**Downloading the source code and tools**

The model simulations indicated in this manuscript were run on NOAA’s Research and Development High Performance Computing System (RDHPCS), Gaea platform. This document has information on downloading the source code and tools on Gaea. The details on this document are extracted from [here](https://github.com/NOAA-GFDL/MOM6-examples/wiki/Getting-started#downloading-the-source-code-and-tools) (last accessed on January 15, 2026).

**Check that git is configured**

Most of the source code is hosted on GitHub. Check that git is set up on your machine and that you can "talk" to GitHub.

**Where to download/install**

All files need to be visible to the compute nodes on your machine. For example, on the gaea platform the files are best placed on the lustre file system. Be aware that many parts of the lustre file system are swept (i.e., your files are erased). To avoid having files swept, it is best to use the unswept area, e.g.:

cd /gpfs/f5/gfdl\_o/scratch/$USER/

Note that the lustre file system is NOT backed up. The home file system is backed up but of limited size, and since it is not visible from the compute nodes, using home is more difficult. In general, if you are making changes to the source code it's important to use git to push to GitHub regularly. This is especially true when your source and edits are on a non-backed up file system (like lustre).

If you are running the model on a desktop/laptop then it shouldn't matter where you put the source.

**Cloning the core repositories**

The source code is split across several repositories. These are arranged in a hierarchy with MOM6-examples at the top as a "super repository", and the other repositories configured as submodules.

Even without a GitHub account you can clone (download) the repositories by executing this single command at the command-line in a shell:

***git clone --recursive https://github.com/NOAA-GFDL/MOM6-examples.git MOM6-examples***

That said, the model developers strongly recommend having a GitHub account so you can version control your own modifications and contribute to MOM6.

The above will clone (download) the MOM6-examples repository and all its sub-modules into a directory called MOM6-examples/.

From here on, all commands will take place within the MOM6-examples/ directory you just created.

By way of explanation, the above one line "recursive clone" is equivalent to the follow steps:

***git clone https://github.com/NOAA-GFDL/MOM6-examples.git MOM6-examples***

***cd MOM6-examples***

***git submodule init***

***git submodule update –recursive***

where the last line in turn is equivalent to

***git submodule update src/FMS***

***git submodule update --init --recursive src/MOM6***

***git submodule update src/SIS2***

***git submodule update tools/matlab/gtools***

***git submodule update tools/python/MIDAS***

Knowing this, you can avoid downloading various of the submodules. For instance, you could just clone MOM6-examples and none of the submodules by stopping before the git submodule init.

Note that MOM6 also has a sub-module (CVmix). If you haven't used a recursive clone or update and src/MOM6/pkg/CVMix-src is empty, it should be initialized and updated independently.

***cd src/MOM6***

***git submodule init***

***git submodule update***