



Projections of Mediterranean Sea climate for the 21st century. Regional vs. local changes.

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The climate change is a global process but its impacts will be noticed locally. Also, any adaptation strategy requires information of the projected changes at local scale in order to be effective. At present, monitoring networks and decadal prediction systems are designed to characterize the large scale features of the climate system. However, it is not clear in which cases the local changes can significantly differ from the large scale changes. That is, in which places and for which variables information about large scale changes can be used for local adaptation.

In this presentation we address this issue using the Mediterranean Sea as a test case. First, we will review the projected evolution of the main marine variables (sea level, wind waves, temperature and salinity) for the next decades using a set of regional climate models. Then, we will characterize the spatial scales of the projected changes through an EOF decomposition in order to assess which part of those changes can be attributed to small scale features. In other words, we will characterize in which locations and for which variables the local changes could be approximated by the large scale signals.