

Summary of discussion on the ABRUPR work package in the EMBRACE Kick-off meeting, on 22-23 November in Norrköping.

We identified 2 urgent issues.

1. The first of 5 ramp-up ramp-down runs with CMIP5 models has to be finished by May, 1, 2012. It needs to be set-up a.s.a.p.
2. The comparative feedback analysis has to be developed by May, 1, 2012. We envisage this will finish a bit later, but a.s.a.p. a conference has to be organized with WP-contributors to set-up a framework for the CFA.

Ad 1:

Contact persons for the model consortia are:

Chris Jones (UKMO-Hadgem)

Stefan Hagemann (MPI-ECHAM5-OM)

Didier Swingedouw (IPSL)

Sybren Drijfhout (ECEARTH)

These 4 have to commit themselves to get the ramp-up ramp-down runs done in time.

Strategy:

The ramp up of the 8.5 RCP run is already performed.

The ramp-down consists of starting in 2100 (or later if the run was extended) and run the 2005-2100 trajectory reversed in time. This implies:

Greenhouse gas concentrations are reversed

Aerosol emissions are reversed

Prescribed/imposed vegetation and surface changes are reversed

When a DVGM is available the DVGM may respond freely, e.g., let trees grow where crop is removed, but will not put back trees when they were cut in the ramp-up.

Solar cycle simply prolonged.

It is ad lib to run 2005-1970 reversed in time, but volcanoes pose a problem here.

Ad 2:

Invitations for the conference already have gone out, both to Abrupt participants and selected specialists. KNMI will host the workshop in February 2012..

We need to define/establish/agree on

What are the key dynamic variables?

How can we define a generalized conceptual framework of topical feedbacks?

What prototype models are of use?

Which early-warning/tipping-point-type of techniques are useful for CMIP5 runs?

Can the approach of Gregory et al (2009) be generalized to all topical feedbacks?

Other items:

1. Where do we submit data of the ramp-up/ramp-down runs? SMHI will look for a solution. (BADC?)
2. In the second set of ramp-up/ramp-down runs freshwater fluxes will be prescribed as an anomaly to the already existing freshwater balance between calving/melt

and snow fall on Greenland/Antarctica. Didier, Stefan and Chris inform Sybren on the existing practice in their respective models.

3. Ramp-up ramp-down with the improved models should start no later than month 36. We need frozen model versions of each consortium in timeframe month 30-36.
4. To improve risk/uncertainty assessments contact will be sought with climate.preiction@net (by Chris J) and by the CMIP5-EMIC group by Sybren.