The impact of SPECS consists in the provision of improved seasonal-to-decadal (s2d) climate forecast systems to relevant operational platforms, which include the European global producing centres (GPCs) of climate forecasts, the Regional Climate Outlook Fora (RCOFs) and the World Meteorological Organisation (WMO) Lead Centre for Long-Range Forecasts Multi-Model Ensemble (LC-LRFMME). Private operators and stakeholders are likely to benefit from the improved climate forecast systems. All these users will benefit from the comprehensive documentation generated on the usefulness of s2d forecast systems for several socio-economic sectors. This material will be the basis of a new generation of European climate services acting on s2d time scales.
Seasonal-to-decadal climate Prediction for the improvement of European Climate Services

The SPECS project 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. It 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 (Global Framework for Climate Services) components.

Currently developing climate services demand better and more accessible climate information from seasonal-to-decadal climate forecast systems. This includes not just more skilful and reliable climate forecasts produced by a new generation of climate prediction systems and relevant at regional and local spatial scales, but also the delivery of information for variables actually employed in climate-sensitive sectors in forms not yet fully explored by the climate community.

The figure on the right shows an example of what can be made available with the current climate prediction systems for the solar energy sector and marks the starting point of the path that SPECS aims to explore.

SPECS will deliver a new generation of climate prediction systems for seasonal-to-decadal time scales, to provide actionable climate information for a wide range of users.