Biogeosciences

Discussions

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Interactive comment on "Geochemistry of the dissolved loads of rivers in Southeast Coastal Region, China: Anthropogenic impact on chemical weathering and carbon sequestration" *by* Wenjing Liu et al.

Anonymous Referee #1

Received and published: 10 April 2018

The Ms explored chemical weathering drawdown CO2 rates, major ion sources, and contribution of anthropogenic acids in the chemical weathering in a most severe acid rain impacted region, China. This is interesting, and the Ms is well structured and well written overall. The ms could be improved with consideration as follows

The field trip was conducted in the high-flow period. Whether is one hydrological sampling representative or can it represent a hydrological year, which must be explicated.

Alkalinity is titrated using HCl, while in the dataset of Table there is no alkalinity. I guess

that the HCO3 is from Alk, is it right? If yes, please demonstrate how to calculate the HCO3.

Authors referred many studies of rock chemical weathering, while several studies in Asia, such as Han River in the Yangtze and Mekong River in the Southeast Asian were ignored.

Authors should inform the extent of CO2 consumption rate in this study in contrast to the world rivers, particularly Asian rivers and highly-impacted rivers.

I have noted that the references is mostly old, some new citations should be included.

L 65 Change stronger to intense

L 138 How many samples?

L232-L233 Very high proportion of SO4 and NO3 is from atmosphere, if correct, does it mean the estimated CO2 consumption rate is still overestimated because of contribution of HNO3?

L393-394 Please could you supply the chemical equations for these weathering by HCO3, H2SO4 or both HCO3 and H2SO4. This will be helpful for readers to quantify the end-members.

L477 No year for this citation

Fig. 5. Please add p value

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Interactive comment on Biogeosciences Discuss., https://doi.org/10.5194/bg-2018-109, 2018.