

This paper discusses the hydrological control mechanisms of the temporal and spatial distribution of nutrients in two tropical small west-flowing river basins, KRB and VRB. It is of great significance. Here, some minor revisions are provided.

The previous paragraph of the text indicates that the DSi flux of KRB is $127.25 \text{ kg ha}^{-1} \text{ yr}^{-1}$, and the DSi flux of VRB is $81.66 \text{ kg ha}^{-1} \text{ yr}^{-1}$. However, the following text then states: "The DSi flux of VRB ($127.25 \text{ kg per hectare per year}$)... comparable to Amazon..." This clearly contradicts the previous text. It should be "KRB" instead of "VRB", indicating an error in the data citation. It is recommended that the author systematically review all the numerical values, tables, and discussion contents in the entire paper to avoid such elementary mistakes that may affect the credibility of the paper.

The latter part of the abstract is highly repetitive with the conclusion content. Avoid copying the conclusion verbatim into the abstract.

Based solely on the descriptions using DIN/DIP or nutrient salt concentrations is not sufficient to fully prove phosphorus limitation. It is recommended to supplement with N:P molar ratio analysis (Redfield ratio comparison), Chl-a/primary productivity response, and seasonal limitation conversion discussions.

You pointed out that the nutrient output from the two rivers has a relatively small impact on the eutrophication of the receiving sea area. However, there are no data on the mixing model of the river mouth, the comparison of the nearshore nutrient background values, or the response data of phytoplankton. Based solely on the river flux, the evidence for inferring the coastal ecological effects is insufficient.

Comparing the DSi area fluxes of small watersheds with those of Amazon and Mississippi is instructive, but it is necessary to emphasize that the comparison indicators are unit area fluxes rather than total fluxes; the differences in climate, lithology, and watershed scale are enormous; it is not appropriate to directly compare the river geochemical mechanisms, to avoid overstating the significance of the research.

It is recommended to uniformly use: hydrochemistry / hydro-geochemistry; downstream region / lower reach; nutrient fluxes / nutrient exports.

The text in Figure 3 is very illegible.

The discussion is extensive, but the core mechanism is not sufficiently summarized, including dilution effect, weathering input, groundwater recharge, runoff erosion and biogeochemical process. Many inferences exceed the scope supported by the actual measured data. Such as, groundwater contributions promoted HCO_3^- accumulation; sewage inputs elevated DIN in downstream KRB; sediment-mediated retention and release in VRB; in-situ production enhanced under stagnant downstream conditions. The ecological consequences section contains obvious speculative expressions. Such as, favors cyanobacteria and chlorophytes; alters trophic pathways; reduces nutritional quality; eakens benthic-pelagic coupling.

It is necessary to quantify. For instance, currently there are several descriptions such as "KRB is dominated by urban areas" and "VRB is dominated by agricultural areas".

Corresponding proportions of the land types can be provided.

Can Figure 6 distinguish between seasons?

Figure 7 is intended to highlight the differences between KRB and VRB, rather than merely

depicting the general continuum model of rivers.

What are the vertical lines in Figure S2?

Please explain the meaning of the black dots in the legend of Figure S2.

The subscripts "HCO₃" "SO₄" in Figures 2, S3 and S4.

The supporting document Text S1 indicates that the unit area nutrient fluxes of KRB and VRB can be comparable to those of large rivers such as the Amazon and Mississippi. This result is quite meaningful, but it is necessary to note whether the different research years, monitoring frequencies, and flux calculation methods are consistent? And are long-term averages used? It is suggested to include a discussion on "the possible influence of differences in different temporal and spatial scales on the comparison results", and avoid using absolute language.

The article divides the river basin into upstream, midstream and downstream areas.

However, the current classification criteria are not clear enough.

The term "significant spatial variability" is used multiple times in the text, but no specific statistical method for determining significance is clearly stated.

High nutrient load and yield occurred repeatedly. This phrase can be appropriately replaced.