



## CSSI-HMG meeting 2018

20 April 2018, 9:00 – 17:00  
Toulouse, France

### List of participants :

*Ludovic Auger, François Bouyssel, Alex Deckmyn, Daan Degrauwe, Maria Derkova, Claude Fischer, Bent Hansen Sass, Frank Lantsheer, Jean-François Mahfouf, Maria Monteiro, Jeanette Onvlee, Patricia Pottier, Roger Randriamampianina, Patrick Samuelsson, Daniel Santos, Roel Stappers, Piet Termonia, Sander Tijm, Alena Trojakova, Martina Tudor, Christoph Zingerle*

**Excused :** *Inger-Lise Frogner*

## 1 Opening and adoption of the agenda

Claude opens the meeting and introduces the newcomers : Maria Monteiro (ALADIN DA coordinator, from IPMA, Portugal) and Roel Stappers (Code Analyst for DA) ; François is punctually invited to this meeting; Martina is attending the HMG/CSSI meeting as the new LACE PM (LACE observer).

Last year HMG/CSSI meeting was mainly dedicated to establishing the new structure of the work plan; this year, the agenda is more focused on the monitoring of the realisation of the RWP2018, on the evolution of the process to have a more efficient preparation for the RWP2019 and on the monitoring of the relation between the R&D planned in the work plan and the expected code deliverables.

## 2 Debriefing and status of RWP2018 (with special attention wrt code deliverables)

An “augmented RWP2018” will be prepared (Patricia), with 2 additional columns in each WP, to describe the status of the tasks. By the 1<sup>st</sup> of February 2019, the HMG/CSSI members will fill the column “status of the tasks” (completed, on track, delayed or issues, not started) and add information in the column “details” (achieved deliverables or explanations in case of issues or delay). Then the PMs and Patricia will summarise the outcomes in a summary RWP2018 table that will be reviewed during the HMG/CSSI meeting in April 2019.

## 3 Expected /planned evolution of cycles

The description of the evolution of the cycles (timing and content) was detailed during the system plenary session of the wk (see Claude’s presentation : [http://www.umr-cnrm.fr/aladin/IMG/pdf/cyclesoops\\_claude\\_v1\\_2\\_.pdf](http://www.umr-cnrm.fr/aladin/IMG/pdf/cyclesoops_claude_v1_2_.pdf)). The HMG/CSSI participants have no comment.

Claude explains that he went through the whole RWP2018 and picked up and listed the T-code deliverables provided in this RWP : this list encompasses most possible contributions for either CY46T1 or CY47T1 although the provided estimate of timing of the t-code deliverables usually was fairly broad. Ideally all contributions should refer to a T-code-deliverable in the RWP but, pragmatically, it happens that some

technical developments are done, without being planned in the RWP. It was distributed as a preparatory document for this HMG/CSSI meeting (see doc 4.a page 9).

The HMG/CSSI members are asked to check this list and signal any missing contributions. HMG should provide any additional information to Daniel (with Claude in copy) and ALADIN colleagues should contact Claude. The focus should be on t-code deliverables proposed for CY46T1. Daniel explains that he will handle with a higher priority those HIRLAM contributions that were not ready in time for CY45T1. The deadline for sending this information to Daniel and Claude is 25 May 2018.

Daniel and Toon wish to change work practices in HIRLAM and organise pre-phasings of the HIRLAM contributions, before the Toulouse phasing. A GIT training is planned by HIRLAM to train their scientists. Claude supports this way of organising the common work between ALADIN and HIRLAM.

Claude adds that he intentionally didn't list the T-code-contributions for Surfex as the same stable version of SURFEX (V8.0) will be kept in the coming cycles in the MF NWP GIT repository. Moreover HIRLAM wish to test maintaining a specific HARMONIE NWP Surfex version on V8 directly in the GMME Surfex trunk.

## 4 Preparations for RWP2019

The debriefing of the RWP2018 underlines the necessity of a better communication, both approaching the **lead authors with clear directives** and letting know **the staff and the LTM how they can contribute to a WP**. Guidelines (see annex 1) for lead authors are prepared and a clear time-line (see annex 2) is established. Section by section remarks were made and simultaneously updated in the draft RWP2019.

### i. Work packages

The list of 2019 WP was established, with slight changes from the 2018 WPs (see annex 3)

### ii. Proposed lead authors

A list of lead authors was proposed (see annex 3) : the PMs (ALADIN, HIRLAM, LACE) will contact those not present during the HMG/CSSI meeting to confirm that they agree to do the job.

### iii. Process and time-line:

A time-line is discussed and adopted :

- 20 April 2018 (this HMG-CSSI meeting): finalization of the list of the 2019 WPs, proposition for lead authors for RWP2019;
- 23-27 April 2018 : The PMs will check with the lead authors that they accept; the guidelines to lead authors -as discussed during this HMG/CSSI meeting- are finalized (Patrick, Patricia);
- 30 April-4 May 2018 : Appointment of lead authors;
- 30 April – 4 May 2018 : Patricia will make the RWP2019 google environment ready (copy-paste from RWP2018, plus changes in WPs or authors as decided, plus removal of the manpower) and distribute instructions to lead authors. At that stage, only lead authors have writing access to the shared document;
- 7 May – 15 June 2018 : 1<sup>st</sup> redaction by lead authors;

- 18 June 2018 : invitation to the HIRLAM staff (HIRLAM PM) and to the ALADIN LTM (ACNA) to check if there is nothing missing in the draft RWP2019 that is in their local scientific plans ; the ALADIN LTMs or anyone in the staff **wishing to introduce a modification in a WP should let know the lead author(s)**, adding a comment to the part they wish to be modified, ending the comment by +name@address (email address of the lead author(s) who will receive an automatic message from googledrive to warn him about the comment).
- Until end of August : 2<sup>nd</sup> redaction : **late contributions implying last minutes modifications should be avoided but, in any case, anyone should let know the lead author(s) of the WP.**
- last week of August 2018: check of the draft RWP2019 by the PMs.
- In September, the text of the RWP2019 is ready and the ALADIN LTMs and HIRLAM HoR will be given writing right to the shared document to add the manpower commitments (Patricia).
- 26 September 2018 : finalization of commitments by the ALADIN LTMs and HIRLAM HoR.
- 27-28 September 2018 : move of the unstaffed tasks to a separate added table ("**needed unstaffed tasks table**") and preparation of a clean pdf version (Patricia).
- 1 October 2018 : submission of RWP2019 to HAC/PAC.
- 1 November 2018 : submission of RWP2019 to GA/C.

## 5 **Proposal for joint monitoring: brief explanation for the HMG-CSSI's information**

At their 3<sup>rd</sup> joint meeting in Krakow (Nov. 2017), the ALADIN General Assembly and the HIRLAM Council tasked the PMs and Patricia to propose a joint manpower reporting to monitor the invested manpower in the ALADIN-HIRLAM common work. Overall efforts of the teams (realisation of the RWP and local implementation work) should be monitored and will be reported at the level of the directors. Patricia has developed a web-interface to be filled by the ALADIN LTMs and the HIRLAM HoR. This is currently being demonstrated and tested and will be introduced to HAC/PAC.

## 6 **Status of convergence steps between the two consortia**

This point was removed from the agenda, as already explained during the Workshop (see Piet's talk : [http://www.umr-cnrm.fr/aladin/IMG/pdf/aladin\\_piet-5.pdf](http://www.umr-cnrm.fr/aladin/IMG/pdf/aladin_piet-5.pdf) ).

## 7 **A.O.B.**

None.

## 8 **Closing : summary of decisions; list of actions and next year meeting**

Below are the main decisions taken during the meeting, besides the adopted WPs, the proposed lead authors, the guidelines for lead authors and the time-line for the preparation of the RWP2019 :

- The HMG should **cross-check the proposed HIRLAM contributions for CY46T1 and the list of**

**possible contributions prepared by Claude** and send comments/feedback to Daniel and Claude. ALADIN usual contributors should contact Claude. **Deadline for all : 25 May 2018.**

- HAC suggested to add to the tasks a level of priority : **the HMG/CSSI decides against putting priorities within the tasks.**
- **The local implementation of the ALADIN-HIRLAM System is not to be indicated in the RWP but it will be reported in the manpower reporting tool.**
- **The PMs will ask HAC/PAC for guidelines about the possible addition of a Climate WP (with no T-code deliverables).**
- **Martina will check the status of OPLACE.**
- It was also decided to maintain the EPS WPs division as it is (division between systems).
- Some additional WPs were created : MGMT3, COM3.2, PH5, QA4;
- SY4 was removed.
- Some changes inside the WPs were decided : addition of a task for the creation of LBC files from IFS in DY1, addition of a task for the organisation of the collaboration with the Barcelona Super Computer centre to SY1; removal of the operation work from QA3.
- **Execution of RWP2018** : Patricia will prepare the “augmented RWP2018” with the status columns in the WPs (before summer 2018); the HMG/CSSI fill the additional columns (final status) in the augmented RWP2018 (before 1 February 2019); PMs and Patricia will prepare a summary table of execution of RWP2018 before 1 March 2019.

The next meeting will take place in Madrid on Friday 5 April, 2019.

# ANNEX 1 : Guidance to lead authors of ALADIN-HIRLAM Rolling Work Plan

## Work Packages

The role of lead author for one, or more, of the RWP WPs is important and fascinating since it connects ALADIN-HIRLAM developers all over the consortia during the RWP process. The active period as lead author is during the RWP preparation process, i.e. until the RWP has been approved by the ALADIN General Assembly and the HIRLAM Council. After that your role is formally fulfilled since it is not part of your role to follow up on the execution of the plan. However, during the process you will become a valuable contact point in the WP research area which means that it is appreciated if you can act as potential connection point between developers also after the process if such needs appear.

### The lead author role includes:

- Compile a first draft (in case of a new WP) or an update (in case of a continuation of an existing one) of the WP before developers are contacted. This draft concerns first of all the WP objectives. Please use the very first draft of the RWP as distributed by the RWP coordinators as baseline and edit the objectives according to needs. The objectives should be written broad enough so it becomes clear also for non-developers what this WP is about and what achievements are expected in general. The character of our WPs are quite different. Some of them cover all consortia while others are more limited. Please carefully describe the character of your WP. E.g. if the WP represents contributions from all consortia, also differences in plans should be described. There should be clear links between the objectives and tasks. Thus, the objectives may need to be modified during the RWP preparation process depending on the final list of tasks. If you during the RWP process feel that your WP is maybe too wide/big or too narrow/small and would be better split/merged please communicate this with the scientific coordinators. Any decision on this is the responsibility of them.
  - Before developers are contacted please compile or update a draft list of tasks to give developers a more concrete idea on what kind of tasks can be covered by this WP.
  - Once the updated RWP is publically announced please collect input from those developers who consider themselves as contributors to next year's RWP within your WP. As it may be difficult to know who are potential contributors the main responsibility is on the developers to contact you. However, if you expect any developer to contribute please contact them and ask for potential contributions.
  - All developers should provide you with information on which already existing tasks they would like to contribute to or give you a clear task description of a potential new task. If they propose a new task please also ask for expected collaborators within this task. Each task description must be attached to one or more deliverables. Each deliverable must be described in the deliverable tables, including a main responsible developer and an estimated time of deliverable. Also, each developer listed should have an estimated PersonMonths contribution attached or being marked as contribution based on externally funded project. The PersonMonths are provided in correspondence with LTMs (ALADIN) and staff/Heads of research (HIRLAM) : effective time of work (1 Full Time Equivalent = 11 months). The local implementation work is not to be indicated in the RWP but it will be reported in the manpower reporting tool.
  - When most tasks are included some rearrangements may be needed. Tasks should be achievable within a year or so. If tasks descriptions are "bigger" than so it is recommended to divide them into sub-tasks. If so, please coordinate with developers involved. Some tasks, suggested by different developers, may be subject of merging if they look similar enough. Please coordinate any such merging with developers involved.
  - Compared to last year we will have an additional table "Needed unstaffed tasks" following after the "Descriptions of tasks" table. The intention with the new table is to identify important development needs for our consortia but which are not yet connected to any manpower.
  - You are the main author of the WP which means that you should be in control of what is added/modified. All developers will be given read and comment permissions but you are the only one allowed to edit your WP. When adding a comment in the google document, staff should end the comment with +email of the lead author (thus the lead author will automatically receive a message letting him/her know about the comment).
  - Do not distribute stand-alone versions of the WP since confusion can easily appear related to which version is the official/latest one. Thus, always refer to the RWP by a link to its google location.
  - Patricia Pottier (ALADIN) and Frank Lantsheer (HIRLAM) are the main coordinators of the technical redaction process. Thus, please follow their instructions carefully, e.g. with respect to time schedule and deadlines. Also, if anything is unclear please don't hesitate to ask Patricia and Frank for advice and help.
- Piet Termonia (ALADIN PM), Jeanette Onvlee (HIRLAM PM) and Martina Tudor (LACE PL) are our scientific coordinators. Please contact them if you need advice on e.g. possible split/merge of WPs.

*From next page on more specific instructions are given related to the outline of a WP sheet. Please carefully consider them and please contact the technical coordinators if something is unclear.*

### Specific instructions related to the outline of a WP sheet:

- Name, number and main editor of Work Package should follow instructions given by RWP coordinators.
- Please group people in the "Table of participants" per institute and sort the rows by alphabetical order with respect to name of institute. Provide full name of participants or contact person, abbreviation if useful later in the document and name of institute. For name abbreviation please use the style: first to letters in name + first to letters in last name, e.g. PaPo for Patricia Pottier.
- If PersonMonths are available for a specific participant for NWP work according to the institute/organization budget it should be included. The PMs should not represent local implementation work. If a participant contributes to the WP through funding by external project please just indicate "external" or name of project. If none of this information is known please indicate this by question mark "?".
- For the "WP Objectives" text please take 300±100 words as a recommendation.
- Depending on Work Area and Work Package, tasks can be dedicated to anything from one specific person to many persons across the whole consortia. Most tasks will probably involve a few people within our current organisations ALADIN/HIRLAM/ LACE/ SURFEX, respectively.

- Please use the following format for task numbering: for example, for the first Surface Workpackage SU1 “Algorithms for surface assimilation” number the tasks as SU1.1, SU1.2,... If you think subtasks will be appropriate please number them as SU1.1.1, SU1.1.2.
- Please take a maximum of 100 words as a recommendation for a task description.
- A task without any participants is indicated on a separate table "needed unstaffed tasks". In the "tasks table", name one or more participants that are expected to be, or will become, involved. Any named participant must also appear in the “Table of participants”.
- The type of deliverable can be e.g. t-code, code, algorithm, documentation, ... One task can have more than one type of deliverable. “t-code” in this context refers to code that is shared in the consortia via the t-cycles. Any other code/script development should be listed in the “Non-t-code deliverables” table. In fact, all non-t-code deliverable tasks must appear in the “Non-code deliverables” table below.
- “t-code deliverables” have a specific importance in our consortia since we share such code via the release of the t-cycles. This box has to be filled if the deliverable is expected to enter a future version of the t-cycle code. If so, then specify a time scale or a specific cycle.
- A task is not allowed in the “Descriptions of tasks” table without a reference to one or more deliverable descriptions in tables “t-code deliverables” and/or “Non-t-code deliverables”.
- At least one responsible participant must be named per deliverable.

## ANNEX 2

### **Timeline for the redaction of the 2019 RWP (backwards)**

- Submission of RWP2019 to HC/GA: 1 November 2018
- Submission of RWP2019 to HAC/PAC: 1 October 2018
- Move of the unstaffed tasks to the "needed unstaffed tasks table", preparation of a clean pdf version : 27-28 September 2018
- Finalization of commitments by ALADIN LTMs: 26 September 2018
- Finalization of commitments by Hirlam HoR: 26 of September 2018
- Plan text ready, not yet with finalized pm numbers: September 1 2018
- 2nd redaction and check of the second draft RWP2019 by the PMs: end of August 2018
- 1st redaction (first draft RWP2019) : until mid-June when the HIRLAM staff (Jeanette) and the ALADIN LTMs (ACNA) are asked to check if there is nothing missing in the first draft RWP2019 that is in their local scientific plans
- Appointment of lead authors : week of 30 April-4 May 2018
- Make RWP2019 google environment ready and distribute instructions to lead authors: week of 30 April – 4 May 2018
- Request for commitment to lead authors: in week of 23-27 April 2018
- HMG-CSSI: finalization of the list of the 2019 WPs, proposition of lead authors for RWP2019, timeline: 20 April 2018

done

done : mail Patricia 04/05/2018

done by 3 PMs

done during HMG/CSSI meeting

### **Monitoring of the realisation of the 2018 RWP**

- Summary of execution of RWP2018 (PMs, Patricia) : 1 March 2019
- Execution of the RWP2018 : HMG/CSSI fill the additional columns (final status) in the augmented RWP2018: 1 February 2019
- Preparation of an augmented RWP2018 with status columns in the WPs (Patricia) : before summer 2018

## ANNEX 3 : structure of the ROLLING WORK PLAN 2019

WP NAME	MAIN EDITOR(S)
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### ROLLING WORK PLAN 2019 : CHAPTER 1

Category	WP ID	Description	Editor(s)	Status
Management	MGMT1	Management and ALADIN support activities	Piet Termonia and Patricia Pottier	
	MGMT2	Management LACE	Martina Tudor	
	MGMT3	Management HIRLAM	Jeanette Onvlee	New WP
Common	COM1.1	ALADIN Code architect coordination activities	Piet Termonia and Daan Degrauwe	
	COM1.2	HIRLAM Code analyst activities	Jeanette Onvlee & Roel Stappers	
	COM2	Code generation and maintenance	Claude Fischer	
	COM3.1	Support for maintenance and Partners' implementations of ALADIN system	Maria Derkova	
	COM3.2	Support for maintenance and Partners' implementations of HIRLAM system	Daniel Santos	New WP

### ROLLING WORK PLAN 2019 : CHAPTER 2 : CORE PROGRAMS

Category	WP ID	Description	Editor(s)
Dynamics and scalability	CDPY1	Quasi-Elastic (QE) system	Ludovic Auger, Sander Tijm
	CDPY2	Development of methods for solving the implicit equation in gridpoint space.	Ludovic Auger, Sander Tijm
	CDPY3	Horizontally Explicit Vertically Implicit (HEVI) methods with ALADIN-NH core	Ludovic Auger, Sander Tijm
	CDPY4	Physics-dynamics interface	Daan Degrauwe, Sander Tijm
	CDPY5	Development of LAM components in Atlas	Daan Degrauwe, Sander Tijm
Basic data assimilation setup	CPDA1	Core programme Basic data assimilation setup	Piet Termonia, Maria Monteiro

### ROLLING WORK PLAN 2019 : CHAPTER 3 : OTHER R&D ACTIVITIES

Data Assimilation	DA1	Further development of 3D-Var (alg. Settings)	Roger Randriamampianina, Antonin Bucanek, Claude Fischer	
	DA2	Development of flow-dependent algorithms	Roger Randriamampianina and Claude Fischer	
	DA3	Use of existing observations	Roger Randriamampianina, Jean-François Mahfouf	
	DA4	Use of new observations types	Jean-François Mahfouf and Roger Randriamampianina	
	DA5	Development of assimilation setups suited for nowcasting	Xiaohua Yang, Pierre Brousseau, Florian Meier	
	DA6	Participation in OOPS	Claude Fischer, Roel Stappers, Daan Degrauwe	
	DA7	Observation pre-processing and diagnostic tools	Eoin Whelan, Alena Trojaková, Roger Randriamampianina	
	DA8	OPLACE	To be decided by LACE Council if part of the RWP (if yes Alena Trojakova as lead author : copy-paste from LACE WP)	to be decided by LACE Council
Dynamics	DY1	Boundary conditions and nesting	Sander Tijm	Add a task : LBC from IFS (contact Martina, Ryad)
	DY2	Time-stepping algorithm	Petra Smolíková	
	DY3	Vertical discretization	Petra Smolíková	
	DY4	Semi-Lagrangian advection	Petra Smolíková	
Physics parametrizations	PH1	Developments of AROME-France (and ARPEGE) physics	Claude Fischer and Yves Bouteloup	
	PH2	Developments of HARMONIE-AROME physics	Sander Tijm	
	PH3	Developments of ALARO physics	Neva Pristov	
	PH4	Common 1D MUSC framework for parametrization validation	Sander Tijm, Wim de Rooij and Eric Bazile	
	PH5	Model output diagnostics	Maria Derkova	New WP
Surface analysis and modelling	SU1	Algorithms for surface assimilation	Rafiq Hamdi	
	SU2	Use of observations in surface assimilation	Stefan Schneider	
	SU3	SURFEX: validation of existing options for NWP	Patrick Samuelsson and Samuel Viana	
	SU4	SURFEX: development of model components	Patrick Samuelsson	
	SU5	Assess/improve quality of surface characterization	Ekaterina Kurzeneva	
	SU6	Coupling with sea surface/ocean	Neva Pristov, Patrick Samuelsson	
Ensemble	E1	Arome-France EPS (PEARO)	Claude Fischer	
	E2.1	Development of convection-permitting ensembles: HarmonEPS - Physics perturbations	Inger-Lise Frogner	
	E2.2	Development of convection-permitting ensembles: HarmonEPS - Initial conditions perturbations	Inger-Lise Frogner	HMG/CSSI decides to keep



forecasting and predictability	E2.3	Development of convection-permitting ensembles: HarmonEPS - Surface perturbations	Inger-Lise Frogner	decides to keep the EPS WPs organised by system
	E2.4	Development of convection-permitting ensembles: HarmonEPS - Lateral boundary perturbations	Inger-Lise Frogner	
	E2.5	Development of convection-permitting ensembles: HarmonEPS - HarmonEPS system	Inger-Lise Frogner	
	E3	Development of convection-permitting ensembles for LACE	Martin Belluš	
	E4	Development, maintenance and operation of LAEF	Martin Belluš	
	E5	Production and maintenance of GLAMEPS	Inger-Lise Frogner	
	E6	Ensemble calibration	Inger-Lise Frogner	

Quality assurance and verification	QA1	Development of HARP	Christoph Zingerle	remove operational work from QA3 new WP (research and development only, no operational)
	QA2	Development of new verification methods	Bent Hansen Sass, Christoph Zingerle	
	QA3	Quality assessment of new HARMONIE-AROME cycles and alleviation of model weaknesses	Bent Hansen Sass	
	QA4	Verification and quality control at MF : development of new methods or products	Joël Stein, Claude Fischer	

Technical code and system development	SY1	Code optimization	Daniel Santos, Ryad El Khatib	Add the organisation of the collaboration with the Barcelona Super Computer center
	SY2	Maintenance and development of the Harmonie Reference System	Daniel Santos	
	SY3	Revision of the Harmonie scripting system	Daniel Santos	

Towards modelling at (sub-)km resolution	HR1	(Sub)-km configurations and turbulence R&D activity	Sander Tijm & Martina Tudor & Claude Fischer
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Possible WP for climate : to be asked at HAC/PAC

The local implementation is not to be indicated in the RWP but it will be reported in the manpower reporting tool.