

ACCESS-NRI Scientific Advisory Committee Meeting #18

Thursday 1st August / 2.00 PM – 3.30 PM

Attendees

Chair: Andy Hogg

Rapporteur: Lauren Vieira

Members: Kelsey Druken, Martin Dix, Rachel Law, Claire Vincent, Ben Evans, Laurie Menviel, Charmaine Franklin, Simon Alexander, Oscar Alves, Ariaan Purich, Adele Morrison

Observers: Victoria Allen, Micael Oliveira, Natalia Bateman

Apologies: Tilo Ziehn, Paul Spence

Item 2: Previous Minutes of SAC Meeting 20th June

The previous minutes of the meeting have been approved and uploaded on the [ACCESS-NRI website](#).

Item 3: Matters Arising from 20th June SAC Meeting

ACTION A17.1: Have a discussion on the Regional Nesting Suite and its challenges with the Atmosphere Working Group – AH

Progress has been made. Some technical challenges have been sorted out, however still need to align the goals of this release with needs of researchers. A short document has been created and distributed to Atmosphere Co-Chairs for discussions in the next fortnight. The name is still to be determined.

ACTION A17.2: Set up a meeting to discuss the regional coupled process - AH & PS

To be discussed with 21st Century Weather (Paul and Navid) – a few discussions have been had, however this topic will be a longer term goal.

Item 4: ACCESS-NRI Updates

- OMO Workshop was held in July, bringing together the Regional & Coastal Model Observation community with COSIMA.
 - The event was successful with a large turnout and strong representation from all over the country.
 - COSIMA plan to extend their workshop to two days next year.
- Urban Climate Workshop held over the last two days.
 - UNSW, BoM, CSIRO reps, discussing prospects of upgrading urban in reference to CABLE.
 - AURIN had two attendees, and are effectively planning to put together a proposal to improve representations of urban Australia – will keep SAC updated.

- NCRIS about to release their NDRI strategy:
 - This may or may not allow us to bid for more funding.
 - ACCESS are looking at a few different streams.
 - The process is not yet clear.
- NCI will be bidding for a refresh of Gadi; ACCESS-NRI will support this.

- ACCESS Community Workshop is coming in September
 - Abstracts submissions have been extended.
 - ACCESS-NRI have had discussions on supporting Bureau attendees.
 - Draft program to be released by end of the week. [ACCESS Community Workshop 2024 DRAFT Program - ACCESS-NRI](#)

4.1 Forecasting & Prediction Working Group

- The Co-Chairs have found it difficult to bring together two disparate communities: Machine Learning and the Data Assimilation.
- Following on from these discussions, we are proposing the following course of action:
 1. That the Forecasting & Prediction Working Group be disbanded.
 2. A new Working Group focused on Machine Learning for Climate & Weather Applications to be created.

Comments

- A Machine Learning Working Group is important as the journey (internationally) is just beginning and will be beneficial to begin a WG on this now.
 - ML much wider than just impact – we will hit the limit of data quickly.
 - Downscaling, training data can contribute to training data.
 - Open to suggestions for co-chairs. It was suggested that co-chairs should come from across the community.
- Data Assimilation is not supported at ACCESS-NRI – this may be an area of future focus; Auscope community is interested for similar reasons

The SAC supports the decision to disband the Forecasting & Prediction Working Group.

4.2 CMIP7 update

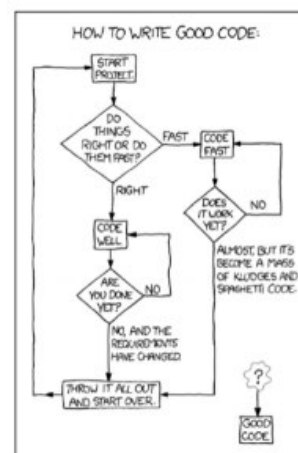
- The EOFY review assessed status of milestones for progress on model development
- The challenge is the movement of external timelines
- Recent project meeting focussed on scope of ESM1.6, an update ESM1.5 to meet FastTrack timelines
- Resourcing is still a concern
- Visit of Detlef Stammer (WCRP) prompted discussions about resourcing needs
- CMIP7 Hackathon first day of ACCESS-NRI workshop

4.3 Presentation from ACCESS-NRI Software Transformation Team

Micael de Oliveira has recently started as the STT Team Lead.

Scope & Strategy

- Model optimisation, including profiling and benchmarking.
- New HPC technologies (eg GPU's).
- Machine Learning/AI.
- Close collaboration with code owners and/or other ACCESS-NRI teams.
- User and staff training.
- Long term vision for model development.
- Have started to discuss needs of the community and at ACCESS-NRI.
- <https://xkcd.com/844/>
- The team will help the transition from UM to LFRic.
- Helping the team to write efficient and portable codes.



<https://xkcd.com/844/>

Short & Medium Term Priorities

- Recruit two team members.
- Formulate a GPU and ML/AI readiness strategy for ACCESS-NRI.
- ACCESS-OM3 profiling and benchmarking.
- Develop tools to simplify and speed up benchmarking and profiling.
- Improve CABLE MPI implementation.
- Git & GitHub tutorial at ACCESS-NRI Workshop training day.
- Commenced collaboration with Land Team.

Comments

- The Bureau have projects in collaboration with the Met Office and Momentum partnership
- Testing physics in LFRic to ensure we can optimise the physics component – have agreed to stay in contact and share information.
- Developed a tool called EDIT – pre-processing Data ready for GPU's – the UM Partnership agreed to support, and will become a momentum partnership tool.

Clare Richards has begun as ACCESS-NRI's Data Management Specialist – Clare has extensive data governance experience managing complex research infrastructure and data collection projects.

Item 5: Update from Working Groups

Atmospheric Modelling

- Meet last week, focused on working with Model output - ACCESS MOPPeR.
- COSIMA spoke about Cookbook using intake catalogue; useful for basic scripts for new users.
- Discussions have started regarding WG meeting at ACCESS Workshop.
- Data sets, cookbook discussions, possible ACCESS-NRI inputs.

Coupled and Earth System Modelling

- Still attempting a science talk each fortnight.
- It's a useful forum to use for sharing information.

Ocean-Sea Ice Modelling

- Meetings weekly
- Good news regarding the new Data Manager, as data set referencing is needed.
- Discussion on joint meetings and future collaborations.

Land Surface

- Not holding WG at ACCESS-NRI Workshop as clashes with JULES Workshop. Instead being held at CSIRO (Black Mountain) on October.

Cryosphere

- In final process of adding AAD as a partner.

Item 7: Next Meeting

Wednesday 4th Sept 2024 (Workshop week) 7.30am - 9.00am

In Person Breakfast Meeting at [Roy Jr. 7 London Cct - Google Maps](#)

End of meeting.