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Comparison Between Flooded Areas And Flood-risk Areas

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In France, June 15th and 16th, 2010, heavy rainfall strikes the department of the Var and provoked numerous floods,essentially concentrated on the Argens and Nartuby rivers. The ministry services decided to launch studies to know the flood extension zones. This approach allowed to obtain an envelope of the zone flooded in June, 2010. Besides, those services had studies, previous to the flood, that define envelopes of flood-risk area according to different methods such as a hydrogeomorphological approach, a geological approach, a numerical approach based on DEM interpretation (Exzeco) and the method developing for the risk prevention plan. The aim of this paper is to compare these limits of the flood-risk area and that of the 2010 flooded zone. A digital comparison method by means of the software Mapinfo allowed to highlight sectors where the limits of flood-risk areas were exceeded by the event of June, 2010. The results show that the geological mapping allows a coherent approach of the flood-risk area at a maximal scale of 1/50.000. For the Plans of Risk Prevention of Floods, their mapping does not allow to report the envelope of the zone flooded in June, 2010 because the limits are often exceeded. The method “Exzeco” supplies a spatial information about the whole territory but thresholds defined for filling the topography do not supply a sufficient extension of the flood-risk area. Hydrogeomorphological mapping appears as being the best method to define the flood-risk area for such an event but it was not carried out everywhere, so was not available for some zones of interest.