The central aim of the project is the continuation of the development of a seasonal-to-decadal (s2d, with decadal covering up to 10 years into the future) prediction system based on the initialized coupled climate model MPI-ESM. The resulting simulations will participate in two European multi-model projects: (I) the FP7 project SPECS (Seasonal-to-decadal climate Prediction for the improvement of European Climate Services), and the EURO-SIP project (European Seasonal to Interannual Prediction).

SPECS intends to develop the new generation of European operational seasonal-to-decadal climate forecast systems for the production of reliable, local climate information at the global scale. SPECS is a collaborative project with 20 partners from Europe and Brazil and is part of a cluster of European projects that will provide a coordinated response to the societal need for climate services. SPECS aims at to deliver a “new generation of European climate forecast systems, including initialised Earth System Models (ESMs) and efficient regionalisation tools to produce quasi-operational and local climate information over land at seasonal-to-decadal time scales with improved forecast quality and a focus on extreme climate events, and provide an enhanced communication protocol and services to satisfy the climate information needs of a wide range of public and private stakeholders.”

EURO-SIP builds on the DEMETER project, developing and operating a real-time multi-model ensemble seasonal forecasting system. Currently, ECMWF, MetOffice, Meteo-France and NCAR participate in the EURO-SIP consortium. The MPI-ESM seasonal forecast system will form the German contribution to EURO-SIP. The seasonal prediction system has been developed at IfM and MPI-M (joint project lead by Johanna Baehr and Wolfgang Mueller), with an active involvement of the DWD. The operational forecasts will be carried out by the DWD at ECMWF. However, tests of the per-operational version and further development of the seasonal prediction system will be carried out in Hamburg.