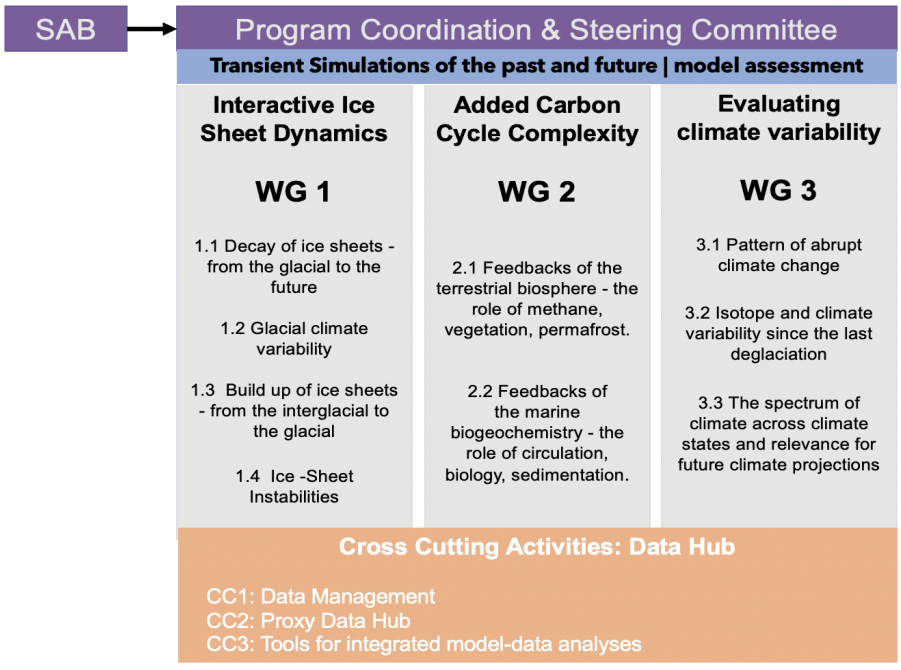
Newsletter June 2023

Dear PalMod members and friends,

this newsletter is a special pleasure for me:

today we can celebrate the official start of PalMod Phase III

As a reminder, this is an overview of the structure of PalMod during the third phase of the project:



According to my bookkeeping the colleagues from CC (CC1, CC2 und CC3) will start today, as well as colleagues in WP1.1 (MARUM), WP 1.4 (GFZ), WP 2.1 (MPI, AWI), WP 2.2 (CAU, MARUM), WP3.2 (MARUM).

WELCOME or WELCOME BACK!

Parallel to this, the work within the framework of PalMod Phase II of cause continues.

In this Newsletter you will find

- an update on the **General Assembly** in September in Bremerhaven
- lists on overdue and upcoming **Milestones** and **Deliverables**,
- a short information on the **resource consumption** of the computing projects at DKRZ of WG1, 2, 3, CC and the Data project,
- the status (to my knowledge) on the **interim reports** / **final reports** of PalMod Phase II submitted so far.

All the information can also be found on the external and internal pages of PalMod (www.palmod.de).

Please let me know

- If something is wrong
- If you would like DKRZ resources to be shifted between the projects
- If papers with PalMod participation (PalMod funded or PalMod in-kind contribution) are accepted
- If you submitted the interim report 2022 or the final report on PalMod Phase II.

1. Update on the General Assembly

- **Date**: Wed. 27. Sept. 2023 11:15h to Fri. 29. Sept. 2023 13h
- **Venue**: AWI Bremerhaven, Building H (Klussmannstr.3)

Please note, the agenda so far is preliminary and still offers plenty of room for ideas, topics and change requests. I you volunteer for a talk, please let contact me.

Wed. 27.09.2023

11:15 – 13:00	**Talks Session1**		**105 Min**
	Welcome, Introduction of new PalMod members	Latif, Ilyina, Schulz	15 Min
	Comments from Projektträger DLR		20 Min
	Talk1		20 + 15 Min
	Talk2		20 + 15 Min
13:00 – 14:00	***Lunch***		***60 Min***
14:00 – 15:30	**Talks Session2**		**90 Min**
	Talk3		20 + 15 Min

	Talk4		20 + 15 Min
	Discussion / buffer		*20 min*
15:30 – 17:30	***Coffee with Postersession1***		**120 Min**
18:00 - xx	***Social Event with Dinner @Fischkochstudio***		

Thu. 28.09.2023

09:00 – 10:30	**BOG Session1**		**90 Min**
	Dynamics of AMOC during the last glacial-interglacial cycle		60 Min.
	Abrupt changes in carbon cycle during warming episodes		
	Wrap up BOG		30 Min.
10:30 – 11:00	***Coffee***		***30 Min***
11:00 – 12:30	**Talks Session 3**		**90 Min**
	Talk 5		20 + 15 Min
	Talk 6		20 + 15 Min
	Discussion / buffer		*20 Min*
12:30 – 13:30	***Lunch***		***60 Min***
13:30 – 15:30	***Postersession 2***		***120 min***
15:30 – 16:00	***Coffee***		***30 Min***
16:00 – 17:30	**Talks Session4**		**90 Min**
	Talk7		20 + 15 Min
	Talk8		20 + 15 Min
	Discussion / buffer		*20 min*
17:30 - xxx	***Fingerfood and quality time @AWI***		

Fri. 29.09.2023

09:00 – 10:30	**BOG Session2**		**90 min**
	Glacial-Interglacial AMOC variability Antarctica, sea level and the Southern Ocean		60 Min.
	BOG4		
	Wrap Up BOG		30 Min
10:30 – 11:00	***Coffee***		**30 Min**
11:00 – 13:00			**120 min**
	Advice from the SAB		
	General discussion, outlook and wrap up		

As a reminder: Bremerhaven is a popular destination in September, so finding a hotel room can be a problem if you don't book in time.

We recommend the following hotels:

B&B Hotel, Barkhausenstr. 3
https://www.hotel-bb.com/de/hotel/bremerhaven

Nordsee Hotel City, Theodor-Heuss Platz 14 – 18,
https://www.nordseehotels.com/city/

Nordsee Hotel Fischereihafen, Am Schaufenster 7,
https://www.nordseehotels.com/fischereihafen

Hotel am Theaterplatz, Schleswiger Straße 3,
https://www.hotel-am-theaterplatz.de/

City Hotel, Schillerstraße 8,
https://city-hotel-bremerhaven.de/

2. Update on Milestones and Deliverables (@01.06.2023)

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.

Deadlines between 06/21 – 09/22

WG2	WP2.1 D3	**30.09.22**	**-244**	AWI, Marum	Perform transient simulations without interactive carbon cycle for abrupt climate changes during MIS3
WG2	WP2.2 D3	**30.09.22**	**-244**	UNI HH	£
WG2	WP2.3 D4	**30.09.22**	**-244**	MPI-C	Publication on isotope analyses submitted
WG2	WP2.3 M6	**30.09.22**	**-244**	MPI-C	Analyses of isotope and aerosol specific simulations, publication drafts
WG3	WP3.2 D3	**30.09.22**	**-244**	GFZ	Update of the PALIM data-base to integrate interpretations from proxy system models for key proxy records
WG3	WP3.2 D6	**30.09.22**	**-244**	MUN	Global ice sheet calibration of Termination II and I
WG3	WP3.2 M10	**30.09.22**	**-244**	MUN	Global ice sheet calibration for Termination II
WG2	WP2.2 M2	**30.06.22**	**-336**	MPI	Biogeophysical and biogeochemical feedbacks between terrestrial biosphere and climate are assessed
WG3	WP3.2 M6	**30.06.22**	**-336**	AWI	Vegetation dynamics analysed including model-proxy comparison
WG3	WP3.2 M9	**30.06.22**	**-336**	MUN	Inclusion of some of the major last glacial cycle ice caps
WG3	WP3.3 D3	**30.06.22**	**-336**	Marum, AWI-B	Transient simulations including water isotopes for last glacial inception
CC	CC2 M18	**30.03.22**	**-428**	GEOMAR	Volcanic forcing data files constructed and tested
WG2	WP2.2 M6	**30.03.22**	**-428**	UNI HH	Manuscript about the role of shelf weathering on land-ocean biogeochemical matter fluxes
WG3	WP3.2 D2	**30.03.22**	**-428**	GFZ	Update of the PALIM data-base to integrate chronological links to the marine data-base
WG3	WP3.2 M1	**30.03.22**	**-428**	GFZ	Synchronization of lacustrine and marine data-bases
WG3	WP3.2 M3	**30.03.22**	**-428**	GFZ	Improved proxy-system models for key climate proxies including varve thickness data
WG3	WP3.2 M8	**30.03.22**	**-428**	MUN	Revised calibrated distribution of last glacial cycle ice sheet chronologies and associated 1D regional Earth models
WG3	WP3.3 M2	**30.03.22**	**-428**	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**	**-518**	UNI HH	Mapping of the geochemical and lithological characteristics of the continental shelves
WG1	WP1.2 M3	**30.09.22**	**-244**	AWI, Marum, MPI	Data from first asynchronosly coupled MIS3 simulations available to the PalMod community
WG2	WP2.3 M5	**30.11.21**	**-548**	MPI-C	Analysis of methane sink in transient simulations, publication draf
WG2	WP2.3 D3	**30.11.21**	**-548**	MPI-C	Publication on transient deglaciation experiments with methane sinks submitted
WG2	WP2.1 M1	**30.06.21**	**-701**	AWI	Adjust REcoM model for simulating prognostic atmospheric CO2 concentrations, including fluxes from weathering, and volcanism.
WG2	WP2.1 M2	**30.06.21**	**-701**	AWI	Include iron sources from marine shelves, rivers, hydrothermal activity and sea ice in REcoM

Deadlines between 10/22 - 12/22

WG2	WP2.2 D1	**30.12.22**	**-153**	MPI	Manuscript on feedbacks between terrestrial biosphere and climate for the deglaciation, glacial inception, and MIS3
WG2	WP2.2 D2	**30.12.22**	**-153**	PIK	Transient simulation of the last glacial cycle with CLIMBER-X driven only by orbital forcing (jointly with WP1.X).
WG3	WP3.2 D4	**30.12.22**	**-153**	AWI	Proxy-Model-comparison of global palaeotemperatures reconstructed from oxygen isotopes in lake sediment cores
WG3	WP3.2 D5	**30.12.22**	**-153**	AWI	Pollen-based biome and climate reconstruction globally available for 130 – 0 ka
WG3	WP3.2 M4	**30.12.22**	**-153**	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	WP3.2 M7	**30.12.22**	**-153**	AWI	Drivers of vegetation dynamics investigated
WG3	WP3.3 D6	**30.12.22**	**-153**	AWI-P	Publication describing the results for MIS3 and the full glacial cycle
WG3	WP3.3 M5	**30.12.22**	**-153**	AWI	Global synthesis and comparison of the spectrum of water isotope variability for MIS3 and full glacial cycle finished
CC	CC2 D6	**31.12.22**	**-152**	HZG	Final PalMod phase II paleo-data metadata table
CC	CC2 D7	**31.12.22**	**-152**	HZG	Documentation of ensemble model-data comparison of deglacial simulation ensemble from PalMod phase II
CC	CC2 M7	**31.12.22**	**-152**	HZG	Standardization of paleo data finished (documentation contained in DMP)
CC	CC2 M8	**31.12.22**	**-152**	HZG	Publication of quality checked paleo data and enabling of version control workflow for future updates incl. persistent identifiers
CC	CC1 M8	**31.12.22**	**-152**	CAU	Parareal version with biogeochemistry coupled; Software, documentation of convergence and efficiency results
CC	CC1 M9	**31.12.22**	**-152**	CAU	Report of possible and promising extensions of parareal methods towards to additional model components and full ESM configurations
CC	CC2 D12	**31.12.22**	**-152**	UHD, Uni Bonn, HZG	Release of v1 of the toolbox and presentation of the results for all publicly released PalMod simulations on a dedicated website
CC	CC2 M11	**30.10.22**	**-214**	U Bonn	precipitation evolution in deglaciation simulation against pollen synthesis / macro fossils available
CC	CC2 M9	**31.12.22**	**-152**	HZG	Application of ensemble tools to PalMod phase II simulations and PalMod phase II marine paleo data synthesis
WG2	WP2.1 D1	**31.12.22**	**-152**	AWI, CAU, MPI, Marum	Transient simulations without interactive carbon cycle for Termination I
CC	CC1 M6	**31.12.22**	**-152**	CAU	Asymptotic method realized and evaluated; Software, documentation of convergence and efficiency results
CC	CC1 M7	**31.12.22**	**-152**	CAU	Micro-macro parareal version running for ocean component, documentation of convergence and efficiency results
WG2	WP2.2 M4	**31.12.22**	**-152**	PIK	Spin-up and initialization procedures for permafrost and peat carbon pools and marine sediment state
WG1	WP1.3 D1	**31.12.22**	**-152**	PIK	Providing early diagnostics in the ice sheet-climate system based on full glacial cycle CLIMBER-X simulations
WG2	WP2.2 M3	**31.12.22**	**-152**	PIK	Quantification of carbon cycle feedbacks operating through shelf processes during glacial inception and deglaciation with CLIMBER-X

Deadline between 02/23 – 05/23

WP	WG	Due To	DAYS	Responsible	Task
CC	CC2 D3	28.02.23	-93	DKRZ, HZG	Final release of DMP
CC	CC2 M2	28.02.23	-93	DKRZ	CMORization finished (documentation contained in DMP)
CC	CC2 M3	28.02.23	-93	DKRZ	Quality checks of model output and publication in ESGF and long-term archiving in WDCC incl. DataCite DOI assignment (documentation contained in DMP)
CC	CC2 D9	30.04.23	-32	Uni Bonn	Plugin for Bayesian framework of spatio-temporal evaluations documented and ready for integration in toolbox
WG1	WP1.1 M2	31.03.23	-62	AWI, Marum, MPI	Analysis of control factors for the sequence of deglaciation key events
WG1	WP1.3 D2	30.03.23	-63	AWI, Marum, MPI	Accelerated ice sheet - solid earth - MIS 5.2climate simulations towards
WG2	WP2.1 D2	30.04.23	-32	AWI, MPI, Marum	Transient simulations without interactive carbon cycle for the last glacial inception
WG2	WP2.1 D4	30.04.23	-32	AWI, CAU, MPI, Marum	Transient simulations with interactive carbon cycle for Termination I
WG2	WP2.3 D2	30.04.23	-32	MPI-M	Publications on methane during MIS 3 and glacial inception submitted
WG2	WP2.3 M2	30.04.23	-32	MPI-M	Transient experiment MIS3 performed, publication draft

Upcoming Milestones and Deliverables until end of PalMod Phase II

WP	WG	Due To	DAYS	Responsible	Task
CC	CC2 M12	31.08.23	91	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	90	AWI, Marum, MPI	Non- Accelerated simulations of the last glacial inception with GCM-based ice sheet - solid earth - climate models
WG1	WP1.4 D6	31.01.24	244	GEOMAR	Study on eddy effects in the Southern ocean including uptake of heat and carbon as well as cross-frontal signal
CC	CC1 D4	31.07.23	60	MPI	Study on the outburst flood and African Humid Period lake feedback hypotheses
CC	CC1 D5	31.07.23	60	MPI	glacial timescales
CC	CC1 D7	31.10.23	152	PIK	Study on simulating the last glacial cycle with PISM using the PICO "pop-up" model
WG1	WP1.1 M3	30.06.23	29	AWI, Marum, MPI	Benchmarked state conditions of LGM and deglacial key intervals via element cycles
WG1	WP1.1 M4	31.12.23	213	AWI, Marum, MPI	Deglaciatial mechanisms using insolation as a single forcing
WG1	WP1.2 D1	30.06.23	29	AWI, Marum, MPI	Reports on the interplay between DO cycles and HE based on fully coupled transient simulations
WG1	WP1.3 D4	31.08.23	91	AWI, Marum, MPI, PIK	Model - data evaluation
WG1	WP1.1 D3	31.12.23	213	AWI, Marum, MPI	Deglaciation simulations for comparison with proxy data, partly including element cycle
WG1	WP1.1 D4	31.12.23	213	AWI, Marum, MPI	Stability analysis for future climate change with interactive ice sheet
WG1	WP1.2 M4	30.06.23	29	AWI, Marum, MPI	Data from first synchronosly coupled simulations available to the PalMod community (prescribed CO2)
WG1	WP1.4 M6	31.10.23	152	GEOMAR	Run FOCI with biogeochemistry component (TRACY-MOPS) and Nest 2
WG1	WP1.4 D4	31.07.23	60	GEOMAR	Sensitivity of Southern Ocean circulation and deep convection to eddy and diffusion parameterisation yielding paramerisation suggestions for WP1.1 - 1.3
WG1	WP1.3 M4	30.10.23	151	PIK	Analysis of climate and carbon cycle feedbacks

If you meet a M or D, please let me know (kfieg@geomar.de), so I can remove it from the list!

3. Resource consumption at HLRE4/Levante @05/2023

DKRZ Project	[n*h] share for 2023	[n*h] accounted by 31.05.2023*	[n*h] expired end of 03/23	[n*h] will be cut end 06/23
0989 / WG1	790.025	262.620	60.640	132.392
1030 / WG2	259.000	92.680	27.886	36.820
1029 / WG3	81.000	20.250	1.145	20.250
0993 / CC	27.000	7.957	5.026	5.543
1192 / CC2-DM	8.300	2.075	1.631	2.075

PLEASE NOTE: some subprojects have strong problems in getting along with the allocated /work space.
This is due to the massive cuts of the WLA compared to the requested resources.
We therefore urge you to delete data from your /work that is not needed currently or to move it to the archive!
It is always possible to shift the resources on request between the projects. If necessary, please contact me, kfieg@geomar.de

4. Overview on the reporting season (@01.06.2023)

	WP1	WP2	WP3	CC
WP *.1	WP1.1 / 01LP1915[] [A] AWI [B] MARUM [C] MPI-M	WP2.1 / 01LP1919[] [A] AWI [B] MPI-M [C] CAU [D] MARUM	WP3.1 / 01LP1922[] [A] MARUM	CC1 / 01LP1925[A - D] Consortial Report ■ DKRZ ■ CAU ■ MPI ■ PIK
WP *.2	WP1.2 / 01LP1916[] [A] MPI-M [B] AWI [C] MARUM	WP2.2 / 01LP1920[] [A] MPI-M [B] PIK [C] Uni Hamburg	WP3.2 / 01LP1923[] [A] GFZ [B] MUN [C] AWI TP2 [C] AWI TP3	CC2 / 01LP1926[A - E] Consortial Report ■ DKRZ ■ HZG ■ Uni Tübingen ■ Uni Bonn ■ GEOMAR
WP *.3	WP1.3 / 01LP1917[] [A] AWI [B] MPI-M [C] MARUM [D] PIK	WP2.3 / 01LP1921[] [A] MPI-M [B] MPI-C	WP3.3 / 01LP1924[] [A] MARUM [B] AWI	
WP *.4	WP1.4 / 01LP1918[] [A] GFZ [B] PIK [C] GEOMAR			
		01LP1914A Report Coordination		

xxx = final report

xxx = intermediate report