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Earth Surface Dynamics Discussions

Interactive comment on "The mass distribution of coarse particulate organic matter exported from an alpine headwater stream" *by* J. M. Turowski et al.

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The MS entitled "The mass distribution of coarse particulate organic matter exported from an alpine headwater stream" submitted for publication in Earth Surf. Dynam. is a very interesting contribution to wood budgeting, providing practical solutions to estimate wood output for a range of discharges. It is then a significant contribution to this field which should be used by a range of researchers (geomorphologists, ecologists, foresters) focusing actually in different part of the world on such wood budget assessment. The dataset is rich and the validation of the statistical relationship from 2 extreme events is convincing. One of the problem for message clarity deals with the

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fact that the 3 field contexts (1 detailed case study (the Erlenbar), 10 other swiss rivers, and the Ain River, France) are combined whereas it is not as straight as this in the text. In the title, only the Erlenbar case-study is considered. Again in the abstract L8, it is said you studied a single stream whereas line 19-20 it is said ".The number of streams studied in this paper is too small to make final conclusions". I would suggest studying a single case-study and considering the comparison with swiss torrents and Ain river in the discussion part only to make the message clearer. A sentence about the comparison feedback should appear in the abstract. The discussion does not fit well also with the main findings of this contribution. It should be focused more explicitly on wood budgeting. What do you know from your case-study compared to other contributions? You should discuss from previous contributions the factors which may influence the rating curves, both spatial (geographical context) and temporal (season, falling versus rising flow, meteorological conditions (wind?))ones, and discuss a little more explicitly why. You refer to potential geographical factors which may influence your results but you do not explain why you consider they may have such potential influence... In this context, it would be very important to provide a little more information on the flow events which have been surveyed.

L17-L22 p. 9, there are no references to support your statement here. They should be introduced in the introduction part to support hypothesis tested related to factors controlling scaling factor. Part 5.1 as a whole is an interesting part but I have a problem to understand how it is related to the question. L18-20 p.12 Why is it characteristic? Arguments? Hypothesis tested? It seems it is not the case anyway. L7 to L14 p.9 should be a discussion point because it is not new data but data that can be compared with new ones similarly to MacVicar and Piegay observations. L14 p. 11. I don't understand the sentence. L3 p.13. I would say they are not correlated at all. L5-7 p. 13 The forest cover in basin is fairly variable between catchments. We would have expected here a potential relationships which is not. One of the key issues is also the representativity of your samples. Can we expect an effect of seasons? type of floods? High event-based variability is not explored or discussed. Fig.8 R2 is only 0.17!! What

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Interactive Comment

is the p-value?. Should correct x-axis title : LENGTH.

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