



FLOOD WARNING PROCEDURE IN FRANCE: CURRENT STATUS AND EVOLUTION TO IMPROVE FLASH FLOOD FORECASTING

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Abstract

Since 2003, a new act “loi Risques n. 2003-699” related to prevention of natural and technological risks and reparation of damage gives a legal framework to flood forecasting in France. The existing local services responsible of flood watch and hydrometry have been completely reorganized to create a national system collecting all relevant hydrological data and exchanging the meteorological data with the national weather service (Météo France).

A new hydrological warning procedure is opened since July 2006 to increase anticipation through regular and formatted information, to use a common decision-aid system for a graduated involvement of civil security, as well as to directly inform the population to help them become actor (<http://www.vigicrues.gouv.fr>).

Flood warnings are currently assessed for about 250 sections representing a network of 20,000 km of river courses, covering therefore about 90 % of the areas at risk. A number of relatively small watersheds (order of less than 500 km²) are subject to flash floods and surveyed by the national

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system. Various hydrological procedures are implemented, and rainfall-runoff models are being improved, to produce reliable forecasts.

Pluvial floods, currently assessed by heavy rainfall thresholds, are combined with the river flood warnings into a concerted rainfall-flood vigilance. This procedure is operationally produced by Météo France and SCHAPI. Due to the occurrence of flash floods on smaller areas, generating important damage over the last years, an extension of the flood forecasting service is under work, together with Météo France, in order to account for the effect of localised heavy rainfall events.