



**PAL
MOD**

GERMAN
CLIMATE
MODELING
INITIATIVE

Newsletter November 2021

Dear PalMod members,

most of you might know, that we are busy preparing the project proposal for PalMod Phase III. We plan to hand in the application to the Projektträger DLR latest end of January 2022.

For this, I hope it will be possible to present the planned organisational structure for the next project phase together with more details on the scientific core questions in the December edition of the Newsletter.

SAVE THE DATES

Next PalMod Seminar

Friday, 5. Nov 2021, 11h:

Stefan Mulitza (MARUM), Martin Werner (AWI):

Titel: Deglacial evolution of foraminiferal d18O: implications for changes in global mean sea surface temperature (Stefan) / Glacial-interglacial d18O variations: Model challenges from a polar data perspective (Martin)

Connection details:

<https://geomar->

[de.zoom.us/j/87697898864?pwd=NDR3VzJRV1dsVTFIVEh3MFZ1UWtIZz09](https://geomar-de.zoom.us/j/87697898864?pwd=NDR3VzJRV1dsVTFIVEh3MFZ1UWtIZz09)

Meeting ID: 876 9789 8864

Passcode: 171426

Two upcoming PalMod Workshops

1. CC2 virtual workshop on PalMod II data, Nov 4. 2021

The objective of the workshop is to present an update on the software development and data management from CC2, an update on data production and needs from the various WP leaders, and to give room for discussions.

Please contact Swati Gehlot (gehlot@dkrz.de) for details.

AGENDA

Morning session on data management

10-11.30: Welcome and presentation of the CMORisation and data management processes by Swati Gehlot

11.30-11.45: Update on paleodata handling from Oliver Bothe

11.45-12.30: Short update from all WP and discussions

Afternoon session on model-data comparison tools, visualisations, and their integration into a common framework

14-14.40: update on the toolbox and visualisation interface by Jean-Philippe Baudouin

14.40-15: probabilistic tools for data-model comparison by Manuel Chevalier

15-15.20: ensemble metrics by Oliver Bothe

15.20-16: Further discussions and input from the WPs

To join the meeting via zoom:

<https://geomar-de.zoom.us/j/88263611084?pwd=d1FDTUhxeVFtaGZxTURMZ2xwUjFhQT09>

Meeting ID: 882 6361 1084

Passcode: 641214

2. CC1 workshop on ESMTOOLS Dec. 14. & 15. 2021 noon – to - noon

The workshop will take place at DKRZ and focus on software development and management to disseminate the ESM-tools. Special attention is paid to the integration of new models, coupling of existing models and the adaptation of the tools to the new HPC system 'Levante' at DKRZ.

The workshop is also aimed explicitly at users who do not yet know the ESM-tools (<https://www.esm-tools.net/>) and are interested in integrating their model into this framework.

We are planning the event as 2G (vaccinated or recovered), so that we can largely do without wearing masks. A corresponding proof has to be provided.

Information on registration and agenda can be found here: <https://indico.dkrz.de/event/21/>

New PalMod related papers

Kleinen, T., S. Gromov, B. Steil & V. Brovkin (2021) Atmospheric methane underestimated in future climate. *Environmental Research Letters*, 16, 094006, <https://doi.org/10.1088/1748-9326/ac1814>

Bothe, Rehfeld, Konecky, Jonkers, Towards increased interoperability of paleoenvironmental observation data. (2021). *Past Global Changes Magazine*, Vol. 29, Issue 1, pp. 59–59. Past Global Changes (PAGES). <https://doi.org/10.22498/pages.29.1.59>

Update on Milestones and Deliverables

Updated traffic lights, 26.10.2021

WP	WG	Due To	DAYS	Y Responsible	Task
WG3	WP3.3 D1	30.09.21	● -25	Marum, AWI-B	Transient simulations including water isotopes for abrupt climate change events during MIS3
WG3	WP3.3 D2	30.09.21	● -25	Marum, AWI-B	Transient simulations including water isotopes for Termination I
WG3	WP3.3 M1	30.06.21	● -117	Marum, AWI-B	Transient simulations including water isotopes for an abrupt climate change event during MIS3 and Termination I set up and ready to run
WG2	WP2.1 M1	30.06.21	● -117	AWI	Adjust RECoM model for simulating prognostic atmospheric CO2 concentrations, including fluxes from weathering, and volcanism.
WG2	WP2.1 M2	30.06.21	● -117	AWI	Include iron sources from marine shelves, rivers, hydrothermal activity and sea ice in RECoM
WG2	WP2.3 M1	30.06.21	● -117	MPI-M	Transient deglaciation experiment with improved atmospheric sink component performed, publication draft
WG2	WP2.1 M4	30.06.21	● -117	CAU	Transient effect of aeolian dust deposition changes and of temperature and sea level variations on ballasting implemented in HAMOCC
WG2	WP2.2 M1	30.06.21	● -117	MPI	The development of vegetation and terrestrial carbon on exposed shelves and the leading factors for this development are figured out
WG2	WP2.2 M3	30.06.21	● -117	PIK	Quantification of carbon cycle feedbacks operating through shelf processes during glacial inception and deglaciation with CLIMBER-X
WG2	WP2.3 D1	30.09.21	● -25	MPI-M	Publication on transient deglaciation experiments with methane sinks submitted
WG2	WP2.1 M5	30.06.21	● -117	MARUM	Transient simulations including marine carbon isotopes for an abrupt climate change event during MIS3 and Termination I set up in CESM and ready to run
WG1	WP1.3 M4	30.09.21	● -25	PIK	Analysis of climate and carbon cycle feedbacks
WG1	WP1.3 D1	30.09.21	● -25	PIK	Providing early diagnostics in the ice sheet-climate system based on full glacial cycle CLIMBER-X simulations
CC	CC2 M14	30.06.21	● -117	UHD	Spatio-temporal plot workflow for the model-data comparison toolbox facilitating visual browsing of results
CC	CC1 M11	30.09.21	● -25	MPI	Successful implementation of the coupling between land (JSBACH) and ocean biogeochemistry (HAMOCC) at the transiently changing land-sea interface into the MPI-ESM1 PalMod setup
CC	CC2 M6	31.10.21	● 6	HZG	Set of ensemble tools documented and available to PalMod
CC	CC2 D5	31.10.21	● 6	HZG	Plugin for ensemble metrics documented and ready for integration in toolbox
CC	CC2 D11	30.09.21	● -25	UHD	v0.1 of the toolbox combining consistent metrics for surface climate changes in model and proxy data installed on MISTRAL and available to the PalMod community for testing
CC	CC2 D15	30.09.21	● -25	GEOMAR, MPI	Volcanically forced and unforced snapshot simulations with MPI-ESM available

You find the documentations of all completed Milestones and Deliverables here:

<https://www.palmod.de/group/palmod/milestones-deliverables>

If you meet a milestones or deliverable let me know, so I can remove it from the list - if you have to shift a milestones or deliverables, please contact me (kfieg@geomar.de)

Update on DKRZ business, 01.11.2021

We handed in a resource application end of August to get DKRZ compute time and storage resources from Nov. 2021 to Dec. 2022 (14 months).

Unfortunately, the schedule of LEVANTE going online is still unclear - so we have to be patient.

The WLA will meet in November to decide on the resources to be granted.

More useful news and links



All protocols of the Steering Group Meetings can be found here:

<https://www.palmod.de/group/palmod/protocols>

For general details on the PalMod Phase II project see <https://palmod.de>