



EC FP6 Integrated Project - PREVIEW: Short-range plain flood forecasting and risk management

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The EU-IP PREVIEW aims at developing new or enhanced information services for risk management on a European scale. Supporting European civil protection units - local, regional, national and European authorities - the project draws on the most advanced research and technological developments in Earth Observation. To reach this goal, a European team of major actors in risk management has been set up. This team gathers the technical skills and expertise of the scientific community, service operators, industrial companies and users, mainly civil protection authorities from the member states.

Main objectives of the sub-project "Short-range plain flood forecasting and risk management" are to develop, demonstrate and validate a prototype of an integrated flood risk management service, supporting flood prevention, forecast and alert, flood risk mapping and damage assessment as well as crisis and post-crisis management. One aspect is to gain detailed knowledge of the quantitative precipitation distribution in high spatial and temporal resolution. This is a crucial issue for effective operational flood management. Especially in relation to the discharge of a flood maximum, high quality data is required. For this purpose, spatially and temporally highly resolved precipitation data are derived by carrying out nested simulations using an adapted version of the COSMO-DE model of the German Weather Service (DWD). Meteorological simulation results are used to initiate a chain of models and applications. One

of the direct "users" is the hydrological model LARSIM. Besides the highly resolved simulations, an ensemble of lower resolved simulations is used in order to add a band of uncertainty in the flood forecasting. Such a band gives the opportunity to gain more insight in the probability of occurrence and magnitude of a flooding event.

As a last step in the flood management chain end-users play a major role in the interpretation and application of the model results. Therefore, an important aspect is the presentation of the results of the project on internet pages, which are publicly accessible. Using generally understandable flood risk maps in combination with specialized training workshops, civil protection authorities as well national weather services are given a valuable set of tools to react properly in case of a crisis.