Newsletter

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Code of Conduct

We are pleased to announce the official publication of the natESM Code of Conduct, available in both German and English. This comprehensive document outlines the expected conduct and principles for all members of our community. By adhering to these guidelines, we aim to cultivate a culture of respect, inclusivity, and collaboration within our community.

Updates to strategy

During this year's community workshop, it became evident that clarifications were needed regarding our decision-making process and criteria for component integration into the natESM system. We wish to clarify that all components seeking inclusion into the natESM capability must demonstrate compatibility and effective integration within at least one sprint to undergo rigorous testing and evaluation. The final decision on component integration will be made by the steering group. We've also revised our technical criterion for data assimilation together with Lars Nerger. We invite you to review the updated strategy, which is available on our website.

New steering-group member

We are delighted to welcome Sabine Grießbach from JSC as the newest member of our steering group. Sabine's expertise and insights will undoubtedly enrich our collaborative efforts.

New head of land-ice working group

During the Community workshop in Leipzig, Torsten Albrecht from PIK assumed leadership of the working group responsible for implementing the land-ice component in natESM, succeeding Thomas Jung and Kira Rehfeld. For inquiries or participation in the working group, please contact Torsten.

Community workshop recap

We extend our heartfelt gratitude to all participants of this year's community workshop in Leipzig. Your active engagement and insightful discussions have significantly contributed to the success of the event. A special thank you goes to our invited speakers, Daniel Klocke from MPI-M and Xavier Lapillone from Meteo-Swiss, for their invaluable contributions. Daniel shared insights into the technical challenges in km-scale resolution Earth system models, while Xavier provided valuable perspectives on contributions to the ICON model development. Please find all presentations delivered during the workshop on our website.

While the workshop was well-received overall, we have taken note of valuable feedback regarding the structure and timing of breakout group sessions. Some of you expressed a desire for more structured discussions and additional time for in-depth conversations within these groups. We appreciate this feedback and are committed to incorporating it into the planning and organization of our next annual meeting to ensure an even more enriching experience for all participants.

Insights from breakout groups

Atmospheric-chemistry component: Despite lively discussions, the future development of this component remains unclear and requires further exploration. The ComIn coupler was recognized as a valuable tool by the community, prompting discussions on its future direction.

Land component: While there were informative presentations on the ICON-land construct, participants expressed a desire for more in-depth discussions during future sessions.

Land-ice component: Currently, two models, PISM and ISSM, are under consideration as land-ice components. At the workshop, discussions primarily focused on PISM due to the significant presence of its representatives. PISM's advanced state allows for almost seamless connection to an ESM, and the PISM team is actively developing a sprint application.
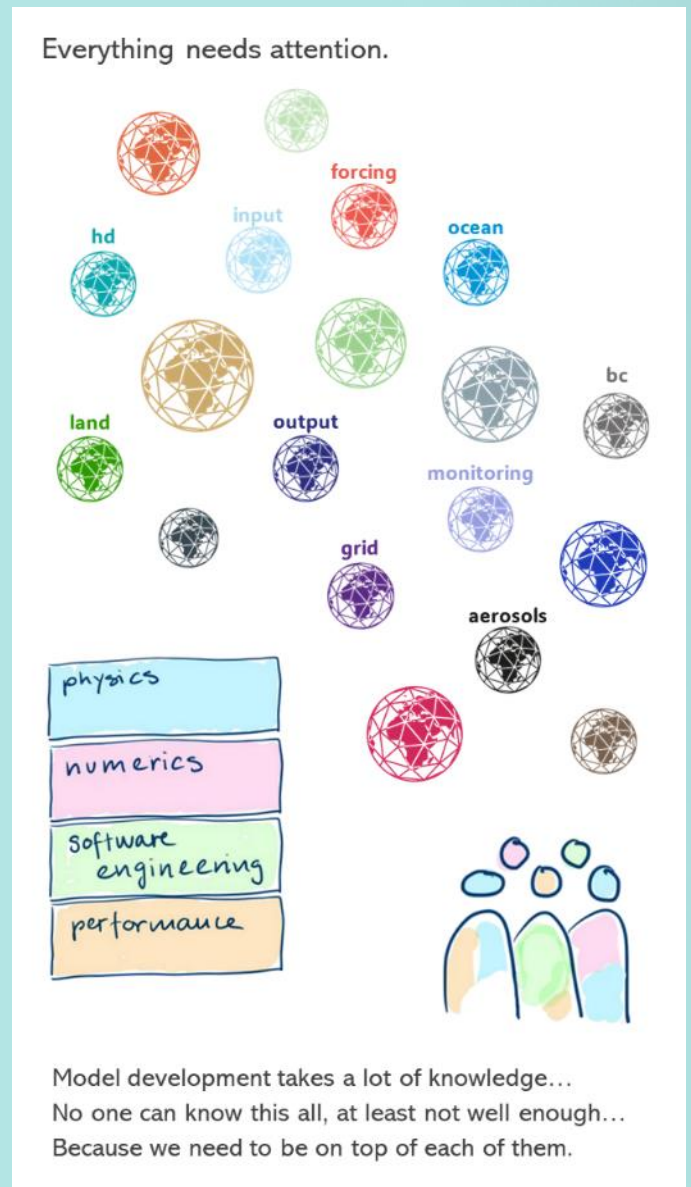

Fig. 1: Combination of two slides from the presentations by Daniel Klocke and Xavier Lapillonne, created by Iris Ehlert.

Please note that the date for our next community workshop has been confirmed already: mark your calendars for February 18-19, 2025, in Berlin.

We look forward to see many of you there again!

New optional component in our GitLab

We are delighted to share that Daniel Caviedes from JSC has introduced a new optional component, SERGHEI, to our GitLab repository. This valuable addition enhances our expanding collection of optional components and fosters collaboration and innovation within our community. We invite you to explore our GitLab repository to update information about your own optional component, explore details about other optional components contributed by members of our community, or submit a new optional component to our natESM system. To submit new components, simply utilize our Google form, and we will gladly publish them on our GitLab platform for you.

Support-team updates

First sprint-status meeting

In line with our commitment to transparency and collaboration, we have introduced status meetings midway through sprints (see our last newsletter). The inaugural meeting with the LAGOON sprint team proved to be very productive, facilitating open discussions and adjustments to the sprint schedule to accommodate the needs of all team members.

Adjustments for the PALM sprint

In mid-March, one of our RSEs, Enrico Degregori, made the decision to transition to a new career path. Consequently, we needed to devise alternative strategies to sustain progress in the PALM Sprint, for which Siegfried Raasch from the University of Hannover is responsible. As an interim measure, Enrico has commenced preparatory tasks for the PALM sprint, while our RSE, Wilton Loch, will resume work on the sprint once he concludes his current CLEO sprint, anticipated to be by the end of August. We extend our gratitude to all three individuals for their flexibility in accommodating adjustments to the PALM-sprint timeline, ensuring we can achieve successful outcomes.

Upcoming Events

Don't miss out on our upcoming natESM events! We have a series of training sessions and workshops lined up to boost your skills and expertise. Join us for the natESM **training on ComIn and YAC**, taking place on July 17th and 18th in Hamburg. Then, on July 23rd, dive into the natESM **training on GPU programming on LEVANTE Nvidia GPUs**. Save the date for our technical training scheduled for November 5th and 6th in Jülich. And mark your calendars for our **next community workshop** on February 18th and 19th, 2025, in Berlin.

Stay updated: Be sure to check our event website regularly for updates and consider submitting your event dates to be featured in our calendar. Our website hosts a wide range of events tailored for modelers, programmers, and RSEs.

Become an RSE at DKRZ!

An exciting opportunity awaits at DKRZ, as we are currently seeking applications for an RSE position in our natESM support team. If you are passionate about cutting-edge software development, we encourage you to review our job offer and submit your application today!

Sprint status

You can discover three new sprint reports on our website, and Wilton and Jörg have also added new entries to the lessons learned page. Feel free to browse and see if there's anything of interest.

Model	Service description	Support time	Status
ICON-ART	Analysis of ART code for GPU porting	2 months 04/22-06/22	Closed → Docu
ICON-mHM-YAC	Online coupling mHM into ICON using YAC	6 months 07/22-01/23	Closed → Docu
FESOM	Port FESOM 2.1 to JUWELS booster and Levante-GPU	6 months 11/22-05/23	Closed → Docu
ParFlow	Port ParFlow to AMD GPUs, Inspection of RAPID Memory Manager and Hipification, Performance Analysis	6 months 12/22-06/23	Closed → Docu
MESSy	Optimize the data transfers between host (CPU) and device (GPU)	4 months 01/23-05/23	Closed → Docu
ESMValTool	Updating remaining non-lazy preprocessor functions to be memory efficient AND updating ESMValCore	6 months 06/23-12/23	Closed → Docu
HAMOCC	Concurrent HAMOCC on GPU	6 months 06/23-12/23	Closed → Docu
MESSy-ComIn	Couple MESSy to ICON via the ICON Community Interface (ComIn)	6 months 07/23-01/24	Closed → Docu
LAGOOn (CLaMS and MPTRAC)	Develop a concept and provide a first implementation of a framework for Lagrangian transport modeling	6 months 09/23-06/24	**Running**
QUINCY in ICON-Land	Stepwise (mode based) port of the IQ code to GPUs based on the established workflow followed for the ICON GPU implementation with OpenACC	6 months 01/24-06/24	**Running**
modLSMcoup	Develop proof-of-concept for modular coupling of land surface + implement YAC coupler in ICON-eCLM coupling	6 months 01/24-06/24	**Running**
CLEO	Coupling CLEO to ICON with YAC	6 months	**Running**
PALM	Porting those of the PALM modules related to urban processes (especially radiation) to GPUs	6 months	Waiting
MESSy-IMPORT	Revise the data import function of the Modular Earth Sub-model System (MESSy) for ICON/MESSy	6 months	Waiting
MESSy-ComIn2	ComIn integration time loop	6 months	Waiting