

Review Form 3

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| Journal Name: | International Journal of Environment and Climate Change |
| Manuscript Number: | Ms_IJECC_130701 |
| Title of the Manuscript: | Estimation of Distribution NO ₂ In East Java From 2019-2021 And The Factors That Improve It |
| Type of the Article | Short Research Article |

General guidelines for the 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 guidelines for the Peer Review process, reviewers are requested to visit this link:

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PART 1: 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> |
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| Please write a few sentences regarding the importance of this manuscript for the scientific community. A minimum of 3-4 sentences may be required for this part. | | |
| Is the title of the article suitable? (If not please suggest an alternative title) | | |
| 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. | | |
| Is the manuscript scientifically, correct? Please write here. | | |
| Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form. | | |

Review Form 3

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| Is the language/English quality of the article suitable for scholarly communications? | | |
| <u>Optional/General</u> comments | <p>The manuscript explores the spatial and temporal distribution of NO₂ in East Java using Sentinel-5P satellite data and Google Earth Engine, providing valuable insights into air quality trends and their correlation with human activities. While the study is relevant and employs advanced technology, there are significant areas for improvement.</p> <p>Strengths: Relevant topic addressing urban and industrial air pollution. Effective use of satellite data for geospatial analysis. Clear policy implications for air quality management.</p> <p>Major Concerns: Validation: The lack of ground-based data validation weakens the reliability of the findings. Data Analysis: The discussion is descriptive, lacking quantitative analysis of factors influencing NO₂ levels. Presentation: Figures and charts need clearer integration into the text, and statistical methods are insufficiently detailed. Language: The manuscript contains grammatical issues and unclear phrasing, particularly in the title and abstract. Recommendations: Validate satellite data with ground-based measurements. Include quantitative analysis to assess the contribution of various factors. Improve figure descriptions and detail</p> <p>statistical methods. Revise the title for clarity, e.g., Spatial and Temporal Analysis of NO₂ in East Java (2019–2021). This study has potential but requires substantial revisions to enhance its scientific rigor and clarity.</p> | <p>Thank you for the valuable recommendations provided. We would like to convey the following points:</p> <ul style="list-style-type: none">• Validation with ground-based measurements could not be conducted in this study, as it is assumed that direct comparison with satellite data is not feasible. Additionally, this research focuses on secondary data.• This study is a descriptive study that emphasizes the observation of phenomena from existing literature to estimate the contributing factors of NO₂ emission sources based on satellite image observations. The absence of statistical analysis may be a limitation of this study due to the unavailability of a statistically sufficient sample dataset.• The methodology section has been enhanced, and the overall structure of the manuscript has been improved. Additionally, figures and graphs have been refined.• The title and abstract have been revised in accordance with the reviewers' suggestions. |

PART 2:

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| | 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) | |