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SURFEX related issues

# Context

- SURFEX is the surface scheme originating from the meso-NH community.
- It is (naturally) included in AROME
- Since it is more developed than the old ISBA scheme of the ALADIN model, it was already planned since a long time ago to have it in ALADIN/ALARO as well.
- As of today, SURFEX is not used by the partners in their operational applications. The reason:
  - Problems of performance on different platforms
  - Ideally the old ISBA behaviour should be reproduced by SURFEX. Efforts have been made but were stopped since roughly 1.5 y.
- MF made considerable progress on the issue of the performance

# During the CSSI meeting in Exeter, the following issue was identified around SURFEX

- The work carried out by MF is greatly appreciated by CSSI and represents a substantial step forward.
- At the meeting it was identified that this work does not guarantee that it may fully solve the problems of the partners.
- So partners, ideally, should start testing the solutions put forth by Météo France on their own platform. A problem with that is that, for justified reasons, these modifications will not enter a common, official model release in the short term (typically, before spring 2011 if not the summer). This causes the following problem for decision. Either the partners: (a) wait, or (b) create an intermediate branch and work on that.
- PM and CSSI chair subsequently identified the following issues:
  - They found that, the first, i.e. the waiting strategy, is not favorable. In the second case, we have to take great care of the coordination: (i) each partners (including MF) should be aware of the developments of the other, otherwise we make create conflicting developments and (ii) at the policy level, special care should be taken that the developments of one partner should not hamper the ones of another.
  - General speaking the present policy of giving priority to the “external” maintenance of one piece of community code should be discussed at PAC, since it might not be the best long-term progress avenue.

Since it has a Policy aspect it was decided to pass this to PAC7

# Discussion at PAC7, 30/11/2010

This was discussed at length in PAC. At present there are no concrete proposals yet. Except that:

- during the course of 2011, the partners should organize themselves to make the tests in a coordinated way (the PM will take care of this). The French LTM has been proactive in proposing a technical way of approaching this problem, the details will be discussed after the GA. This action is necessary for the short run.
- In the long term, PAC concluded that some specific governance for the R&D and the maintenance of SURFEX should be necessary.

# What is expected from GA:

- **Take note** of
  - The evolutions in SURFEX
  - The necessity to put man power on it
- In my opinion the activities are SURFEX should not disperse in 2010, so we need some follow up. Proposal (additional input is welcome);
  - (new) PM will, with technical support from the CSSI, **coordinate tests** (performance +reproducibility) by the partners
  - Governance: MF will analyse how to create a **governance of SURFEX**, first internally.
- Proposal for a **follow up**: the results of this will be scrutinized in PAC, 6-7 June Brussels 2010.