

# **Early warning of shallow landslides in the PREVIEW Project: methodology and preliminary results**

N. Casagli (1), M.G. Ciminelli (2), G. Falorni (1), S. Gabellani (3), F. Giannoni (4), N. Rebora (3), G. Righini (1), R. Rudari (3) and the PREVIEW scientific team

(1)Dipartimento di Scienze della Terra, Università' degli Studi di Firenze, Via G. La Pira 4 - I-50121 Firenze, Italy, (2) Telespazio Spa., via Cannizzaro 71, 00100, Roma, Italy, (3) CIMA, Università di Genova e della Basilicata, Via Cadorna 7, Savona, Italy, (4) ARPAL CFMI-PC, Viale Brigate Liguria 2, 16100 Genova, Italy (rr@cima.unige.it/+3901923027240)

The present work is a contribution to PREVIEW, the European Commission FP6 Integrated Project aimed to the development at European level, of new geo-information services for atmospheric, geophysical and man made risks. The landslides platform of the geophysical cluster is targeted to provide tools for the prevention and forecasting of landslides; this work describes the service devoted to the prediction of shallow rapid slope movements (SRSM). SRSM service is an innovative contribution to civil protection procedures. The overall objective is to define an integrated procedure for forecast and warn against distributed shallow landsliding able to respond to the needs expressed by the end-users. The service will blend advanced techniques in different fields: meteorological, hydrologic and geologic modelling, remote sensing and GIS techniques. The service will provide maps for the implementation of the hydro-geological models on the study area based on the combined use of satellite products, geologic modelling, a probabilistic downscaled short term forecast and probabilistic soil slips activation maps based on hydro-geological modelling outcomes. Moreover it will provide a nowcast of the system evolution in the very short term (less than 6 hours) on smaller target geographical areas by means of meteorological radar outputs and nowcasting techniques. The study area is located in Armea basin in the Liguria region, Italy.