

***Interactive comment on* “Evaluation dam overtopping risk based on univariate and bivariate flood frequency analysis” by E. Goodarzi et al.**

A. Castellarin (Referee)

attilio.castellarin@unibo.it

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Review of:

“EVALUATION DAM OVERTOPPING RISK BASE ON UNIVARIATE AND BIVARIATE FLOOD FREQUENCY ANALYSIS”

By:

E. Goodarzi, M. Mirzaei, L.T. Shui and M. Ziaei

GENERAL COMMENT

The manuscript deals with a very important issue in flood-risk assessment, the assess-

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ment of flood-hazard associated with dam overtopping. Even though the considered topic is of broad international interest I do not believe that this manuscript is suitable for a final publication in HESS. I detail some of the reasons below. In brief, the presentation of the study is very unclear, the analysis is not reproducible, the language is poor.

I hope the authors will find the comments I report below of use should they decide in the future to revise this manuscript.

With warm regards, Attilio Castellarin.

SOME SPECIFIC REMARKS

- A scientific study should be reproducible, this study is not, due to unclear description of the framework of the analysis, methodologies adopted and variables considered in the study.
- Elements of novelty relative to previous studies on the same (or similar) subjects are not clearly identifiable.
- Techniques are poorly (or insufficiently) described (see e.g., subsections 5.1 and 5.2).
- Notation inconsistent (e.g., same notation is used for the CDF of two random variates, eqs. (4) and (5); random variables are confused with their realizations, and viceversa, see e.g. eqs. (4), (5), (9), ...).
- Terminology is inaccurate (e.g., see the definition of risk on p.9764, which does not consider expected losses or damages).
- Applicability of theoretical assumptions is not discussed (e.g., are eqs. (21) and (22) always valid?).
- Important elements of the study lack a clear description or contextualization (e.g. spillway discharge coefficient).

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- Grammar is extremely poor, several errors and typos are present in the document (see e.g. the title, or the 1st sentence of section 2).

In conclusion, the overall quality of the presentation needs to be significantly improved before the manuscript can become acceptable for publication in an international journal.

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 8, 9757, 2011.

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