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The climate4impact platform: Providing, tailoring and facilitating climate model data access

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One of the main objectives of climate4impact is to provide standardized web services and tools that are reusable in other portals. These services include web processing services, web coverage services and web mapping services (WPS, WCS and WMS). Tailored portals can be targeted to specific communities and/or countries/regions while making use of those services.

Easier access to climate data is very important for the climate change impact communities. To fulfill this objective, the climate4impact (http://climate4impact.eu/) web portal and services has been developed, targeting climate change impact modellers, impact and adaptation consultants, as well as other experts using climate change data. It provides to users harmonized access to climate model data through tailored services. It features static and dynamic documentation, Use Cases and best practice examples, an advanced search interface, an integrated authentication and authorization system with the Earth System Grid Federation (ESGF), a visualization interface with ADAGUC web mapping tools. In the latest version, statistical downscaling services, provided by the Santander Meteorology Group Downscaling Portal, were integrated. An innovative interface to integrate statistical downscaling services will be released in the upcoming version. The latter will be a big step in bridging the gap between climate scientists and the climate change impact communities.

The climate4impact portal builds on the infrastructure of an international distributed database that has been set to disseminate the results from the global climate model results of the Coupled Model Intercomparison project Phase 5 (CMIP5). This database, the ESGF, is an international collaboration that develops, deploys and maintains software infrastructure for the management, dissemination, and analysis of climate model data. The European FP7 project IS-ENES, Infrastructure for the European Network for Earth System modelling, supports the European contribution to ESGF and contributes to the ESGF open source effort, notably through the development of search, monitoring, quality control, and metadata services. In its second phase, IS-ENES2 supports the implementation of regional climate model results from the international Coordinated Regional Downscaling Experiments (CORDEX). These services were extended within the European FP7 Climate Information Portal for Copernicus (CLIPC) project, and some could be later integrated into the European Copernicus platform.