



Evaluation and Quality Control Function of the Copernicus Climate Change Service

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The Climate Data Store (CDS) is the cornerstone of the Copernicus Climate Change Service (C3S). The CDS provides comprehensive information on past, present and potential future climate for a diverse range of users. The CDS delivers a number of climate datasets, including Essential Climate Variables (ECVs) from satellite and in-situ observations, as well as climate projections, seasonal forecasts and reanalyses. Tailored climate indicators derived from specific sectoral needs (e.g. water, energy, agriculture, etc.) are also provided. These indicators are generated by the Sectoral Information System (SIS) component of C3S, which aims to demonstrate best practice in the use of C3S data and information for sectoral applications.

The Evaluation and Quality Control (EQC) function of the C3S provides a user-led overarching EQC service for the whole CDS and SIS. In particular, the EQC for CDS function aims to (i) provide information about the technical and scientific quality and fitness-for-purpose of the data and (ii) map evolving user needs into viable user requirements to ensure a user-oriented evolution of the CDS. The EQC for SIS function provides a similar service for SIS-generated data, as well as considering wider aspects of SIS provision, such as showcases and applications. Importantly, the EQC function defines a consistent framework based on common protocols and workflows for the provision of quality assurance information of C3S datasets (product generation, user documentation, uncertainty characterization, known issues, etc.). Furthermore, an independent evaluation of the quality of these datasets will ensure the information is robust and sufficient for users to judge the fitness for purpose of the data for their application. The results of EQC activities will be constantly updated and presented in a homogeneous way for all data on the CDS catalogue.

Besides the option of downloading datasets, the CDS also provides interactive processing software (the Toolbox), which allows users to create applications and visualizations based on the data content of the CDS. The EQC function assesses documentation and technical methods of the Toolbox components, building on internationally-recognized standards for software quality.

Finally, the EQC function is completed by the continuous monitoring of the overall quality of the CDS service through Key Performance Indicators (KPIs) made available in a dashboard under development. As the C3S is a user-driven climate service, continuous monitoring includes measuring users' satisfaction with the CDS and SIS. This is achieved through the user requirement assessment, resulting in recommendations periodically developed for improvement and expansion of the CDS datasets, products and infrastructure, and new SIS showcases, indicators and applications.

Therefore, the EQC activities are essential for the C3S to guarantee the usability of its authoritative information. This presentation will show an end-to-end holistic approach that the EQC function is building to become an integral and operational component of the C3S.