



CALL TEXT AND SUPPORTING INFORMATION

Call: Section 2 – Multi-topic 2022

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Thematic Area 1- Water management

Topic 2.1.1 (RIA*) Prevent and reduce land and water salinization and pollution due to agri-food activities

	<p>SRIA priorities addressed</p> <p>Topic 1.1.1 refers to the Priorities:</p> <ul style="list-style-type: none">- 1.1 "Water resources availability and quality within catchment and aquifers."- 2.2 "Developing sustainable and productive agro-ecosystems." <p><u>OPERATIONAL OBJECTIVES</u></p> <ul style="list-style-type: none">- 2/LAND AND WATER SUSTAINABILITY- 4/SMART AND SUSTAINABLE FARMING
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Challenge

In the Mediterranean Region, the current increase in the surface and ground-water exploitation poses a risk that water resources and water scarcity are often combined with poor ground-water quality. This occurs mainly in areas heavily conditioned by human activities. Despite the many non-point sources of pollution carrying phosphorus, nitrogen, pesticides and other organic pollutants, metals, pathogens, salts and trace elements, agricultural practices have become the most significant non-point contributors of pollutants to the Mediterranean. Notably, the low annual rainfall, and the common occurrence of alkaline soils in the dry Mediterranean Regions, provide an environment in which agriculture production contributes to the ongoing salinization of aquifers and the frequent eutrophication problem wetlands and coastal water bodies.

Scope

Both agriculture and food industry practices, potentially determining contamination of surrounding water bodies, should reduce the risk of water pollution and salinization. Under this general aim, the specificities of the prevailing Mediterranean soils and environmental conditions should be considered. This includes the detailed study of salinity management, which often involves additional watering to displace salts from the root zone, creating a management conflict in water and soils to reduce nitrates leaching. These specific conditions, among other typically Mediterranean soil and climatic factors, should be considered when searching for technical solutions for minimising water pollution restoring water bodies to acceptable water quality standards while ensuring profitable agri-food activities. In this sense, under a circular economy approach, particular attention should be paid to water reuse and the valorisation of other by-products from the surrounding agri-food processing plants to minimise the external use of resources, avoiding further contamination of land and water. Fertilisation regimes should be improved for conventional and organic farming practices, focusing on organic matter management studying how mineralisation occurs. The goal is to provide more informed decisions on organic matter and mineral

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fertiliser application better tailored to crop needs, soil conditions, and the agroecosystem's nitrogen cycle.

Similarly, the potential contamination of water streams due to pesticides and other potential organic pollutants should be minimised by delivering innovative solutions. The acceptance of the proposed practices by end-users should be defined by including socio-economic studies assessing the cost-benefit outputs for each of the new proposed practices. In this sense, the overall governance framework conditions at the whole water basin level influencing the final on-site application of the proposed technical measures should be considered.

Expected Impacts

- Reduction in the contamination and salinization of water bodies by agri-food practices upscaling results from the farm to the whole water basin area considering the different sources of water contamination related to the agri-food activities.
- Development of a site-specific solution to reduce nitrate leaching under specific Mediterranean soil conditions (i.e. salinity and sodicity).
- Evaluation of the risks linked to pesticides and other potential organic pollutants use on water and soil contamination and rehabilitation of polluted soils and water
- The development and on-site application of innovative and environmental-friendly technical solutions for water decontamination

Key performance indicators

SDG#6

- 06.21 Biochemical oxygen demand in rivers;
- 06.24 Nitrate in ground-water

SRIA KPIs

Number of practical solutions to water (quantity and quality) degradation

Number of practical solutions to land and agro-ecosystem degradation

Links with EU Policies

The proposal should indicate linkages to relevant EU policies and objectives in the context of the European Green Deal, Water Framework Directive (WFD), EU Action Plan: 'Towards Zero Pollution for Air, Water and Soil and relevant Horizon Europe Missions and Partnerships.

- [Farm to Fork Strategy](#)²
- [Biodiversity Strategy](#)³
- [Horizon Europe Mission on Soil Health and Food](#)
- [Horizon Europe Mission: Restore our Ocean and Waters](#)
- European Partnership Water Security for the Planet (Water4All)

² Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions “A Farm to Fork Strategy for a fair, healthy and environmentally-friendly food system”

³ Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions “EU Biodiversity Strategy for 2030 Bringing nature back into our lives”

- European Partnership accelerating farming systems transition: agroecology living labs and research infrastructures
- European Partnership Agriculture of data
- European Partnership for Safe and Sustainable Food Systems for people, planet and climate
- European Partnership for rescuing biodiversity to safeguard life on Earth


Links with SDGs

The proposal should indicate linkages to relevant SDGs and methodology to contribute to the reporting of SDG indicators

- TARGET 2.3 By 2030 double the agricultural productivity and the incomes of small-scale food producers, particularly women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment
- TARGET 2.4 By 2030 ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems and that progressively improve land and soil quality
- TARGET 6.3 By 2030, improve water quality by reducing pollution, eliminating dumping and minimising the release of hazardous chemicals and materials.
- TARGET 6.6 By 2030, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes
- TARGET 15.3 By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world

Thematic Area 2 – Farming Systems

Topic 2.2.1 (RIA)⁴ Improving the sustainability of agro-pastoralism in the Mediterranean Region under the context of climate change.

	<p>SRIA priorities addressed</p> <p>1. Developing sustainable and productive agro-ecosystems.</p> <p><u>OPERATIONAL OBJECTIVES</u></p> <ul style="list-style-type: none">- 4/ SMART AND SUSTAINABLE FARMING
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Challenge

In the Mediterranean, agro-pastoralism⁵ is significant, especially in marginal (or peripheral) rural settings, which account for about half of the Mediterranean territories – islands, mountainous and dryland areas where more intensive agricultural practices are unfeasible. In these settings, agro-pastoralism plays a significant role as the primary source of employment and income and ecosystem functioning and landscape management. Agro-pastoral products are closely embedded with local communities and territories, including local value chains and the tourism industry, while sustainable agro-pastoral practices also provide important socio-ecosystem services. These features are critical in mitigating the effects of climate change (i.e., carbon sequestration, soil-water conservation) and providing adaptive strategies to tackle it, including reducing natural hazards (i.e., flooding, forest fires). However, agro-pastoral systems operate under unfavourable institutional and economic conditions all over the region, leading to unsustainable practices, problems of farm economic viability, and generational renewal. With more volatile rainfall patterns and recurrent droughts, environmental and climate change further challenges the sustainable management of agro-pastoral territories. Overgrazing on the one hand and land abandonment on the other cause an intense degradation of rangelands, with the gradual disappearance of fauna, flora, and entire biotopes, increase in soil erosion and, ultimately, changes in the landscape.

In this scenario, agro-pastoral multifunctional systems represent an increasingly important asset to produce quality food through environmental-friendly practices and support the livelihood of communities inhabiting inner and remote areas.

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⁵ Agro-pastoralism: association of pastoral and agricultural activities.

Scope

Proposals, building on good pastoral practices in the Mediterranean Area, should promote an enabling environment for viable agro-pastoral farming and rational use of rangelands: land, water and biodiversity management (including local animal breeds), Carbon, Nitrogen and overall GHG footprint. Agroforestry practices could also be considered for supporting pastoral and agropastoral livestock production ranging from tree preservation to more intensively planted and managed systems.

Proposals should also consider products' quality in terms of consumers' health and safety, provision of socio-ecosystem services, questions of social, gender and generational dynamics. Proposals should address the policy-setting and the market frame that hold relevant implications for agro-pastoral farming to provide advice and suggestions for a more enabling institutional and economic environment.

Expected Impacts

- Enhance the resilience of Mediterranean pastoral and agro-pastoral communities to societal and climate change
- Contribute to improving the economic, social and environmental conditions of agro-pastoral farming and livelihoods
- Preserve and rehabilitate pastoral ecosystems, including animal and plant biodiversity, rangeland recovery and landscape management
- Enhance the quality, typicity, diversity, value-adding and related value chains for traditional pastoral products
- Support generational renewal of agro-pastoral farming through the involvement of women, youth and newcomers

Key performance indicators

For KPIs, refer to the SRIA

Links with EU Policies

The proposal should indicate linkages to **relevant** EU policies and objectives in the context of the European Green Deal and relevant [Horizon Europe Missions and Partnerships](#)

- [Farm to Fork Strategy](#)⁶
- [Biodiversity Strategy](#)⁷
- [Horizon Europe Mission on Soil Health and Food](#)
- European Partnership Water Security for the Planet (Water4All)
- European Partnership accelerating farming systems transition: agroecology living labs and research infrastructures
- European Partnership Agriculture of data
- European Partnership for Safe and Sustainable Food Systems

⁶ Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions “A Farm to Fork Strategy for a fair, healthy and environmentally-friendly food system”

⁷ Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions “EU Biodiversity Strategy for 2030 Bringing nature back into our lives”


- European Partnership for rescuing biodiversity to safeguard life on Earth

Links with SDGs

The proposal should indicate linkages to relevant SDGs and methodology to contribute to the reporting of SDG indicators

Thematic Area 3 - Agro-food value chain

Topic 2.3.1 (RIA)⁸ Enabling the transition to healthy and sustainable dietary behaviour

	<p><i>SRIA priorities addressed</i></p> <p>Topic 1.3.1 refers to:</p> <p>Priority 3.1: "Valorising food products from the traditional Mediterranean." Priority 3.3: "Implementation of innovation in the Agri-food chain, promoting higher quality, sustainability and competitiveness, with particular reference to smallholders." Priority 3.4: "Implications of dietary shifts and sustainable diets for the Med populations and food industry."</p> <p>OPERATIONAL OBJECTIVE</p> <p>- /6 NUTRITION AND HEALTH.</p> <p>- /8 NEW AGRO-FOOD BUSINESS MODELS.</p>
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Challenge

Human health is deeply affected by dietary patterns, and most of the non-transmissible and chronic diseases, which currently affect worldwide populations, are directly linked to unhealthy diets. Recent studies have highlighted the relationship between dietary habits and diseases, such as heart diseases, obesity, diabetes, strokes, Alzheimer, Parkinson's. Increasing scientific evidence shows that the Mediterranean lifestyle, including characteristic dietary patterns and psychosocial and cultural features, has beneficial effects on human health. A correct and equilibrated daily intake of food and moderate, together with regular physical exercise, has positive effects in improving children's mental and physical development and improving the quality of life at all ages in general. Moreover, healthy diets limit the insurgence of several types of cancer, improve body performances at all ages and are based on longevity. The concept of the Mediterranean diet, based on moderate consumption of meat, fish and seafood, and more use of local vegetables, legumes, nuts, fruits, olive oil, and dairy products, also includes more social behaviour, e.g., taking more

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time for meals and sharing this time with others, family members, friends, colleagues. All these aspects, taken together, positively affect the general mood and physical and mental health. However, in the last decades, due to the adaptation of the society to modern times, with less and less time devoted to preparing meals, even in the Mediterranean Region, the dietary habits have shifted towards the convenience of highly processed and takeout food, with evident adverse effects on the population: increase of obesity, chronic diseases and cancers in areas where they were at the lowest levels until fifty-sixty years ago.

Scope

Under this general challenge, it is of utmost importance to (i) identify, understand and measure the factors influencing the adoption of healthy dietary behaviours in the Mediterranean communities, and (ii) to implement tailored strategies to help people of all ages to shift towards Mediterranean healthy dietary behaviours. These two tasks should be facilitated by combining at least two approaches, such as increasing awareness of the general benefits of the Mediterranean diets at all-age levels and increasing the availability and accessibility of highly nutritional, healthy, sustainable low processed Mediterranean food in the markets.

To achieve the desired targets and goals, it is paramount to elaborate and put effective awareness campaigns tailored to the different Mediterranean communities by using traditional communication strategies and information and communication technologies-based applications (e.g., m-application, gaming). Educational toolkits, cooking classes, demonstration facilities, and promotional materials adapted to the different socio-economic groups in respect of ages, genders, cultures also need to be developed.

To address the second task, new business models should be designed and proposed at the food industry level to produce and distribute traditional, local, low-processed, pre-prepared dishes with high nutritional value, following the accredited Mediterranean dietary patterns (i.e., nutrient-rich, prepared with healthier cooking methods, particularly salt and sugar reduction, removal of trans fats, providing consumers with better nutritional information, etc.). Besides the nutritional aspects, and in line with the concept of a low environmental-impact diet model associated with the Mediterranean diet, proposals should also consider sustainability aspects related to the consumption of the prepared meals (local and diversified ingredients, innovative and sustainable process (e.g. low energy and process), extended shelf-life, cooling, smart and sustainable packaging, ready to heat meals).

Along these lines, organic food produced without (or with less) pesticides should be considered for more sustainable and healthy consumption in line with the Farm to Fork strategy and consumer expectations.⁹ Aligned with this strategy, applicants should also include in the proposed approaches the concept and overarching goals of reducing food waste and using by-products as beneficial food ingredients to meet the circular economy's general idea supporting the transition towards a more sustainable food system.

The project proponents should consider identifying potential synergies with other PRIMA and Horizon Europe projects with the same objectives (e.g. HORIZON-CL6-FARM2FORK-01-15).

Expected impacts

- Updating, modifying and developing dietary guidelines and promotion strategies for the adoption of Mediterranean healthy and sustainable diets

⁹ COM (2020) 381 final

- Promoting and marketing of Mediterranean dietary habits and highlighting its benefits at all levels through media coverage, TV programmes, awareness campaigns in schools and communities
- Introducing new and healthy low-processed Mediterranean food products in acceptable, attractive, accessible and affordable formats
- Improving Med people health by facilitating the shifting to a Mediterranean healthy and sustainable diet
- Decrease in obesity rate and other diet-related non-communicable diseases in the Mediterranean area

Key Performance Indicators

- Number of business models for quality and sustainability adapted to SME and smallholders;
- Number of raising awareness campaigns promoting a food environment conducive to healthy food choices through appropriate incentives and information provision to consumers and policymakers
- Number of new food products with enhanced shelf-life, quality and health-related beneficial and sustainable properties;
- Percentage of overweight population (of which obese) and other diet-related non-communicable diseases by sex and by Country

Links with EU Policies

The proposal should indicate linkages to relevant EU policies and objectives in the context of the European Green Deal and relevant [Horizon Europe Missions and Partnerships](#)

- [Farm to Fork Strategy](#)¹⁰
- [Biodiversity Strategy](#)¹¹
- [Horizon Europe Mission on Soil Health and Food](#)
- European Partnership Water Security for the Planet (Water4All)
- European Partnership accelerating farming systems transition: agroecology living labs and research infrastructures
- European Partnership Agriculture of data
- European Partnership for Safe and Sustainable Food Systems for people, planet and climate
- European Partnership for rescuing biodiversity to safeguard life on Earth

Links with SDGs

The proposal should indicate linkages to relevant SDGs

¹⁰ Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions “A Farm to Fork Strategy for a fair, healthy and environmentally-friendly food system”

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SDG 3 Ensure healthy lives and promote well-being for all at all ages

TARGET 3.4 By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being

SDG 12 Ensure sustainable consumption and production patterns

TARGET 12. 2 By 2030, achieve the sustainable management and efficient use of natural resources.

Supporting Information for the Section 2 Call for Proposals

Type of action	Research & Innovation Activities (RIA*¹²)
The total indicative amount allocated to this call	EUR 36 632 500
Funding level	Depending on National Regulations
Budget and duration of grants	PRIMA considers that proposals requesting a contribution of at least EUR 1.5 million and with a duration of 48 months , would allow this specific challenge to be addressed appropriately. Nonetheless, this does not preclude submission and selection of proposals requesting other amounts or duration, following national regulations.
TRL	Proposals should clearly state the starting and end TRLs of the key technology or technologies targeted in the project.
Eligibility conditions for participation	In addition to the standard admissibility and eligibility conditions (please refer to section 5.2.2 and section 5.2.3 of the PRIMA Annual Work Plan 2022), the following additional eligibility condition applies: each applicant must check its own eligibility for participation/funding in accordance with their national funding agencies.
Submission and evaluation procedure	The call will be organised according to a two-stage submission process. For the first step, a first-stage proposal (maximum ten pages) must be submitted within the first-stage submission deadline. Successful applicants in the first step will be invited to the second step to submit a full proposal (maximum 50 pages). A timeline for the submission and evaluation of applications can be found in Table 9 of the PRIMA Annual Work Plan 2022.
Grant agreement	Each national funding body will fund the beneficiaries established in its own country; thus, the national funding rules apply. Each national funding body will sign a grant agreement (or any official documents acting as a contract) with their national beneficiaries taking part in the selected project (section 5.2.11). The coordinator of the project has to decide with his/her partners of a common starting date and send this information to all the funding bodies involved in funding this project in order to ensure that the national grant agreements are synchronized in time to cover all the period of the project.
Consortium agreement	A consortium agreement mentioning the distribution of the tasks among partners (as listed in the proposal) must be concluded. Some national funding bodies may require this document before signing the grant agreements, so it is necessary to refer to the national regulations and draft the consortium agreement, accordingly (section 5.2.11 of the PRIMA Annual Work Plan 2022)

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