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Rainfall – Runoff Modeling of floods in the Ourika Catchment, Morocco

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Abstract

Taking into account its geomorphologic context thus of its arid semi climate, the catchment area of Ourika represents a hydrological entity subjected to many sudden risings, causing properly damages and/or human, in particular that august 17th that a peak output estimated a 1030m³/s.

For this purpose, the present study is the first study of Modeling at fine time in this basin. Its target the development of a model applicable rain-flow for the operational weather forecasting of the risings by the means of platform HEC-HMS containing the episodes of the risings of November 2014. The event-driven model thus worked out was tested for a total model as well as distributed.

In the light of the got results, during the calibration, it was observed a similar hydrological behavior between the two. Nevertheless, spatialization makes it possible to achieve sets of parameters of the model more realistic and significant within sight of the physical properties and morphological of the basin.

Key words: Ourika, Semi-arid, The rising, Peak output, Weather forecasting, Event-driven, HEC-HMS, Calibration, Global, November 2014.