**Minutes TM5 Steering Committee meeting 1 March 2019**

Draft version, 1-03-2019

Participants: Maarten Krol (MK), Andy Jacobson (AJ), Sourish Basu (SB), Arjo Segers (AS), Maria Kanakidou (MKa), Philippe le Sager (PlS), Stelios Myriokefalitakis (SM), Nikos Daskalakis (ND)

For Andy: Official TM5 website: <http://tm5.sourceforge.net>

This site contains links to Wiki pages/Ticketing systems:

[TM5 project page](https://dev.knmi.nl/projects/tm5)

[TM5-4DVAR project page](https://sourceforge.net/projects/tm5)

[TM5-MP project page](https://dev.knmi.nl/projects/tm5mp)

[TM5-4DVAR-MP project page](https://dev.knmi.nl/projects/4dvar)

**Agenda:**

1. Action items last time
2. Discussion points
   * Move to new version control system at KNMI
   * Meteo processing, ERA5
3. Updated list of action items
4. New Projects
5. 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 | Run KNMI benchmark on both new KPP chemistry versions, with / without M7; | PLS | 10221 |
| 7.3\* | Commit Marco’s code on cloud/rain processing to EC-Earth repository | Marco + MK |  |
| 7.4 | Check description of MSA, Sulfuric, Oxalic acid | Stelios + TvN |  |
| 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 | SB, AS, MK/Narcisa |  |
| 8.4 | Simplify trunk versions (rc-keys, HDF, NCEP, Udunits etc.) | SB, AS, MK/Narcisa, PlS | 8931  616 (closed) |
| 8.5 | Single website on TM5mp, incl. directions for new users | PlS | 10261 |
| 8.6 | e-mail reminder to report issues through the ticketing system | MK, PlS |  |
| 8.7 | Prepare for a decision on a single version control system | All |  |

**6.1**: Nothing done, leave open

**7.2**: Pending the MOGUNTIA chemistry paper; After paper is accepted in GMDD, merge the branches with KPP/MOGUNTIA default (incl. M7) and KPP/mCB05 as option. Get rid of the old EBI manual solver. Remains open.

**7.3**: Closed, PlS will still try to run with KPP off, to check if code breaks

**7.3**\*: Leave open, Marco de Bruine to take action with TvN/PlS

**7.4**: Fixed in MOGUNTIA and mCB05 versions. Close.

**8.1**: Started, but action remains open and urgent.

**8.2**: Idem. Not clear to me (MK) if this includes also 3D fields. Leave open.

**8.3**: Small 1-month package is available for the new Utopya TM5-4DVAR-MP. A similar package will be constructed for the old “zoom” TM5-4DVAR, for CO2 and Dummy tracer (SB).

**8.4**: #616 closed. #8931: Everybody should work to a HDF4-free version, with output writing in netcdf/hdf5. Done for 4DVAR. Problem is that hdf4 often leads to compiler problems. Priority to get rid of!

**8.5**: 40% done; All information on .rc is on the old TM5 WIKI. Tedious.

**8.6:** Closed

**8.7:** Closed

# Discussion points

**Move to new version control system at KNMI**

KNMI will likely transfer to git-like system next year, but it is still unclear if they will allow external users to mess around on KNMI compueter. PlS will follow this.

**SB:** Option could be to have ticketing/WIKI at KNMI (all versions). Code can be made available through ***github***.

**PlS:** We have to be clear on how we will use the tool. E.g. only one person can commit to the trunk, while everybody works in their own branch.

**MK:** a dead branch is fine, e.g. developed by a PhD, as long as it remains available.

**AJ:** account management. There should be external accounts in order to archive progress. KNMI policy is currently not fully open (to be pushed by **PlS**).

**ND**: If we switch to git, the projects should also be reorganized. ***Git*** allows better maintenance. The overwriting of files makes it necessary to bug-fix all files that overwrite the trunk.

**AJ:** the modularity is there for a good reason. Other models are much less flexible than TM5. So, the modularity is a great tool.

**Action** **PlS**: get idea of needs for new version control system. Concern is to access “old” tickets (note: I read there are tools to transfer redmine 🡪 github, including tickets. Also history of commits is maintained from SVN🡪GITHUB.

**PlS**: TM5-MP is now standard with only ***trunk*** and ***branches***. For the old TM5-zoom (with “branches”) the situation is a bit more difficult

**Action PlS:** how to transfer old “zoom” branches to github.

**SB**: Is concerned about the move to ***python3***. Next to print statements, there are serious issues, e.g. 3/2 🡪 1.5 (float) in python3, while python2 produces 1 (int). This might be a problem. ***Utopya*** is in python3 and backward compatible with python2.

**Action SB**: look into issues when moving python2->python3.

**Meteo processing, ERA5**

**PlS & AS**: Will start working serious amounts of time on the ERA5 processing this month.

**MK:** Reading surface files: do we need to change TM5 code? What vertical resolution do we choose (how many of the 138 levels?).

We will adopt the operational TM5-MP definition (used for TROPOMI support). ERA5 will continue to support TM5-zoom.

Actions **8.1** & **8.2** will start soon, because AS needs the process CAMS. This year there will be data available. Start 2019 🡪 2000; Then roll back towards 1990. And then look into earlier years.

# Updated list of actions

Tracker ids are either:

* **issue** number from the TM5-MP project management page (<https://dev.knmi.nl/projects/tm5mp>), or
* **ticket** number from the TM5-4DVAR projects management page (<https://sourceforge.net/projects/tm5/>)

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| 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 |  |

# New projects:

PlS: KNMI 2 projects. Vincent NSO project, C-IFS into OpenIFS + M7. FORCES EU project about aerosol forcing using EC-Earth.

NOAA: AJ and SB received funding from NASA for OCO-2 support. SB committed 14C versions (radiocarbon). 13CH4 project is in progress.

ND: Bremen focus: Inversion glyoxal + prognostic air quality with TM5. Focus over Africa.

AS: TNOCAMS Methane.

MK: Jin Ma will start 1-5-2019 in Utrecht to work on TM5-4DVAR COS version.

# Next Meeting:

Scheduled: 21 Nov 2019 to 22 Nov 2019