

6th Copernicus Climate Change Service (C3S) General Assembly

11-14 Sept 2023



6th C3S General Assembly *Agenda*

MONDAY 11 SEPTEMBER

19:00 - 21:00 INTERNAL C3S DINNER (C3S STAFF ONLY)
Quality Hotel, Brno

TUESDAY 12 SEPTEMBER

08:45 - 09:15 Registration

09:15 - 10:00 Welcome & Keynote

- Jean-Noel Thepaut, Director of Copernicus Services (ECMWF)
- Mr. Jaroslav Suchý, Deputy mayor, Brno
- Director prof. Michal V. Marek on behalf of the Czech Academy
- Francesca Somma, DG-DEFIS, European Commission
- Carlo Buontempo, Director of the Copernicus Climate Change Service (ECMWF)

10:00 – 10:45 **Session 1: Reanalysis & Observations**

Description: This session showcases the reanalysis and observation activities being undertaken within C3S. There will be a focus on those activities that have commenced since the 2022 General Assembly, while giving the 'big picture' and the evolution of C3S reanalysis. The session also shows how C3S reanalysis and observations are being used in developments that could revolutionise Numerical Weather Prediction and in future climate science.

Technical session lead: Hans Hersbach (ECMWF) and Paul Poli (ECMWF)

- The reanalysis user landscape, Chiara Cagnazzo (ECMWF)
- ERA5, the story so far & plans for ERA6, Hans Hersbach (ECMWF)
- The contributions of C3S to the Global Climate Observing System, Peter Thorne, (Maynooth University)

10:45 – 11:15 **COFFEE BREAK**

11:15 – 11:45

- Machine learning approaches in climate science - Matt Chantry, ECMWF (online)
- Questions & Answers

11:45 – 13:00: **Session 2: Climate Intelligence**

Outline of session: This session focuses on C3S Climate Intelligence activities, specifically those that support the European State of the Climate reports. The presentations will detail how C3S activities utilize different datasets and methodologies for climate monitoring, showing which type of processes/events, including extremes, are investigated. The session will include highlights from the ESOTC 2022 report.

Technical session lead: Samantha Burgess, Dept. Director C3S

- Evaluating ERA5 precipitation: an opportunity for a future improvement, David Lavers (ECMWF)
- Presentation TBC
- ESOTC methodology and highlights, Rebecca Emerton (ECMWF)
- Glaciers in the ESOTC context, (Presenter TBC, UZH)
- 1.5 degrees, Samantha Burgess (ECMWF)
- Questions & Answers

13:00 – 14:00 **LUNCH**

14:00 – 16:00 **Session 3: Joint C3S-EUMETSAT Session on Monitoring the Hydrological Cycle & Related Extreme Events**

Online session connected remotely to the EUMETSAT Meteorological Satellite Conference 2023, Malmö, Sweden

Description: This collaborative session between C3S and EUMETSAT (European Organization for the Exploitation of Meteorological Satellites) focuses on satellite-based Climate Data Records (CDRs) and their value in operational climate services. Emphasis is placed on identifying the essential components to monitor, comprehend, and characterize the hydrological cycle, as well as related extreme events.

On-site co-moderator (C3S): Ali Al-Jaberi / On-site co-moderator (EUMETSAT): Marie Doutriaux Boucher

14:00 – 15:15 Part 1: Satellite observations for CDRs and next generation reanalysis

- EUMETSAT continuous support to climate services and science (Joerg Schulz, EUMETSAT) - Brno
- The EUMETSAT Climate monitoring SAF: Evapotranspiration and latent and sensible heat fluxes (William Moutier - Royal Meteorological Institute of Belgium) - Malmö
- Monitoring soil moisture from space: A European perspective (Joaquin Munoz Sabater, ECMWF) - Brno
- Temperature extremes: The 2022 extremely warm summer over Europe - what can we learn from the satellite perspective? João Paulo Martins (IPMA, Portuguese Institute of Sea and Atmosphere), EUMETSAT Conference - Brno
- Next generation reanalysis: Results from the CERISE project, Patricia de Rosnay, Hans Hersbach (ECMWF)

15:15 – 16:00 Part 2: Climate challenges – Focus on droughts: Impacts and monitoring

- Local users: Transnational Danube international organization: challenges and requirements (International Commission for the Protection of the Danube River, ICPDR), (speaker TBC)
- JRC Drought observatory – (speaker TBC)
- Synergies between CEMS and C3S on hydrological modeling, Shaun Harrigan (ECMWF)

16:00 – 16:30 COFFEE BREAK

16:30 – 17:30 Session 4: New C3S Infrastructure and Tools

Description: C3S Infrastructure is currently in an interim period, moving towards a modern infrastructure, based on FAIR principles that will allow the service to continue growing and be in position to address all the challenges ahead. The first part of the session reports on operational activities and the status of current development contracts, it will also introduce the envisaged migration plan towards implementing the new system and inform the community about the benefits for C3S users.

Technical session lead: Angel Lopez Alos (ECMWF)

- Operational report and statistical update, Iryna Rozum (ECMWF)
- CADS 2.0: Status of development and envisaged transition roadmap, Angel Lopez (ECMWF)
- Visual Interactive Content (VIC) on CADS 2.0: introduction to Earthkit, Edward C. Platt/James Varndell (ECMWF)
- Workshop for a FAIRest CADS, Eduardo Damasio/Marcus Znacchi (ECMWF)
- Conclusions and Q&A

CONFERENCE DINNER

WEDNESDAY 13 SEPTEMBER

09:30 - 11:00 **Session 5 – Climate Predictions**

Technical session lead: Eduardo Penabad (ECMWF)

- Keynote: Title TBC, Wilfran Moufouma-Okia (World Meteorological Organization)
- Title TBC, Anca Brookshaw (ECMWF)
- SEAS6, Tim Stockdale / Magdalena (ECMWF) (online)
- An introduction to the seasonal products for hydrology and energy from C3S Operational Sectoral Information services.
 - Peter Berg (SMHI)
 - Nube Gonzalez (ECMWF)
- Questions and answers

11:00 - 11:30 **GROUP PHOTO followed by COFFEE BREAK.**

11:30 - 13:00 **Session 6: Climate Projections & Use of Data by Third Parties**

Technical session lead: Anca Brookshaw (ECMWF)

- Keynote: Richard Jones (UK Met Office)
- Science from below: Taking a bottom-up approach to climate risk, Ted Shepherd (University of Reading)
- The Copernicus Interactive Climate Atlas and its viewer in the CDS, Andras Horanyi (ECMWF) & Daniel San Martín (Predictia)
- C3S products and services as a new reference for ENTSO-E's studies (David Radu, ENTSO-E).
- EU Climate Risk Assessment (EUCRA), Julie Berckmans (European Environment Agency)
- Is my project risky or not? Lessons learned from using climate data at the European Investment Bank (EIB), Roman Roehrl (EIB)
- Questions & Answers

13:00 - 14:00 **LUNCH**

Session 7: Parallel Sessions & Side Meetings

Description: Wednesday afternoon is dedicated to side meetings and the launch of the Copernicus Energy Hub. Note that the side meetings are related to C3S contractual activities, with many being by invite only. The Earthkit training sessions provide an opportunity to get familiar with the new open-source toolkit to handle C3S data, and are open to all, as are the sessions 'Launch of the Copernicus Energy Hub' and the Workshop on 'Communication in Climate Science.'

Parallel Sessions & Side meetings*

14:00 - 15:00	Plenary Room Launch of the Copernicus Energy Hub	Side meeting* CADS 2.0	Earthkit training 1 (classroom)	Side meetings* Cross CDR
15:00 - 16:00	POSTERS & COFFEE BREAK			
16:00 - 17:30	Plenary Room Workshop on 'Communication in Climate Science'	Side meeting* Climate Intelligence	Earthkit training 2 (classroom)	Side meeting* In-situ observations data rescue

*Invites to these meetings will be sent prior to the general assembly via the C3S technical officer or thematic lead.

14:00 - 15:00 Copernicus Energy Hub Launch – Plenary Room / Livestream

Moderator: Nube Gonzalez

- Welcome, Francesca Somma (DG DEFIS)
- Introduction of the Copernicus Energy Hub, Carlo Buontempo (ECMWF)
- Presentation of the Copernicus Energy Hub, Cristina Ananasso (ECMWF)
- Advisory Board Panel discussion, DG ENER: Andreas Zucker, IRENA: Asami Miketa, ENTSO-E: David Radu, RTE-FRANCE: Laurent Dubus
- Question & Answers
- Concluding remarks, Stijn Vermoote (ECMWF)

THURSDAY 14 SEPTEMBER

9:30 - 11:00 Session 8: Service-oriented Elements

Description: C3S is not just about providing access to data; it is about enabling users to make best use of our data. This is achieved by the provision of a user support service, training materials and outreach/communications. This session will briefly explore the new elements in C3S user services and the synergies between them.

Technical session leads: Anabelle Menochet (ECMWF) and Andre Obregon (ECMWF)

09:30 - 10:00 Training & user support, Chris Stewart, Anabelle Menochet (ECMWF)

10:00 - 11:00 Evaluation and Quality Control

Description: This session will introduce the renewed EQC framework, “EQC 2.0” to a wider C3S audience; introducing the concepts of fitness-for-purpose, quality assurance and assessment; highlighting the renewed focus on usability, with a demonstration of how EQC is integrated in the new CADS (Climate and Atmosphere Data Store) infrastructure. This session will detail C3S plans for the ‘user-driven evolution’ of the EQC, highlighting the role and process of managing user feedback.

- An enhanced EQC function for C3S, Andre Obregon (ECMWF)
- Demo of the new EQC in the CADS portal, TBC (CNR + B-Open/Predictia)
- User-driven evolution of the EQC, Paula Salge (+Atlantic)
- Questions & answers

11:00 – 11:30 **COFFEE BREAK**

11:30 – 12:30 **Session 9: New C3S activities & Close**

Description: This wrap-up session introduces C3S activities that have commenced since the 2022 General Assembly and provides an insight into the future C3S endeavours.

- Highlights from C3S User Engagement & Introduction to the National Collaboration Programme, Stijn Vermoote, Cristina Ananasso, Delphine Deryng (ECMWF)
- Title TBC, Samantha Burgess (ECMWF)
- Conclusions, including poster prize, Carlo Buontempo, (Director C3S, ECMWF)

END