

Interactive comment on “Sub-daily variability of suspended sediment fluxes in small mountainous catchments – implications for community-based river monitoring” by C. Duvert et al.

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On behalf of all the authors, I wish to thank Referee #2 for his time and constructive comments. His/her specific comments and hints as listed in bullet-point 8 will be addressed as follows:

Referee: p. 8238, line 18. Authors refer to SSC without providing definition. Previously, only referred to SSY (equation 1 only provided later).

Response: definition of SSC was actually given in the introduction (page 8236 lines 13-14); however, we can provide it once again in the method section for better clarity.

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Referee: p. 8240, first paragraph of section 2.2.2. Please clarify the origins of the rating curve relationship. Was the rating curve developed using NaCl tracer dilution data only? This is a little unclear, and perhaps also a little confused by the use of ‘previously’. Suggestion: “. . . For each station, a rating curve was developed using stage readings and discharge measurements generated from NaCl tracer dilution gauging methods. . .”

Response: the sentence in page 8240 lines 12-13 (“In each station, discharge measurements were previously carried out at various stage levels using the NaCl tracer dilution gauging method”) will be replaced by “For each station, a rating curve was developed using stage readings and discharge measurements generated from NaCl tracer dilution gauging surveys”.

Referee: p. 8243, line 2. Provide the mean discharge as one of the lowest in 60 yrs but what about providing a reference (mean of 60 yr mean discharge) for some context?

Response: thanks for the hint. The value of long-term mean discharge will be added in the paragraph: “Mean discharge, however, only reached $1.3 \text{ m}^3 \text{ s}^{-1}$ in 2009, which was one of the lowest values in more than 60 years. Long-term mean discharge was $2.2 \text{ m}^3 \text{ s}^{-1}$ between 1940 and 2002.”

Referee: p. 8244, line 6. Text reads “Catchment characteristics such as land cover, steepness and degree of land degradation were the prevailing factors in explaining suspended solid yields discrepancies”. Does this refer to a detailed analysis elsewhere or just a general evaluation? No information is really provided here to support this statement.

Response: this statement stems from results further detailed in Duvert et al. (2010) and Evrard et al. (2010). We will therefore add both references at the end of the sentence page 8244 lines 6-8.

Referee: p. 8246, line 9. Replace ‘Imprecision’ with ‘Error due to sampling design’. Then “this is an evidence for. . .”, replace with ;”This is evidence of scale effects. . .”.

Response: OK.

Referee: p. 8249, line 23. Replace 'lied' with 'lie'.

Response: OK.

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 7, 8233, 2010.

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