

Interactive comment on “Assessment of Forest Fire Rating Systems in Typical Mediterranean Forest, Crete, Greece” by Mohamed Elhag and Slivena Boteva

Anonymous Referee #3

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Dear Editor, Here is my review for the manuscript entitled "Forest Fire Danger Rating Systems Assessment in the Mediterranean Type Environment, Crete, Greece"

As a general comment, the objective of the study (lines 111-112) “ to test and evaluate the following FFDRS, to propose possible modifications that would better adapt these systems to the Mediterranean conditions” , cannot be supported by the analysis of the data, the results and the discussion. The authors provide some conclusions and recommendations, which cannot be justified in this manuscript , given the limited extent of the study and data, and also the lack of analysis based on important previous research and results related to the study of FWI in Mediterranean environments.

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Below are some particular important comments: – The research paper of A. P. Dimitrakopoulos, A. M. Bemmerzouk, I. D. Mitsopoulos (2010) entitled : “Evaluation of the Canadian fire weather index system in an eastern Mediterranean environment”, which is a study the same area of Krete (Akrotiri), using very similar data and methodology, which showed the same results for FWI, has not been mentioned and taken into account. The above mentioned study, the conclusions and discussion should be considered by the authors as a basis for further evaluation of FWI.

– The classification system of FWI (the source is not mentioned by the authors) used in the current paper is not appropriate to the Mediterranean environment, as indicated by many previous studies and researchers. There exist relevant suggestions by the research community on the appropriate FWI classification including those EFFIS and Dimitrakopoulos et al. (in the research paper mentioned above).

– The following conclusions/suggestions for the use of the FWI and KBDI cannot be justified in the current study and should be avoided: - Lines 362-363: “In the first part, the (FWI) system was tested against real data covering two fire seasons and can be applicable as a method for meteorological fire risk assessment for the country.” - Lines 390-392 :” The EFFIS system could use the additional data received from KBDI for more accurate early fire warning and fire management planning, such as prescribed burning when conditions are convenient for it.”

Additional Comments – The authors do not provide information about the source, quality, amount of fire data used in their study. Thus, it is no clear how the results about the Burned Area, Number of Fires and the Components of the (FWI) and KBDI have been obtained (lines 247-250, 371, 377-378) – The meteorological station, which was the source of meteorological information for the evaluation of FWI and KBDI is at a rather long distance from the experimental site (5 km). The authors should justify the selection of the experimental site and/or the source of the meteo data.

Yours Sincerely,

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Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., <https://doi.org/10.5194/nhess-2017-318>, 2017.

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