Natural Hazards
and Earth System
Sciences

Discussions

Interactive comment on "Comparison of machine learning classification algorithms for land cover change in a coastal area affected by the 2010 Earthquake and Tsunami in Chile" *by* Matias I. Volke and Rodrigo Abarca-Del-Rio

Anonymous Referee #1

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In this work, the authors implement two machine learning classification methods on optical satellite images of Landsat and ASTER and compare the accuracy of the results. They have applied the Maximum Likelihood method on the ASTER as well and compared its result with the machine learning-based methods. The document is well structured and written. However, the novelty of the work is limited or unclear.

In addition to this general comment, please find below some more specific comments:

Page 8, Figure 3: 1- I do not understand the reason for using both Landsat and ASTER

images? Does it add any further information?

2- Considering that the time difference between the Landsat and ASTER images is one-two weeks, please explain the reason for the differences between the thematic maps (I-A with II-A and I-B with II-B).

3- As the title of the manuscript is a comparison of the machine learning methods, I suggest adding the thematic maps created by applying the RF method. And compare the results in more detail.

4- Please add some signs or vectors in the map, so that the interpretation provided in page 9 becomes more understandable.

Page 4, paragraph 105: Please explain the 'correction C' briefly. Page 4, figure 2: What does ND stand for? 'mtree' should be 'ntree'? Page 6, paragraph 165, last line: Possible typo: Is it possible that the authors meant "75% of the data for training and the remaining 25% for validation", instead of 25% of the data for training and the remaining 75% for validation"? Page 6, paragraph 170, line 3: "[49]" Please use a unique style for citation. Page 7, Table 3: 1- typo: "MV" instead of "ML". 2- It seems that the values in the last row, second to sixth columns should be multiplied by 100?

Looking forward to a revised version of the paper.

Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., https://doi.org/10.5194/nhess-2020-41, 2020.