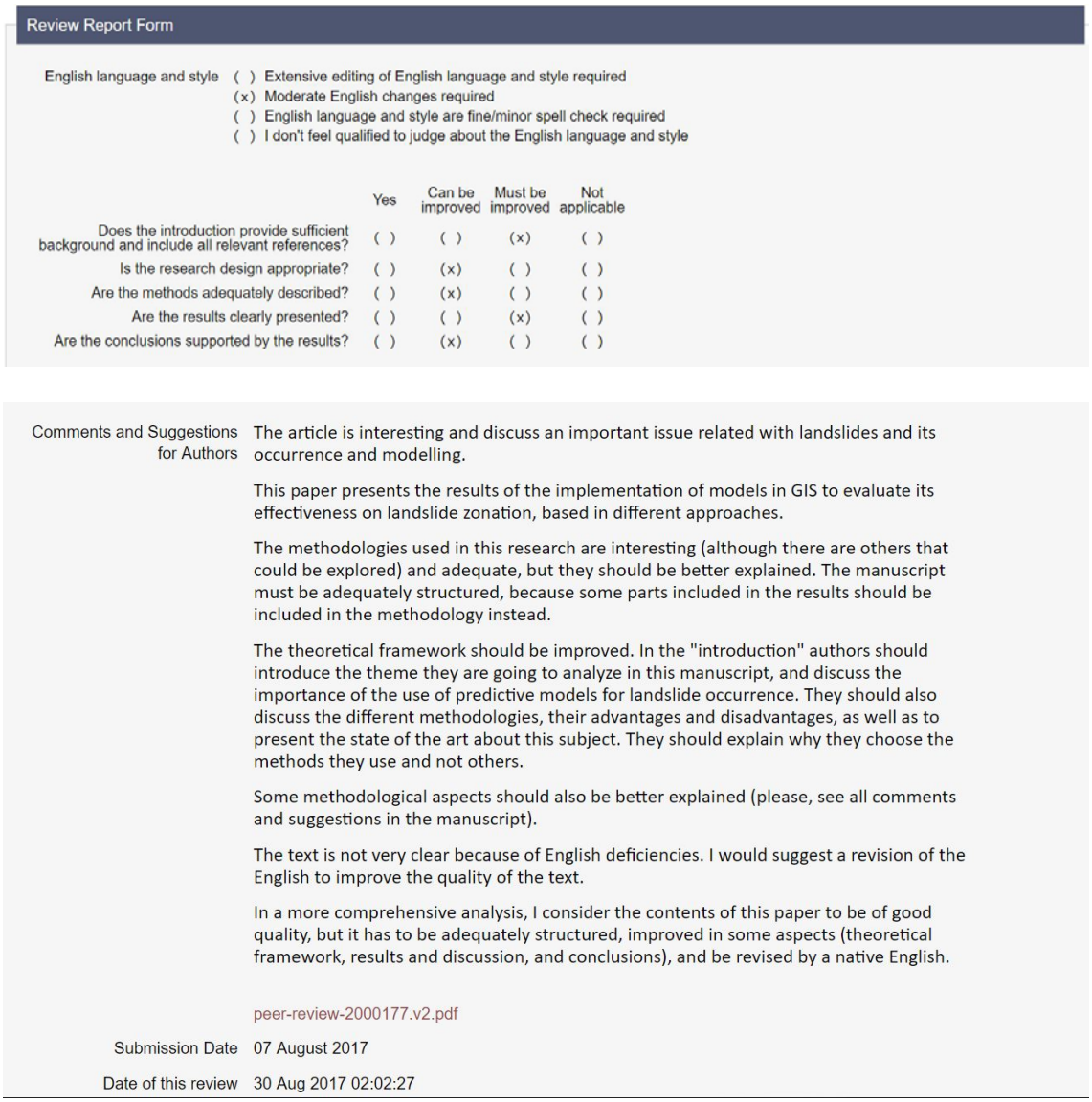
5. Judul Artikel: Slope stability assessment using trigger parameters and SINMAP methods on tamblingan-buyan ancient mountain area in buleleng regency, bali, Penulis: Sinarta I.N., Nama Jurnal: Geosciences (Switzerland), Volume Jurnal: 7, Nomor Jurnal: 4, Tahun Terbit Jurnal: 2017, Halaman: 1-16, ISSN: 2076-3263, Penerbit: Multidisciplinary Digital Publishing Institute (MDPI), DOI: https://doi.org/10.3390/geosciences7040110, SJR: 0.660, Impact Factor: 0.660

AUTHOR CORRESPONDING

REVIEWER 1



Review Report Form

English language and style
( ) Extensive editing of English language and style required
(x) Moderate English changes required
( ) English language and style are fine/minor spell check required
( ) I don't feel qualified to judge about the English language and style

	Yes	Can be improved	Must be improved	Not applicable
Does the introduction provide sufficient background and include all relevant references?	( )	( )	(x)	( )
Is the research design appropriate?	( )	(x)	( )	( )
Are the methods adequately described?	( )	(x)	( )	( )
Are the results clearly presented?	( )	( )	(x)	( )
Are the conclusions supported by the results?	( )	(x)	( )	( )

Comments and Suggestions for Authors

The article is interesting and discuss an important issue related with landslides and its occurrence and modelling.

This paper presents the results of the implementation of models in GIS to evaluate its effectiveness on landslide zonation, based in different approaches.

The methodologies used in this research are interesting (although there are others that could be explored) and adequate, but they should be better explained. The manuscript must be adequately structured, because some parts included in the results should be included in the methodology instead.

The theoretical framework should be improved. In the "introduction" authors should introduce the theme they are going to analyze in this manuscript, and discuss the importance of the use of predictive models for landslide occurrence. They should also discuss the different methodologies, their advantages and disadvantages, as well as to present the state of the art about this subject. They should explain why they choose the methods they use and not others.

Some methodological aspects should also be better explained (please, see all comments and suggestions in the manuscript).

The text is not very clear because of English deficiencies. I would suggest a revision of the English to improve the quality of the text.

In a more comprehensive analysis, I consider the contents of this paper to be of good quality, but it has to be adequately structured, improved in some aspects (theoretical framework, results and discussion, and conclusions), and be revised by a native English.

peer-review-2000177.v2.pdf

Submission Date 07 August 2017

Date of this review 30 Aug 2017 02:02:27

Comments and Suggestions for Authors

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Some methodological aspects should also be better explained (please, see all comments and suggestions in the manuscript).
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In a more comprehensive analysis, I consider the contents of this paper to be of good quality, but it has to be adequately structured, improved in some aspects (theoretical framework, results and discussion, and conclusions), and be revised by a native English.

Reply:
Thanks for your attention with your kind and insightful comments. This comment provides a significant role in improving the quality of this paper. This article will revise our best as per your suggestion.

Based on the reviewers' suggestions all comments and suggestions have been answered and answered.

The revised part of the paper is marked in red show the changes.

The following points should be considered before publication

1) In my opinion "Soil movement" is not the better designation for what is being analyzed in the manuscript. "Slope" or "terrain" may be preferable...
   Reply:
   Thanks, I agree and support your opinion, more suitable to use Slope
   The explanations were added in the revised manuscript:
   P1:L2 : "*Slope Stability Assessment Using Trigger Parameters and Sinmap Methods on Tamblingan-Buyan Ancient Mountain Area in Buleleng Regency, Bali*"

   Thank you for your suggestion

2) In this "introduction" authors should introduce the theme they are going to analyze in this manuscript, and discuss the importance of the use of predictive models for landslide occurrence. They should also discuss the different methodologies, their advantages and disadvantages, as well as to present the state of the art about this subject.

Reply:

P1-2:L35-58 : *The high demand for public information related to spatial planning and environmental protection against landslide hazards, so that landslide-related hazards assessment becomes the main tool in risk management as an integral part of land use planning in disaster prone areas[1][2]. Zoning of landslide hazard is associated with environmental conditions with homogeneous land sharing. Determining the level of threat based on the classes specified by the researchers themselves by the purpose and experience of the author. Hazard assessments are usually indicated on the map, which displays spatial distributions or hazard class zones [3][4]. However, the probability of landslide events still difficult to include in most of the hazard maps due to different environmental conditions, scarcity of previous landslide events or historical events [4][21]. As a result, most of the published hazard maps present only spatial information of landslide hazards and do not provide an estimate of when a landslide occurred.*

Various methods have been developed and applied to landslide hazards assessment in recent years from the simplest way to very sophisticated methods, using a large number of landslide parameters [5]. The hazards assessment classified into two approaches, namely qualitative and quantitative methods. The choice of this method relies heavily on the accuracy of the results and the nature of the problem desired and must be by the quality and quantity of the data available. Generally, for large areas where the quality and amount of available data is too limited for quantitative analysis, the threat assessment with qualitative methods is more appropriate, whereas for slopes in close locations is done by equilibrium boundary strength analysis, which requires a detailed quantitative assessment of hazards.

P2:L76-83: *The primary purpose of this paper is to present the landslide hazard assessment by comparing the deterministic and semi-quantitative methods around the Tamblingan-Buyan Ancient Mountain in Buleleng so that the most relevant methods in the area can be identified and applicable under the same location conditions. The semi-quantitative method with overlay operation in GIS is used to analyze some physical aspects of nature (1) slope inclination, (2) weathering rocks, (3) geological structure, (4) rainfall, (5) groundwater potential, (6) seismicity, and (7). The deterministic method with this Sinmap extension is analyzing the landslide potential area using the soil parameters, in this modeling, the area is divided into six classes which each region has a "Stability Index" value to determine whether the area is in the landslide potential area or not.*

Thank you for your suggestion.

3) Here you have the methodologies (not the theoretical framework). Should change the title.

Reply:

We agree with reviewer suggestion, we replace theoretical framework with methodologies

P3:L113 : ***Methodologies***

Thank you for your suggestion.

4) Which methodology was used to define thevarious parameters?
How the authors reached the different weighting values? Randomly? If not, which method was used? References about this methodologies? It must be all explained!

Reply:

Thanks for the attention, We add the explanation of methodology of parameter determination and weight value on each parameter

The explanations were added in the revised manuscript

P5:L177-180: *Weighting method based on Guidance of spatial planning of disaster prone areas, Decree of Minister of Public Works No.22 / PRT / M / 2007. Processing started from study literature, and field data, then processed and arranged in the form of thematic maps, geology, rock weathering map, slope inclination map, vegetation map, earthquake map, and hydrogeology map with an estimate of typology of landslide prone areas.*

5) What's the objective of this typology? It is not clear!

Reply:

P5:L181-183: *The regional typology aims at analyzing using ArcGIS 10.3 Program in a depiction of landslide hazards map, which will produce potential ground motion maps covering five very high, high, medium, low and very low hazards zone levels.*

Additional revisions

P5:L207-209: *Soil sampling for Sinmap analysis taken at ten village points. Which nine points in the villages are around the research whose purpose is the control of the land properties of the study area, and one village is Pancasari Village with three boreholes as the main point located at the research location. Soil properties testing at 10 sampling points in Buleleng District can be seen in Table 2.*

6) "...the ability of...inability..."?????

Thank you for your correction, my correction of this manuscript

Reply:

P6:L214-220 : *The Sinmap Method which is an additional extension on ArcGIS is used to analyze the assessment of the hazards level of landslides, the study is only carried out in a narrower area, namely in Buleleng regency, especially in Sukasada sub-district, which is an ancient mountainous area. The sampling of soil in the research area used in Sinmap is cohesion value, internal friction angle which then made the range between the lower limit and upper limit, depending on the dominant soil type in the research area. Borehole for sample controls was also conducted in other regions around the study area.*

7) These should be justified. Are you sure these are the best parameters to use? You should justify your choice with solid arguments.

Thank you for your suggestion, my correction of this manuscript

Reply:

P8:L254-262: *Regulation of Indonesia Minister of Public Works decree no. 22 / PRT / M / 2007 each weighting rating of parameters recommended in the regulation weights indicator: 30% slope inclination, 15% rocks weathering, 20% geological structure, 15% rainfall, 7% groundwater potential, 3% seismicity, and 10% vegetation. Based on the literature study all the assessment components are relevant to the environmental conditions in Indonesia as a tropical country. The use of these seven parameters is very appropriate to use in this study. Assessment of the weight of landslide threat on each indicator done through multiplication of index weight with scoring weight. Scoring level of hazards made five level that is; (1) very low, (2) low, (3) medium, (4) high and (5) is very high, in order to get more accurate or detailed results and can compare with Sinmap method which*

also has five level of stability index.

8) This part where you explain the values for each parameter should go to the previous point, where you present the methodology.
These aspects are methodological topics, not results. In results you should present the result of the analysis made with the two methods, confront them (very important!) and then discuss these findings. I suggest you to better explain how you reached these values.
Thank you for your suggestion, my correction of this manuscript
Reply:

P8-9:L263-270: *Criteria and indicators that weights and scores on each of the parameters in the creative zone based on the height of the area in this research area. Furthermore, the software ArcGIS 10.3, performed the procedure of calculation and determination of the region of the threat of ground motion in overlay between the map parameter with a map spread the hazards of landslides. The overlay map parameters produce five index values the hazards of landslides, the threat level from very low to very high, the scale interval of the hazards of ground motions at each zone area as in Table 4.*

No	Indicator	Weighted (%)	Scoring	Verifer / Description		
				Typology A	Typology B	Typology C
				mountainous area slopes, hillsides, hills slopes, and river cliffs with a slope of > 40%, with altitudes > 2000 m.swl	the foot of the mountainous area, of the slope ranges between 21%-40%, with the height of 500 m - 2000 m.swl.	zone in plateau, lowland, river cliff, or river valley with slope ranges from 0%-20%, with the height of 0-500 m.swl
1	Slope inclination	30	5	Slope inclination > 40^{o}	Slope inclination > 40^{o}	-
			4	Relatively convex slopes steeper slope of 35^{o} – 40^{o}	Relatively convex slopes steeper slope of 35^{o} – 40^{o}	Relatively convex slopes steeper slope of 35^{o} – 40^{o}
			3	Slope inclination 35^{o} - 40^{o}	Slope inclination 35^{o} - 40^{o}	Slope inclination 35^{o} - 40^{o}
			2	Slope inclination 20^{o}-30^{o}	Slope inclination 20^{o}-30^{o}	Slope inclination 20^{o}-30^{o}
			1	Slope inclination 15^{o}- 20^{o}	Slope inclination 15^{o}- 20^{o}	Slope inclination 15^{o}- 20^{o}
2	Rocks weathering	15	5	-	Regosol	Regosol
			4	Andosol, Grumosol	Andosol, Grumosol	Andosol, Grumosol
			3	Brown Forest Soil	Brown Forest Soil	Brown Forest Soil
			2	Latosol	Latosol	Latosol
			1	Aluuvial	Aluuvial	Aluuvial
3	Geological structure	20	5	*very wide* >2 m	*very wide* >2 m	*very wide* >2 m
			4	*Wide* 0,6 m – 2 m	*Wide* 0,6 m – 2 m	*Wide* 0,6 m – 2 m
			3	*Moderate* 0,2 m – 0,6 m	*Moderate* 0,2 m – 0,6 m	*Moderate* 0,2 m – 0,6 m
			2	*Close* 0,006 m – 0,2 m	*Close* 0,006 m – 0,2 m	*Close* 0,006 m – 0,2 m
			1	*very close* < 0,006 m	*very close* < 0,006 m	*very close* < 0,006 m
4	Rainfall	15	5	Rainfall reaches 100 mm / day with annual rainfall> 5500 mm	Rainfall reaches 100 mm / day with annual rainfall> 5500 mm	Rainfall reaches 100 mm / day with annual rainfall> 5500 mm
			4	Rainfall <100 mm / day with annual rainfall 4500 - 5500 mm	Rainfall <100 mm / day with annual rainfall 4500 - 5500 mm	Rainfall <100 mm / day with annual rainfall 4500 - 5500 mm

			3	Rainfall <100 mm / day with annual rainfall 3500 - 4500 mm	Rainfall <100 mm / day with annual rainfall 3500 - 4500 mm	Rainfall <100 mm / day with annual rainfall 3500 - 4500 mm
			2	Rainfall <100 mm / day with annual rainfall 2500 - 3500 mm	Rainfall <100 mm / day with annual rainfall 2500 - 3500 mm	Rainfall <100 mm / day with annual rainfall 2500 - 3500 mm
			1	Annual rainfall <2500 mm	Annual rainfall <2500 mm	Annual rainfall <2500 mm
5	Groundwater potential	7	5	High groundwater potential	High groundwater potential	High groundwater potential
			4	High – medium potential groundwater	High – medium potential groundwater	High – medium potential groundwater
			3	Medium groundwater potential	Medium groundwater potential	Medium groundwater potential
			2	Low groundwater potential	Low groundwater potential	Low groundwater potential
			1	Potential groundwater is scarce	Potential groundwater is scarce	Potential groundwater is scarce
6	Seismicity	3	4	0,4 – 0,5 g	0,4 – 0,5 g	0,4 – 0,5 g
			3	0,3 – 0,4 g	0,3 – 0,4 g	0,3 – 0,4 g
7	Vegetation	10	5	Irrigated rice fields	Irrigated rice fields	Irrigated rice fields
			4	Rainfed rice fields	Rainfed rice fields	Rainfed rice fields
			3	Plantations, fields	Plantations, fields	Plantations, fields
			2	Forest	Forest	Forest
			1	Rocky ground, bush, Savana	Rocky ground, bush, Savana	Rocky ground, bush, Savana

9) Why didn't you performed and proposed such a modification? It would be very valuable for the manuscript!

Reply:

Thank you for your suggestion, we are still in the process of research the landslides hazards method with Analytic Hierarchy process (AHP). The method of AHP, we believe it would be more flexible because it adapts to environmental conditions or regions threatened by the landslide.

P1:L2 : *The results of this study recommend the method of weighting parameters, with percentage with the percentage of weight given, because the results of the survey are quite extensive. Weighting also allows for modification according to the characteristics of the study area, beginning with geotechnical observations and investigations. The Analytic Hierarchy (AHP) method allows highly modifying the scale of weights on each of the parameters greatly influenced by the experience of the weighting individual, as well as the environmental conditions.*

REVIEWER 2

English language and style
( ) Extensive editing of English language and style required
(x) Moderate English changes required
( ) English language and style are fine/minor spell check required
( ) I don't feel qualified to judge about the English language and style

	Yes	Can be improved	Must be improved	Not applicable
Does the introduction provide sufficient background and include all relevant references?	( )	( )	(x)	( )
Is the research design appropriate?	( )	( )	(x)	( )
Are the methods adequately described?	( )	(x)	( )	( )
Are the results clearly presented?	( )	(x)	( )	( )
Are the conclusions supported by the results?	( )	( )	( )	(x)

Comments and Suggestions for Authors

In your paper you compare the use of the SINMAP application with a weighted overlay method for an area in Bali. I consider this a case study in which you have applied two well-known techniques and compared them. The input data for the analysis is quite limited. Especially the soil strength parameters have a large variation and they do not seem to be related to mapped soil units. How about the soil depth map? Did you make such a map and if so, how did you make this? The SINMAP method should be checked carefully. The parameterization should be explained better. How did you measure soil strength and conductivity?. Explain better why you selected the factors for the weighted overlay and how you determined their importance. Why use, groundwater potential? Why the seismic factor

which is the same in almost all the area? How did you include different soil water scenarios in the analysis? I think you should call this hazard, but susceptibility

The conclusions are not substantiated, and only state that one method is better than the other, which may be only true for this area and for this set of data.

Reply:

Thanks for your attention with your kind and insightful comments. This comment provides a significant role in improving the quality of this paper. This article will revise our best as per your suggestion.

Based on the advice of the reviewers, all comments and suggestions have answered. Improvements have made in the manuscript.
Thank you for any suggestions, which will make my paper better.

The following points are comments on the reviewer's question:

1. The input data for the analysis is quite limited. Especially the soil strength parameters have a large variation and they do not seem to be related to mapped soil units.

Reply:

Sampling conducted in ten villages of the research area consisting of nine soil sample data in the villages around the study of the objectives as properties soil control of the research area and one village with three boreholes located at the research location.

Thank you for your comment.

2. How about the soil depth map? Did you make such a map and if so, how did you make this?

Reply:

We did not conduct a study of the depth of the soil layer, in the analysis of Sinmap and the Weighted method does not require parameters related to soil depth. Because our research is regionally challenging to conduct an analysis associated with soil depth unless the analysis performed on certain slopes that are two-dimensional.

Thank you for your comment.

3. The parameterization should be explained better. How did you measure soil strength and conductivity?

Reply:

We have tested the soil properties on the borehole in the study area as well as in the field around the control study. Testing of soil mechanical properties of soil shear strength by using direct shear test to obtain the internal friction angle value of the soil (Ø), and soil cohesion value (c). Whereas the soil conductivity value based on the permeability test results and compared the soil type obtained with the existing literature.

Thank you for your comment.

4. Explain better why you selected the factors for the weighted overlay and how you determined their importance.

Reply:

The weighted factor is an indicator recommended by Ministry of Public Works Decree No.22 / PRT / M / 2007, the weights in it have been determined as follows: (1) slope inclination = 30%, (2) rock weathering = 15%, (3) rainfall = 15%, (5) groundwater potential = 7%, (6) seismicity = 3 %, and (7) vegetation = 10%.

Data processing begins with literature and literature data, and field data is processed and arranged in the form of thematic maps, such as geological map, soil map, topographic map, vegetation map, seismic map, the geohidrologi map of threat level based on natural physical aspect concerning typology of the disaster-prone area.

Thank you for your suggestion.

5. Why use, groundwater potential?

Reply:

Groundwater potential is one of the indicators in soil movement assessment, the study of groundwater potential based on Hydrogeology map. Potential groundwater determines the level of groundwater, seepage that occurs in the research area that is very influential on the occurrence of landslides.

Thank you for your comment.

6. Why the seismic factor which is the same in almost all the area?

Reply:

The map reviewed refers to the Indonesian Earthquake Hazards Map 2010 issued by the Ministry of Public by using Peak Ground Acceleration (PGA) in the bedrock (SB) for probability exceeded 2% within 50 years of service life or corresponds to the 2475 quake period year. Wave propagation or attenuation, rocking in bedrock in Bali Province, as the research area of 0.3-0.4 g and 0.4 to 0.5 g.

Thank you for your comment.

7. How did you include different soil water scenarios in the analysis? I think you should call this hazard, but susceptibility.

Reply:

The potential of underground water in the research area classified into five based on the Spatial Plan of the Province of Bali, such as; explained as follows:

1. High underground water potential. Being on medium graduation on tuff and diffuse rocks on vesicular lava and breccia (volcanic) debit well water 10 liters/sec. spring discharge> 300 liters/sec.

2. Medium to high water potential. Groundwater is in alluvium volcanoes, plains, and rivers. Well water discharge 5 - 10 liters/ sec, water discharge 10-15 liters/ sec.

3. Medium water potential is moderate graduation, groundwater is in gap structure, channel and fracture in limestone, well water discharge at depth more than 10 meters, water discharge <5 liters/sec, springs <10 liters/sec.

4. Low underground water potential. A small to very small potential, groundwater is in alluvium sediment swamp (coastal plains, tertiary rock rendering).

5. Potential groundwater is scarce. How much on the graduation is very small to rare, groundwater is at the peak location of the Volcano in Lava rocks and the peak spread of tertiary deposits only as a flow medium.

This study is to compare the method of landslide risk assessment, not compare vulnerability if speaking vulnerability of social factors should be included such as social factors, economy, demography, and others.

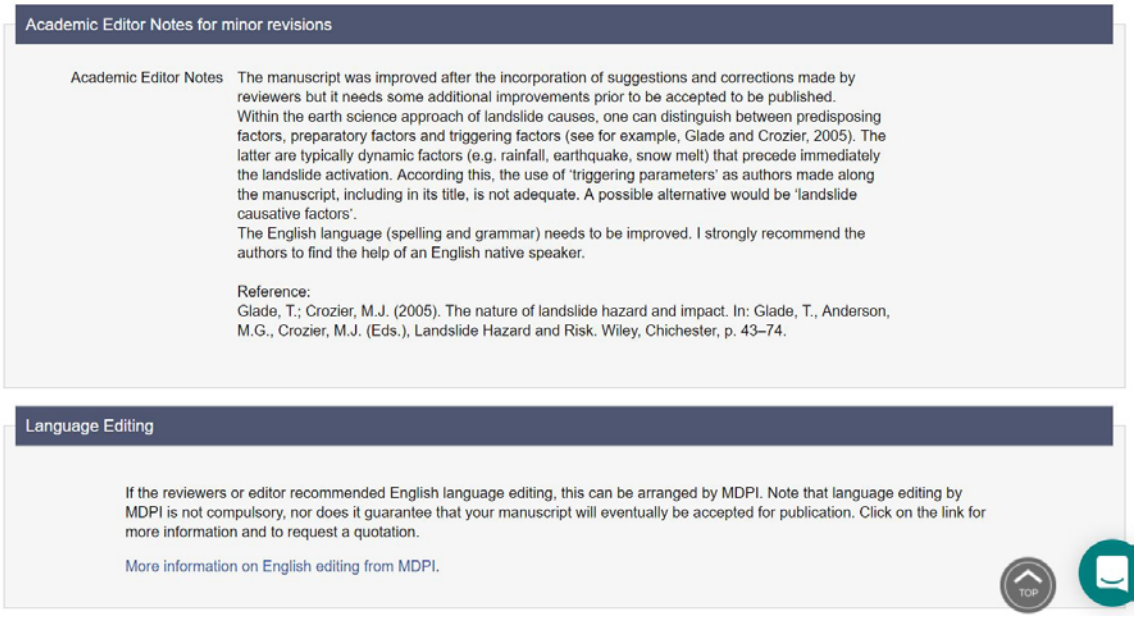
Thank you for your suggestion.

8. The conclusions are not substantiated, and only state that one method is better than the other, which may be only true for this area and for this set of data.

Reply:

We've done editorial improvements in the article, to answer your point.

Thank you for your suggestion.



Academic Editor Notes for minor revisions

Academic Editor Notes: The manuscript was improved after the incorporation of suggestions and corrections made by reviewers but it needs some additional improvements prior to be accepted to be published.
Within the earth science approach of landslide causes, one can distinguish between predisposing factors, preparatory factors and triggering factors (see for example, Glade and Crozier, 2005). The latter are typically dynamic factors (e.g. rainfall, earthquake, snow melt) that precede immediately the landslide activation. According this, the use of 'triggering parameters' as authors made along the manuscript, including in its title, is not adequate. A possible alternative would be 'landslide causative factors'.
The English language (spelling and grammar) needs to be improved. I strongly recommend the authors to find the help of an English native speaker.

Reference:
Glade, T.; Crozier, M.J. (2005). The nature of landslide hazard and impact. In: Glade, T., Anderson, M.G., Crozier, M.J. (Eds.), Landslide Hazard and Risk. Wiley, Chichester, p. 43–74.

Language Editing

If the reviewers or editor recommended English language editing, this can be arranged by MDPI. Note that language editing by MDPI is not compulsory, nor does it guarantee that your manuscript will eventually be accepted for publication. Click on the link for more information and to request a quotation.

More information on English editing from MDPI.

Answer for Academic editors

We would like to thanks the reviewers and academic editors for the excellent review comments to improve the quality of this paper.

Related to Reference in:

Glade, T; Crozier, M.J. (2005). The nature of the hazard and the impact of landslides. In: Glade, T., Anderson, M.G., Crozier, M.J. (Eds.), Landslide Hazards and Risks. Wiley, Chichester, p. 43-74.

In that reference, which is the cause of landslide by 3 factors (predisposing-preparatory-triggering factors), we agree with that opinion.

However, in this article, we use the method for landslide hazard assessment which stated in this reference: Ministry of Public Works, Guidelines for spatial planning of disaster-prone

areas, Decree of the Minister of Public Works No.22 / PRT / M / 2007, Directorate General of Spatial Planning, 2007.

The guidelines (Ministry of Public Works, 2007) is implemented for the research conducted in the tropical region with two seasons: dry season and rainy season; and with the sliding mass is mostly composed by the weathered volcanic rocks. Therefore, in this research we have special parameters in *the assessment of landslide triggering factors* based on those two environmental conditions. The landslide triggering factors are related to each other which called the natural physical elements: (1) slope inclination, (2) rock weathering, (3) geological structure, (4) rainfall, (5) groundwater potential, (6) seismicity, and (7) vegetation. Whereas in other cases, *the landslide causing factors* can be the factors due to human activity that is: (1) cropping pattern, (2) excavation/slope cutting, (3) water basin, (4) drainage system, (5) construction work, (6) population density and (7) mitigation efforts.

Based on the above explanation and considering the guidelines (Ministry of Public Works, 2007), we do hope that the use of "triggering parameters" term in this article is acceptable.

For English editing for the better, we have input into the MDPI English Editing Service, and the results of article editing have been submitted in this 2nd round repair.

Reply for Academic editors

We would like to thanks the reviewers and academic editors for the excellent review comments to improve the quality of this paper.

We have corrected the manuscript as the suggestion from academic editor, the change texts are marked in yellow line in the revised manuscript. The details as below:

Line 27-28: *This percentage is wrong. The correct feature is 34.61%.*

Answer:

> *The correct number of landslide is 21 landslides as shown in Table 3. After re-calculating SINMAP model and overlay method using 21 data of landslides, the validation accuracies reduce to 14.29% and 71.43%, respectively. The entire values in Table 3 and Table 6 are also corrected.*
>
> *Line 27-28: "The SINMAP model gave a validation accuracy of 14.29%, while the overlay method with seven trigger parameters produced an accuracy of 71.43%."*

Line 100-103: This paragraph is not related with analysis method but with the description of the study area. It should be removed and merged with paragraph that starts line 79, page 2 (previous).

Answer:

The text was modified and be place in Line 79-82 as suggestion from academic editor.

Line 79-82: "This study, conducted in the Buleleng district, covers an area of 1,365.88 km2 or 24.23% of the Bali province area, with the Sukasada sub-district being the main observation location because this area often experiences landslides. Administratively, the area of the Sukasada sub-district, which measures 366.92 km2, comprises about 70.45% of the Buleleng district area"

Line 242: This statement makes not sense. It should be "a landslide density of 0.0001 landslide per ha."

Answer:

The manuscript was revised as the suggestion from academic editor.

Line 242: "……. a landslide density of 0.0001 landslide per ha."

Line 246: Table 3

(1) Landslide density for lower threshold: This value is not correct. It should be 0.001
Answer:

The value was corrected as the suggestion from academic editor

(2) This value is not correct. It should be 0.02
Answer:

The value was corrected as the suggestion from academic editor

(3) Here you have 21 landslides. This does not correspond to the number referred in table 6 (26 landslides). How do authors explain this difference?
Answer:

The correct of number referred in table 6 is 21 landslides. The Table 6 were corrected.

Line 337: In table 6. this feature is 34.61%. Correct, please.

Answer:

As was explained in the answer for comment in Line 27-28,

"After re-calculating SINMAP model and overlay method using 21 landslides locations, the validation accuracies reduce to 14.29% and 71.43%, respectively. The Table 3 and Table 6 were corrected.

Line 345: Table 6: These classes of SINMAP does not match with the ones presented in table 3 and the reader cannot understand why.

Answer:

The correct of number referred in table 6 is 21 landslides. The value in Table 6 was corrected.