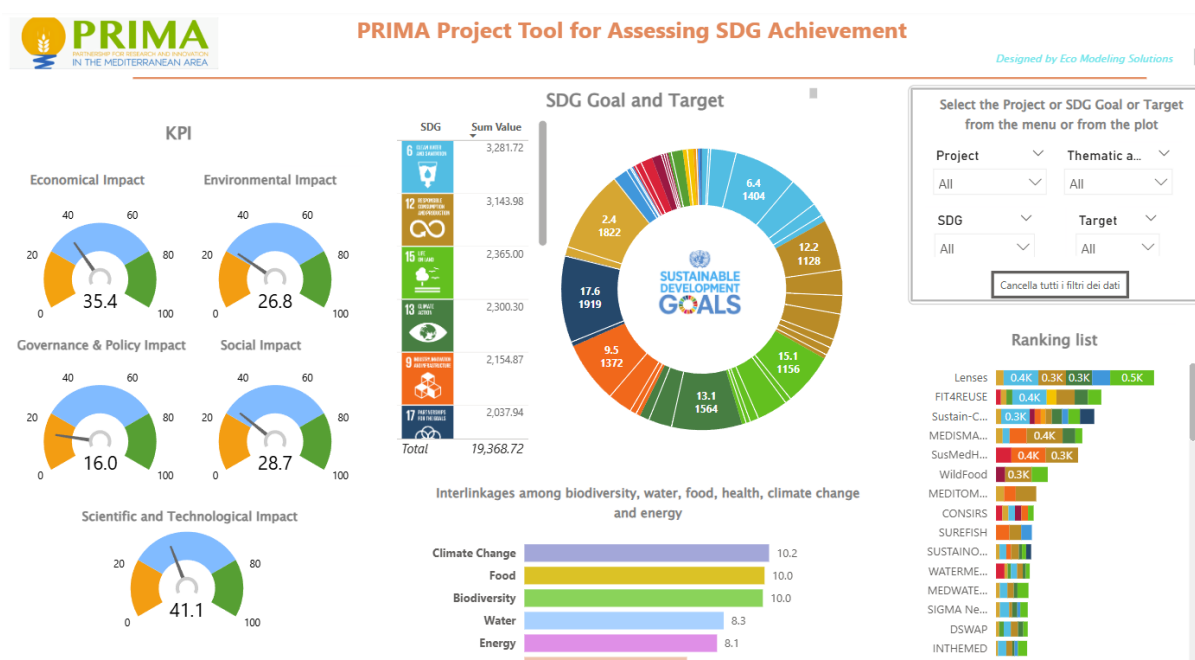
Climate: 10.2

Food: 10.0

Biodiversity: 10.0

These results affirm the coherence of PRIMA's portfolio with the IPBES recommendations for cross-sectoral, integrated responses to Mediterranean challenges. However, Health (6.8) and Energy (8.1) showed weaker integration, and SDG 16 (peace, justice, and strong institutions) was notably underrepresented.

Overview of the distribution and intensity of impacts across the Sustainable Development Goals (SDGs).



The PRIMA-SDG analysis confirms that PRIMA-funded projects are meaningfully advancing multiple sustainability goals—particularly in climate resilience, resource efficiency, and biodiversity protection. However, the relatively low governance and policy scores indicate the need for deeper institutional embedding, regulatory engagement, and systemic uptake. Addressing these gaps will be key to transforming promising research outcomes into long-lasting, replicable solutions.

Going forward, aligning PRIMA activities with broader SDG interlinkages—especially across SDGs 13, 14, 15, and 16—and operationalising the concept of “nexus governance” can amplify the transformative impact of PRIMA investments. This includes combining sustainable agriculture, ecological restoration, and integrated water management with inclusive, adaptive policy frameworks, in line with the [Kunming-Montreal Global Biodiversity Framework](#) and the [IPBES Nexus Assessment \(2024\)](#).

Progress of PRIMA towards its operational objectives

The PRIMA-SDG Tool assessed 57 completed projects across five impact dimensions. This evidence-based process drew on over 170 Key Exploitable Results (KERs) and output metrics such as 630 peer-reviewed publications, 8 patents, and 20 policy briefs. Below is a synthesis of outcomes, SDG contributions, and illustrative KERs for each dimension.

1. Economic Impact

Score: 35.4 / 100

49 KERs demonstrate high economic or business potential, reflecting PRIMA’s success in developing market-ready innovations.

Examples from KERs:

“Hydroponic and Aquaponic Systems” – Deployment of cost-efficient soilless farming to reduce inputs and optimise yields.

“Design of innovative camel dairy products” – Valorisation of underused food chains and support for rural entrepreneurship.

Publications/Patents:

Multiple prototypes reached TRL 6–7, with several pilot-tested.

8 patents were filed, especially in water treatment, food preservation, and agri-sensor domains.

Linked SDGs:

SDG 8.2, 9.4, 12.3

2. Societal Impact

Score: 28.7 / 100

24 KERs are classified with high societal potential, often involving training, local empowerment, and social inclusion.

Examples from KERs:

“Educational Materials and Training Programs on Camel Breeding” – Tailored to rural populations in North Africa.

“MEDSAL Training Platform” – Capacity-building on groundwater salinity for water managers and local communities.

Policy Briefs:

20 policy briefs address inclusive governance, food security, and community resilience.

Linked SDGs:

SDG 5.5, 10.2, 11.3

3. Scientific and Technological Impact

Score: 41.1 / 100 (highest)

65 KERs are classified as having high scientific potential—PRIMA’s strongest dimension. The programme also contributed 630 scientific publications and open datasets.

Examples from KERs:

“Phenology Model for Climate-Resilient Fruit Cultivation” – Used in climate change impact projections.

“ArtisaneFood decision support tool” – Advanced analytics for food safety in artisanal production systems.

Open Science Outputs:

Over 630 peer-reviewed publications between 2019–2024

Multiple open-source tools and training materials

Linked SDGs:

SDG 9.5, 12.a, 17.6

4. Environmental Impact

Score: 26.8 / 100

Environmental benefits are embedded in over 40 KERs, with major contributions to water efficiency, sustainable farming, and biodiversity.

Examples from KERs:

“Ready-to-Eat Tomato and Leafy Vegetable Products from Hydroponics” – Reduces land footprint and water use.

“Nature-Based Solutions for Agroecological Transitions” – Applied in degraded Mediterranean landscapes.

SDG Results:

SDG 6.4 (1,404 references)

SDG 15.1 (1,156)

SDG 13.1/13.2 (1,564)

Linked SDGs:

SDG 6, 12.2, 13, 15

5. Governance & Policy Impact

Score: 16.0 / 100 (lowest)

Only 29 KERs reported high policy or regulatory potential. Policy uptake remains a key area for improvement.

Examples from KERs:

“New Regulation for Camel Milk Production” – Adopted in French-speaking North Africa to enable commercialisation.

“Risk Models for Traditional Foods” – Used by regulatory authorities in food safety planning.

Challenges:

Limited engagement with SDG 16 targets

Weak integration of governance mechanisms and rights-based approaches

Linked SDGs:

SDG 16.6, 17.14

The KER analysis confirms that PRIMA projects are generating measurable, diverse impacts across all five dimensions of sustainability. Scientific and technological outcomes are particularly strong, while economic and social dimensions are also well represented. Addressing policy integration and institutional uptake remains essential to unlock PRIMA's full systemic potential and reinforce its contribution to the 2030 Agenda.

Regional Impacts and Sustainability

PRIMA systematically addresses unsustainable water and food management by harmonizing research priorities between the EU and Mediterranean partner countries, and validating solutions through practical local demonstrations. These efforts have resulted in notable regional transformations, including:

Economic viability through resource-efficient technologies and products.

Reduced crop failures and increased market stability, enhancing rural economies.

Up to 30% reduction in greenhouse gas emissions through integration of renewable energy, particularly solar, into agricultural practices.

PRIMA has significantly addressed the unsustainable management of water resources and food security by developing solutions focused on environmental sustainability. These include advanced water-use efficiency systems, greenhouse and hydroponic technologies, resource conservation methods, and pollution prevention practices. PRIMA projects have substantially contributed to scientific advancement through innovative research models, climate-adaptive techniques, methodological improvements, and enriched scientific knowledge and protocols. Additionally, PRIMA initiatives have provided economically viable solutions, including commercially promising products, market-ready technologies, enhanced resource efficiency, and productivity-enhancing tools. The economic and social impacts have been notable. Communities involved in PRIMA demonstration sites reported fewer crop failures during drought years, contributing to local market stability and potential increases in rural incomes. In some pilot areas, greenhouse gas emissions dropped by up to 30%, thanks to the integration of renewable energy—particularly solar—into agricultural operations.

At the micro level, PRIMA-funded initiatives have yielded substantial scientific, economic, environmental, social, and policy impacts. In terms of market readiness, CONSIRS' greenhouse climate-control system demonstrates notable water and energy savings, positioning it near market deployment (TRL5). AWESOME's hydroponic and aquaponic systems have realized water-use efficiencies up to eight times greater than traditional methods and are actively exploited commercially by private entities such as Agrimatic and Plug'n'Grow. Socially, the AWESOME project has enhanced regional resilience by training 26 professionals in precision agriculture, remote sensing, and irrigation management, thus empowering local farmers and SMEs. Regarding policy impact, DSWAP developed a decision-support tool for reclaimed water management, which is actively promoted among regional water authorities, while AWESOME's integrated resource management platform supports ministries and basin organizations in informed water governance decisions. This combined emphasis on practical skill-building and policy-relevant innovation has fostered a coherent scientific and operational framework, paving the way for sustainable resource management across Mediterranean countries.

At the macro level, these efforts have already begun to influence national R&I agendas across the region. *Tunisia's 2022–2027 national research and innovation strategy*¹⁰ explicitly prioritizes sustainable water management and climate adaptation—core themes of PRIMA's SRIA. Tunisia's association with Horizon Europe (effective 9 June 2022) included a Policy Support Facility review recommending the alignment of national R&I programmes with PRIMA's water-efficiency and Agri-Food priorities. [Jordan's 2023–2040 National Water Strategy](#) echoes PRIMA's calls for smart farming and integrated water management, targeting a 25% reduction in

¹⁰ Tunisia's National Research and Innovation Strategy 2022–2027 was officially adopted on 21 June 2022, following extensive consultations with stakeholders. The strategy aims to enhance the country's research and innovation ecosystem by promoting private sector participation in research and development (R&D)

water loss by 2040. The strategy commits to scaling wastewater reuse and renewable-powered desalination, directly aligning with PRIMA's operational objectives. [Lebanon's 2024–2035 National Water Strategy](#) similarly calls for a shift from fragmented sectoral plans to a holistic, climate-resilient approach, integrating efficient irrigation, watershed protection, and policy harmonization. It directly references PRIMA's SRIA principles and has led to the realignment of national R&I calls toward drip irrigation, wastewater reuse, and agroecological practices.

Today, PRIMA functions not just as a funding mechanism, but as a nexus for knowledge exchange, joint capacity-building, and regional policy alignment. It is a key pillar of the Euro-Mediterranean Hub for Research and Innovation, a one-stop platform for accessing research outputs, policy briefs, best practices, and collaborative opportunities. Through this Hub, stakeholders in areas such as health, renewable energy, and climate resilience can access funding, networks, and cluster organizations—ensuring that PRIMA's innovations and insights are widely disseminated and adopted.

Chapter 8: Added Value

PRIMA demonstrates the potential of science diplomacy and regional collaboration, utilizing economies of scale and cross-border externalities to address important challenges in the Mediterranean. This approach has advanced scientific and technological innovation while also promoting political and socio-economic cohesion, resulting in significant structural changes.

By bringing together countries with a shared vision, PRIMA has established a platform that uses collective resources, expertise, and innovation to tackle issues such as water scarcity, food security, and climate resilience. The governance model encourages equal participation and ownership, and the integrated approach aims for solutions that are both innovative and sustainable. In addition to advancing research and technological development, PRIMA's work has had notable socio-economic and political effects, connecting fragmented sectors and contributing to a more unified and resilient Mediterranean region.

Analysis of PRIMA's added value and role as a science diplomacy tool

At the regional level, the [1995 Barcelona Declaration](#) recognized the significant influence of science and technology on the Euro-Mediterranean region's socioeconomic development. Building on this, the 2017 EuroMed Conference on Research and Innovation underscored the importance of R&I in addressing regional challenges. PRIMA, launched in 2018, became one of the key achievements of these efforts. Its role was further emphasized in 2021 when the UfM Regional Platform on Research and Innovation approved a new research agenda, identifying PRIMA as a critical implementation structure. These milestones highlight the region's commitment to advancing science and innovation, with a UfM Ministerial Conference on R&I scheduled for 2022.

At the EU level, science diplomacy is recognized as a pivotal tool for addressing global challenges, fostering collaboration, and enhancing competitiveness. The EU integrates the [Global Approach to Research and Innovation \(R&I\)](#) into its foreign and security policies, reflecting a commitment to using scientific cooperation to address shared challenges. PRIMA exemplifies this vision by engaging EU and non-EU Mediterranean countries in tackling issues such as water scarcity, food security, and sustainable agriculture. Its alignment with the [European Commission's 2024-2029 political guidelines](#) further emphasizes the importance of the Mediterranean in the EU's external relations.

PRIMA has become a flagship example of science diplomacy, bridging divides and fostering trust among nations with diverse political and cultural contexts. Its projects not only advance scientific knowledge but also contribute to broader diplomatic and geopolitical goals.

Building Trust Through Science:

PRIMA acts as a neutral platform that unites countries across the Mediterranean, enabling collaboration even in politically sensitive contexts.

Case Studies: ECOFUTURE and SALAM Med Projects



ECOFUTURE Project:

The ECOFUTURE project, funded under PRIMA, focuses on the Water-Energy-Food-Ecosystems (WEFE) nexus in the Jordan Valley, involving partners from Palestine, Jordan, and Israel. Despite geopolitical tensions, the project has progressed through effective risk management and communication strategies, highlighting its resilience and the role of science in fostering cooperation.



SALAM Med Project:

The SALAM Med project addresses land degradation and desertification in Mediterranean drylands, combining scientific research with social learning to develop sustainable land and water management solutions. This project brings together research organizations, NGOs, and SMEs, promoting a collaborative environment that aligns with PRIMA's goals of sustainable development and climate resilience.

Enhancing EU Soft Power:

PRIMA shows the EU's efforts to address regional challenges, positioning the Mediterranean as an area of innovation and enhancing the EU's geopolitical presence.

Promotion of Innovation:

By encouraging collaboration on emerging technologies and sustainable practices, PRIMA aims to position the region as a leader in areas such as climate resilience and sustainable agriculture.

Unique aspects and contributions compared to other initiatives/Partnerships

PRIMA focuses on the Mediterranean, unlike broader EU initiatives. It addresses water scarcity and food security, with a governance model ensuring equal decision-making for all countries, whether EU members or not. This promotes regional cooperation and connects Europe with its [Southern Neighbourhood](#).

PRIMA places a strong emphasis on capacity building to ensure that solutions are deeply embedded in local contexts, thereby enhancing their relevance and sustainability. By incorporating science diplomacy into its framework, PRIMA addresses not only scientific challenges but also broader geopolitical and socio-economic issues, contributing to regional stability and bolstering the European Union's soft power.

Structuring and mobilise an otherwise fragmented landscape of different sectors

PRIMA has successfully addressed the fragmentation of R&I efforts in the Mediterranean by adopting strategic approaches:

The Integrated WEFE Nexus Approach of PRIMA focuses on the connections among water, energy, food, and ecosystems for cohesive resource management. This framework fosters interdisciplinary collaboration and innovation beyond isolated interventions. PRIMA addresses interconnected challenges in the Mediterranean region through targeted projects and research. The program shapes sustainable development strategies by incorporating WEFE nexus principles, emphasizing governance, research, and innovation.

Inclusive Governance: PRIMA's governance model involves both EU and non-EU countries in co-ownership, co-management, and co-funding of projects. This inclusivity fosters regional cooperation and ensures diverse stakeholder engagement.

Socioeconomic Integration: PRIMA embeds socio-economic dimensions into its projects, addressing factors such as demographic trends and urbanization. This approach promotes sustainable development and resilience in the region.

PRIMA's Role in Structuring Fragmented R&I Programmes

In 2016, the scenario for Research and Innovation (R&I) in the Mediterranean region was highly fragmented, as highlighted in the [Impact Assessment accompanying the proposal for the PRIMA Joint Programme](#). The assessment revealed significant challenges, including uneven R&I resources, limited coordination among Mediterranean countries, and a lack of long-term strategic agendas. These issues hindered the development and implementation of innovative solutions needed to address the region's critical challenges, particularly in the areas of sustainable water provision and food systems.

PRIMA was established to integrate and structure these fragmented R&I efforts across the Mediterranean. Since its inception, PRIMA has played a pivotal role in aligning research initiatives with the EU Green Deal, regional agendas such as the UfM R&I Platform, the UfM GreenerMed Agenda, and the UfM Water Agenda, as well as international frameworks like the Sustainable Development Goals (SDGs). This alignment, rooted in PRIMA's Strategic Research and Innovation Agenda, has focused on key challenges such as water scarcity, sustainable agriculture, and renewable energy, ensuring that research efforts remain impactful and scalable across the region.

PRIMA has fostered interdisciplinary research, bridging gaps between various sectors to develop innovative solutions tailored to the Mediterranean's unique needs. This approach has strengthened the regional innovation ecosystem, positioning PRIMA as a significant player in the Euro-Mediterranean R&I landscape.

A study by Reusch et al. (2018) highlighted that, as of 2018, the Mediterranean lagged behind regions such as the Baltic and North Seas in research activities, data availability, and governance structures. By 2024, substantial improvements have been observed, largely driven by increased funding programs like PRIMA and a growing number of scientific publications focusing on the region. Data availability has improved, demonstrating the benefits of data sharing in fostering knowledge co-creation and production. However, progress in monitoring activities and governance structures remains modest and fragmented, often tied to individual project activities with limited timeframes. Sustained funding and a long-term strategic

approach to monitoring, data sharing, and governance are needed to ensure systemic improvements in these areas.

In summary, PRIMA's efforts have been instrumental in enhancing R&I integration in the Mediterranean, leading to improved data availability and research activities. However, ongoing efforts are necessary to strengthen monitoring and governance frameworks to ensure sustainable progress.

Table 14 Overview of data availability, system understanding, and management/governance frameworks in the Baltic Sea compared to other coastal regions globally, including the Mediterranean Sea (modified from Reusch et al., 2018). In the heatmap, green represents strong scientific knowledge and effective management/governance structures, red signifies poor performance in these areas, and yellow indicates intermediate levels. Detailed documentation on the scoring methodology for each system and parameter can be found in Reusch et al. (2018)¹¹.

System	Research activities	Monitoring activities	Data availability	Governance structure
Baltic Sea	Green	Green	Green	Green
North Sea	Green	Yellow	Yellow	Green
Mediterranean Sea	Red	Yellow	Red	Yellow
Black Sea	Green	Red	Red	Yellow
Gulf of Mexico	Yellow	Yellow	Red	Red
East China Sea	Red	Red	Red	Red
Barents Sea	Red	Red	Green	Red

Overview of Mediterranean Sea R&I Development (2018-2024)

The findings from Reusch et al. (2018) provided a baseline for assessing the Mediterranean's progress in research and governance. For the preparation of this evaluation report, one of the co-authors of Reusch et al. (2018), who is also a coordinator of a PRIMA S1 project, reassessed the status of the Mediterranean Sea using the same methodology. The re-evaluation, summarized in Table 1, reflects significant improvements over the past years due to increased funding and a rise in scientific output.

However, while scientific knowledge and governance structures have strengthened, challenges remain in monitoring activities and data availability. These aspects continue to be fragmented among individual projects, with many efforts halting after project completion due to a lack of sustained funding and long-term vision. A strategic and coordinated approach is still needed to achieve systemic and lasting improvements.

Table 4 Re-evaluation of the Mediterranean Sea status in 2024 compared to 2018 using the same methodology as Reusch et al. (2018). **Green:** Strong scientific knowledge and effective management/governance structures.

Yellow: Intermediate levels of performance and partial improvement.

Red: Poor performance, indicating a need for significant improvement.

¹¹ Reusch et al., Sci. Adv. 2018;doi: 10.1126/sciadv.aar8195.

Indicator	Mediterranean Sea (2018)	Mediterranean Sea (2024)
Scientific Knowledge	● Red	● Green
Management & Governance	● Yellow	● Green
Data Availability	● Red	● Yellow
Monitoring Activities	● Yellow	● Yellow

Chapter 9: Synergies with Other EU Partnerships

Analysis of synergies with other EU partnerships, missions, clusters, and programmes

PRIMA, in line with [Article 10 of the Horizon Europe Regulation](#), is committed to fostering synergies with EU programs, missions, and initiatives. This ensures coherence, avoids duplication, and enhances complementarities, furthering PRIMA's alignment with broader EU goals. Through this approach, PRIMA addresses pressing Mediterranean challenges, contributing to an integrated European Research Area (ERA) while supporting the objectives of [Horizon Europe](#).

Engagement with EU Co-funded Partnerships

[Water4All Partnership](#)

PRIMA has been actively involved in workshops shaping the Strategic Research and Innovation Agenda (SRIA).

[European Partnership on Animal Health and Welfare](#)

PRIMA contributes through its participation in the Stakeholder Board, ensuring coherence with Mediterranean-specific needs.

PRIMA's collaborations span multiple dimensions, showcasing a strategic approach to fostering synergies.

Planning Level: PRIMA partners with key stakeholders to align Research and Innovation priorities with EU strategies while addressing Mediterranean challenges.

Project Level: PRIMA enhances project impact by promoting the exchange of tools, methodologies, and results. It encourages applicants to build synergies with projects under relevant **EU Partnerships**, contributing to European goals and addressing regional issues.

Forward-looking Collaborations with EU Partnerships under Cluster 6

PRIMA is actively seeking to establish collaborations with several key European partnerships under [Horizon Europe's Cluster 6](#), which focuses on "Food, Bioeconomy, Natural Resources, Agriculture and Environment." These potential collaborations aim to address shared challenges and foster innovation in the Mediterranean region, aligning with PRIMA's objectives and broader EU strategies:

Future European Agriculture of Data Initiative PRIMA is examining ways to collaborate on frameworks to improve the use of agricultural data in the Mediterranean. The focus is on utilizing data for precision agriculture and supporting sustainable practices specific to the region's needs. By participating in this initiative, PRIMA aims to make agricultural data more accessible and usable within Mediterranean contexts. This collaboration enables regional stakeholders to adopt precision agriculture technologies and ensures that innovations developed in one area can be adapted and applied in other areas.

[Antimicrobial Resistance \(One Health/AMR\)](#)

Under Cluster 6, PRIMA seeks to align its research efforts on antimicrobial resistance (AMR) with broader EU strategies. By fostering potential synergies between health and agriculture sectors, PRIMA aims to contribute to innovative and complementary solutions for addressing global AMR challenges.

[Partnership for Sustainable Food Systems for People, Planet, and Climate \(FUTUREFOODS\)](#)

PRIMA aspires to collaborate with this partnership to promote sustainable food systems that address the unique challenges of the Mediterranean. Prospective collaborative efforts would focus on reducing environmental impact, improving food security, and enhancing resilience in the region's agri-food systems.

[Sustainable Blue Economy Partnership](#)

PRIMA is exploring the potential to partner with this initiative to develop innovative approaches for fostering a sustainable blue economy. Collaborative priorities include promoting sustainable aquaculture and enhancing the resilience of coastal communities in the Mediterranean.

[Biodiversa+](#)

Seeking collaboration with Biodiversa+, a European partnership supporting research on biodiversity and ecosystem services, aligns with PRIMA's mission to promote biodiversity conservation and sustainable ecosystem management in the Mediterranean region.

[Agroecology Partnership](#)

PRIMA aims to collaborate on advancing agroecological transitions to sustainable farming systems, supporting practices that are environmentally friendly and socially equitable.

Additionally, PRIMA is pursuing collaborations with [EIT Knowledge and Innovation Communities \(KICs\)](#) such as [EIT Food](#) and the upcoming [EIT Water](#), as well as [Joint Undertakings](#) like the [European High Performance Computing Joint Undertaking \(EuroHPC JU\)](#), [Global Health EDCTP3](#), and the [Circular Bio-based Europe \(CBE\) Partnership](#) under Cluster 6. Specifically, with the CBE Partnership, PRIMA aims to participate in webinars and workshops to promote circular economy practices. The objective is to share cross-sector best practices that enhance sustainability across value chains in the Mediterranean.

Synergies with EU Missions

PRIMA collaborates with several EU Missions, aligning its activities with broader EU goals and addressing critical Mediterranean challenges. These partnerships enable PRIMA to contribute to the transformative objectives of the [European Research Area \(ERA\)](#) while fostering sustainable development in the region. Through its annual work plans, PRIMA encourages its projects to include dedicated tasks and allocate resources for coordination and joint activities with relevant Mission-funded projects.

[EU Mission: "Restore Our Ocean and Waters by 2030"](#)

PRIMA actively supports this mission through collaborative research initiatives aimed at improving water restoration and management in the Mediterranean. By funding projects that develop innovative solutions for water sustainability and ecosystem restoration, PRIMA contributes to the mission's goals of protecting and restoring marine and freshwater ecosystems. These efforts tackle Mediterranean-specific challenges, including pollution reduction, water scarcity, and the sustainable use of aquatic resources. Within its annual work plans, PRIMA encourages its projects to incorporate dedicated tasks and resources for coordination and joint activities with Mission-funded projects, enhancing synergy and impact.

[EU Mission: "A Soil Deal for Europe"](#)

In support of this mission, PRIMA has endorsed the [Soil Manifesto](#), reaffirming its commitment to restoring soil health in the Mediterranean. PRIMA allocates resources to research and innovation projects focused on sustainable land management, improving soil fertility, and combating land degradation. Through its annual work plans, PRIMA promotes the inclusion of dedicated tasks and resources for coordination with Mission-funded initiatives. These contributions align with the mission's objectives to establish healthy and resilient soil systems, essential for agricultural productivity, biodiversity, and climate adaptation in the region.

[EU Mission: "Adaptation to Climate Change"](#)

PRIMA collaborates with this mission to enhance the Mediterranean's resilience to climate impacts. Through its projects, PRIMA supports the development of innovative adaptation strategies for water management, agriculture, and ecosystem restoration. For instance, PRIMA-funded initiatives focus on climate-resilient farming practices and water-saving technologies, addressing vulnerabilities unique to the Mediterranean. In its annual work plans, PRIMA encourages projects to include dedicated tasks and resources for coordination and joint activities with relevant Mission-funded projects. These synergies contribute to building climate-resilient regions and communities, aligning with the mission's objectives of preparing Europe for the increasing impacts of climate change.

ERIC INFRASTRUCTURES

In terms of infrastructure, PRIMA benefits from partnerships with [LifeWatch ERIC](#) and [METROFOOD-RI](#), leveraging data storage, sharing, and advanced research facilities. These collaborations enhance the quality of research in food systems and biodiversity conservation.

[LifeWatch ERIC](#), a European Research Infrastructure Consortium, supports scientists investigating biodiversity and ecosystem functions. In collaboration with PRIMA, LifeWatch ERIC provides a platform for storing and sharing PRIMA data.

PRIMA projects can benefit by utilizing LifeWatch ERIC's infrastructure for data storage and analysis, fostering collaborations, and enhancing data availability. This partnership encourages participation from more Mediterranean countries and young researchers.

PRIMA also interacts with other European research infrastructures, such as:

[European Infrastructure for Plant Phenotyping \(EMPHASIS\)](#)

[METROFOOD-RI](#)

EU Funded regional programmes

PRIMA works closely with the [ENI-CBC-MED](#) (*European Neighbourhood Instrument Cross-Border Cooperation Mediterranean Sea Basin Programme*) and the newly launched [INTERREG NEXT MED](#) EU-funded regional programme to strengthen transnational cooperation in the Mediterranean. This partnership tackles common challenges and promotes sustainable development across the region. Key collaborative efforts include:

Joint Events and Webinars: PRIMA and ENI-CBC-MED regularly organize joint events to enhance and capitalize on project findings, they enable knowledge exchange and strengthen project results.

Contribution to Inventories of Best Practices: [MEDWAYCAP's](#) an open platform for the water community to document and share non-conventional water use solutions. This inventory serves as a valuable resource for practitioners in sustainable water management

EU-Africa Partnership collaborations

PRIMA complements the [Food and Nutrition Security and Sustainable Agriculture \(FNSSA\)](#) priority of the EU-African Union research and innovation cooperation. This partnership aims to enhance the impact of AU-EU joint research at the local level by addressing the entire value chain and focusing on demonstration projects to translate research into practical applications.

PRIMA projects can benefit by accessing collaborative networks in Africa, sharing knowledge, and developing solutions applicable across both continents. This fosters pan-African and cross-European cooperation, bolsters regional resilience, and enhances collective efforts to achieve food security and sustainability.

Table 15 PRIMA synergies with EU Partnerships Activities and Outcomes

Organization/Partnership	Organization Type	Activities	Outcomes	Synergy Activities Implemented
Water4All Partnership	EU Partnership	Shaping SRIA and supporting water management in the Mediterranean.	Improved water management strategies and tools.	Participated in SRIA workshops and initiated collaborative water management projects.
European Partnership on Animal Health and Welfare	EU Partnership	Participating in the Stakeholder Board to address Mediterranean-specific needs.	Enhanced coherence in addressing animal health and welfare.	Engaged in Stakeholder Board meetings and aligned projects with Mediterranean needs.
Future European Agriculture of Data Initiative	EU Partnership	Developing frameworks to enhance agricultural data utility for precision agriculture.	Accessible and usable agricultural data for the Mediterranean.	Started collaborative frameworks for agricultural data sharing in precision agriculture.
Antimicrobial Resistance (One Health/AMR)	EU Partnership	Aligning research efforts on AMR with EU strategies.	Synergies between health and agriculture to address AMR.	Co-organized events to align research on AMR with EU strategies.
Partnership for Sustainable Food Systems (FUTUREFOODS)	EU Partnership	Promoting sustainable food systems to reduce environmental impact and enhance food security.	Sustainable food systems with improved resilience and reduced environmental impact.	Collaborated on sustainable food system workshops and joint research projects.
Sustainable Blue Economy Partnership	EU Partnership	Developing sustainable aquaculture and enhancing coastal resilience.	Innovative solutions for sustainable aquaculture and coastal communities.	Launched joint initiatives on aquaculture and coastal resilience in the Mediterranean.
Biodiversa+	EU Partnership	Supporting research on biodiversity and ecosystem services.	Biodiversity conservation and sustainable ecosystem management.	Conducted joint biodiversity research and ecosystem management activities.
Agroecology Partnership	EU Partnership	Advancing agroecological transitions to sustainable farming systems.	Transition to sustainable and equitable farming systems.	Supported agroecology workshops and pilot sustainable farming projects.
EIT Food	Knowledge and Innovation	Promoting innovation in food systems.	Advanced innovation in food production and value chains.	Promoted innovation challenges and knowledge-sharing events in food systems.

	Community (KIC)			
EIT Water	Knowledge and Innovation Community (KIC)	Advancing water-related innovation and sustainability.	Improved water management and sustainability solutions.	Organized collaborative discussions on water sustainability strategies.
EuroHPC JU	Joint Undertaking	Promoting high-performance computing for research.	Enhanced computational resources for research.	Implemented training sessions on high-performance computing for research applications.
Global Health EDCTP3	Joint Undertaking	Fostering global health innovation and collaboration.	Improved health outcomes through research collaboration.	Collaborated on global health impact workshops and funding programs.
Circular Bio-based Europe (CBE) Partnership	Joint Undertaking	Promoting circular economy practices through webinars and workshops.	Increased adoption of circular economy practices.	Facilitated workshops on circular economy practices and cross-sector innovation.
EU Mission: Restore Our Ocean and Waters by 2030	EU Mission	Supporting water restoration and management in the Mediterranean.	Restored and protected marine and freshwater ecosystems.	Co-funded water restoration projects and shared tools with Mission stakeholders.
EU Mission: A Soil Deal for Europe	EU Mission	Restoring soil health and promoting sustainable land management.	Healthy, resilient soil systems supporting productivity and biodiversity.	Developed soil health initiatives and contributed to Soil Manifesto activities.
EU Mission: Adaptation to Climate Change	EU Mission	Enhancing resilience to climate impacts through adaptation strategies.	Climate-resilient farming practices and communities.	Implemented climate adaptation pilot projects on farming and water management.
LifeWatch ERIC	ERIC Infrastructure	Providing data storage and sharing for biodiversity research.	Improved data sharing and research in biodiversity.	Shared biodiversity data through LifeWatch infrastructure and joint studies.
METROFOOD-RI	ERIC Infrastructure	Enhancing research quality in food systems through advanced facilities.	Advanced research capabilities in food and nutrition systems.	Utilized research facilities for food system innovation and regional studies.

European Infrastructure for Plant Phenotyping (EMPHASIS)	ERIC Infrastructure	Supporting plant phenotyping research infrastructure.	Enhanced plant research and phenotyping capabilities.	Collaborated on plant phenotyping technologies for Mediterranean applications.
ENI-CBC-MED	EU Regional Programme	Organizing joint events and contributing to best practices inventory.	Improved water use practices and knowledge sharing.	Hosted joint events and webinars to enhance knowledge exchange on water use.
INTERREG NEXT MED	EU Regional Programme	Strengthening transnational cooperation through joint programs.	Strengthened Mediterranean cooperation and sustainable development.	Strengthened cross-border projects through INTERREG programs.

Regional collaborations

At the regional level, PRIMA collaborates extensively with organizations such as the [Union for the Mediterranean \(UfM\)](#), contributing to initiatives under the GreenerMed Agenda and participating in events like the EU-MED Marketplace.

PRIMA contributes to the [Union for the Mediterranean \(UfM\) R&I platform's Roadmaps](#), focusing on climate change, renewable energy, and health. PRIMA's projects promote sustainable food value chains and drive climate change mitigation.

PRIMA is included and contributes to the [Euromed Research and Innovation Hub](#), which fosters collaboration and innovation across the Mediterranean

PRIMA, through its projects contributes to [Post-2020 Environment Agenda "Towards 2030: Agenda for a Greener Med"](#) on its main axes of work including

Green Economy – Support the transition towards a Green, Circular and Socially Inclusive Economy

Depollution and pollution prevention – Prevent and reduce pollution on land, air and sea

Protect, preserve, manage and restore natural resources – Foster an integrated ecosystem approach for the Mediterranean region, including terrestrial, marine and coastal dimensions

Climate Change

PRIMA is actively contributing to the definition of a Strategy for the Water-Energy-Food-Ecosystems (WEFE) Nexus in the Mediterranean Source-to-Sea (S2S) Continuum in collaboration with EC, [UNEP-MAP](#) and the Secretariat of the Union for the Mediterranean.

[WEFE Community of Practice \(CoP\)](#), along with EC DG Research and Innovation, the Joint Research Centre (JRC), and the UfM Secretariat, steers the WEFE CoP. Initiatives are operationalized through the PRIMA-funded project [WEFE4MED](#) which is aimed to the adoption and operationalization on the ground of the WEFE Nexus approach. will manage the community, fostering engagement, facilitating discussions, and coordinating projects and knowledge-sharing activities. This platform will enable stakeholders to collaborate and promote sustainable, climate-resilient policies throughout the region.

INSTITUT MÉDITERRANÉEN DE L'EAU

- Water Resources Collaboration: PRIMA collaborates with this institute at forums like the World Water Forum, focusing on non-conventional water resources and renewable energies in the Mediterranean. Its partnership with the [Institut Méditerranéen de l'Eau \(IME\)](#) addresses water resource challenges through participation in platforms like the [World Water Forum](#).

ASCAME and IEMED

- Visibility and Webinars: PRIMA's involvement in MedaWeek and joint webinars with IEMED enhances the visibility of PRIMA-funded projects and fosters discussions on the socioeconomic impacts of climate change in the Mediterranean. PRIMA's collaborations with [ASCAME](#) and [IEMED](#) enhance the visibility of PRIMA-funded projects and promote discussions on the socioeconomic impacts of climate change.

MEDWAVES

PRIMA - Partnership for Research and Innovation in the Mediterranean Area

- COP Collaborations: Joint collaborations with MEDWAVES at events like the Arab SME summit and COPs contribute to PRIMA's engagement in climate change, land degradation, and the WEFE Nexus.

UNIMED and BusinessMED

- Capacity Building and Sustainable Development: Collaborations include events like the FOSAMED Master's Programme and webinars focusing on sustainable food systems and gender equality in the green transition.

GWP-MED

Its collaboration with the [Global Water Partnership \(GWP\)](#) focuses on the WEFE Nexus Community of Practice, promoting solutions to water-energy-food-ecosystem challenges. Additionally, PRIMA's engagement with the United Nations University Institute for Integrated Management of Material Fluxes and Resources (UNU-FLORES) supports capacity building through WEFE Nexus workshops.

SDSN Mediterranean

- MOOC Development: PRIMA collaborates with SDSN Mediterranean on the development of a MOOC focused on sustainable food systems from a Mediterranean perspective.

International Organisations

Food and Agriculture Organization (FAO)

PRIMA's partnerships extend to global organizations, reflecting its commitment to addressing interconnected challenges. For instance, PRIMA works with the [Food and Agriculture Organization \(FAO\)](#) through the SFS-MED Platform, coordinating sustainable food systems research in the Mediterranean.

SFS-MED Platform: PRIMA collaborates with FAO within the SFS-MED platform, focusing on better scientific coordination with a regional focus on sustainable food systems in the Mediterranean. Additionally, PRIMA is collaborating with the [Food and Agriculture Organization \(FAO\)](#) and the [International Centre for Advanced Mediterranean Agronomic Studies \(CIHEAM\)](#) within a [Multi-stakeholder Sustainable Food Systems Platform in the Mediterranean](#) (SFS-MED Platform). The [SFS-MED platform](#) serves as a forum for dialogue among diverse stakeholders to promote shared learning and drive sustainable transformation of agri-food systems. Through the [SFS-MED platform](#), PRIMA projects can benefit by accessing resources, enhancing knowledge sharing, and contributing to collective efforts in transforming food systems.

PRIMA office in FAO

The establishment of a PRIMA office at the [Food and Agriculture Organization \(FAO\)](#) is planned, with the signing of a Memorandum of Understanding (MoU) between PRIMA and FAO by the end of 2024. Once operational, this office will enhance collaboration with FAO's sustainable food systems initiatives.

This office will serve as a strategic hub for networking, fostering partnerships, and leveraging FAO's expertise. It will facilitate direct engagement with FAO units, strengthen connections with FAO's regional and country offices, and support PRIMA's efforts through active participation in events.

Consultative Group on International Agricultural Research (CGIAR) collaboration in the [AgriTech4Egypt Innovation Challenge](#)

The challenge is designed to support early-stage agri-tech ventures in Egypt, focusing on areas like digital agriculture, agri-finance solutions, sustainable value chain development, capacity-building tools, and efficient irrigation water management. Participants benefit from a fully funded, four-day immersive bootcamp, expert guidance from CGIAR scientists and industry experts, and a sponsored six-month acceleration program that combines entrepreneurial training with technical assistance. Additionally, participants have the opportunity to test and validate their solutions on the ground with end-users and may receive up to 300,000 EGP as an equity-free grant provided by ASRT. As of November 2024, the acceleration program is ongoing, with a demo day scheduled for November 2024. During this event, the top 15 finalists will have the opportunity to pitch their solutions to investors, industry experts, agribusinesses, scientists, governmental institutions, and partners.

While specific outcomes and impacts of the AgriTech4Egypt Innovation Challenge are yet to be fully realized and reported, the initiative aims to:

Attract global innovations to tackle Egypt's agricultural challenges.

Provide farmers and value chain actors with deployable, affordable solutions.

Create an enabling environment that attracts investments and de-risks technology development for innovations.

Empower rural communities, women, and young entrepreneurs.

Drive economic growth by creating employment and fostering a skilled workforce.

Align efforts with the objectives of the Sustainable Agricultural Development Strategy Towards 2030.

Table 16 Synergies with regional organisations and international organisations

Collaboration Type	Organization/Partnership	Key Activities	Outcomes
Regional Organization	Union for the Mediterranean (UfM)	Contributing to UfM strategies and action plans such as the GreenerMed Agenda , UfM R&I Roadmaps focusing on climate change, renewable energy, and health	Promoted sustainable food value chains and climate-resilient policies.
	Institut Méditerranéen de l'Eau (IME)	Collaborating on non-conventional water resources and renewable energy solutions at the World Water Forum , Bali 2024	Addressed water resource challenges in Mediterranean regions.
	ASCAME	Enhancing visibility of PRIMA projects during the MedaWeek Barcelona event	Increased visibility and engagement in one of the most
	MEDWAVES	Participating in events like COP and the Arab SME Summit to address climate change, land degradation, and WEFE Nexus.	Strengthened regional collaboration on climate resilience and WEFE Nexus.
	IEMED	Jointly elaborated report on SOCIOECONOMIC IMPACTS OF CLIMATE CHANGE IN THE MEDITERRANEAN https://www.iemed.org/wp-content/uploads/2021/11/Policy-Study-6-PRIMA_IEMed.pdf	
	BUSINESS MED		
	UNIMED	Organizing capacity-building events such as FOSAMED Master's Programme and webinars on sustainable food systems and gender equality.	Improved capacity for sustainable systems and gender equality in the Mediterranean.
	SDSN Mediterranean	Developing a MOOC on sustainable food systems with a Mediterranean perspective . Defining tools for measuring the achievements of SDGs in PRIMA projects. SDSN Med report ¹² analyzes the level of progress towards the SDGs in 24 Mediterranean countries, with the objective to favor the implementation of common transformative strategies and actions that could concretely bring to the sustainable development of the region.	Increased educational resources for sustainable food system practices.

¹² Riccaboni, A., Cresti, S., Betti, G., Gagliardi, F., Riccelli, E. A., Stanghellini, G. (2021): *Sustainable Development in the Mediterranean. Report 2021. Transformations to achieve the Sustainable Development Goals*. Siena: Sustainable Development Solutions Network Mediterranean (SDSN Mediterranean) <https://drive.google.com/file/d/1BIELFETv-LbJwCuAKYIFyTc1L42Upvgb/view>

International Organization	Food and Agriculture Organization (FAO)	Collaborating on the SFS-MED Platform, focusing on sustainable food systems " SFS-MED Platform ", a multi-stakeholder initiative initiated by CIHEAM, FAO and UfMS, offers a forum to facilitate collaboration beyond the Food Systems Summit, sharing a common approach to food systems transformation, mobilizing funds and fostering investments, capacities and innovation as a systemic response to the challenges hindering the region. and establishing a PRIMA office at FAO.	Strengthened collaboration and coordination on food system transformation.
	CGIAR	Advancing sustainable agriculture through AgriTech4Egypt Innovation Challenge . Supporting early-stage agri-tech ventures in Egypt through the Accelerate for Impact Platform (A4IP) is a venture space that builds on CGIAR's legacy of Research and Innovation to support both incremental and transformational innovation to address some of the world's most pressing challenges at the nexus of agriculture, environment, and health. A4IP bridges science and entrepreneurship to incubate and accelerate scientific ventures for spin-offs, such as start-ups, that directly respond to market demand and generate both impact and the resources needed to support continued research in pursuit of the Sustainable Development Goals.	Support agri-tech startups with validated technical solutions and market access.

Chapter 10: International Positioning and Visibility

-Overview of PRIMA's international positioning and visibility

PRIMA (Partnership for Research and Innovation in the Mediterranean Area) has established a prominent role in the international context, serving as a global ambassador for Mediterranean research and innovation. Its focus on sustainable management of water resources, food systems, and agricultural practices extends its influence well beyond the Mediterranean region, making PRIMA a reputed entity and a hub for international cooperation.

PRIMA effectively represents Mediterranean research and innovation on the global stage. By addressing critical issues such as water scarcity, food security, and climate resilience, PRIMA promotes the values and scientific capabilities of the Mediterranean region internationally. The organization's participation in major global events like the World Water Forum(<https://www.worldwatercouncil.org/en/world-water-forum>) and the Global Food Security Symposium(<https://www.globalfoodsecuritysymposium.org/>) further cements its role as a global ambassador. These engagements allow PRIMA to showcase its projects, share best practices, and influence global sustainability agendas.

PRIMA is recognized as a leading entity in fostering collaborative research, particularly in tackling environmental and socio-economic challenges. Its reputation is built through:

- International Presence: Active participation in high-profile international conferences such as the European FAO Science and Innovation Days(<https://www.fao.org/about/meetings/science-days-2022/en/>) and the United Nations Climate Change Conferences (COP)(<https://unfccc.int/cop>), which enhances its credibility and visibility.
- High-Level Engagement: PRIMA's strong reputation leads to frequent invitations to high-level discussions, conferences, and political events, where it contributes meaningfully to global dialogues on research and innovation.

Hub for International Cooperation

PRIMA serves as a central hub for international cooperation, bringing together a diverse range of stakeholders, including governments, research institutions, private sector entities, and civil society organizations from Europe and the Mediterranean region. This role is exemplified by PRIMA's organization and participation in international conferences, which serve as platforms for networking, partnership building, and co-creating solutions to shared challenges.

PRIMA's international positioning and visibility are thus characterized by its active role as a global ambassador, its strong reputation in the research community, and its pivotal function as a hub for collaboration across borders. This positioning not only strengthens PRIMA's impact on Mediterranean issues but also contributes to global research and innovation efforts aimed at sustainability and resilience.

Examples of Invitations to Conferences and High-Profile Events:

1. [Conference on Water-Energy-Food-Ecosystems \(WEFE\) Nexus Scientific Advances in the Mediterranean Region](https://www.prima-med.org/event/conference-on-wefe-nexus/) (<https://www.prima-med.org/event/conference-on-wefe-nexus/>)

- Type of Event: Conference

- Organizer: Jointly organized by the Joint Research Centre (JRC) and the Directorate-General for Research and Innovation of the European Commission, the Union for the Mediterranean (UfM), PRIMA, and the Cyprus Institute.

- Date & Location: 27–29 September 2021, Nicosia, Cyprus + online

- PRIMA's Role: Co-organizer

- Objective:

to address the role of science as a driver of innovation and its interface with the policymaking process.

To explore new decision-making approaches and cross-sectoral management of water, energy, food, and ecosystems, share best practices, and foster collaboration in the Mediterranean region.

[Outcome document](#)

2. [COP27](#) PRIMA Side Events at COP27

- Type of Event: Side events and conferences within the framework of the UNFCCC COP

- Organizer: PRIMA co-organized six side events as part of the Mediterranean Pavilion.

- Date & Location: 9–16 November 2023, Sharm El Sheikh, Egypt + online

- Objective: To address urgent challenges facing the Mediterranean, featuring discussions with high-level speakers, researchers, and policymakers.

The PRIMA Foundation organized several side events at COP27 as part of the Mediterranean Pavilion. These events focused on addressing various challenges related to climate change in the Mediterranean region, with a specific emphasis on sustainable agri-food systems, land degradation, climate change resilience, and the Water-Energy-Food-Ecosystem (WEFE) Nexus approach. Here's a summary of the side events:

PRIMA Side Events at COP27

1. Sustainable Agri-Food Systems as a Lever for Climate Neutrality and Food Security

- Date: November 9, 2022 (Finance Day)

- Focus: The role of partnerships and cooperation in research and innovation to achieve climate neutrality and food security through sustainable agri-food systems.

Outcome: The event underscored the critical role of sustainable agri-food systems in achieving climate neutrality and food security. Participants emphasized the need for stronger partnerships and cooperation in research and innovation to drive systemic changes in food production and consumption patterns.

2. Regional Actions to Counter Land Degradation, Enhance Climate Change Resilience, and Food Security

- Date: November 11, 2022 (Decarbonization Day)

- Focus: Regional initiatives aimed at addressing land degradation and enhancing resilience to climate change while ensuring food security.

Outcome: The discussions highlighted successful regional actions and best practices for countering land degradation and enhancing resilience to climate change. The event also emphasized the importance of integrating these actions into broader food security strategies, with a focus on scalable solutions that can be replicated across the Mediterranean.

3. Alignment and Contribution of Agri-Food Businesses to Climate Change Adaptation and Mitigation Strategy and Green Circular Economy

- Date: November 12, 2022 (Adaptation and Agriculture Day)

- Focus: The role of agri-food businesses in climate change adaptation and mitigation, emphasizing the transition to a green circular economy.

Outcome: This event reinforced the significant role of the private sector, particularly agri-food businesses, in climate change adaptation and mitigation. The discussions led to a consensus on the necessity for agri-food businesses to align their operations with climate strategies and transition toward a green circular economy.

4. Nature-Based Solutions for Climate Change Mitigation

- Date: November 14, 2022 (Water and Gender Day)

- Focus: Exploring nature-based solutions as effective strategies for mitigating climate change impacts, with an emphasis on water management and gender inclusivity.

Outcome: The event brought attention to the effectiveness of nature-based solutions in mitigating climate change impacts. It highlighted successful examples of these solutions, particularly in water management, and stressed the need for integrating gender perspectives into climate change mitigation strategies.

5. The Importance of R&I in the Fight Against Climate Change in the Mediterranean

- Date: November 15, 2022 (Energy Day)

- Focus: Highlighting the critical role of research and innovation (R&I) in combating climate change, specifically within the Mediterranean context.

Outcome: Participants agreed on the critical importance of research and innovation (R&I) in addressing climate change. The event showcased innovative R&I projects and called for increased investment and collaboration in these areas to accelerate climate action in the Mediterranean region.

6. Water-Energy-Food-Ecosystems Nexus Approach: An Adaptation Strategy to Cope with Climate Change in the Mediterranean Area

- Date: November 16, 2022 (Biodiversity Day)

- Focus: Discussing the WEFE Nexus approach as a comprehensive strategy to address the interconnections between water, energy, food, and ecosystems, particularly in adapting to climate change in the Mediterranean.

Outcome: The event successfully demonstrated the value of the WEFE Nexus approach as a holistic strategy to address the interconnected challenges of water, energy, food, and ecosystems in the face of climate change. The discussions led to a commitment to further develop and implement WEFE Nexus strategies across the Mediterranean, emphasizing their potential to enhance resilience and sustainability.

These events brought together high-level speakers, researchers, and policymakers to discuss and seek solutions to the significant climate-related challenges facing the Mediterranean region. 6 side events organized <https://prima-med.org/cop/cop27agenda/>

3. EU GREEN WEEK 2023(<https://www.prima-med.org/event/eu-green-week-2023/>)

- Type of Event: Side events and workshops

- Organizer: PRIMA was the main organizer, collaborating with the SFS Med platform (UfM, CIHEAM, FAO) and ENI CBC MED.

- Date & Location: 30 May – 6 June 2023

- Objective: To highlight the integration of gender perspectives in research and innovation, including a 2-day event with workshops and discussions on empowering women in the Mediterranean.

4. [European Mission Soil Week: 'Leading the Transition Towards Healthy Soils'](#)

- Type of Event: Conference
- Organizer: European Commission Directorate-General for Agriculture and Rural Development (DG AGRI) with CSIC
- Date & Location: 21–23 November 2023, Madrid
- PRIMA's Role: Invited as a speaker and presenter
- Objective: PRIMA highlighted its collaboration with the EU Mission "A Soil Deal for Europe," showcasing its commitment to addressing land degradation and enhancing soil health in the Mediterranean.

5. UN ESCWA Arab SME Summit(<https://www.unescwa.org/events/arab-sme-summit>)

- Type of Event: International Summit
- Organizer: UN ESCWA
- Date & Location: 12–14 December 2023
- PRIMA's Role: Led the organization of the EURO-MED pavilion in collaboration with UfM, MedWaves, ASCAME, BusinessMed, and CEEBA.

6. [World Water Forum 2024](#)

- Type of Event: International Forum
- Organizer: World Water Council and Government of Indonesia
- Date & Location: 18–25 May 2024, Bali, Indonesia
- PRIMA's Role: Participant
- Objective: To highlight PRIMA-funded projects in sustainable water management and the WEFE Nexus in the Mediterranean, and to foster collaborations with international stakeholders.

[Summary report of PRIMA at WWF](#) contribution

7. [SFS-MED webinar series](#), jointly organized by the Food and Agriculture Organization of the United Nations ([FAO](#)), the International Centre for Advanced Mediterranean Agronomic Studies ([CIHEAM](#)), the Secretariat of the Union for the Mediterranean ([UfM](#)), and the Partnership for Research and Innovation in the Mediterranean Area ([PRIMA](#)) within the framework of the [SFS-MED Platform](#), a multi-stakeholder initiative for Sustainable Food Systems in the Mediterranean.

[Alignment to Global, EU and regional policies \(SDGs, EU Green Deal, UfM policies\)](#)

Alignment with Global Policies (SDGs) and tools to measure the alignment of projects to SDGs

PRIMA's objectives and activities align closely with the [United Nations Sustainable Development Goals \(SDGs\)](#), particularly those related to water management (SDG 6), sustainable agriculture (SDG 2), and climate action (SDG 13). PRIMA's focus on fostering research and innovation in sustainable agri-food

systems and integrated water management in the Mediterranean region contributes to these global goals by addressing critical issues such as water scarcity, food security, climate resilience, and environmental sustainability.

To strengthen its alignment with global policies, PRIMA is conducting a **pilot study** to evaluate how its projects contribute to the SDGs. This initiative is based on the analytical framework outlined in “*An Analytical Framework to Assess SDG Targets within the Context of WEF Nexus in the Mediterranean Region*¹³” (Malagò et al., 2021). The framework has been adapted to focus on specific SDG objectives and tailored to assess the unique characteristics of PRIMA projects.

To ensure comprehensive insights, the pilot study will include 5 to 10 case studies representing diverse geographical and sectoral contexts. These case studies will test the methodology’s applicability to individual projects and lay the groundwork for broader aggregate analyses. A new SDG-focused questionnaire will be developed, adapting the original WEF-based methodology to gather critical data on social, economic, and environmental impacts. This tool will emphasize assessing the achievement of SDG-related goals while enabling meaningful cross-case comparisons.

The updated methodology will be applied to evaluate SDG progress at both the individual project level and in an aggregated format, identifying broader trends and insights. To enhance the depth and clarity of the analysis, the study will also integrate advanced tools, including artificial intelligence (AI) techniques and business intelligence platforms, for data analysis and visualization. These technologies will help synthesize findings and provide a holistic understanding of SDG progress across the selected projects.

This pilot study not only supports PRIMA’s mission to foster sustainable development in the Mediterranean region but also offers practical guidelines for scaling the methodology to a larger number of case studies. Ultimately, it will contribute to a comprehensive assessment of PRIMA’s collective impact on achieving the SDGs.

Alignment of PRIMA’s activities with EU priorities (e.g., Green Deal) and emerging socio-economic challenges.

PRIMA's activities are strategically aligned with several key EU policies, including:

PRIMA's initiatives are designed to contribute to the overarching goal of transforming the EU into a climate-neutral continent by 2050. The Partnership’s focus on sustainable agriculture, water management, and climate resilience aligns with the Green Deal's priorities, including the [Farm to Fork Strategy](#), [Biodiversity Strategy](#), and [Climate Adaptation Strategy](#).

PRIMA’s projects indeed align strategically with these EU policies, as demonstrated by its targeted initiatives and project portfolio:

[European Green Deal](#):

PRIMA’s focus on **climate-neutral solutions** directly supports the Green Deal's objectives. Projects like **AWESOME** (WEFE Nexus) and **FIT4REUSE** (water reuse technologies) enhance sustainability in agriculture and water management while addressing resource efficiency.

¹³ Anna Malagò, Sara Comero, Fayçal Bouraoui, Cevza Melek Kazezyılmaz-Alhan, Bernd Manfred Gawlik, Peter Easton, Chrysi Laspidou, An analytical framework to assess SDG targets within the context of WEF nexus in the Mediterranean region, Resources, Conservation and Recycling, Volume 164, 2021, 105205, ISSN 0921-3449, <https://doi.org/10.1016/j.resconrec.2020.105205>.

Alignment with the **Farm to Fork Strategy** is visible in initiatives such as **SUREFISH**, which integrates blockchain for traceability, reducing food waste and ensuring food safety in fisheries.

Contributions to the **Biodiversity Strategy** include projects like **SUSTAINOLIVE**, which promotes agroecological practices and enhances biodiversity in olive farming, and **WILDFOOD**, which supports sustainable wild food value chains.

[EU Water Framework Directive:](#)

PRIMA prioritizes **sustainable water management** through projects like **SMARTIES** and **SUSTAINCOAST**, which develop advanced irrigation techniques and protect coastal aquifers. These initiatives aim to maintain water quality and availability, consistent with the directive's objectives.

[EU Farm to Fork Strategy:](#)

PRIMA actively supports **sustainable food systems** by reducing environmental impacts through circular economy approaches, such as **BIOMEDFOOD** (valorizing agricultural by-products into functional foods) and **MEDIFIT** (digital food traceability and integrity platforms).

Food security and local economic resilience are enhanced through projects like **CAMELMILK**, which develops sustainable dairy products in Mediterranean regions.

[EU Biodiversity Strategy for 2030:](#)

PRIMA's initiatives include nature-based solutions for restoring ecosystems, such as the **HALOFARMS** project (salt-tolerant agriculture) and **4CE-MED**, which integrates cash cover crops for biodiversity and soil resilience.

Projects such as **MEDSAL** (coastal aquifer management) help mitigate biodiversity loss by preventing overexploitation and salinization of water resources.

[EU Adaptation Strategy:](#)

PRIMA emphasizes **climate adaptation** through climate-resilient farming practices (e.g., **VEG-ADAPT**, developing drought-tolerant vegetables) and integrated water management systems like **LENSES**, which addresses uncertainties in dynamic climatic conditions.

Projects like **REVINE** and **SUSTAINOLIVE** integrate nature-based solutions for carbon sequestration and ecosystem resilience, crucial for adapting to changing climatic conditions.

[Zero Pollution Action Plan:](#)

PRIMA projects address **pollution reduction** through innovations like **FIT4REUSE**, which utilizes treated wastewater for agriculture, achieving high pollutant removal rates, and **SUSTAINCOAST**, which develops tools to manage groundwater pollution.

The reduction of agrochemical use is evident in projects such as **PLANT-B**, which implements sustainable pest control systems to minimize chemical runoff into ecosystems.

In addition, PRIMA substantially contributes to the EU's **FOOD 2030** initiative by sharing a common vision of transforming food systems into more sustainable, resilient, and inclusive models. In December 2023,

the European Commission released the "FOOD 2030: Pathways for Action 2.0" report¹⁴, which outlines eleven strategic pathways where research and innovation can deliver co-benefits related to nutrition, climate, circularity, and communities. Considering the thematic parallels PRIMA could indeed be considered as a potential regional implementation mechanism for the EU's **FOOD 2030 initiative**, with a specific focus on addressing systemic challenges in the Mediterranean. transforming food systems to become more sustainable, resilient, and inclusive. PRIMA's topics have been strategically identified to align with these priorities, particularly in areas such as informal food systems, microbiome research, and sustainable healthy diets. Its projects are directly aligned with the initiative's pathways, including governance transformation, climate-smart solutions, and circular systems.

The synergy between PRIMA and FOOD 2030 is further exemplified by collaborative efforts. Notably, PRIMA participated in the [FOOD 2030 Conference](#) in December 2023, highlighting the transformative potential of international partnerships in achieving sustainable food systems

Alignment with Union for the Mediterranean (UfM) Policies

PRIMA is also closely aligned with regional policies and priorities set forth by the Union for the Mediterranean (UfM), particularly in the areas of climate change, sustainable development, and research and innovation:

[UfM Water Agenda](#): PRIMA contributes to the UfM's efforts to address water scarcity and enhance integrated water management across the Mediterranean region.

[UfM Research and Innovation \(R&I\) Roadmaps](#): PRIMA's activities support the UfM R&I Roadmaps, focusing on promoting sustainable practices in the food value chain, enhancing resource efficiency, and mitigating the impacts of climate change in the region.

[2030GreenerMed Agenda](#): PRIMA aligns with the UfM's "Towards 2030: Agenda for a Greener Med" initiative by promoting sustainable practices that contribute to achieving the environmental SDGs in the Mediterranean. 2030 GreenerMed Agenda provides a regional structured framework that, based on the coordination of existing and future programmes and projects, creates political and operational convergence to accelerate the transition of the Mediterranean region towards a green, circular and inclusive economy

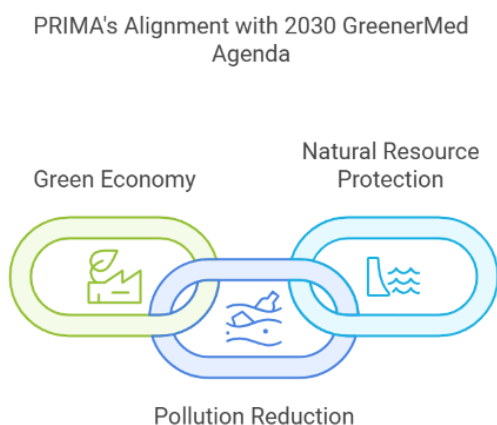
As highlighted in the [Greenermed monitoring report](#)

PRIMA plays a significant role in supporting the objectives of the 2030 GreenerMed Agenda, which aims to improve environmental sustainability in the Mediterranean region through coordinated actions and projects. Here's a summary of PRIMA's contribution based on the insights from the monitoring report:

Leadership in Project Implementation:

PRIMA's projects are particularly aligned with the three thematic axes of the 2030 GreenerMed Agenda:

¹⁴ European Commission: Directorate-General for Research and Innovation, Bizzo, G., Fabbri, K., Gajdzinska, M., Haentjens, W. et al., *Food 2030 – Pathways for action 2.0 – R&I policy as a driver for sustainable, healthy, climate resilient and inclusive food systems*, Publications Office of the European Union, 2023, <https://data.europa.eu/doi/10.2777/365011>



- **Axis 1: Green, Circular, and Socially Inclusive Economy:** This axis is the most covered by PRIMA projects, emphasizing sustainable consumption and production, resource efficiency, and promoting changes in business practices and public policy.

- **Axis 2: Pollution Prevention and Reduction:** PRIMA contributes to reducing pollution in land, air, and sea, with a focus on issues like plastic pollution, marine litter, and chemical pollution.

- **Axis 3: Protection of Natural Resources and Ecosystems:** PRIMA supports actions aimed at protecting and restoring terrestrial, marine, and coastal ecosystems, promoting sustainable management of natural resources.

66 projects: Support the transition towards a Green, Circular, and Socially Inclusive Economy, emphasizing sustainable consumption, production practices, and nature-based solutions.

13 projects: Focus on preventing and reducing pollution on land, air, and sea.

62 projects: Aim to protect, preserve, manage, and restore natural resources in the Mediterranean region, considering terrestrial, marine, and coastal dimensions through an integrated ecosystem approach.

Chapter 11: Phasing Out Preparedness- Phasing out strategy

Phasing Out Strategy and Renewal Plan for PRIMA

PRIMA's Phasing-Out and Renewal Strategies: Ensuring Long-Term Impact

Sustaining the Impact of PRIMA

While a comprehensive phasing-out strategy for PRIMA is still under development, the programme is actively working to ensure a sustainable, long-term impact on the research and innovation ecosystem in the Mediterranean region. Simultaneously, PRIMA is preparing to renew the partnership to continue its mission under Horizon Europe.

As a public-public partnership, PRIMA emphasizes leveraging investments and fostering collaboration among participating countries. Although primarily funded through public resources, PRIMA is exploring potential partnerships with the private sector to enhance the sustainability and impact of its projects. This approach ensures that the knowledge and solutions developed through PRIMA projects extend beyond their initial funding phases, creating a solid foundation for further development and practical applications.

PRIMA's work addresses critical regional challenges such as water scarcity, sustainable agriculture, and food security. By focusing on these issues, PRIMA contributes to regional resilience, environmental sustainability, and socio-economic benefits. The programme's strategy ensures that project outcomes remain accessible and actionable for public institutions and stakeholders across the Mediterranean region.

Advancing Projects and Bridging Gaps

Many PRIMA projects focus on early-stage research and development rather than market-ready solutions. Research and Innovation Actions (RIAs), for instance, typically reach Technology Readiness Level 5 (TRL 5) and require additional support to progress to higher readiness levels. PRIMA facilitates this progression by aligning promising projects with complementary funding opportunities and strategic partnerships, such as Horizon Europe's Cluster 6. This approach reflects PRIMA's commitment to fostering synergies and bridging the gap between research and practical implementation.

Coordination and Support Actions (CSAs) play a pivotal role in addressing cross-cutting issues and generating insights that inform future priorities. These actions focus on building regional capacity, enhancing stakeholder engagement, and supporting the development of policies aligned with sustainable innovation. The knowledge generated through CSAs creates a foundation for scaling up activities and ensures continuity beyond individual project life cycles, reinforcing PRIMA's role as a driver of systemic change.

Challenges in the Phasing-Out Process

The transition from project completion to further development is not without challenges. Advancing projects to higher TRLs and ensuring their uptake by end-users or integration into policy frameworks remain significant hurdles. Financial, technical, and institutional barriers often hinder this transition. Projects frequently struggle to move from research to practical application due to funding gaps, regulatory

challenges, or limited market readiness. Additionally, aligning the diverse objectives of stakeholders during the transition from PRIMA's specialized framework to broader European or regional programmes can lead to potential misalignments and missed opportunities.

Alternative Funding for PRIMA Post-EU Phasing Out

Exploring Funding Alternatives

EU contribution (2018–2024): €157.59 million

Increased Contributions from Participating States: A primary alternative would involve participating states significantly increasing their financial commitments. However, given that at least half of the programme's funding comes from the European Commission, many countries may withdraw without this incentive.

Diversification of Funding Sources: Engaging additional stakeholders such as regional governments, international organizations, and the private sector could provide alternative funding. However, socio-political instability in the Mediterranean region and the programme's specific content makes it challenging to attract private investments.

Administrative and Operational Adjustments

Should EU funding not be secured beyond 2027, PRIMA plans to implement the following measures:

Staffing Adjustments: Gradual reduction of staff from 17 members in 2027 to 5 by 2031.

Cash Flow Management: Estimated annual cash flow requirements for administrative and operational costs are as follows:

- 2028: €1,300,000
- 2029: €1,100,000
- 2030: €900,000
- 2031: €450,000

Total: €3,750,000 If states independently fund PRIMA after 2031, the estimated annual budget for administrative costs would be €600,000.

Grant Agreement Commitments: Gradual reduction of active projects, with approximately 30 projects remaining in 2031. These projects, mainly from the 2026 and 2027 calls, must be finalized and approved before the end of 2031.

Renewal Strategy

The FUTURE4PRIMA Project

To address these challenges and prepare for the future, PRIMA launched the FUTURE4PRIMA project on January 1, 2024. Funded as a Coordination and Support Action under Horizon Europe, FUTURE4PRIMA brings together 21 partners from 16 participating states, including six EU widening countries (Bulgaria,

Croatia, Cyprus, Greece, Malta, and Portugal). This project aims to strengthen research and innovation cooperation in the Mediterranean region, focusing on sustainable water and food systems.

Preparing for Renewal

FUTURE4PRIMA plays a key role in preparing for the renewal of the partnership within the next EU Framework Programme. Activities include developing the Strategic Research and Innovation Agenda (SRIA) 2 (2026–2028), shaped through extensive stakeholder consultations. The preparation and submission of the Joint Programme are expected by the end of 2025. A potential impact assessment by the European Commission in 2027 will determine whether to renew PRIMA as an institutionalized partnership under Article 185 of the Treaty on the Functioning of the European Union (TFEU).

Roadmap for Transition

The FUTURE4PRIMA roadmap outlines key tasks from 2024 to 2029, aligning with EU Council Presidencies. These include the preparation of SRIA 2, interinstitutional processes for the renewed partnership, and the anticipated decision and launch of the new programme in 2028. By strategically planning these steps, PRIMA aims to ensure a seamless transition into the renewed partnership.

Conclusion

PRIMA's dual approach—developing a phasing-out strategy while preparing for partnership renewal—demonstrates its commitment to sustaining contributions to research and innovation in the Mediterranean region. Through coordinated efforts, strategic planning, and collaboration with stakeholders, PRIMA seeks to address critical regional challenges and foster sustainable development for the long term. Maintaining EU support is essential to achieving these objectives and ensuring PRIMA's continued success.