BSC: Helping to ensure the future of the Mediterranean diet

BSC is participating in the MED-GOLD project, which is dedicated to optimising the management and planning of grape, olive and durum wheat production.

It is very likely that these crops will be threatened by the future risk of extreme weather events, water scarcity and pest invasion in the Mediterranean.

Wine, olive oil and durum wheat products are staples of the Mediterranean diet. Their production rates and quality are highly dependent on weather and climate. These essential features are not guaranteed under future climate change conditions, which are expected to increase vulnerability to crop failure and pest damage.

Barcelona Supercomputing Center (BSC) is a partner in the MED-GOLD project, coordinated by the Italian National Agency for New Technologies, Energy and Sustainable Economic Development (ENEA). Three world leading companies are partners in MED-GOLD: the Portuguese winery Sogrape Vinhos, the Spanish oil cooperative DCOOP and the Italian food company Barilla. It is funded by the European Union with the aim to turn climate-related information into added value for the wine, olive oil and durum wheat sectors. The project will foster the creation of highly specialized climate services for each of these crops, providing indicators to optimise agricultural management practices in relation to the impact of global warming.

The new type of climate services for agriculture developed by MED-GOLD will provide targeted information to companies that will allow them to act over longer time periods (months, seasons or even decades into the future) that go beyond the traditional 2-5 days provided by current weather forecasts. For
example, knowing in advance if the next season will be warmer and drier or milder and wetter than normal, would allow wine, olive oil and durum wheat producers to put in place the necessary measures to counteract the effects of climate (choosing the ideal pest treatment, deciding on harvest or pruning dates, or choosing more suitable varieties).

BSC is involved in co-designing the climate service for the wine sector together with the SOGRAPE winery, and will work in providing seasonal predictions of climate indices relevant for this sector. These indices will allow wine producers to determine the number and distribution of expected pest treatments for the upcoming season in a specific site or plan other processes that relate to the management of the vineyard. The center will also be in charge of organising webinars targeting the MED-GOLD community (stakeholders from the wine, olive oil and durum wheat sectors) and of releasing regular newsletters with information about the project developments.

A first step to provide climate services for agriculture is to identify what companies need to know about weather and climate. With this aim, focus group discussions were organised by the wine sector, which took place on the 3-4 May at Sogrape headquarters in Porto. The olive oil and durum wheat sectors will gather this information through participative workshops. The workshop for durum wheat is scheduled for the 15-16 May in Ravenna, Italy, and will involve regional institutions, farmers and elevators working with the Italian companies Barilla and Horta. The olive oil workshop is expected to take place in June in Andalucía, Spain, at the installations of the DCOOP cooperative. Various agricultural technicians working in different departments of DCOOP will participate in the workshop.

The last phase of the project envisages the extension of the methodology developed for grape, olive and durum wheat to other products of global wider consumption, such as coffee, to demonstrate the global dimension of the project beyond the Mediterranean region.