



CALL TEXT AND SUPPORTING INFORMATION

Call: Section 1 – Management of Water 2020

IA – Topic 1.1.1: Implementing sustainable, integrated management of water resources in the Mediterranean, under climate change conditions

Version 1.0
10 February 2020



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Challenge

The Mediterranean is among the most arid regions in the world. Hosting more than 50 percent of the world's 'water poor' population. Water scarcity can only increase in the future and is already becoming an increasingly important limitation to society in the Region. Additionally, Mediterranean countries are particularly vulnerable to climate change, because of the predominance of agriculture in their economies, the scarcity of capital for adaptation measures, their warmer baseline climates and their heightened exposure to extreme events. Rural areas are expected to experience major impacts of climate change on water availability and supply, infrastructure and agricultural incomes, reduced agricultural production and increase food insecurity with socio-economic consequences, such as increasing poverty and migration.

In this context, "Integrated Water Resources Management" (IWRM), founded on reliable water accounting and based on three pillars, (such as social equity, economic efficiency and environmental sustainability), can facilitate adaptation to the global change promoting the coordinated development and management of water, land and related resources, maximizing economic and social welfare without compromising the sustainability of vital ecosystems. The integration of Climate Change Adaptation (CCA) and IWRM should be investigated, developing and testing innovative demonstration cases on efficient and sustainable use of water, at pilot projects at various scales, from plot to basin. New solutions enhancing the real integration of social and economic components of the IWRM as well as the environmental ones have to be developed and connected to existing simulation models assessing the impact of climate change.

Scope

The IWRM approach(es) should be implemented and tested by involving all the potential stakeholders in experimental or demonstration sites representative of Mediterranean water conditions in terms of water scarcity, water accounting, water use efficiency, use of non-conventional irrigation waters (saline and waste), changing climatic and demographic conditions, crop diversification, conflicting use of available waters, as well as needs for improved governance by different authorities (including transboundary aspects), and other relevant factors.

Given that the majority of the water is consumed in the agricultural sector, a comprehensive approach to water accounting is needed to obtain robust estimates of water use by developing and testing state of the art technologies that are affordable to all users. Reliable estimates of consumptive use are needed for a) water allocation by policy makers at the basin scale and beyond; b) for validation of current remote sensing techniques; and c) for optimizing farm irrigation management under water scarcity. Pilot projects should be launched to integrate innovative water accounting approaches into CCA and IWRM.

Existing simulation models predicting the impact of climate change can be useful tools for developing and testing adaptation measures working under real conditions, involving stakeholders, and end-user groups, preferably at the river basin scale. Calibration and validation of these models is necessary to obtain site-specific results in terms of climate change impact and adaptation. These results shall be incorporated in the IWRM approach to develop water allocation strategies aimed at meeting various sectorial water demands under future climate change scenarios and with different socio-economic assumptions.

The developed approach shall be implemented through capacity development and participatory approaches, promoting coordination among various stakeholders and companies (explicitly involving SMEs), with frequent dialogues, training and advisory sessions to provide the support on designing and demonstrating real-life examples, ensuring and demonstrating linkages among diverse water resources managers and users and their involvement from the beginning of the project. Biophysical, technological, social, economic, environmental, hydrological, institutional, and financial issues to achieve higher water use efficiency and improved water allocation and management will need to be the part of the implemented IWRM approach.

Proposals might take into account and, where possible, the results of LIFE programme¹ and H2020 Societal Challenge projects and among others, the Sustainable Water Integrated Management and Horizon 2020 Support Mechanism (SWIM-H2020 support Mechanism)². The innovations identified within the projects could be disseminated within the EU Regional Project funded by DG NEAR "Water and Environment Support in the ENI Southern Neighbourhood region (WES)"

Proposals should fall under the '**multi-actor approach**' ensuring cooperation between research centres, governments, regulators, users and providers, in the field of Integrated Water Resources Management.

Expected impact

- Validation, testing and adoption of innovative and adapted technical, organizational, business and governance models aimed at enhancing the efficiency of water use by the integration of social and economic components into IWRM and CCA approaches.
- Demonstration(s) of how the proposed IWRM models approach will lead to better use, saving and preservation of water resources, with a positive impact in terms of quality, quantity, and sustainable use, without adverse impacts on other natural resources and in terms of benefit for users (socio economic issues) as well as ensuring preservation of natural ecosystem services.
- Optimization of management of water for irrigation obtained from various sources, in particular, abstracted of recovered water from waste water treatment systems or recovered water from other sources (such as rain water, industrial, etc.) at the basin level as well as in collective networks (water users' associations), improving water use and distribution efficiency, as well as preventing socio-economic conflicts in the use of water resources; Water exploitation index in rivers, aquifers, and other land-based sources must be also ensured.
- Improved regional, national and transboundary water governance in support of legal security and social trust.
- Strengthened institutional/organisational and individual capacities in terms of adopting and applying IWRM models, concepts and strategies.
- Improve multi-sectorial stakeholder involvement management and institutional capacity building.

¹ <https://ec.europa.eu/easme/en/life>

² "SWIM - Sustainable Water Integrated Management and Horizon 2020 Support Mechanism" funded by the European Neighbourhood Instrument (ENI) South/Environment. <https://www.swim-h2020.eu/>

KEY PERFORMANCE INDICATORS



Number of applied R&I solutions to the challenges of water management



Number and efficiency performance of new irrigation technologies and scheduling protocols and models



SDG#6: indicator 6.5.1 Degree of integrated water resources management implementation (0-100)

Supporting information for the Section 1 Call for Proposals, Topic 1.1.1

Type of action	Innovation Action (IA)
Total indicative amount allocated to this call	€ 7.5 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 up to EUR 2,5 million and with a duration of 36 months to 48 months, would allow this specific challenge to be addressed appropriately. Nonetheless, this does not preclude submission and selection of proposals requesting other amounts.
Submission and evaluation procedure	Two-stage application procedure. For the first stage, a short proposal (maximum 10 pages) must be submitted by the first deadline. Successful applicants in the first stage will be invited to the second stage to submit a full proposal (maximum 50 pages). A timeline for the submission and evaluation of applications can be found in Table 6 of the AWP 2020.
Evaluation rules	The award criteria, scoring, thresholds and weightings for IAs listed in part 5.1.6 of the AWP 2020 will be used.
Grant agreement	PRIMA MGA (multi-beneficiary), based on Horizon 2020.
Consortium agreement	Participants in projects resulting from this Call for Proposals will be required to conclude a consortium agreement prior to the conclusion of the PRIMA grant agreement.