ECMWF Member State Copernicus Workshop, 11 June 2020

C3S presentation summary

Copernicus Climate Change Service status

Carlo Buontempo and Samantha Burgess presented the highlights of C3S from the last year. This update included:

- recent developments in the Climate Data Store (CDS) and the global user community,
- climate data production and delivery,
- plans for enhanced continuity and service evolution in the Copernicus 2.0 programme,
- launch of the Evaluation and Quality Control (EQC) function,
- role of C3S in the climate service community,
- examples of sectoral use cases and how C3S data is used in the ClimateAdapt Portal
- impact of the climate bulletins and European State of the Climate Report
- relevance for C3S in the policy and scientific landscape including the European Green Deal, Sustainable Development Goals and IPCC amongst others.

More detailed presentations on the service evolution components were given by Cedric Bergeron - Climate Data Store (CDS) architecture; seasonal forecasts – Anca Brookshaw; Sectoral Information Systems (SIS) – Chiara Cagnazzo; and, rapid attribution protocol for extreme events – Freja Vamborg.

The proposed approach for service evolution builds on the activity and experience of the first Delegation Period and feedback from the European Commission, users and the User Requirements Analysis Report (URAD) and aims to increase/develop:

- climate observations available within the CDS
- reanalysis products – extending ERA5 backwards in time to 1950
- spatial resolution of regional reanalysis over Europe and the European Arctic
- inclusion of CMIP6 in the CDS
- global CORDEX simulations linked to IPCC Climate Atlas
- extension of EQC across all CDS datasets and products
- prototype decadal prediction service
- sector specific climate analogues
- extreme event attribution protocol
- cross-cutting user engagement and user support functions

Status

C3S is at the forefront of climate services with over 70 datasets open and freely available in the CDS and an engaged user community with almost 50,000 registered users. Traceability and transparency of climate data are assured through a robust evaluation and quality control process. C3S products including climate observations, predictions, projections and reanalysis are instrumental to supporting policymakers, businesses and society in the development of climate adaptation plans.

Recommendations (from Q&A session)

An engaging Q&A session followed the presentations with the following key points highlighted by one or more participants:

- ensure data and service continuity between COP 1 and COP 2;

- whenever possible and practical, increase the temporal resolution of the data – with acknowledgement of the tradeoff between resolution vs compute & storage costs
- enhance training opportunities at national level to ensure uptake of C3S data
- increase the efficiency of the dataset integration process
- further enhance the complementarity with national meteorological and hydrological services to ensure these can build on the outputs of the services;
- keep supporting the toolbox development and its role in providing a transparent and open way of processing data;
- Leverage CDS and SIS for downstream applications and markets
- Ensure a close interaction with the research community to ensure the technological development the service needs takes place without hindering the performances of the operational service

ECMWF would like to thank all the participants for their active engagement and insightful questions, which will be an asset for the final set of negotiations with the European Commission.