

How the start of this session will run

1

CMIP7 data delivery overview

2

Evaluation workflows (with focus on CMIP)

3

Collaborative workflow for evaluation driven model development of CM3 and AM3

4

Split into CMIP publication/model evaluation groups to discuss plans, existing analyses and plans for future.

Parts 1-3 are information sharing today. Staff are here for quick questions, and happy to follow up in more detail during the workshop.

CMIP7 data delivery overview



Key takeaways

1 ACCESS-NRI + NCI are supporting CMIP7 data delivery

From publication of Australian model outputs through to local access to international CMIP7 data.

2 ACCESS-ESM1.6 Fast Track is our first publication priority

The first datasets are being prepared for publication through ESGF now.

3 We'll replicate CMIP7 data at NCI — but we'll need to prioritise

We'll start broadly, then use community needs to help shape what is kept locally as the collection grows.

4 We're here to help

Whether you want to use CMIP7 data or publish it.

Supporting Australia's CMIP7 data

New NCRIS investment gives ACCESS-NRI and NCI dedicated capacity to support Australia's CMIP7 contributions and access to international replica data on NCI.

Next-Generation Earth System Model · **\$14.75M over 2 years** · includes an upgrade of the Australian ESGF node at NCI for CMIP7.

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PUBLISH

Australian CMIP7 model outputs

Global publication through ESGF

REPLICATE

Priority international CMIP7 data

Local access alongside NCI compute

ENABLE

Discovery, documentation and support

Evaluation and use by the community

What's the same?

The overall approach will be familiar from CMIP6.

PUBLISH

NCI provides Australia's ESGF infrastructure

Support for the publication process

REPLICATE

Prioritised datasets replicated at NCI for local access

Mechanism to request data

ENABLE

Data discovery (ESGF, NCI)

Errata and retractions

Documentation and user support

What's different?

Improvements and/or new for CMIP7.

Dedicated support New NCRIS investment gives ACCESS-NRI + NCI dedicated capacity, including storage and support for CMORisation and evaluation tools.

Data discovery Improved local discovery tools that will be synced with data releases and replication.

Prioritisation We'll need a more deliberate, community-informed approach to what we support locally, both publishing and replication (*more details coming soon*).

The data itself There are changes to CMIP conventions, including how variables are named and organised.

Start broad — then prioritise with the community

INTERIM APPROACH

Replicate broadly while volumes allow

- Capture available CMIP7 data early, while the collection is still ramping up

AS THE COLLECTION GROWS

Move to community-informed priorities

- Prioritisation to be informed by what the Australian community needs.
- Support both initial priorities and adjustment over time as CMIP7 evolves.

~8 PB* planning assumption for CMIP7 storage in the proposal

**Final capacity may change as storage costs and the CMIP7 collection evolve.*

We'll also establish a clear process for requesting additional datasets and helping shape replication priorities.

CMIP7 data will look a little different

CMIP7 Variable names now carry the realm, cell methods, frequency and domain directly in the branded name.

`Amon.tas`

now becomes →

`atmos.tas.tavg-h2m-hxy-u.mon.glb`

`atmos`

REALM

model component

`tas`

VARIABLE

near-surface air temperature

`tavg-h2m-hxy-u`

CELL METHODS

time mean · 2m · horizontal x/y ·
unmasked

`mon`

FREQUENCY

monthly

`glb`

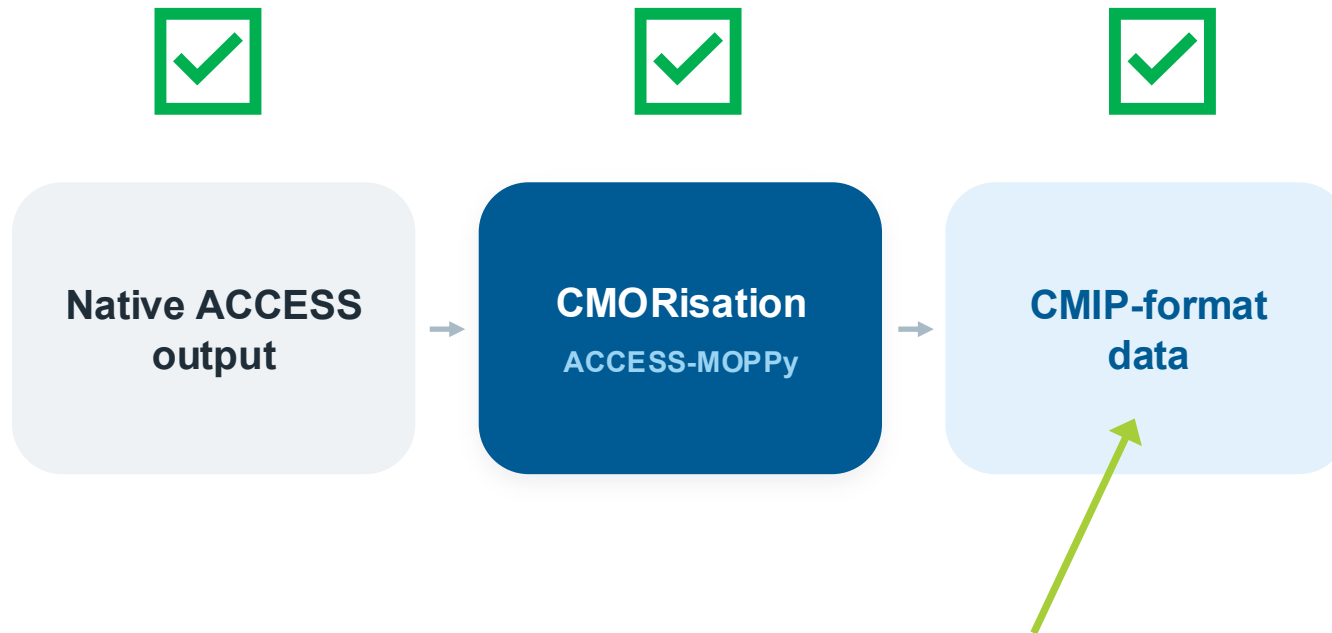
DOMAIN

global

You do not need to memorise these. The maintained baseline configuration lists the branded names — copy the lines you need.

Current status

For first set of Fast Track datasets

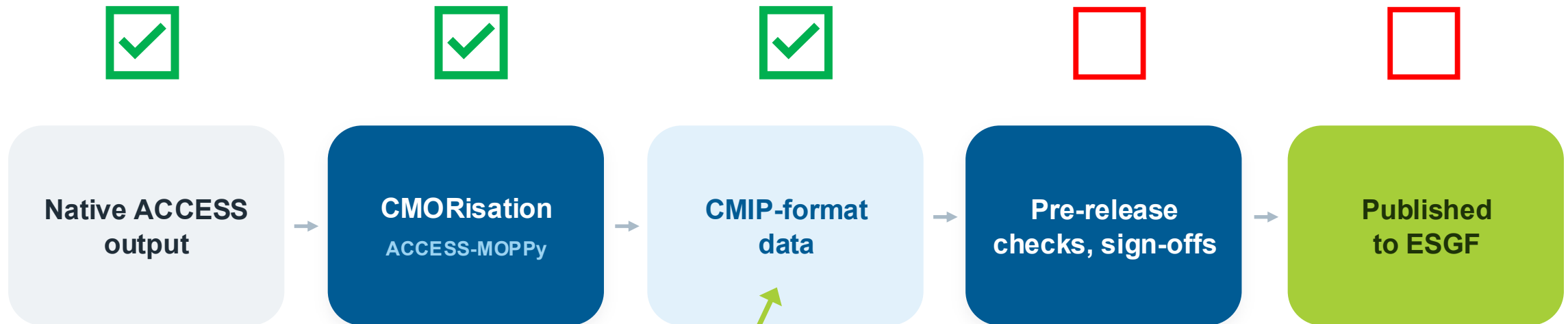


Completed runs are available in
/scratch/p73 if needed.

***Use with caution, minor changes may still
occur before publication.*

Current status

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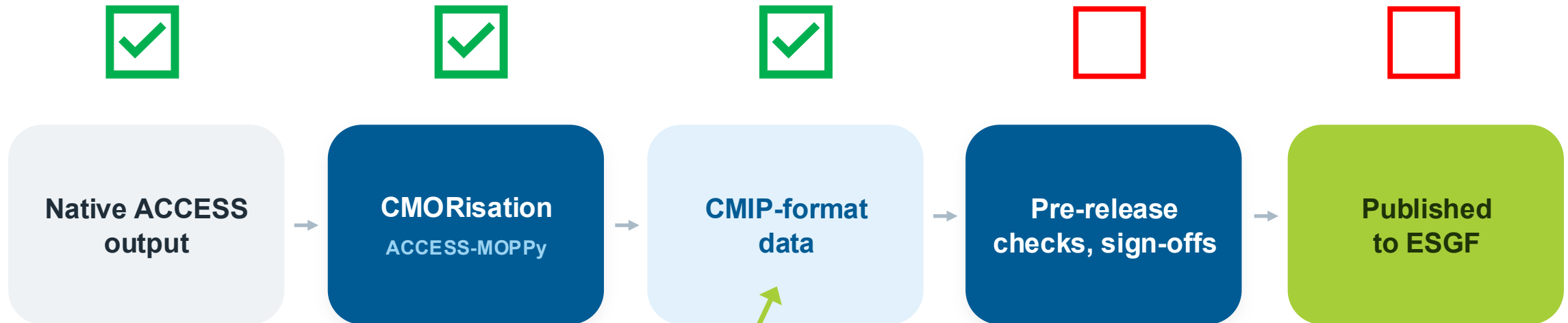
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Current status

For first set of Fast Track datasets

Estimated timeline (best guess):
~1-2 weeks (on ESGF)
~ 1 month (for full release with documentation)

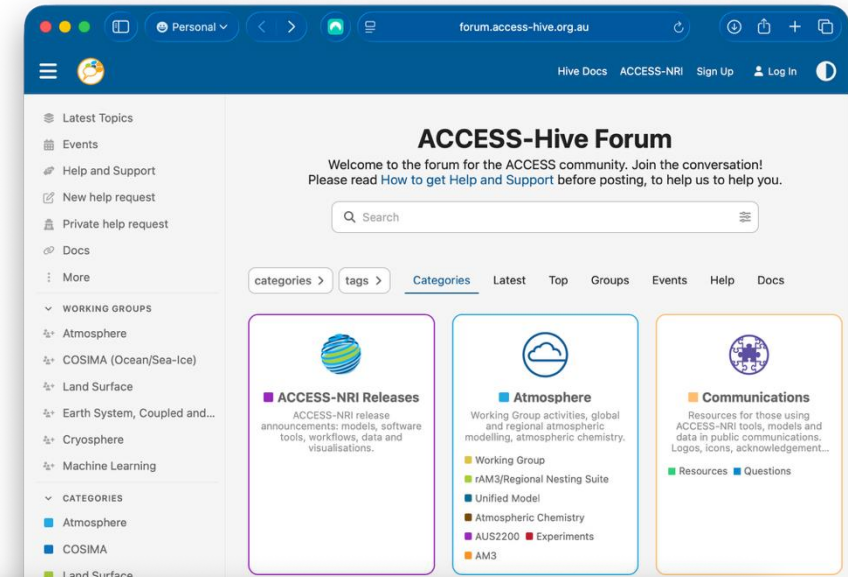


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Stay connected

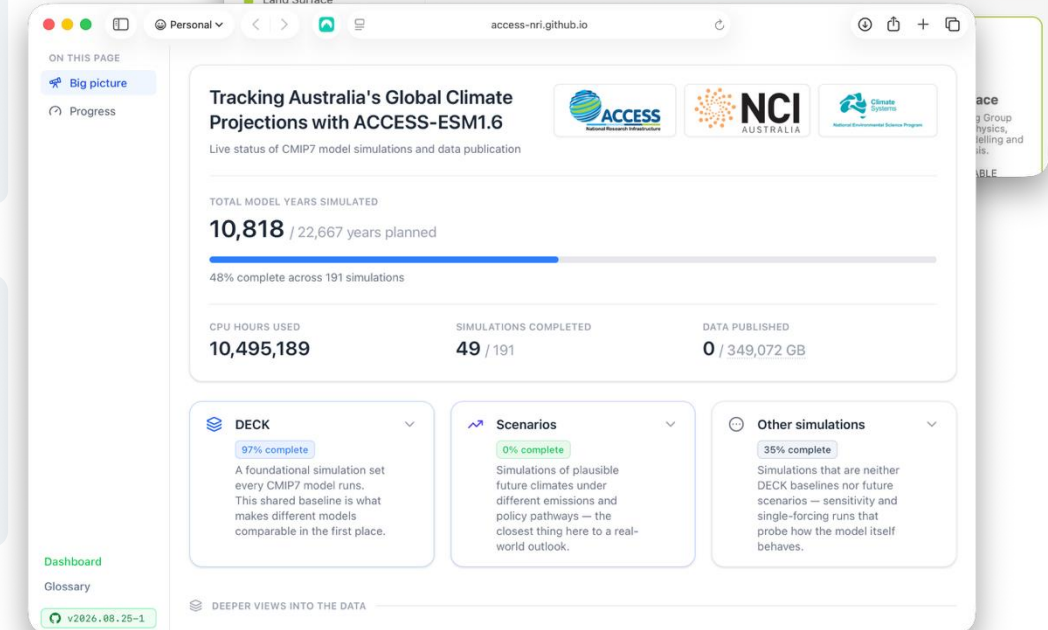
<https://forum.access-hive.org.au>



- 1 ACCESS-NRI mailing list**
Major announcements, releases and updates

- 2 ACCESS Hive Forum**
Technical updates, new data availability, discussion and questions

- 3 CMIP7 Status Dashboard**
Follow progress of ACCESS model runs, CMORisation and publication



<https://access-nri.github.io/cmip7-dashboard>

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