

Dear Editor,

Thank you again for your accurate contribution to improve this work. A further effort has been done to meet all the guidelines as requested, and to correct the mistakes you listed and to find other mistakes.

If still possible we would like to change the title of the manuscript into "The transformed-stationary approach: a generic and simplified methodology for non-stationary extreme value analysis". We think the new title would better capture the content and open the article (hence also the journal) to a wider audience.

Follows a item by item reply to your comments:

- 1) *Editor: I previously asked the authors to please review the HESS manuscript guidelines to ensure that the manuscript was in compliance; however, there are many places where the guidelines have not been followed - particularly for equations and symbols. Specific guidelines for equations and symbols are below. The authors must take note particularly for items (a), (b), and (d). The notation used in the equations and text need to be revisited based on the guidelines.*

Authors: The notation of the equations has been completely revised. In particular, (a) the numeration of the equation has been revised and long equation have been splitted. (b) Multiletter functions such as tr or std have been replaced with single letter ones such as T and S . A few remaining multiletter functions, such as "month", in eq. 32, or Err in the section about the statistical error have been set to roman. (d) Single letter variables/functions have been set to italic everywhere, while the subscripts have been everywhere styled to roman.

- 2) *Please review again the requirements for figures. See last sentence below in the guidelines for figure composition.*

*"Figure composition: It is important for the production process that separate figures are submitted. Composite figures containing multiple panels should be collected into one file before submission. The figures should be labelled correctly with Arabic numerals (e.g. fig01, fig02). They can be submitted in *.pdf, *.ps, *.eps, *.jpg, *.png, or *.tif format and should have a resolution of 300 dpi. The width should not be less than 8 cm. A legend should clarify all symbols used and should appear in the figure itself, rather than verbal explanations in the captions (e.g. "dashed line" or "open green circles")."*

Authors: Separate files for the images have been prepared and accordingly uploaded to the system. We apologize, we did not have the possibility to upload them before now. A legend has been added to the scatter plot of figure 7, which was the only figure without a comprehensive legend.

- 3) *The grammar still needs improving. It is disappointing that there are so many errors remaining after several revisions. I recommend the authors read the manuscript again to improve clarity. Here are only some of the changes that are needed based on my reading. Please note that is only a partial list. Submit a version of the revised manuscript showing track changes so that I can confirm these changes were made and see evidence that other areas of the text were reviewed and revised by the authors.*

We thank the editor for her suggestions and contribution to improve the clarity and correctness of the manuscript. All of her suggestions have been accepted. Follows a item-to-item rebuttal for each of the proposed changes.

p. 1,

l. 21: 'ones' to 'results'

Amended as requested

l. 23 and 25: 'it' to 'the proposed technique'

Amended as requested

l. 25 'values' to 'value'

Amended as requested

p. 2

l. 12: add so that sentence reads "latitudes on a global scale"

Amended as requested

l. 23: add so that sentence reads "referred to as the established approach"

Amended as requested

l. 32: delete 'approach'

Amended as requested

p. 3

l. 5: sentence should read, "This technique is referred to in the text as..."

Amended as requested

l. 21: You have already spelled out EVA earlier so only use abbreviation here.

Amended as requested

p. 4

l 4: should read "has mean equal to zero and variance equal to 1"; the use of 'null average' is awkward

Amended as requested

l 9: Move 'for example' in front of "A simple test"

Amended as requested

I 11: The use of GEV and Gx is confusing. Choose one notation for the GEV and use throughout the manuscript

As suggested, we substituted Gx with GEVx , Gx with GEVy everywhere in the text.

I 15: an example of where x and y are not italics and should be according to the submission guidelines

We put effort into finding all the reference to variables in the text and italicized them.

p. 5

I 8: Pgns does not appear to be defined

Thank you for suggesting us to clarify this point. The meaning of the Pgns has been clarified at lines 5 and 10 of page 5.

p. 6

I 5: x should be italics, add comma at the end of pgx(x), define "it", change "that" to "thusly"

Substituted "This means that" with "Therefore" . The rest have been amended as requested

I 8: EA and EVA are very close to each other in abbreviation and could lead to confusion by readers. Consider changing. Remove quotes around 'dual'

Done. Substituted everywhere EA with Established Method (EM)

I. 17 x and y are not italics

Amended

p. 7

I 3: according to the manuscript guidelines, Eq. should be placed in front of (2)

Amended

I. 8: put commas around "respectively"

Done

Question about notation: What does the '0' in the subscripts mean?

In the notation the subscript "0" denotes the long-term varying components. Added the explanation to the manuscript.

p. 8

I 4: "about" to "of"

Amended as requested

I 5: delete "the" in "variations in the climate"

Amended as requested

I. 6: check guidelines if a posteriori needs to the italics. Also, the dash should be removed.

Amended as requested

p. 9

I 5: "rough" is capitalized in the equations and should be also capitalized in the text

Done

I. 8: Commas around "in general"

Amended as requested

p. 12

I 15: Annual maxima of what?

Of a considered time series. Explained as requested

I. 28: Should read "GEV and GPD"

Amended as requested

I 28: Should read "Eqs. (7) and (15), respectively"

Amended as requested

p. 13, I 13: What figure are you referring when you point to panels (c) and (d)?

Of Figure 2 and Figure 3. Explained in the text

p. 14

I 2: Should read: "error associated with the stationary..."

Amended as requested. Expression "associated to" has been corrected everywhere.

I 6: delete comma

Amended as requested