



SDI Review Form 1.6

Journal Name:	<u>British Journal of Applied Science & Technology</u>
Manuscript Number:	<u>2013_BJAST_8650</u>
Title of the Manuscript:	<u>Trend Analysis of Temperature Series by Mann Kendall Test - A Case Study of Upper Ganga Canal Command (1901 - 2002)</u>
Type of the Article	<u>Original Research Article</u>

General guideline for Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound.

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PART 1: Review Comments

	Reviewer's comment	Author's comments (if agreed with reviewer, correct <i>the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)</i>
Compulsory REVISION comments	Line 2. It might be better if the title is re-written as; Trend Analysis of Air Temperature Time Series by Mann Kendall Test Line 23, for the key word- add Air before temperature The objective of the study is not clear, it should indicate the case study area, For example line 68, and should be re-written as the main objective of this study is to find out the trend (both in monthly and annual) mean air temperature of..... (mention the study areas) by using Mann-Kendall Test Line 80 please use and instead of & Results are not well discussed, so it is difficult to refer which result the author is describing. The author must refer to tables for example table 1(a), etc when discussing the results. All figures are not referenced or discussed in the section result. All figures have not discussed, the author need to discuss all figures. Line 192, what do you mean by the word: reverse trend? since there is no any reference temperature mentioned before avoid using the word reverse but use increased or decreased trend. Line 195-196, please explain the findings, how Haridwar temperature trend is impacted/affected by its geographical	The title was re-written as Trend Analysis of Air Temperature Time Series by Mann Kendall Test: A Case Study of Upper Ganga Canal Command (1901 - 2002), to indicate a specific objective of the paper in terms of analysis and parameter of analysis. The case study area was indicated to define the specific objective of the paper. ‘&’ was not used anywhere in the paper. Result section of the paper has been revised to better accommodate all revisions and indicate the obtained results. All Figures and Tables have been referenced and discussed, accordingly. The term ‘reverse trend’ was explained. The following paper was referenced to explain the



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	location? While the decrease in temperature is evident to all stations during Monsoon season. Results presented in Table 1a-c are not discussed in the text, authors need to discuss all tables Explain your finding in details: Haridwar is near the mountains with most of the Himalayan streams and vegetation, which impacts its trend, why the decreasing trend is also in the other stations during monsoon season. Clarify this discrepancy: It is clear that in summer, temperature is increasing. Higher temperature means more evaporation and hence, more rainfall in monsoon, if there is higher temperature during monsoon that associate more rainfall, why decreasing trend of temperature is observed during the season. Explain in detail and provide references: line 221-223: If this trend continues for several thousand years, then it appears that there will be no effect of Earth's angle on temperature variation due to air temperature equilibrium. Line 228: The change rate of minimum temperature v/s maximum temperature is maximum i.e. minimum temperature has less variation than maximum temperature trend, is not clear, please clarify more in detail by referencing the figure or table results. How the issue of data (temperature) inhomogeneity due to	trend in temperature due to geographical location: 40. James Hansen, Sergej Lebedeff (1987) Global Trends of Measured Surface Air Temperature JOURNAL OF GEOPHYSICAL RESEARCH, VOL. 92, NO. D11, PAGES 13,345-13,372, NOVEMBER 20, 1987 Results given in Tables 1a, 1b and 1c were discussed and referenced accordingly. The explanation falls beyond the scope of the paper and hence the above mentioned reference was made. (Reference No. 40) Through the analysis, the general trend that was determined was increasing in nature. Obvious conclusions were drawn from there. The sentence was revised to clear the discrepancy. The necessary corrections were made.
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	the instrument failure, changes of instrument and change of the land use surrounding the station have been addressed in this study? This is because if these inhomogeneities area not detected and corrected properly can lead to wrong conclusion of temperature trend (1901-2002). Line 252-254, please clarify, what are does it mean by heavy temperatures which are rising with time?, I advice the author to use higher temperature than heavy temperatures The conclusion should be re-written to summarize all the findings of this research. Refer to both figures and tables.	As mentioned in the Acknowledgement Section of the paper, the data was procured from the Indian Water Portal, which does not mention the sensors used or their range and accuracy for different stations. Necessary corrections were made.
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Minor REVISION comments	The line 20-22, the sentences need to be re-written to indicates that minimum temperature is warming at higher rates compared to the other temperatures (avoid the word followed). Could you describe why minimum temperature is rising at higher rate compared to maximum temperature? Line 43-45, the study should be restricted to temperature variation and not rainfall variation. In the whole paper replace the word temperature with air temperature The results section might be better to be re-written as results and discussion/ or the authors need to have another section that discuss the results in details. More detailed description of the study area, especially its climate and weather conditions is necessary The specific aim of the study is mentioned in the abstract but not in the introduction section. The author need to explain what is the specific aim of the study and what is the specific objective of the study. Line 14-15 in the abstract, how the spatial variability of temperature is analysed in the study? It might be better to have a table that indicates the distance, altitude, longitude of the stations in the methodology, especially in the study area sub-section.	Necessary corrections were made.
Optional/General comments	This manuscript shows interesting scientific work. This manuscript fulfills the requirements for an article in British Journal of Applied Science & Technology. It is an interesting paper that I recommend for publication but definitely not as it stands.	Tables 1a, 1b and 1c contain the required values. The paper has been developed on a very regional level to determine the accuracy in the obtained result, which conforms to recent studies. The same approach shall now be adopted to develop a trend for a larger area. The scope of the paper is limited only to the Upper Ganga Canal Command area at this point, which includes the analysis of four stations only.