

C-SRNWP (SHORT RANGE NUMERICAL WEATHER PREDICTION NETWORK): PROGRESS REPORT

Responsible member: Hungarian Meteorological Service

Period: 2008-2011

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C-SRNWP: MAIN OBJECTIVES

- Improved **scientific cooperation** between the 5 LAM Consortia (ALADIN, COSMO, HIRLAM, LACE, Met Office) in Europe for numerical weather prediction (NWP) through the initiation and execution of joint projects
 - Expert Teams and their workplans
- Enhanced **operational cooperation** through harmonisation of standards and increased interoperability between models
 - Interoperability (SRNWP-I) and verification (SRNWP-V) programmes
- Effective **diffusion of NWP knowledge** and enhanced practical cooperation in NWP
 - Thematic SRNWP workshops
 - Webpage: srnwp.met.hu

SRNWP CONSORTIA (5) and MODELS (4)

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

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



SRNWP Consortia in Europe



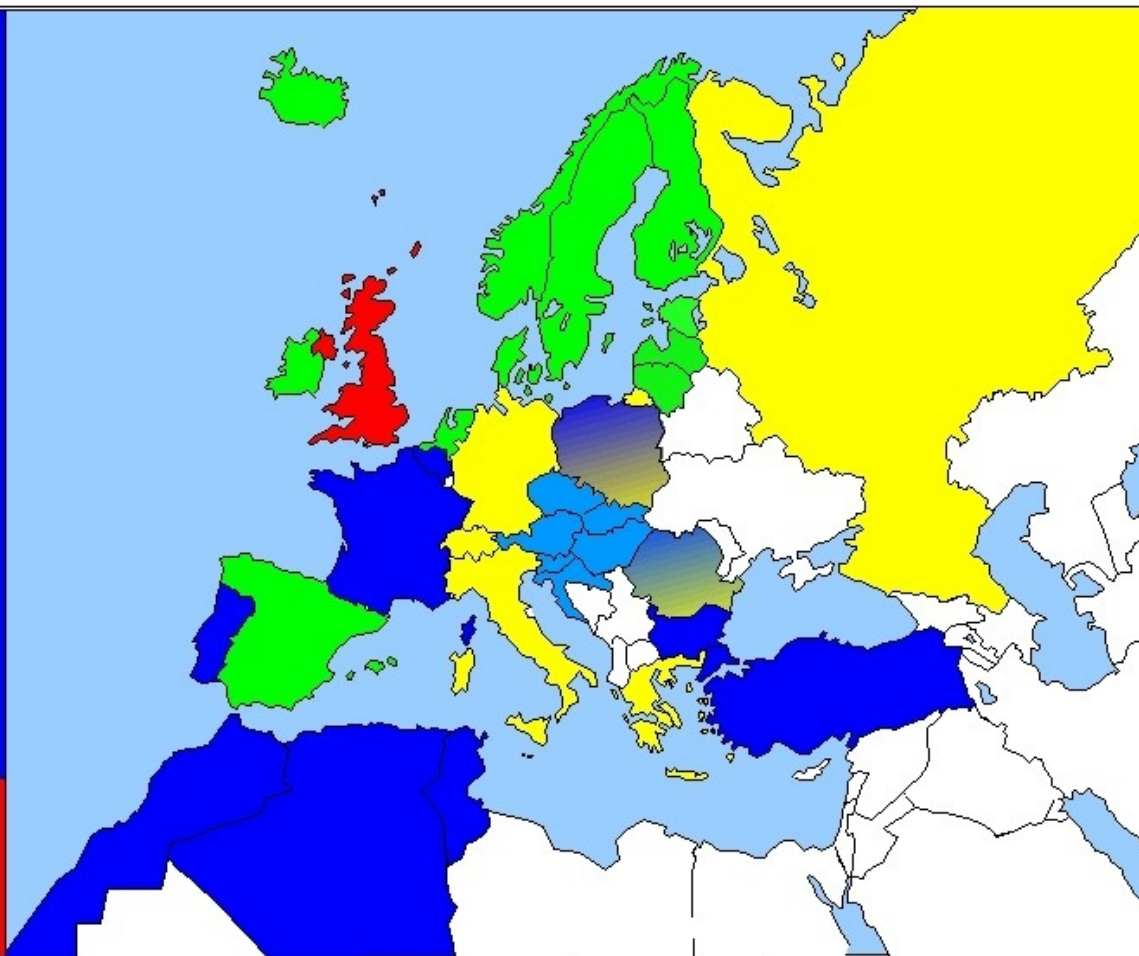
ALADIN

Algeria
Belgium
Bulgaria
France
Morocco
Poland
Portugal
Tunisia
Turkey

Austria
Croatia
Czech Rep.
Hungary
Romania
Slovakia
Slovenia



UKMO
United Kingdom



HIRLAM

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

COSMO

Germany
Greece
Italy
Poland
Romania
Russia
Switzerland



Latest news: Russia became full member of COSMO!



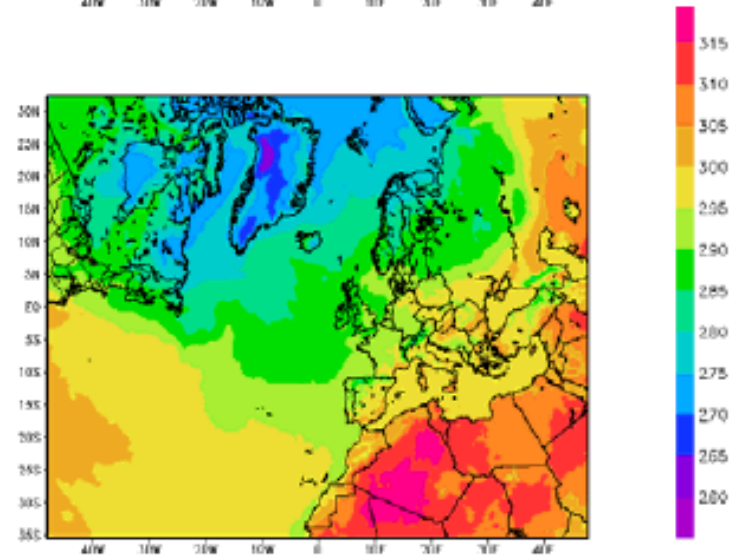
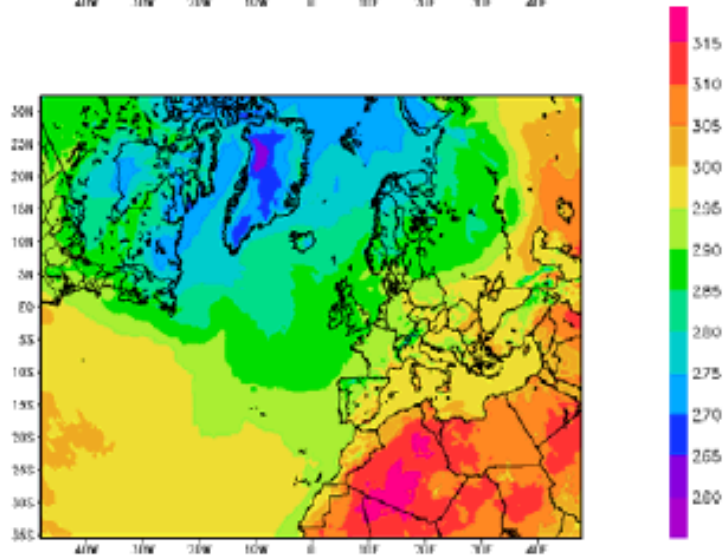
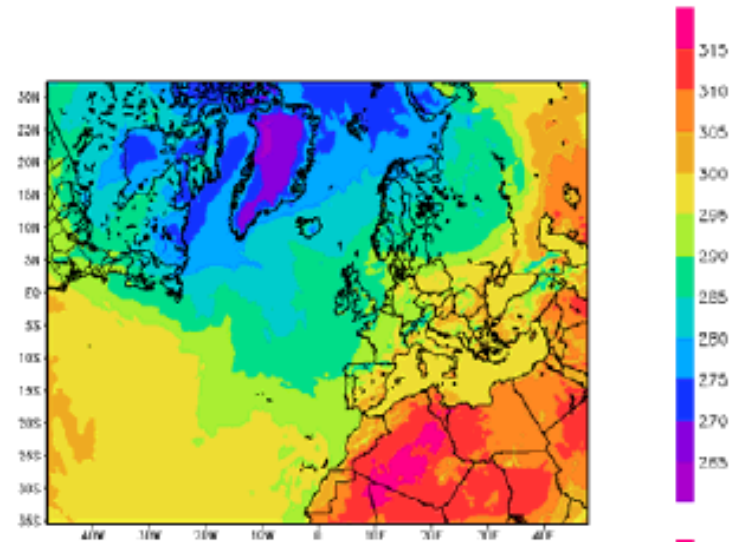
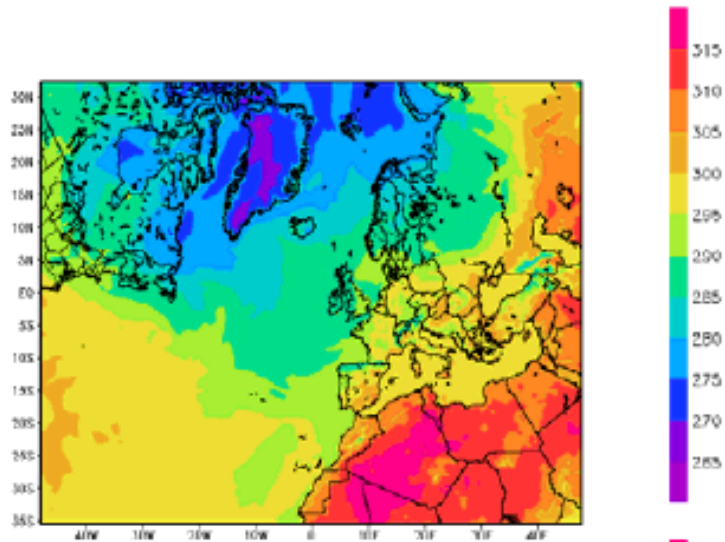
PARTICIPATION (CONSORTIA and PARTICIPATING STATES)

- Consortia: ALADIN, COSMO, HIRLAM, LACE, Met Office
- Participating states
 - EUMETNET members: **Austria, Belgium, Croatia, Cyprus, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Luxemburg, Netherlands, Norway, Portugal, Serbia, Slovenia, Sweden, Switzerland, United Kingdom (all EUMETNET countries except Poland!!)**
 - Non-EUMETNET members: **Bulgaria, Czech Republic, Romania, Russia, Slovakia, Turkey, (Lithuania)**
 - C-SRNWP members, but not member of any of the Consortia: Cyprus, Luxemburg, Serbia

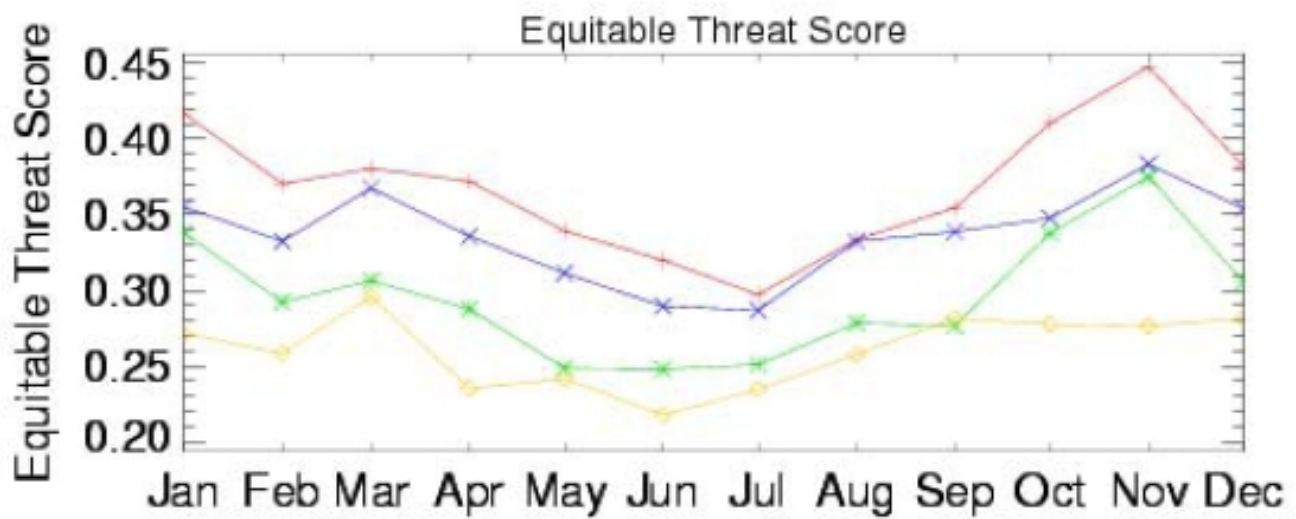
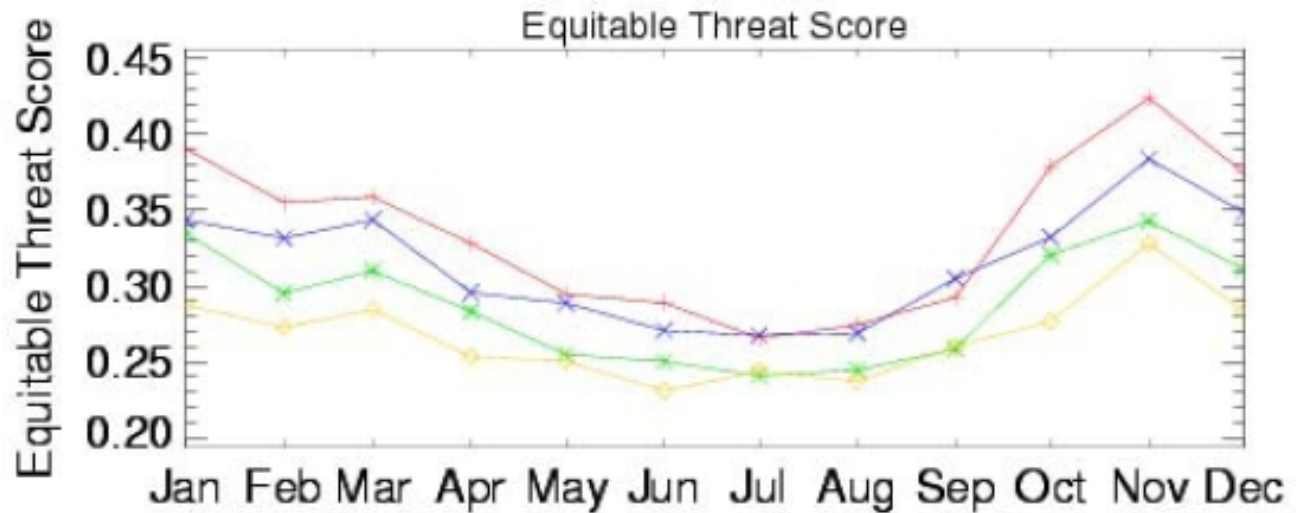
LIST OF EXPERT TEAMS (CROSS-CONSORTIA WORKING GROUPS)

- **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**)

SRNWP-I: EXAMPLE OF ADAPTOR SOFTWARE (Temperature at the lowest COSMO level: GME, IFS, UM)



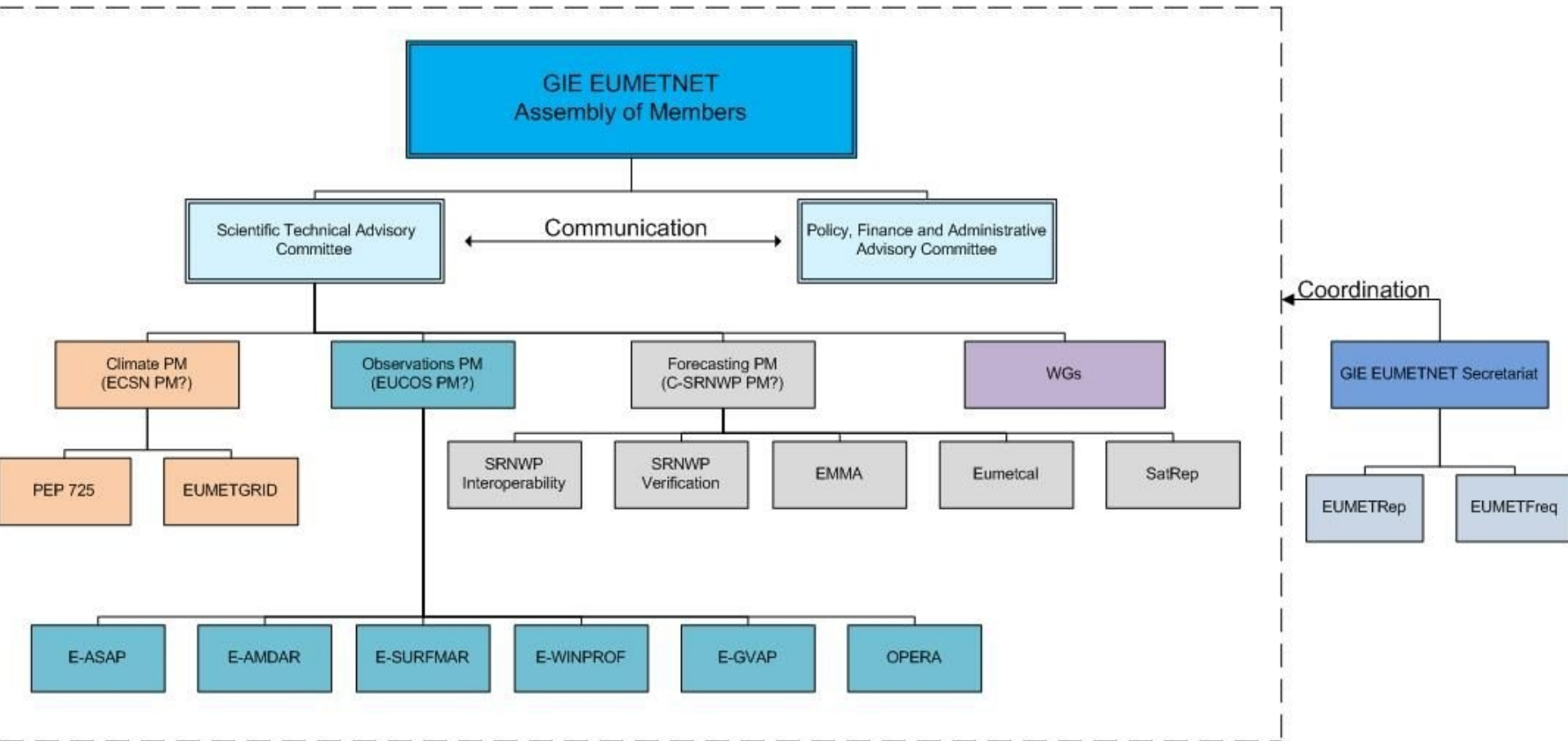
SRNWP-V: Some preliminary results for 2009 (6 hours precipitation $\geq 0,5$ mm; two models separately for different forecast ranges)



SOME NEWS FROM EUMETNET

- EUMETNET became Economic Interest Group (last year)
 - Legal entity, which can take part in bids (EU projects), procurements and can employ personnel
- New structure of EUMETNET is going to be proposed
- EUMETNET Strategy is accepted and going to be translated into specific actions (roadmaps)
- SESAR (Single European Sky Aviation Requirements) are going to be specified → optimisation and reorganisation of air traffic management (strong requirements towards meteorology)

PROPOSED NEW EUMETNET GOVERNANCE (DRAFT, NOT YET ACCEPTED!!)



OBSERVATIONAL STRATEGY AND SRNWP

- Programme Board on Observations (PB-OBS) invited the SRNWP community to present the observation requirements of NWP
- The „answer” was coordinated through the Consortia leaders and the chairpersons of the data assimilation and verification Expert Teams
- Presentations at the ECSN Advisory Committee and the PB-OBS meeting (end of March)

BRIEF SUMMARY OF REQUIREMENTS

- High resolution NWP models need detailed information on the planetary boundary layer (including the classical model state variables, but also surface characteristics)
- In the future (especially for km-scale modelling) more and more information about the hydrological cycle is needed (humidity, hydrometeors)
- Local high resolution data should be also made available (which are not in the GTS at the moment → data policy issues)
- New instruments (lidars, polarimetric radars for instance) should be exploited and their use would be welcome!

NWP STRATEGY (DISCUSSED BY THE SRNWP ADVISORY COMMITTEE, thanks to Jeanette for drafting the document)

- Relation to EUMETNET Strategy
 - Improved efficiency with shared services
 - Collective investment in science, technology and skills
 - Essential partnership with EU/EC
- Position of SRNWP within Europe
 - Recent target: convection-permitting models
 - Relations with „observations” (requirements)
 - NWP models to be used for nowcasting
 - Climate (change) services (regional climate modelling)

NWP STRATEGY (DISCUSSED BY THE SRNWP ADVISORY COMMITTEE, thanks to Jeanette for drafting the document!)

- Shared services
 - Towards convection-permitting models → no any more interest to run neither a common deterministic nor an EPS system over a pan-European domain
- Strategic extension possibilities
 - Towards nowcasting: rather emerging field
 - Towards regional climate modelling: possible on the longer time scale

EUMETNET ASSEMBLY IN MAY – SRNWP RELATIONS

- Report of the C-SRNWP programme –presentation of the „Strategy and roadmap for SRNWP”
- Report of the SRNWP- V programme (ending this autumn) and proposal for the continuation (Met Office)
- New EUREPS proposal (LAMEPS)
 - Two phases (feasibility study as preparatory phase and then the project itself)
 - Concentrating on convection resolving EPS (operational targets for shared services in one stage?)
 - Possible relation with SESAR (funding opportunity)

SUMMARY, CONCLUSIONS

- We are in a very active phase of EUMETNET (SRNWP too)
- New governance of EUMETNET is going to be accepted and realised soon (super-programmes, new advisory bodies)
- EUMETNET strategy is accepted and now the SRNWP strategy (and roadmap) is going to be compiled
- Our DRAFT observational requirements are collected and presented
- SRNWP-V is going to be finished soon and the follow-on project will be proposed by the Met Office (the details are not yet known)
- A new LAMEPS proposal is going to be submitted soon to the EUMETNET Assembly



SRNWP Consortia in Europe



ALADIN

Algeria
 Belgium
 Bulgaria
 France
 Morocco
 Poland
 Portugal
 Tunisia
 Turkey

Austria
 Croatia
 Czech Rep.
 Hungary
 Romania
 Slovakia
 Slovenia



UKMO

United Kingdom



Thank you for your attention!

HIRLAM

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

COSMO

Germany
 Greece
 Italy
 Poland
 Romania
 Russia
 Switzerland



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