Minutes of 24th Annual Meeting of the Working Group on Co-operation Between European Forecasters (WGCEF)

Monday 12th – Tuesday 13th of November 2018
BY14 Hotel in Tel Aviv

By Christian Csekits, ZAMG (chair) and Jos Diepeveen KNMI (vice-chair)

LAINE, Mikko - FMI/Finland
PALJAK, Taimi - Estonian Weather Service
PATERSON, Laura - UK Met Office/Great Britain
PATKAI, Zsolt - OMSZ/Hungary
RAZY, Alissa - Israel Meteorological Service
REY, Jaime - AEMET/Spain
ROULET, Bernard - Meteo-France
SANDEV, Marjan - Czech Hydrometeorological Institute
SAVIR, Amit - Israel Meteorological Service
SKELBAEK, Michael - DMI/Denmark
STAV, Nir - Director of Israel Meteorological Service
TROISI, Antonio - Italian Meteorological Service
VANHAMEL, Thomas - RMI/Belgium

List of Participants (in alphabetical order):

BLAAUBOER, Dick - Eumetnet
BRAININ, Evgeny - Israel Meteorological Service
CSEKITS, Christian - ZAMG/Austria
CUSACK, Evelyn - Met Éireann/Ireland
DAVIDOFF, Oren - Israel Meteorological Service
DIEPEVEEN, Jos - KNMI/The Netherlands
HEWSON, Tim - ECMWF
HOIKKANEN, Marjo - FMI/Finland
JAMESON, Stephanie - UK Met Office/Great Britain
LETESTU, Andre-Charles - MeteoSwiss/Switzerland
KALIN, Lovro - DHMZ/Meteorological and Hydrometeorological Service of Croatia

Monday, 12th of November
Session I ″Introduction″:

* Welcome Address Director of IMS Nir Stav

Nir Stav tells us about the history of IMS and the important role of Ben Gurion in establishing the weather service, particularly for aviation forecasting. Nowadays IMS is active in a wide range of sectors.

* Opening words (Christian, Jos)

* Welcome of the new WGCEF members (Jos and Christian)

* Agree agenda and review actions from last meeting (Jos and Christian)

Session II ˝Updates since the last meeting˝:

* Round table: participants introduce themselves and give an update on new developments within their NMSs (5 minutes each)

Cristian Csekits/ZAMG

• ZAMG are participating in the ARISTOTLE II Project which delivers multi-hazard information to the ERCC (Emergency Response Coordination Centre); Start: November 2018.

• INCA: forecast data from AROME (instead of ALARO) from end of 2018 onwards

• New thunderstorm guidance bulletin for internal users (maybe presentation for 2019).

• Projected restructuring of one shift (more international weather forecasts or more activities on social media; more details in 2019).

Evelyn Cusack (MET EIREANN)

• 12 members Ensemble high-resolution (2.5km) has become operational. Model is 54 hour and ensembles are 36 hours.

• We are hiring 8 meteorologists - interview panel took place in July, but no one has arrived yet!

• We are setting up a Flood Forecasting Center. Hiring 6 hydromets (3 so far).

• Monthly forecaster/NWP'ers meeting….very useful. Sometimes lively. Older forecasters resisting ensembles! (ECMWF course in February).

Jos Diepeveen (KNMI)

• Major KNMI project: development of a new web-based Met. Work Station: Geoweb. Other European NMS's are also interested.

• KNMI received extra funding from the ministry this year to keep basic services on a proper level, with possibility for development to an Early Warning System. However, budget-planning for 2019 is still difficult.

• On the 8th of March, International Women's Day, we had a completely female operational shift.

Tim Hewson (ECMWF)

• New seasonal forecast system SEAS5 went live in Nov 2017

– Higher resolution (32km from 80km, ocean 0.25 from 1, sea ice model)

– More recent reference period for anomalies, to help address non-stationarity (climate change) issues.

• New Model cycle 45r1 went live in Jun 2018

– Improved physics, better rainfall near coasts in "warm rain" situations

– Lightning flash density forecasts included

– HRES now coupled to ocean, so SST changes according to overlying weather.

• Migration work for the relocation of the next ECMWF supercomputer in Bologna is gathering pace…

• New Web-based Forecast User Guide released in May 2018 – unrestricted access.

• ENS and HRES Vertical Profiles are now available in ecCharts.

• "Weather Cloud" initiative started.

Robert Hausen (DWD)

• Issue of warnings for west Germany switched from Offenbach to the regional office in Essen. Regional expertise across the whole of Germany is now under control/guidance of supervisor/lead forecaster in Offenbach.

• Fusion of aviation and general weather forecasting in Essen, looking to prove a similar concept for Berlin and Munich.

• The forecasting headquarters in Offenbach will now focus more on international activities and issue of user-orientated products (focus on severe weather events).

• After a successful period of evaluation, ICON-EPS went operational in early 2018.

Veronika Hladnik (EARS)

• New web page www.vreme.si with hourly forecast which is nice for use for smart phones.

• Internal project for new subjective products for special groups of users is in progress.

• Small group starting to produce audio and/or video recordings.

Lovro Kalin (DHMZ)

• Small group starting to produce audio and/or video

recordings. fully employed, some still on apprentice), age structure changed - generation shift.

• Still problems with infrastructure (operational room, inadequate facilities)

– refurbishment needed, new building expected in 2022.

• IBL VW visualisation is fully operational, whilst forecast production is currently in progress - expected fully in Spring 2019.

– new products (tailored, automated end products, tailored diagnostic/forecasting parameters).

• Warnings improvements (more elements, cold waves introduced this winter, demand for County based warnings, automation, impact based, thresholds improvements...).

• New web page *meteo.hr*

• Forecasters communicate via Slack, though still await the use of other social networks.

Mikko Laine (FMI)

• Regular, twice a month, verification meetings between meteorologists, model developers and post-processing method developers. Also we have nominated one meteorologist to work as contact person between model developers and forecasters. In addition some of our forecasters are more engaged with the post-processing method development. In both cases above worktime is shared between development and forecasting units.

• We have integrated crowdsourcing app to our weather app. We are collecting weather observations from citizens (e.g. precipitation, ice thickness, snow depth, hail, slippery pedestrian weather). Meteorologists can monitor these observations directly from our meteorological workstation (SmartMet).

• Tailored products for our customers: weather chat, Webex briefings (virtual meeting) e.g. for ice breakers & pilots and electricity companies.

• We have increased our activity in social media. We have reorganised our shifts to get more time for social media tasks: regular tweets in Twitter, weather related videos in YouTube. We can also create weather videos directly from our workstation.

• The aviation weather unit has launched a tool developed in FMI to ease the production of Significant Weather Charts together with SMHI in Sweden.

• We have started to use Slack as in-house chat and team message platform. Aviation unit is using Slack to communicate (SWC, Sigmets) with other Scandinavian and Baltic aviation units.

• Since last autumn, aviation forecasters have been participating in weather meetings in Helsinki Airport operations center, together with airport stakeholders, to help plan actions to mitigate the effects of high-impact snowfalls and thunderstorms.

• The FMI is participating in the ARISTOTLE (All Risk Integrated System TOwards Trans-boundary hoListic Early-warning) Project which delivers multi-hazard information to the ERCC (Emergency Response Coordination Centre). As a backup leader of the weather hazard group after UKMO, we are also leading the group ten weeks per year.

• The FMI is leading the PECASUS (Pan-European Consortium for Aviation Space weather User Services) consortium, which is aiming to provide information on space weather that has the potential to affect communications, navigation and health of passengers and crew.

• We are starting to collect a database of impacts of severe weather events to further increase the accuracy of impact based warnings.

Andre Charles Letestu (Meteoswiss)

• A new law has been approved by Parliament, which applies from the 1st January 2019. One of the main aims of this is to strongly reduce the price of observed and forecast data.

• A new project has been launched which is aimed at developing a concept to communicate probabilistic forecasts to the public. A number of products now include probabilities, especially on the website and in the App.

• MeteoSwiss have published documents about climatic scenarios in Switzerland (CH2018) and their resulting probable effects on tourism, economy, agriculture, civil protection and welfare; events have been organized in various locations in Switzerland. Several products are currently produced manually, but it is planned to produce these automatically using data4web. This is a forecast data base computed using model data, and input from the forecaster.

• A MeteoSwiss twitter channel will be launched on the 1st March. There will be one for each language. At least one tweet a day should be sent.

• Continuous snow measurement (every 10 minutes) will soon be available on the MeteoSwiss automatic measurement network. A test is currently in progress at Geneva airport.

• Two projects concerning the future of COSMO models have started or about to start. ModInterim began early 2018 and will finished late 2020.The goal is to produce an ensemble model from the analysis to 5 days with a horizontal resolution increasing seamlessly from 1.1 to 2.2 km. New observations will be added into the assimilation scheme and a new scheme (KENDA) will be applied. The second project, called ICON-22 will start mid-2019 and will finish late 2022. It will replace the COSMO models by a new version calculated on an icosahedral grid developed by the DWD.

• A post processing project (PostprocVeri) has just started - its aim is to establish probabilistic and spatial postprocessing for several parameters on all weather prediction time scales, taking into account all available observations and models. Output will be automatic and seamless in time.

Taimi Paljak (EMHI)

• The meteorological and hydrological Network is automated, with only 3 stations providing manual observations.

• Close co-operation with civil protection authorities (thresholds of warnings, further development of service).

• Development of HARMONIE with resolution 2.5 km.

• Development of road model.

• Use of SENTINEL data for ice chart on the platform QGIS.

• Meteorological Workstation SMARTMET – implementation of which comes under the framework of the CESAR project.

Laura Paterson (MetOffice)

• New CE, Prof Penelope Endersby and Chair, Rob Woodward, appointed.

• Large scale transformation and efficiency project underway

– Large scale infrastructure updates

– Programme of voluntary redundancies.

• What this means for forecasting – Making operational work more efficient, developing tools to cope with future NWP, object/event approach, ways of working, reducing unsociable hours, improved visualisation.

• Meanwhile, we continue to face resourcing challenges.

• Science changes – recent PS41, MOGREPS UK hourly cycling being trialled.

• Climate updates – WSSP China, ARRCC Programme with Dfid, IPCC contributions, CSSP Brazil.

• Contract changes – roads, Heathrow, M&S, Gatwick, new Beta Website.

Amit Savir (IMS)

• Automatic weather station on one ship.

• AMDAR data: start in December 2018 (El-Al carrier).

• New website coming in early 2019 (in Hebrew, Arabic and English language).

Zsolt Patkai (OMSZ)

• A country-wide hail protection system was started in May 2018:

– HMS offers special meteorological forecasts: hail probability maps. (0-30%: yellow, 30-60%: orange, >60%: red).

– 5 new colleagues were hired for this task.

– Hail protection period: 1. May - 30. September.

• New social media role was started in September 2018:

– Working hours: 8-18 h.

– Responsibilities:

• Making a daily weather forecast video on YouTube. All the graphics and images are made with our visualisation system. Flexible: one may decide how many and what type of graphics to use.

• Posting weather information on HMS Facebook. Both domestic and worldwide weather news.

• Replying to Facebook messages related to forecasts.

• Serving TV channels who want to make reports on the weather.

• After 10 years without, a 30% pay rise is expected for staff next year. However there may be a possible reduction of staff in 2019.

Vida Raliene (LHMS)

• Re-organisation has been taking place since 20th March 2018 (with the reduction of staff and full automation of meteorological stations). Fortunately, the best specialists did not leave the LHMS. Staff were moved to work in a newly created Research and Development department.

• General weather, marine and hydro forecasters were joined into one unit in 2018, so we learn:

– to work together (physically in one room, adjusting to new areas of job)

– to use reduced amounts of information about weather phenomena (as we now have no observers in meteostations, no volunteer institution).

• Reduction of staff leads to reduced possibilities for external training, especially where training is required to use the classroom.

• Weather and hydro forecasters are unused to a lot of regulations (bureaucratic problems) associated with aeronautical weather services.

• No new forecasting methods or tools were introduced, just videoconferences between remote units. Introduction of videoconferences with main customers (Fire and Rescue Department, Command and Coordination board, Situation coordination division).

Jaime Rey (AEMET)

• CAP 1.2 became operational on 18th of June 2018 at national level, but due to visualisation problems, it is still not visible in Meteoalarm.

• Storm Naming season 1 was a success. Season 2 just started with "Adrian", named by Météo-France.

• TTwo important meetings related to forecasting were held in the last couple of months:

– 6th National Symposium on Forecasting. 17 – 19 September.

– HARMONIE-Users Workshop. 6 – 7 November.

Bernard Roulet (Meteo France)

• Climatology

– All databases migrated from ORACLE to PostgreSQL

– Implementation of a management tool for climate archives.

• Observations

– New radar mosaic SERVAL : all software treatments available at T+2mn

– New radar band C Doppler double polarisation at Ajaccio/ Alata, 780 m western coast of Corsica.

• Models

– AROME overseas (Lesser Antilles, La Reunion-Indian Ocean, New-Caledonia and Polynesia-Pacific Ocean) could be extended up to 72 hours.

– Ensemble assimilation has been implemented in AROME and PE AROME.

– Developments for coupling AROME and ocean model are ongoing.

• Production

– Work in progress to build an automatic production line of fields from D to D+14 under probabilistic form.

• Vigilance

– Two red events

■ Snow 28/02/18 Herault

■ Heavy rainfall 15/10/18

– Work in progress for producing an impact based rain-flooding vigilance (working group Regional Forecasters-Hydrologists).

– Developments start on new software to allow vigilance over smaller areas (infra-departemental).

• Super Computer

– Renewal process initiated: answers from manufacturers expected by March 2019.

– Expected target is a 5 multiplication factor but perhaps only 4.

– Implementation target : before the end of 2020.

Marjan Sandev (CHMI)

• New application Alert Editor for issuing of meteorological, hydrological and air pollution warnings (within software Visual Weather f.

• New warning web pages.

• Changes at distribution warnings - CAP to FRS CR.

• Mobile application (Android, IOS).

• Media department for the whole CHMI (from September 2018).

• Work on all social networks now comes under 'one roof' (facebook, twitter, you tube).

• A new concept of employee training is being developed within the CHMI - the MOODLE system will be the main tool for training.

• A new supercomputer for model Aladin, from February 2019 with horizontal resolutions of 2.4 km.

• Work continues on the project of "Prevention of security risks caused by extreme meteorological phenomena - their specification and innovation of forecasting and warning systems with respect to climate change".

• After six years of preparation, a new Central Forecasting Office will be built (from December 2018).

Michael Skelbaek (DMI)

• Extra budget funds.

• Model shift and new models introduced.

• New staff, app & homepage.

• Twitter Award.

• We are moving!

Thomas Vanhammel (RMIB)

• New products and developments

– Road forecasting model implemented (operational test phase this winter, operational forecasting next year).

– Automation of warning verification (development phase)

– "forecast database": forecasters choose the "model of the day" that will feed all our outgoing products (development phase).

– Astronomical product (short term forecast of clouds: structure, type, total amount; transparency of the atmosphere; "seeing-index" based on turbulence) (development phase).

– Co-operation with regional hydrological agencies (drought index, QPE and other radar/precipitation products) (semi-operational phase).

• General news concerning the weather office

– Space weather formations held.

– New head of department: David Dehenauw replaces Fabian Debal.

– Open door days held in September 2018.

Session II "Updates since the last meeting":

* Discussion of the 23rd WGCEF Newsletter (Bernard)

* WGCEF website and social media report (Andre-Charles)

• EUMETNET Update (Dick)

Dick gives us an interesting overview of all EUMETNET activities. Details can be viewed in his presentation.

• EUMETNET Task Team on Storm-Naming Update (Evelyn)

The west and southwest storm-naming groups have made quite a lot of progress over the last year, with the members in the two groups co-operating more and more.

There is need for structure.
Co-ordination of storm naming using an (internet) platform (Meteo Alarm): using such a platform to share understanding around which low has been named could take away a lot of administrative work for the forecaster.

Following contact with the University of Berlin, it is understood that they do not currently wish to cooperate with the EUMETNET initiative.

Tuesday, 13th of November

• 15:15 - 16:15 Session III 'Presentations: Social Media' (20 minutes each including discussion):

Michael Skelbaek: "Changing forecaster role and communication to the public"

In Denmark we see a growing need for the fore-

caster to communicate about the weather to society and emergency management, rather than "just" making a text forecast. Through a lot of training our forecasters are ready to make small video clips, tweets and more general use of different media platforms. The forecasters did actually win a special language prize for the best tweets in Denmark 2018! To the professional user our main focus is nowcasting, and communicating uncertainties and impacts. Besides that we have taken some action to make our met office more resilient to the future. Every forecaster is now capable of doing aviation forecasts which is important due to the growing cooperation between the Nordic countries and the Baltic countries in NAMCON.

Jaime Rey: "The use of social media for warning dissemination in Spain"

Weather warnings in Spain, produced with web software, are disseminated through a data processing unit and a warning database. The use of a message broker software enables the dissemination of automatic messages in social networks. Aemet publishes in a Blog, Youtube and Facebook on a regular basis, but Twitter is currently the leading Social Network, with more than 175,000 subscribers.

The impact in social networks of the first Storm Naming season for the SW group was studied. By analysing the total number of visits to Aemet´s web page and the impact of Tweets with the hashtag #BorrascaName we concluded that Storm Naming helps with the spreading of information about the severe event and associated warnings through mass media.

Stephanie Jameson: "Met Office: The use of social media: Communicating Meteorological Information to the public"

This presentation looks briefly at how we have developed our current approach to using social media to communicate weather information to the public.

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In 2015, we, at the Met Office, set-up our own in-house operational media team which enabled us to move to a 24/7 Twitter platform, expand further into Facebook and also create accounts on Instagram and Snapchat, amongst other channels.

We will describe how the media team work closely with other parts of the Office to determine the content we produce, as well as how we vary our approach depending on the channel being used and the demographic of that channel's user.

Finally, we will look at how this has increased our public reach, before touching upon what we might anticipate for the future in terms of our use of social media.

Tim Hewson: "Recent and upcoming developments at ECMWF"

• New seasonal forecast system SEAS5 went live in Nov 2017

– Higher resolution (32km from 80km, ocean 0.25° from 1°, sea ice model)

– More recent reference period for anomalies, to help address non-stationarity (climate change) issues +…

• New Model cycle 45r1 went live in Jun 2018

– Improved physics, better rainfall near coasts in "warm rain" situations

– Lightning flash density forecasts included

– HRES now coupled to ocean, so SST changes according to overlying weather.

Alissa Razy: "Using Lidar ceilometer and its products for nowcasting"

Lidar information was very useful for nowcasting fog conditions for the Tel Aviv airport. Also lidar information is used for diagnosing dust events and fire events.

Andres-Charles Letestu: "New products provided by MeteoSwiss for Geneva Airport"

For many years MeteoSwiss has provided support for aviation.
Recently collaboration has increased between itself, air traffic control (Skyguide), and the operation centre at Geneva airport.
Past MeteoSwiss products have been re-thought and new ones created in order to best respond to the needs of the airport.
Here are examples of some new and updated forecasts:

• A thunderstorm forecast is sent to air traffic controllers to enable delays to be anticipated. Telephone contact with the controllers provides fur-

ther with the forecaster if necessary.

• The Dashboard; this consists of a platform on which radar, satellite, and forecasts of various meteorological parameters are displayed including the temperature and state of the runway.
Probabilities of fog, thunderstorms or snow are added by the forecaster.
The same product is displayed in both the operation centre at Geneva Airport (APOC),and in the forecasting room at MeteoSwiss.

• The charter forecast enables APOC to predict delays due to weather hazards in departure airports, and on roads to ski resorts, during busy winter weekends.
Warnings of lightning, strong winds and snow are also issued for the Geneva Airport area.

• Finally, since 2016, a low level significant weather chart over the Alps has been produced every three hours in collaboration between Austrocontrol and MeteoSwiss. The two centres produce this chart simultaneously using the same tool.

Mikko Laine: "Forecast verification at FMI"

Constant forecast verification is key to further improving our forecasts and our post processing methods.

Verification is a way to understand differences between models and a way to find the best performing model in a current weather situation. It is also a good way to find new model errors and to cope with known ones. Different operational units at FMI verify different things, e.g. the aviation unit is interested in cloud ceiling, visibility and low cloud. Safety Weather Services verify high wind speeds, and the hit rate of weather warnings. At tailored weather services, we verify temperature and precipitation forecasts.
We are using two verification tools at FMI, both are developed by FMI.
With "Verification Tool" we can do both daily verification and also monthly and yearly verification. We can verify different models, post-processing methods, and also weather data from our institute and weather data from our neighboring national institutes. We can visualise data with tables, charts and maps.
With "Personal Trainer" our meteorologists can compare their own forecasts to the average of all forecasts. We can visualise data with tables and charts. "Personal Trainer" is still under development.

Bernard Roulet: "Severe snow event in Herault on the 28th of February 2018"

Storm Ana produced an active snow event on the 28th of February 2018 across southeastern France, especially over Herault (department n°34). Forecast model outputs (ECMWF, ARPEGE and AROME) are studied from medium range to very short range and then compared to observations. Orange, then red, vigilance for snowfalls were issued by Meteo France during this event. Despite these alerts, major troubles occurred near the town of Montpellier, particularly on motorway A9. Attempt to explain and provide a conclusion.

Thomas Vanhamel: "The 2018 drought in Belgium"

Drought is a creeping natural hazard that is not bound to specific climates. It can occur even in temperate maritime climates, like that of Belgium. Climate models project an overall increase in precipitation in northern Europe and a decrease in southern Europe. Belgium, lying in the transition zone, could possibly see an increase in the occurrence of spring / summer droughts, similar to the ones that occurred in 2017 and 2018. Adaptation measures to cope with these persistent dry weather regimes must therefore be considered. A first step in adaptation is the monitoring of droughts.
In light of this, the Flemish regional government established a "drought committee" in Autumn 2017 that gathers observations and indices concerning droughts, and decides on a drought state. This information is then used by decision makers to decide whether measurements (restrictions) should be taken. The RMI is indirectly involved in this process, since it delivers several products to the Flemish hydrological service, i.e. SPI, radar products. In light of this global change, these kind of co-operations between meteorological services and other institutes could become increasingly important in tackling difficult problems that concern society in an interdisciplinary manner.

Christian Csekits: "Severe rain and storm event in Austria in October 2018"

The period of the 27th to 30th of October 2018 was a very extreme one for severe weather phenomena in Austria, as well as in many other parts of Central Europe. Firstly, a persistent low over the Gulf of Genoa and associated frontal system caused heavy rainfall in south-western parts of Austria.

After a short break of 12 hours the next low developed over the Western Mediterranean Sea and propagated over Northern Italy and Switzerland towards the Benelux States. This led to another period of heavy rain in the same area as the first rain event. Total precipitation of up to 650 mm was observed within 72 hours, which is 2 to 3 times the monthly sum of precipitation for this region. Due to the strong pressure gradient, severe wind gusts of around 100 km/h in the valleys and up to 180 km/h in the mountains occurred. The performance of different models for various time steps is shown and the procedure of severe weather warnings issued by the Austrian Meteorological Service is illustrated. Luckily the impacts on society and infrastructure were less dramatic then expected as a result of the early delivery of red warnings and the excellent co-operation with the national emergency response center, army, police and fire brigade.

Antonio Triosi: Nightmare week in Italy end of October and beginning of November.

A typical upper air cut-off low was giving high impact weather, especially because of a convergence line in the "warm sector" and a comma, associated to a PVA max, behind the cold front.
During November 3rd in Millicia, there were 12 casualties as a result of a severe flooding event. In total 32 casualties were counted, due to the impacts from a variety of weather parameters.

Jos Diepeveen: Estimating storm impact using a storm number

At KNMI a way of ranking strong wind storms is being used, using an objective method by Sander Tijm: "The storm number." Fact sheets have been made using this ranking for the top 10 most severe storms, describing the impact on different user groups. These fact sheets can be used to estimate impact more objectively in the case of a future severe storm situation.

Session IV "WGCEF Discussion Forum":

Discussion on "training activities and sharing expertise":

- ESSL-testbed is recommended by a colleague from IMS. IMS learn a lot from EU co-operation. IMS can provide unique knowledge, but also have some questions about the handling of various synoptic phenomena, for example the "Red Sea

Trough". Their operational database is also recommended.

- The UK Met Office run internal testbeds, but also send people to the US to participate in testbeds there.

- IMS offer an exchange of expertise and would like to be involved in European developments.

- DMI are running a training day on icing conditions and are looking for someone who can provide training on this topic.

- ECMWF e-learning modules: what is the balance between on-line sessions, test-beds/hands on sessions/meetings or conferences? Feedback suggests a combination of different methods is fine! Exchange of ideas and knowledge through meeting face to face is most preferred, but maybe not that practical.

- Training in Tropical Meteorology for ZAMG forecasters (Aristotle II)

Session VI "Closure of the meeting":

The next WGCEF meeting will be in Dublin (26th and 27th of September 2019)

With thanks to Evelyn/Met Eireann in advance for their kind hospitality!

- Date to be decided, two days on Thursday and Friday at the end of September/beginning of October (since decided as the 26th and 27th of September 2019).

- The suggestion for 2 complete days was well received.

Tips for next meeting/remarks:

- Better preparation, with suggested questions, is required for the discussion sessions!

- Online participants are also welcome to do presentations if technically possible. We should bear in mind that technical problems are always possible.

- Newsletter articles: please ask colleagues if they would also like to contribute.

- EMS sessions are recommended, so send articles. The call for papers will be at the beginning of next year.

Jos Diepeveen nd Christian Csekits and
Chairpersons WGCEF
14th of November 2018