Ref.: Ms. No. HEENG-3342
An R- function for the estimation of trend significance under the scaling hypothesis-application in PET parametric annual samples
Aristoteles Tegos, M.D; Hristos Tyralis, Phd; Demetris Koutsoyiannis, Professor; Khaled Hamed, Professor

Dear Dr Aristoteles Tegos,

Your Technical Note, listed above, has completed the peer-review process for possible publication in ASCE's Journal of Hydrologic Engineering. The editor's final decision was to decline the manuscript with encouragement to resubmit.

For your guidance, you will find below the reviewer's comments identifying those elements of the manuscript that prevent its acceptance by the Journal.

We realize that it takes a great deal of time and effort to prepare a paper for submission and we thank you for choosing the Journal of Hydrologic Engineering for submission of your work. If you choose to resubmit, the manuscript will receive a new manuscript number and be treated as a new submission to the journal.

Sincerely,

Jennifer Chapman
Editorial Coordinator

Reviewers' Questions & Answers:
Reviewer's Responses to Questions

This manuscript was submitted as a Technical Note. Does the reviewer think this is the appropriate article type? To see descriptions of the article types, Click Here.

Reviewer #1: Yes. The author is using the correct article type.

Reviewer #2: Yes. The author is using the correct article type.

Reviewers' comments:

Editor:

The associate editor has secured two reviews for this paper. While the topic is of interest to the readership of the journal, the reviewers and the associate editor express several concerns over the shortcomings they find in the paper. The paper presents a script written (in R)for estimation of trend significance under scaling hypothesis with application to PET series at several sites in Greece. The is lacking any contribution to hydrologic literature on trend estimation except a demonstration of implementation of R language coded script developed by authors for a set of time series. The case study application does not provide any insights into the application of the already well researched and applied method. A script developed and founded on already published guidance and methods is a tool, but the note needs clear hydrologic objectives, an improved description of methodology and applications, a stronger literature review, and applications with insights and comparison of
results with methods that do not consider scaling hypothesis.

I agree with the associate editor's recommendation to have the paper be returned to the authors with encouragement to revise and resubmit as a new note. Should the authors choose to follow this recommendation, they need to provide the following in their cover letter (i) the number and title of the current paper displayed prominently, and (ii) a statement describing the authors' modifications and responses to review comments (from reviewers and editorial board).

Reviewer #1: An R- function for the estimation of trend significance under the scaling hypothesis-application in PET parametric annual samples

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This paper presented an R package for trend analysis using a modified Mann- Kendall test. The function was tested for trend detection in potential evapotranspiration (PET) time series. The manuscript is, in general, well-organized and easy to read and understand, in my opinion. My recommendation is that the article deserves publication after minor changes concerning the following points:

1-   It was mentioned in the second paragraph of the introduction section that there are different versions of the Mann-Kendall test. More explanation is needed on why different versions were presented and what is the consequence of using the original test. See for example page 214 of the paper "Pan evaporation and reference evapotranspiration trend detection in western Iran with consideration of data persistence".
2-   There is no history of trend analysis studies in the introduction. A literature review on trend analysis of hydro-climatic variables especially evapotranspiration needs to be added to this section.
3-   The title of Section 4 is "Discussion and conclusions", but there is no discussion in this section.
4-   The English of the paper might be improved. For example,
Line 36-37: Change "with successfully implementations in several climatic regimes" to "with successful implementations in several climatic regions"
Line 75: Change "Based our previous study" to "Based on our previous study".
Line 83: Change "Table 2 present results of our analysis" to "Table 2 presents the results of our analysis".
Lines 93-94: This paragraph needs a thorough revision. The sentences are telegraphic.

Minor comments:
Line 77: Change "1950-200" to "1950-2000".
Lines 84-85: "The estimate of the Hurst parameter for annual PET time series varies in the range 0.43 to 0.76". The authors rely too much on the readers' prior knowledge. What would be the meaning of the Hurst parameter?

Ref: ENVSOFT_2016_467

Title: An R function for the estimation of trend significance under the scaling hypothesis-application in PET parametric annual time series
Journal: Environmental Modelling and Software

Dear Mr. Tegos,
Thank you for submitting your manuscript to Environmental Modelling and Software. Unfortunately, after conferring with the editorial board, I feel that your paper is not suitable for publication in the journal and is unlikely to be favorably reviewed by the referees. Accordingly, the manuscript is being returned without review. EMS is generally interested in widely applicable modelling methods and software tools with interdisciplinary potential. In this respect, your manuscript was deemed too narrowly focused.
However, if your R script is open source, I would be happy to accept this paper into our new open access journal, Open Water (www.openwaterjournal.org). Our first issue will be released in January 2017. Please email me directly with any questions about this offer at dan.ames@byu.edu.
Thank you for giving us the opportunity to consider your work.

Kind regards,
Dr Ames
Editor-in-Chief
Environmental Modelling and Software