

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

F. Pacheco (Referee)

fpacheco@utad.pt

Received and published: 16 September 2016

REVISION Paper: se-2016-120 Title: Estimating Soil Erosion Risk and Evaluating Erosion Control Measures for Soil Conservation Planning at Koga Watershed, Highlands of Ethiopia

OUTLINE AND GENERAL APPRECIATION This is a conventional study on soil erosion rates estimated by the RUSLE equation, with indication of conservation measures for soil loss attenuation. It brings nothing conceptually new but it provides insights on soil erosion of a specific region of Ethiopia (the Koga watershed). The study is well written

Printer-friendly version

Discussion paper



and documented and merits publication in *Solid Earth*, with a minor revision.

CONCERNS I have no concerns on this paper

MINOR COMMENT 1) In lines 15-16 of page 1, the authors should include the environmental land use conflicts (ELUC) as another major cause of soil loss amplification, as recently recognized by Pacheco et al. (2014) and Valle Junior et al. (2014). The ELUC are related to land uses not conforming to soil's capability, meaning that are uses which deviate from the soil's natural use (e.g. practice of agriculture in soils solely capable of being used for forestry). Apart from the amplification of soil erosion, the ELUC have been demonstrated to provoke a decline in soil fertility (Valera et al., 2016). Somehow, these aspects of soil erosion / decline of soil fertility should be referred to in the revised manuscript.

RECOMMENDATION Minor revision 14 September 2016

REFERENCES Pacheco, F.A.L., Varandas, S.G.P., Sanches Fernandes, L.F., & Valle Junior, R.F. (2014). Soil losses in rural watersheds with environmental land use conflicts. *Science of the Total Environment*, v. 485–486C, p. 110–120.

Valle Junior, R.F., Varandas, S.G.P., Sanches Fernandes, L.F., & Pacheco, F.A.L. (2014). Environmental land use conflicts: A threat to soil conservation. *Land Use Policy*, v. 41, p. 172–185.

Valera, C.A., Valle Junior, R.F., Varandas, S.G.P., Sanches Fernandes, L.F., Pacheco, F.A.L. (2016). The role of environmental land use conflicts in soil fertility: A study on the Uberaba River basin, Brazil. *Science of the Total Environment*, v. 562, p. 463–473.

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