

Leveraging Spatial Analysis Techniques for Comprehensive Assessment of Internally Displaced Persons (IDP) Camp in Borno State

Precious Eguagie-Suyi.O, Moturayo Adeyemi.A

Department of Meteorology and Climate Science, University of Technology Akure, Nigeria

Presented By:

Precious Eguagie-Suyi.O



Abstract

- ❑ Using Sentinel-2 satellite imagery and Land Use Land Cover (LULC) analysis, this study examines the evolution of IDP camps in Borno State, Nigeria, focusing on Dikwa camp from 2015 to 2022.
- ❑ Results show built-up areas increased from 12% to 46.7%, while bare ground decreased from 79% to 40%, highlighting rapid urbanization due to growing IDP populations.
- ❑ This analysis provides key insights for camp management, resource allocation, and policy decisions in humanitarian response.



An aerial view of IDP camps in Borno state
Source: ICRC

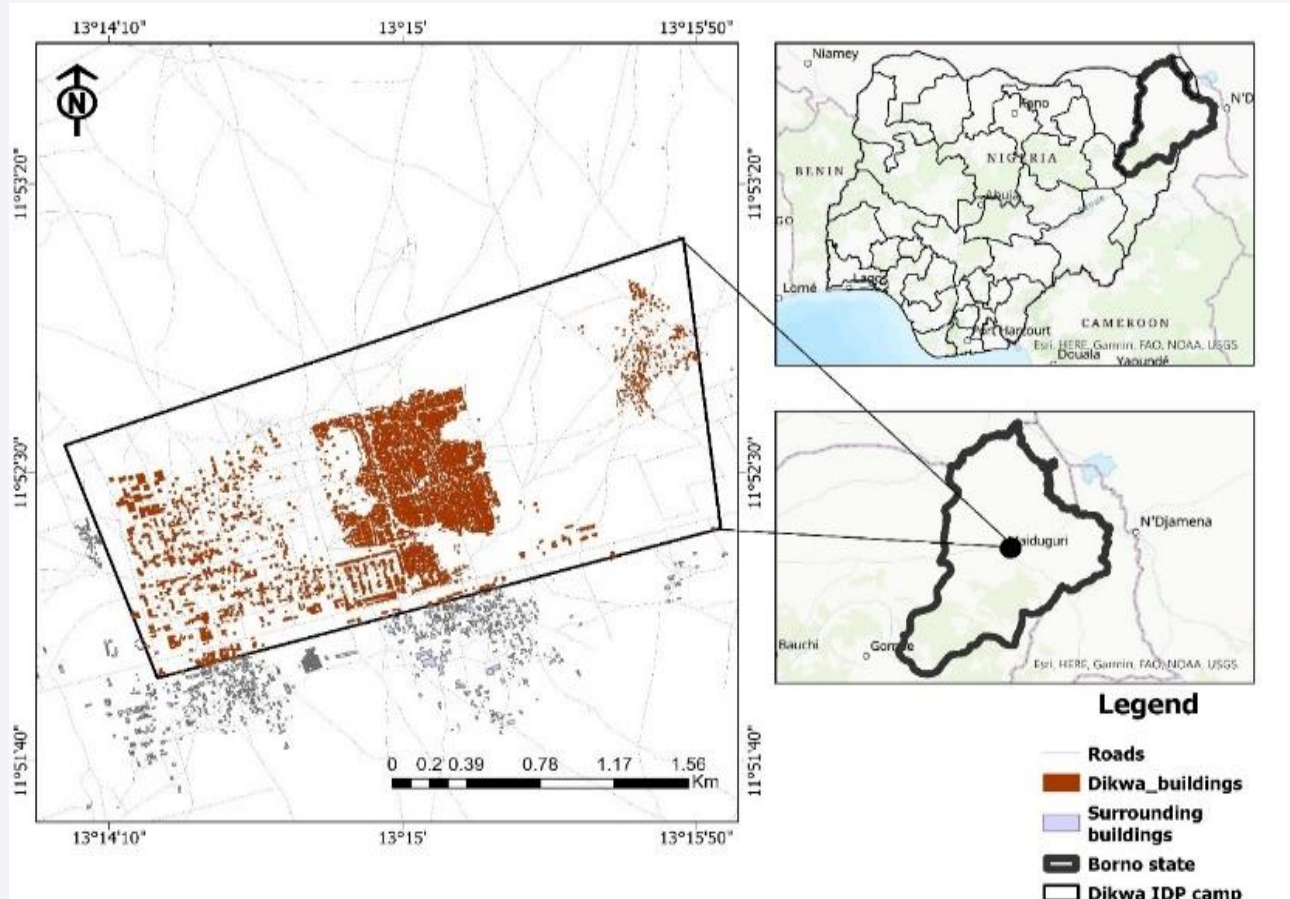
Introduction

- ❑ According to United Nations (UN) Internally Displaced Persons (IDPs) are individuals or groups who have been compelled to abandon their homes or usual places of residence, yet remain within their country's borders
- ❑ Nigeria is experiencing a rising tide of internal displacement, primarily driven by two distinct conflicts;
 - 1)Boko Haram insurgency,
 - 2)Fulani herdsmen violent clashes.(Uzobo & Akhuetie, 2018)



*Queue of pots awaiting the distribution of cooked food at an IDP camp in Dikwa, Borno state.
Source: UNHCR*

Study Area



Map of study Area
Source: Author

- ❑ Borno state is located in the north eastern part of Nigeria.
- ❑ Dikwa Local Government Area (LGA) is located in eastern Borno. Dikwa town lies 90 km east of Maiduguri (the state capital)

Methodology

Data

Sentinel-2 imagery was used based on its high spatial resolution (10m for visible and near-infrared bands)

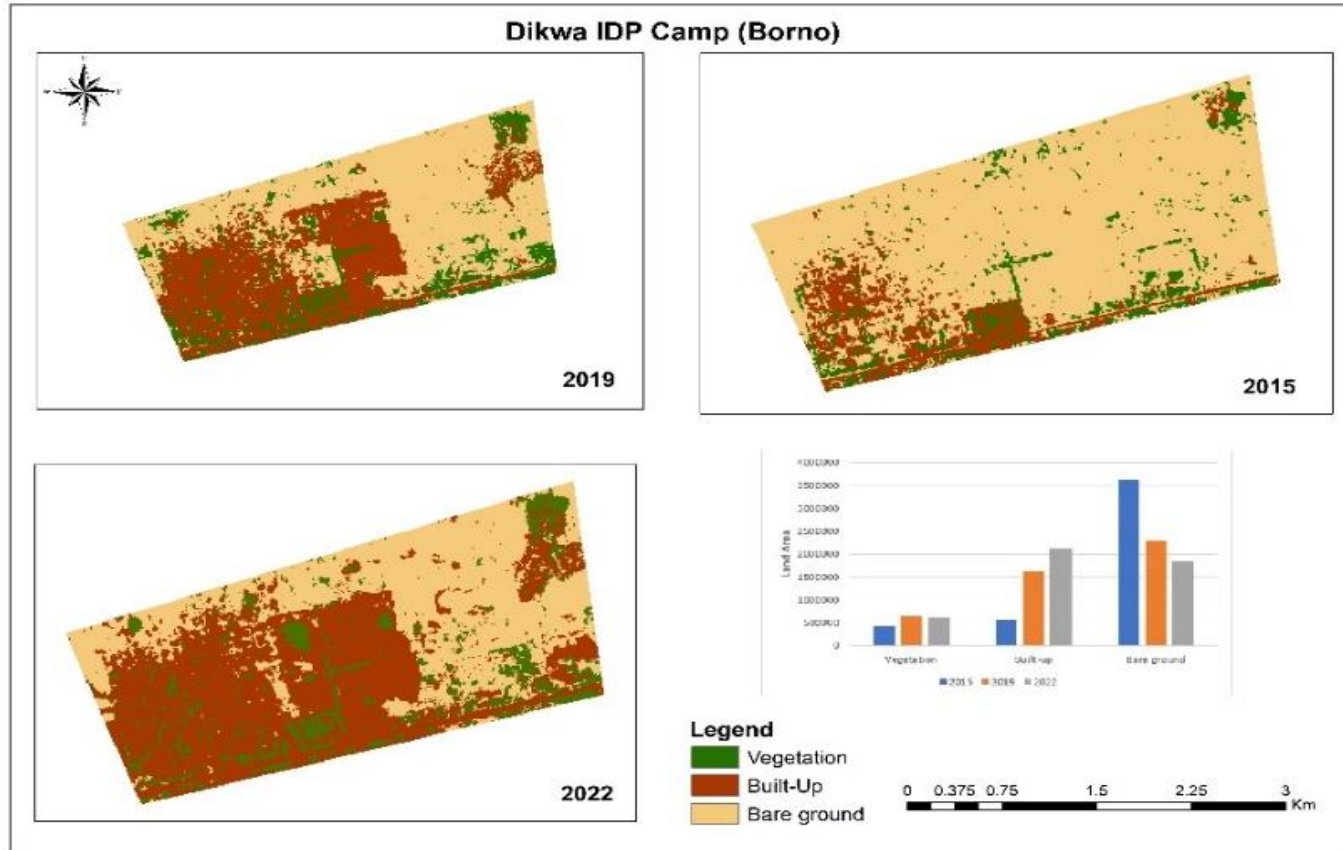
Method

A supervised classification approach was implemented to categorize the landscape into three primary classes: built-up areas, bare ground, and vegetation.

Tools

- ☐ ArcGIS Pro
- ☐ Google Earth Engine (GEE)
- ☐ Google Earth Pro
- ☐ Excel

Result



- ❑ The analysis reveals increase in built-up, 12% in 2015, 35.5% in 2019 and 46.7% in 2022.
- ❑ Concurrently, the gradual reduction in bare land from 79%, 50.4 to 40% over the same period.

Conclusion

- ❑ Dikwa IDP camp transformation from 2015 to 2022 with built-up areas increasing from 12% to 46.7% while bare land decreased from 79% to 40%, reflects rapid urbanization due to humanitarian needs.
- ❑ Population growth in the camp stems from increased insecurity according to United Nations Office for the Coordination of Humanitarian Affairs (OCHA ,2023) . The increasing insecurity requires the urgent intervention of the government.
- ❑ Geospatial analysis proves important in monitoring IDP camps, informing resource management and policy decisions, while highlighting the need for targeted interventions to address displacement impacts



*Hopeful faces of Children: Picture from IDP camp.
Source: Guardian*

Questions??

Contact: Email- eguagiesuyiprecious@gmail.com

LinkedIn- <https://www.linkedin.com/in/eguagie-suyi-precious>