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VITCLIC project

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In Croatia is observed the increasing trend in mean annual air temperature and the large variability in the measured extreme precipitation from prominent drought to severe flooding. Climatological studies based on regional climate models show the intensification of the extreme values of temperature and precipitation over Europe in the future climate. These changes in temperature and precipitation have a great impact on viticulture, considering that of all living organisms, plants react first to the change of surface temperature. Due to climate change, changes in temperature will affect: (i) differently all developmental stages of vines in certain wine-growing areas in Croatia (i.e. their phenological characteristics) and (ii) differently on different varieties. At the same time, the temperature increase changes convective activity (storms) and thus the occurrence of hail that are estimated as the second biggest cause of material damage in Croatia. The trend of increasing average duration of hailfall was also observed on the basis of measurements obtained in the low land of Croatia. Due to mentioned, the VITCLIC project (VITiculture and CLImate Change in Croatia) has several goals. Based on meteorological and climatological datasets and wine and grapevine archive data, the current situation and a monitoring system of key phenological phases of the vine due to climate change will be analyzed and established. Furthermore, the aim is to link the ripening and quality of grapes with agro-climatic indices and determine the relationship between hail parameters and the degree of damages in grapevines. The purpose is also to enable: (i) detailed agronomic and economic evaluation for preserving Croatian autochthonous grapevine varieties, (ii) determination of climate changes through agro-climatic indices in different future periods and (iii) an estimation of the increase or decrease in certain weather types which favor co nvective developments (and hail).