

A selection of updates from NMSs (November 2021 online meeting)



AEMET (Juan Manuel Sancho)

Multi-model non-hydrostatic ensemble is in use running on the new Cirrus supercomputer. There has been a revision in staff positions and forecasting products, resulting in a new catalogue.

ARSO (Veronika Hladnik)

General and aviation forecast benches have now been split. Social media now features 2 weekly podcasts. Some staff turnover has resulted in new, younger forecasters joining the office. There is now no budget for TV broadcasts.

CHMI (Josef Hanzlik)

The new building has become ready after a wait of 8 Years. A rare F4 Tornado affected some areas.

DHMZ (Lovro Kalin)

6 new radars have been installed. The Aladin ensemble system is now working. A more comprehensive warning system commenced with 6 increased to 21 regions covered. Ready for storm naming. DHMZ has seen a 'Brain Drain' from its forecasting staff.

DMI (Janne Rydhof Thor Hansen)

Other employees have now been hired with backgrounds other than meteorology. A new forecasting office on the Faroe Isles has opened, working office hours.

DWD (Robert Hausen)

Devastating floods in July 2021 in the Ahr Valley with more than 180 fatalities resulted in an optimisation of the forecast and advisory process as

well as the crisis management element. Communication part of the system now needs further optimisation.

A new full Dual-Pol 250m resolution radar has been installed at Borkum.

50% of shifts are now completed remotely following new ways established during the pandemic.

ECMWF (Tim Hewson)

Model updates in the last two years – some key points:

Cycle 47r1 – 30 June 2020: CIN computation revised / corrected – values markedly reduced for CAPE and CAPE-shear EFI and SOT use Max of 24 values per day, instead of 4 values per day.

New tropical cyclone wind attributes (quadrant-based) – in BUFR format messages. Model and data assimilation improvements also.

Cycle 47r2 – 11 May 2021: ENSEMBLE went from 91 to 137 vertical levels (now same as HRES) – skill gains very clear.

Cycle 47r3 – 12 Oct 2021: New “moist physics” package – many changes incorporated model output for rainfall and cloud is noticeably different, and is mostly more realistic. Gust and visibility parametrisations improved – again some big, noticeable changes. Many new CAPE-related parameters introduced.

Upcoming model updates:

Cycle 48r1 – End of 2022 or start of 2023: Medium range ENS resolution increased to 9km, and will then match the “HRES” with huge data volumes! Medium range ENS structure unchanged – 51 members, to day 15, 2x per day (+ shorter 06/18UTC runs), extended Range forecasts structure will change completely with 101 members will run at 36km resolution, from day 1 to day 45, every day from a 00UTC data time. This will be completely independent of ENS. Graphical web products are very likely to remain as now – available only for 00UTC Mon and 00UTC Thu runs. Re-forecasts: two sets will be created, one to support the medium range, at 9km resolution, one to support the extended range, at 36km resolution. These will run from 00Z Mon and 00Z Thu, as now. New 4-layer snow scheme will be introduced (but keeping in addition outputs equivalent to the old 1-layer scheme) – some positive impacts expected, e.g. on snow-melt, 2m temperature. New precipitation type “freezing drizzle” will be introduced – we hope to adjust graphical products accordingly.

Other news:

Nov 2021: 50 more chart options and enhanced functionalities were added, part of the “emerging” ECMWF Open Data policy.

In 2021 ECMWF officially became a “multi-site organisation” with headquarters remaining in Reading, UK (majority of workforce), the Data Centre is located in Bologna, Italy (HPC facilities, with supporting staff for those, plus some operational aspects) and a third site is in Bonn, Germany (centre for most EU-funded activities, and a base for some other staff).

Destination Earth (DestinE) soon to start: a major EU project which includes creation of a “digital twin” of the earth, including meteorological and other components will provide a test-bed for very-high-res (1-2km scale) operational global prediction.

Should deliver many benefits for ECMWF core activities, via EU funding

ECMWF’s DestinE activities will be based in Bonn.

FMI (Marjo Hoikkanen)

Remote work has become normal, except for aeronautical forecasting. This has been a silver lining from Covid.

Nordic Sig Weather Chart is now being issued.

An impact data base is being constructed to aid advice.

A renewal of aeronautical met observations at airports is in progress, necessary after FMI took over the work which was handed over in a poor condition.

HNMS (Panagiotis Giannopoulos)

A new dust tool from focusing on Athens has been established.

The SE warnings group will also now consider dust events.

IMGW (Piotr Manczak)

Now cooperating with the Government Centre for Security.

Update to the measurements network including 2 Radars (NE and S).

Hybrid working has become normal due to less office space being available after it was sold.

Forecasters legal expense insurance has become necessary (following the fatal incident in 2017 which led to litigation of forecasters).

Last summer large variability of precipitation, has become more common.

4 casualties storm sadly occurred during Storm Aurore.

IMS (Amit Savir)

Started a high impact weather naming program, similar to storm naming in other areas of Europe. A “Whatsapp” group for SE Mediterranean NMS has proved useful.

A New broadcasting studio was opened.

A “burning index forecast” in cooperation with the national fire brigade service was initiated.

IPMA (Paula Leitão)

3 new forecasters have been welcomed.

A new radar was installed on the Azores.

The lightning detection network is now fully operational.

Working to improve wildfire and snow event forecasts.

Italian Meteorological Service (Alessio Canessa)

Storm naming has now begun.

LHMT (Vida Raliene)

There has been a reorganisation of its staff structure and the centralisation of aeronautical forecasting to the HQ in Vilnius.

More use of social media.

The warning system has been adopted into Metealarm. The system has been redesigned to a high res Harmonie (<1 km) which is used for severe weather situations.

Celebrated our 100 years anniversary.

LVGMC (Laura Krumina)

General, marine and aviation forecasters as well as hydro-meteorologists are now all working together:

3 forecasters are working on the joint general, marine and aviation bench with 2 more in training.

3 more forecasters have just finished special training with 3 more to qualify soon. These forecasters will fill in gaps left by retiring forecasters.

Covid restrictions continued to affect operations well into the late Autumn but a continuous presence in the office was maintained with appropriate safety measures in place.

Meteolux (Luca Mathias)

Lengthy government ministerial discussions regarding the status of Meteolux as the NMS of Luxemburg have concluded that it is the official MET authority although there would be no additional resources.

A new layer of middle management has been created and 3 new forecasters recruited.

The new production system “MeteoFactory” developed by Météo-France International (MFI) has increased the amount of automation.

An internal “tornado risk procedure” has been implemented following a request from the Commission for National Protection in 2019.

The effectiveness of the warning and crisis management system is ongoing. Meteolux is part of the working group to develop a new system: GouvAlert.

AWOS software has been implemented with RVR “transmissometers” and “ceilometers” upgraded at airports.

MeteoSwiss (André-Charles Letestu)

A new mobile weather app has been launched.

Météo-France (Bruno Gillet-Chaulet)

Record Rainfall amounts in the last year but it has proved difficult to adjust thresholds in the forecasting process.

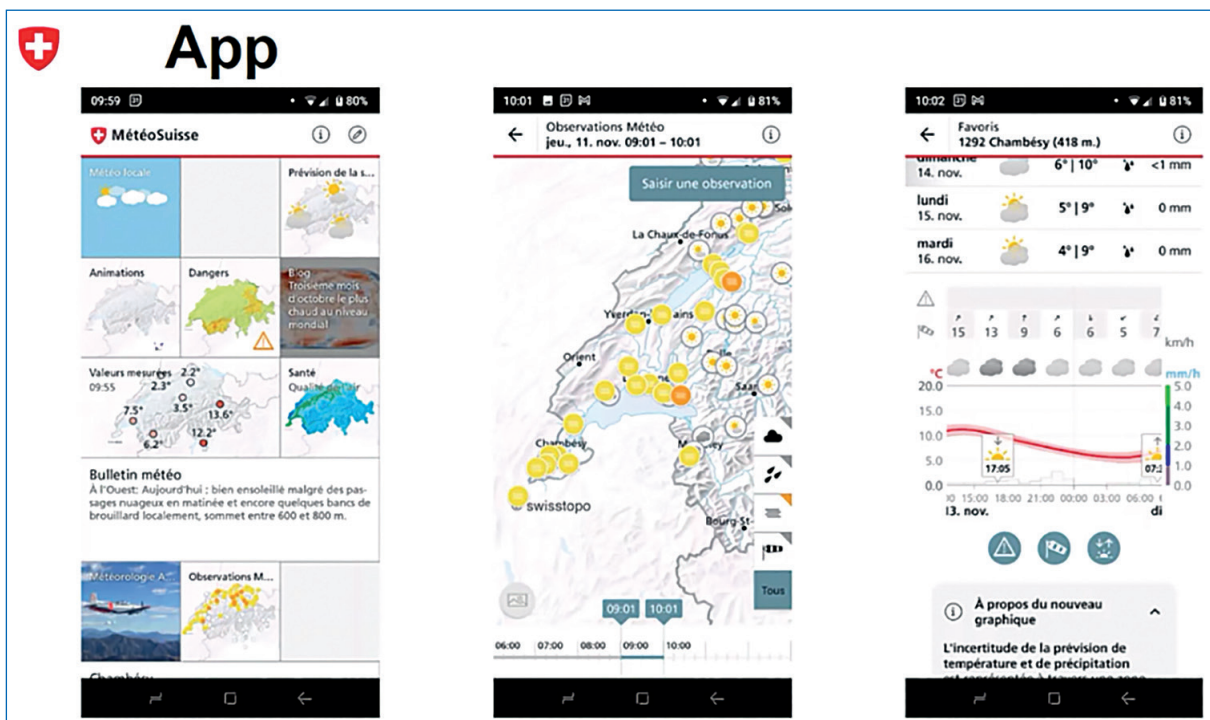
“Aurore”, one of the strongest windstorms ever recorded in October in France, gusts underestimated.

Environmental Action Plan: 20% CO2 gas emission reduction to be achieved by Météo-France in the next 5 years.

Models upcoming updates (2022), a revolution in the Ensembles: members resolution will match HR deterministic runs (PEARP&PEARO), new products (lightning density).

Met Eireann (Liz Coleman)

3 day marine warnings are now available online. Progressing with impact based forecasting.



NMI (Geir Ottar Fagerlid & Karen-Helen Doublet)

Amber warnings for rain have been added: A whole region affected by rain for most of the time warrants a red warning.

Improved return values model reanalysis model based Harmonie at 2, 10, 25 year event return times. A notice board indicates when these values have been exceeded.

Podcasts are being issued on social media.

Now involved in the Eumetnet storm naming group.

OMSZ (Zsolt Pátkai)

Open data policy (OBS model data).

RMIB (Thomas Vanhamel)

Two new staff have been hired to help with the increasing work load: e.g. Road agencies, media channel, new clients.

Hybrid working is now normal with two shifts working from home.

A road model has become operational.

New radar products including Tornado Vortex Detection (TVD) are now available.

Climate services have begun.

UKMO (Nicholas Roe)

Staff structural change, now all operational forecasters are in the same department: Business Services.

Remote working remains common following the pandemic, with 40 new meteorologists trained in the year, mostly working from home.

Civil contingency forecasters were involved in the G7 and COP26 meetings.

Defence forecasters closed their office in Afghanistan after 18 years of continuous operation.

Future of operational forecasting project continues to deliver new aid including: Defence warnings software, online tactical decision aids, new layers including post-processing are available in the visual weather mapping tool and improved thunderstorm now-casting which was trialled over London.

Internal communication has switched to "Teams".

ZAMG (Christian Csekits)

During the Covid pandemic the office was successfully run with a minimum in office presence and most forecasters working from home. An after effect is a law that managers have to check the 3G of staff.

A new director has started: Andreas Schaffhauser. Diversity has increased with the hiring of a female forecaster.

The same forecasting system is now used for all forecasting departments so they can act as backups to each other.

Warning impacts and guidance now feature on the warning pages.

Impact forecasts are now issued to insurance companies and the national power grid.

New customers include the national motorway company and municipal winter services, some receiving video conferences.

A new ZAMG App has been launched: "wetter.zone".