

SPECS: Seasonal-to-decadal climate prediction for the improvement of European Climate Services

Description

The World Meteorological Organization (WMO) sponsored the Global Framework on Climate Services (GFCS) where the need for actionable climate information for periods from several months up to several years for economic, industrial and political planning has been expressed. However, progress in seasonal forecasting has been slow and decadal forecasting is still incipient. At the same time, new model components to address the role of sea ice, land surface, stratosphere, ocean and their resolution in global models are now available from the climate change and weather forecasting communities. Methods for sophisticated downscaling and calibration for local, reliable climate predictions are scarce in Europe. In this context, SPECS aims to identify the main problems in climate prediction and investigate a battery of solutions from a seamless perspective. SPECS will undertake research and dissemination activities to deliver a new generation of European climate forecast systems, with improved forecast quality and efficient regionalisation tools to produce reliable, local climate information over land at seasonal-to-decadal time scales, and provide an enhanced communication protocol and services to satisfy the climate information needs of a wide range of public and private stakeholders. The improved understanding and seamless predictions will offer better estimates of the future frequency of high-impact, extreme climatic events and of the prediction uncertainty. New services to convey climate information and its quality will be used. SPECS will be, among other things, the glue to coalesce the outcome of previous research efforts that hardly took climate prediction into account. SPECS will ensure interoperability so as to easily incorporate their application in an operational context, provide the basis for improving the capacity of European policy making, industry and society to adapt to near-future climate variations and a coordinated response to some of the GFCS components

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