

Interactive comment on “Estimating soil erosion risk and evaluating erosion control measures for soil conservation planning at Koga Watershed, Ethiopian Highlands” by Tegegne Molla and Biniam Sisheber

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Authors' Response to the Referee #3 Comments Comment 1: This paper shows an interesting topic which is well presented in the Introduction. I would include in line 22 two new appointments: Asensio, C.; Lozano, F.J.; Ortega, E.; Kikvidze, Z. Study on the effectiveness of an agricultural technique based on aeolian deposition, in a semiarid environment. *Environmental Engineering and Management Journal*, 14 (5): 1143-1150. 2015. Lozano, F. J.; Soriano, M.; Martínez, S.; Asensio, C. The influence of blowing soil trapped by shrubs on fertility in Tabernas district (SE Spain). *Land*

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Degradation & Development, 24 (6): 575-581. 2013.

Response: Thank you for your genuine and constructive comments! The two references you recommended us to include provides very important analysis about the effect of wind on soil erosion. Off course it is one of the factor causing soil degradation in our study area too. However, we didn't discussed about it because of two reasons. Firstly, soil degradation due to blowing wind in Ethiopian highland is very small and is not recognizable compared to huge amount of soil lost every year due to running water. Secondly, the model we chose to (RUSLE) can't take wind erosion in to account. Therefore, the introduction only focused on water erosion. Comment 2: In the section on Material and Methods, I think part of the Description of the Study Site could be extended by reference to characteristics of the site that appear later in the Results and Discussion section. The part of Research Methods, should also be extended with a large number of descriptions in Results and Discussion. In the discussion could include more references to the effect of erosion, in that specific region of Ethiopia, on soil fertility. Response: This is really a critical comment and we appreciate the recommendation. According to your comment, brief explanations about the practice and method of agriculture, land use and the management practice and soil type, which all are causes of erosion are incorporated in each subsection under Results and Discussion section. Moreover, we have supported the analysis and discussion section with additional similar studies in part of the Ethiopian highlands as it further improves this manuscript. However, extending the description of Research Methods might create redundancy as it is depicted on flow chart of the study. The Result and Discussion part also includes the key Research Methods how factors of RUSLE are determined and analyzed.

Interactive comment on Solid Earth Discuss., doi:10.5194/se-2016-120, 2016.

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