

The Copernicus Climate Change Service (C3S): Open Access to a Climate Data Store

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In November 2014, The European Centre for Medium-range Weather Forecasts (ECMWF) signed an agreement with the European Commission to deliver two of the Copernicus Earth Observation Programme Services on the Commission's behalf.

The ECMWF delivered services - the Copernicus Climate Change Service (C3S) and Atmosphere Monitoring Service (AMS) – will bring a consistent standard to how we monitor and predict atmospheric conditions and climate change. They will maximise the potential of past, current and future earth observations - ground, ocean, airborne, satellite - and analyse these to monitor and predict atmospheric conditions and in the future, climate change.

With the wealth of free and open data that the services provide, they will help business users to assess the impact of their business decisions and make informed choices, delivering a more energy efficient and climate aware economy. These sound investment decisions now will not only stimulate growth in the short term, but reduce the impact of climate change on the economy and society in the future.

C3S is in its proof of concept phase and through its Climate Data Store will provide

- global and regional climate data reanalyses;
- multi-model seasonal forecasts;
- customisable visual data to enable examination of wide range of scenarios and model the impact of changes;
- access to all the underlying data, including climate data records from various satellite and in-situ observations.

In addition, C3S will provide key indicators on climate change drivers (such as carbon dioxide) and impacts (such as reducing glaciers). The aim of these indicators will be to support European adaptation and mitigation policies in a number of economic sectors.

At the heart of the Service is the provision of open access to a one stop shop (the Climate Data Store) of climate data and modelling, analysing more than 20 Essential Climate Variables to build a global picture of our past, present and future climate and developing customisable climate indicators for key economic sectors, such as energy, water management, agriculture, insurance, health. . .

This talk will focus on the Climate Data Store facility, designed as a distributed system, providing improved access to existing datasets through a unified web interface. This service will accommodate the needs of the highly diverse set of users, from policy makers to expert practitioners and scientists.