ESM meeting 1
22 October 2020
Microsoft Teams

Agenda
* Welcome
* Aim of the ESM group meetings
* Practical issues
* Discussion: ongoing and planned projects
    - structure of further meetings
    - GitHub page
    - List of past projects
  - future large simulation project

Meeting minutes

- focus of this group will be primarily on coordinating new simulations
- ongoing and past simulations will be listed on our Github page https://github.com/UU-IMAU/Earth-System-Modelling/
    - level of detail to be decided. At least: name, simulation length, resolution, active components, list of related publications
    - Michael is working on compiling a list already. Michiel B will follow up with him and put it on Github
    - similar list can be compiled for EC-Earth (Sybren)
- new simulations require:
    - core hours
        - idea: write joint IMAU application, multiple sub-projects possible
        - Henk is willing to act as PI (he has to renew his grant anyway in February)
    - data output
        - need an inventory of variables + output frequency from all people interested
        - make distinction between spinup / analysis phase.
        - only for analysis phase, hi-frequency output is needed
    - data storage
        - right now, most CESM data is stored at SURFSara, behind firewall, i.e. no external access.
        - for reproducibility of results in papers, need public dataset with DOI
            - YODA?
            - subset of data
            - SURFSara cannot give DOIs, since it's not public.
        - for archiving full dataset one needs large storage (tape or large disks)
            - SURFSara is still the cheapest option (M. Kliphuis)

        - Leo: maybe invite speaker from other institute to hear how they deal with this?
            - Anna: in Bristol they have their own hardware.
        - data storage is a complex issue, we are not going to solve this today in 10 minutes. Will be a returning topic.
    - engineering support
        - not talked about during today's meeting.
- non-exhaustive list of interests for new simulations and output
    - Henk: active carbon cycle at high-resolution, possibility of rapid change, ocean geo-engineering
    - Anna: explore dynamic vegetation in CESM2
    - Michiel vd B: 1/4 degree atmosphere over ice sheets
    - Roderik / Sybren: freshwater discharge from dynamic mass loss in Antarctica , possibly parameterized. Sybren proposes an intermediate solution based on LARMIP-2 https://esd.copernicus.org/articles/11/35/2020/
    - Roderik: currently talks to people at NCAR to maybe use CESM3 beta version with MOM6 ocean model (capable of simulating ice shelves)
- Hot Topics seminar + new ESM master course
    - maybe can be somewhat integrated with this ESM workgroup
    - we could dedicate one ESM workgroup session on the curriculum of the new course
    - Hot Topics
        - future models: exascale GCM, stochastic parametrizations, machine learning.
        - sub-team is formed to talk further about how to coordinate
            - Sybren (lead), Claudia, Leo, Michiel B, Michiel vdB, Henk
- next meeting
    - ESM 2020.2 : 19 november 11:00
    - ESM 2020.3 : 17 december 11:00
- topics for next time
    - data storage
    - overview of existing simulations
    - joint IMAU computing grant for NWO
    - Hot Topics

Actions

- [Sybren] call meeting for Hot Topics with Claudia, Leo, Michiel B, Michiel vdB, Henk
- [Michiel B] follow-up with Michael on list of existing simulations
- [ESM coordinators] first draft for joint NWO compute time proposal
- [ESM coordinators] set-up mailing list