Review Form 3

Journal Name:	**International Journal of Environment and Climate Change**
Manuscript Number:	**Ms_IJECC_129192**
Title of the Manuscript:	**LULC impacts on NDVI and LST: A case study on Jashore District, Bangladesh**
Type of the Article	

<mark>PART 1:</mark> Comments

	Reviewer's comment	Author's Feedback *(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)*
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.		

Is the language/English quality of the article suitable for scholarly communications?		
Optional/General comments	The study is good. But it needs some modification. I have highlighted the comments try to rectify the manuscript accordingly. The manuscript mentions using Landsat data and GIS technology, but does not provide sufficient details on the methodology used for LULC classification. It would be helpful to specify the classification technique (e.g., supervised or unsupervised), and the specific algorithms or tools employed. There is no mention of preprocessing steps for the Landsat data, such as atmospheric correction, geometric correction, or cloud masking. These are crucial for ensuring the accuracy and reliability of the results. The study mentions using "ancillary data" but does not specify what this data includes. Detailing the sources and types of ancillary data (e.g., meteorological data, socio-economic data) would improve the transparency of the methodology. The term "vegetation land cover" is used but not clearly defined. It would be beneficial to clarify whether this refers to forest cover, cropland, grassland, or another type of vegetation, and how these were classified in the study. While NDVI and LST analysis are mentioned, the specific methods or formulas for calculating these indices are not provided. Including information on how NDVI and LST were derived and analyzed would make the study more robust. The study reports a negative correlation between LST and NDVI, but it is unclear how the correlation was quantified. It would be important to include the correlation coefficient and discuss any potential confounding variables or seasonal variations that could affect this relationship. The resolution and quality of the Landsat data are not mentioned. The study should clarify the spatial and temporal resolution of the Landsat images used, as this can significantly impact the interpretation of LULC changes and LST variations. While the manuscript acknowledges that LST could be influenced by global climate change, there is no further exploration or analysis of how climate change might interact with local land use changes. This is a significant limitation if the study aims to make long-term predictions or policy recommendations. The Kappa statistics are provided for 2002 and 2022, but it would be helpful to include accuracy assessment for intermediate years (e.g., 2012) to provide a clearer picture of how LULC has changed over time. There is no mention of how LST values were validated. Ground-truthing or comparison with temperature data from weather stations would enhance the credibility of the LST findings. The study focuses on Jashore District, but the findings may not be generalizable to other regions in Bangladesh or beyond. A discussion on the regional applicability of the results and whether similar patterns could be observed in other areas would strengthen the conclusion.	

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

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