**Minutes TM5 Steering Committee meeting 22 November 2019**

22-11-2019

Participants: Maarten Krol (MK), Andy Jacobson (AJ), Arjo Segers (AS), Maria Kanakidou (MKa), Philippe le Sager (PlS), Stelios Myriokefalitakis (SM), Nikos Daskalakis (ND), Wouter Peters (WP), Twan van Noije (TvN)

**Agenda:**

1. Action items
2. Discussion points
	* Move to new version control system at KNMI
	* Meteo processing, ERA5
3. New Projects
4. Next meeting

# Action items last time

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| Action # | Title | Responsible | Tracker id. |
| 6.1 | NETCDF / HDF meteo inconsistency: try to figure out what causes this + implications for (re)processing.  | PLS | 627 |
| 7.2 | Merge Stelios KPP-CB05 and KPP-MOGUNTIA/ECPL code into TM5-mp trunk. | Stelios + PLS | 10221 |
| 7.3\* | Commit Marco’s code on cloud/rain processing to EC-Earth repository | Marco + MK |  |
| 8.1 | Testing / Processing ERA5 meteo at 1x1 / 137layers / 3hourly | PlS + AS | 10241 |
| 8.2 | Processing and testing 1 month of ERA5 at 0.5x0.5/1hourly | PlS + AS | 10251 |
| 8.3 | 4D-VAR frozen versions of CH4, CO, CO2 on Sourceforge (as package) | SB |  |
| 8.4 | Simplify trunk versions (rc-keys, HDF) | SB, AS, PlS | 8931 |
| 8.5 | Single website on TM5mp, incl. directions for new users  | PlS | 10261 |
| 9.1 | Investigate transfer Redmine/SVN  Gitlab/Github | PlS |  |
| 9.2 | Study if it is possible to transfer old “Zoom” branches to github | PlS |  |
| 9.3 | Investigate possible failures in moving from python2python3 | SB |  |
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**6.1**: Obsolete, removed.

**7.2**: The merge still needs to be done, but the issue is entangled with budrr budget new implementation. Convert to a new action item. This is more of a technical problem (how to keep two versions of the code) and will be further discussed on the portal.

**7.3**: Marco has been contacted again

**8.1:** Done. We have switched to production mode. Issue on the portal is closed. Remove the action item.

**8.2:** See discussion, item removed.

**8.3:** Version CH4 works, ask SB to produce similar versions for CO2/CO

ND ask for notes student to put on HG. Leave open.

**8.4:** We will get rid of HDF4. In progress.

**8.5:** Closed

**9.1:** See discussion, remains open

**9.2:** Closed, since there is no demand from the user community for migrating the TM5 code.

**9.3**: Ongoing. Some issues like division and unicode encoding in python3

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New action item list:

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| Action # | Title | Responsible | Tracker id. |
| 7.3 | Commit Marco’s code on cloud/rain processing to EC-Earth repository | Marco + MK |  |
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| 8.3 | 4D-VAR frozen versions of CH4, CO, CO2 on Sourceforge (as package) | SB |  |
| 8.4 | Simplify trunk versions (rc-keys, HDF) | SB, AS, PlS | 8931 |
| 9.1 | Investigate transfer Redmine/SVN  Gitlab/Github | PlS, ND |  |
| 9.3 | Investigate possible failures in moving from python2python3 | PlS, SB | 20341 |
| 10.1 | Issue with budrr in budget, virtual species, include or not? | SM | 10221 |
| 10.2 | Investigate Nudging stream in preprocessing creating ERA5  | AS + PLS |  |
| 10.3 | Investigate possibility to develop IFS-TM5-MP coupling | WP+MK |  |
| 10.4 | TM5-4DVAR test package on Sourceforge to use single month of ERA5 | AS |  |

# Discussion

We discussed the use of svn/redmine/hg/github.

PlS states there is no hurry for migrating from svn+redmine. Redmine+svn at KNMI will remain available for several years. Problem with a move to github (or gitlab or JIRA/confluence) is the transfer of tickets, wiki and forums. Andreas Hillbol will have a look (ND).

AS: why don’t we stay at Redmine altogether? PlS: there is at least one advantage in being hosted outside KNMI, namely an easier user administration.

Another issue is the workflow. We should have clear procedures for committing, merging, pull requests, etc. And: we should do this more often than we do now.

Proposal is: PLS remains maintainer of the TM5-MP version (including new 4DVAR), and maintains the trunk. SB maintains (“standard” TM5-4DVAR). New students (Jin, Ara, …) should learn how to commit and merge, and communicate with SB to profit from new developments and to share codes better (e.g. move to ERA5).

Another discussion point was the production of 0.5x0.5 meteo. This would involve a tremendous amount of diskspace, beyond what we can defend. There are a couple of options:

1. Use meteo on CDS (Climate Data Store), and provide users with scripts to process their own high-resolution meteo files.
2. Invest in Open-IFS, and the coupling with TM5. This would allow for more flexibility, the use of ensemble meteo, etc. The CHE2-project (CoCO2) would be a good project to work on this with ECMWF.

 new actions: 10.2 & 10.3

**NEW Projects:**

Maria + Twan: FORCeS EU project about aerosol-climate modelling using EC-Earth.

Maria: project in Bremen. Inverse modelling/ Data Assimilation

Maria: Assimilation of NO2/NH3 for deposition calculations + 2 students (Marios to work on Ice nuclei: using TM4, Nikos Gialesakis. MsC analyzing CO2 + CH4

Andy: ----

Stelios: no new projects

Arjo: ---

Wouter: CoCO2 project (CHE-2), core development of Copernicus CO2 monitoring.

Maarten: Ara started on coupled CO2 & COS DA.

John Miller: 13CO2 inverse modelling for longer time periods, global DA system + TM5.

# Next Meeting:

Scheduled: 15-16 Oct 2020, Heraklion, Crete