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<http://www.aquastress.net>



*AQUASTRESS TEST SITE:
Kairouan, Merguellil Watershed, Tunisia*



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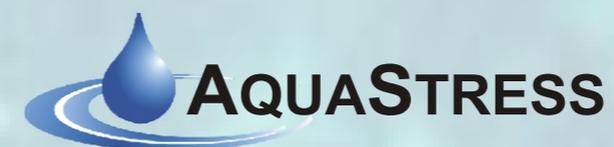
European Commission
Direction General Research



AQUASTRESS

INTEGRATED PROJECT

Mitigation of Water Stress
through new Approaches to Integrating
Management, Technical, Economic and
Institutional Instruments



The AquaStress Partnership

AQUASTRESS includes partners ranging from research councils and universities to SMEs, NGOs, national and international organisations involved in water resources, for a total of 35 partners. The partnership is highly interdisciplinary covering water engineering, hydrology, hydrogeology, economics, socio-economics, water technology, water quality, policy and governance across the domestic, agricultural and industrial uses.

Project coordinator

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Introduction

Water policies of the last century relied on the construction of massive infrastructures in the form of dams, distribution systems and treatment plants to meet human demand. These policies brought benefits to billion people but they also had deep and unanticipated social, economic and ecological costs and impacts, increasing water stress in many countries and regions in the world. **Many water problems remain unsolved and traditional approaches to water management seem no longer adequate.** There is a need for a transition to soft-path solutions that complement centralised infrastructures with lower cost community-scale systems, decentralised decision-making, water markets and equitable pricing, equity of access, societal-driven innovation & technology and full ecosystem responsibility.

The project background

AQUASTRESS is a research project funded by the European Commission through the 6th R&D Framework Programme. In particular, **the project addresses the problem of water stress**, which threatens the sustainable development of a large part of Europe and neighbouring regions, particularly those suffering from chronic water scarcity and human pressure on natural water bodies. The overall objective of the project is inspired by the EU aim of integrating environmental, economic, social and institutional or, even, governance dimensions **to enhance sustainable development** and strengthen knowledge building, innovation, competitiveness and cohesion in Europe and neighbouring regions (e.g.: the southern Mediterranean).

AQUASTRESS applies a new approach and provides tools contributing to soft-path solutions. Many technical and non-technical options have been studied in the past to mitigate water stress. However, despite the numerous projects and research activities carried out on this subject, effective water stress mitigation at local, regional and global scale is still below expectations. This failure is mainly due to the lack of comprehensive approaches, as well as to the low level of participation of stakeholders and citizens in the decision/policy-making process, and to the often-inadequate system of governance.

AQUASTRESS project aims to improve multi-stakeholder and society-driven holistic approaches, linking and integrating the society to research, technology and policy-making, so as **to enhance sustainability and innovation in water stress management.**

AQUASTRESS intends to develop a stakeholder and society driven approach to mitigating water stress in case-study areas (**test-sites**) of eight catchments in **Italy** (Flumendosa - Mulargia), **Portugal** (Guadiana), **The Netherlands** (Vecht), **Poland** (Przemsza), **Bulgaria** (Iskar), **Tunisia** (Merguellil), **Morocco** (Tadla irrigation scheme) and **Cyprus** (Limassol). All these sites are affected by old and recent water stress problems but in spite of the efforts made by relevant stakeholders and institutions many of these problems remain open and require a solution. Each test-site is managed by a Regional Partner.

Due to its highly scientific, interdisciplinary and participatory approach, AQUASTRESS is a real opportunity for policy-makers and relevant stakeholders to give local water issues and related policy concerns a European visibility, which may attract the interest of European and extra-European investment bodies and organisations. AQUASTRESS enables the active participation of site stakeholders and relevant institutions and improves their access to relevant knowledge and innovative solutions at the European level.

Project objectives, work-plan and expected results

AQUASTRESS involves researchers, stakeholders and citizens at different stages of the planning process in order to establish mechanisms of participatory research and address water stress through real societal perspectives. The project intends:

- to work with governmental, professional, and citizens groups to create new tools for problem diagnosis, prognosis, and management of water stress: it will support primarily what can only be described as a 'cultural change' in the approach to water management.
- to prioritise actions for the effective adaptation to change in global system, knowledge, innovation and culture. Together with stakeholders, policy makers and citizens, the project will deliver guidelines for water stress mitigation management.

AQUASTRESS contributes to achieving the following **specific objectives in the selected study areas:**

- major advances in participatory mechanisms for a successful involvement of stakeholders, policy-makers and citizens;
- better insight in the economic, social, environmental drivers of water stress;
- assessment of diverse policies, institutional and cultural factors as causes or remedies to water stress;
- a culture change in the approach to water stress mitigation.

These objectives will be achieved through the implementation of an integrated work plan, centred on **six main work blocks (WB)** managed by project partners:

WB1: *Co-ordination of site activities, communication and dialogue with stakeholders*

WB2: *Characterisation of water stress*

WB3: *Development of innovative mitigation options*

WB4: *Integration of options into a Solution Support System*

WB5: *Testing feasibility of solutions*

WB6: *Dissemination, training and schooling.*

The implementation of the AQUASTRESS work plan enables the achievement of the following **expected results:**

- *sustainable water stress options deliberated along a multi-stakeholder participatory process;*
- *integration of local water stress issues and concerns into the European dimension;*
- *a new knowledge management tool and approach to support stakeholder and society-driven research in water stress;*
- *background for a change in the political and cultural approach to water stress;*
- *Contribution to the EU water Initiative related to the Mediterranean basin and eastern accession countries.*

An opportunity to work together with stakeholders and society

According to the European Water Framework Directive (WFD), stakeholders' and citizens' engagement is a key element in the development of integrated river basin management plans. Since the early stage of the project, AQUASTRESS operates specific tools to enable stakeholder involvement to strengthen public access to factual knowledge, consultation in the research process and implementation of the WFD.

Specific events, such as information days, thematic workshops and round-tables, are foreseen to establish an open dialogue between stakeholders, citizens, water professionals and policy-makers, to enforce technical and non-technical options and guidelines for their implementation.

Enhancing impact on policy and society

AQUASTRESS intends to provide more reliable options to respond to water stress across the EU and neighbouring regions, by developing transferable guidelines for the harmonisation of policy-making from local to regional scale.

The strong emphasis placed by AQUASTRESS upon the participatory process intends to produce a fundamental culture change in the approach to water stress mitigation. It will widen the role of society, redefining the understanding of sustainability, governance and water policy. It will improve cohesion through the mitigation of historical conflicts and will consolidate the voice of stakeholders in decision-making.

Thus, AQUASTRESS will contribute to enhancing the awareness of society on water stress issues and mitigation measures. Attenuation of water stress will improve economic competitiveness, and better water quality will support human health and increase the intrinsic and economic value of the resource.

