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Comment on nhess-2022-130

Anonymous Referee #2

Referee comment on "Warning water level determination and its spatial distribution in coastal areas of China" by Shan Liu et al., Nat. Hazards Earth Syst. Sci. Discuss., https://doi.org/10.5194/nhess-2022-130-RC2, 2022

This paper proposes a quantitative method for determining the four-color warning water level, and the results show that proposed method could be easily adopted in various coastal areas. Especially, the study provides an insight into the spatial distribution of the four-color warning water level and its correction value along the coastlines of China. It can be helpful for storm-surge forecasting and prewarning. The paper is well structured and mostly easy to follow. However, there are few critical points that should be addressed in the manuscript as follow:

- Figure 4 gives the distribution map of the shore section importance level. It is very necessary to further clarify the distribution characteristics, for example, what is the proportion of the 259 shore sections corresponding to the different importance levels?
- The paper points out that the four-color warning water level corresponding to the four levels of marine disaster emergency response is more helpful for the storm surge prewarning. It is better to explain what is the marine disaster emergency response level and how the four warning water levels improve the marine disaster prevention capabilities compared to the previous system.
- The "Discussion" section should be further improved. For example, more detailed explanations of the advantage, limitation and future research could be presented.
- U. S. or USA, China or PRC, please make it uniform in the entire manuscript.
- Re-check the unit of Table 2 and 5. At the same time, it is recommended to move the unit "cm" of Table 5 from the table to the header position.
- Figure 5 shows the spatial distribution of Hs and Hd. Please re-check the name of Figure 5 and make sure the name corresponding to the content.