

climate change initiative

→ CLIMATE MODELLING USER GROUP

CMUG Introduction and Status

Amy Doherty, CMUG Integration meeting, 16th Oct 2024, Harwell

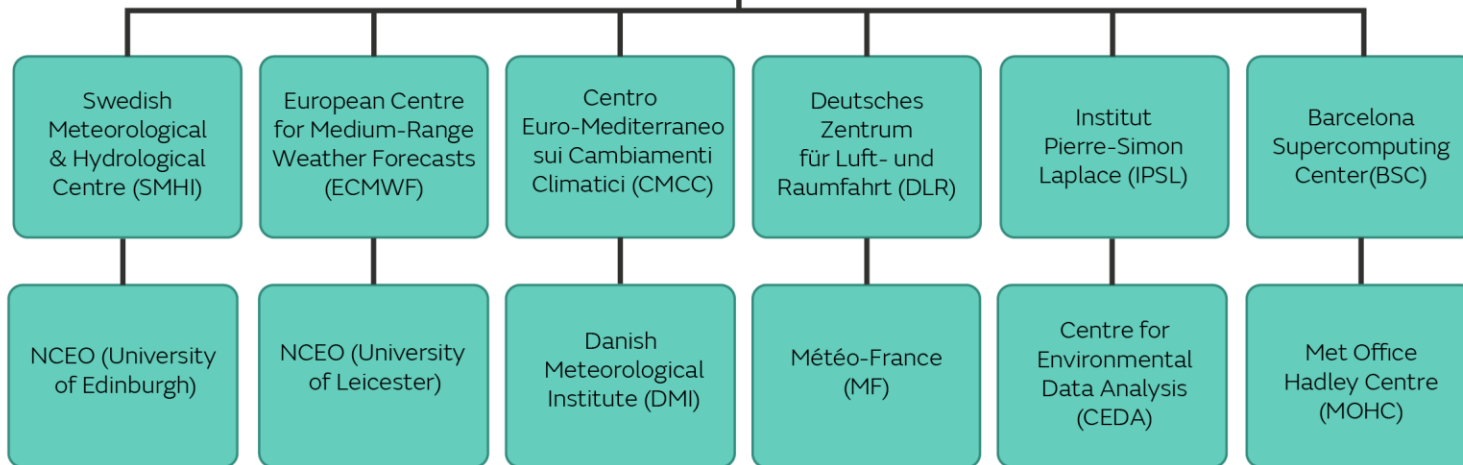


European Space Agency (ESA) Climate Change Initiative (CCI)

Essential Climate Variables (ECVs)

Sea level	Aerosols	Permafrost	High resolution land cover	Land cover	Vegetation parameters
Land surface temperature	Greenhouse gases	Clouds	Above ground biomass	Soil moisture	River discharge
Sea ice	Sea surface temperature	Water vapour	Fire	Lakes	Precursors for aerosols
Antarctic ice sheet	Glaciers	Sea state	Ozone	Other long-lived	and ozone
Snow	Greenland ice sheet	Ocean colour	Sea salinity	greenhouse gases	Anthropogenic water use

CMUG Climate Modellers



Met Office Hadley Centre – CMUG Project Management



Refine scientific requirements of Earth observations for climate modellers and climate researchers

Provide technical and scientific feedback to CCI projects

Assess the global satellite climate data records produced by the Essential Climate Variable (ECV) projects

Promote and report on the application of CCI datasets for climate modelling, research, services and reanalysis

Look at consistencies and uncertainties across ECVs from a user viewpoint



- Kick off September 2024
- Main activities:
 - 8 science studies using 21 ECVs
 - ESMValTool development
 - CCI ECV User Requirements reports
 - Obs4MIPs user requirements and gap analysis
- Outreach activities:
 - Interaction and user feedback with new ECV projects
 - Web pages: <https://climate.esa.int/en/projects/cmug/>
 - Newsletters
 - Climate Science Working Group
 - WCRP activities



- URD for new ECVs complete:
https://climate.esa.int/documents/2725/CMUG_Baseline_Requirements.pdf
- 1 science study complete
- 7 science studies underway
- Obs4MIPs requirements and gap analysis: interviews being held
- 5 science study mid-term reviews held during CSWG meetings, 2 more planned for winter 2024
- Optional study proposals submitted
- Deliverables can be found on the CMUG page of the CCI website: [Climate Modelling User Group \(CMUG\) \(esa.int\)](#)



- Current phase ends September 2026
- CMUG scientific activities will be continued in the “Interfacing the climate observations and modelling communities” CCI theme
- ESMO will play a role in facilitating communication between the observation providers and the users of the datasets: Working Group on Observations for Researching Climate (WGORC)