**ESMValTool Coding Workshop**
**6-8 February 2019 – DLR Oberpfaffenhofen**

Participants: Bouwe Andela, Lisa Bock, Björn Brotz, Veronika Eyring, Birgit Hassler, Axel Lauer, Saskia Loosveldt Tomas, Valeriu Predoi, Mattia Righi, Manuel Schlund, Javier Vegas-Regidor.

The workshop was organized to address several high priority issues in the ESMValTool v2, to set the basis for the next release and to prepare for the upcoming hot phase of CMIP6, with most modeling groups submitting their data.

The participants worked on three major tasks:

- Extension and testing of the cmor module, to allow handling non-standard CMOR variable, such us standard errors associated with several variables and derived variables available only in the observations. The related issues were solved and tested with several real-world cases.
- Switch to Iris 2. This was a long standing issues, whose solution was mainly hampered by the much higher memory usage when running the ESMValTool with Iris 2 than in the Iris 1.13 case. A preprocessor feature responsible for checking the range of the input data was identified as responsible for a major slowdown in the preprocessor chain. Since this feature was only raising a warning and data cannot be modified anyway, it was deactivated. The final tests are currently running to exclude any further problems due to this version change.
- With the workflow for cmorizing the observational data now available, the porting of the cmorizer scripts from v1 has started. Priority will be given to the dataset currently in use in v2. Once finished, a new data pool for v2 will be made available to the developers at DKRZ and kept synchronized with Jasmin.

We decided to separate the preprocessor and other core functionalities of the tool (shared scripts, utilities, etc.) from the diagnostics and to maintain them in two separate github repositories: a public one for the core and a private one for the diagnostics. This will be implemented in a dedicated workshop to be held in May 2019 at DLR.

Concerning governance, we decided to separate the core development team (people who actually write code) from the scientific steering committee (Veronika Eyring et al.).

Other issues and tasks for the near future:
- Big projects, like CRECENDO or PRIMAVERA, need to commit to invest in the quality control of the tool and in technical enhancements.
- Define a consortium agreement (for 4 or 5 years then renew) with the formal commitment of consortium partners to invest a given amount of resources every year (e.g., 1 person-year)

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- Definition of contact people for ocean, land, biosphere, atmosphere etc. diagnostics
- Create a user support and possibly a ticket system
- Finalize the documentation for v2.0 (Valeriu volunteered to help, this is possibly something to be done before end of April)
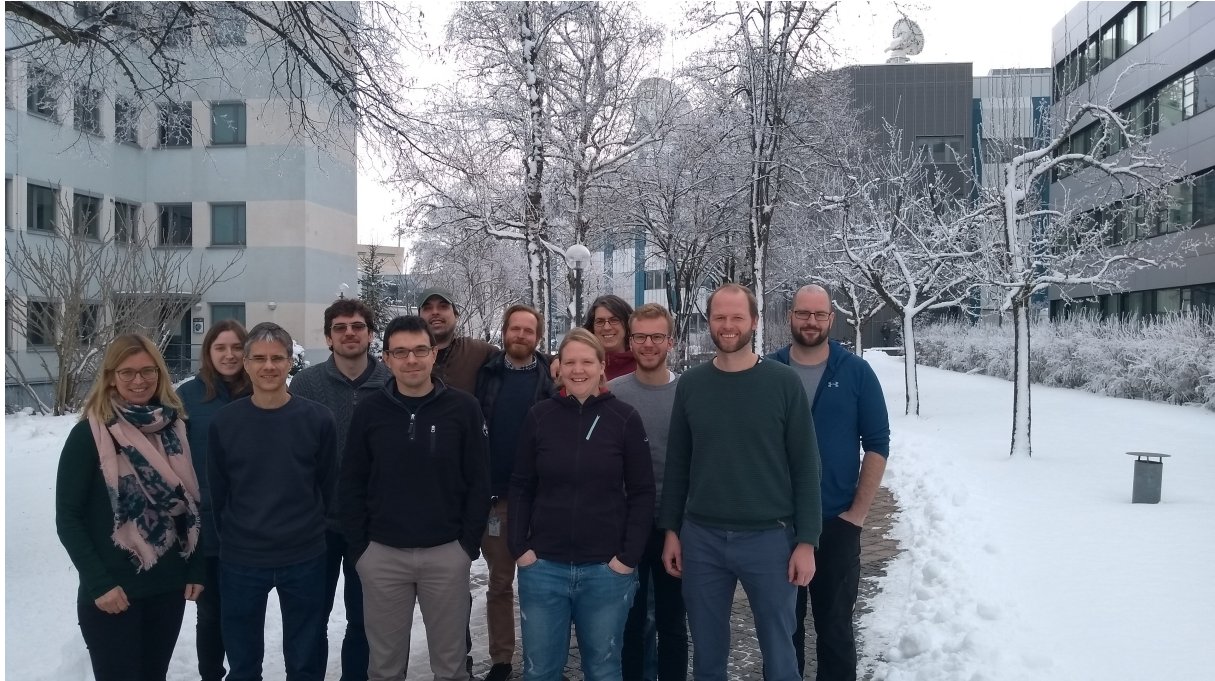


*Participants of the ESMValTool Technical Coding Workshop at DLR Oberpfaffenhofen, February 6-8, 2019.*

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