

# The Mediterranean and Middle East

## A partnership for integrated management of water resources and wetlands in the Mediterranean



Mediterranean wetlands are natural ecosystems that provide important services for human activities, especially those related to water. Thanks to their hydrological functions, they can supply water to aquifers and rivers, which are important sources of the fresh water necessary for human consumption as well as for activities such as agriculture and industry.

Today, activities such as uncontrolled water withdrawals, unsustainable agriculture, hydroelectric power plants and non-perennial water storage facilities lead to the over-exploitation of this natural resource and diminish the quantities of water required by nature and its natural ecosystems.

To address the problem of unsustainable water use and management, a partnership has just been launched in the Mediterranean basin to ensure integrated management of water resources for natural ecosystems.

The partnership, funded by the MAVA Foundation, involves seven international organizations: Wetlands International, GWP-Med, the IUCN Mediterranean Cooperation Center (IUCN-Med) and the IUCN Regional Office for Western Asia (ROWA), MedWet, Tour du Valat, and WWF North Africa.

The partnership aims to significantly reduce the impact of water abstraction and related key sectors (including agriculture) on biodiversity and on the functioning of wetland ecosystems in the Mediterranean.

Through pilot projects in the south and east of the Mediterranean, this platform is intended to promote integrated water management and dialogue with the civil society by integrating the place of natural ecosystems into the approach of the Water - Energy - Food Nexus.

This approach highlights existing interdependencies to guarantee water, energy and food security for human well-being while ensuring the conservation and ecologically sustainable use of natural resources.

River basins and wetland ecosystems in the Mediterranean need integrated water management and approaches such as the Nexus to ensure better maintenance

of their ecological functioning, including the provision of ecosystem services useful for nature, for the economy, and for future generations.

**Read more: Policy Brief on "Water, Wetlands and Nature-based Solutions in a Nexus Context in the Mediterranean".**

<http://bit.ly/Water-Wetlands-Nexus>

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## VISCA



### Climate services to support medium to long term adaptation to climate change in agriculture

Climate change is threatening different varieties of agricultural species; the wine-grapes are extremely sensitive to weather, and subtle changes in temperature can affect their acidity, sugar levels, ripening period or their vulnerability to pests and diseases leading to implications on the economic competitiveness of Europe's wines.

Wine-growers need accurate information about weather forecasting including when extreme weather events are likely to hit them and when the best periods to irrigate, fertilize, prune and harvest their crops are.

VISCA project, a Horizon 2020 -funded project, a 3-year project which started in May 2017 with a total budget of

3.2 Million Euros, aims to meet this need by providing climate services with a decision support system (DSS) through a multi-platform web application tool integrating climate, agricultural and end-users specifications in order to design medium-and long-term adaptation strategies to ensure that wine-growers get the best quality and quantity of their wine-grapes.

VISCA services are validated by real demonstrations with end users, who are part of the consortium, on three demo sites in Spain (Codorniu), Italy (Mastroberardino) and Portugal (Symington). These services include: weather forecasting/extreme events at short time-scales from hours up to ten days, seasonal forecasting at time-scales up to 7 months ahead, climate

projections at decadal time-scales for the next 20-30 years. VISCA services are demonstrated while testing different management techniques such as crop forcing, shoot trimming and an irrigation scheduling tool. The project is also evaluating the replicability potential in other countries as well as the adaptation of the tool for other crops like olive, cereals, etc.

Beyond the applications for the agriculture sector, climate services can be applied to the management of water infrastructure at river basin scales at different time scales.

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VISCA demonstration site in Portugal © SYMINGTON