

**Review Form 3**

Journal Name:	<a href="#">International Journal of Environment and Climate Change</a>
Manuscript Number:	Ms_IJECC_127187
Title of the Manuscript:	Relationship between Inter-Tropical Front and Rainy Season Onset in Guinea Republic
Type of the Article	Original Research Article

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PART 1: Review Comments

Compulsory REVISION comments	Reviewer's comment	Author's Feedback <i>(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)</i>
Please write a few sentences regarding the importance of this manuscript for the scientific community. Why do you like (or dislike) this manuscript? A minimum of 3-4 sentences may be required for this part.		<p>The main objective is to better understand the onset of rainfall on precipitation in the Republic of Guinea, also to study the InterTropical Front (ITF) position compared to each station at the onset date. For it, we link the rainfall Onset and the distance from stations to the ITF location and found that it's at least 57km Northern. We also found a good correlation between ITF position and precipitation at monthly and decadal (10 days) scales for the different stations.</p> <p>This study will allow farmers to know with more precision the rainfall onset in the Republic of Guinea.</p> <p>Ok done.</p>
Is the title of the article suitable? (If not please suggest an alternative title)		<p>Impact of the ITF relationship and the onset of rainfall on precipitation in the Republic of Guinea.</p> <p>Ok done.</p>
Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here.		<p>The abstract of the article has been revised.</p> <p>Ok done.</p>
Are subsections and structure of the manuscript appropriate?		<p>Yes, the subsections and structure of the manuscript are appropriate.</p> <p>Ok done.</p>
Please write a few sentences regarding the scientific correctness of this manuscript. Why do you think that this manuscript is scientifically robust and technically sound? A minimum of 3-4 sentences may be required for this part.		<p>Yes, this manuscript is scientifically robust and technically sound.</p> <p>Water-related problems (drought, flooding) are not only due to the accumulation of rain but also to her spatio-temporal distribution. One of the recurring problems of farmers is failure control of Rainy Season Onset which is of great importance for productivity. In this manuscript, the determination of the rainy season starts was done using a criterion retained for our study zone; also a good correlation between the ITF position and the monthly precipitation was found for each station. This study will allow farmers to know with more precision the rainfall onset in the Republic of Guinea.</p> <p>Ok done.</p>
Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form. =		<p>The references have been completed in paper.</p> <p>Ok done.</p> <p>Gupta N., Mahato P.K., Patel J., Omar P.J. (2022a). Chapter 30 - Understanding trend and its variability of rainfall and temperature over Patna (Bihar). <i>Current Directions in Water Scarcity Research</i>. 7, 533-</p>

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		<p>543. <a href="https://doi.org/10.1016/B978-0-323-91910-4.00030-3">https://doi.org/10.1016/B978-0-323-91910-4.00030-3</a></p> <p>Kumar V., Chaplot V., Omar P. J., Mishra S., H Md. Azamathulla H. Md. (2021). Experimental study on infiltration pattern: opportunities for sustainable management in the Northern region of India. <i>Water Science and Technology</i>, 84: 10-11. <a href="https://doi:10.2166/wst.2021.171">https://doi:10.2166/wst.2021.171</a></p> <p>Umakanth N., Satyanarayana G. C., Naveena N. (2021). Statistical and dynamical based thunderstorm prediction over southeast India. <i>Journal of Earth System Science</i>, 130 : 71.</p> <p>Gupta N., Patel J., Gond S., Tripathi R. P., PJ Omar P. J., PKS Dikshit P. K. S. (2022b). Projecting future maximum temperature changes in River Ganges Basin using observations and statistical Downscaling Model (SDSM). <i>River Dynamics and Flood hazards, Disaster Resilience and Green Growth</i>, <a href="https://doi.org/10.1007/978-981-19-7100-6_31">https://doi.org/10.1007/978-981-19-7100-6_31</a></p> <p>Gupta N., Banerjee A., Gupta S.K. (2021a). Spatio-temporal trend analysis of climatic variables over Jharkhand, India. <i>Earth Syst Environ</i>, 5(1) :71–86</p> <p>Gupta SK, Gupta N, Singh VP (2021b) Variable-sized cluster analysis for 3D pattern characterization of trends in precipitation and change-point detection. <i>J Hydrol Eng</i>, 26(1) : 04020056</p> <p>Omar P. J., Gupta P., Wang Q. (2023). Exploring the rise of AI-based smart water management systems. <i>AQUA—Water Infrastructure, Ecosystems and Society</i>, 2 (11). <a href="https://doi.org/10.2166/aqua.2023.005">https://doi.org/10.2166/aqua.2023.005</a></p> <p>Yoboué V., Galy-Lacaux C., Lacaux JP. (2005). Rainwater chemistry and wet deposition over the Wet Savanna Ecosystem of Lamto (Cote d'Ivoire). <i>Journal of atmospheric chemistry</i>. 52 : 117–141.</p> <p>Lebel T., Parker D., Bourles B., Flamant C., Marticorena B., Peugeot C., Gaye A., Haywood J., Mougin E., Polcher J., Redelsperger J-L and Thorncroft C. D., (2010). The AMMA field campaigns: Multiscale and multidisciplinary observations in the West African region, <i>Quarterly Journal of the Royal Meteorological Society</i>, 136 (S1): 8-33. <a href="https://doi.org/10.1002/qj.486">https://doi.org/10.1002/qj.486</a></p> <p>Lothon M., Saïd F., Lohou F., Campistron B. (2008). Observation of the Diurnal Cycle in the Low Troposphere of West Africa. <i>Monthly Weather Review</i>, 136: 3477 – 3500. <a href="https://doi.org/10.1175/2008MWR2427.1">https://doi.org/10.1175/2008MWR2427.1</a>.</p> <p>Hall N.M.J., Kiladis G.N., Thorncroft C.D. (2006). Three-dimensional structure and dynamics of African easterly waves. Part II: Dynamical modes. <i>J. Atmos. Sci.</i>, 63 : 2231 – 2245.</p> <p>Akpo A., Galy-Lacaux C., Laouali D., Gardrat E., Castera P. (2015). Five years study of rainwater chemistry and wet deposition in the wet savanna of Djougou, Benin (West Africa). <i>AtmEnv</i>, 115:110-123. <a href="http://dx.doi.org/10.1016/j.atmosenv.2015.04.064">http://dx.doi.org/10.1016/j.atmosenv.2015.04.064</a></p>
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		Sultan B., Janicot S. (2003). The West Africa Monsoon Dynamics. Part II: The “Presonset” and “onset” of the Summer Monsoon. <i>Journal of Climate</i> , 16:3407-3427.
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Minor REVISION comments		Yes, the language/English quality of the article suitable for scholarly communications.
Is the language/English quality of the article suitable for scholarly communications?		Thank you for your contribution.
Optional/General comments	<p>Paper Title: <b>Relationship between Inter-Tropical Front and Rainy Season Onset in Guinea Republic</b></p> <p>The study addresses a critical issue for agriculture in Guinea, examining the onset of the rainy season in relation to the Inter-Tropical Front (ITF), but before publication, the paper needs revision based on the following comments.</p> <ol style="list-style-type: none"><li>1. The abstract could be clearer in articulating the study's aims, methodology, and findings. It would help if the abstract first outlined the research question, then described the methods briefly, followed by key findings and their significance.</li><li>2. The introduction briefly mentions the importance of rainfall for agriculture in West Africa but lacks a more detailed background on Guinea's climatic challenges and their agricultural impact.</li><li>3. While the introduction cites a few relevant studies, it could benefit from a clearer synthesis of past research. Expanding on how this study builds on or differs from prior studies on the ITF and rainfall in West Africa would strengthen the literature review.</li><li>4. Three criteria are compared, but the reasoning for selecting Djossou's criterion is not fully explained. Adding context on why this criterion best suits Guinea's specific climatic conditions would add clarity.</li><li>5. The data extrapolation method (for unavailable ITF data from November to March) should be explained in more detail. Justifying why this extrapolation is appropriate would enhance methodological rigor.</li><li>6. Fig. 1. Location of the station should be pointing location. Authors are suggested to mark the stations in the point form.</li><li>7. The discussion section highlights findings but could provide a more in-depth analysis of observed trends and variability in ITF movements and rainfall onset across different regions.</li><li>8. The conclusion effectively summarizes key findings but could better emphasize the practical applications of the research, such as implications for agricultural planning and water resource management.</li><li>9. The study would benefit from a brief discussion of potential limitations and areas for future research, such as exploring the influence of additional climatic factors on rainfall onset.</li><li>10. Authors are advised to ensure consistency in referencing style throughout the manuscript. Authors</li></ol>	Thank you for your contribution.

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	<p>are also suggested to check the following references and may use them in the paper.</p> <ul style="list-style-type: none"><li>– Jee, O. P., Bihari, D. S., &amp; Kumar, D. P. (2019). Temporal variability study in rainfall and temperature over Varanasi and adjoining areas. <i>Disaster Advances</i>, 12(1), 1-7.</li><li>– <a href="https://doi.org/10.1007/s12517-021-08255-0">https://doi.org/10.1007/s12517-021-08255-0</a></li><li>– <a href="https://doi.org/10.1016/B978-0-323-91910-4.00030-3">https://doi.org/10.1016/B978-0-323-91910-4.00030-3</a></li><li>– <a href="https://doi.org/10.1007/978-981-19-7100-6_31">https://doi.org/10.1007/978-981-19-7100-6_31</a></li><li>– <a href="https://doi.org/10.1007/978-981-13-8181-2_18">https://doi.org/10.1007/978-981-13-8181-2_18</a></li><li>– <a href="https://doi.org/10.2166/aqua.2023.005">https://doi.org/10.2166/aqua.2023.005</a></li></ul>	
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PART 2:

	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)
Are there ethical issues in this manuscript?	(If yes, Kindly please write down the ethical issues here in details)	