Review Form 3

Journal Name:	**International Journal of Environment and Climate Change**
Manuscript Number:	**Ms_IJECC_123564**
Title of the Manuscript:	**Implications of Land Use and Cover Transformation on Biomass and Carbon Sequestration in Coastal Areas of Kinondoni, Tanzania**
Type of the Article	

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PART 1: Review Comments

Compulsory REVISION comments	**Reviewer's comment** The abstract should specify the methods for estimating biomass, carbon and the economic value of carbon The introduction does not address the research question, the main objective and the main hypothesis of the study. What materials and data are used? There should be a section presenting the types of data used, another for the hardware and another for the software. Describe the method used to process satellite images to assess land-use change between 1993 and 2023. Why were images from two different sensors (Landsat and sentinel) chosen? If you have used images that have already been classified, please specify this. Apart from the 2022 census, what other sources of socio-economic data are being used? Which GIS software was used to map land use? The analysis of the data is well presented, but merits further study. GHG emissions from the land use sector consist mainly of CO2 gas, generated mainly through cultivated land, grassland and forest management, including carbon gains and losses linked to anthropogenic changes in land use. Given that land use change has been mapped, then the method used should be consistent with the IPCC Good Practice Guidance on Greenhouse Gas Inventories, according to which historical emissions from deforestation and degradation are calculated by multiplying activity data (AD) by emission factors (EF). The ADs correspond to the areas lost by each land during the transitions due to degradation and deforestation. The EFs correspond to the quantity of carbon released into the atmosphere during transitions (deforestation, degradation, etc.) between 1993 and 2023. The formula proposed by the IPCC (www.ipcc.ch) for the estimate is of the form : $$EH = \sum_{classe=i} DA_i \times FE_i$$ The results need to be restructured. Given that the methodology dealt extensively with land-use mapping, it would have been ideal to begin by presenting a land-use map of 1993 and 2023, in order to analyse the changes that have occurred between the two dates using supporting statistics. This will make it possible to generate the activity data needed to estimate emissions from deforestation and vegetation degradation. GHG emissions from deforestation and forest degradation are estimated in accordance with the 2006 IPCC Good Practice Guidance on Greenhouse Gas Inventories and Methodology. Activity data from land use change and CO2 equivalent emission factors from above-ground biomass are used to calculate historical emissions from deforestation and degradation. Issifou Moumouni and Toko Imorou (2019) Toko Imorou et al, 2021 Kosa, V., & Muamba, M. (2018). IPCC, 2006 The references are very recent, which is to the author's credit. However, not all the authors cited in the text are listed in the bibliographic references.	**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. Why do you like (or dislike) this manuscript? A minimum of 3-4 sentences may be required for this part.	The document is of sound scientific value. The title evokes a topical issue of general interest in science and politics, namely the fight against global warming.	

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Is the title of the article suitable? **(If not please suggest an alternative title)**	**Yes**	
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.	The abstract should specify the methods for estimating biomass, carbon and the economic value of carbon	
Are subsections and structure of the manuscript appropriate?	The structure of the document is generally good, although the author could improve it.	
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.	There should be a section presenting the types of data used, another for the hardware and another for the software. Describe the method used to process satellite images to assess land-use change between 1993 and 2023. Why were images from two different sensors (Landsat and sentinel) chosen? If you have used images that have already been classified, please specify this. Apart from the 2022 census, what other sources of socio-economic data are being used? Which GIS software was used to map land use? The analysis of the data is well presented, but merits further study. GHG emissions from the land use sector consist mainly of CO2 gas, generated mainly through cultivated land, grassland and forest management, including carbon gains and losses linked to anthropogenic changes in land use. Given that land use change has been mapped, then the method used should be consistent with the IPCC Good Practice Guidance on Greenhouse Gas Inventories, according to which historical emissions from deforestation and degradation are calculated by multiplying activity data (AD) by emission factors (EF).	
Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form. **-**	The references are very recent, which is to the author's credit. However, not all the authors cited in the text are listed in the bibliographic references.	
Minor REVISION comments **Is the language/English quality of the article suitable for scholarly communications?**	Yes	
Optional/General comments		

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)*	

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