



SDI Review Form 1.6

Journal Name:	Physical Science International Journal
Manuscript Number:	Ms_PSIJ_47136
Title of the Manuscript:	IMPACTS OF SOME METEOROLOGICAL PARAMETERS ON VISIBILITY IN THE NIGER DELTA REGION OF NIGERIA
Type of the Article	Original Research Paper

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. To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

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PART 1: 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	<ul style="list-style-type: none"> - The authors are kindly requested to also specify the location of selected study stations (Calabar, Uyo, Port Harcourt, Owerri, Warri, and Akure) on the map in Fig. 1, displaying the location of underlying states in the Niger Delta region. - The present study has no explanatory section concerning the statistical methods the authors used to interpolate and interpret data. They only mention that : “Due to the resolution of the Datasets, NCEP has a grid box representing each of Relative humidity and wind direction. Figures 2(a/b) to 7(a/b) shows the numerical graphic representation of Visibility and Relative humidity while figures 8(a/b) to 13(a/b) shows the numerical graphic representation of Visibility and Wind direction for Calabar, Uyo, Port Harcourt, Owerri, Warri and Akure respectively for the years 1981, 1991, 2001 and 2011”, failing to give a sound scientific account for their database, namely: whether the 10-years average values they used for horizontal visibility, relative humidity and wind direction represent interpolated decennial means or 10-yrs running means for each state over the two monsoonal seasons (dry and wet). In this respect they are strongly recommended to introduce a brief <i>Methodology</i> section to explain more thoroughly all related aspects and to also make a full (30-yrs) correlation for all the analyzed parameters on the two different monsoonal seasons, to see if and to what extent the overall period average values confirm the partial 10-yrs analyses. - Moreover, the authors used simple correlation techniques to demonstrate the direct or indirect influence, depending on the case, between relative humidity and visibility or wind direction and visibility, respectively. Maybe, it would have been more inspiring for them if they used other more dedicated statistical correlation techniques (Man-Kendall, Spearman, Pearson tests etc.). - Some explanations seem quite uninspired, to say the least, since they are not meant to clarify or explain beyond any doubt the conclusions or statements of the authors. For ex.: “This result is expected because visibility is reduced when relative humidity is high and vice versa. This is because when R-H is low, water cannot condense to form low visibility. It is when water content in the atmosphere is high that condensation will take place to give rise to low visibility” or “This means that as the wind direction increases the visibility reduces and vice versa. This result is also expected because there is a direct correlation between wind speed and wind direction and an inverse correlation between wind speed and wind direction (!!!!!), hence the relation between wind direction and visibility is an inverse correlation. This is because increasing wind speed/direction will give rise to more dust which will be blown into the atmosphere to cause reduction in visibility”... Please rephrase explanations in more logical, systematic and meteorologically accurate terms. In the case of the first sentence, the authors might have wanted to say that condensation processes are usually initiated only at high values of water vapor concentrations/content, yielding intense cloudiness that greatly reduces visibility. Moreover, the greater the air-pollution is (expressed by increased air concentrations of condensation nuclei, e.g. hydrocarbon particles emitted by oil-processing industries), the lower the visibility gets, especially on calm weather, with little wind-speed values, when dust particles may keep suspended in the air. On the contrary, when wind blows, especially with great speed values, the dust particles (namely the condensation nuclei) may quickly be diffused in the open atmosphere, thus enhancing visibility on certain wind directions... In conclusion, the authors are warmly invited to revise their <i>Discussion</i> section in order to provide more coherent explanations for their findings. - As depicted in Figs. 2-13, there appear some very erratic, non-linear 10-yrs trend values from one month to another, for different parameters and locations. Maybe the authors should also dwell more on this problem too. - Another pretty major flaw which needs immediate repair in this article is the fact that very few of the 37 total references are actually mentioned in the text. 	
Minor REVISION comments	An additional revision of the English version would also be advisable.	
Optional/General comments	The present study is interesting but it reflects a hurried (not to say superficial) approach. Nevertheless, its design is sound but its construction is rather sparse. Therefore, the authors are warmly invited to revise it accordingly. Maybe the above-mentioned considerations prove helpful enough....	



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PART 2:

	Reviewer's comment	Author's comment <i>(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)</i>
Are there ethical issues in this manuscript?	<i>(If yes, Kindly please write down the ethical issues here in details)</i>	

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