

Nat. Hazards Earth Syst. Sci. Discuss., referee comment RC1
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Comment on nhess-2022-130

Anonymous Referee #1

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-RC1>, 2022

This study proposed a method for the determining of warning water level for storm surge and investigated their variations in China, which could provide useful guidance for storm surge early warning and is of great practical significance. While, the manuscript should be more relevant as a scientific article and the scientific contribution of this study should be more clear. Specially,

(1) The literature overview in the Introduction is not sufficient; The review of existing studies especially for some latest researches should be strengthened to reveal the research gap and justify the novelty and contribution of this study.

(2) The methods used in this study should be evaluated, for example, the reason of using Gumbel model for return period analysis should be given and the significance of the fitting should be evaluated; the rationality and effectiveness for the method of calculating the four warning water levels should be clarified.

(3) I would suggest a discussion for the advantage and limitations of the proposed method in comparison with other methods.

(4) The caption of Table 3,4,5 should be complete.

(5) The compass (the North Arrow) was missing in all figures.