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## Climate change analysis of hydrological droughts in Jiet catchment, Romania.

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Drought events are more common nowadays than it used to be in the past in different areas around the world. Some of its consequences are the reduction of cropping areas, lower rates of percolation for recharge of aquifers and scarcity of drinkable water. To analyse and identify droughts location, dates of occurrence and severity, it is necessary to collect meteorological data. However, based on the location of the study region, some places do not have measurement stations, hence, spatiotemporal databases are the best alternative. Present paper shows the analysis of the past and future scenarios of hydrological droughts due to climate change in the Jiet river basin in Romania. Spatiotemporal data from remote sensing with different resolutions is analysed and processed. Data from year.1990. to year 2020. At a resolution of 0.1° is compared to projection scenario RCp 8.5 during 2030 to 2060.

An assessment of hydrological droughts for past scenarios is made by defining a statistical threshold (85 percentile) from historical data. Further, an analysis of characteristics of hydrological drought events is performed for present and future scenarios. Drought is measured through soil moisture analysis, using results from HEC – HMS v4.9 BETA, hydrological modelling tool. This study presents the results of the first stage of the process were a spatiotemporal analysis of the calibration performance of the of the hydrological model and the droughts found are characterized.