

Interactive comment on “Erosive phenomena in the Kaulon archaeological site: origins and remedies” by Giuseppe Barbaro et al.

Anonymous Referee #2

Received and published: 23 March 2017

GENERAL COMMENTS

The paper describes the erosive phenomena occurring along the coast of Monesterace Marina (Calabria, Italy) and investigates on possible causes of shoreline changes through the analysis of different types of data. In addition, a temporary and a final solution to protect the Kaulon archaeological site affected by beach and dune erosion is proposed. In the present form, the paper is redundant, verbous and lacks a consistent scientific analysis and it does not provide substantial and original results; there is a potentially very interesting available dataset, but the paper could do with a more extensive analysis by not including previously published material [e.g. Barbaro, G., Foti, G., & Sicilia, C. L. (2016). Erosive Phenomena in the Proximity of Kaulon Archaeological Park: Origins and Remedies. *Procedia-Social and Behavioral Sciences*, 223, 714-719]. As a consequence, the reviewer recommends reconsideration of the paper

[Printer-friendly version](#)

[Discussion paper](#)



following a major revision.

DETAILED COMMENTS

âĀĀ Pag. 3, line 15: suggest to use “estimation” instead of “calculation”. âĀĀ Pag. 3, line 30: it seems redundant to consider an entire Section for listing the main aims of the paper. The objectives of the work can be briefly described in the introduction (line 18 to follow). âĀĀ Pag. 4, line 12: suggest to substitute “Geographic” classification with “Geographical” classification. âĀĀ Pag. 7 to pag. 11: the quality of Figure 5 to 9 has to be improved. âĀĀ Pag. 10, line 3: are you referring to the mean peak wave period ? Please, explain. âĀĀ Pag. 11, line 18: symbol ‘h’ has not been defined. âĀĀ Pag. 14, line 15: please, define T_m as mean wave period. âĀĀ Pag. 15, Eq. (16): please, explain the meaning of “per”. âĀĀ Pag. 15, Figure 11: the quality of Figure 11 has to be improved. âĀĀ Pag. 16, line 3: “The run-up has been calculated using a probabilistic based on the ETS model...”. Do you mean “The run-up has been calculated using a probabilistic approach based on the ETS model...” ? âĀĀ Pag. 16, line 11: Please, define “X” as fixed treshold. Suggest to change the sentence “Return period of a run-up level higher than a fixed treshold is determined as...”, with: “Return period of a run-up level higher than a fixed treshold, X, is determined as...”. âĀĀ Pag. 16, line 17: Please, define “D(X) as the mean persistence of the run-up above X”. Suggest to change the sentence “The mean persistence of the run-up above the fixed treshold is given by...” with: “The mean persistence of the run-up, D(X), above X is given by...”. âĀĀ Pag. 17, Figure 12: Please, add axes labels. âĀĀ Pag. 17, Figure 13: Please, add axes labels. âĀĀ Pag. 17, line 8: “To evaluate changes in river sediment transport hydraulic structures, ...”. Do you mean “To evaluate changes in river sediment transport in presence of hydraulic structures,.. ” ? âĀĀ Pag. 17, line 12: suggest to substitute “cards” with “charts”. âĀĀ Pag. 18, line 3: suggest to substitute “Land cover data” with “Digital mapping”. âĀĀ Pag. 20, line 9: “where h is the average yearly temperature”. Please, consider that symbol ‘h’ has been previously adopted; see comment Pag. 11, line 18 above. âĀĀ Pag. 20, line 13: X, the soil

protection coefficient, has been previously used for a fixed threshold; see comments Pag. 16 above. – Pag. 21, line 5: the Zemljic delivery coefficient has been adopted. Please, give more details. – Pag. 22, line 9: “In this case, the analysis of the storm that occurred between in January 2014 to protect the archaeological site”. The sentence is not clear to the reader. – Pag. 24, line 8: suggest to substitute “works” by “structures”. – An improvement in the description of the final solution (Section 8) and temporary solution (Section 7) is needed. The design of these solutions should take into account the analysis previously performed to characterize the causes of erosion. – A revision of the manuscript to verify English correct grammar and syntax is needed.

Please also note the supplement to this comment:

<http://www.nat-hazards-earth-syst-sci-discuss.net/nhess-2016-399/nhess-2016-399-RC2-supplement.pdf>

Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., doi:10.5194/nhess-2016-399, 2017.

[Printer-friendly version](#)

[Discussion paper](#)

