Session: C4 Poster: TH192A

CLIVAR-SPAIN contributions: Climate in Spain, past, present and future

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The poster will summarize the principal findings of a recently published regional climate assessment report by the CLIVAR-SPAIN community that synthesizes and assesses the available information on the physical aspects of the changes that have been observed in the climate of the Iberian Peninsula (IP), both in current times and in the distant past. The report tries to enhance our understanding of those changes in order to better predict the impacts of future changes. It is based on the contributions of a large number of researchers and has been revised both by the contributors themselves and by external reviewers. Understanding the causes and effects of climate variations as well as the multiple interactions that take place within the climate system is a complex scientific challenge. In order to understand climate change at a regional scale it is necessary to adopt a wide perspective and acquire a detailed knowledge of the internal dynamics of climate and its natural variability. For this reason, this report on the climate of the IP is structured in five chapters, ranging from past climates, to current climate changes, to future climate projections, and includes two chapters dealing with climate variability in the IP. In chapter I, the state of affairs in paleoclimate research in the IP is presented. In chapter 2, recent changes in the main atmospheric variables (temperature and precipitation) are discussed and compared to the range of variability observed during the instrumental period. Chapter 3 examines observed variations in the temperature and salinity of the waters of the different basins that surround the IP, as well as sea level variations and changes in coastal and oceanic currents. The next chapter is devoted to the atmospheric teleconnections that influence the climate of the Euro-Atlantic sector on seasonal to decadal timescales, focusing on the NAO and ENSO. The last chapter deals with regional climate projections for the IP: the mean state of the climate, changes in interannual variability and changes in the frequency of extreme phenomena are examined. The report also identifies gaps in knowledge and major uncertainties that need to be resolved in order to increase our confidence in short and long term predictions of future climate and be able to better predict the impacts of future climate changes.