



CALL TEXT AND SUPPORTING INFORMATION

Call: Section 1 – Nexus 2021

Topic 1.4.1-2021 (IA) Leveraging knowledge on the Nexus management of Water-Energy-Food-Ecosystems resources in the Mediterranean region: from concepts to practical solutions.

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Topic 1.4.1-2021 (IA) Leveraging knowledge on the Nexus management of Water-Energy-Food-Ecosystems resources in the Mediterranean region: from concepts to practical solutions.

	<p><i>SRIA priorities addressed</i></p> <p>WEFE Nexus</p> <p>Topic 1.4.1 address</p> <p>Priority 1.2 Water sustainability in the Mediterranean region should be ensured through improved technical tools coupled with socio-economic <u>tools and governance, organisational and/or business models</u> to define the limits of water use in certain key regions under present and future global change scenarios.</p> <p>Priority 1.4 Use of alternative water resources</p> <p>Priority 2.2 Developing sustainable and productive agro-ecosystems</p> <p>OPERATIONAL OBJECTIVES</p> <ul style="list-style-type: none">- 2/LAND AND WATER SUSTAINABILITY- 4/ SMART AND SUSTAINABLE FARMING- 7/ REDUCE LOSSES AND WASTES
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Challenge

The Sustainable Development Goals on water, energy, food and biodiversity sit at the heart of the Agenda 2030. A central principle of SDGs is to reach across all sectors and operate them in an interdependent way. This nexus is a key determinant for a successful implementation of the objectives of Agenda 2030. However, the current silo-driven disproportionate use and allocation of WEFE resources have created an imbalance in the physical and natural systems. Besides, these interlinked resources are managed by separate institutions to facilitate decision-making, which overlooks the interdependences and interconnectivity of the resources. This is especially critical in the Mediterranean region, where climate change projections make more and more relevant the need for achieving further benefits to nature, economy and society per drop of available water. Optimization of water allocation across, e.g., the irrigation and the energy sectors is central in scenario planning for regional and local development. Research has a role to play by providing convincing evidence as a basis for nexus decision making in the Mediterranean region. Integrated tools are necessary to enlighten stakeholders on the spatial-temporal dimension of social and economic drivers and the benefits deriving from trading in circular cycles of the water, energy, food and ecosystem resources. At the same time, the fact that significant nexus challenges have to be tackled at the local level should not be neglected.

However, although the systemic nature of water, energy and food securities is widely recognized, there is a relatively limited understanding of how to take action to address these relationships. Lack of knowledge and resistance to changes hinder the practical deployment of a cross-sectoral nexus approach in the management of natural resources.

Scope

The call for proposals aims at creating a PRIMA portfolio of demonstration cases at specific sites in the Mediterranean region to operationalize the Water-Energy-Food-Ecosystems (WEFE) Nexus concept and translate conceptual considerations first into practical solutions and then into specific policy-making processes. To this end, technologies, processes and management models, including decision support system tools, digital solutions, data infrastructure, should be implemented and validated in demonstration areas under a practical approach. This action should identify and

implement solutions for gaining efficiency and saving of water-energy-food resources. Proposals should address the interdependency of food, water and energy securities by analysing trade-offs and synergies between sectors and potential impact on social stability due to resource shortages and climate change. Activities should analyse good practices for resource allocation and assess the economic, environmental and social implications of various choices. For the proposed cases, Nexus interventions should be identified and prioritized, also considering ecosystems and natural infrastructure, in a participatory dialogue with water right holders and stakeholders accounting for the specific social and economic circumstances. Starting from existing governance frameworks, demonstration cases should also analyze the potential for upscaling and replication of the Nexus solutions in other geographic or thematic contexts in the Mediterranean region and identify impacts on the Sustainable Development Goals. Extensive involvement of stakeholders and right holders is necessary to make projects also social innovative experiments. Projects evaluation will emphasize explicit KPI to ensure quantifiable outcomes. The project proponents should make use of lessons learned from the Nexus projects funded by H2020 and PRIMA in 2019 and 2020 calls through the development of a close partnership during the implementation of respective projects. The objective is to enlarge the portfolio of WEFE Nexus projects and case studies in PRIMA. Successful consortia are also asked to cooperate with the [EC Knowledge Hub on Water and Agriculture](#)¹ to facilitate the uptake of project outputs by policymakers after project completion.

Expected impacts

Contributing to the ongoing implementation of the UfM Water Agenda, together with the implementation of the Water Framework Directive, toward more consistent cooperation between the EU and the southern and eastern Mediterranean countries (according to the European Neighbourhood Policy-ENP), and the delivery to the Decade of Action of the UN Agenda 2030, activities will:

- Support the identification and development of practical solutions where the use of a nexus approach can lead to improved outcomes in the integrated management of water-energy-food-ecosystems resources.
- Increased water and energy use efficiency contributing to the reduction of conflicts in the allocation of resources and adaptation and resilience to climate change.
- Enable the deployment of methodologies and guidelines stimulating the reduction of water use and deliver tools addressing the cascading effects and impacts on other sectors in a circular economy perspective.
- Demonstrate how science can strengthen institutional capacities, support the intra-regional dialogue and integration of knowledge, and positively benefit multiple SDGs.
- Ensure viability and replicability of the demonstration cases also after the end of the project.
- Demonstrate how the nexus approach provides the opportunity for building regional resilience to climate change.

Key Performance Indicators

The proportion of sustainable agricultural production per unit area

- Degree of integration of environmental policies
- Number of stakeholders involved in innovative experiments

¹ <https://water.jrc.ec.europa.eu/>

- Number of technologies, processes and management models, DSS tools, implemented and validated in demonstration areas
- Number of best practices assessed (economically, environmentally and socially)

Links with EU Policies

The proposal should indicate linkages to relevant EU policies and objectives in the context of the EU Green Deal and relevant Horizon Europe Missions and Partnerships²

- Farm to Fork Strategy³
- Biodiversity Strategy⁴
- Horizon Europe Mission on Soil Health and Food⁵
- 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
- European Partnership for rescuing biodiversity to safeguard life on Earth

Links with SDGs

Indicate links with the relevant SDG target.

² Horizon Europe Partnerships: https://ec.europa.eu/info/horizon-europe/european-partnerships-horizon-europe/candidates-food-security_en

³ 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” https://eur-lex.europa.eu/resource.html?uri=cellar:ea0f9f73-9ab2-11ea-9d2d-01aa75ed71a1.0001.02/DOC_1&format=PDF

⁴ 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” https://eur-lex.europa.eu/resource.html?uri=cellar:a3c806a6-9ab3-11ea-9d2d-01aa75ed71a1.0001.02/DOC_1&format=PDF

⁵ https://ec.europa.eu/info/horizon-europe/missions-horizon-europe/soil-health-and-food_en

Supporting information for Section 1 Call for Proposals, Topic 1.4.1

Type of action	DEMO Innovation Action (IA)
Total indicative amount allocated to this call	Approx. EUR 8.1 million
Funding level	According to Horizon 2020 Rules 70% (except for non-profit legal entities, where a rate of 100% applies)
Technology Readiness levels (TRL)	TRL 6-7 Proposals should clearly state the starting and end TRLs of the key technology or technologies targeted in the project.
Budget and duration of grants	PRIMA considers that proposals requesting a contribution from the EU in the range of EUR 4 million and with a duration of 36 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.
Eligibility conditions for participation	Please refer to section 5.1.1 of the PRIMA Annual Work Plan 2021. The standard admissibility (section 5.1.2) and eligibility conditions (section 5.1.3) apply.
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 5 of the PRIMA Annual Work Plan 2021.
Evaluation rules	The award criteria, scoring, thresholds and weightings for IAs listed in part 5.1.7 of the PRIMA Annual Work Plan 2021 will be used.
Grant agreement	PRIMA MGA (multi-beneficiary), based on Horizon 2020 MGA.
Consortium agreement	Participants in projects resulting from this Call for Proposals will be required to conclude a consortium agreement before the conclusion of the PRIMA grant agreement.