The study is about "Mapping land degradation risk due to wind and water erosion". Principles and methodology are well supported. However, I would like to consider some specific comments below as minor revision. In general, there are some grammar errors throughout the manuscript. Please check the spellchecking in addition to these minor issues.

Page 5: Only 23 dusty days are used ….. out of 500 dust days, I speculate…every year: 28 dusty days (2000-2020). I would like to see a histogram with MODIS AOD (500nm, 2000-2020) at least for one key dust station. I think all days with AOD>0.5 (500nm) are dusty days. Is the use of 23 days really a representative approach?

Why not showing a correlation with wind speed vs AOD for several selected observational sites? Your argumentation is not very much convincing without some demonstrations (visualizations). One could get the impression, the work is based, at the end, on a few 'beauty data' only, but does not allow solid conclusions and does not provide insight into the complex problematic.

Did you consider these days with visibility less than 2 km as non fog/haze days? How did you differentiate between fog and dust?

Once per day cannot be considered as high resolution?

Considering that the map of dust sources for Iran was prepared by the Geological Organization, why did you use satellite images to produce it? How accurate is your generated map compared to the ground map?

How to deal with the satellite data with different spatial resolutions in the study?

Line 26: **The** water and aeolian soil erosion **maps**

Line 32: the risk of land degradation **in** an inhabited region

Line 43: soil erosion in **a** short time

Line 49: has detrimental impacts **on** the Earth system

Line 52: therefore necessary **for** developing a better understanding

Line 85: to the increasing dust concentration **in** southwest Asia

Line 118: That information **is** extracted from data collected during an own field **survey** paired with a previous research (delete **"a"** before previous)

Line 141: in the ten**-**year period (add hyphen for "ten**-**year")

Line 162-163: constants **taken** during the initial calibration

Line 168: we see dust aerosol in different color**s** and quali**ties** in the MODIS images **over** 28 days

Line 177-178: the identification and selection of appropriate dust sources and soil erosion-effective factors **are** necessary.

Line 183: the Topographic W**e**tness Index (TWI), (Not Witness)

Line 199: Annual rainfall (Fig. 3e) **was** obtained from

Line 195: Mean annual rainfall **was** calculated using

Line 261:  The former **is** built while the RF model

Line 276: three layers, namely, the input layer, **the** hidden layers

Line 279: and the output layer **is** the maps of

Line 304: and some indicators which **were** explained in section 2.1.2

Line 356: similar results have been obtained in which RF with **an** accuracy of 45.8%

Line 364: although the differences **between** FDA and ANN are in the statistical sense relatively small.

Line 381: Distance from roads and rivers **were** recognized as the least important factors

Line 414: human activity is a contributing factor **to** the water-induced soil erosion.

Line 425: the study area are at risk **of** soil erosion

Line 428: The findings of the present study **are** therefore

Line 431: The areas that fall under the category of both kind**s** ("falls" should change into "fall")

Line 435: the adverse impacts of water-induced soil erosion **are** known