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Flood risk management for the Bavarian Danube basin within EC FP6 Integrated Project PREVIEW

M. Mueller, M. Tinz, V. Holzhauer (1), A. Assmann (2), P. Krahe (3), J. Bliefernicht (4), K. Daamen (5), M. Kunz (6), G. Meinel (7)

(1) Infoterra GmbH Friedrichshafen (marc.mueller@infoterra-global.com), (2) geomer GmbH Heidelberg, (3) Federal Institute of Hydrology Koblenz, (4) Institute of Hydraulic Engineering Stuttgart, (5) Bavarian Environment Agency Munich, (6) Institute for Meteorology and Climate Research Karlsruhe, (7) Institute of Ecological and Regional Development Leipzig

GMES (Global Monitoring for Environment and Security) is a European initiative for the implementation of information services dealing with environment and security. The initiative is jointly supported by the European Commission and the European Space Agency and aims at the integration of data from space-based and in-situ Earth observation capacities into user-driven operational application services. Within the framework of GMES the objective of PREVIEW (PREVention, Information and Early Warning pre-operational services to support the management of risks) is to develop new or enhanced information services to support the management of atmospheric, geophysical and man made risks, mainly intended for the European civil protection units and regional or local authorities. Concerning the risk management all phases (prevention, preparedness, response, recovery) are covered in a consistent and harmonised approach, allowing the exchange of information between the different operators and actors involved. In the PREVIEW sub-project “Short-range plain flood forecasting and flood risk management” researchers, service providers and users from Germany work on the improvement of flood forecast (forecast lead time $<$ 3d) and risk management services for medium and large river basins. The main objective is to develop, demonstrate and validate a prototype of an integrated flood risk management service, supporting flood prevention, forecast and alert as well as crisis / post-crisis management. For that purpose the service portfolio comprises high-resolved weather forecast, ensemble short-term flood forecast, provision of specific land cover data sets, flood risk mapping, damage assessment and a flood information web portal. Key as-

pect is the integration and operational provision of flood related information for better support of decision makers. Here, the presentation focuses on the requirements of remotely sensed land cover data for a) rainfall-runoff modelling to improve the accuracy of the forecast outputs of the hydrological model used and for b) damage assessment to calculate in combination with socio-economic data the potential economic damage that can be caused by floods. The prototype consisting of the main components of a local up to regional integrated flood risk management service is developed on the basis of the user requirements and the organisational structure of the Bavarian part of the Upper Danube.