

THE COPERNICUS CLIMATE CHANGE SERVICE: From a Proof-of-Concept to a Fully Operational Service

The Copernicus Climate Change Service (C3S) is one of the six core Services of the European Union Copernicus programme. C3S is implemented by ECMWF on behalf of the European Commission. C3S enters its fourth year of development. 2018 has been a critical year for C3S as a transition between a prototyping phase into a full operational Service. A wide variety of products is now routinely made available and accessed by thousands of users. A unique and strong point of C3S is to focus on delivering operationally “authoritative” data, via its climate data store. A prime user of the Service is the European Commission itself, and C3S strives to support policy makers and public authorities at European level and beyond, by providing the environmental information they need to inform their policies and legislations, which become critically important in view of following up the Paris Agreement, and supporting the UNFCCC Sustainable Development Goals, the Sendai Framework for Disaster Risk Reduction, etc. A special effort has been dedicated to support WMO and GCOS, in particular by routinely producing a number of agreed climate indicators as well as contributing to the WMO State of the Climate reports.

In addition, by providing access not only to high quality data but also tools, guidance and compute facilities to handle and transform these data, C3S ambitions to be an enabler for downstream climate service applications tailored to various local and sectoral needs.

This presentation will provide an overview of the State-of-Play of C3S and its main components: from ECV (Essential Climate Variable) products which largely inherit from the ESA Climate Change Initiative, global reanalyses, seasonal forecasts, climate scenarios to sectoral climate impact indicators, as well as the processes put in place for the quality assurance of these elements. Last but not least, the presentation will cover the foreseen evolution of the Service until and beyond 2020, including its ambition to contribute to a future European CO₂ Anthropogenic Emission Monitoring System.