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## Embrace **GitLab** - share your models and more

## Sprint checks gain momentum

We are delighted to inform you that the introduction of the sprint checks has already been embraced by the community. Nine sprint checks have been initiated, with four of these progressing to full proposal submissions. Of these four proposals, two sprints are currently in progress.

We are thrilled to see such a positive response to this offering and we eagerly anticipate more requests. The direct interaction between the RSEs and the applicants has proven to be mutually beneficial. We recently received feedback from an applicant who, as a result of the exchange during a sprint check, generated at least two additional sprint ideas. We find this outcome particularly exciting and look forward to receiving more requests.

Our [natESM GitLab platform](#) is now accessible to the entire natESM community. Feel free to join and propose models, components, or any other relevant contributions. It's a collaborative space designed to encourage active participation and knowledge exchange.

While everyone can view the content on the natESM GitLab page, comments require an active DKRZ account. Check out our GitLab for more information on ways to contribute. We are just beginning to build the system together with you. If you have any questions, comments, or suggestions, don't hesitate to reach out to us. We are eager to explore how we can collectively enhance the platform.

## Join us on **Mattermost**

We're pleased to announce the launch of our Mattermost channel, open to the entire natESM community. We invite you to participate by following [this link](#) and engage in discussions, collaborate with peers, or reconnect with colleagues you haven't spoken to in a while. We are already making extensive use of Mattermost, particularly for communication between the RSE and sprint applicants.



Send us a short description with access to the code and an experimental setup to [support-request@nat-esm.de](mailto:support-request@nat-esm.de)

# New member in support team

We're thrilled to introduce [Sergey Sukov](#), who joined the natESM support team in July. Sergey is based at JSC. He is mainly interested in parallel simulations, distributed mesh processing, graph partitioning algorithms, adaptive mesh refinement, and intergrid interpolation techniques.



## Upcoming natESM events

### **Charting the course for land-ice integration**

On October 25th, we will convene with members of the ice-sheet community to explore strategies for integrating a land-ice component into the natESM system. To begin with, four community members will introduce models currently under consideration, and we will assess the extent to which these models already align with the technical criteria required for the integration into the natESM system. The meeting will be conducted via Zoom.

→ [More info](#)

### **Full house: training workshop fully booked for November**

Our "Software-Engineering Aspects of Composed Earth System Models" training workshop, which we organized in collaboration with community members, scheduled for November 14th and 15th, quickly reached full capacity, demonstrating its popularity among participants. This workshop will delve into crucial topics such as "Integrating (smaller) components with core components" and "Asynchronous execution of code components."

→ [More info](#)

### **natESM community workshop: save the date for February 2024**

The forthcoming [community workshop](#) is set for February 27-28, 2024, in Leipzig.

Our agenda includes in-depth briefings on natESM's recent advancements, including sprint results. On the first afternoon, we've arranged three parallel workshops to foster interactive dialogues about natESM's future. Two of these workshops will emphasize strategic conversations, delving into prospective models for core land and atmospheric-chemistry components. The third, guided by our RSEs, is dedicated to training and skill enhancement. We'll wrap up by presenting and discussing the outcomes during the plenary session on the second day.

Since we're still in the planning stage, don't hesitate to reach out if you have ideas or

thoughts about additional topics that should be addressed during the workshop. If you have specific suggestions for the three workshops, please feel free to share them as well. Be assured that even after we present the preliminary agenda in our upcoming December newsletter, you'll still have an opportunity to make further suggestions. Your input is highly valued as we aim to tailor the event to meet the needs and interests of our community.

In the meantime, you can secure your spot by [registering here](#). As a bonus, upon registration, you'll gain access to details on reserving rooms at discounted rates at the nearby SeaSide Hotel.

Save the date, register, and we'll see you in Leipzig!

# Sprint status

## Stay informed with new sprint reports

We've updated our →[sprint website](#) with new sprint reports and our →[lessons-learned website](#) to keep you informed about our latest projects.

For supplemental sprint information that may not be available elsewhere and is too detailed for the sprint reports, we have recently established a →[GitLab Wiki](#) dedicated to Sprints. Stay connected and engage with the sprint teams.

## Up next...

Exciting updates ahead!

In the pipeline: unveiling our strategy paper, sharing insights from the ice-sheet workshop and training, and a sneak peek at the February community workshop.

Stay tuned for more!

Model	Service description	Support time	Status
ICON-ART	Analysis of ART code for GPU porting	2 months 04/22-06/22	Closed → <a href="#">Docu</a>
ICON-mHM-YAC	Online coupling mHM into ICON using YAC	6 months 07/22-01/23	Closed → <a href="#">Docu</a>
FESOM	Port FESOM 2.1 to JUWELS booster and Levante-GPU	6 months 11/22-05/23	Closed → <a href="#">Docu</a>
ParFlow	Port ParFlow to AMD GPUs, Inspection of RAPID Memory Manager and Hipification, Performance Analysis	6 months 12/22-06/23	Closed → <a href="#">Docu</a>
MESSy	Optimize the data transfers between host (CPU) and device (GPU)	4 months 01/23-05/23	Closed → <a href="#">Docu</a>
ESMValTool	Updating remaining non-lazy preprocessor functions to be memory efficient AND updating ESMValCore	6 months 06/23-12/23	Running
HAMOCC	Concurrent HAMOCC on GPU	6 months 06/23-12/23	Running
MESSy-ComIn	Couple MESSy to ICON via the ICON Community Interface (ComIn)	6 months 07/23-01/24	Running
LAGOOn (CLaMS and MPTRAC)	Develop a concept and provide a first implementation of a framework for Lagrangian transport modeling	6 months 09/23-03/24	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	Waiting