

HESSD Review:

Manuscript: Suspended sediment concentration-discharge relationships in the (sub) humid Ethiopian highlands

The manuscript offers a new, promising view to the standard rating curve method. Modelers would do well to entertain fresh ideas to complex systems. The authors present a refreshing methodology and view of these highly variable systems.

Suggestions and Technical Changes:

P9013 L12-17 For example, runoff coefficients (...) increase during ...
... sediment concentrations fall as the rainy season progresses, in ...

P9013 L28 ... monthly trends that are well under ...

P9014 L13 ... quantify sediment concentration changes ...

P9014 L16 The three study watersheds ...

P9015 L5&L11 Anjeni catchment is 90% or 80% cultivated? Later in the text 80% is used, suggest changing L5.

P9017 L6 ... sediment concentration samples ...
... during the event ...

P9018 L2 Reference is Vanmaecke et al. (2010)

P9018 L15&L18-19 Information is repeated from L7-8. Remove the parenthetical definitions.

P9019 L5 ... helped group storms ...

P9019 L7 In addition, sediment concentrations were averaged over ...

P9019 L22 Remove “the” after “sediment load is”

P9020 L15 Change “if” to “whether”

P9020 L20 Change “gave” to “give”

P9025 Eq. 6 (P-E) was defined earlier as P_e (P9018 L7-8) Why not use that information here? AND, since $C_w = C_c$ from Eq. 4, why not make this variable C_{wc} ?

P9025 Eq. 7 C_w was defined previously in Eq. 4, why not rename this variable C_{wo} ?

Something needs to be done with Eq. 6 and 7 in any case. Please consider the suggestions above.

P9025 L27 Previous reference was to Liu et al. 2008, you could include that here as well.

P9026 L3 ... to Eq. (7) (Fig. 5).

P9026 L12 Remove “to” after “contribute”

P9026 L12 Remove “these” at beginning of line

P9026 L25-26 Also, high variability is to be expected with ...

P9026 L28 Consequently, basing the exponent on physically ...

P9027 L1 Remove “the” at beginning of the line

P9027 L3 ... especially when compared to initial ...

P9027 L4 ... amounts (Fig. 2).

P9028 L7 ... the high and low concentration values.

P9028 L10 ... that high concentration low flow events occurred for rating curves calculated for the ...

P9028 L12 Remove both “the” in the line

P9028 L14-15 ... watersheds, possible explanations arise for decreasing concentrations throughout ...

P9028 L18 Change “and” to “which”

References Not in Text:

Bosshart, 1997

DiCenzo et al., 1997

Hurni 1984; 1985

Nyssen et al., 2000

Tilahun et al., 2011

References Not in Reference List:

Tebebu et al., 2010