

Basin-oriented verification of COSMO-LEPS system

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The predictability of the flood events affecting Central Europe in July and August 2002 is investigated by considering the performance of COSMO-LEPS system over the upper-Danube river basin and sub-basins. COSMO-LEPS is the limited-area ensemble prediction system based on the non-hydrostatic ``COSMO-model" and developed within the COSMO consortium.

In the framework of the Workpackage ``Medium-range Plain Flood" of PREVIEW (EC FP6 Integrated Project), COSMO-LEPS has been based on 10 integrations with 10 km of horizontal resolution, 32 vertical levels and 120 hours of forecast range.

Several skill measures have been developed and used to assess the ability of COSMO-LEPS to provide early warnings of heavy precipitation events for alert areas of various size. Although the skill of the system changes according to the extension of the river sub-basin, the overall performance of COSMO-LEPS is satisfactory throughout the entire flood season.