



The ECOMS User Data Gateway: homogeneous seasonal-to-decadal forecast data access for end-users

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The European Climate Observations, Modelling and Services initiative (ECOMS), coordinates three ongoing European FP7 projects: EUPORIAS, SPECS and NACLIM. These projects gather a research community of data providers and consumers, including end-users, which have specific needs regarding data access. In many cases, the required datasets (predictions/hindcasts from different models, reanalysis, etc.) are provided from different servers with different data and metadata formats. This impedes in many cases the accomplishment of comprehensive studies comparing several models/predictions for uncertainty assessment.

The ECOMS User Data Gateway (ECOMS UDG) provides a homogeneous access point to collections of impact-relevant variables. The aim of ECOMS UDG is to gather different data sources (including third-party) with different terms of use in a single data server, so that users can access all the data and metadata they typically need (seasonal forecasts, reanalysis and observations) in a homogeneous and simple way, without worrying about the inherent complexities of data access, download and post-processing of the variables stored in distributed databases and data servers, such as the Earth System Grid Federation (ESGF) database or a variety of massive archive systems at different institutions.

Currently, the ECOMS UDG collects seasonal forecast products from two different sources: System4, provided by the ECMWF, and CFSv2, provided by the NCEP, focusing on a reduced number of fields identified by end-user requirements. Typically these fields are considered at surface (precipitation, temperature...) but also at pressure levels (geopotential or temperature). Also the user requirements for temporal aggregation (mean, minimum...) and frequency (daily, monthly, ...) are met.

All datasets are catalogued by a THREDDS data server using remote data access services (OPeNDAP). The UDG also provides tools to allow a user-friendly data exploration (bias correction, downscaling, verification) and access, without worrying about the fragmentation of the datasets into files and accessing only the subset of data they need. As different use policies apply to the different datasets, a fine-grained user authorization scheme has been implemented to allow them. The user may accept the usage terms and conditions as a required step to apply for the dataset access role.

More details: <http://meteo.unican.es/ecoms-udg>