

climate change initiative

→ CLIMATE MODELLING USER GROUP

CMUG Integration Meeting

24-25 October 2022

Amy Doherty CMUG Project Manager





- CMUG Overview
- CMUG outputs – documents and experiments
- Purpose of the Integration meeting
- Objectives of each session

Agenda and Webex links at: <https://climate.esa.int/de/events/12th-cci-colocation-meeting/>





CMUG currently consists of 9 partners plus ESA:

- Met Office
- DLR
- MPI-M
- Météo-France
- ECMWF
- SMHI
- IPSL
- BSC
- CEDA/UKRI-STFC



climate modelling user group cci



Max-Planck-Institut
für Meteorologie



Science and
Technology
Facilities Council



RAL Space





CMUG Partners current phase



- **ESA:** Simon Pinnock
- **Met Office:** Amy Doherty, Richard Jones, Hannah Griffith, David Ford, Debbie Hemming, Rob King, Erasmo Buonomo, Grace Redmond
- **DLR:** Axel Lauer
- **MPI-M:** Andreas Wernecke, Dirk Notz
- **Météo-France:** Jean-Christophe Calvet
- **ECMWF:** Angela Benedetti
- **BSC:** Pablo Ortega, Enza Di Tomaso
- **SMHI:** Ulrika Willén
- **IPSL:** Frédérique Cheruy
- **CEDA/UKRI-STFC:** Alison Waterfall





CMUG Partners next phase



- ESA: Simon Pinnock
- Met Office: Amy Doherty, Richard Jones, Hannah Griffith, David Ford, Debbie Hemming, Rob King
- DLR: Axel Lauer, Lisa Bock, Veronika Eyring
- MPI-M: Dirk Notz
- CNRM: Jean-Christophe Calvet
- ECMWF: Angela Benedetti
- BSC: Pablo Ortega, Enza Di Tomaso, Eleftheria Exarchou
- SMHI: Ulrika Willén
- IPSL: Frédérique Cheruy
- CEDA/UKRI-STFC: Alison Waterfall
- CMCC: Daniele Peano
- DMI: Shuting Yang, Ruth Mottram
- UoL: Rob Parker





“ESA has established CMUG to place a climate system perspective at the centre of its Climate Change Initiative (CCI) programme, and to provide a dedicated forum through which the Earth observation data community and the climate modelling and reanalysis community can work closely together. CMUG will work with the Essential Climate Variable CCI projects to achieve this goal.”

CMUG activities:

- Gather user requirements for ECV data sets
- Quality assessments
- Outreach (e.g. newsletters)
- Coordinate forums for communication (like the Climate Science Working Group – CSWG)
- Publicity for the ECV datasets to the climate research and monitoring communities
- ECV inclusion in databases such as obs4MIPs and the Copernicus Climate Data Store



- Foresight report
- User requirements document
- Review of documentation from the ECV projects
- CSWG meetings
- Newsletters
- Outreach
- Expanding reach of CCI datasets





- Usually held ever quarter
- All ECV projects and their CRGs (Climate Research Groups) invited
- Subset of ECVs discussed at each meeting
 - Oct 2020: Sea Ice, SST and Salinity
 - Jan 2021: Fire, LC and Biomass
 - May 2021: Lakes, Snow and Permafrost
 - April 2022: next phase plans
- Past meeting minutes can be found on the CMUG SharePoint site at <https://metoffice.sharepoint.com/:f:/r/sites/CMUGExt/External%20Documents/04.%20CSWG?csf=1&web=1&e=08inkf>



WP3: Quality Assessment of CCI products

Jean-Christophe Calvet, Meteo-France

- Consistency and interaction between datasets
- Constraining models using CCI data
- CCI data for model evaluation
- Use of CCI data in reanalysis

WP4: Model Intercomparison type experiments

Andreas Wernecke, MPI-M

- Using CCI data to evaluate and develop climate models
- Comparing CCI data with other observations

WP5: Adaptation of climate evaluation tools

Axel Lauer, DLR

- ESMValTool
- obs4MIPs
- CMF – Climate Monitoring Facility



- **Overview of phase 1 achievements** (today)
- **Plans for next phase** (tomorrow)
 - Intro to Phase 2 proposals
 - Discussion and input from CCI projects on the science proposals
- **Discussions with the wider climate modelling and observation community** (final session tomorrow)



Tuesday 14:00-15:30



Break out rooms to discuss the proposed scientific studies

14.05-14.45: Session 3a

- **Room G:** Land surface (J-C Calvet, Chair) [
- **Big Hall:** Machine learning (L. Bock, Chair)
- **Room D:** Snow (*C. Ottele, Chair)
- **Room E:** Ocean biogeochemistry (P Ortega, Chair)
- **FORCADA:** ESMValTool (A. Lauer, Chair)

14:50: 15:30: Session 3b

- **Room D:** Veg/hydro (D. Peano, Chair)
- **Big Hall:** Machine learning (L. Bock, Chair)
- **Room E:** Ice sheets (Ulrika Willen, Chair, Shuting Yang, Rapportuer)
- **FORCADA:** Cloud/aerosol (P. Ortega, Chair)





See slides, posters and agenda here:

