

Interactive comment on “Hydrometeorological multi-model ensemble simulations of the 4 November 2011 flash-flood event in Genoa, Italy, in the framework of the DRIHM project” by A. Hally et al.

Anonymous Referee #2

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The manuscript deals with a very interesting issue concerning the multi-model ensemble simulation of a flash flood event occurred in Genova (Liguria) in 2011. The analysis allows for a relative analysis of the effect of atmospheric and hydrologic modelling uncertainties. The paper is well suited to the readership of NHESS and is generally well structured and written. Only a few conceptual improvements are suggested to increase its completeness.

GENERAL COMMENTS

C3000

The manuscript reports accurate analyses regarding the impact of the uncertainties affecting a set of meteorological and hydrological models. Nevertheless, additional evaluations and descriptions about two aspects, whose explanation would improve the manuscript, could be carried out:

- a) Why exactly those models were considered. This is particularly important for the hydrological analysis, where both spatially explicit and lumped models are considered. Moreover, it is not clear how the hydrological models accounts for the initial conditions. This should be better specified in the paper.
- b) The authors should discuss strategies to reduce the uncertainties affecting the forecasts. Indeed, one key use of the explicit uncertainty assessment is to identify observations and data which can be exploited to reduce the spreading of uncertainty.

SPECIFIC COMMENTS

- 1) P21, L9-L11: “In this sense, the most relevant aspect is to predict the occurrence of an episode where significant flows are expected; accuracy in the quantitative prediction of peak flow is of less importance.” I agree with this sentence, but the authors should discuss more clearly why the accurate peak flow prediction is of less importance.
- 2) Table 1: Titles are not fully understandable.
- 3) Fig 12. The temporal resolution of the observations and simulations should be reported here.
- 4) Fig. 15: the dotted magenta line, which corresponds to the observed peak discharge, is very hard to identify.

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