

Nat. Hazards Earth Syst. Sci. Discuss., referee comment RC1  
<https://doi.org/10.5194/nhess-2022-253-RC1>, 2022  
© Author(s) 2022. This work is distributed under  
the Creative Commons Attribution 4.0 License.

## Comment on nhess-2022-253

Anonymous Referee #1

---

Referee comment on "Assessing Typhoon Soulik-induced morphodynamics over the Mokpo coastal region in South Korea based on a geospatial approach" by Sang-Guk Yum et al., Nat. Hazards Earth Syst. Sci. Discuss., <https://doi.org/10.5194/nhess-2022-253-RC1>, 2022

---

I read the manuscript with great interest. Authors have investigated the impact of typhoon Soulik on the coastal ecology, landform, erosion/accretion, suspended sediment movement and associated coastal changes along the Mokpo coast. This research developed an integrated approach for identifying coastal dynamics impacted by typhoons and determining damage severity. Approach and analyses support to derive their conclusions.

The content is interested for NHESS readers. Overall, the paper is well structured, with results being presented in a clear and organized manner. I have only a few comments and suggestions for improvements.

### General comments

- Sections 3.3 and 3.4 should be discussed under section 3.2, i.e., Typhoon-induced coastal dynamic modeling. Accordingly, subsections should be renumbered and rearranged.
- Figure 3 and Table 2 contained similar information. It is therefore recommended that Authors keep only one piece of information.
- NDVI and FVC (Fractional vegetation coverage) are frequently used vegetation metrics for assessing land-surface vegetation conditions. Therefore, the use of NDVI is reasonable for vegetation damage severity mapping. I would expect that Authors should analyze the FVC and compare it to NDVI-derived damaged severity. You are referred to go through the following paper:  
<https://doi.org/10.1007/s11069-018-3351-7>.
- It would be better to explain the influence of topography on vegetation damage caused by Typhoon Soulik.
- A statistical summary of the shoreline change based on the NSM model should be

presented in a tabular format.

### **Specific comments**

Line 66: The year of the reference in line 66 (Charrua et al., 2020) should be checked.

Line 112: The year of the reference in line 112 (Kwon et al., 2019) should be checked.

Line 139: The year of the reference in line 139 (Ryang et al., 2018) should be checked.

Line 306: The year of the reference in line 306 (Eom et al., 2016) should be checked.

Lines 335 and 342. Check the abbreviation of remote sensing reflectance.

Line 461: The unit of measurement in Tables 6 and 7 should be standardized. Choose between sq km or km<sup>2</sup>.