

## ***Interactive comment on “Geochemical mass-balance, weathering and evolution of soils formed on a Quaternary age basaltic toposequences” by Hüseyin Şenol et al.***

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Dear Editor, This paper (doi:10.5194/se-2016-105) written by Hüseyin ŞENOL, Tülay TUNÇAY and Orhan DENGİZ deals with important research about “Geochemical mass-balance, weathering and evolution of soils formed on a Quaternary age basaltic toposequences”. This study was carried out in the central Black Sea region of Turkey and aimed to assess the geochemical mass-balance and weathering intensity of Typic Haplustert and Lithic Ustorthent soils that developed in a Quaternary-age basaltic toposequence under semi-humid conditions. As well known that soil has complex system and explanation and determination of ‘soil production’ or ‘soil formation’ are difficult. There are several approaches and concepts exist that lead to potentially dif-

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ferent or possibly even contradictory results. In this study, an empirical method was used by determining the weathering rates and mass-balance of soils developed on a catena with respect to the soil-forming factor topography, and using some weathering indices based on geochemical information. Therefore this study has assessed the role of understanding about soil formation over a toposequence and Quaternary-age basaltic parent materials. Moreover, this case is still able to add some substantial knowledge of interest to not only soil scientists but also to earth scientists and environmental readerships. In addition, the paper contains some useful information that is worthy of publication and usefulness for other researchers in this field. Statement of manuscript is clarity. The main objectives of this research were given by authors in introduction section and these objectives were clarity explained in result and discussion section. Methodology is suitable for research aims and analytical results of research were given adequately in result and discussions section. On the other hand, some additional information should be given in test, - It should be given all math formulas as high quality - Abbreviation under Table 2 , O.M: organic Matter should be O.M: Organic Matter - In all tables should be the same standard using dot "." or comma "," - It should be checked all references in text with reference list. There are some literatures in text such as Dengiz et al., 2013; Dengiz, 2007; Sommer et al., 2008 etc. on the other hand, these literatures should be added in reference section I think that these suggestions contribute to the manuscript. In brief, my opinion is, this manuscript has been written in standard scientific way and is suitable for publication in an international journals as like Journal of Soil Earth. Consequently, the paper has some potential, but needs quite some work. Therefore, the manuscript can be accepted for publication after minor revision.

Sincerely yours,

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