



**5th Joint ALADIN General
Assembly / HIRLAM Council
17th December 2019
Istanbul, Turkey**



Minutes

The meeting was co-chaired by the Chairs of the HIRLAM Council (Mrs. Marianne Thyrring) and of the ALADIN General Assembly (M. Martin Benko).

1. Opening and welcome

Marianne and Martin welcomed the representatives (see Annex 1) of the ALADIN General Assembly (GA), of the HIRLAM Council (C) and the ECMWF observer, for the 5th joint GA-C. All Members were present but Croatia, Iceland (represented by Denmark) and Lithuania. The HIRLAM PM (Mrs. Jeanette Onvlee) could not attend, due to health problems.


M. Volkan Mutlu Coşkun, Director General of Turkish State Meteorological Service welcomed the participants and congratulated both consortiums who do their best to improve the Numerical Weather Prediction models. According to a Turkish proverb “*One hand washes the other and together they wash the face. (Union is strength).*”, M. Coşkun hoped that the Assemblies can reach the expected agreement for the convergence of the two consortiums during this meeting in Istanbul.


2. Adoption of the draft agenda

The proposed agenda was adopted.

3. Report from the 8th and 9th PAC-HAC meetings

1. Report from the 8th and 9th PAC-HAC meetings

Marianne asked the chairs of HAC (M. Heiner Körnich) and PAC (M. Daniel Gellens) and the ALADIN Program Manager (M. Piet Termonia) to report on the progress made since the last joint GA-C meeting. Heiner summarized the main conclusions of the joint PAC-HAC meetings (the minutes  of these meetings are available on-line) and of the several (web-)meetings of the Convergence Working Group (HAC and PAC chairs, PMs of ALADIN, HIRLAM and LACE, CSSI chair, Philippe Bougeault as MF representative, Patricia Pottier as scientific secretary). The last meeting pointed the importance of the Strategy meeting and its necessary good preparation, with the aim to define common goals and to analyse the needed manpower for the suggested strategy, but also to get all the staff on board. Among the scenarios for the financial organization of the future single consortium, the HAC-PAC supported the scenario A, although the HAC would have favoured the scenario C. The HAC-PAC judged the Quality Assurance document very useful but too technical for the MoU: the CWG has been tasked to draft a new version for the annex II of the

 A copy of the presentations of the 5th joint GA-C, some preparatory documents and some photos are available on the ALADIN website : <http://www.umr-cnrm.fr/aladin/spip.php?article339>.

MoU. The HAC and PAC members are not legal experts but considered that a friendly solution was preferable in case of disagreement, followed by mediation if possible, rather than arbitration. The comments of the HAC-PAC were included in the draft MoU by the CWG and the roadmap for the next months was adapted to recruit the PM after the approval of the strategy and the MoU by the Assemblies in June.

Daniel added that the roadmap is very tight but feasible and the CWG completed it with some risk analysis.

The GA-C had no comment.

4. Governance issues

Marianne proposed that, as both the ALADIN GA and the HIRLAM C had already gone through the preparatory documents proposed by the CWG for discussing this item (4. Governance issues) during their separate meeting, the joint GA-C would focus on the pending issues and on points with still differences of opinion within ALADIN and HIRLAM Members.

1 From scope document to MoU

- a. short and long term goals and organization of the future single consortium, inc. strategy meeting

The PMs prepared a document explaining the need for a common strategy to define what the future Consortium wish to achieve on the short and longer term, and proposing a procedure : after the strategy meeting early February, the CWG will prepare a summary document with the objectives for 2021-2025 and the envisaged path and required resources to achieve them (including a proposal for the organisation of the management group).

Marianne reported the concerns of the HIRLAM Council about defining a very clear ambition for the cooperation, with a common understanding of the Canonical System Configurations (CSCs) and a vision for interoperability (leading to fewer systems and working towards one CSC in the future, going towards a common scripting tool). Piet reported that the same request for a more ambitious convergence was raised by some Partners during the ALADIN GA.

The GA-C acknowledged the progress made in the convergence and the work done in the right direction. The CWG was tasked to make more clear the ambitions for common work on scientific and technical developments and common working methods.

- b. budget principles and scenarios for financial organisation

Martin summarized the three scenarios proposed by the CWG (these scenarios only differ by the number of compensated positions) and explained that the compensation mechanism enters in conflict with financial rules prevailing by some ALADIN Members, thus they could only accept the scenario A that minimizes the membership fee and the number of compensated positions.

Marianne acknowledged the difficulties in reaching a common solution for NMSs with so many different legal constraints and concluded that, whereas they preferred scenario C, the HIRLAM Members could go with scenario A for the beginning of the new Consortium, while continuing to look for better solutions.

Some Members insisted on the importance of finding a funding mechanism that does not rely on in-kind manpower for the management, in order to get the best management team. Others underlined the legal impossibility to implement the compensation mechanism in their NMSs.

The GA-C agreed to organise the budget of the future Consortium according to the scenario A for the validity of the MoU (5 years). Meanwhile, other possible solutions should be investigated for the future.

c. quality assurance

As previously explained by Heiner (item 3.1), the annex II of the MoU (Quality Assurance) will be drafted later.

d. legal aspects (IPR, disputes)

The point was discussed together with item 4.1.e (draft MoU).

e. draft MoU

The ALADIN GA scrutinised the draft MoU and proposed modifications that were passed to the HIRLAM C who added modifications on top of them. The GA-C went through the document and assessed the proposed changes.

The GA-C agreed on most of them (*editor's note : the agreed changes are not listed in these minutes as the CWG will produce a new draft accordingly*).

An agreement could not be found on a few topics that still raise some concerns and need further investigations :

- Intellectual Property: a Sub-Group of the GA-C (GAC-SG) representing the different views expressed during the GA-C meeting (composed of the CWG, the chairs of the GA-C, the Directors or General Director level representatives of CHMI, KNMI, Met.no and Meteo-France) will investigate the legal requirements concerning IP in the different countries, look for compromise solutions;
- Voting system: the CWG will identify a list of decisions and propose the rules for voting each of them (majority needed to make each decision);
- Voting rights: although there had been previously an agreement that main factor determining the voting rights of one Member would be the amount of human resources that this Member has supplied to the Consortium, some Members were not happy with the proposed solutions; the GAC-SG will search compromises for a concrete definition of the weight of the vote of each Member and its implementation in the MoU;
- Settlement of disputes: the CWG will further investigate the possibility to use the "mediation" option of the ICC procedure instead of the "arbitration" one in case that a dispute cannot be settled amicably.
- The CWG will look for the best formulation and place regarding the obligation for each Member to ensure that it owns the IP of its products and is able to transfer it to other Members.

The GA-C acknowledged the progress made in the convergence process and in the preparation of the draft MoU of the future Consortium, and was confident in the possibility to adopt in June a new draft MoU prepared by the CWG with the outcomes of the strategy meeting and the proposals of the GAC-WG. Marianne asked if there were already suggestions for the name of the future Consortium. As there were none, she encouraged the Members to come with proposals at the next joint meeting in June.

f. Procedure for management positions selection

The GA-C supported the procedure for management positions selection as proposed by the CWG in document 4.1.f.

g. roadmap

The GA-C approved the document 4.1.g and the schedule proposed in order to sign the MoU of the single Consortium in November 2020.

2 Open source

For information, Philippe introduced the document exploring open source licensing for the ALADIN-HIRLAM common codes : he summarized the arguments in favor (legal obligation for some Members; increase of the visibility and the use by academy; benefit from the contributions of the licensees; it encourages the private sector to use our codes to make new products) and against (it generates additional costs to help the users; need to protect our IP with a risk of contestation of these IP, an increased risk of robbery of the IP; risk of aggressive competition by the private sector; the choice of a specific license should be agreed by ECMWF and can be complex).

Philippe also noted that not a single European NWP code is currently distributed under classical open source licenses.

The GA-C Members thanked Philippe for this summary and the very enlightening document. Mr. Roar Skalin (Norway) added that as EU encourages to move toward open data and there would probably be options in the future to get also funding for opening the source.

Mrs. Florence Rabier (ECMWF DG) commented that, at the request of their staff, ECMWF has started to consider open source for IFS. Meteo-France and the LAM community will be associated to this reflection. Gerard van der Steehoven (Netherlands) thanked Florence for this invitation and added that a common reflection on our shared code is absolutely necessary to find a solution that would not make some ALADIN Partners suffer from the competition by private companies.

The GA-C concluded that the chairs of the GA-C will participate to the reflection on open source at ECMWF, together with Meteo-France.

3 Associated Member

Marianne gave the floor to Philippe who presented the last developments in this area.

Philippe reminded that the 4th joint GA-C had approved the proposal by Meteo-France to create a status of Associate Member in the future Consortium in order to distribute to non-European NMSs a simplified version of the common codes (only the forecast model, dynamical adaptation mode) and give them a perspective to become acceding Members, then Member.

The CWG was tasked to write a detailed proposal to describe this new status, its rights and obligations, and the procedure to accept an Associate Member. The PAC-HAC approved this document and Météo-France, as Member State of ECMWF, was mandated to formally propose it to ECMWF Council. The December 2019 ECMWF Council has just approved it.

Although Meteo-France, at the incentive of WMO who aims at providing solutions for developing countries, is prepared to support Associate Members alone if necessary, Philippe invited all Members to declare their interest to participate in this new activity at their earliest convenience .

The GA-C approved to include in the next version of the draft MoU this new status of Associate Member.

5. Reports and Plans

1. Report on the 2019 Rolling Work Plan

Piet presented (*) some statistics on the manpower invested or committed in the Rolling Work Plans (RWP) 2019 and 2020. He also illustrated (*) the RWP2019 with concrete examples of important achievements in 2019. The long standing developments on Vertical Finite Elements were ported to the IFS and allowed to reduce temperature Biases in the tropopause. A grid-point solver has been developed as an alternative to the spectral one. The scalability was tested and it was proved that it performs better than the spectral one. Tests were performed in the full AROME setup, albeit on a single core. The tests confirmed that the performance is comparable to the one of the spectral approach. An overview was given of the status of the operational implementations of the data assimilation systems in the LACE countries. Good progress was reported on the DaskIT program. The ALH community is increasingly investigating non-standard (crow-sourced) observations. Some major works were carried out in the tuning of the ALARO physics (as part of the increase of the resolution in CHMI). During the last year increasingly more attention has been paid to postprocessing and diagnostics. This includes to use of big data and machine-learning techniques in Morocco. New versions of the LAEF system have been presented, leading to an improved forecast of a flash flood in Turkey. A lot of attention is being paid to the work on the system issues (scalability, code optimization, single precision, dependence on architecture ...).

Marianne and Martin thanked Piet for this report, congratulated all Members for these developments that contribute to the ALADIN-LACE-HIRLAM common success and asked them to pass on their congratulations to all their scientists.

2. Approval of the 2020 Rolling Work Plan

The RWP2020 had previously been discussed and accepted by the ALADIN GA and the HIRLAM C.

The GA-C unanimously approved the RWP2020¹.

3. Progress and plans at Météo-France

M. Claude Fischer presented (*) the progress and plans of MF, with an overview of the NWP global (Arpège forecast, 4D-VAR and EPS) and LAM configurations (AROME-France, nowcasting version, AROME-EPS, ensemble DA and various oversea or specific versions), and their recent operational evolution, with higher resolution, more members for EPS, new observations assimilated, and production of new diagnostics (i.e. fog or precipitation types, to answer an important request from forecasters and in the frame of an ALADIN-HIRLAM initiative with a new package in the RWP).

The next major step is the operational move to MF new Bull computer mid 2020: benefiting from a performance multiplied by around five, major changes are planned on the new computer for 2020 (increase of AROME and ARPEGE EPS resolution to match the deterministic ones, new convection and radiation schemes, snow analysis and sea-ice model in ARPEGE, new observations assimilated, new or improved diagnostics, ...). The ALADIN and HIRLAM colleagues having access to MF current computer will also receive access to the new one.

In 2020, the discussion with ECMWF colleagues about important an IFS code overhaul to prepare the code to new architecture will go on and LAM partners should expect impacts in the very near

1 *The approved RWP2020 is available on the aladin website : <http://www.umr-cnrm.fr/aladin/spip.php?article321>*

future cycles of the common code.

Marianne thanked Claude, congratulated him for the impressive progress and wished MF colleagues all the best for the migration.

4. Progress and plans at ECMWF

The ECMWF DG, Mrs. Florence Rabier presented(*) the latest developments and plans at ECMWF. In June 2019, Cycle 46r1 was introduced, with continuous data assimilation, weakly coupled data assimilation of SST in the Tropics, the assimilation of SMOS with a neural network approach, the move to 50 members for the EDA, the call to radiation every hour in the Ensemble, and developments on wave modelling. In parallel, efforts have been made on the assimilation MetOp C, of Aeolus and of lightning observations. Also, first results have been obtained in the context of the CO2 Human Emissions project to quantify uncertainties on CO2 concentrations due to emissions and meteorological conditions. Cycle 47r1 is expected to be implemented in 2020, which will bring improvements in the stratosphere and in the wind-reassurance relationship in the case of strong winds, as well as general improvements.

Work also continues on improving the efficiency of the NWP system through code-developments including co-design applications.

For Copernicus, one notable achievement is the delivery of ERA5, now replacing ERA-Interim which is being discontinued. ERA5 is currently being extended back in time to 1950.

Marianne thanked Florence for her presentation and these ambitious plans.

6. Date and place of the 6th & 7th joint ALADIN GA / HIRLAM Council meetings

The GA-C agreed that their Assemblies will meet twice in 2020 :

- on 25-26 June in Madrid, after the ECMWF Council,
- on 26-27 November 2020 in France (Paris or Toulouse), after the EUMETNET/ECOMET Council.

For the meetings in Madrid, one day will be dedicated to ALADIN GA, half a day (in parallel) to the LACE and HIRLAM Councils and half a day to the joint ALADIN GA & HIRLAM Council meeting.

7. A.O.B

None.

8. Closing

The two Chairs thanked the Turkish delegation for their perfect organisation and warm welcome. They also thanked the GA and C Members for the very fruitful discussions and closed the meeting at 17:30.

Participants of the 5th joint ALADIN General Assembly and HIRLAM Council

Annex 1 : Participants

COUNTRY	NMS	Participants
ALGERIA	ONM	HAMADACHE Bachir, MOKHTARI Mohamed
AUSTRIA	ZAMG	Yong WANG, Christoph WITTMANN
BELGIUM	RMI	GELLENS Daniel (PAC)
BULGARIA	NIMH	BOGATCHEV Andrey
CROATIA	DHMZ	
CZECH REP	CHMI	Libor CERNIKOVSKY, Radmila BROZKOVA
DENMARK	DMI	Marianne THYRRING (C chair), Ulrik Smith KORSHOLM
ESTONIA	EEA	Taimar ALA
FINLAND	FMI	Sami NIEMELA
FRANCE	MF	Anne DEBAR, Philippe BOUGEAULT
HUNGARY	HMS	Kornélia RADICS, Mihaly SZUCS
ICELAND	VI	
IRELAND	Met Eireann	Eoin MORAN
LITHUANIA	LHMS	
MOROCCO	DMN	Omar CHAFKI, Hassan HADDOUCH
NETHERLANDS	KNMI	Gerard van der STEENHOVEN
NORWAY	Met.no	Roar SKALIN
POLAND	IMGW	Bogdan BOCHENEK
PORTUGAL	IPMA	Nuno LOPEZ, Maria MONTEIRO
ROMANIA	NMA	Florinela GEORGESCU, Simona TASCU
SLOVAKIA	SHMU	BENKO Martin (GA chair)
SLOVENIA	EARS	BERGANT Klemen, Jure CEDILNIK (PAC)
SPAIN	AEMET	Jose Antonio FERNADREZ MONISTROL
SWEDEN	SMHI	Stefan NILSSON, Bodil AARHUS ANDRAE, Heiner KÖRNICH (HAC)
TUNISIA	INM	Hatem BACCOUR
TURKEY	TSMS	Volkan Mutlu COŞKUN, Tayfun DALKILIÇ, Murat ALTINYOLLAR, Ersin KÜÇÜKKARACA, Yelis CENGİZ
ALADIN / PM		Piet TERMONIA
HIRLAM / PM		
ACE / PM		Martina TUDOR
CSSI CHAIR		Claude FISCHER
ALADIN/ ACNA		Maria DERKOVA
ALADIN / ST	GA sec.	Patricia POTTIER
ECMWF obs.	ECMWF DG	Florence RABIER