

## ***Interactive comment on “Influencing factors and their interactions of water erosion based on yearly and monthly scale analysis: A case study in the Yellow River basin of China” by T. Hua et al.***

### **Anonymous Referee #1**

Received and published: 30 May 2019

The author assessed water erosion risk in the Yellow River Basin and highlighted the impact of interaction of the environment factors on soil erosion. This is a nice research on the relationship between soil erosion and environment factors. While, this is a lack of comparison about the effects of a single environmental factor and multiple environmental factors. In addition, there are some problems in the details of figures and texts. Therefore, I recommend this manuscript to be accepted after revisions.

Introduction: I noticed that the topic of this special issue is Remote sensing, modelling-based hazard and risk assessment, and management of agro-forested ecosystems. Soil erosion is indeed disaster and the authors have used modelling methods in soil

C1

erosion assessments. However, the article lacks the expression of the relationship between soil erosion and the agro-forestry ecosystems. The author needs to supplement the relationship in the Introduction and Discussion.

Introduction: Lines 42-46: The author attempts to explain the complex relationship between soil erosion and environmental factors using a few examples, but the expression here is too fragmented. Author needs to summarize the meanings expressed by these sentences in a general language.

Lines 198-206: The results in these sentences are missing units. Please further indicate the unit.

Figure 3: Need to explain some symbols in the box plot.

Figure 4: Purple and green shadows appear in these figures such as figure 4 and figure 6, and the author needs to explain these shadows.

Discussion: The author carried out research on the interaction of environmental factors on soil erosion, but needs to further supplement the comparison between the interaction of multiple factors and the effect of a single factor.

Discussion 4.3: Need to supplement the impact of the missing P factor calculation on the uncertainty of results.

---

Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., <https://doi.org/10.5194/nhess-2019-122>, 2019.

C2