

Interactive comment on “Estimation of regional differences in wind erosion sensitivity in Hungary” by G. Mezõsi et al.

Anonymous Referee #2

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This is a review of "Estimation of regional differences in wind erosion sensitivity in Hungary"

Overall, this is a well written paper, on an interesting subject, needing just some minor revisions and some extension of discussion (although it might seem 'medium' in some cases).

MEDIUM LEVEL (A) Uncertainty. The words 'uncertain' or 'uncertainty' only appear twice in the paper. Although the data, methodology, results, are clearly explained as to what was done, it is unclear the uncertainties that would be involved in the data inputs themselves, in the resultant methodology, and finally the results. It would improve this paper to have a much more engaged discussion on uncertainties, and if possible, to

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introduce them so that the results can be put into a greater context.

(B) FIGURES. Were these all meant to be in colour? So for example, Figure 1 was very hard to see as it came out as a grey scale (on the screen and in print). This was true for many of the figures, that it was hard to see what were otherwise well done figures. In places, text was so small (when printed – e.g., look at numbers in Fig. 2) that I could barely read them, and needed to go back to the online version. Then I had to blow them up to the full screen size to see some of the smaller parts of the figures. Please go through and reevaluate figure colour/grey scale and all font sizes, to make sure the reader can see them, from what is otherwise some really nice figures.

(C) INTRODUCTION. (1) You have a lot of useful information in your introduction, and set the tone, but it is very long. Either break out the introduction into Intro and then another section on background, or signal somewhere early on in the intro, what you will be discussing. (2) Put something towards the end of the introduction letting the reader know the organization of the entire paper.

(D) IN-TEXT CITATIONS. Make sure it is clear everywhere what your 'source' of material is. So for example, p. 4714, line 26, it is unclear that you are now going on to discuss the map by Loczy et al. (2012), and we think, where is this fact from? This is solved here by putting in a "They find that in 17.1% of the country". Do this throughout, being clear where your sources are, and don't assume because you discuss something in one sentence, the reader knows you will then be continuing to use that source of information.

(E) FUZZY METHODS. You might consider adding just a bit more on what fuzzy analysis is and who has used it, as it plays such a key part of your paper. You describe what you did, but don't give the reader much intuitive feel for the method, or how it has been used.

(F) Figure 5 and associated text. (1) I became somewhat confused on this figure and in the text, if you were talking about number of days per month, number of days per

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year, or number of days over 12 years. (2) In terms of the 52 stations used to do your kriging, can you give some sort of a figure when you are talking about data, with the 52 stations spatially located on the map, so we know that they are not all clustered in one place.

MINOR (A) Figure 1. Caption can be more complete (tell us it is Hungary we are looking at!). Your scale has something strange with it – you go 50, 0, 50, km, 150. The “km” should be “100” and then km farther to the right.

(B) ENGLISH. Throughout, there will need to be some minor checks on English, but that can come at a later stage (I think that the journal does copy-editing).

(C) p. 4715, line 23 “100 m x 100 m” not “100 x 100 m”

(D) Wherever you mention ‘averages’ of precipitation or temperature, always state the period over which the average is. So for example, p. 4717 lines 19-21, average over what period? In addition, this is a very dated reference (1998).

(E) p. 4718, line 9. This might be an ‘English’ item, but it was confusing discussing “The calculation methods from plot-sized models cannot be applied. . .” Without knowing what these calculation methods being discussed were. It is the ‘the’ which is causing the issue. You might just state “Calculation methods from plot-sized models. . .”

(F) p. 4719, line 22. It should be $>35\%$ (not “35%<”) and $>9 \text{ m s}^{-1}$ not “9 m s⁻¹>”.

(G) p. 4719. Last line. “(See Fig. 3 for flow chart)” otherwise reader doesn’t know why they are being asked to see Fig. 3, and think that Fig. 3 is the map.

(H) FIGURE ORDER. Please introduce figures in the text in order 1, 2, 3, 4, . . . , 14. In section 3.2.1. you jump from figure 4 to 7 to 10, skipping 5, 6, 8, 9.

(I) ROSE DIAGRAMS. Would it help to have some background rose frequency diagrams to supplement Fig. 2? I found it strange not to have background wind speeds by frequency and direction, even a few localities.

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(J) Figure 2. (1) y-axis, should be 2.0, 2.5, 3.0, 3.5. (2) Put the std. dev. (or $\pm 2 \text{ s.d.}$) error bars on the averages so we have some idea of variability over these months, and then bring into the text where you discuss the averages. (3) In legend of wind speeds, include .0. (4) Make clear the arrows for dominant wind speed do not have length that varies according to the average dominant wind speed (although it would be better if they did!). (5) For wind speed information, what is the spatial resolution on which the left figure is based? (6) Consider (for size) having one figure over another for Fig. 2, and label them A and B.

(K) Fig. 6. State the resolution of the NDVI map in the caption.

(L) Fig. 7. In the caption, consider stating that this is an exponential distribution, and giving the parameters.

(M) Fig. 8. (1) Units of days/month, should be (??) dy mth^{-1} . (2) Give the parameters of the best-fit line.

(N) For figures 7 to 9, I recommend that you put a variable on the x- and y-axes, in addition to the text already there, making it easier to give the equations with the parameters for the fits.

(O) For all figure captions, can they be slightly more complete (not discussion, but enough there so we don’t have to go back to the text to read about what is being presented).

Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., 1, 4713, 2013.

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