
Receive a cordial greeting of my part. I have completed the review of the manuscript entitled “Temporal prediction of landslide-generated waves using a theoretical-statistical combined method”. I recommend accepting the manuscript in its current version with only small suggestions. To support my recommendation, please find a detailed description of the following questions:

1. What is the main question addressed by the research?

The authors worked on a very important issue associated with natural disasters, i.e., landslides. Specifically, the authors study the landslide-generated waves problem by providing models that build the temporal relation between the wave characteristics and the slide features. Insights about impulsive waves generated by snow are gained with this investigation. The authors experimentally determined the slide’s temporal velocity field using the particle image velocimetry technique, and the temporal wave amplitude was estimated using panel data analysis. Finally, the authors validated the proposed theoretical-statistical combined predictive method with the support of experimental data.

2. Do you consider the topic original or relevant in the field? Does it address a specific gap in the field?

The topic is original since the authors address the temporal relation between parameters such as the maximum wave amplitude, maximum wave height, and slide features.

3. What does it add to the subject area compared with other published material?

The manuscript adds a mathematical model to predict the temporal relation between wave characteristics and slide features, giving a specific insight into impulsive waves generated by snow avalanches.

4. What specific improvements should the authors consider regarding the methodology? What further controls should be considered?

This reviewer considers the methodology presented by the authors to be clear enough and supports its publication. However, the reviewer recommends expanding the introductory section, citing some relevant studies on the topic, such as:

- Yavari-Ramshe, S., Ataie-Ashtiani, B. Numerical modeling of subaerial and submarine landslide-generated tsunami waves—recent advances and future challenges. *Landslides* 13, 1325–1368 (2016). <https://doi.org/10.1007/s10346-016-0734-2>
- Di Risio, M., & Sammarco, P. (2008). Analytical modeling of landslide-generated waves. *Journal of waterway, port, coastal, and ocean engineering*, 134(1), 53-60.

5. Are the conclusions consistent with the evidence and arguments presented, and do they address the main question posed?

The reviewer considers that the conclusions are consistent with the arguments presented in the body of the manuscript.

6. Are the references appropriate?

The reviewer considers the authors have missed some important references and recommends including some of them:

- Yavari-Ramshe, S., Ataie-Ashtiani, B. Numerical modeling of subaerial and submarine landslide-generated tsunami waves—recent advances and future challenges. *Landslides* 13, 1325–1368 (2016). <https://doi.org/10.1007/s10346-016-0734-2>
- Di Risio, M., & Sammarco, P. (2008). Analytical modeling of landslide-generated waves. *Journal of waterway, port, coastal, and ocean engineering*, 134(1), 53-60.

In the introductory section, the reviewer encourages the authors to detail the differences between the before-mentioned studies and the current study.

7. Please include any additional comments on the tables and figures.

The reviewer is satisfied with the current version of the tables and figures. However, recommends minor editorial changes:

In lines 81-86: “Comparing with previous empirical equations which predicted the maximum wave characteristics from slide parameters on impact, the proposed statistical-theoretical combined model not only estimated the temporal parameters of the sliding mass on impact but also the predicted the temporal wave characteristics from these temporal slide parameters, which helps to understand how the slide features affects the wave

generation.” The reviewer considers the authors should delete the article “the” before “predicted” in line 84. Also, delete the “s” of the word “affects” in line 86.

In line 297, it seems there is a typo: (see?)

With this report, the reviewer hopes the editor has enough elements to decide on the publication of this manuscript.