

Minutes of the 23rd Annual Meeting of the Working Group on Co-operation Between European Forecasters (WGCEF)

Thursday 12th – Friday 13th October 2017

Warsaw, Poland



List of Participants (in alphabetical order):

BLAAUBOER, Dick - Eumetnet
CSEKITS, Christian - ZAMG/Austria
CUSACK, Evelyn - MET EIREANN/Ireland
DIEPEVEEN, Jos - KNMI/The Netherlands
DOUBLET, Karen Helen - Met Norway
*DROZDZYNSKA, Julianna - MGW/
Hydrometeorological Service of Poland*
HAUSEN, Robert - DWD/Germany
HEWSON, Tim - ECMWF
*HLADNIK, Veronika - Slovenian Environmental
Agency*
JAMESON, Stephanie - UK Met Office
JONASDOTTIR, Elín Björk - Icelandic Met Office
*KALIN, Lovro - DHMZ/Meteorological and
Hydrometeorological Service of Croatia*
*KRUMINA, Laura - Latvian Environment,
Geology and Meteorology Centre (LEGMC)*
LAINE, Mikko - FMI/Finland
LEITAO, Paula - PMA/Portugal
*MANCZAK, Piotr - MGW/Hydrometeorological
Service of Poland*

*OGRODNIK, Michal - IMGW/Hydrometeorolo-
gical Service of Poland*

PATKAI, Zsolt - OMSZ/Hungary

*RALIENE, Vida - Hydrometeorological Service
of Lithuania*

REY, Jaime - AEMET/Spain

ROULET, Bernard - Meteo France

*SANDEV, Marjan - Czech
Hydrometeorological Institute*

SKELBAEK, Michael - DMI/Denmark

VANHAMEL, Thomas - RMI/Belgium

Participants via videoconference:

Mr. Attilio DI DIODATO (Italy), Mr. Panos GIANNOPOU-
LOS (Greece); Mr. Andre-Charles LETESTU
(Switzerland); Mr Mats Johansson, SHMI (Sweden).

Meeting Venue:

Institute of Meteorology and Water Management –
National Research Institute
ul. Podleśna 61
01-673 Warszawa

Thursday, 12th of October

Introduction

IMGW Deputy Director General Piotr Kowalczak welcomed the WG to Warsaw and introduced the participants to the IMGW facilities.

As WG Chair, Christian thanked Piotr and made his introductory remarks. Christian and Jos then welcomed the new members to the group: Jaime Rey from Spain, Laura Krumina from Latvia, Elin Bjork Jonasdottir from Iceland and Stephanie Jameson from the UK.

In an overview of group activities, Christian noted that WGCEF delegates were Co-Chairs in the Forecasters' Session of the EMS Annual Conference,

which took place in Dublin from 4th to 8th of September 2017 (Evelyn Cusack and Christian Csekits). Furthermore the WGCEF Chair is member of the PSC, the programme and science committee of the EMS.

WGCEF was also heavily involved in the Eumetnet Task Team on Improved Services and Impact Based Warnings (Laura Paterson, Jos Diepeveen and Christian Csekits). WGCEF has also participated in the Eumetnet Drafting Team on forecasting (Jos Diepeveen and Christian Csekits).

The meeting agenda was agreed and actions from the last meeting were agreed.

Members' Updates

In this round table session, participants were invited to introduce themselves and give a short update on new developments within their NMS.

Cristian Csekits, ZAMG/Austria

- During nights there is now only one technical shift (instead of two; operational since summer 2017)
- New ZAMG-App for fire brigade, police and ambulance
- INCA now uses forecast data from AROME (instead of ALARO) from 2018/19 on
- New operational forecasting and emergency room (7 instead of 4 positions) ready in November 2017

Evelyn Cusack, Met Eireann

- New Assistant Director: Dr Sarah O'Reilly
- 8 new meteorologists are training at KNMI: October/November/December. KNMI trainers coming to Dublin in January and February.
- European Met Society in Dublin was a great success.....the largest ever over 850 (110 from Ireland). Met Eireann had a follow-on 1-day seminar in October 2018 which energized all the staff. We gave 15-minute presentations from EMS.
- We continue to automate remote rainfall stations in mountains etc and 60 are being tested.

Jos Diepeveen KNMI/Netherlands

- There is ambition to develop to an Early Warning Centre
- Devastating hurricane Irma hits the SSS Islands in the Caribbean, especially St. Maarten
- 2017 is the 200 year anniversary of the birth of Buys Ballot, founder KNMI in 1854 (1817-1890)
- New Dual-pol radar in Herwijnen and update BULL supercomputer

- At the beginning of October, KNMI launched new app.
- Development of own visualisation and production system, Geoweb.

Karen Helen Doublet /Norwegian Met Service

- Several episodes of extreme precipitation events/flooding during the last year, and there is a project to update extreme weather warning plans.
- NWP cooperation between SMHI and METNorway will include FMI this year. Ensemble system MEPS 2.5 km, 10 members. Cooperation on a HPC-solution as well
- New trajectory models for drifting objects. Flexible solution, different modules: drifting oil slick, persons in water, different objects. General input data: current, waves and wind
- Developing finemesh models in coastal areas and in fjords:
 - grid size 800 m, wave model and ocean model.
 - grid size 2.5 km atmospheric model.

Robert Hausen DWD/Germany

- Change in DWD-law regarding providing free data
- The "Sinfony" project is developing an integrated forecast system
- Add-on DWD-App: warnings and reports for floodings, storm tides and avalanches

Tim Hewson, ECMWF

- Agreement reached that ECMWF computing facilities – notably the next -Supercomputer – will be re-located to Bologna in Italy
- Two new model cycles were introduced since the last WGCEF meeting. New seasonal forecast system (System 5) will become operational in November.
- For the recent devastating hurricanes in the North Atlantic ECMWF forecasts, though not perfect, outperformed forecasts from other centres (including special high resolution LAMs).

Veronika Hladnik, Slovenian Environmental Agency

- Implementation of Aladin-SI model version CY40
- Facebook account Arso Vreme
- Rejuvenation of the forecasting team Facebook account Arso Vreme.

Stephanie Jameson, UK Met Office

- Weather challenges over the past year:
 - Storm Naming reaches 'Ewan' for the 2016/2017 season. Particularly notable impacts associated with Storm Angus (flooding) and Storm Doris (winds).

- Aviation impacts due to dense fog over Christmas period.

- UM Model Upgrade:
 - GM: Horizontal resolution increases
 - UK High Resolution (UKV): Introduction of hourly cycling, change from 3 to 4 Dimensional Analysis (4D-Var), higher resolution lateral boundaries.
 - Ensemble: Increase in number of ensemble members, increased horizontal resolution.
- Other Business Development:
 - Transform & Efficiency Programme, increase in Media & Aviation Consultancy Services, developing involvement with the UN Ops & Crisis Centre.

Mats Johansson, SMHI Sweden

- Due to new products (road condition forecasts) there has been one more night shift for my group since October (2 total). SMHI also have 2-3 night shifts in Stockholm working mostly with aviation forecasts.
- Upgrading radar stations, 6 of 12 are done. The plan is that all of them will be modified by late 2018.
- The work to upgrade observation stations is ongoing and will continue also next year.
- Running a ten member high resolution EPS (Arome) together with Norway and Finland. Finland joined earlier this year.
- Impact based warning project is running and Phase I will be done in July next year. Parameters that are of most interest are wind, snow, flooding and high sea levels.
- From the coming ice season we will work together with FMI with the ice-chart for the Baltic Sea
- Aviation forecasting group has been working together with DMI for a couple of years. The group has also started cooperation with FMI.

Elin Bjork JÓNASDÓTTIR, Icelandic Met Office

- Harmonie is run in two separate instances, one by IMO the other in collaboration with DMI (IGA)
- New satellite images, including SCAT
- Visual Weather and Moving weather updates pending.
- CAP warning system for severe weather.

Lovro Kalin, DHMZ Croatia

- There are around 15 forecasters (2 apprentices) There has been an increase of daily work – and increasing pressure on staff/schedules (including health issues)
- 2017 was a tough season (cold, hot, drought, fires)
- VisWe is used in operational forecasts for visualisation and forecast production.

- Ongoing refurbishment of forecasting office
- Regional Maritime Centre established in Split.

Laura Krūmiņa, Latvian Environment, Geology and Meteorology Centre (LEGMC)

- Continued renovation of the meteorological and hydrological network – reduction of manual observations, but real time data flow and web cameras – completion is planned by the end of 2018;
- Development of new automatic verification system for general forecasts; verification of forecasts on daily basis – fast feedback on models and forecasters performance;
- Revision of hydrological and meteorological warnings criteria; closer cooperation with civil protection authority and municipalities. The first steps to new warnings dissemination and verification system;
- Development of the personnel competency maintenance and assessment system for the Forecasting and Climate Department (3 years cycle); competency assessment for general and marine forecasters at the end of 2017;
- More activities in the NORDMET with an emphasis on the work in the NAMCON consortium, developing closer cooperation with Estonian Environment Agency. Priorities - field of aviation forecasting (common SWC, etc.) and IT solutions;
- Analysis of past and future climate for Latvia, activities were performed in cooperation with FMI – basis for adaptation plans;
- Development of hydraulic model application, flood risk maps for flood risk
- areas and hydrological simulation and forecasting system. Activities are done in cooperation with SYKE (FINLAND);
- Use of SENTINEL satellite images to detect ice cover / ice jams in inland waters, flooded areas.

Mikko Laine, FMI Finland

- A joint Nordic (Norway, Sweden, Finland) model MEPS has replaced our own Harmonie model.
- New weather warning system, now some of our warnings are given up to 5 days ahead. Free choice of area for warnings.
- Meteorologist are co-operating with research/developers/sales – personnel.
- New services/products: meteorologists were on site on Nordic World Ski Championships in Lahti.

Paula Leitao, IPMA/Portugal

- New lightning detector network is operational
- Pre operational severe weather warning, which congregates different phenomena resulting from convection

- Forest fire risk based on impacts is operational
- Improving connections with other national authorities and knowledge in order to Impact Based Forecasts and Warnings
- Low level area forecast (GAMET – over mainland)
- Aerodrome warnings
- Contact with UK and Spain in case of significant weather over the border.
- On the 17 June a forest fire caused 64 casualties
- Later this year
 - Contact with Morocco in case of significant weather over the border.
 - Pre operational AUTOMETAR at small aerodromes during night time (Pico, Graciosa e Corvo – Azores)
 - Pre operational severe weather warning by counties
- Planning for near future
 - New radar for Madeira
 - New lightning detector network at Madeira and Azores
 - New meteorological visualization and processing system

Andre-Charles Letestu, Meteoswiss

- Simplification of warnings
- AutoMETARS during the night at Geneva's airport.
New apps: type of precipitation in radar animation.
New forecasters, employed as AMFe later becoming AMFm.

Piotr Manczak, IMGW/ Hydrometeorological Service of Poland

- Works on nowcasting tool SEiNO are in progress. Particular modules of the SEiNO system are responsible for different calculations. For example: GRS – estimation of precipitation field based on rain gauges, radar and satellite data; SCENE – detection of convection and precipitation nowcasting using extrapolation vectors; SNOF – Fourier analysis is used to particular hydrometeors (similarly to STEPS models in other countries); ENSEMBLE and PROB modules of this nowcasting system are tested.
- Works on forecast simulator have begun this year. It's going to be a training tool which will allow users to work operationally on archive data. There are works in progress on interface and database. This simulator will be used in the future to examine candidates for the job, to raise and periodically check forecasters' qualifications.
- In 2015 and 2016 we experienced staff redundancies and automation of about 40% of the synoptic stations. This year, however, a slightly opposite trend is visible. Human observations were restored in several synoptic stations, only during the day as yet.

Zsolt Patkai, OMSZ/Hungary

- A new Aviation Meteorology portal has been launched (aviation.met.hu). Widespread weather information available: Bulletins, Observations, Regional Area Forecast for VFR flights, Tons of forecast maps based on AROME (e.g. thermals, wave forecast, wind, cross-sections, convective indices).
- Staff number is stable, but people are coming and going, only last year 5 forecaster colleagues decided to leave. The main reason: salaries are very low, they have not been raised since 2008.
- This year WMO released a new International Cloud Atlas. Linked to this, our Met. Service also released a book called Cloud Atlas ([Cloud Atlas - OMSZ](#))

Vida Raliene, Hydrometeorological Service of Lithuania

- New supercomputer SGI ICE X Replacing Hirlam 4km by Harmonie 2,5 km.
- TRAINING COURSE "BALTIC+" on 14–16 March in Vilnius, involving 19 Forecasters and 9 Teachers from 7 countries and EUMETSAT. The information about this event was published in the "EUMETRAIN training bulletin" in July's issue.
- The presentation "Baltic+ 2017 course on Convection – Collaborative Effort for High Quality Convection Training" was made in ESSC-2017.

Jaime Rey, AEMET/Spain

- Since June Harmonie-Arome cycle 40 is fully operational in AEMET's Bull supercomputer. There are often problems in convective situations
- Warnings issuance in CAP format to Meteoalarm and Civil Protection authorities is in test phase.
- Ninjo licenses expired in January and were not renewed. It didn't fulfill our expectations (e.g. only one product was generated through Ninjo for external users)

Bernard Roulet, Meteo France

- Models
 - Global model ARPEGE : test of new scheme for convection was not yet conclusive (so not included in future version)
 - Ensemble High Resolution Model AROME : training plan for forecasters and test of new algorithm to select coupling models in ARPEGE ensemble.
 - OVERSEAS AROME : improvements for tropical phenomena including tropical cyclones
 - AROME-NWC : test of new algorithm to merge forecast precipitation and extrapolated precipitation by radar.

- Vigilance
 - Surveys of public and authorities to identify the needs and to build future evolutions
 - Working group on specifications for a smaller scale vigilance and more impact based warnings
- Cloud Sourcing Applications
 - Public observation applications for smartphone
 - Test of connected cars in partnership with Continental

Marjan Sandev, Czech Hydrometeorological Institute

- The basic changes in the Integrated Warning Service System at Czech Hydrometeorological Institute (in near future) are as follows:
 - Alert Editor as a module of the Visual Weather system
 - Future performance of warning web page (from the beginning of 2018?)
 - Project on prevention of security risks caused by extreme meteorological phenomena - their specification and innovation of forecasting and warning

- Progress due to new contracts and appropriations
- 3 new Doppler radars - new Harmonie and Ensemble model

Thomas Vanhamel, RMI/Belgium

- New products and developments:
 - New model ALARO13 operational with resolution of 1.3 km
 - Bellavista (BELLS lightning detection)
 - Open data: growing catalogue (climate data, ALARO-4 output, lidar) with GIS-application
- General news concerning the weather office
 - (Ongoing) organisational changes: automatization of some products & from 3 -> 2 forecasters on duty during the day: test phase
 - Road condition forecasting (preliminary development phase)

Newsletter, Website and Social Media

The WG passed their great thanks and respect to the reviewers of the last newsletter, and also for the printing of the beautiful magazine, kindly provided by Meteo France. We are very grateful that Meteo France is willing to print the letter also in the near future!

Andre Charles gave an update about the website (www.euroforecaster.org) . Presentations will be put on this site in the secured area.

Jos offers all participants to connect via Facebook to the (closed) group of WGCEF, you can also encourage colleagues to join: send a message to Jos Diepeveen, via FB/Email!

EUMETNET Update

Dick updated the WG on current and planned developments in EUMETNET

Future

The next phase, 2019-2023, of EUMETNET programmes is being prepared. Drafting teams in the area of Observations and Forecasting are drafting the requirements for the various programmes in these areas. The main theme of the Forecasting Programme in the next phase will be “impact based forecasting and warning”, which is currently a main subject on the agenda of many NMHSs. The subject is related with several activities within the programme like probability forecasting, nowcasting, impact assessment, verification of lbW and education&training. Activities and projects will be integrated in a smaller number of programmes which will focus on:

- EMMA/Meteoalarm

Current IWSS	Changes in new one
Output in .xml format and text	Output in CAP and for media text
Issuing as needed (usually around 11:00 am)	Issuing daily at 11.30 am
Outlook of dangerous phenomena for web CHMI or as a separate information	Outlook of dangerous phenomena on days D + 3 to D + 5 as part of CAP
Only one warning for the whole country and all groups of phenomena	Possibility of splitting into separate reports by regions and phenomena
All warnings are issued by CFO - Prague	Some interventions may be also performed by RFO (meteo-hydro)
Warnings are issued on district level (77)	Warnings issued on municipalities level (262)
It gives only general alert severity (degree of danger)	It can be obtained separate information about intensity and probability of the event
No additional background information (maps, graphs)	CAP provides links to additional background information
Text is always relative to the warning as a whole	For each event / area / length of time a separate text

systems with respect to climate change. The project is financed by the Ministry of Foreign Affairs, and its main goals are:

- Analysis of impacts caused by extreme meteorological phenomena
- Definitions and Database of Extremes
- Impact analysis and draft criteria for issuing impact-based alerts
- Evaluation of the success of predictions of dangerous hydrometeorological phenomena
- Estimation of the evolution of frequency of dangerous phenomena with regards to climate change

Michael Skelbaek, DMI/Denmark

- ‘Black November’ – 20% got fired or left voluntarily

- Forecaster support
- NWP cooperation
- Education&Training

EUMETNET is striving for more flexibility. This means projects with flexible start and duration, flexible number of participating Members. New activities may arise during the next programme phase and fit in the existing programmes.

Today

All projects in the forecasting domain, EMMA, EMMA-H, Eumetcal, C-SRNWP, SRNWP EPS II, ASIST are well underway, details can be found in the presentation on the website.

The yearly Heads of Forecasting meeting in Warsaw in May 2017 was focused on planning the new phase of projects, especially “Impact based warnings and forecasting”. There were special presentations on the ESFS projects, where interested NMHSs may cooperate in a storm forecasting activity in cooperation with ESSL. Also a very interesting presentation was given on the HIWeather project from WMO/WWRP by Brian Golding. The importance of including other disciplines like economy, sociology, communication in the production chain of impact forecasting was discussed.

Related non-EUMETNET projects:

- Aristotle, started February 2016 ending January 2018: <http://aristotle.ingv.it/> . Seven individual NMHSs and EUMETNET are joining, a project financed by and in support of the ERCC in Brussels. Currently in a semi-operational pilot phase. Much related with current impact based forecasting activities;
- ANYWHERE (EnhANCing emergencY management and response to extreme WeatHER and climate Events, H2020-DRS-1-2015-700099)) is funded within EU’s Horizon 2020 research and innovation programme. The principal objective of ANYWHERE is to enable society as a whole and the main civil protection agencies to respond more rapidly than today to extreme climate and weather events, and to better cope with the high social, environmental and economic impacts related to these extremes.

Friday 13th October

EUMETNET Task Team on Storm-Naming Update and Discussion

Evelyn gave an update on the progress and plans of the storm-naming TT, including the aspirations for further harmonisation of the European schemes and possible integration of some of the existing regional schemes, notably in between the southwestern and western schemes. A lively debate ensued, with the intention of passing recommendations to the TT meeting in Spring 2018.

Members’ Presentations

The majority of the second day of the meeting was devoted to presentations by members on a variety of subjects. The contents of these presentations can be found on the WGCEF website, www.euroforecaster.org . Our IMGW hosts also arranged a visit to the Forecast Office and the Remote Sensing Department.

Before the close of the meeting, there was discussion around the location and theme of the next meeting.

Alyssa Razy kindly offered to host the autumn 2018 meeting on behalf of the Meteorological Service of Israel. WG subgroups were also formed to propose possible topics for discussion. It was also proposed that the next meeting should be 2 days in length, possibly involving a social event and/or sight seeing.

Christian and Jos then again complimented our IMGW hosts and organisers Piotr and Julianna before thanking the members for their participation and closing the 2018 meeting.

Jos Diepeveen 20th October 2017

