

An open data portal for ESA's Climate Change Initiative



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Primary objective and key requirements

To develop an Open Data Portal providing a central point of harmonised access to mature Climate Change Initiative (CCI) Essential Climate Variable (ECV) datasets

- Complementary to the data access mechanisms provided by each CCI project
- A “shop window” for the CCI programme (explore, discover and access data, request support, share and collaborate through the on-line community...)
- Must be user-friendly and reliable, offering long-term availability and free and open access to data
- An online user requirements survey is here: <http://tinyurl.com/portal-survey-0615>

Who are the expected users?

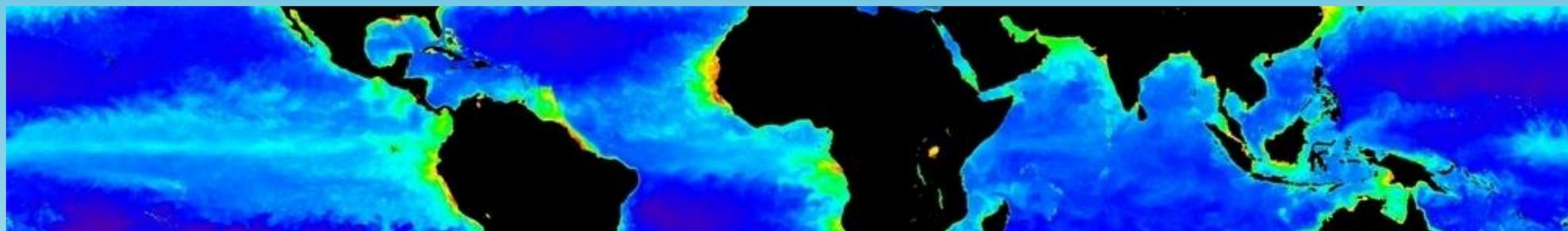
- **International climate research community** contributing to IPCC scientific assessments, including climate model development, verification and data assimilation, and scientists performing research on climate change monitoring, detection, attribution and mitigation.
- **Climate service developers and providers**, to support in their development and provision of climate services.
- **Earth system reanalysis community**, for use in reanalysis model development, verification and data assimilation.
- **General public**, for access to general information about the CCI programme and success stories.

Features of the portal

- The open data portal will provide a **simple web-based interface** as a single dedicated point-of-access for all CCI data products and for all ESA Climate Change enquiries.
- It will feature **search and data discovery tools** for CCI data products and facilitate efficient and expedient data access. This will be based on a CCI Central Data Archive and Metadata Catalogue.
- The portal will provide a comprehensive repository for information on the CCI and a **user forum** for queries, discussion and feedback.
- The portal will be the host for a **CCI toolbox** dedicated to the discovery, interrogation and analysis of CCI data products.



Current ECV projects cover aerosol, cloud, fire, greenhouse gases, glaciers, ice sheets, land cover, ocean colour, ozone, sea ice, sea level, sea surface temperature and soil moisture.



Example CCI ocean colour data set. The CCI is realizing the potential of Earth Observation to provide stable, long-term, global ECV data products. Comprehensive information is also provided on uncertainties, calibration and validation, long term algorithm maintenance, data curation and reprocessing.

Example ESGF interface to CCI data. Climate modellers are already familiar with the Earth System Grid Federation as a host to climate model output, and integration with ESGF will be a significant step in improving access to ECVs for the modelling community.

First steps and project timeline

The project began in May 2015 with a duration of 3 years. The first steps are:

- Rapid deployment of portal FTP site offering key ECV datasets
- Quick integration of existing programme web site
- Portal baseline requirements analysis exercise

This will be followed by development of the central data archive, metadata catalogue, and interfaces, together with an improved programme web site with catalogue search interface, helpdesk function, ECV dashboard and document library.

The project will also support ECV teams in maintaining the individual project web sites, and submitting CCI data sets to the Obs4MIPs database, through training and assistance with data preparation.

For further information on the CCI data, portal and toolbox please see ESA Climate Office presentations from the ECMWF Climate Change Service workshops in 2015, e.g. <http://tinyurl.com/ESA-CO-C3S>