

Summary report on DAsKIT video-conference, 5-6 December 2018

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The main topics of this video-conference were:

1. Status on the DAsKIT countries progress
2. Status on the 2018 DAsKIT WD exercises
3. Validation of local surfDA cycling
4. Local issues
5. Planning of next actions and AOB

Preliminary note:

Due to the bad connectivity conditions, the meeting was postponed from 5 to 6 December, at 08:00UTC. Though a new conference platform was tried, started from Météo-France (rendez-vous), the conditions were still not appropriate which has brought some constraints within the participants communication.

Short progress status per country:

ALGERIA

- BATOR CY40T1_bf07 has been implemented for SYNOP data
- 3D-Var has been cycled and tested for ALADIN at CY40T1_bf07
- B-matrix has been computed from AEARP downscaling and a 3D-Var cycling is being implemented for AROME at CY40T1_bf07
- SurfDAexer and MANDALAY exercises have been ported locally but no cycle has started yet from the initial surface exercise
- OBSMON is being installed locally
- HARP has not been installed
- Compilation problem with BATOR CY43T1_bf02 has been found, with routine `bator_decodhdf5_mod.90` (tested with other hdf5 libraries versions but doesn't fix the issue)
- future plans consist on building a pre-operational version of 3D-Var cycle for AROME at CY40T1 and pre-process TEMP and GPS data.

BELGIUM

- have an eflow suite to cycle surface OI_MAIN + 3D-Var DA which is technical working for CY40T1_bf07 and CY43T2_bf09, after a 3 weeks stay of a colleague from Algeria
- B-matrix has been computed by the NMC method; plans include the improvement of B-matrix
- just started an e-suite for surface DA with AROME at 1.3km resolution and an equal suite will be started to ALARO with the same eflow set of scripting
- OBSMON is technically working at the HPC machine, but not in use yet.

BULGARIA

- all the exercises done during the 2018 DAsKIT WD in beaufix were finished
- OBSMON was not ported locally due a compilation problem
- HARP, surfDAexer and MANDALY have been ported successfully to the local machines
- the surfDAexer was successfully adapted to an AROME-BG domain in a single experiment in CY40T1_bf07; no cycled yet.

MOROCCO

- Bator was successfully implemented locally in CY40T1 and it was tested with SYNOP and TEMP GTS BUFR & local GPS and ATOVS; an issue has appear with AMDAR GTS BUFR data in the local machine, but it was OK in beaufix
- OBSMON and MANDALAY were implemented locally and the tests run ok
- HARP was not implemented
- surface DA implementation shown a bug in the local machine, but it was OK for AROME-MOROCCO in beaufix
- a full AROME-MOROCCO DA experiment with OI_MAIN+3D-Var will be assembled and cycled in beaufix for a 2 to 3 weeks period in CY40T1 since most of the components have been tested already (3D-Var and OI_MAIN)
- future plans rely on the new machine acquisition to where the full AROME-MOROCCO setting is supposed to be ported.

POLAND

- DA is being cycled each 6-hour for ALARO configuration with CANARI in CY40T1 and CY43T2 in parallel
- test with and without surface DA is on-going
- surface DA exercise has not been ported from beaufix
- OBSMON implementation locally is on-going

PORTUGAL

- surface DA is running in operational mode locally at CY38T1
- there was no progress on local data acquisition and pre-processing, though deported work was done with conventional data during 2018
- Bator CY40T1_bf07 is being implemented but there may be a compilation problem
- surfDAexer was ported to the local HPC, but is still under test
- local implementation of MANDALAY is still on-going
- B-matrix for AROME-PT2 (2.5 km, 60 levels) has been computed in beaufix and a full OI_MAIN+3D-Var experiment has been cycle under OLIVE platform at CY40T1 (the closest to export version)
- B-matrix diagnostics have been started as well
- next actions should be related to pre-processing of OIFS radar data for DA; DA training; porting AROME-PT2 OI-MAIN+3D-Var from beaufix to the local HPC machine

TUNISIA

- Bator has been locally implemented on CY40T1 and should now be tested with OPLACE databases
- OBSMON and MANDALAY have been successfully tested locally
- surfDAexer has been tested on the local machine and next step will be to adapt it to the AROME-Tunisia domain
- a new HPC machine should be acquired by mid 2019 and after that the tests for a full (surface+3D-Var) DA for AROME at CY43 should take place
- in the new configuration, Jk will be added on AROME-Tunisia 3D-Var.

TURKEY

- a 6-hour DA is being cycled for ALARO CY40T1 in operational mode (at 00, 06, 12, 18UTC network times), at 4.5km, 60 levels and with LBC from ARPEGE; as conventional observations are using SYNOP GTS&local; TEMP local and AMDAR GTS; as non-conventional observations are using AMSUA, AMSUB-MHS (NOAA18-19 & METOP1-2,

SEVIRI (METEOSAT11) and AMV (METEOSAT); CANARI is used for surface DA and 3D-Var for the upper-air with 24-hour varBC. The model is integrated up to 48 hours

- an ensemble B-matrix has been calculated from AEARP at CY43T2
- OBSMON has been installed and tested with provided observations
- surfDAexer in beaufix was not completed
- next actions will include the installation of HARP, and the implementation of CY43T2 for ALARO; besides, an assimilation cycle should start for AROME.

Main conclusions:

1. Countries have shown good progress in their local DA settings (Belgium in particular) and almost all are now able to cycle them;
2. concerning local implementation of surface DA settings, all the countries besides those running ALARO (Poland and Turkey) have declared to have started its local implementation. However, Portugal (Bator) and Morocco (add_surf) reported compilation or running problems in their local machines. Bulgaria declared to have manage to adapt surfDAexer setting from the WD to an AROME-BG domain and Tunisia will soon start doing it; moreover,
3. none of the countries has shown any sort of validation studies so far;
4. MANDALAY has been implemented and tested in almost all the countries and no issues have been found;
5. OBSMON has been implemented in many countries and some compilation issues have been found;
6. HARP has not been implemented in most of the countries;
7. at the same time, although most of the countries are still working in CY40T1, they plan to start working on CY43T2 in 2019.
8. two countries (Morocco and Tunisia) expect to buy new HPC platforms in 2019 with impact on their DA planning.

Recommendations & actions:

1. all countries are invited to document their issues in at the LACE forum, on the page dedicated to DAsKIT issues (Algeria, Portugal and Morocco)
2. all countries are request to finish the validation of their surface DA cycling at CY40T1
3. video-conferences and DAsKIT WD will be planned for 2019, however, the facility platform will have to be tested in advance with all countries and the procedures to get good communications conditions should be optimised; for next video-conference, countries are recommended to continue to share their slides in advance to allow an efficient communication
4. it was recommended that countries should rely on CY40T1_bf07 and CY43T2_bf09 for their local implementation to easy sharing experiences
5. outcomes from DA training in Budapest should be given on the next video-conference

6. next video-conference should be around March 2019.