THE SHORT RANGE NUMERICAL WEATHER PREDICTION NETWORK (SRNWP) OF EUMETNET: A STATUS REPORT

Responsible member: Hungarian Meteorological Service (OMSZ)

Period: 2008 - 2011

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HISTORY

- EWGLAM (European Working Group on Limited Area Modelling) was established in 1979 (Norrköping)
- SRNWP (Short Range Numerical Weather Prediction Network) was established in 1993 (Toulouse)
- Since 2000: EUMETNET Programme with participation from EUMETNET and non-EUMETNET countries
- Responsible member
  - 2000-2007: MeteoSwiss, Programme Manager: Jean Quiby
  - 2008-2011: OMSZ, Programme Manager: Andras Horanyi
- This year: 31st EWGLAM and 16th SRNWP meeting (Greece)

SUMMARY OF MAIN OBJECTIVES

- Improved **scientific cooperation** between the 5 LAM Consortia (ALADIN, COSMO, HIRLAM, LACE, MetOffice) in Europe for numerical weather prediction (NWP) through the initiation and execution of joint projects

- Enhanced **operational cooperation** through harmonisation of standards and increased interoperability between models

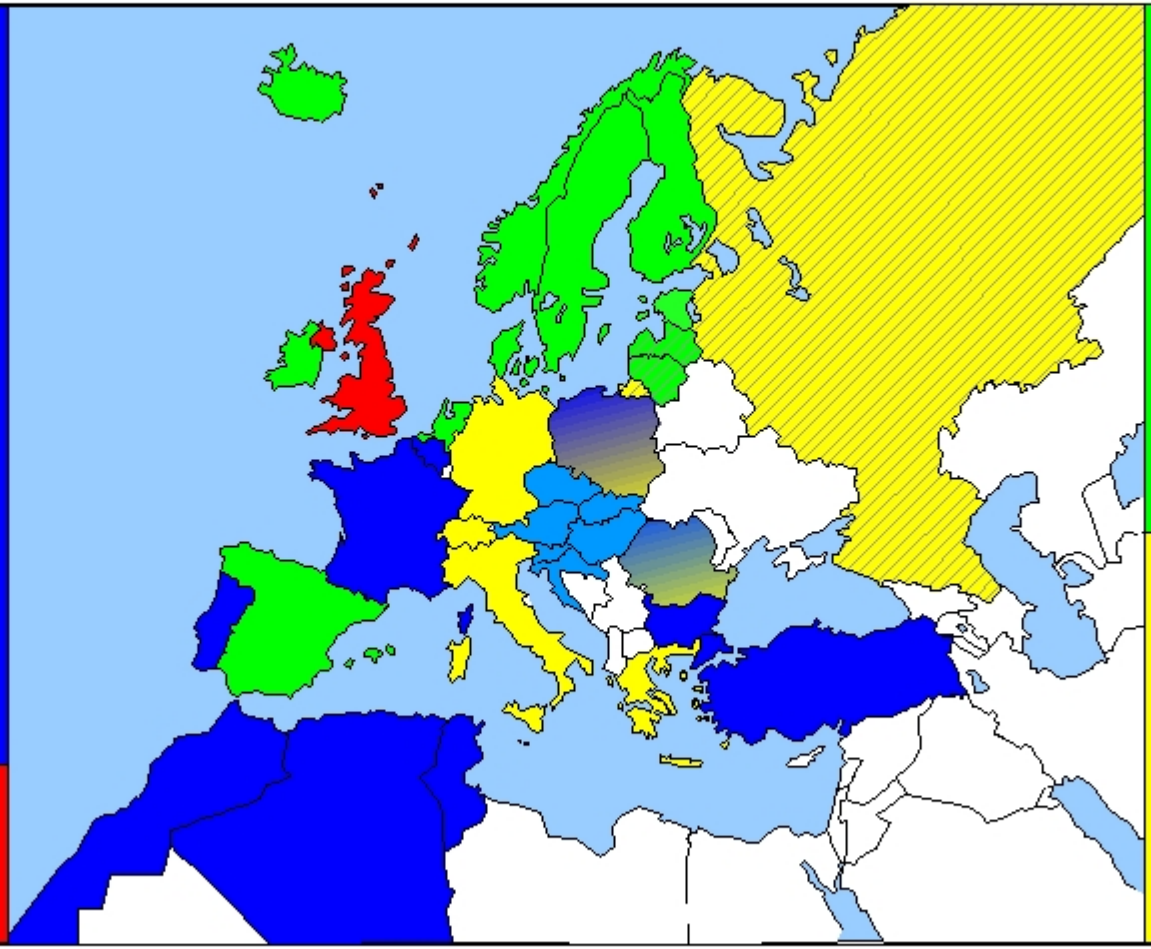
- Effective **diffusion of NWP knowledge** and enhanced practical cooperation in NWP through efficient information exchange (means: organisation of workshops, thematic projects, SRNWP website – **srnwp.met.hu**)

SRNWP CONSORTIA (5) and MODELS (4)

CONSORTIA	MODEL
ALADIN	ALADIN (HARMONIE)
COSMO	COSMO
HIRLAM	HIRLAM (HARMONIE)
LACE	ALADIN (HARMONIE)
Met Office	Unified Model

Remark: ALADIN (LACE) and HIRLAM are working on code collaboration around the IFS/ARPEGE/ALADIN/ALARO/AROME code

SRNWP Consortia in Europe



ALADIN
Algeria
Belgium
Bulgaria
France
Morocco
Poland
Portugal
Tunisia
Turkey

Austria
Croatia
Czech Rep.
Hungary
Romania
Slovakia
Slovenia
LACE

UKMO
United Kingdom

HIRLAM
Denmark
Estonia
Finland
Iceland
Ireland
Netherlands
Norway
Spain
Sweden
(Latvia)
(Lithuania)

COSMO
Germany
Greece
Italy
Poland
Romania
Switzerland
(Russia)

Met Office

Many thanks to Patricia for providing the map!

COSMO

PARTICIPATION (CONSORTIA and PARTICIPATING STATES)

- Consortia: ALADIN, COSMO, HIRLAM, LACE, Met Office
- Participating states (bold face: ALADIN, HIRLAM and LACE members)
  - EUMETNET members: **Austria, Belgium, Croatia,** Cyprus, **Denmark, Estonia, Finland, France**, Germany, Greece, **Hungary, Iceland, Ireland**, Italy, **Latvia**, Luxemburg, **Netherlands, Norway, Portugal, Slovenia, Spain, Sweden**, Switzerland, United Kingdom (all EUMETNET countries: **17 countries from 24 are from ALADIN/HIRLAM/LACE!!**)
  - Non-EUMETNET members: **Bulgaria, Czech Republic, Poland, Romania, Slovakia, Turkey, (Lithuania,** Russia)

C-SRNWP: GOVERNANCE

- Programme Manager (coordinator)
- SRNWP Advisory Committee: heads of LAM Consortia (5) and PM
- Expert Teams (ETs)
- Annual business meeting (EWGLAM/SRNWP)
- Other SRNWP-related EUMETNET Programmes: interoperability (SRNWP-I), verification (SRNWP-V)

LIST OF EXPERT TEAMS (CROSS-CONSORTIA WORKING GROUPS)

- **Data assimilation** and use of observations
- Diagnostics, validation and **verification (→ SRNWP-V)**
- **Dynamics** and lateral boundary coupling
- Link with **applications**
- **Physical parameterisation** (upper air)
- Predictability and **EPS**
- **Surface** and soil processes (model and data assimilation)
- **System** aspects (→ SRNWP-I)

Latest ET: Tennis Expert Team

EXPERT TEAMS: MAIN TASKS

- The members are nominated by the Consortia (2 members per Consortia in average), so they represent their respective LAM Consortia (chairpersons are elected by the ET members)

- ETs prepare workplans for their area of interest
  - Specific areas of interest for cross-cooperation
  - Plans for workshops, meetings

- Help in the organisation of the annual EWGLAM/SRNWP meeting (specific sessions!)

- Execution of the workplans (frequent email exchanges: generic email addresses exist, informal meetings, research stays, projects, workshops etc.)

EXPERT TEAMS (1)

- Data assimilation and use of observations (Bruce Macpherson, Met Office)
  - ALADIN: Claude Fischer, Bernard Chapnik (?), Maria Derkova (?)
  - HIRLAM: Nils Gustafsson, Harald Schyberg
  - LACE: Gergely Boloni, Marian Jurasek, Tomislav Kovacic
- Diagnostics, validation and verification (Clive Wilson, Met Office)
  - ALADIN: Joel Stein, Marek Jerczynski, Christoph Wittmann
  - HIRLAM: Carl Fortelius, Ulf Andre, Xiahoua, Yang
  - LACE: Dijana Klaric, Lovro Kalin
- Dynamics and lateral boundary coupling (**Pierre Benard, ALADIN**)
  - ALADIN: Pierre Benard, Petra Smolikova, Piet Termonia
  - HIRLAM: Mariano Hortal, Isabel Martinez
  - LACE: Filip Vana, Jan Masek

EXPERT TEAMS (2)

- Link with applications (**Jeanette Onvlee, HIRLAM**)
  - ALADIN: Maria Monteiro, Jean Nicolau
  - HIRLAM: Jeanette Onvlee, Per Unden
  - LACE: Thomas Haiden
- Physical parameterisation (upper air; **Sander Tijm, HIRLAM**)
  - ALADIN: Valery Masson, Bart Catry, Tomas Kral
  - HIRLAM: Sander Tijm, Bent Hansen Sass
  - LACE: Neva Pristov, Doina Banciu
- Predictability and EPS (**Trond Iversen, HIRLAM**)
  - ALADIN: Alex Deckmyn, Larent Descamps, Alain Joly
  - HIRLAM: Trond Iversen, Jan Barkmeijer
  - LACE: Yong Wang, Edit Hagel (?)

EXPERT TEAMS (3)

- Surface and soil processes (model and data assimilation; **Jean-Francois Mahfouf, ALADIN**)
  - ALADIN: Jean-Francois Mahfouf, Rafiq Hamdi
  - HIRLAM: Sander Tijm, Maria Diez
  - LACE: Alena Trojakova, Laszlo Kullmann, Jure Cedilnik

- System aspects (Rachel North, Met Office)
  - ALADIN: Ryad El Khatib, Andrey Bogatchev
  - HIRLAM: Xiahoua Yang, Toon Moene
  - LACE: Oldrich Spaniel

TETOC: Tennis Expert Team Organising Committee (Neva, Sander, Andras)

It is really boring...

EXPERT TEAMS: STATISTICS

CHAIRPERSONS: 3 Met Office, 3 HIRLAM, 2 ALADIN (no COSMO and LACE!)

MEMBERS: 18 countries from the ALADIN/HIRLAM/LACE world

10 members: France; 4 members: Belgium, Czech Republic, the Netherlands, Slovakia; 3 members: Austria, Croatia, Denmark, Hungary, Spain, Sweden; 2 members: Norway, Slovenia; 1 member: Bulgaria, Finland, Poland, Portugal, Romania; no members: Estonia, Iceland, Ireland, Turkey

Thanks to the ET chairpersons and members!!

ANNUAL EWGLAM/SRNWP MEETING: STRUCTURE

- Consortia overview presentations (short ones)
- ECMWF presentation (as the essential partner of the LAM community; longer)
- R
- N
- Dedicated sessions on the [illegible] areas of interests (ET topics; proposals [illegible] the ETs!)
- EWGLAM: final discussion
- SRNWP business meeting
- SRNWP Advisory Committee meeting

It is important to have proper representation of the Consortia ("working group leaders") and members as well!

OTHER SRNWP PROGRAMMES: INTEROPERABILITY (SRNWP-I)

- Main objectives: Increased interoperability between numerical forecasting systems of ALADIN, COSMO, HIRLAM and Metoffice (ECMWF is also involved!)
- Responsible member: Met Office
- Programme Manager. Rachel North (Glenn Greed)
- 3 years programme from September, 2008

OTHER SRNWP PROGRAMMES: INTEROPERABILITY (SRNWP-I) - DELIVERABLES

- D1: report about the standard output format (+parameters)
- D2: Requirements and specifications of the adaptors
- D3: Development of four 2-way adaptors (specific LAM format to standard format)
- D4: Software for enabling any of the LAMs to use any of the global models as initial and lateral boundary conditions

OTHER SRNWP PROGRAMMES: VERIFICATION (SRNWP-V)

- Main objectives: model intercomparison and verification of the European LAMs
- Responsible member: Met Office
- Programme Manager: Clive Wilson (deputy: Marion Mittermaier)
- Two-years project (from the beginning of 2009)

OTHER SRNWP PROGRAMMES: VERIFICATION (SRNWP-V) - DELIVERABLES

- D1: Operational verification comparison of one version of each of the 4 regional European LAM model (ALADIN, COSMO, HIRLAM, Unified Model)
- D2: Additional intercomparison of other models of the Consortia (including high resolution ones)
- D3: Inventory and recommendations of new scale selective verification methods
- D4: Catalogue of sources of non-GTS data
- D5. Exchange methods and code for verification of severe weather forecasts

SOME ADDITIONAL ISSUES

- SRNWP webpage is operational: **srnwp.met.hu** (facts about ETs including workplans, list of workshops, annual meeting presentations etc.)
- Possible contribution to the EUMETNET strategy and reogranisation (communication towards the EUMETNET Executive Director and Council)
- Submission of a proposal to the European Science Foundation about „Mesocale Predictability of High-impact Weather Events" (EUROPredict)
- Preparation (update) of a COST proposal for an enhanced cooperation between university/academia researchers and „operational" NWP experts (also including climate modellers)

MEETINGS, WORKHOPS

- 4th International Verification Methods Workshop, 4-10 June, Helsinki
- 2nd Workshop on Remote Sensing and Modeling of Surface Properties, 9-11 June, Toulouse
- Surface processes ET meeting, 12 June, Toulouse
- NetFAM workshop on Moist Processes in Future High Resolution NWP Models, 15-17 June, Norrkoping
- 4th Workshop on Short Range Ensemble Prediction Systems, 23-25 June, Exeter
- COSMO General Meeting, 7-11 September, Offenbach
- EWGLAM/SRNWP annual meeting, 28 September – 1 October, Greece
- 8th SRNWP workshop on non-hydrostatic modelling, 25-28 October, Bad Orb

SRNWP Consortia in Europe

ALADIN
Algeria
Belgium
Bulgaria
France
Morocco
Poland
Portugal
Tunisia
Turkey

Austria
Croatia
Czech Rep.
Hungary
Romania
Slovakia
Slovenia
LACE

UKMO
United Kingdom

HIRLAM
Denmark
Estonia
Finland
Iceland
Ireland
Netherlands
Norway
Spain
Sweden
(Latvia)
(Lithuania)

COSMO
Germany
Greece
Italy
Poland
Romania
Switzerland
(Russia)

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