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VISCA: Protecting 20 Billion Euros from Climate Change [\(/news-1/2018/11/2/visca\)](#)

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In the agricultural sector, the project VISCA (funded under the Horizon 2020 programme) aims to make the European wine industries resilient to climate change. Maha Al-Salehi from VISCA speaks about the threats and chances.





The European wine industry produces almost 20 billion euros of value annually. Now climate change is threatening the crops. ©Mastroberardino

MCS: US-Vice President Al Gore recently announced that he would speak at the Climate Change Leadership Porto Summit in March 2019 in Lisbon. He will follow the footsteps of former US-President Barack Obama and address the wine industry regarding the challenges the wine world is facing due to climate change. Two very high former representatives of politics take their time to speak directly to the European wine industry. Why?

Al Salehi: In Europe, wine is considered as one of the main economic activities. Europe owns 70 percent of the worldwide trade of wine. In 2015, the global wine trade was about 28.3 billion euros. 19.8 billion euros were belonging to the EU (numbers by the international organization of vine and wine, 2015[[link \(http://www.ceev.eu/images/documents/press_releases/2016/Brochure_CEEV_-_High_resolution.pdf\)](http://www.ceev.eu/images/documents/press_releases/2016/Brochure_CEEV_-_High_resolution.pdf)]). The agricultural sector is severely affected by the impacts of climate change and grapes are no exception to other crops. Premium wine grapes are especially sensitive to micro-climatic changes and they have very high value in terms of economy.

Many politicians address climate change because the impacts are increasing. We feel the impacts everywhere, in the US, Europe, MENA and elsewhere. Extreme events have been occurring more, whether as droughts, severe storms, wildfires and much more. But even if politics and current actions prove to be effective, we are still going to experience the impacts of climate change for several years. That is why taking an action is very important. We need to adapt our management practices to minimise the impacts of climate change.



MCS: It was an especially dry summer in many parts of the European Union. How is climate change affecting vine grapes already?



Heat waves threaten the European wine industry the most. ©Symington

Al Salehi: In terms of vine, not only the heat waves that bother us most, but also other extreme events such as severe storms and hailstorms which all impact the crops to a noticeable extent; reducing the

harvest consequently. There are many news articles which have reported these phenomena.

A new decision-support-system

MCS: What is VISCA doing to support the wine sector?

Al Salehi: VISCA will provide a climate service and decision support system that integrates climate-, agricultural- and end-user specifications in order to design medium and long-term adaptation strategies to help in adapting climate change. It is our ultimate object to make the European wine industry resilient to climate change while minimizing costs and risks through improving the production managements of the final product both in terms of quality and quantity.

The outputs of the tool will be used to make well-founded decisions for specific aspects of crop planning. For example, when to harvest or the minimum water needs. We also provide a short-, medium-term and seasonal weather forecast and warning system for short term extreme weather events and historical and future projections of the effects of climate change. If the end-user, the farmer, takes recommendations of VISCA, he has to feedback to the tool as well. In this way, the decision support system integrates the updates and is learning, so to say.

“Safe the Vineyards that already exist”

MCS: You already won famous wine producers in Europe to test VISCA. Cordoniu in Spain produces the majority of the famous Cava. Syminton in Portugal, which is one of the biggest producers of Porto, and Mastroberardino in Italy. How are they using VISCA?

Al Salehi: For these three demo sides, the tool is proposing agronomic techniques. One is crop forcing, which is done in Portugal and Spain. Crop forcing is based on moving the grape-ripening period from hot summer months to a cooler month later in the growing

season. This is achieved by making an additional pruning, stopping the natural cycle of the plant and “forcing” it to restart its cycle later.

Because of the climate change some wine growers change the location of their grapes and to go to higher places. However, we are trying to adapt in changing the date of harvest. We want to save these vineyards that already exist and are well-known for their high quality.

MCS: Let's say a heat wave is predicted to arrive in six days. What can a wine grower do?

Al Salehi: They would increase irrigation to make sure the heat wave is not affecting the crops or start to protect the plants by covering them. It depends on the farmer.

Expanding VISCA to other crops in other countries

MCS: Are there also plans to reduce the water the wine industry needs?

Al Salehi: The VISCA tool tells you with how much water the farmer should be irrigating the plants. Usually, it shows the farmer the minimum water needs for a plant according to the weather. For example, if the weather forecast shows that there will be rain in two days; the tool would maybe tell end-users not to irrigate.

MCS: What is VISCA up to now?

Al Salehi: VISCA started in May 2017. It is a project of three years, funded by Horizon 2020 programme. During the first year, the models were developed. Right now we are in the validation phase. From now until end of April 2020 – that is when the project will end – we will test our product.

Also, the next general meeting is very important to us. It is an advisory board meeting taking place from the 10th to the 12th December 2018 in Italy. There, we will show the first results of the tool. We will also discuss the usability for other sectors. VISCA is about vineyards in Spain, Italy and Portugal, but we would also like to replicate our solution in different countries in Europe and even outside of Europe whether in vineyards or in other sectors, especially for olives, rice and cereals. That is why even in our advisory board, we chose people from outside the wine industry so that they can give us their input and we can exchange with them the usability via adapting the solution for other crops and other countries.

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