

Application and verification of ECMWF products 2017

Please state your Organisation and Author(s)

1. Summary of major highlights

As during previous years, the ECMWF products are the main source of information for medium and long range weather forecasts at national service in Slovakia. Our forecaster use EcCharts to access EFI product.

We are downloading operationally LBC from ECMWF for LAM ALADIN –SLOVAKIA. But they are not used for operational purpose. They serve rather as a backup.

In the case when our customer require weather forecast for more than 72h ahead, we use ECMWF products as the main source to cover required forecast range.

During 2017 we started to download complete set of EPS products (all members). We started development of processing software to compute statistics over EPS data (quantiles, median, mean).

ECMWF data are used as input into rainfall runoff models in our hydrological department.

2. Use and application of products

2.1 Post-processing of ECMWF model output

2.1.1 *Statistical adaptation*

There is no statistical adaptation of ECMWF products at SHMI.

2.1.2 *Physical adaptation*

Air quality department ad-hoc uses ECMWF model data as input for WRF model and results are input for CMAQ model. SHMI participates in development and research of LAM EPS (ALADIN-LAEF), which uses ECMWF model outputs.

Our operational hydrological department run operationally rainfall-runoff models using ECMWF deterministic and EPS products. They compute expected discharge for approx. 200 river profiles. Example of water level EPS prediction is on Figure 1.

2.1.3 *Derived fields*

No derived fields are calculated from ECMWF products.

2.2 ECMWF products

2.2.1 *Use of Products*

ECMWF products are the main source of information for medium and long range weather forecasts at national service in Slovakia. Our forecaster use EcCharts to access EFI product and web page for EPSgrams.

The monthly forecasts are based on ECMWF monthly forecasts. The seasonal forecasts are preparing very rarely, but are again based on ECMWF seasonal forecasts.

3. Verification of products

Since we do not have any derived product, we rely on verifications scores provided by ECMWF.

4. Feedback on ECMWF “forecast user” initiatives

5. References to relevant publications