Understanding the Spatial Distribution of Conflict in Ethiopia and the Implication on Sustainable Development Goals #2 -Zero Hunger

Aemro Worku Ayalew, University of Notre Dame

KEOUGH SCHOOL OF GLOBAL AFFAIRS

Introduction

Ethiopia's conflicts, especially in the Tigray and Amhara regions, have severely hindered efforts to achieve Sustainable Development Goal 2 (SDG 2), aimed at eradicating hunger and ensuring food security. Especially, the Tigray war, which began in 2020 and expanded to the Amhara And Afar regions, has devastated the country's economy and social fabric leaving many people food insecure.

This turmoil has resulted in widespread destruction of livelihoods, population displacement, and disruption of essential services, worsening the food insecurity crisis. Projections indicate that over 15.8 million people in Ethiopia will need food assistance in 2024 due to the compounded impacts of conflict and climate shocks.

Despite humanitarian efforts, the response has not kept pace with escalating needs, leading to hunger becoming a leading cause of death in some regions.

In light of this urgent situation, **this study aims to conduct a spatial analysis of SDG 2 indicators to understand how conflict affects food security and nutrition outcomes in these regions by addressing key questions: how conflict events relate to regional variations in SDG 2 indicators, which regions are most affected by conflict, and which SDG 2 indicators are most sensitive to conflict impacts.**

Methodology

The study employs an integrative approach, combining SDG data from the Ethiopia SDG Data Hub (2022) and Ethiopia Humanitarian Data Exchange (2022) with conflict data from the Armed Conflict Location & Event Data Project (ACLED).

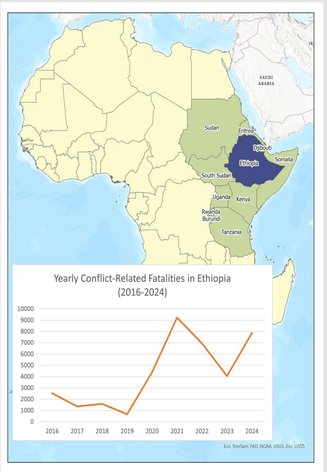


Figure 1: Map of Africa and East Africa with Ethiopia highlighted in blue. The chart displays conflict dynamics from 2016 to 2024, showing significant fluctuations in conflict-related fatalities in Ethiopia, from 670 in 2019 to a peak of 9,222 in 2021.

The analysis focuses on conflict events from 2019 to 2022 across Ethiopia's 11 regions, including battles, armed clashes, drone strikes, protests, and violent acts against civilians.

This comprehensive dataset enables a nuanced understanding of how different types of conflict affect SDG 2 indicators such as malnutrition, stunting, wasting, and food insecurity.

Using Geographic Information Systems (GIS), the study maps conflict distributions, identifies hotspots, and overlays these with malnutrition indicators. This spatial lens provides a detailed picture of how conflict dynamics influence regional disparities in food security.

Figure 2: Map of Ethiopia showing conflict distribution across regions

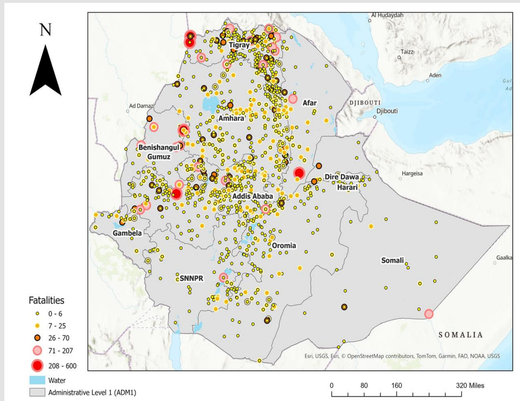


Figure 3: Regional disparities in conflict hotspots

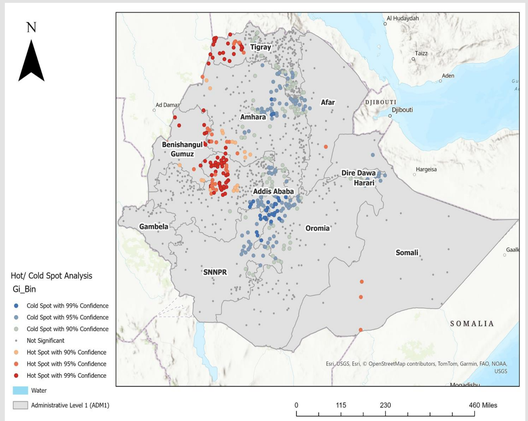


Figure 4: Prevalence of Severe Acute Malnutrition by severity from 1 (Acceptable) to 4 (Critical)

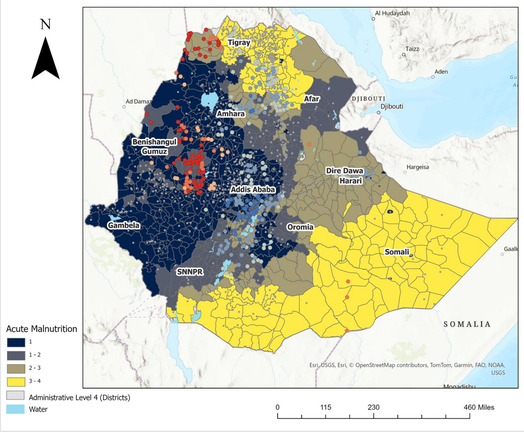


Figure 5: Prevalence of Stunting (*low height-for-age*)

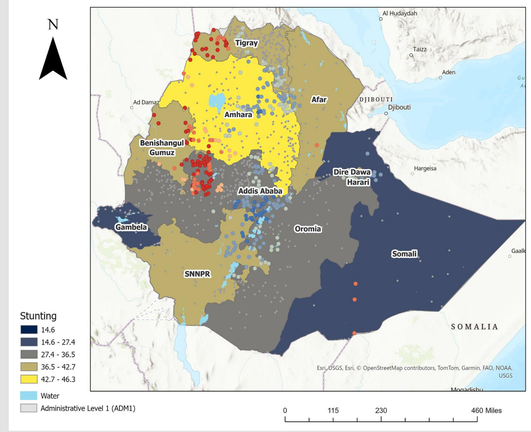
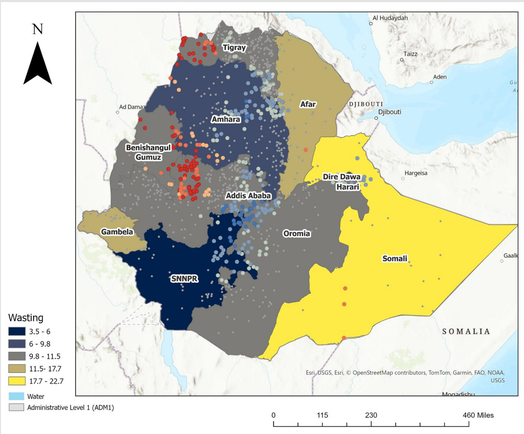


Figure 6: Prevalence of Wasting (*low weight-for-height*)



Policy Implications

- Adopt conflict-sensitive strategies that integrate peacebuilding with food security initiatives.
- Strengthen humanitarian access in conflict-affected areas for timely delivery of food and health services.
- Increase investments in climate-resilient agricultural systems, such as drought-resistant crops and irrigation.
- Foster international partnerships and align aid with Ethiopia's national priorities and mobilize resources to effectively tackle the intersection of conflict, malnutrition, and food insecurity, accelerating progress toward SDG 2.

Findings

Spatial Distribution

The spatial analysis of conflict and malnutrition in Ethiopia reveals a widespread distribution of conflicts, particularly in the Amhara, Oromia, and Tigray regions, with severe conflicts concentrated in border areas between these and other regions like Benishangul-Gumuz.

The data show that conflict hotspots are notably concentrated in specific regions such as Oromia, Tigray, Amhara, and Benishangul-Gumuz, while other areas experience comparatively less conflict.

Differing Correlation of Malnutrition with Conflict and Environmental Factors

The analysis indicates that stunting is closely correlated with conflict prevalence, particularly in Amhara, Tigray, Afar, Benishangul-Gumuz, and SNNP regions.

Severe Acute Malnutrition is also correlated with conflict in Tigray and its neighboring regions, while in southern regions, it is more associated with drought conditions. In contrast, wasting in Eastern Ethiopia, particularly in Afar and Gambela, shows a stronger correlation with environmental factors affecting agricultural production rather than direct conflict impacts.

Addressing these correlations is crucial for developing effective interventions to mitigate malnutrition and advance food security goals in Ethiopia.

Conclusion & Limitations

Conclusion

Conflict in Ethiopia is correlated with malnutrition, particularly stunting and severe acute malnutrition, with regional variations influenced by both conflict intensity and environmental factors.

Limitations

- Using region-level data could obscure localized variations,
- While correlations between conflict and SDG 2 indicators are noted, causation is not established, and factors such as climate change and economic instability are not fully considered.
- The impacts of environmental factors like drought and climate change on food insecurity may be underestimated.

Data Sources

1. ACLED (2022). "Ethiopia." Retrieved from ACLED Website
2. Ethiopia SDG Data Hub (2022). "Sustainable Development Goals Indicators." Retrieved from Ethiopia SDG Data Hub
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