# SRNWP BUSINESS MEETING

- Actual coordination activities and projections for the future regarding C-SRNWP (Gergely Bölöni)
- Update on the future EUMETNET Programmes/Projects (Steve Noyes – EUMETNET Executive Director)
- Discussion

# INTRODUCTION

- Coordination on short range numerical weather prediction (NWP) between 32 European meteorological institutions (5 modeling consortia: ALADIN, COSMO, LACE, HIRLAM, UKMO)

- Represent the interests of short-range NWP in fornt of other institutions/projects (e.g. ECMWF or EUMETNET observation programmes, i.e. OPERA, etc.)

- Enhance cooperation on NWP: share resources in operations and stimulate competition on scientific development

- OMSZ (Hungarian Meteorological Service) is the actual Coordinating Member (till the end of 2012)

# ACTUAL COORDINATION ACTIVITIES

## Expert Team on Data Assimilation

**OPERA and NWP**

- based on the „NWP questionnaire” (answers from 19 NMSs) NWP requirements entered the OPERA4 (2013-2017) Project Requirements → appropriate quality flagging on Odyssey and re-distribution of volume data by the end of 2014

- Short-cuts proposed by HIRLAM-ALADIN → re-distribution of the volume data as they are on Odyssey and do the quality flagging locally (at consortium level) → data policy issues to be sorted out (simple policy would be preferable for NWP but Assembly proposes a complicated way → agreement with all each data provider individually)

# ACTUAL COORDINATION ACTIVITIES

## Expert Team on Data Assimilation

### High-resolution AMDAR profiles

- Experimental high vertical resolution data provided by E-AMDAR via GTS (17-18 May 2011) → 3 x times the present resolution
- Do we expect an impact from such increased resolution? → Do we anticipate OSEs? → EUCOS could finance such experiments
- Feasibility study proposed → BUFR test data set prepared and distributed for the SRNWP DA community for providing reference (usual resolution) → no results from this simplified study
- „DA-lunch": ET agreed to answer to E-SAT that a full OSE experimentation is proposed if it can be funded

# ACTUAL COORDINATION ACTIVITIES

## Expert Team on Data Assimilation

**BUFR radiosond data**

- Information collected for E-SAT about BUFR coded radiosonds (drifted profiles including lat, lon, time info) and their assimilation in LAMs
- Only few NMSs encode their soundings in the above format (some encode in BUFR but without the drifting info)
- MetÉireann (HARMONIE-Arome) found an impact of drifted soundings in simple experiments

# ACTUAL COORDINATION ACTIVITIES

## Expert Team on Data Assimilation

**More FSO/DFS besides OSE**

- Network re-design and optimization (EUCOS) is based mostly on campaign-like OSE experiments (and recently FSO/DFS)

- Could we (NWP community) set up „regular monitoring" of forecast sensitivity to observations and provide it to EUCOS? → how many centers run FSO/DFS regularly? Are they ready provide it to EUCOS? How to motivate other centers to start providing regular FSO/DFS?

- „DA-lunch": ET agreed that those material available on a quasi-regular basis will be sent to E-SAT through the E-SAT representatives (Meteo-France, MetOffice, C-SRNWP PM collects similar studies in potentially active smaller centers)

# ACTUAL COORDINATION ACTIVITIES

## Expert Team on Data Assimilation

**DA related EUCOS (E-SAT) news :**

- Space-Terrestrial network re-design study with IFS (and partly LAMs):
- Slight reduction in density of radiosonds (100 km spacing around airports) is mostly compensated by AMDAR data (except at 00 UTC) → small (not significant) degradation in precipitation
- AMDAR data are important in GPSRO bias correction (anchoring)
- Warm bias of AMDAR data
- Positive impact of Buoys and VOS (Voluntary Observing Ships)
- Neutral to slightly negative impact of ASAP → no significant impact found → longer experimental periods planned
- AMDAR humidity needed over Europe: 9 Lufthansa sensors planned (end of 2013) + ~100 Flybe aircraft with TAMDAR → run OSE's now over US (where the TAMDAR network is good) or wait for more obs over Europe?

# ACTUAL COORDINATION ACTIVITIES

## Expert Team on Verification

**SRNWP-Verification will finish in 2012**

**Make use of SRNWP-V in the future**:

- does it make sense to share the methods developped in this frame with the NWP community (can they be used e.g. as a common verification basis for EUCOS OSEs, etc.) in the future. Are there portable elements to be shared? If yes, how to organize that?

**GTS Wind Gust data to be improved**:

- MeteoSwiss found that wind-gust data (used for NWP validation) available via GTS are very heterogenous and not well documented → have others similar experience? → would be valuable to collect all similar „complains" regarding the overall European obs network and start to sort it out with EUCOS

# ACTUAL COORDINATION ACTIVITIES

## Expert Team on Dynamics

**No Chair for a long time!**

**No coordination at EUMETNET SRNWP level. Is it needed?**

**Dynamical core comparison on massively parallel HPC?**

- An idea already raised last year: comparison (scalability, stability on very high resolution) of dynamical cores on massively parallel HPC (in cooperation with the System ET) → does this make sense for us? → from where to find money for that?
- COSMO experiences (MeteoSwiss, Poland)

# ACTUAL COORDINATION ACTIVITIES

## Expert Team on Link with Applications

**Nowcasting Project (Activity) under EUMETNET (2013-):**

- a feasibility project (18 months) with the main aim of setting up a group of European experts on nowcasring and to draft project requirements for a longer term project (mid 2014 - 2017)
- A joint bid by ZAMG and KNMI is positively evaluated and endorsed by PFAC/STAC

**WMO workshop „on the use of NWP in Nowcasting”**

- Jeanette’s talk
- Useful input material to draft the requirements for the Nowcasting Project (2013 – mid 2014)

# ACTUAL COORDINATION ACTIVITIES

## Expert Team on Physical Parametrizations (Upper Air)

**No Chair for a long time!**

**No coordination at EUMETNET SRNWP level. Is it needed?**

**Looking for a „coordination gap”:**

- are references for physics validations (i.e. measurement campaigns and LES results) accessible for all NWP centers (big centers may have their own references but what about smaller centers? → do they deal with relevant research?)

# ACTUAL COORDINATION ACTIVITIES

## Expert Team on Predictability and EPS

**Dedicated IFS EPS runs for experimental high-resolution EPS**

- To drive future high resolution LAM EPS systems extra IFS EPS runs are anticipated by the SRNWP community from ECMWF on the top of the presently operational (higher resolution, 06 and 18 UTC runs)
- ECMWF developed an „economic archive" to store EPS model level fields only over Europe, North-Atlantic, North-Africa (covering all anticipated European EPS domains)
- The „economic archive" (reduced Gaussian grid) was succesfully tested by interested European consortia (relevant models: ALADIN/ALARO, AROME, COSMO, HIRLAM)

# ACTUAL COORDINATION ACTIVITIES

## Expert Team on Predictability and EPS

**Dedicated IFS EPS runs for experimental high-resolution EPS**

- Agreement reached (EPS-DA workshop Bologna 2011) within the SRNWP ET about the parameters (resolution, EPS size, forecast range) of future test runs
- IFS EPS tests are requested from ECMWF: 2x2 weeks T1279 test periods are to be run (periods perhaps already agreed)

**SRNWP-EPS Project (Chiara's talk)**

**EPS (and generally NWP) training → link with EUMETCAL**

# ACTUAL COORDINATION ACTIVITIES

## Expert Team on Surface Aspects

**Surface data pool**

- New stations: Debrecen (HU), Valdai (RU) (no soil)
- 7 new users (Croatia, Germany, Greece, Hungary, Italy, Russia, Sweden)
- Quality issues with data from Cardington (UK) station sent to the pool
- Intention to open the data pool for Universities

**ET meeting and Lake workshop (September 18-20 Helsinki)**

- Laura's talk
- EUMETNET funds for continuing Lake workshops? (MUSCATEN is over)

# ACTUAL COORDINATION ACTIVITIES

## Expert Team on Surface Aspects

**Continue working on the lake data base at ECMWF**

- Improve bathymetry for large lakes and lake depth for boreal lakes
- Support from ECMWF to be asked

**New Chair is sought!**

- Jean-Francois Mahfouf steps down in Jan 2013

# ACTUAL COORDINATION ACTIVITIES

## Expert Team on System Aspects

**SRNWP-Interoperability will finish in 2012**

**Make use of SRNWP-I outcomes in the future**

- is the maintenance of the model to model adaptors developped so far is feasible in each consortia?
- is there a priority for the adaptors to maintain?
- Is the yearly adaptor testing before EWGLAM is acceptable approach for the future?

**Updated European model configurations on the SRNWP website**

**New Chair is sought:** Uli Schaettler steps down

# ACTUAL COORDINATION ACTIVITIES

## Expert Team on System Aspects

**What about Academia versions of our NWP models (our working practices together with Universities → can we learn here from each-other?**

# FUTURE PROJECTIONS REGARDING C-SRNWP

- OMSZ is bidding for the C-SRNWP management in the next phase (2013-17). A positive evaluation report put forward to STAC/PFAC.

- STAC/PFAC outcomes are positive → what's left is to get the bid accepted by Assembly and *to have enough members to afford the budget* (same as before i.e. 35K€)

- Expert Team structure remains according to the Project Requirements → selection of members will be of key importance → some refreshment needed (4 Chairs sought)

- Two closely related projects so far successful: SRNWP-EPS and Nowcasting

# FUTURE PROJECTIONS REGARDING C-SRNWP

## OMSZ BID HIGHLIGHTS:

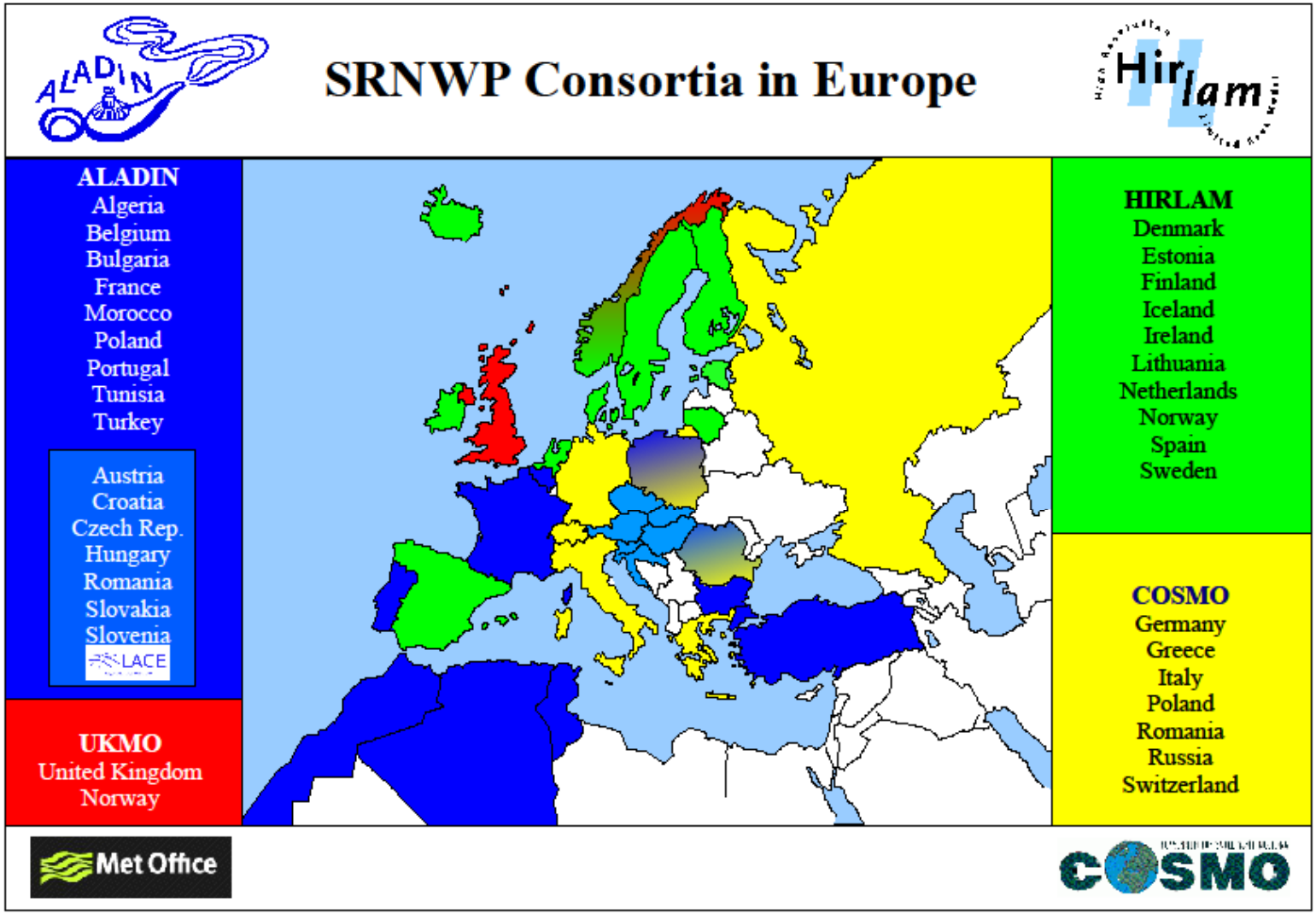
- Represent the interests of short-range NWP in front of other institutions/projects (e.g. ECMWF or EUMETNET observation programmes, i.e. OPERA, etc.)
- Popularize European NWP systems in education (academia versions of NWP models)
- Try to find „external" funds (FP8, Norway Grants) for NWP development actions → try to coach that interested NMSs get organized in related projects

# FUTURE PROJECTIONS REGARDING C-SRNWP

## A PERSONAL VIEW ON C-SRNWP AIMS

- Not for driving plans (that's well organized and happens at national and consortium level)
- Tackle NWP problems unsolvable at scientific level (organizational issues) but not yet treated
- Spot such problems and verify its relevance for the whole community
- Put it forward efficiently

# THANKS FOR YOUR ATTENTION
# QUESTIONS AND REMARKS ARE WELCOME
# (AFTER STEVE'S TALK)



# SRNWP AC agenda

- **14:00-14:15 EPS (Bartolomé**, Chiara left)
- 14:15-14:30 Link with App
- **14:30-15:00 Data Assimilation (OPERA: Asko and Elena)**
- 15:00-15:20 Verification
- 15:20-15:40 Physics
- 15:40-16:00 coffee break
- **16:00-16:15 EUMETCAL (with Tero)**
- 16:15-16:30 Surface
- 16:30-16:45 System
- 16:45-17:00 Dynamics