



Paper: “Analyse spatiotemporelle par Google Earth Engine de l’extension de la ville de Saint-Louis, Sénégal de 1980 à 2024”

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Peer review:

Reviewer 1: Jean-Romuald Mambou

Université Denis SASSOU-NGUESSO de Kintélé, Centre de Recherches Géologiques et Minières du Congo

Reviewer 2: Olamiposi Fagunloye

Geosciences Department, Georgia State University, Atlanta, U.S.A.

Reviewer 3: Blinded

Reviewer C:

Recommendation: Revisions Required

The TITLE is clear and it is adequate to the content of the article.

“Spatiotemporal analysis of the expansion of the city of Saint-Louis from 1980 to 2024” accurately reflects the scope, geographic focus, and temporal span of the work. It is concise and informative. You may consider adding “Random Forest” or “Google Earth Engine” to signal your primary analytical tools, but that is optional.

The ABSTRACT clearly presents objects, methods, and results.

The abstract succinctly states the aim, the use of Random Forest classification, and key findings (fivefold urban area increase). However, it repeats phrases from the summary.

There are a few grammatical errors and spelling mistakes in this article.

In the Abstract: “the area occupied by housing and infrastructure increasing fivefold, from 374.38 ha in 1980 to 2006.35 ha in 2024” – consider hyphenating “five-fold” or rephrasing for clarity.

In Methodology: “Land use mapping by classification:” could read “Land-use mapping by supervised classification.”

Some in-text citations (e.g. “DIOP, 2024”) don’t match the reference list entries.

A thorough language check will catch these minor slips and this might just be because it was written in French.

The study METHODS are explained clearly.

You provide a solid overview of data sources (Landsat), preprocessing (GEE), classification (Random Forest), and post-processing (ArcGIS). To enhance reproducibility:

- Random Forest parameters (number of trees, variables per split).
- How training/validation samples were selected and how many.
- Accuracy assessment metrics (overall accuracy, Kappa).
- Exact acquisition dates of the Landsat scenes.

The body of the paper is clear and does not contain errors.

The structure (Introduction → Study Area → Methods → Results → Discussion) flows well. A few suggestions:

Break long paragraphs in the Introduction for readability.

Standardize figure and table referencing (e.g., “Figure 2” vs. “Figure2”).

Table 1 could be reformatted for clearer alignment between “Class” and “Description.”

Include more citations in Introduction and most especially in the "study area" section. I hardly see any paper or publications that was cited.

The CONCLUSION or summary is accurate and supported by the content.

Your conclusion faithfully recaps the major findings. To deepen its impact, consider adding:

- Discussion of practical implications for urban planners in Saint-Louis.
- Limitations of the approach (e.g., spectral confusion, seasonal effects).
- Suggestions for future monitoring or integration with socioeconomic data.

The list of REFERENCES is comprehensive and appropriate.

You cite a broad range of sources on Senegal's urban dynamics and remote sensing. Please:

- Ensure every in-text citation appears in the bibliography (e.g., check "DIOP (2024)" vs. "DIOP A. (2024)").
- Uniformly format all entries (journal articles, thesis, reports) and include DOIs where available.
- Verify page ranges are correct.

Please rate the TITLE of this paper.

[Poor] **1-5** [Excellent]

4

Please rate the ABSTRACT of this paper.

[Poor] **1-5** [Excellent]

4

Please rate the LANGUAGE of this paper.

[Poor] **1-5** [Excellent]

3

Please rate the METHODS of this paper.

[Poor] **1-5** [Excellent]

2

Please rate the BODY of this paper.

[Poor] **1-5** [Excellent]

3

Please rate the CONCLUSION of this paper.

[Poor] **1-5** [Excellent]

4

Please rate the REFERENCES of this paper.

[Poor] **1-5** [Excellent]

3

Overall Recommendation!!!

Accepted, minor revision needed

Comments and Suggestions to the Author(s):

Overall, this manuscript offers a valuable spatiotemporal assessment of Saint-Louis's urban expansion using up-to-date remote sensing and machine-learning methods. The narrative is logical and the findings are well supported by maps and statistics. Before final acceptance, please address the minor language inconsistencies, tighten the abstract, and enrich methodological details (e.g. Random Forest parameters, accuracy metrics). Consider expanding the conclusion with practical implications and study limitations to guide future research and urban planning. Additionally, citation of some sentences in the introduction and especially citing sentences in "Presentation of the study space", that would give your sentences research weight and proof. There is need to justify slightly the reason for the selection of "Random Forest" as the method and if you can cite a research will justifying the method (This can just be a sentence or two).

Reviewer D:

Recommendation: Revisions Required

The TITLE is clear and it is adequate to the content of the article.

Le titre est clair

The ABSTRACT clearly presents objects, methods, and results.

Le résumé, les objectifs et la méthodologie sont clairement définis, il en de même des résultats attendus

There are a few grammatical errors and spelling mistakes in this article.

Quelques fautes dont.mew auteurs feraient mieux de corriger

The study METHODS are explained clearly.

C'est clair

The body of the paper is clear and does not contain errors.

Dans le corps de texte. Nous avons noté quelques imprécisions et approximations

The CONCLUSION or summary is accurate and supported by the content.

La conclusion gagnerait à être étoffée

The list of REFERENCES is comprehensive and appropriate.

Bibliographie un peu trop sélective

Please rate the TITLE of this paper.

[Poor] 1-5 [Excellent]

2

Please rate the ABSTRACT of this paper.

[Poor] 1-5 [Excellent]

3

Please rate the LANGUAGE of this paper.

[Poor] **1-5** [Excellent]

3

*Please rate the **METHODS** of this paper.*

[Poor] **1-5** [Excellent]

3

*Please rate the **BODY** of this paper.*

[Poor] **1-5** [Excellent]

3

*Please rate the **CONCLUSION** of this paper.*

[Poor] **1-5** [Excellent]

3

*Please rate the **REFERENCES** of this paper.*

[Poor] **1-5** [Excellent]

3

Overall Recommendation!!!

Accepted, minor revision needed

Comments and Suggestions to the Author(s):

Les auteurs devront revoir les cartes de l'article. Elles ne sont pas très explicites pour des lecteurs qui ne connaissent pas la zone d'étude
