

## **The Drought Interest Group: Climate variability and drought projection in a changing climate**

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Several key drivers have been identified as triggers of historical droughts. However, to fully understand and predict the behavior of droughts in a non-stationary climate, we need to be able to separate the naturally -driven and the externally-forced components of those drought precursors, and assess their evolution in the future. Solely based on observations, we have now identified a specific and persistent spatial pattern in ocean surface temperature (an ENSO-like pattern), the variability of which can explain a large part of the observed variability of tropical and subtropical droughts. We have also assessed how the temporal statistics of this drought-conducive ocean pattern will evolve in the future. In this poster, we will continue this investigation by evaluating the ability of the CMIP3 and CMIP5 models to replicate this pattern, and reproduce the associated teleconnections with droughts, as inferred from observations. Ultimately, the developed diagnostics will help us to weight the models, and to investigate the role these teleconnections play in different climate states (e.g. simulated past and future climates).