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Application and verification of ECMWF products 2013

Hydrometeorological Service of MACEDONIA

1. Summary of major highlights

As our country became a cooperating state of ECMWF, the range of forecasting products from ECMWF used in the operational work increase. Now there are major tools in the forecasting process. Most frequently used products are: ten days deterministic forecast, also Epsgrams, from the Ensemble Prediction System - EFI, monthly forecast etc. There are some efforts for installing the MetView software last year, but steel without any operative results.

2. Use and application of products

ECMWF products are used in the every day operational work for preparing short-range forecast, which is designed for different users, such as governmental institution, public, media etc.

Medium-range forecast is also mainly based on ECMWF products from deterministic model as well as EPS products. Monthly forecast is often using for the monthly outlook of the weather.

ECMWF forecast products are exploring with password, certificate and token. We find EC-charts web service most useful with a wide range of possibilities in combination of meteorological parameters and creating of meteograms for a lot of places.

2.1 Post-processing of model output

2.2 Use of products

Use of ECMWF products in severe weather situations is significant, especially EPS-EFI products, such as those about wind gusts, wind speed and precipitation. Also EC-charts are using for this purpose. In the forecasting of the heat waves during the summer 2m-temperature EFI also is very useful.

3. Verification of products

Regular verification of the products is not part of our activities.

3.1 Objective verification

3.2 Subjective verification

The ECMWF forecast are very reliable, especially for the first days. Maybe some remark about the exact values of 2m temperature, in the model in most of the places they are lower in correlation with the observed one, but the tendency from day to day in most of the cases is very good.

4. References to relevant publications