

**Minutes of the GlacierMIP meeting
at IGS/IACS/CliC conference 2017, Wellington, New Zealand**

17 February, 9:30 – noon

<http://www.climate-cryosphere.org/activities/targeted/glaciermip>

WG Participants:

1. Regine Hock (co-chair)
2. Ben Marzeion (co-chair)
3. Brian Anderson
4. Andy Bliss
5. Akiko Sakai
6. Rianne Giesen (via teleconference)
7. Matthias Huss (via teleconference)
8. Valentina Radić (via teleconference)
9. Sarah Shannon (via teleconference)
10. Aimee Slangen (via teleconference)
11. Yukiko Hirabayashi (via teleconference)

CliC representatives: Gwénaëlle Hamon, Lawrence Hislop, Gerhard Krinner

1. Info from Aimee Slangen about her possible contribution

Aimée will no longer be able to produce new simulations with her model. Whether it is possible to find someone to continue is questionable, Aimée will discuss options with Roderik van de Wal (original developer of the model).

2. Presentations on GlacierMIP so far

GlacierMIP results have been presented at

- IUGG June 2015 (Regine),
- AGU Dec 2015 (Regine),
- Network of Arctic Glaciology, NAG, Jan 2016 (Regine),
- IGS/IACS/CliC Jan 2017 (Regine)
- EGU Apr 2016 poster (Rianne)

One important note: always tell about GlacierMIP when presenting results!

Also please report any presentations that include GlacierMIP activities.

3. Phase I: Intercomparison of published global-scale results

Regine reported on progress and plans regarding the preparation of the first publication.

Regarding additional experiments as suggested by Jonathan Gregory: the response is generally positive, but it was agreed that not too much time should go into this. Regine and Ben will stay in touch with Jonathan to base the decision whether to include his experiments on the amount of additional work that it would cause him.

4. Short reports

- Sarah explained the setup of her model; area changes are based on VA scaling, glacier mass balance is calculated on a grid (similar to the model of Yukiko). While it is developed in the framework of a larger land surface component of a coupled GCM, it is able to run stand-alone.
- Akiko reported on progress of her model: there are now 45 ensemble members available, forced by 13 GCMs, for all Asian glaciers. Results are based on RGI5.0. Different configurations for bias corrections were applied. The model is quite demanding for resources, thus requires long integration times.
- Ben reported that a newly developed model open source model, the Open Global Glacier Model, will almost certainly be ready to participate in phase 2 of GlacierMIP. It includes explicit simulation of ice dynamics based on a network of flowlines.

5. Phase II: New future projections

5.1 Participating models

The following models confirmed participation in phase 2:

- 1) GloGEM, Huss
- 3) OGGM, Marzeion, Fabien
- 4) Rounce/Hock
- 5) Bliss/Radic
- 6) Hirabayashi
- 7) Shannon
- 8) Sakai
- 9) Moeller (regional)
- 10) Anderson (regional or global, depending on funding)

5.2 Future simulation runs: Standardized experiments

It was decided to apply the following standardized initial and boundary conditions:

- **Glacier outlines:** RGI 6.0
- **Initial volume** (if needed/applicable): update from Huss 2012, to be provided by Matthias
- **Emission scenarios:**
Regine and Ben will provide a priority list which CMIP5 runs to use as forcing. In principle, 10 ensemble members for two RCP scenarios (2.6 and 8.5) will be the minimum to participate; ideally, also ten members for RCP4.5 should be provided; if more is possible, inclusion of RCP6.0 or larger ensembles are welcome.
- No standardization will be applied to downscaling, model calibration, model physics, etc.
- **Additional experiments:**
- e.g. set of equilibrium responses would be insightful, e.g. using the CMIP5 pre-industrial control simulations (for looking into the natural variability), and/or repeated time slices of CMIP5 projections.
- **Deadline:** before next meeting (AGU?) for projections, later for additional experiments

Action items/deadlines for GlacierMIP participants Phase II:

1. send a list of required input variables to Regine and Ben asap (all participants)
2. create priority list of experiments (Ben, Regine)
3. provide forcing data of the prioritized CMIP5 runs on an ftp site for all participants (Ben)
4. end of November: delivery of results, same format as in phase 1 (all participants)

6. Future GlacierMIP Meetings

Will be at AGU Fall Meeting, on a just before or after the main meeting, exact date to be decided later.