

BACKGROUND

Borno State, one of Nigeria's federating units, which prides itself as the "Home of Peace", has been in the news since July 2009 for the wrong reasons. The typical headlines on and about the state are coordinated and uncoordinated bombings, sporadic gun battles, raiding of police stations, targeted killings, drive-by shootings, etc. All of these were unknown to the state and seemed distant until the 2009 insurgency mounted by the extremist Islamist sect, Jama'atu Ahis Sunna Lidda'awati Wal-Jihad, referred to in common parlance as Boko Haram

In the region of Borno, the health system has suffered significant deterioration due to ongoing conflict. Primary care services are inadequate, referrals are difficult to make, and hospitals are overwhelmed with patients. As a result, the local population has limited access to healthcare services.

The overall situation in Borno highlights the urgent need for comprehensive and improved healthcare intervention and optimized resource distribution.

I am pleased to present to you the report on the spatial analysis conducted to guide interventions aimed at improving access to healthcare services in Borno State. The analysis utilized various datasets, including conflict data, health facilities data, population density data, and administrative boundaries. The objective was to understand the distribution of facilities in high-risk areas, assess the risk profile of different population groups, and optimize resource allocation for healthcare intervention.

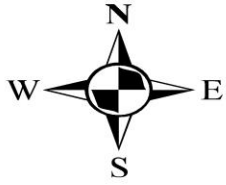
Analysis and Findings:

Distribution of conflicts in the state:

Looking at the analysis below we can see there more conflict at the center down to the east. This gives a picture of the local governments with most conflict events in the state.

12°0'0"E 13°0'0"E 14°0'0"E

MAP SHOWING DISTRIBUTION OF CONFLICTS IN BORNO STATE



14°0'0"N 13°0'0"N

12°0'0"N

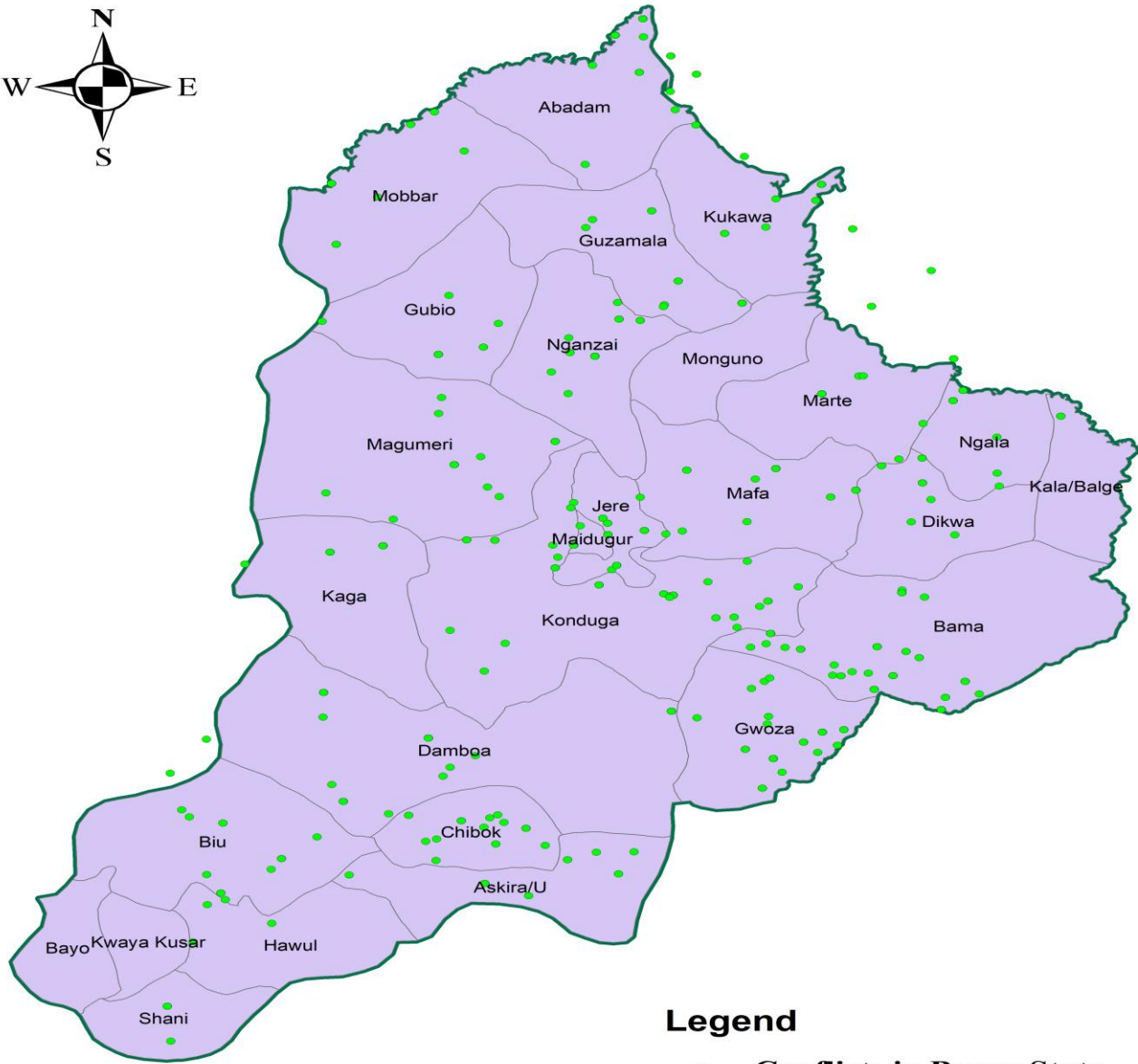
11°0'0"N

10°0'0"N

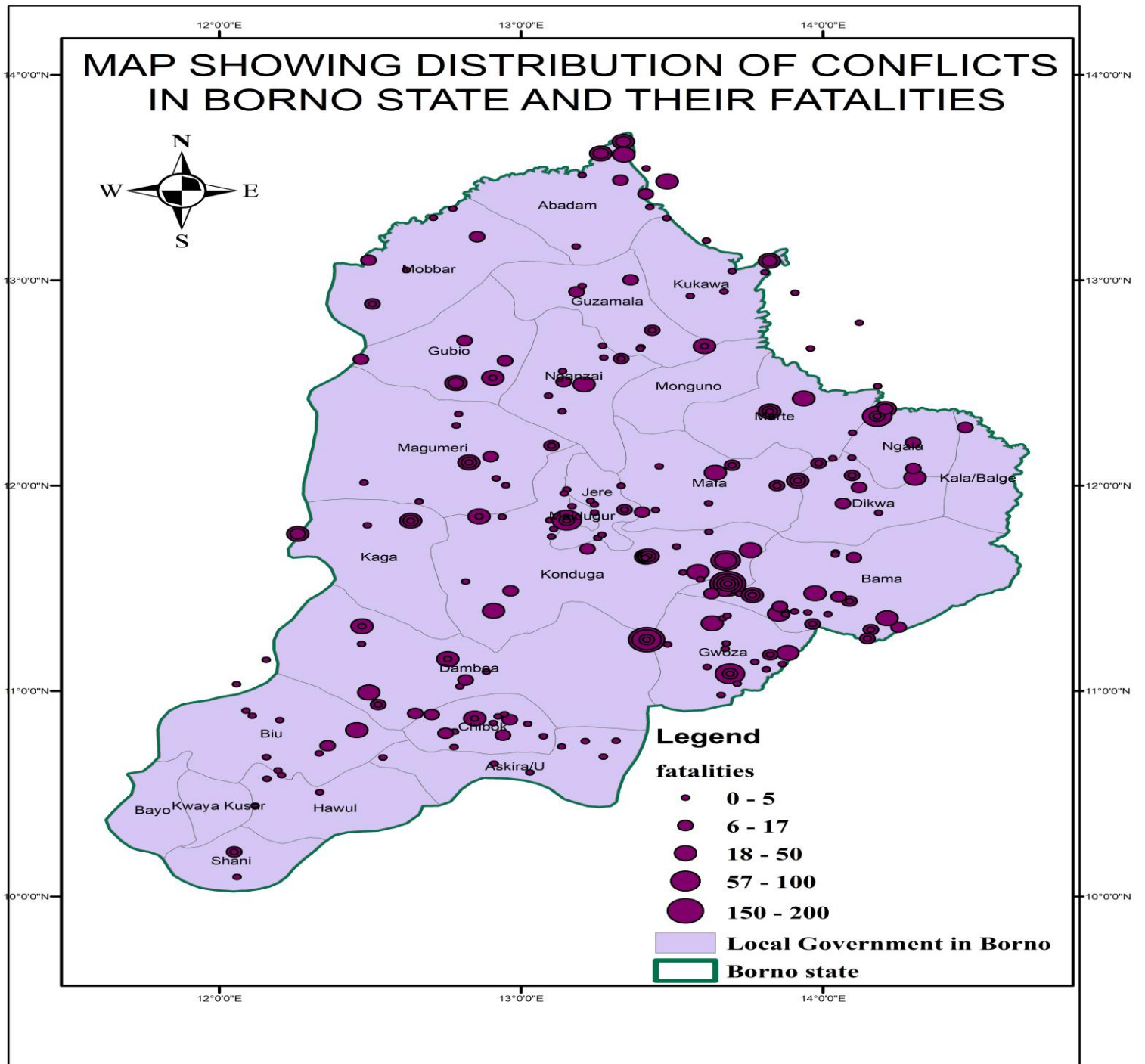
12°0'0"E 13°0'0"E 14°0'0"E

Legend

- Conflicts in Borno State
- Local Government in Borno
- Borno state

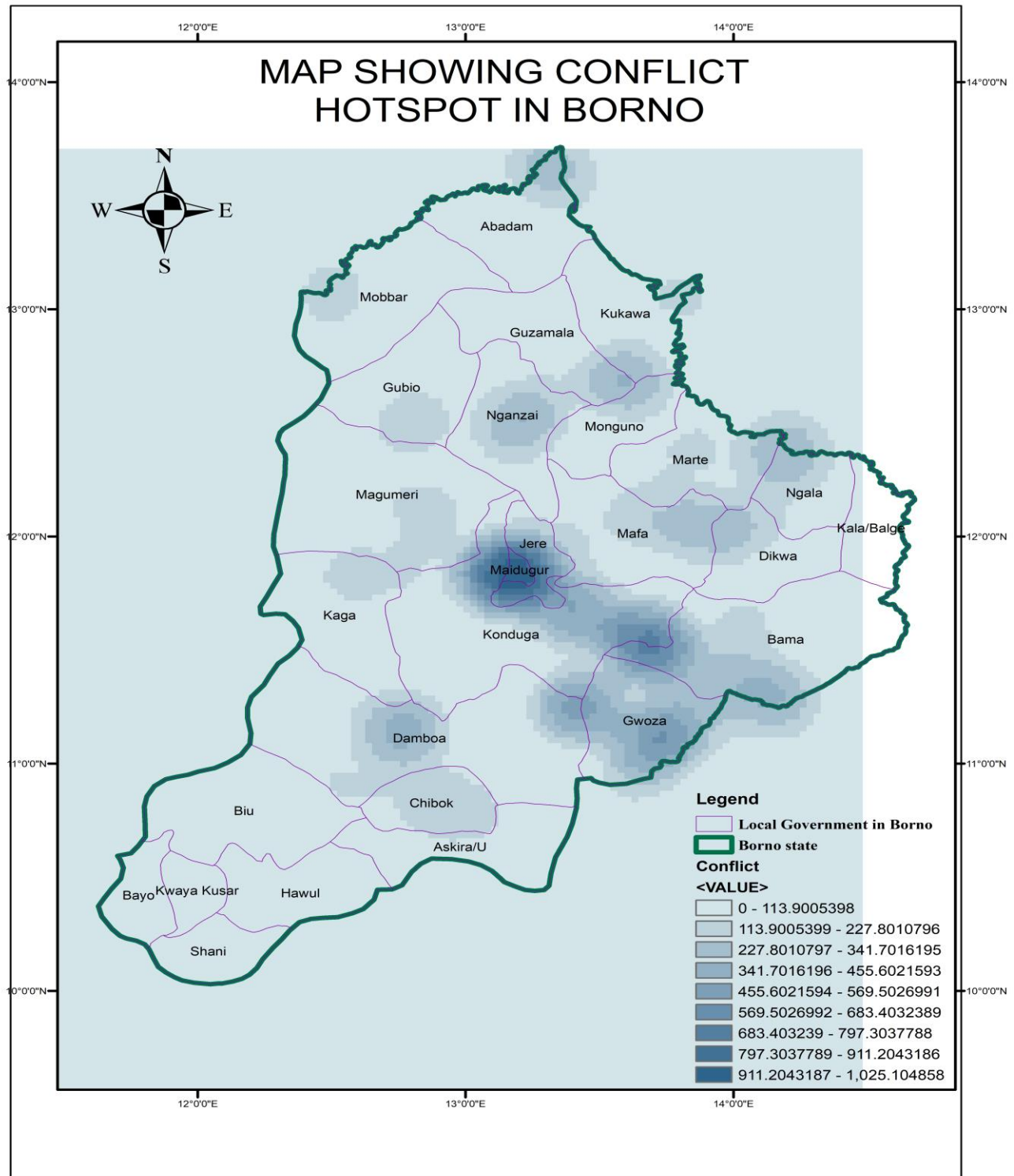


Conflict Intensity Distribution



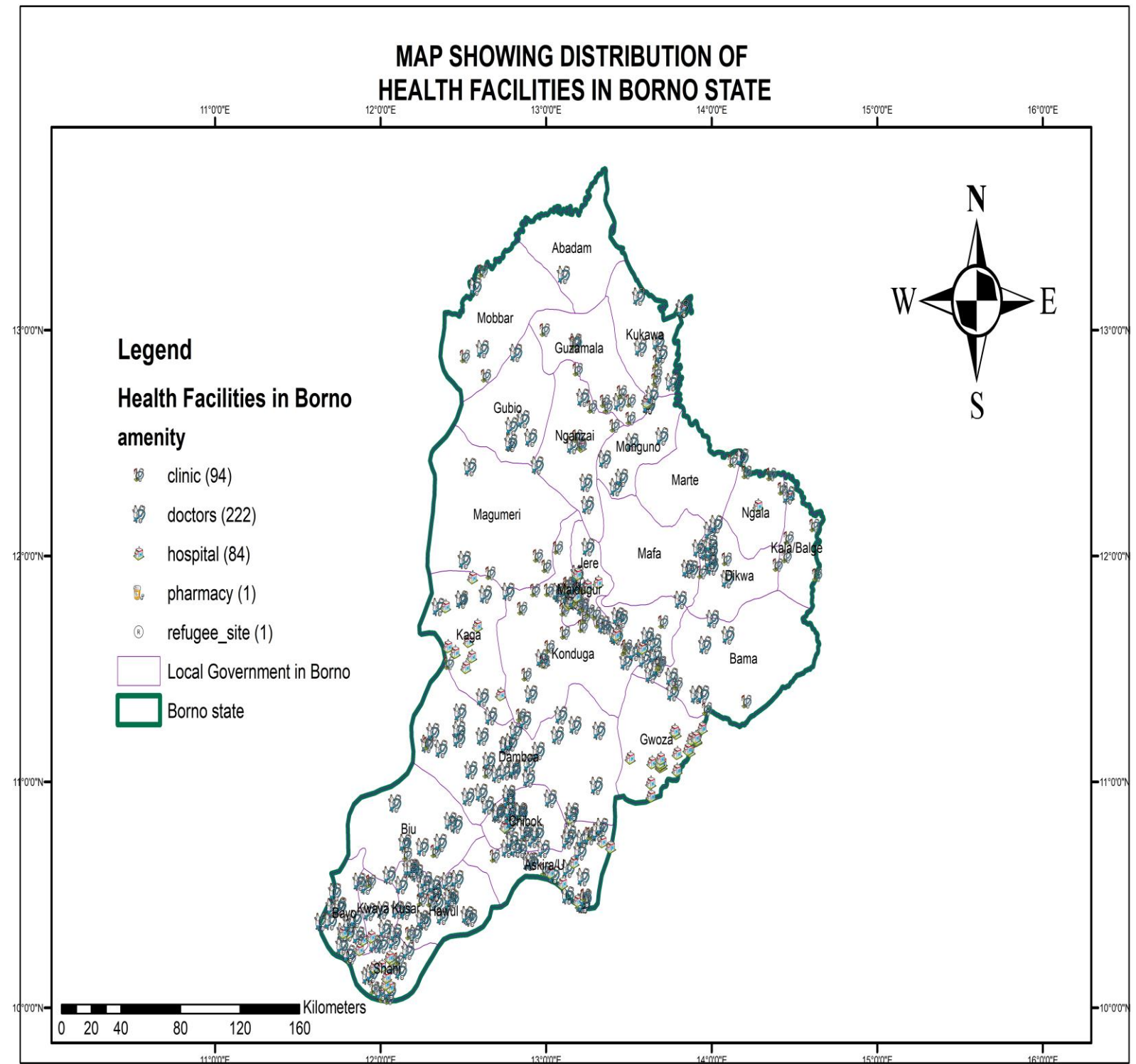
This represents the distribution of the conflicts in the state with their extremity. It gives a picture of areas with more violent conflict events. Health Facilities in areas like this are more prone to disruptions and destructions than others.

Hotspot of Borno conflict using Kernel Density

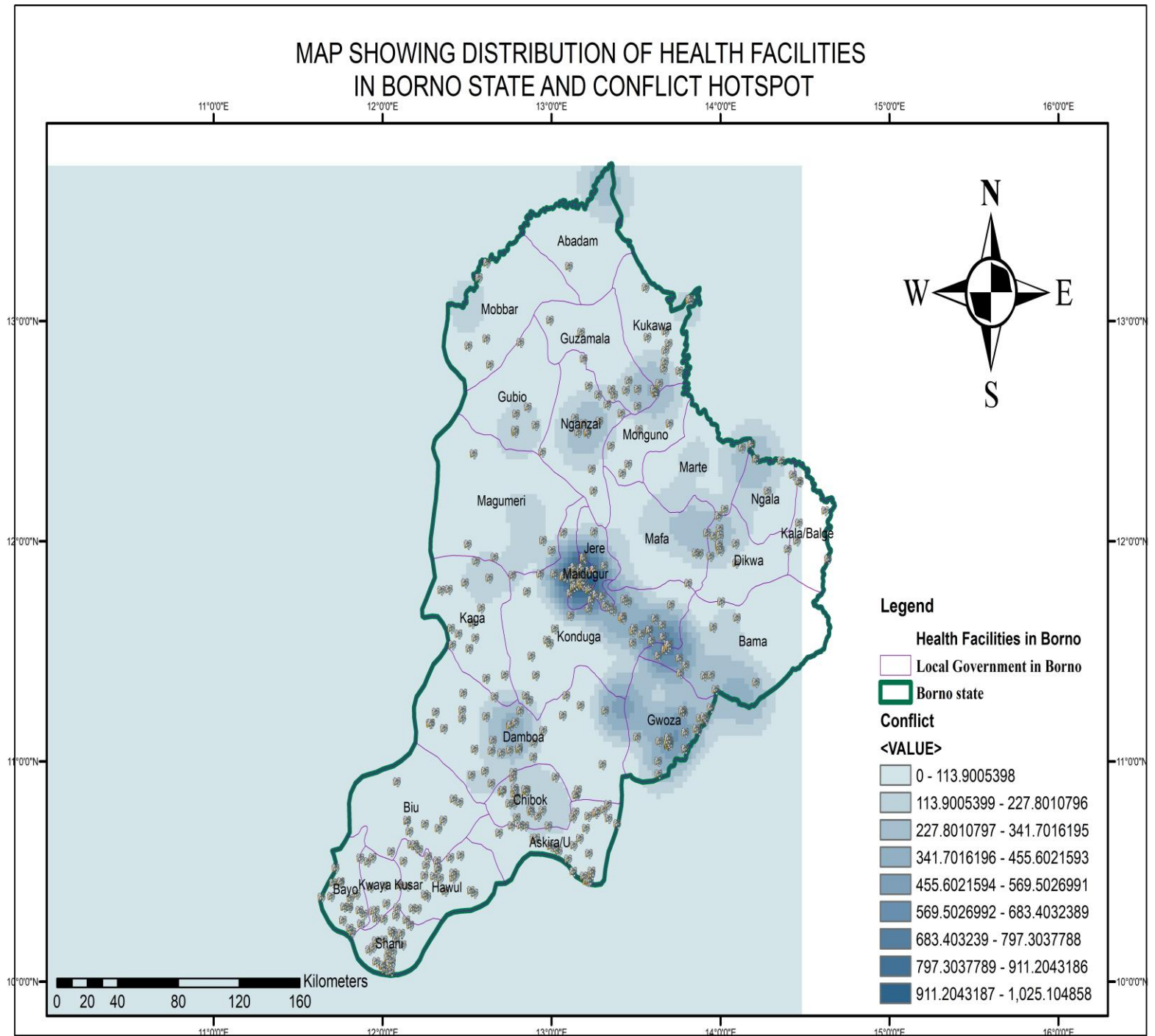


Using the Kernel Density , this analysis identifies areas with a higher density and concentration of conflict events showcasing conflict hotspot locations in the state. LGs like Chibok, Maiduguri, gwoza, Jere, Nganzai would need more security resources than others.

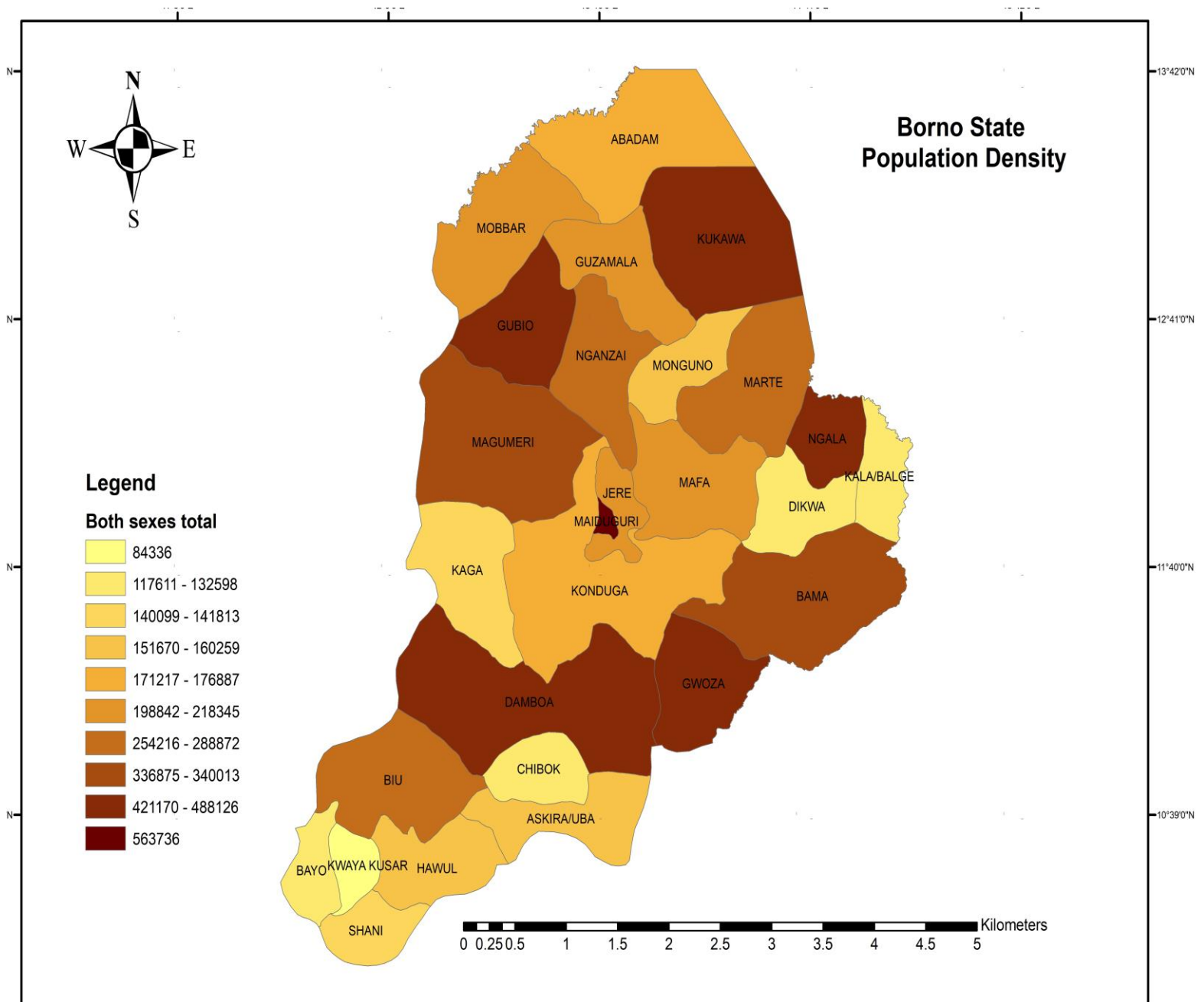
Distribution of Health Facilities in the state



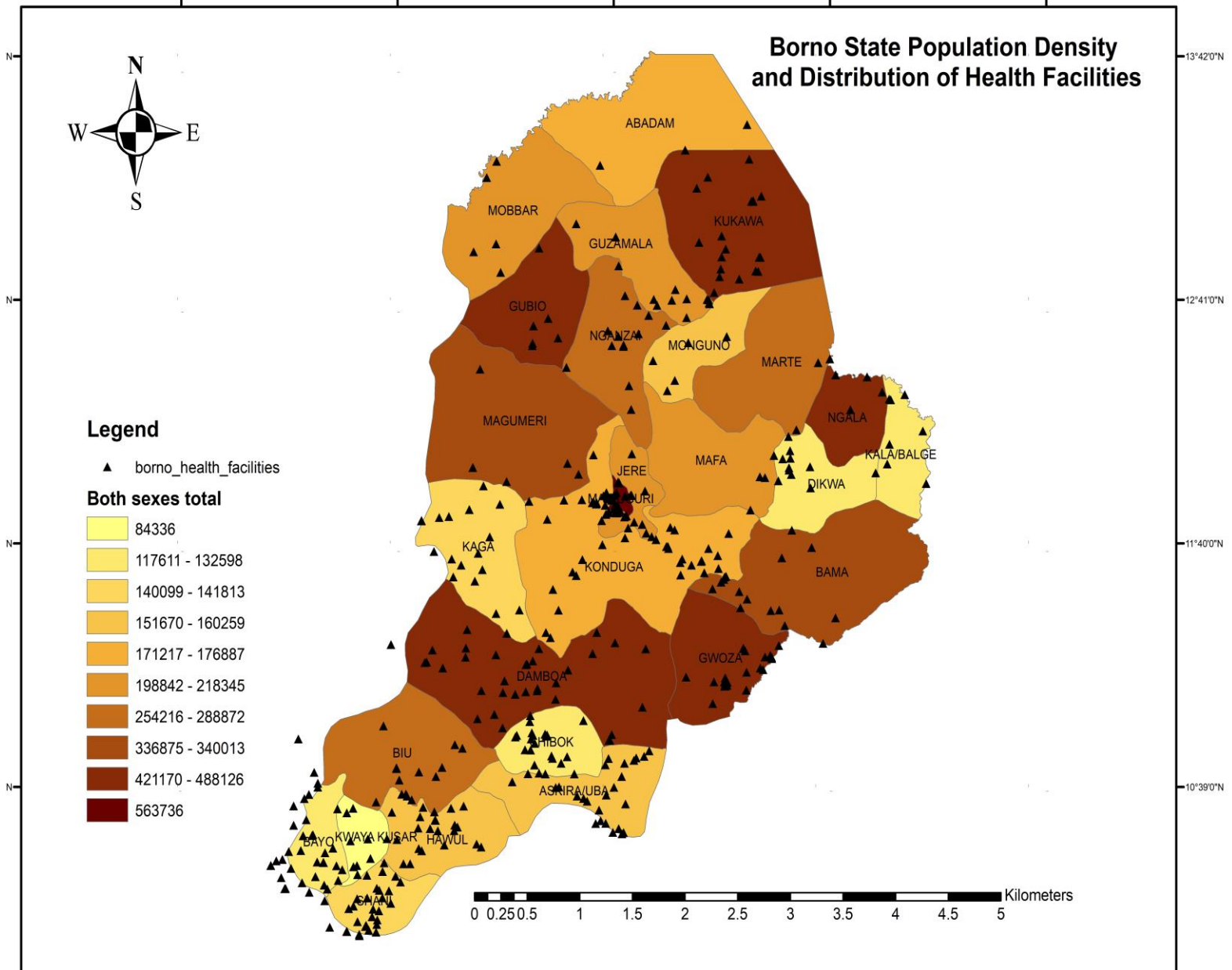
Distribution of Health facilities in Conflict Hotspot



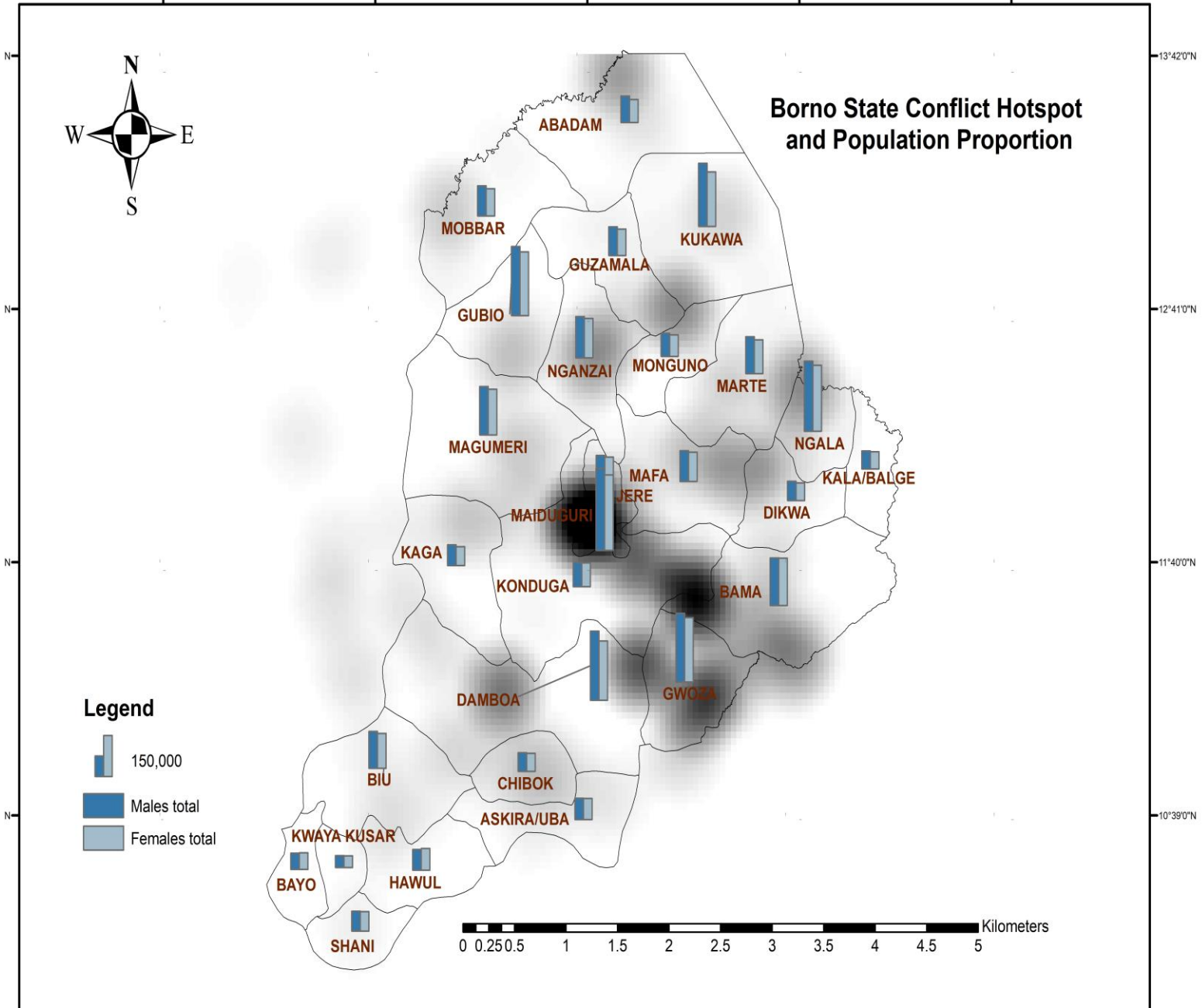
Popuation Density In Borno



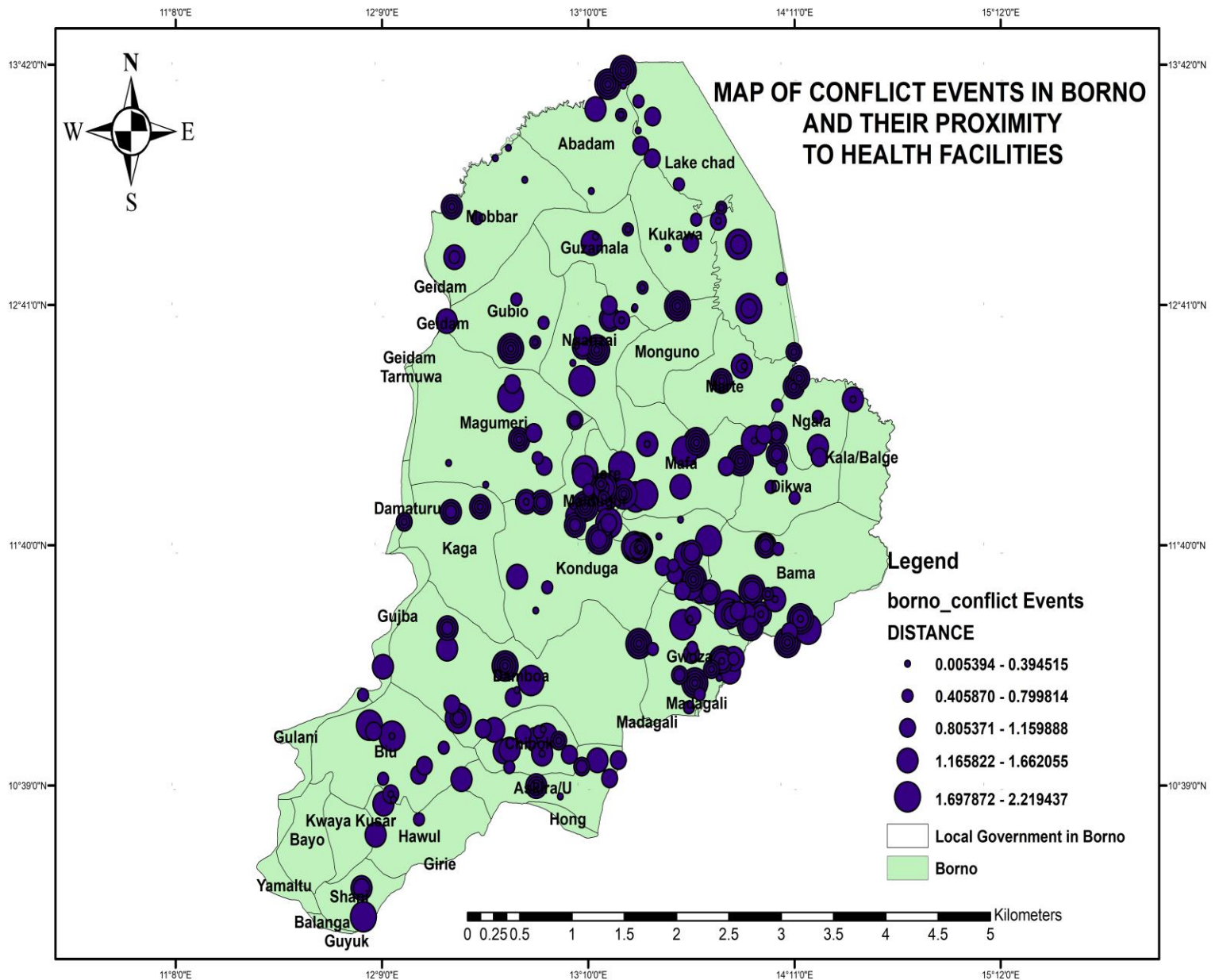
Population Density and Health Facilities



Conflict Hotspot and Population



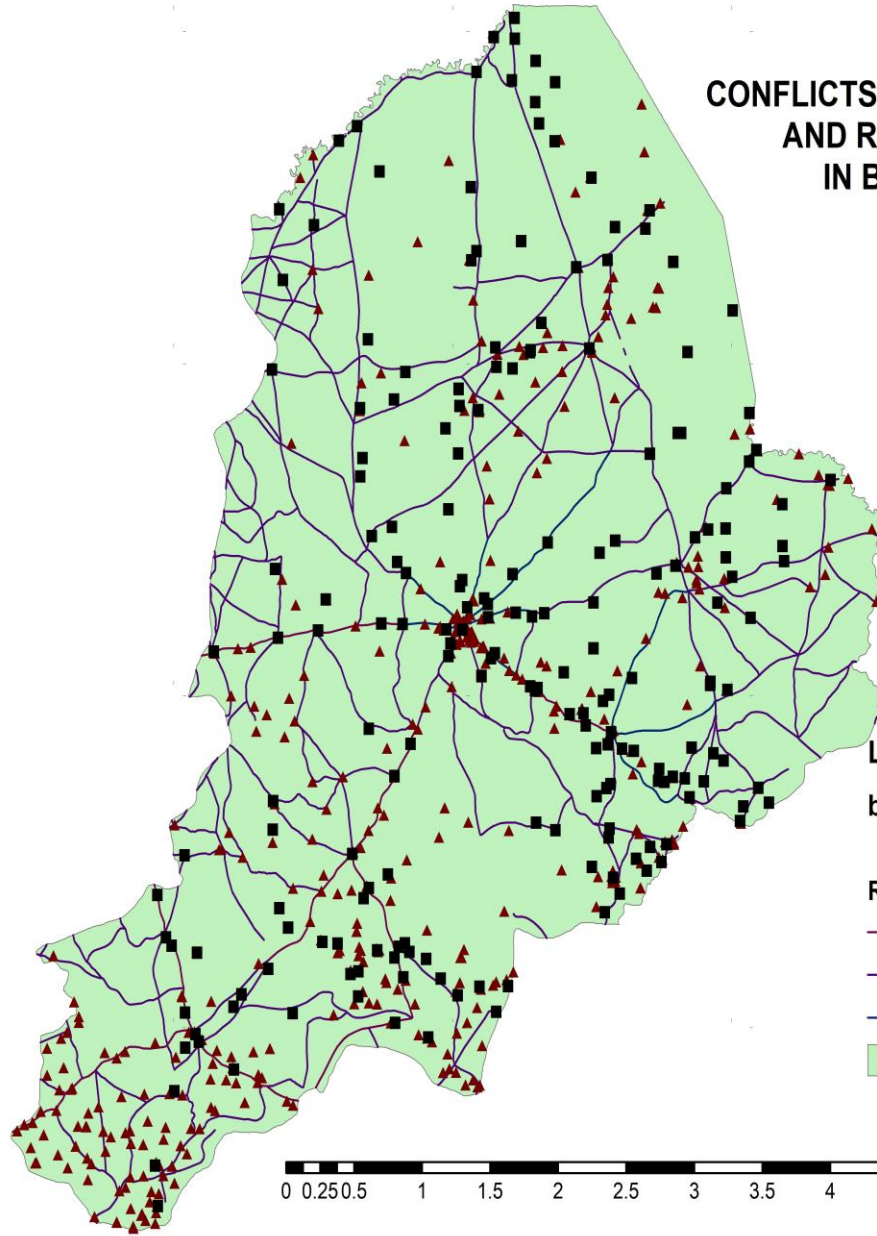
Conflict and Proximity to Health Facilities



Conflict and Road Network



CONFLICTS, HEALTH FACILITIES AND ROAD NETWORK IN BORNO STATE



Legend

borno_conflict Events

■ borno_conflict Events

RTT_DESCR

Primary Route

Secondary Route

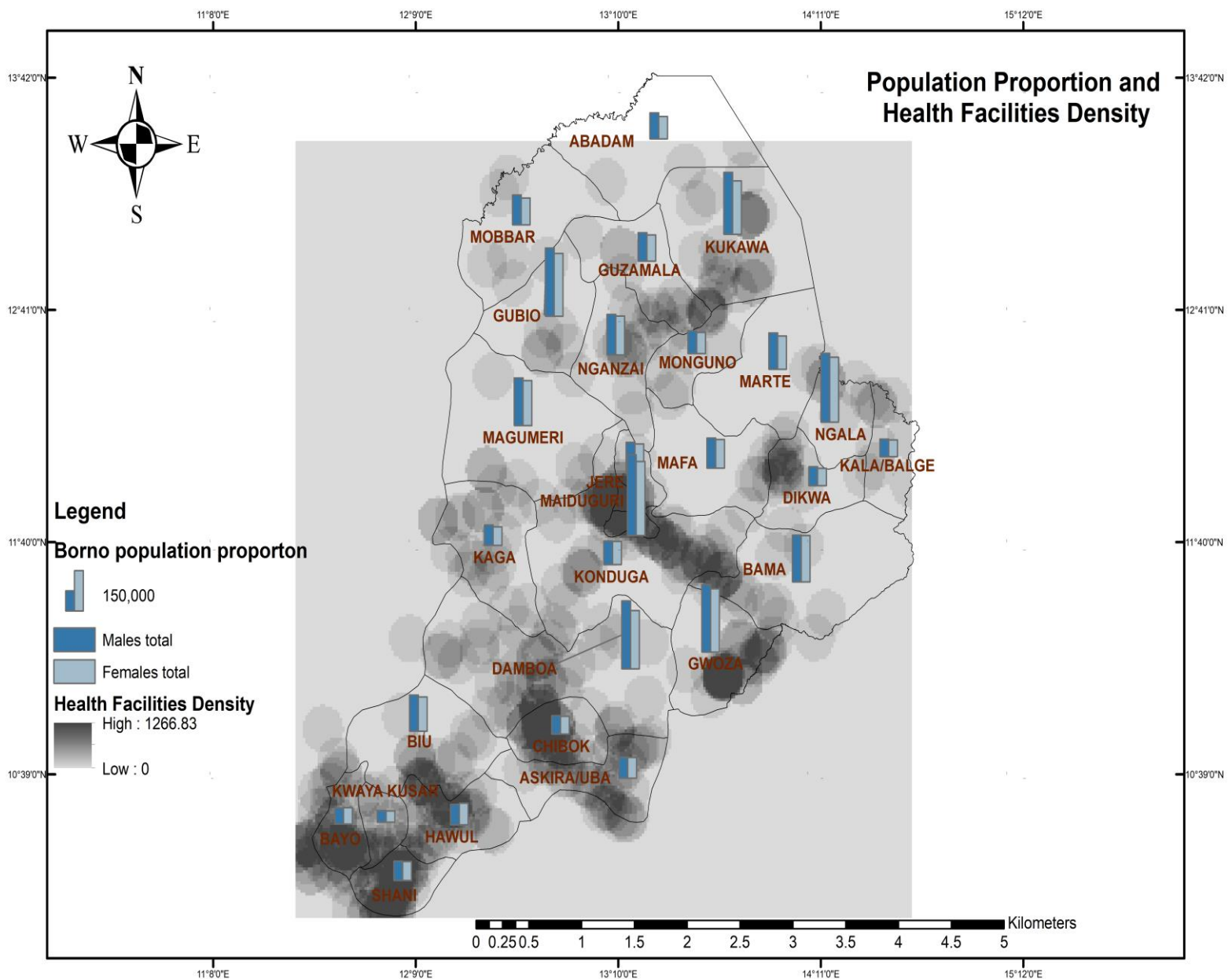
Unknown

Borno

▲ borno_health_facilities

0 0.25 0.5 1 1.5 2 2.5 3 3.5 4 4.5 5 Kilometers

Density of Health Facilities in relation to Population



Summary:

- Conflict analysis revealed the spatial distribution of conflicts in Borno State. Hotspot analysis identified areas with a high concentration of conflicts, indicating potential high-risk zones.
- Health facilities were mapped and overlaid with conflict areas to identify facilities located in or near high-risk areas.
- The analysis highlighted facilities that may require additional security measures for effective service delivery.
- Thematic maps were generated to visualize the population density across the region and identify areas with high concentrations of specific population groups.

- By overlaying the population density maps with the conflict areas and health facilities, we were able to identify populations at higher risk due to inadequate access to healthcare.

Recommendations:

1. Resource Allocation and Service Delivery:

- Prioritize resource allocation for healthcare intervention in high-risk areas identified through conflict analysis. Ensure adequate security measures are in place to support healthcare service delivery.

- Strengthen the existing health facilities located in or near conflict zones to improve access and provide essential healthcare services to the affected population.

- Consider establishing temporary or mobile healthcare facilities in areas with limited access to address the gaps in healthcare service coverage.

2. Targeted Healthcare Interventions:

- Develop targeted interventions to address the specific healthcare needs of vulnerable population groups identified through the analysis.

- Collaborate with local communities, healthcare providers, and relevant stakeholders to design and implement programs that address the unique challenges faced by each group.

- Conduct awareness campaigns and education programs to promote health-seeking behaviors and preventive measures within the identified high-risk areas.

Conclusion:

The spatial analysis conducted in Borno State provides valuable insights into the distribution of healthcare facilities in high-risk areas and the risk profile of different population groups. By integrating this information into decision-making processes, we can optimize resource allocation, improve service delivery, and enhance healthcare access for the population.

We recommend further research and ongoing monitoring of the healthcare situation in Borno State to adapt interventions and ensure their effectiveness over time. Additionally, collaboration with local communities and relevant stakeholders is essential for successful implementation and sustainability of healthcare interventions.