

Interactive comment on “Generation of a global fuel dataset using the Fuel Characteristic Classification System” by M. L. Pettinari and E. Chuvieco

Anonymous Referee #2

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This is very interesting and well documented work that proposes a methodology of analysis of vegetation cover data as an analogous to a fuel that can support vegetation fires (also designated as forest fires). It provides a good database on vegetation data at global scale that can be used for various purposes, namely for fire behaviour prediction. Being based in remote sensed data it can be updated in a relatively short period of time. Can the Authors provide some indication of the time or effort required to update the global map assuming that the same set of criteria are adopted? The application of the results of this study for fire behaviour prediction is justified if local more detailed data are not available. The Authors should nevertheless explain how this downscaling can be performed for a smaller area if a more detailed fuel map is required. The

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paper is very well written and well organized. It has some minor spelling errors that can be easily corrected by the authors eventually with the help of a native English speaker. Some aspects of the outputs of this work may not be fully validated like the parameters provided for fire behaviour analysis. But the fact that this work provides such data at a global scale is in itself of great relevance. I propose that the Authors give a name and acronym to their global fuel map. I recommend that this paper is accepted after revisions. Details: Page 2 It is mentioned that “. . . fires have multiple biophysical and ecological consequences”. Perhaps the authors should mention socioeconomic consequences as well. In the caption of Figure 4 classes A, B and C that were not mentioned or defined with these names in the main text.

Remarks to other comments: Regarding the comment of P. Fernandes that the fact that the authors used the FCCS approach to select and present their fuel bed parameters is a limitation of the work and of its applications. I understand that the parameters that are provided are basic ones and can be used by other fire behaviour models rather than Rothermel. For example the assessment of crown fires requires parameters that are available in this database and not present in common databases. I recommend that the Authors justify better their option of selecting FCCS and explain if it is or not a limitation of the work. Regarding the objection made by Reviewer #1 about the lack of validation of the mm and on that it is premature to publish it without making this validation I do not agree with it. The paper is relevant for itself for proposing the methodology that has innovative contributions. Besides this any validation would require a couple of years to conclude and in the meantime the proposed maps would be outdated.

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