



SDI Review Form 1.6

PART 1:

Journal Name:	<u>British Journal of Applied Science & Technology</u>
Manuscript Number:	2013_BJAST_5045
Title of the Manuscript:	Kriging interpolation method for estimation of continuous spatial distribution of precipitation in Cyprus
Type of the Article	Research Paper

General guideline for Peer Review process is available in this link:

(<http://www.sciencedomain.org/page.php?id=sdi-general-editorial-policy#Peer-Review-Guideline>)

- This form has total 7 parts. Kindly note that you should use all the parts of this review form.



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PART 2: Review Comments

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Compulsory REVISION comments	Stations are not visible in Fig 1. Lines 164-166: how can fit stability starting at 80% justify 85% fit sample? The fit sample covering 80% of observations would leave more observations to the test sample making test results more reliable. Reliability of test samples is not less crucial than reliability of training samples. At least, the decision need further justification. Add all-cover maps of predicted values and maps of prediction residuals at test stations. Lines 253-272. This text with yellow background does not fit to the chapter Results. Most of it should be in the introduction. The last two of highlighted sentences pretend to be discussion but are too brief and general. A discussion should include comparison with results of other investigations, critical evaluation of the results and possible interpretations of the results. In this case, perhaps, comparison with previous precipitation maps of Cyprus. Even Google search offers multiple images of precipitation maps of Cyprus. Conclusion does not give answer to the goal stated in the end of introduction: " ...to estimate precipitation in mountain regions, based on four	We improved Fig. 1. 85% of the stations were used for fitting, and the remaining 15% for validation. When we use >80% for fitting (as is in our study), the adjusted determination coefficient tends to remain stable (Figure 3). We added all relative maps (Figures 2, 5a, 5b). This is a discussion about climate change and precipitation estimations, for Cyprus. There are several climate change studies, but no appropriate models for precipitation estimations via topographic variables. Our model can be used as a tool for climate change research, not for comparison to other climate change researches. To avoid confusion, we separated "Results and Discussion" section in two. We gave precipitation models for annual, wet and dry season in section 3.1, and regression coefficients in Table 4. We repeat this



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	topographic factors." There are no predicted precipitation values noted in the conclusion and no precipitation maps among results.	information in the Conclusion section.
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Minor REVISION comments	"Interpolation – based" pro "Interpolation-based" in the abstract. Last sentence in the introduction should moved to chapter 2. Line 75: omit "tough" or replace with a less emotional word. Exactly the same sentence: "Most rivers flow from the Troodos mountain" is both in line 75 and reiterated in line 85. Remove one of them. Comments under table 2 – check the meaning of **, is it 0.1 or 0.01? Notation used in table 3 should be explained under the table not in the main text. The main text should include more explanation to the results presented in the table 3. In general words – table must be understandable without reading the main text in details; and the message and the results of an article must be understandable if reading only the main text (without tables and figures). What is the meaning of Measured precipitation (mm) in the tables 3 and 4? Is it the mean value over all observation period or a particular test value? Why to repeat the same values in two tables? If these values are chatracterizing source data, these should be in a separate table characterizing observed precipitation data used for model calibration. At least, give also the corresponding prediced values when describing models.	Corrected. Corrected. Corrected. Corrected. Corrected. Corrected. Yes, it is the mean observed value. We deleted this line from tables 3 and 4, and we added this information into section 2.2.
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<u>Optional/General</u> comments	Introduction could include some references to the latest publications in the field of precipitation mapping using landscape variables. There is only one source published after 2008 in the current version of introduction. Table 1. "Relative proportions (%)" pro "Proportion [%]" since proportion is always a relative figure related to a total. Area proportions should also be given in the table for comparison with the proportion of stations. Line 116: add "... in our data ..." or "... in Cypros ..." since the claim is not universal. Table 2. Term annual could be used instead of whole year. Any reference to similarity-based interpolation of precipitation data using landscape variables would make the contribution more complete. E.g. see http://www.kirj.ee/public/Estonian_Journal_of_Earth_Sciences/2011/issue_3/earth-2011-3-172-190.pdf Lines 171-176: grammar of the sentence and line breaks are incorrect.	We tried to include some representative works in the field. Corrected. Corrected. Corrected. We tried to include some representative works in the field. Corrected.
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