

Interactive comment on “Evaluation of changes in different climates of Iran, using De Martonne index and Mann–Kendall trend test” by A. R. Zareiee

Anonymous Referee #2

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The main aim of the paper is to analyze climate change pattern in Iran over 1967–2005 period using De Martonne index and trend statistics. To topic is relevant for the objectives of NHESS. However, paper is generally poorly written and requires essential corrections before considered for publication.

Title I would suggest correction of the title since methods doesn't need to be incorporated in the title, unless specific package/method is developed by author and then applied. Man Kendall's test is well known and very often used in climate studies therefore I don't see need to be given in the title.

Abstract Strating from abstract poor English language and grammar is prevailing throughout the paper sometimes significantly influencing meaning of some sentences

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(line 3: “. . . de Martonne index and Man Kendall test are indexes. . .”?) Whole paper should be checked and corrected by English native speaker.

Introduction Introduction is rather general and not well structured according to the topic of the paper. It should at least contain previous research on climate change in Iran, as well as studies on aridity trends in the region, and other parts of the world. Line 6: “. . .developing countries have absorbed US\$5 billion a year..” need reference

Study area Scale is missing at Fig.1.

Data Since Iran exhibits heterogeneous relief and high elevation range it would be useful to give percentage of stations within the certain height range (up to 1000 m, between 1000 and 2000 m, etc.). Homogeneity is mentioned in the text, but it is not given how it is achieved or tested. Please clarify.

Methodology The authors should justify why they have decided to apply nonparametric trend test for both rainfall and temperature. Did they check series for normality first to determine which trend test to apply parametric or nonparametric? There has been nothing written on De Martonne index, please provide at least essential information within this section. It also needs to be given how maps at Fig.2 are produced. Which program has been used?

Results and Discussion In this section there is no proper discussion since only description of results is given. The authors should offer how their results fit/differ to/from previous research. Instead of ascending/descending for trend better use positive/negative. Also, instead of insignificant should be used not significant. Since maps at Fig.2 are produced for each year, is there any temporal clustering noticed?

Conclusion Since results suggested tendency towards arid conditions authors should state with reference in few paragraphs how it can impact both society, economy and environment of the country. Line 18: “. . . zariee and mohmodi ..” should be written in capital letters and referenced correctly.

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