

INCA-CE: A Central European initiative in nowcasting severe weather and its applications

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Severe weather is accountable for many natural disasters causing damage and loss of life. Short term forecasting (nowcasting) of such events forms an integral part of early warning systems for civil protection, flood protection and road safety. In recent years, nowcasting has improved significantly and forecasts at very high spatial and temporal scales (e.g. at 1km and in 15min time steps) have been made available. Thus, severe weather conditions such as heavy rain, snow or hail and thunderstorms can be predicted more precisely. Such information is crucial for flood predictions, civil protection and road safety applications. However, the direct link between nowcasting and those applications is still in need of improvement. INCA-Central Europe is a project supported by the European Regional Development Fund which aims at building the link between nowcasting and the application side. Within the project, the INCA nowcasting system, which has been developed by the Austrian weather service (ZAMG), will be advanced and refined to the specific needs of selected users. With 16 project partners from 8 central European countries, a trans-regional and trans-disciplinary approach is adopted. Partners of this project are meteorological and hydrological services as well as public agencies responsible for civil protection, crisis management and road safety. Therefore, nowcasting applications will be tailored to the specific needs of early warning services and moreover, applications for warning purposes will be developed.

In this presentation the objectives of the project, the nowcasting system INCA, the approach for implementing the project, and the strategies for weather forecasting in the fields of civil protection, flood management and road safety are presented.