

Peer-Review Record

# Land Use Change, Urban Agglomeration, and Urban Sprawl: A Sustainable Development Perspective of Makassar City, Indonesia

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*Reviewer 1:* Anonymous

*Reviewer 2:* Anonymous

*Reviewer 3:* Anonymous

*Reviewer 4:* Anonymous

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(This article belongs to the Collection [Land Systems in Transition: Challenges, Approaches, and Pathways for a Sustainable Development](#))

## Round 1

### *Reviewer 1 Report*

The manuscript Land Use Change, Urban Agglomeration, and Urban Sprawl: A Sustainable Development Perspective of Makassar City, Indonesia addresses various implications of urbanization in the city of Makassar. It presents and interesting case study research.

The manuscript has several issues that need to be addressed in order to turn it into a publishable piece. I provide several recommendations below which I hope will help the authors.

#### Introduction

- As written now, it is difficult to follow the main message of the introduction. The authors mix ideas on positive and negative implications of urbanization and discuss altogether social, economic, environmental aspects. I recommend separating the ideas by focusing each paragraph on one idea. Also, this will help create a flow in the text.
- I recommend explaining what the authors mean when using the terms urbanization, urban expansion urban sprawl, and urban agglomeration, suburbanization. What is the difference between them?

#### Conceptual framework

- Check the title of the Review subsection.

- Check lines 202-226 – some text in Malay was not translated

#### Study area

- In Table 1, I suggest to remove the column with the geographical location and replace it with the information regarding population (for example density), the surface of the district from Table 2. Merge the two tables.

#### Method of Collecting Data

- Please add the source of the data and the reference year for each dataset used in this study. It would be good to present this information in a table.

#### Questionnaire

- who filled in the questionnaire, when was the questionnaire applied?

- it is a bit confusing because the section on Questionnaire and Research Respondents are separated. Are the Research Respondents the ones who filled in in questionnaire? If yes, then these two subsections could be merged.

#### Results

- First of all, the results section should contain ONLY the results of the analysis conducted by the authors. Thus, I highly recommend to remove any information from other studies.
- Second, the results section is very long. I suggest to keep only the most important information which answer the research questions formulated in lines 148-151. I suggest to reorganize this section by presenting the data collected and analysed.

#### Discussions

- Should be organized to answer the research questions
- Figure 12 cannot be read.

Overall, I recommend shortening the list of citations. Keep the most important ones and relevant to your study.

### *Author Response*

Dear Reviewer

We thank you for the suggestion and input provided by reviewers. In the following, we present some of the revisions that we have made regarding our article.

1. Our introduction section has restructured the discussion of urban expansion, urban sprawl, and urban agglomeration. We have separated for each discussion according to reviewer suggestion (pages 1-3).
2. We have revised the conceptual framework in relation to the Indonesian language use (page 4).
3. In the methodology section, namely in the study area Table 1 and Table 2 we have combined it according to the reviewer recommendations (page 7).
4. In the data collection methods section, we have added to each dataset and presented it in tabular form (pages 10-11).
5. In the questionnaire section we have combined the questionnaire discussion and research sample into one section (page 12).
6. We have revised and corrected the discussion structure of the study results. We have eliminated other irrelevant studies and focused more on data and research results according to the research questions posed (pages 14-26).
7. In the discussion, we have revised the substance, including removing irrelevant citations and we have clarified Figure 12 (pages 26-28).

Thanks you for the suggestion, input, and corrections given. Hopefully, our revision result are in accordance with reviewer expectations.

Regards,

Author

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## Reviewer 2 Report

This manuscript discusses the land use change, urban agglomeration, and urban sprawl towards the sustainable development perspective over Makassar City of Indonesia. The objective of this study is well defined and the approach is well founded. The manuscript is also well written, but many points seem to be unnecessary, particularly in the framework and results section. The Method section also lacks much information. Overall results and findings seem to be useful towards the sustainable development of the said city. So I recommend this manuscript with the following major and/or minor comments.

1. L37-39: "The spatial .... urban systems". Please give one or more references, particularly that studied over a city like the present study.
2. L52: "World Bank states that urbanization in large and metropolitan cities in Indonesia has reached 55%." It needs references.
3. L81-83: "Furthermore, housing and settlement development activities and increased transportation infrastructure development have an impact on the complexity of space utilization." It needs references.
4. L99, L113, L37: This study is based on urbanization and suburban is a part of it, so it is suggested to use the "suburban" word uniquely throughout the manuscript i.e. use either suburb or suburban.
5. L129-143: "The results.....Transformation". Please rewrite this paragraph in a different way. The present form looks like your own results are presented here.
6. L153: "2.1. Review Teori". Do you mean review theory? In this section, many things have been highlighted. It just looks like a review paper. It may be reduced and it is suggested to highlight only the points that are mainly necessary for the defined objectives.
7. L402: "3.3. Method of Collecting Data": Data collection method is not clear at all. Please write it in a simple way and more clearly. Whether the survey questionnaires followed the government protocol and ethics should also be clearly mentioned in the methods section.
8. L413: "(4)". Is it (5)?
9. L449: "land use change data": Where did the authors get data? What about the accuracy of the data? Also missing information on the periods, types and methods used to prepare this data?
10. Figure 5: Figure is not clear

## Author Response

Dear Reviewer

Thank you for the suggestion and input given to us. We have substantially corrected and revised several things, according to reviewer suggestions, as follow:

1. In the introduction we have added reference according to the suggestions given (pages 1-2).
2. We have revised the use of the term suburbs for the entire manuscript according to the suggestions and input of the reviewers.
3. We have reviewed and improved the research result that support this study (page 3).
4. We have improved the conceptual framework and reduced it and only use important theories according to the needs of study (pages 3-6).
5. We have improved the study method section, including the questionnaire section according to suggestions and input from reviewers (pages 8-12).
6. In changing the land use change data, we have improved the relevant data obtained, the data period and methods we use (pages 9-10).

Thank you for the suggestions and input. Hopefully, the revisions we have made have met the expectation of the reviewers.

Regards,

Author.

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## Reviewer 3 Report

- The introduction section is a bit too long. The authors could move the context-specific content regarding the case study areas to the latter part of the article. In terms of the research gaps, the authors should clearly highlight how the gaps are bridged in the conclusions section.
- The representativeness of the case study areas should be further explained (lines 302-311). For instance, it is not convincing to claim that the case is representative because of the “complexity in land use change in the suburbs of...” It is still not clear why Makassar City is an important case for research. How can the lessons learned from Indonesia be extended to the other areas? The authors need to justify the case representativeness to attract a wider audience without local knowledge.
- The economic aspects of urban sprawl are not adequately covered in the literature review. There are many relevant theoretical concepts such as urban spatial structure (e.g., <https://www.jstor.org/stable/2564805> and <https://doi.org/10.1016/j.jue.2012.05.003>) and polycentric development (e.g., <https://doi.org/10.1177/2399808319864972> and <https://doi.org/10.1016/j.polsoc.2013.05.005>) which are not currently covered in the manuscript. The authors should better situate their research in the wider literature.
- The design of the flowchart (figure 3) can be further justified. For instance, why did the authors choose four indicators to assess urban agglomeration? The selection of indicators should be better linked to literature.
- Despite many interesting findings, the theoretical contribution of this work is not clearly summarized in the conclusion section. How do the findings specifically contribute to the existing literature? The new findings should be highlighted and better linked to the literature.
- There are too many figures (12 in total) in the manuscript. The authors should move some of them to the supplementary material(s). In addition, Figure 12 is not well displayed in the manuscript.

## Author Response

Dear Reviewer

We thank you for the suggestions and input provided by reviewer. In the following, we present some of the revisions that we have made regarding our article.

1. In the introduction, we have reviewed and simplified it according to reviewers suggestions and input (pages 1-3).
2. Representation of the study area, we have reaffirmed that the study in the case of Makassar City as a primary city in a metropolitan urban system related to spatial expansion contributes to changes in land use, urban sprawl, and urban agglomeration towards urban system integration and its impact on environmental degradation. This means that the context of these cases predominantly occurs in big and metropolitan cities (page 6).
3. In the substance and revision that we have conducted, we have added several theoretical studies according to suggestions and input from reviewer (the introduction section, conceptual framework, and result) related to supporting theories.
4. In Figure 3 we have added a theoretical study related to urban agglomeration according to reviewers suggestions and input (page 9).
5. At the conclusion of our study, we have substantially improved it according to the suggestions and input from reviewers (pages 28-29).
6. The Figure 12 in the discussion section has been clarified again (pages 27-28).

Thank you for the suggestions, input, and corrections given. Hopefully, our revision results are in accordance with reviewer expectations.

Regards,

Author

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## *Reviewer 4 Report*

This is a very good, well structured paper: the goals and methods are well addressed and the conclusion meets the objectives.

In my view the paper should be accepted as is. The authors have merit.

### *Author Response*

Dear Reviewer

Thank you for the advice, input, and support.

Regads,

Author

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## **Round 2**

### *Reviewer 1 Report*

The manuscript Land Use Change, Urban Agglomeration, and Urban Sprawl: A Sustainable Development Perspective of Makassar City, Indonesia addresses various implications of urbanization in the city of Makassar. After a round of revisions, the authors have made several improvements to the manuscript. I have several additional comments and suggestions for the revised version:

- Overall, the article is rather long. I suggest the authors to consider shortening several sections 2. Conceptual Framework, 4. Data Analysis Method and 4. Results. The same applies to the references list. A list of maximum 80 references would be sufficient.
- For shortening the manuscript, authors could take out some information on multiple regression, for example. This is a statistical method wildly used by the scientific community. Thus, including its formula and model (figure 4) is not necessary.
- Consider moving Figures 8, 9 and 10 in an Appendix.
- Please specify when was the questionnaire applied.
- The manuscript could benefit from a English language proofing.

### *Author Response*

Dear Reviewer

Herewith, we thank you for your suggestions and input on our article. Some of the things we have revised are related to reviewer suggestions and input, as follows:

1. We have revised the conceptual framework and reviewed it (pages 3-4).
2. We have improved and revised the methodology (pages 5-11).
3. Figures 8,9,and 10 we make as attachments.
4. We have revised the questionnaire (pages 9-10).

Thank you for the suggestion and input.

Regards,

Author

Author Response File:  [Author Response.pdf](#)

## *Reviewer 2 Report*

Reviewer appreciated the authors' effort. Authors have considered all my major comments, but still I suggest them to double check it before sending the final manuscript.

Comments:

1. Methodology section: I did not find any statements that confirms the survey questionnaires have been followed the government protocol and ethics.
2. Still too many literature and many of them are unnecessary. Those can be reduced.

## *Author Response*

Dear Reviewer

Herewith, we thank you for your suggestions and input on our article. Some of things we have revised are related to reviewer suggestions and input, as follows:

1. We have revised the methodology section related to the questionnaire according to reviewer suggestion and input (pages 9-10).
2. Unnecessary literature we have omitted for each section in the article

Thank you for the suggestions and input

Regards,

Author

Author Response File:  [Author Response.pdf](#)

## *Reviewer 3 Report*

My concerns have been well addressed.

## *Author Response*

Dear Reviewer

Thank you for the advice, input, and support.

Regards,

Author

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