Generally, the manuscript addresses an important topic. The work in the manuscript is sufficient to be a publication. However, the writing needs to be improved in some sections of the manuscript. Please see specific comments below.

Abstract:

Please write full words of abbreviations before using them. For example NPS, SWAT in the abstract. The authors should check abbreviations throughout the manuscript.

L16: "The study topics is mainly focus on", correct to "The study topic mainly focuses on". The purpose of the study is very general. I prefer specific objectives of the study.

L17-18: " SWAT model was constructed based on rainfall runoff

18 and land use type": SWAT model also uses soil types and slope information.

L20: What do you mean by systematically analyzed? Can you describe what you did?

L24: What you mean by "scenario settings" in your study?

In the Results and Discussion of the abstract, you should mention your results for calibration and validation before discussing about the results from scenarios.

Introduction

L53-54: "The concentrate…between different areas". Grammar is not right. Please rewrite.

L73-L74: "The SWAT model has 701 mathematical equations…" This is really unnecessary. The model is continuously updated and equations are continuously added.

L91: "contrast the different" I guess you mean compare.

Materials and Methods

Section 2.1 about description of study area is too long. Please shorten it and only mention necessary information.

L141-L147 " For the calculation process … farmers status quo". I think these sentences should belong to the model setup section.

The description about SWAT model is too long. Since we can find these information in many previous studies and in the manual of SWAT, there is no need to describe them in details. Please shorten it and only choose the necessary information to describe.

L184-185: " We used 30×30 grid data (elevation) as the basis for DEM operation". What did you do to prepare the DEM data?

L193-195 " The database of the underlying substrate was constructed based on the database of soil types using the soil properties & land development data as underlying substrate parameters". I don't understand what you want to say here. What are substrate parameters here?

L204-205 "All the data were validated by the standard procedures used by the SWAT". Can you specify the standard procedures?

L228-229: Which period is used for calibration, and for validation?

L283-288: Your description on streamflow calibration is not clear about how you did for annual calibration and how you used the annual calibration to do monthly calibration. Did you use SWAT-CUP for this calibration?

Is the SWAT setup you used for calibration called the status quo scenario described in

the Scenarios setting?

L271-272: 29 smaller modeling units, are they subbasins in SWAT? Or HRUs? Then after that you mentioned 184 HRUs. But with the number of soil types (26 types) and land use types (27 types), the number of HRUs (184) seems to be a very small number.

I think the results are valuable, however, I don't feel they have been presented well to the reader.

Conclusion

I feel that the conclusion is just repetition of the results and discussion. I don't think you should repeat the number of TN and TP loads under two scenarios. You should summarize what you learn from the results and discuss about them.