

## Review Form 1.6

Journal Name:	<a href="#">International Journal of Environment and Climate Change</a>
Manuscript Number:	Ms_IJECC_88439
Title of the Manuscript:	Comparative Assessment of Soil Carbon Sequestration and Carbon dioxide emissions from Agroforestry Systems in Kogi East Nigeria
Type of the Article	Original Research Article

### 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:

(<https://www.journalijecc.com/index.php/IJECC/editorial-policy> )

### 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)
<b>Compulsory</b> REVISION comments	<p><b>Methodology</b></p> <ul style="list-style-type: none"> <li>i) Map of the study area locations in the Kogi East, Nigeria should be provided.</li> <li>ii) Table-1 gives lot of details about trees and crops in each AFS, however, information regarding soil type is not provided.</li> <li>iii) Determination of Soil Carbon Stock: In the SOCFD equation, please explain about 0.1 factor</li> <li>iv) Carbon dioxide Emissions: impact of tree density, crop cover and other vegetation in in each AFS should also have been considered which may impact on soil carbon sequestration.</li> <li>v) Statistical Analysis: Some more details about use of GENSTAT Discovery Software may be provided for the knowledge of scientific community.</li> </ul> <p><b>Results and Discussion</b></p> <ul style="list-style-type: none"> <li>i) <b>Carbon Stock of Soils from Agroforestry Systems:</b> The highest carbon stock was recorded from the soils from agroforestry systems in Dekina (334.43 Mg Cha-1) while no significant difference in carbon stock was observed from the soils of AFS in Ankpa, Ofu, Olamaboro, and Omala <ul style="list-style-type: none"> <li><input type="checkbox"/> The reasons for no significant difference in carbon stock was observed in other AFS needs to be discussed in detail in the manuscript.</li> <li><input type="checkbox"/> In table-2 and 3, Statistics columns, what they indicate and their significance needs to be indicated in the results.</li> </ul> </li> <li>ii) <b>Carbon dioxide emissions of Soils from Agroforestry Systems</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> The carbon dioxide emissions from the root system or the total above ground foliage is considered should be discussed in detail.</li> <li><input type="checkbox"/> The differences due to land management practices like tillage, bush burning and soil fertility management should be highlighted for each AFS.</li> </ul> </li> </ul> <p><b>Summary and Conclusions</b></p> <ul style="list-style-type: none"> <li>i. The results from the analysis revealed that highest carbon stock was recorded from the soils of AFSs in Dekina while no significant difference in carbon stock was observed from the soils of AFSs in Ankpa, Ofu, Olamaboro, and Omala LGAs. <ul style="list-style-type: none"> <li><input type="checkbox"/> It should also summarize the precise reasons for these differences.</li> </ul> </li> <li>ii. Furthermore, the results further indicated that the soils from AFSs in Dekina and Ofu LGAs had highest CO2 emissions while the lowest CO2 emissions were recorded from Ankpa and Omala LGAs respectively. <ul style="list-style-type: none"> <li><input type="checkbox"/> Whether these differences are because of differences in soil type, fertilizer applications or inherent soil fertility status should also be discussed.</li> </ul> </li> </ul>	
<b>Minor</b> REVISION comments	<p><b>Abstract</b></p> <ul style="list-style-type: none"> <li>i) In the present study impact of forest cover (Tree density, tree height and DBH etc), crops grown and other vegetation cover in each AFS has not been considered in SCS.</li> </ul>	
<b>Optional/General</b> comments		

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**PART 2:**

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

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