

***Interactive comment on “The importance of mineral determinations to PROFILE base cation weathering release rates: A case study” by Sophie Casetou-Gustafson et al.***

**Sophie Casetou-Gustafson et al.**

sophie.casetou@slu.se

Received and published: 4 March 2019

We would like to thank the referee for his helpful comments. With regard to point 3 and the suggestion of comparing our weathering rate estimates with estimates from other climate and lithologic regimes, we argue that our study was necessarily focused without scope to extend to other regimes. Since the focus of this manuscript is the soil mineralogical input to PROFILE, we do not believe a paragraph about the limitations of PROFILE with regard to other PROFILE input parameters would be adequate as suggested by the referee under point 4. However, we could add some lines and/or rephrase sentences in paragraph 2.6.1 and define the steady state concept. This is a

C1

well-known and often used concept. Of course it has draw-backs compared to dynamic models, like ForSAFE, but it also has advantages (e.g. simpler, thus more transparent and easy to use). With regard to point 7 and as mentioned in our reply under point 4, we are not able to extend the study to climatic/lithological regimes. We thank the referee for his/her suggestion under point 8, however, but we prefer our shorter version. We agree with the referee about suggestions made under point 13, they can be enlarged.

---

Interactive comment on Biogeosciences Discuss., <https://doi.org/10.5194/bg-2018-522>, 2019.

C2