

Hydrol. Earth Syst. Sci. Discuss., referee comment RC2
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Referee's comment on hess-2022-232

Anonymous Referee #2

Referee comment on "Three hypotheses on changing river flood hazards" by Günter Blöschl, Hydrol. Earth Syst. Sci. Discuss., <https://doi.org/10.5194/hess-2022-232-RC2>, 2022

The paper illustrates evidence about hypotheses on causes of river flood hazard changes, as presented at the EGU Alfred Wegener Medal talk in May 2022. It is a review of what has been found in past studies, many European ones from Prof. Blöschl's group but not only, on the effects of land use change, river training, and climate change on floods. The paper is very well written and surely of interest to the readership of HESS. As for the Medal presentation, I appreciated the effort made by Prof. Blöschl to present the subject in a very accessible way. Also non-hydrologists can fully understand its content and, even more importantly, students will benefit from this "low entrance-high exit" description of the subject.

I believe that the paper does not need improvement and could be published as is. The only minor suggestion I can give is to try to better explain Figure 9 (bottom graphic) in the caption. It is not clear, to me, what the reference line (horizontal line at 1) is for return periods greater than 1. It is not the current situation (2015) nor the "pristine" one (1800). I cannot easily grasp what it is, so I cannot make a good suggestion for a change in the text of the caption.