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Manuscript Number:	Ms_JGEESI_46570
Title of the Manuscript:	Spatio-temporal analysis of the impact of rainfall dynamics on the water resources of the N'zi watershed in Côte d'Ivoire
Type of the Article	Original 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:

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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	<p>The differences between the presented rates need to present statistical values (p value, for example), since the whole article is based on numerical differences between the parameters</p> <p>If the analyzed parameters present some type of normalization, it is necessary to emphasize in the methodology.</p>	<p>The study undertaken relates to the descriptive, cartographic statistical analysis and the estimation of the values of certain parameters. The different maps and values in it are illustrative of what the study aims to highlight.</p>
Minor REVISION comments	<p>The main conclusion of the article is "showed a change in the rainfall-discharge relationship", which was already highlighted in the introduction, citing previous articles. It is not possible in the discussion (nor its results) to detect factors related to this change in the rainfall-discharge relationship. In the last paragraph, "hydroclimatic variability and changes in land use / land cover" is highlighted, but the data presented do not allow this type of correlation. I suggest including local numerical data on land use and increasing land use, and performing a statistical correlation analysis to strengthen the main argument of the work.</p> <p>As "the change in the rainfall-discharge relationship" is the main idea highlighted in the text, I suggest changing the title to include this idea.</p>	<p>The main conclusion of the article is not to "show a change in the rain-flow relationship" (TO BE REVIEWED). In fact, several studies have been carried out on the N'zi watershed as clearly mentioned in the Introduction, along with various techniques. In addition to the problematic and the different objectives of the study, one of the most important points to be addressed by the Introduction is to establish precisely (and briefly) the state of knowledge on the subject at the moment of work (research or existing work on your theme) and of course, references must be cited. This avoids plagiarism. What makes the specificity of the present study is the mapping of the spatio-temporal dynamics of the rainfall, the demonstration of the relation between the spatial variability of the rainfall and the flow of the surface water of N'zi, and the evaluation groundwater recharge from aquifers in the watershed. And the conclusion of the article shows that the objectives of the study were well achieved.</p> <p>The discussion you are referring to here aims to:</p> <ul style="list-style-type: none"> - compare the main results of the



		<p>study with those of the literature or with published data, as objectively as possible;</p> <p>- indicate the limitations of the research and highlight the main results (if the results are in the same direction (similar, similar) and / or contradict previous work, express the criticism in terms measured).</p> <p>This part must be full of bibliographical references. Of course some references cited in the Introduction can also be found here; which is normal.</p> <p>The title cannot under any circumstances be modified since it perfectly summarizes the content of the article.</p>
<u>Optional/General comments</u>	<p>The article is of local importance and presents a great robustness of data. However, the potential of the data is not explored, which reflects in the discussion (repeat s ideas already presented in the introduction) and in the absence of statistical analysis of correlation (which is fundamental for this type of study).</p> <p>A very interesting point would be the reasons for the change in climate relations presented, which could be analyzed through local data collection</p>	<p>Review the data from the study. This study is not intended to deal with land cover or land use. Kindly re-read the article to better understand the work developed.</p> <p>Note: Not all points can be addressed in an article of about ten pages, hence the perspectives for addressing other aspects of the research theme.</p>

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?	<u>(If yes, Kindly please write down the ethical issues here in details)</u>	