Newsletter February 2024

Dear PalMod members and friends

Starting with Good News!
A warm welcome to **Vanessa Skiba**. She started her work at AWI Potsdam in the group of Thom Laepple on Spectrum of Climate variability (WP3.3) 01. Dec.2023.
Moreover, congratulations to **Ulrike Herzschuh**, who was awarded a *Gottfried Wilhelm Leibniz Prize* by the German Research Foundation (DFG), which is considered the most important German research prize. She receives it for her outstanding work in the field of geoecology, with which she has made numerous contributions to the influence of climate fluctuations in recent Earth history on the biodiversity and functioning of polar regions.
Gerrit Lohmann (AWI), together with two colleagues from Norway, has been awarded an *ERC grant* to run the project "i2B - Into the Blue", a project, that strongly benefits from modeling efforts in the PalMod project.
Last but not least**, Mojib Latif** (GEOMAR) was awarded the *Order of Merit of the Federal Republic of Germany* by the Federal President and honored for his long-standing commitment to climate protection.

In transition from Phase II to Phase III
If my administration is correct, the last WP of the PalMod Phase II project will come to an end at the end of February - bringing PalMod Phase II to a close.
However, this does not mean that the work is done, not only the Final Reports have to be written, but a number of milestones and deliverables (M&D) are still outstanding.
Please note: I am happy to update the information on your M&D given in the Final Report in the list, if you send me **a copy of your Final Report.**

Some general information
Save the date for the PalMod General Assembly / Kick off Meeting on **Tuesday, June 11th & Wednesday, June 12th 2024** in **Hamburg**. I will send around a first draft of the agenda in the next Newsletter.

Moreover, have a look to the www.palmod.de webpage to stay informed on the dates of the seminar jointly organized by PalMod and PMIP Wings.

Next seminar: 21. Feb.2024, 01 am !!!!!!

Speakers:

Dr. Gabriel Pontes, CCRC & ACEAS at the University of New South Wales (UNSW):

ENSO sensitivity to background states: lessons from a multi-climate analysis

Dr. Yasuto Watanabe, Met. Res. Institute of Japan:

Drivers of the 41-kyr glacial cycles during early Pleistocene

Please find records of all previous talks on YOUTUBE.

1. Phase II: Milestones and Deliverables (@24.01.2024)

Deadlines until end of 2022

WG3	WP3.2 M4	**30.12.22**	**-390**	AWI	Synthesis of terrestrial palaeoclimate reconstructions by carbonate and silica oxygen isotopes, focusing on lake sediment cores with a regional focus on the Arctic
WG3	WP3.3 D6	**30.12.22**	**-390**	AWI-P	Publication describing the results for MIS3 and the full glacial cycle
CC	CC2 M11	**30.10.22**	**-451**	U Bonn	Spatio-temporal Bayesian framework documented and example of probabilistic evaluation of temperature and precipitation evolution in deglaciation simulation against pollen synthesis / macro fossils available
WG2	WP2.2 D3	**30.09.22**	**-481**	UNI HH	Manuscript about the role of shelf weathering on land-ocean biogeochemical matter fluxes
WG3	WP3.3 D3	**30.06.22**	**-573**	Marum, AWI-B	Transient simulations including water isotopes for last glacial inception
WG2	WP2.2 M6	**30.03.22**	**-665**	UNI HH	Manuscript about the role of shelf weathering on land-ocean biogeochemical matter fluxes
WG3	WP3.3 M2	**30.03.22**	**-665**	Marum, AWI-B	Transient simulations of the Holocene and last glacial inception set up and ready to run
WG2	WP2.2 M5	**30.12.21**	**-755**	UNI HH	Mapping of the geochemical and lithological characteristics of the continental shelves
WG1	WP1.2 M3	**30.09.22**	**-481**	AWI, Marum, MPI	Data from first asynchronosly coupled MIS3 simulations available to the PalMod community

Deadline between 01/23 – 08/23

CC	CC2 M12	**31.08.23**	**-146**	U Bonn	Probabilistic evaluation of temperature and precipitation trend patterns and abrupt changes in PalMod phase II deglaciation simulation ensemble against pollen synthesis from PalMod phase I
WG1	WP1.3 D3	**30.08.23**	**-147**	AWI, Marum, MPI	Non- Accelerated simulations of the last glacial inception with GCM-based ice sheet - solid earth - climate models
WG3	WP3.2 M7	**30.09.23**	**-116**	AWI	Drivers of vegetation dynamics investigated
CC	CC1 D4	**31.07.23**	**-177**	MPI	Study on the outburst flood and African Humid Period lake feedback hypotheses
CC	CC1 D5	**31.07.23**	**-177**	MPI	Study on the role of land-sea carbon and nutrient transfer related to changes in sea level for CO2 variations on glacial timescales
WG1	WP1.1 M2	**31.03.23**	**-299**	AWI, Marum, MPI	Analysis of control factors for the sequence of deglaciation key events
WG1	WP1.1 M3	**30.06.23**	**-208**	AWI, Marum, MPI	Benchmarked state conditions of LGM and deglacial key intervals via element cycles
WG1	WP1.1 M4	**31.12.23**	**-24**	AWI, Marum, MPI	Deglaciatial mechanisms using insolation as a single forcing
WG1	WP1.2 D1	**30.06.23**	**-208**	AWI, Marum, MPI	Reports on the interplay between DO cycles and HE based on fully coupled transient simulations
WG1	WP1.3 D2	**30.03.23**	**-300**	AWI, Marum, MPI	Accelerated ice sheet - solid earth - MIS 5.2climate simulations towards
WG1	WP1.3 D4	**31.08.23**	**-146**	AWI, Marum, MPI, PIK	Model - data evaluation
WG2	WP2.1 D1	**31.12.23**	**-24**	AWI, CAU, MPI, Marum	Transient simulations without interactive carbon cycle for Termination I
WG2	WP2.1 D2	**31.12.23**	**-24**	AWI, MPI, Marum	Transient simulations without interactive carbon cycle for the last glacial inception
WG2	WP2.1 D3	**31.12.23**	**-24**	AWI, Marum	Perform transient simulations without interactive carbon cycle for abrupt climate changes during MIS3
WG2	WP2.3 D2	**30.04.23**	**-269**	MPI-M	Publications on methane during MIS 3 and glacial inception submitted
WG2	WP2.3 M2	**30.04.23**	**-269**	MPI-M	Transient experiment MIS3 performed, publication draft
WG1	WP1.1 D3	**31.12.23**	**-24**	AWI, Marum, MPI	Deglaciation simulations for comparison with proxy data, partly including element cycle
WG1	WP1.1 D4	**31.12.23**	**-24**	AWI, Marum, MPI	Stability analysis for future climate change with interactive ice sheet
WG1	WP1.2 M4	**30.06.23**	**-208**	AWI, Marum, MPI	Data from first synchronosly coupled simulations available to the PalMod community (prescribed CO2)
WG1	WP1.4 M6	**31.10.23**	**-85**	GEOMAR	Run FOCI with biogeochemistry component (TRACY-MOPS) and Nest 2
WG1	WP1.4 D4	**31.07.23**	**-177**	GEOMAR	Sensitivity of Southern Ocean circulation and deep convection to eddy and diffusion parameterisation yielding paramerisation suggestions for WP1.1 - 1.3
WG2	WP2.1 M1	**30.03.23**	**-300**	AWI	Adjust REcoM model for simulating prognostic atmospheric CO2 concentrations, including fluxes from weathering, and volcanism.
WG2	WP2.1 M2	**30.03.23**	**-300**	AWI	Include iron sources from marine shelves, rivers, hydrothermal activity and sea ice in REcoM

It is very possible, and in the case of some severely overdue M&Ds very likely, that they turned out as not being useful. In this case, please let me know and I will remove them from the list. If you meet a M or D, please let me know (kfieg@geomar.de), so I can remove it from the list!

2. Phase III: Milestones and Deliverables

WG	WP	Date	Responsible Institution	Task
CC	DCC1.1	01.09.23	DKRZ	Initial version of DMP (with respect to DMP Phase 2).
CC	MCC2.1	01.09.23	MARUM	Definition of data format for deployment of harmonized PalMod data products on PANGAEA
CC	MCC1.1	01.12.23	DKRZ	Revisit and harmonize the existing data standardization workflows for all PalMod coupled models and sub-models.
WG1	M1.4.1	01.06.24	PIK2	Three emission scenarios (low, intermediate and high, for 10 kyr) with CLIMBER-X
CC	MCC2.2	01.12.23	MARUM	Inclusion of export routines into PaleoDataView for data to be deployed on PANGAEA
CC	DCC2.1	01.12.23	MARUM	Updated version of PDV with PANGAEA export routines
CC	WSCC3.1	01.12.23	Uni Tübingen	Kick-off workshop on model-intercomparison strategies, CC organisation in cooperation with WGs1-3
WG2	M2.1.8	01.03.24	MPI (TP3)	PalMod versions of JSBACH in MPI-ESM and AWI-ESM is updated with existing permafrost carbon module.
WG2	D.2.1.1	01.03.24	MPI(TP1)	Standardised setup of terrestrial C cycle and methane cycle distributed to PalMod users of MPI-ESM
CC	DCC2.2	01.03.24	MARUM	Upload of harmonized proxy data exported from PaleoDataView to PANGAEA

MCC1.1, DCC1., 1MCC2.1 and M1.4.1 have already been reached, the documentations can be downloaded on the PalMod internal pages:
https://www.palmod.de/group/palmod/palmod-iii-milestones-deliverables

3. PalMod DKRZ Compute Resources for 2024

Subproject	Compute resources [n*h] for Jan/Feb/Mar*	Compute resources [n*h] used in 01/24	/work [TB] granted	/work [TB] in use
WG1, ba0989	228.750	25.978	1.650	1.396
WG2, bm1030	105.000	36.684	1.090	898
DM, bk1192	2.500	0	306	82

*Note: the CPU [n*h] not used will be cut end of March

We can always shift the resources between the projects on request.

4. New PalMod Paper

Jonkers, L., Laepple, T., Rillo, M., Shi, X., Dolman, A., Lohmann, G., Paul, A., Mix & A., Kucera, M. (2023). Strong temperature gradients in the ice age North Atlantic Ocean revealed by plankton biogeography, Nat. Geo., Vol. 16, p.1114- 1119.
https://www.nature.com/articles/s41561-023-01328-7