

Evaluation of build food environments mapping approaches for policy decision making; perspective from Kenya, Benin, Uganda and Côte d'Ivoire



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- □ Mapping the build food environment is important for understanding food availability, accessibility, and its impact on public health for policy and intervention planning.
- □ The Alliance of Bioversity and CIAT conducted food environment mapping, using three different mapping approaches; administrative, community, and centered approach.

OBJECTIVES AND METHODOLOGY

- □ This study conducts a critical evaluation of various food environment mapping approaches, assessing their effectiveness and identifying limitations, with a focus on determining which method most effectively integrates geographical and public health data to support informed policy decision-making.
- □ The data was cleaned and analyzed using Python, with the maps generated via the Geopandas package. This process included spatial integrations and linkages to offer a deeper understanding of the impact of the food environment on public health.

RESULTS

ADMINISTRATIVE (NAIROBI, KENYA)

Selected Vendor Types





COMMUNITY (VIHIGA, KENYA) Focuses on localized areas within larger regions.

- Aligns well with national data systems for comprehensive spatial analysis
- Most reliable for integrating spatial and health data e.g., DHS due to defined boundaries
- Suitable for policy decision-making, despite being time**intensive** in large areas.

Provides localized insights but lacks accessible geographical and population data

Necessitates local engagements for population data acquisition





CENTERED (BENIN, UGANDA & CÔTE D'IVOIRE) Centers on a point of interest (e.g., school) with a designated radius.



May introduce spatial estimation **bias** due to data acquisition challenges.

Quick and cost-effective

Misrepresents food vendor distribution within administrative area

Affects the reliability of derived **indicators** like vendor density per population or per square kilometer, that **potentially leads to spatial**

estimation bias

CONCLUSIONS

Strengths and Limitations:

• Each approach has merits, but trade-offs exist between accuracy, cost, and feasibility

Key Takeaway:

• The administrative method provides the most robust framework for policy analysis

Future Directions:

• Potential for a **hybrid approach that** maximizes accuracy and efficiency

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