

***Interactive comment on “Trends of streamflow, sediment load and their dynamic relations for the catchments in the middle reaches of the Yellow River in the past five decades” by Z. L. Gao et al.***

**Anonymous Referee #1**

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P5489 In6. Replace “adopted” with “implemented”

P5489 In 7, Delete “consequent”

P5489 In11, Replace “their dynamic relations” with “the relationships between streamflow and sediment load”

P5490 In 1-3, Please reword “the relation between streamflow and sediment load did not change essentially in the research of Pan et al. (1999) at a regional scale and even Zheng and Cai (2007) in the small paired catchments.”

C1435

P5492 In 3. What do you mean by “two elements”?

P5492 In 6, I am not sure about the unit for streamflow and it is essentially dimensionless.

P5495 In 4, what is the significance level?

P5495 In 5, Can you express the rate of streamflow change as mm/year/year?

P5495 In 15, Delete “Clearly, years for the former were all earlier than those for the latter”

P5495 In 18. Can you provide any references to support your argument?

P5495 In22, Delete “sequential”

P5496 In 2-4, Reword.

P5496 In 5, what do you mean by “change extent”?

P5496 In 9, should be high, median, and low percentile flows.

P5497 In 3-5, Reword

P5497 In 25, How did you use the change points to analyse the dynamic relationships?

P5498 In1, Why did not you include the rest of month? No data?

P5498 In3-6, Poor correlations between streamflow and sediment load would suggest variable sediment concentrations? The authors should elaborate on this and explain how poor correlations were result from human activities. Also any physical basis for the form of relationships shown in Figure 2?

P5498, In7-10, Replace “domain” with “range”.

P5498, In2427, Do you mean the soil conservation measures implemented in the 1970s to 1980s reduced the sediment generation capacity in most of the catchments?

C1436

P5499, In 4-5, It is not clear to me what this means.

P5499, In 4-20. The authors interpreted the constants in the regression equations as sediment storage. Is there any physical basis for the argument? What happens if they fit different functional relationships to the data? P5500, In13. What do you mean by standard streamflow?

P5501, In 2, what do you mean by elements? Are you referring to streamflow and sediment load?

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C1437