

Interactive comment on

Manuscript title:

MS No.: se-2016-152

**“Soil Atterberg limits of different weathering profiles of the collapsing gullies in the hilly granitic region of south China”** by Deng et al.

Submitted to:

**Solid Earth**

**General Comments:**

This article discusses the use of Atterberg limits as an indicator for soil vulnerability and degradation in collapsing gully systems in the hilly granitic regions of south China. The relationship of the limits to certain soil-physico-chemical characteristics and different weathering profiles was also explored. Overall, the manuscript is sufficiently novel and significant. The authors have in particular done a thorough job of highlighting the impact of collapsing gully systems to physical and social environments in the region. The article is well referenced and concepts explained sufficiently. However, there are a few minor issues related to sampling and site selection (see below under specific comments).

**Specific Comments:**

The authors have used appropriate physico-chemical soil measurements with which to compare the limits and weathering profiles. However, all the sites that were selected from already collapsing gullies with no unaffected site with which to compare to. As such, the relationships studied can be related to the Atterberg limits and weathering profiles to some extent but not to a true baseline of conditions of an unaffected slope. This study would be considerably strengthened if this was included in the results and subsequent statistical analyses.

**Technical corrections:**

There are a few minor technical/typographical corrections listed below:

Page #	Line #	
3	80	Change sentence to <b>Soil erosion is an important problem in mountainous areas...</b>
3	82	Be careful where you mention collapsing gully, check for the correct use of singular/plural (also
4	105-106	check for in other parts of the text)
4	98-99	Perhaps think of another way of framing this sentence
4	113	Change sentence to <b>there is a close relationship between among the stability of...</b>
5	119	Change sentence to <b>pointed out that the granite soil is easy to...</b>
6	148	Add space between <b>plots (22</b>
6	161-163	Consider adding a photo figure here to illustrate the four soil layers in more detail.
8	229	Add space between <b>B). Meanwhile</b>

**Decision:**

Revise (minor corrections)