Interactive comment on “Metal contamination budget at the river basin scale: a critical analysis based on the Seine River” by L. Lestel et al.

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Two reviews of the manuscript have now been achieved and published as “Referee Comments” in HESSD. The referees are acknowledged for their work and valuable comments. They both agree on the importance of the synthesis described in this paper, which makes it highly suitable for publication in the special issue “Man and river systems: Long-term interactions between societies and nature in regional scale watersheds” of HESS. Based on these evaluations and my own reading of the manuscript, the manuscript is accepted for publication with minor changes.

The author is asked to write an “Author Comment” within 4 weeks to respond to the referee comments and attributed short comments if any, and to submit a revised version of the manuscript accordingly. In doing so, she shall address each point of the referee
comments and provide a list of the changes introduced to the manuscript.

In particular, to meet the recommendation of both reviewers, they must clarify their definition of flows and fluxes, the combination of which is proposed as the main innovation of the paper. This paper relies on a huge data collection and analysis effort, which has been published before and is only summarized here. Both reviewers, however, missed details about the origin of some data, the calculation methods, and the uncertainties of the resulting estimates, especially the ones pertaining to the influence of peak river flows. The authors should address these concerns, using references to other papers when appropriate. Finally, as suggested by Referee 2, the relevance of the paper to the general issue of metal contamination would increase if it compared the Seine case study to other rivers, and discussed the feasibility to apply the proposed analysis to such rivers.

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