

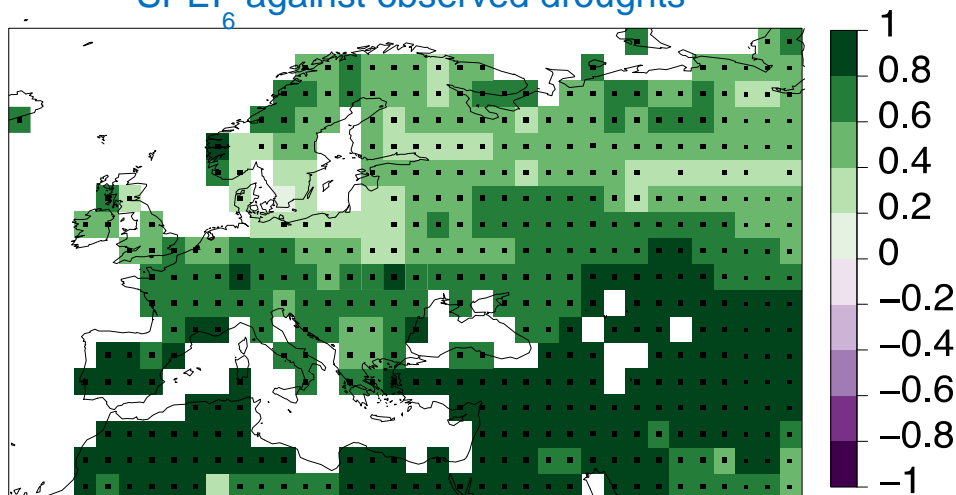
Observations, Impacts and Adaptation Measures of Climate Change and Droughts

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Ecosystems and human societies in the Mediterranean region are strongly impacted by weather driven natural hazards, such as droughts and heatwaves, which are expected to increase in frequency and amplitude under climate change. Whilst newly available datasets and recent research efforts have significantly boosted our knowledge of past trends in Mediterranean, the analysis of observed changes in climate extremes still shows a rather controversial picture. Here I present an updated review of the observed past evolution of climate extremes and droughts, based on an assessment of the observed climate-change hotspots. Natural vegetation, agricultural production and forest fires in the Mediterranean are significantly influenced by climate variability and extremes. An increasing number of studies advancing the understanding on the impacts of climate variability/droughts on crop production and on forest fires have been recently published and are discussed here. These studies represent a necessary step to assess the resilience of ecosystems and agricultural production systems to future climate conditions with adaptation measures taken on monthly to seasonal and decadal time scales. Seasonal climate forecast, when provided in a climate-services context, can enable a more effective adaptation to climate variability and change, offering an under-exploited opportunity to minimize the impacts of adverse climate conditions. Examples addressing the seasonal prediction of fire risk and crop yield will be briefly described.

Correlation maps of the forecasts issued in June of summer
SPEI₆ against observed droughts



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