

The Copernicus Climate Change Service (C3S): a European response to Climate Change

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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 (CAMS) – will bring a consistent standard to how we measure 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.

The presentation will provide an overview of this newly created Service, its various components and activities, and a roadmap towards achieving a fully operational European Climate Service at the horizon 2019-2020. It will focus on the requirements for quality-assured **Observation Gridded Products** to establish an operational delivery of a series of gridded long-term Climate Data Records (CDRs) of Essential Climate Variables (ECVs), along with associated input data and uncertainty estimation.