

# C-SRNWP (SHORT RANGE NUMERICAL WEATHER PREDICTION NETWORK): ANNUAL C-SRNWP BUSINESS MEETING

Responsible member: Hungarian Meteorological Service

Period: 2008-2012

Gergely Boloni ([boloni.g@met.hu](mailto:boloni.g@met.hu)), Andras Horanyi



# **CHANGES IN THE PROGRAMME**

# CHANGES

- C-SRNWP was extended until the end of 2012 (OMSZ remains the responsible member)
- Andras Horanyi is replaced by Gergely Boloni (to be approved by the Assembly)
- The EUMETNET Forecasting Capability Area is not any more coordinated by the C-SRNWP PM
- Advisory Committee changes
  - COSMO: Marco → Michal
  - Met Office: Terry → Clive

# **CONSORTIA AND EXPERT TEAM MATTERS**

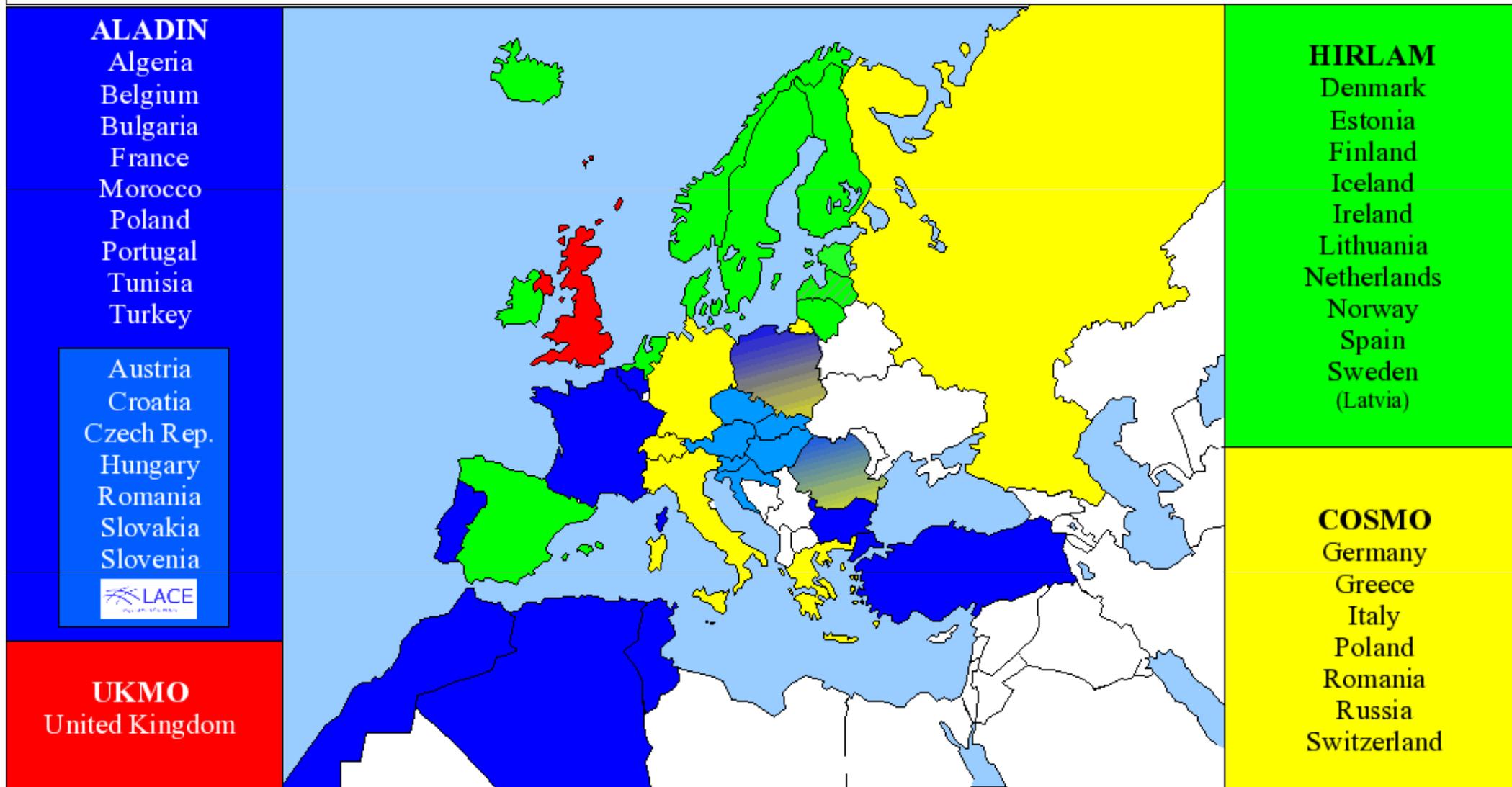
# SRNWP CONSORTIA (5) and MODELS (4)

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

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



# SRNWP Consortia in Europe



## ANY CHANGES?



# LIST OF EXPERT TEAMS (CROSS-CONSORTIA WORKING GROUPS)

- **Data assimilation** and use of observations
- Diagnostics, validation and **verification** (→ **SRNWP-V**)

## WAS THE ET CONCEPT SUCCESSFUL???

- Link with **applications**
- **Physical parameterisation** (upper air)
- Predictability and **EPS**
- **Surface** and soil processes (model and data assimilation)
- **System** aspects (→ **SRNWP-I**)

# DATA ASSIMILATION AND USE OF OBSERVATIONS

- Chair: Bruce Macpherson
- Members: Claude Fischer, Mikhail Tsyrunikov, Jelena Bojarova, **Gergely Boloni**, Loik Berre, **Maria Derkova**, Christoph Schraff, Harald Schyberg, Sue Ballard, Richard Renshaw, Marian Jurasek, Tomislav Kovacic, Lars Isaksen
- Discussions with OPERA people (observer status at the OPERA meetings; Martin Gronsleth – this week in Jersey)
  - STAC endorsed the update of OPERA for 2012
  - Exchange of 3D volume (reflectivity, wind data)
- Membership at the WG on E-AMDAR Humidity Business Case (Roger Randriamampianina is nominated)
- Participation on the EUCOS Science Advisory Team (E-SAT) meeting (Bruce beside C-SRNWP PM)
- NWP requirements towards the Observation Roadmap

# DIAGNOSTICS, VALIDATION AND VERIFICATION (SRNWP-V)

- Chair: Clive Wilson
- Members: **Joel Stein**, Francis Schubiger, Xiaohua Yang, **Dijana Klaric**, Marek Jerczynski, Alexander Kann, **Adriano Raspanti (Flora Gofa)**, Ulf Andre, Carl Fortelius, Marion Mittermaier, Nigel Roberts, Lovro Kalin, Dave Richardson
- SRNWP-V: intercomparison results at the EUMETNET portal
- The brief interpretation of the results is not yet available (for scientists and directors)
- Catalogue of non-GTS data (for possible exchange)
- The follow-on programme requirements from 2013 onwards should be prepared soon

# DYNAMICS AND LATERAL BOUNDARY COUPLING

- Chair: **Pierre Benard**
- Members: Lucio Torrisi, Mariano Hortal, Nigel Wood, **Filip Vana**, **Petra Smolikova**, **Piet Termonia**, Michael Baldauf, Isabel Martinez, **Terry Davies**, Chris Smith, Jan Masek, Nils Wedi
- The Expert Team basically doesn't exist (no chairman)...
- Inter-comparison of dynamical cores (Piet's proposal)?

# LINK WITH APPLICATIONS

- Chair: **Jeanette Onvlee**
- Members: Maria Monteiro, Pierre Eckert, Simon Jackson, Benedikt Bica, Jean Nicolau, **Flora Gofa, Per Uden, Mike Bush**
- Did anything happen in the light of our discussions already in Athens (more focus of the group: nowcasting + forecasters' interpretation of models)?
- Feedbacks from the atmospheric chemistry components (aerosols) to the atmosphere

# PHYSICAL PARAMETERISATION (UPPER AIR)

- Chair: ??????
- Members: Valery Masson, Federico Grazzini, **Peter Clark**, Neva Pristov, **Tomas Kral**, Dmitrij Mironov, Bent Hansen Sass, Sander Tijm, Andy Brown, Paul Field, Doina Banciu, Anton Beljaars
- Election of chairperson is needed!
- Radiation scheme inter-comparison (Laura's proposal)?

# PREDICTABILITY AND EPS

- Chair: Chiara Marsigli
- Members: Alex Deckmyn, Trond Iversen, Ken Mylne, Yong Wang, **Laurent Descamps**, **Alain Joly**, Pierre Eckert, Susanne Theis, Jan Barkmeijer, Jose Antonio Garcia-Moya, Sarah Beare, Martin Leutbecher
- Project requirements for the renewed EUREPS proposal (two stage approach) should be prepared
- Tests and discussions around LAMEPS BC requirements towards ECMWF
- Observational data for verification is needed!
- TIGGE-LAm archive at ECMWF (GEOWOW)

# SURFACE AND SOIL PROCESSES (MODEL AND DATA ASSIMILATION)

- Chair: Jean-Francois Mahfouf
- Members: Jurgen Helmert, Laura Rontu, Martin Best, Alena Trojakova, Rafiq Hamdi, Jean-Marie Bettems, Maria Diez, Ekaterina Kurzheneva, Bruce Macpherson, Gabriel Rooney, **Laszlo Kullmann**, Jure Cedilnik, Gianpaolo Balsamo, Patricia de Rosnay
- Exchange of surface and near-surface data for European supersites (leading role by COSMO):
  - <http://www.cosmo-model.org/srnwp/content/default.htm>
  - **Extension towards academia/universities (no helpdesk)**
- Discussions with the „owners” of the physiographic datasets?

# SYSTEM ASPECTS (SRNWP-I)

- Chair: **Ulrich Schaettler**
- Members: Ryad el Khatib, Ulf Andrae, Glenn Greed, Oldrich Spaniel, Andrey Bogatchev, Jean-Marie Bettems, Toon Moene, Xiaohua Yang, **Rachel North**, Bruce Wright, Alfred Hofstadler
- New chairman is sought...
- List of operational NWP systems (maintained by DWD)
- SRNWP-I project requirements to be compiled for the next programme phase (from 2013 onwards)

# ADDITIONAL ECMWF-RELATED ISSUES

- ECMWF offered to C-SRNWP PM observer status in its Scientific Advisory Committee meeting (already last year, Gergo attended it this year)
- ECMWF would like to intensify the cooperation with SRNWP and they offer to host a meeting for facilitating the discussions around the requirements for deterministic and LAMEPS boundary conditions (followed by a user meeting)
  - At spring, 2012??

# **EUMETNET FORECASTING ROADMAP (UNTIL 2020)**

- EUMETNET adopted its (high-level) strategy last year
  - Improved efficiency with shared services
  - Collective investment in science, technology and skills
  - Essential partnership with EU/EC
- The next step is to produce roadmaps for observations, climate, **forecasting**, aviation and EU
- Drafting Teams were established for these „capability areas”
  - Forecasting Roadmap Drafting Team members: Massimo Ferri (chair, STAC), Vesa Nietosvaara (EUMETCAL), Michael Staudinger (EMMA), Clive Wilson (SRNWP-V), Rachel North (SRNWP-I), Jeanette Onvlee (HIRLAM), Piet Termonia (ALADIN), Marco Arpagaus (COSMO), Fredrik Linde (Sweden), Ilda Novo (Portugal), Adrian Broad (PFAC), Jose Antonio Garcia-Moya (Spain), Andras Horanyi (C-SRNWP); Massimo Capaldo („external support”)

# HIGH-LEVEL GOALS ALREADY DEFINED BY THE ASSEMBLY

- F1: Throughout the decade EUMETNET will support Members in ensuring that they always have highly skilled forecasters through shared training and shared best practise
- F2: EUMETNET will assist members and their modelling Consortia to develop their forecast models and processes in order to produce the best possible short term forecasts for their clients
- F3: EUMETNET will have facilitated through a strategic discussion among Members, the identification and initiation of projects for collaboration, harmonisation and coordination in support of more efficient forecasting systems and improved regional and short range weather forecasts

# TASKS OF THE DRAFTING TEAM

- Identification of priorities between existing (C-SRNWP, SRNWP-I, SRNWP-V, EMMA, SATREP, EUMETCAL) and proposed new programmes
- Propose programmes (with their rationale, resource requirements) in the period of 2013-2020
- Identify cross-cutting issues with the other EUMETNET capability areas

# HIGH PRIORITY AREAS

- Protection of past investments (at least the existing projects shouldn't be destroyed; C-SRNWP, SRNWP-I, SRNWP-V ...)
- Improved communication with users and understanding their requirements
- Severe and high impact weather forecasting to be improved via
  - Better **nowcasting** (also addressing developments of advanced applications for key customers)
  - **High resolution EPS** forecasts to address the reliability of convection permitting forecasts and improvement their accuracy
- Enhanced coordination (Forecasting Capability Area)

# PROPOSED HIGH PRIORITY NEW PROGRAMMES

- Forecasting Capability Coordination (full-time job?)
- Nowcasting: as extension of SRNWP towards ultra-short range (RUC, convective scale models)
  - 0,3 FTE as programme manager (as a minimum)
- Short range ensemble prediction: based on the tools already developed by SRNWP-I and SRNWP-V (including the interpretation of uncertainty information by the forecasters – through EUMETCAL)
  - Phase I: feasibility study
  - Phase II: demonstration project
- (Regional climate modelling – should be part of the Climate Roadmap)

## Forecasting Roadmap Summary

<b>Forecasting goals</b>	F1 - TO SUPPORT Members in ensuring that they always have highly skilled forecasters through shared training and shared best practice.
	F2 - TO ASSIST Members and their modelling consortia to develop their forecast models and processes in order to produce the best possible short term forecasts for their clients [avoiding duplication of activities with the consortia and ECMWF]
	F3 - TO FACILITATE through a strategic discussion among Members, the identification and initiation of projects for collaboration, harmonisation and coordination in support of more efficient forecasting systems, and improved regional and short-range weather forecasts.

Roadmap Key	
	List of key activities (or deliverables) during 2011-2020
	Explanation of the rationale for the activities and possible options for delivery that will need to be considered
	Proposed timetable for delivery of the activities
	Resources needed
	Likely risks
	Definition of constraints and dependencies

Key activities or deliverables	2011		2012		2013		2014		2015		2016		2017		2018		2019		2020	
	H1	H2																		
<b>F1 - Goal (Training)</b>																				
Continuation of EUMETCAL Programme																				
Training on aviation topics																				
Renewed Phase of EUMETCAL Programme			A	B	C							A	B	C						
Programme Management																				
Maintenance of Virtual Library																				
Advanced Training																				
Competencies												A	B	C						
Training Support																				
Cooperation																				
<b>F2 - Goal (Support to NWP Consortia)</b>																				
Continuation of C-SRNWP																				
FCPM Programme																				
Continuation of SRNWP - I Programme			A	B	C															
Continuation of SRNWP - I Programme			A	B	C															
Continuation of SRNWP - V Programme			A	B	C															
Creation of a SRNWP - N (Phase I) Programme					A	B	C													
Creation of a SRNWP - N (Phase II) Programme			A	B	C						A	B	C							
<b>F3 - Goal (Support to more efficient forecasting services)</b>																				
Continuation of EMMA Programme																				
New Phase of the EMMA Programme			A	B	C								A	B	C					
Eur- EPS			A	B	C															
Feasibility Study			A	B	C															
Demonstration Project								A	B	C										

**Explanation of the rationale for the activities and possible options for delivery that will need to be considered**

1) Progression of past investments  
All EUMETNET results matured over the years call for a high level of attention in order not to lose resources invested in the past.

2) Improved communications with users and understanding of their requirements  
The customer base of NMSs have users characterized by different requirements. Consequently it is essential that great attention be given to these user requirements in order to develop services in line with the real and stated needs of the user community.

3) Severe Weather Forecasting and High Impact Weather High Impact Weather  
NMSs have strong commitments towards severe weather forecasting and detection of high impact weather. During the next decade, together with the improvement of high-resolution NWP models, most promising results are expected by nowcasting and convection-permitting ensemble prediction systems developments.

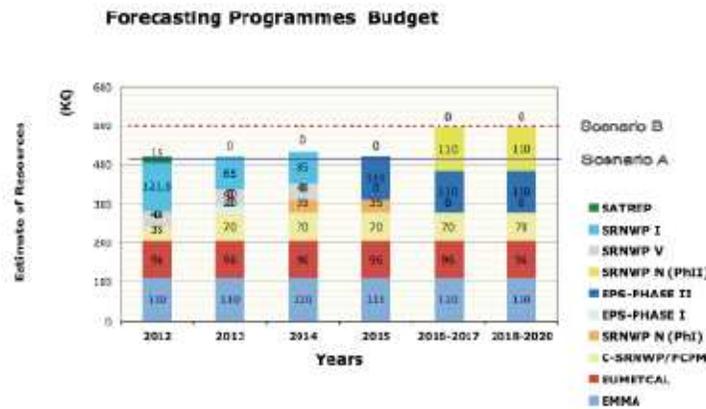
4) Enhanced coordination programmes  
Coordination within NWP has been particularly valuable for EUMETNET Members also in view of the peculiar situation in Europe where so many consortia are active. This coordination might be even more profitable if extended on more general terms to cover most of the coordination.

**Likely risks**

reduced money stream preventing some deliverables to be realized in minor cases and to cancel a capability area in full in worst cases.  
If Phase II of Eur-EPG should not show positive results, its corresponding resources will be distributed to cover sufficient funding in other forecasting programmes.

- A - Approval of Programmes
- B - Call for Proposals
- C - Selection of Responsible Member

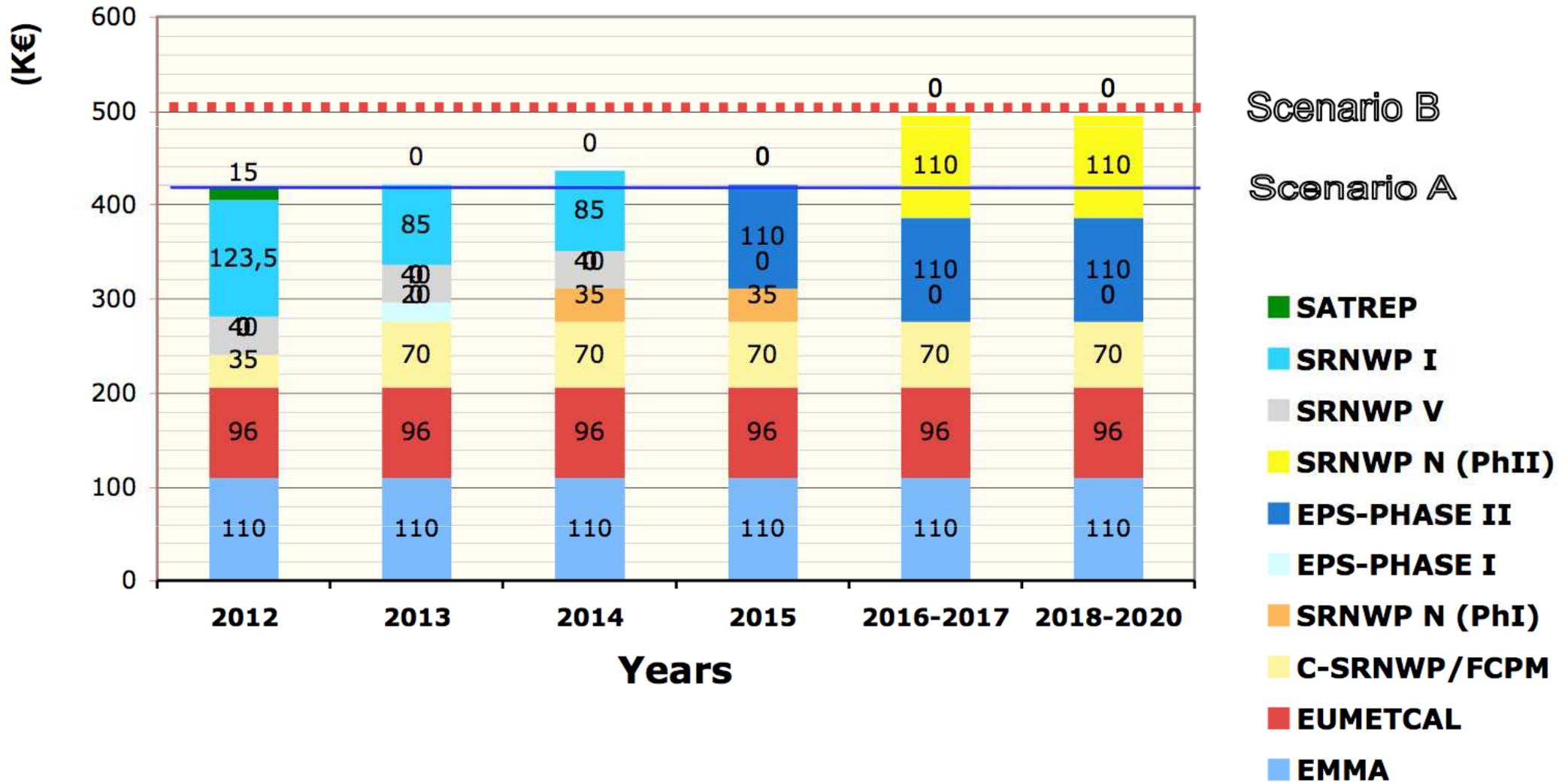
Initial estimate of scale of resources required



**Definition of constraints and dependencies**

Affordability Scenario A - Money stream as currently assigned.  
Scenario B - 20% increase  
Scenario C - stable contributions from Members but addition of third parties resources

# PROPOSED BUDGETS OF THE FORECASTING PROGRAMMES



# SRNWP - RECENT STAGE: TRANSITION

- SRNWP-V programme is accepted until the end of 2012
- SRNWP-I is formally valid until the end of 2011
  - Continuation proposal is just submitted for acceptance
- C-SRNWP is extended until the end of 2012
- Project requirements: first drafts are ready for FCPM, and nowcasting (rather preliminary); EPS (initial point: earlier proposal to Assembly), SRNWP-I and SRNWP-V should be proposed

## (FORECASTING) ROADMAP: NEXT STEPS (?)

- The roadmap(s) should be accepted in the November Assembly → the priorities inside and among the roadmaps will be clarified
- Project requirements should be ready and accepted until the end of the year (→full programme proposals)
- Bidding for new responsible members should be done during spring 2012 (decision in autumn)
- The new (updated) programmes (in agreement with the roadmaps) can start at the beginning of 2013

**BUT**



## Year 2013-2017: Analysing Survey of Members

### CAVEAT:

- Survey is only indicative and Members views may change
- Not all Members survey results have been received
- ED has had to make some assumptions in interpreting the results
- More analysis needed

## Results of Survey

- 21 Members replied to questionnaire:
  - Austria, Belgium, Croatia, Cyprus, Czech R, Denmark, Estonia, Finland, France, Ireland, Germany, Greece, Hungary, Italy, Luxembourg, Netherlands, Norway, Portugal, Slovenia, Sweden and UK
- Some Members did not want any mandatory programmes
- 5 Members could see an increase in funding to EUMETNET, 9 will expect a decrease, 1 expects no change in funding and the rest did not state their budget.
- Of the 9 who expect a decrease, the average is about 7.5% reduction

Programmes	Cost	Running Total
Secretariat+EUMETFREQ+EUMETFReq	856 724	856 724
EUCOS I + II	970000	1 826 724 Mandatory
OPERA	205 000	2 031 724 Optional
EMMA	110000	2 141 724 Optional
ECSN	90000	2 231 724 Optional
EUMETCAL	96000	2 327 724 Optional
G-SRNWP	70000	2 397 724 Optional
EU Focal Point	0	2 397 724 Optional
E-AMDAR II	1550000	3 947 724 Optional
EUMETGRID	135000	4 082 724 Optional
OPERA 02 & 03	400000	4 482 724 Optional
E-SUFRMAR II	780000	5 262 724 Optional
ECA&D	100000	5 362 724 Optional
SRNWP-N Phase 1 + 2	58000	5 420 724 Optional
EUCOS 01	50000	5 470 724 Optional
E-ASAP II	[1850000]	Excluded
HIST-EU	90000	5 560 724 Optional
EPS (Phase 1)	40000	5 600 724 Optional
OPERA 05	50000	5 650 724 Optional
E-GVAP II	120000	5 770 724 Optional
OPERA 06	50000	5 820 724 Optional
E-AMDAR 01	0	5 770 724 Optional
EUCOS 09	190000	6 010 724 Optional
<b>Total</b>	<b>6 010 724</b>	

## Option 2

## E-ASAP?

- As can be seen from Option 1, E-ASAP is not included as it appears as priority rank 15 and by this stage in the prioritisation process there is inadequate balance of funds to pay for E-ASAP.
- Hence it is excluded as not affordable within the 6m€ cap.
- STAC should advise on the S&T issues of stopping E-ASAP

## E-WINPROF, Satrep, SRNWP - V & I, PEP725?

- These programmes are excluded as their priority is lower than those which make the 'cut'.
- STAC should advise on the S&T issues of stopping these programmes

## Option 5

Option 5 - with E-ASAP, E-AMDAR and E-SURFMAR added as mandatory

Secretariat+EUMETFREQ+EUMET FReq		856 724		856 724	
EUCOS I + II		970000		1 826 724	Mandatory
E-ASAP II		1850000		3 676 724	Mandatory
E-AMDAR II		1550000		5 226 724	Mandatory
E-SURFMAR II		780000		6 006 724	
Total		6 006 724			

## What would we propose to Assembly?

- We have a big problem – we cannot afford to deliver the strategic goals
- We may even find it difficult to fund what we are currently doing.
- We have agreed that the following projects are the highest priority for Members and they may use most or all of the budget:
  - EUCOS
  - E-AMDAR
  - E-ASAP
  - E-SURFMAR

## What would we propose to Assembly?

- A discussion by the Assembly on the philosophy of and number of mandatory programmes is necessary.
- We think these 4 Programmes will be affordable within the likely 2013 budget, but we need more confidence of costs
- Therefore we recommend that we invite proposals for these 4 projects only and then we review the costs and affordability again before deciding how to proceed.
- Projects planned for 2012 should continue as normal in the meantime.
- The roadmaps should be put on hold.
- Of these we have only been able to reach agreement that EUCOS is mandatory

# **FINAL REMARKS**

# OUTLOOK

- The SRNWP programmes (C-SRNWP, SRNWP-V, SRNWP-I; the latter to be confirmed) are ensured until the end of 2012
- The Forecasting Roadmap is basically ready and waiting for acceptance by the Assembly (???)
  - BUT: we might loose sight in the future, since not the C-SRNWP PM will be in charge for the forecasting coordination
- Our observational requirements are high on the priority list of the Observation Roadmap
- Regional Climate Modelling activities are put into the Climate Roadmap



# SRNWP Consortia in Europe



[boloni.g@met.hu](mailto:boloni.g@met.hu) / [srnwp.met.hu](http://srnwp.met.hu)



**Thank you for your support and cooperation,  
see you in Reading!**

