

For the WGCEF meeting - main events 2022 – ½ 2023

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- **New organizational structure of CHMI**
- From 1st of January 2023, a new Forecasting Service Division was established, separated from the Meteorology and Climatology Division.
- This division incorporates the Meteorological Forecasting Section, the Hydrological Forecasting Department and the Forecasting Service Development Department.
- The aim of this change is to focus on the expertise of forecasting offices and communication both between departments and sections, as well as towards the public and customers.



■ Warning System updates I

- Changes of display alerts on the CHMI websites. Approved version of two maps: the first map displays information about all severe phenomena, and second map inform about observed severe phenomena, which require extraordinary attention and possibly quick response to protect property and health of the population;
- From 1st of May 2022 a support expert team Convective Group started to work to help operational forecasters in decision-making process with severe convective storm forecasting and nowcasting. In the convective season (from May to September), forecasters from the Convective Group have shifts every day, when storms are expected. They prepare alert proposals and summary reports for media and social networks, explain forecast uncertainty, prepare case studies, and train the forecasters.



■ Warning System updates II

- The working group for new (Impact based/oriented) warning system has been working since the summer of 2022. A group consists of sub-groups with different tasks. I. group - Limits, Impact, II. group – Hydrology, III. group - CAP, Alert Editor – meteorological workstation, distribution, IV. group: Education, V. group: Communication;
- ČHMÚ developed a mobile application: SMS alert for mayors – access to the application only for mayors and external employees of the regions, and also participates in distribution of alerts for state and local government organizations through many other applications Ambulance, Munipolis, etc. operated by partners.



International and national cooperation with organizations and customers I

- preparation of interdepartmental cooperation in the rental of drones for terrain/damage survey activities, the purchase + training of pilots is planned
- cooperation with an Amateur Meteorological Society, who prepare an application - browser and database for reporting severe weather phenomena from the field (similar to ESWD of ESSL)
- preparation of a cooperation with the Mountain Rescue Service on sharing warnings (avalanches probably will be a part of the NMS warning system, assumes distribution to Meteoalarm)
- HAMR (Hydrology – Agronomy – Meteorology - Retention) – as part of the PERUN project (Prediction, Evaluation and Research for Understanding National sensitivity and impacts of drought and climate change for Czechia) was developed. The goal of HAMR is drought status information with a resolution of the region level on surface and underground waters with a prediction for 1 week, not currently part of the warning system.



International and national cooperation with organizations and customers II

- FROST – a part of TAČR grant project cooperated with Institute of Atmospheric Physics. The aim is to better predict the surface temperature and condition of the Czech motorway network (linear forecasting). The project supposes the use of new data sources, especially satellite measurements, which will be used for a cloud extrapolation;
- In cooperation with the organization CzechGlobe, the FIRERISK model was innovated. FIRERISK is a forecast model for predicting the risk of occurrence and spread of fires. Based on the experience of the fire in the Czech Switzerland National Park, the model was updated. It uses the outputs of the ALADIN model (from 00 UTC). The overall risk is a combination of the Haines index, drought conditions, and the FWI Fire Danger Index itself.
- automatic creation and distribution of products at the request of customers from the energy suppliers (ČEZ, ČEPS) , transport (road – ŘSD, railway – SŽ) and public services segments (WOLT). Data, text, graphic forecasts of severe weather phenomena with a large impact - e.g. wind gusts, storms, snowfall, icing, rime.



Education and Training

- Coordination of preparation, creation of online meteorological courses in MOODLE (mandatory, optional) for newcomer as well as operational forecasters. Examples of courses: Convective storms (mandatory), Road meteorology (mandatory), Integrated warning system and meteorological workstation Visual Weather – Alert Editor (mandatory), other optional courses: Basics of synoptic meteorology, Satellite and radar meteorology, numerical weather forecast etc.

Final note

- Due to the recent economic crisis, CHMI was forced to reduce the number of employees by 3% (23 employees) from 1st October 2023. Unfortunately, the reduction mainly fell on forecasters from the meteorological and hydrological section (10 forecasters in total).

