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***Interactive comment on* “Sea cliff instability susceptibility at regional scale: a statistically based assessment in southern Algarve, Portugal” by F. M. S. F. Marques et al.**

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Dear Editor I have read the initial submitted manuscript by Marques et al. entitled "Sea cliff instability susceptibility at regional scale: A statistically based assessment in southern Algarve, Portugal", submitted to Natural Hazards and Earth System Sciences. During my first reading it looks like a very nice and data-supported study, but I found a lot of inconsistencies in the text and to figures. The main remarks were already given to the authors on April 2013 on the initial submission and the current version of the manuscript address almost all of the remarks.

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## General comments:

1. I found out that too many sentences in this paper are just "Copy and Paste" from Redweik et al. (2009). Although the two papers are focusing on different parts of the study, the author of the current study should not use so many lines from their previous publication in Journal of Coastal Research.
2. My main concern was about the international perspectives of this study, which were not included by the authors. The main finding was that the failures are best correlate with height and protection. Although, the height calculation was capture from a DEM which post-dated most of the failures, the finding is not so shocking. Concerning the toe protection, this could be an artifact of the calculation method. The authors used a 0.999 value in the cases where a variable is not present ( $S_i=0$ ), thus, the "li absolute value mean" (table 2) was calculate to be 0.4963. Second place of importance.
3. I believe that the authors could try to use their data and statistical correlation factor as a predictive tool, or just to point out areas where the statistical parameters show a high probability for failure, which did not occurred during the last 60 years.
4. I could not understand how did the authors got to the conclusions of the sentence in 1967:26.
5. I did not found where the authors are using the Total Information Value (Ij) (1974:2) in the paper?
6. 1980:9 to 1980:12 - If the DEM is based on images obtained between 2001 to 2003, and represent the cliff after most of the failures occurred (between 1947 and 2007). Most of the calculated parameters (height, slope and so on) are for the cliff after the failure already occurred.
7. Page 1994 (figure 1): the legend is a mixture You Legend is a mixture of lithology (basalt, aluvium, sand), of geomorphology (beach\_sand), of morphology (sea cliffs), Epoch based chronology (Pliocene, Pleistocene), and Period based chronology

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(Miocene, Barremian, Aptian).

8. Many people believe that a one-sentence-paragraph is not legitimate in manuscripts. In this paper I found 25 cases of a one-sentence-paragraph: 1966:1, 1966:5, 1977:25, 1978:1, 1979:12, 1982:7, 1983:20, 1984:19, 1984:23, 1985:1, 1985:5. Although a one-sentence-paragraphs can be very effective for pointing out critical ideas or keeping the reader mentally focused on the content, I think that the authors should reduce and or change many of the one-sentence-paragraphs (i.e., join them into the above or below paragraphs, split the sentence, etc.).

I recommend publishing this paper in Natural Hazards and Earth System Sciences Journal, with minor corrections.

Rani Calvo

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