

ACCESS-NRI Scientific Advisory Committee Meeting Minutes #22

Thursday 13th February / 2.00 PM – 3.30 PM

Attendees

Chair: Martin Dix

Rapporteur: Natalia Bateman

Members: Kelsey Druken, Martin Dix, Claire Vincent, Tilo Ziehn, Charmaine Franklin, Simon Alexander, Ariaan Purich, Adele Morrison, Oscar Alves

Observers: Aidan Heerdegen, Tennessee Leeuwenburg, Claire Carouge

Apologies: Adele Morrison (proxy: Andrew Kiss), Paul Spence, Andy Hogg, Rachel Law, Ben Evans, Laurie Menviel, Victoria Allen

Welcome & Acknowledgment of Country

Item 2: Previous Minutes of SAC Meeting 13th December

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

Matters Arising from December SAC Meeting:

The SAC approved initial steps for a release of BoM's PyEarthTools to be supported by ACCESS-NRI. Work has been ongoing on this proposal and a GitHub repository has been prepared by the community in advance of adopting PyEarthTools as a supported configuration. We are currently finalising the proposal to adopt PyEarthTools and we will bring a full proposal to the next SAC.

Item 3: ACCESS-NRI Updates

3.1 National Digital Research Infrastructure Update

We had expected to be in the midst of writing proposals for the next NCRIS funding round, focussing on NDRI, in mid-January but NCRIS just opened yesterday an early round of the Guidelines in stages. The first one is by invitation only to support HPC facilities and due before the caretaker mode kicks in. We understand NCI and Pawsey are invited. Everything else might be delayed. There are some signals that there may be an early rapid round to support HPC facilities, but that the remainder of the NDRI will be postponed until after the election.

NCRIS 2025 Funding Guidelines: <https://www.education.gov.au/national-research-infrastructure/resources/national-collaborative-research-infrastructure-strategy-2025-guidelines>

3.2. CMIP7 Update (Tilo Ziehn)

- ESGF will close CMIP6 for new submissions in April – CMIP6+ won't be affected. CMIP7 Fast track is expected to have first publications in late 2025.
- In terms of model focus on ESM1.6, the focus is on ocean. BGC leading this with new WOMBAT version, spin up started at the end of last year. We have now over 600 years of output which can be shared to the community. This will be presented in the next ESM WG meeting for community input. Important to continue spin up until we are happy with it or run out of time.
- Recently discovered that the atmosphere output is not completely converted. We are currently addressing this with ACCESS-NRI and have a tool we can run.
- CABLE version doesn't yet have all the planned updates. Checking the water and energy balances. Short test with updated vegetation distribution was ok.
- Hoping to introduce 2 new vegetation types to provide two Australia specific PFTs more tailored to Australian conditions and bring it to CMIP7 FastTrack
- We need to figure out best process for the model evaluation – we are all using old scripts but it will be great to use ESMvaltool. This requires some post-processing to integrate in the workflow- some setups and are ready to go.
- A lot of work around optimisation, still early stage but might be some low hanging fruit changing decomposition and queues.
- There is an issue around Spack not picking up the latest code changes, but there's a workaround, so can continue with testing and compiling.
- The work delivered to ESM fast track continue with people from CSIRO and Monash, as well as focus on the evaluation of the test runs.
- Changes at NOAA: we are not quite sure how this will impact us and CMIP7 or the model. Small risk for the forcing datasets, because NOAA is a strong contributor.

Comments

- ACCESS-NRI is looking at all the risks of collaborators in the US as well.
- ESGF Data citation service (run by DKRZ) has closed.
- Not planning any more CMIP6 submissions test but we are doing CMIP6+ that is not affected by ESGF CMIP6 closure.

3.3 Data Update

Summary of the reference data supported by ACCESS-NRI merit allocation scheme. Further detail, including proposals and dataset list, can be found in the SAC SharePoint site: [ACCESS-NRI supported reference data](#)

Storage usage:

- Total Approved (TB): 536 TB
- Unallocated (TB): 664

Scheme total for FY2024-25 is 1200 TB. (Reference datasets)

We have Included now all the COSIMA output collection and the collection the MED team has been working on.

New releases:

- Nil

New approvals:

- ISMIP6 Ice Sheet Model Data Collection (8 datasets, 15 TBs) - publication of all datasets are in progress
- Operational Sea Surface Temperature and Ice Analysis (OSTIA) Sea Surface Temperature (1 dataset, 1 TB) - publication in progress
- ACCESS-OM2 Model Output (8 datasets, 440 TBs) - publication of one dataset is in progress
- ACCESS-OM2 proposal updated for published CF-Compliant and Raw Model Output datasets in cj50.ACCESS-NRI Replicated Datasets for Climate Model Evaluation (6 datasets, 10TB) - publication of two datasets are in progress. The collection is undergoing review to confirm the proposal and ongoing needs.

3.4 Communications Update

- New branding (we have now a new logo and updated the ACCESS Model Figure. Please ask Natalia for the files if you need them)
- User Report form: it is accessible in the ACCESS-NRI website.
- ACCESS-NRI has moved to Bluesky and closed the X (Twitter) account. Other NCRIS facilities have done the same. You can follow us using the handle @access-nri.bsky.social

3.5 Recruitment Update

Mike Tetley moved back to Canberra, Manodeep Sinha and Edward Yang have joined the Software Transformation team and Justin Hew the Ice Sheet modelling team. We still looking for a replacement for Lauren.

Item 4: ACCESS-NRI Release team by Aidan Heerdegen.

All information is on the Hive Forum and documentation on the ACCESS-Hive Docs.

- ACCESS OM2: 12 configurations, 3 Releases, Model run documentation and credits are on the ACCESS-Hive docs.
- ACCESS-ESM1.5: all information in ACCESS-Hive Forum, 2 configurations (PI and historical), 3 releases, fixed bugs, modified code to allow runtime setting of orbital parameters and improved performance. Model run documentation is available on the ACCESS-Hive Forum
- ACCESS-ESM1.6: CICE5, CABLE3, MOM5 with iceberg scheme, WOMBAT-lite, requirements satisfied by GitHub, pre-release environments and common development platform.
- ACCESS-RAM3: localised version of UKMO regional Nesting Suite, Spack built, bespoke python tools, documentation in development, alpha release to targeted community members for testing, currently gathering feedback, aiming at a Beta release by end of March.
- Tools: Controlled model configuration inputs, Spack software build tool
- Tracking (NCI, GitHub, Zenodo, Data usage) Reporting (NECTAR database, Grafana dashboards, Discourse queries) and Modular API.

Aidan's PowerPoint presentation is accessible in the SAC SharePoint

Comments/Suggestions:

- The community is struggling with storage. Users are getting their runs into Scratch. Not sure what the solution is but it can become a bottleneck. Solutions might include user request profile 1- don't save what you don't need, space improvement and for most users is fine. 2. use the experiment explorer 3. save in single precision and then use bit-grooming methods to reduce precision further if appropriate 4. improve management use.

ACTION for ACCESS-NRI: follow up with each of the WG co-chairs as they might be under utilising the storage, for an option to help with that problem.

Item 5: Working Group Updates

Land Surface

Looking for approval for a change of co-chair as Anna Ukkola is going on parental leave. Mat Lipson (lead of the land program for 21st century weather) proposed as the new co-chair.

Approved

Coupled & ESM

Started WG meetings again today. Focusing more on CMIP7 and evaluation and alternating between science updates and CMIP7 updates.

Atmosphere Modelling

First meeting yesterday, more students and ECRs attending which is great, Owen presented the visualisation work – No input for the workshop yet but visualisation training seems to be a very popular option.

Ocean-Sea Ice Modelling

We had two meetings well attended. The ACCESS-NRI/COSIMA training is about to begin (next week). There is a COSIMA program committee to plan for the COSIMA workshop. ACCESS-OM3 discussion for its development (including ice sheet cavities, and surface simulations).

Cryosphere

No update

Machine Learning

Kicking up discussion for the Workshop, PyEarthTools and engaging with NCI more effectively, really focus on adoption. Advertised a few seminars.

Item 6: Any Other Business

The due date for the Workshop Survey is 23 February 2025. We need your input to create a Program committee and sessions.

Next Meeting: 27th May 2025 2.00 – 3.30pm