

# ***Interactive comment on “Dynamic mapping of flood boundaries: current possibilities offered by Earth Observation System and Cellular Automata” by A. Gerardi et al.***

**A. Gerardi et al.**

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Dear Referee,

I would like to thank You for showing your interest in my article. I will try to answer to your question points in order to make it easier to understand.

Q1 - Also, it is not clear how the model is applied (watershed mode or reach mode?)

A1 - The simulations were carried out both in catchment and in reach mode. This choice was motivated by several factors that vary from the actual hydrological, morphological and basin contexts. Above all, the need to discover all the possible devel-

opments regarding the occurrence of precipitation and an increase in river flow.

Q2 - Nor it is clear how the model is integrated with TOPMODEL (is it using TOPMODEL equations?).

A2 - As fully described in Section 3 (page 837, row 25), TOPMODEL is exactly the model that governs the hydrological behavior developed by Beven and Kirkby (1979). Their intuition is based on the robust topographic index derived from the DEM in a systematic way.

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Interactive comment on *Hydrol. Earth Syst. Sci. Discuss.*, 11, 833, 2014.

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