

Pathway to regular and sustained delivery of climate forcing datasets

28-31 October 2024
ECMWF Reading, UK

MONDAY 28 OCTOBER	
13:00-15:00	<p>Session 1: CMIP7 DECK forcings focus (Chairs: Paul Durack, Vaishali Naik)</p> <ul style="list-style-type: none"> • TT member updates (all data providers) <ul style="list-style-type: none"> ◦ Status of dataset delivery and timeline ◦ Additional information and recommendations related to datasets • First look at v0 datasets compared to CMIP6 – Fresh Eyes led (Camilla Mathison, Wandu Yu) • Q&A/Discussion • Addressing any critical issues • Identify key data dependencies: NOAA, NASA, ESA, EUMETSAT, private entities (IEA)?
15:15-15:30	AFTERNOON TEA BREAK
15:30-18:00	<p>Session 2: Scenario forcings and harmonisation (Chairs: Jarmo Kikstra, Steve Smith)</p> <ul style="list-style-type: none"> • Status, plans and timeline (Louise Chini, Matt Gidden) • Lessons learned from <u>RESCUE</u> (Matt Gidden) • Addressing challenges <ul style="list-style-type: none"> ◦ Emissions (Steve Smith, Jarmo Kikstra) ◦ Land Use and Land Cover Change (LULCC) (Louise Chini) ◦ Carbon Dioxide Removal (Ben Sanderson) ◦ Scenarios (Brian O’Neill)
Evening	FREE EVENING
TUESDAY 29 OCTOBER	
09:00-12:30 (including tea break at 10:30)	<p>Session 3: CMIP7 DECK protocol development (Chairs: Vaishali Naik and Ben Sanderson)</p> <ul style="list-style-type: none"> • Status of v0 data implementation in models - (modelling groups) - 30 mins

	<ul style="list-style-type: none"> • Summary of DECK experimental protocol in CMIP6 (Vaishali Naik, Paul Durack) -15 mins • Revisiting piControl/ScenarioMIP protocol related to (all 10 + 3 mins): <ul style="list-style-type: none"> ○ Volcanic baseline time period, vertical extent and scenario specification (Thomas Aubry) ○ Solar baseline period (Bernd Funke) ○ Natural variability embedded in biomass burning emissions (John Fasullo) ○ Natural variability embedded in Ozone (Michaela Hegglin) • Guidance development for the community (with report back to CMIP Core Panel) - 45 minutes
12:30-13:30	LUNCH
13:30-14:30	<p>Community drop-in session (Chairs: Vaishali Naik, Paul Durack)</p> <p>Latest update on CMIP7 DECK forcing datasets including testing and planned publication of AR7 Fast Track versions.</p> <p>Registration for drop-in session here and padlets for pre, during and post event questions and feedback:</p> <ul style="list-style-type: none"> • The now...CMIP7 DECK forcing suite • Next generation sustained mode forcing updates
14:30-16:00	<p>Session 4: Addressing Gaps and Uncertainties in Forcing Datasets (Chair: Paul Durack)</p> <ul style="list-style-type: none"> • Setting the stage – Paul Durack - 5 mins • How are historical/DECK forcings implemented in an ESM - an example of IPSL-CM6A-LR 2020 (Thibaut Lurton) (10+3 mins) • How do we identify and recommend forcings datasets for models - example of simple plume aerosols: (Stephanie Fiedler) (10+3 mins) <p>Discussion on uncertainties in implementing forcings in models:</p> <ul style="list-style-type: none"> • Alternate datasets to address missing processes in models or elucidate uncertainties in forcings <ul style="list-style-type: none"> ○ Freshwater from ice sheets (Ken Mankoff) (10+3 mins) ○ Groundwater for irrigation (Yi Yao) (10+3 mins) ○ Alternative fire emissions datasets (Douglas Hamilton) (10+3 mins) <p>Discussions leading to decisions on inclusion of additional forcings for delivery</p>
16:00-16:30	AFTERNOON TEA BREAK

16:30-18:00	<p>Session 5: What are the MIP needs? (Chair: Stephanie Fiedler)</p> <ul style="list-style-type: none"> • Population density data (HYDE) – highlighting the need from the models’ perspective (Jane Mulcahy) (8+ 2 mins) • Hydrogen (Maria Sand) (8+2 mins) • Dust emissions (Stephanie Fiedler) (8+ 2 mins) • Land-only and ocean-only atmospheric forcing datasets (Dave Lawrence) (8+ 2 mins) • Other contributed datasets - scenarios/idealized <p>Outcome - identify points of contact for forcing data delivery</p>
18:00-20:00	ICE BREAKER: Networking and drinks (ECMWF Weather Room)
WEDNESDAY 30 OCTOBER	
09:00-10:30	<p>Session 6: Sustained mode challenges (Chair: Eleanor O’Rourke)</p> <ul style="list-style-type: none"> • Setting the stage (Zeb Nicholls) • Refining the challenges for both historical and scenario forcings. • Refining the presentation of the current process and proposed options for sustained mode for the plenary session.
10:30-11:00	MORNING TEA BREAK and arrival of plenary participants
11:00-12:30	<p>PLENARY 1: The need for sustained mode forcings (Chair: Anca Brookshaw)</p> <ul style="list-style-type: none"> • What do we mean by sustained mode? (Helene Hewitt) • The wider user perspective: introductions from the panel. <ul style="list-style-type: none"> ◦ Climate forcings in the CAMS operational service (Johannes Flemming) (15 mins) ◦ Forcings for reanalysis and initialised predictions (Tim Stockdale) (20 mins) ◦ Contributions from the rest of the panel (10 mins) • Discussion on the user perspectives: reflect on challenges in catering for the wide variety of needs (30 mins)
12:30-13:30	<p>LUNCH</p> <p>At 13.25 please congregate in the courtyard (by the ducks) for a group photo</p>
13:40-15:30	<p>PLENARY 2: Current status and potential challenges for sustained mode (Chair: Eleanor O’Rourke)</p> <ul style="list-style-type: none"> • What is happening now? – the CMIP7 experience (Paul Durack and Vaishali Naik) (15+15 mins) • Summary of potential sustained mode challenges (Zeb Nicholls) (15+15 mins) • Funders panel
15:30-16:00	AFTERNOON TEA BREAK

16:00-18:30	<p>PLENARY 3: Can we address the challenges? (Chair: Claire MacIntosh)</p> <ul style="list-style-type: none"> • Introduction to break out session and objectives (Claire MacIntosh) • Breakout 1: How to address user needs/requirements (40 mins + 20 mins feedback) • Breakout 2: How to build a sustained mode delivery programme (40 mins + 20 mins feedback) • Plenary summary: list of potential solutions and approaches to be developed in Plenary 4.
19:30-22:00	<p>WORKSHOP DINNER (Location: Thames Lido) Participants by coach directly from ECMWF at 19:00</p>
THURSDAY 31 OCTOBER	
09:00-11:00	<p>PLENARY 4: Realising the vision (Chair: Carlo Buontempo)</p> <ul style="list-style-type: none"> • Reflecting and refining the vision • How can this vision be achieved?
11:00-11:30	MORNING TEA BREAK
11:30-13:00	<p>PLENARY 5: Next steps (Chair: Carlo Buontempo)</p> <ul style="list-style-type: none"> • What are the next steps – tangible actions with timeline and assigned responsibilities
13:00-	<p>Wash up meetings</p> <ul style="list-style-type: none"> • Forcings TT/providers • C3S-CMIP • BECCS afternoon workshop

Venue and logistics

The workshop is free to attend, however, travel, lunch and accommodation costs cannot be reimbursed and must be met by the participant. Lunch will be available for purchase on site.

ECMWF, Shinfield Park, Reading – location and travel details can be found [here](#). We suggest in person participants stay in Reading town centre – there is a wider choice of accommodation and a regular bus service to the ECMWF site (*Reading Buses* run bus number 3 (Leopard 3) between Reading station and Wokingham, via Shinfield Road (stop at ‘Shinfield Park, Weather Centre’) [check timetables](#)).

Towards Weather Centre

<https://www.reading-buses.co.uk/services/RBUS/3?&direction=outbound&all=on>

Towards Town <https://www.reading-buses.co.uk/stops/035077040002>

Some key times: 13:11, 13:28, 13:41, 13:56, 14:11, 14:28, 17:13, 17:27, 17:48, 17:56, 18:07, 18:20

Tickets can be bought on the bus using cash (exact money) or contactless card payments. If booking a taxi, it might help the taxi driver if you ask for 'the Weather Centre on Shinfield Road' instead of 'ECMWF'.

Meeting dinner

The meeting dinner will take place at [Thames Lido](#), hosted by European Space Agency, at 19:30 on Wednesday 30th October in central Reading, an Edwardian era swimming bath that has been recently renovated and reopened. A coach will leave from ECMWF at 19:00.

Organising committee

- CMIP Climate Forcings Task Team Co-leads Vaishali Naik (GFDL/NOAA), Paul Durack (PCMDI/LLNL) and [Task Team members](#).
- ECMWF Copernicus Climate Services - Carlo Buontempo, Anca Brookshaw, Chris Goddard
- ESA Climate and Long-Term Action Division - Claire MacIntosh
- CMIP International Project Office - Eleanor O'Rourke, Briony Turner

Questions?

If you have any questions, please contact cmip-ipo@esa.int