

Sudan | Understanding the Conflict.

Understanding the Conflict in Sudan: An Analysis Using ACLED Data

Introduction

Since April 2023, Sudan has been engulfed in a conflict marked by escalating violence and humanitarian crises. This report utilizes data from the Armed Conflict Location & Event Data Project (ACLED) to provide a comprehensive understanding of the ongoing war, focusing on the actors involved, their strategies, and the spatial dynamics of the conflict.

Context: The War in Sudan

The conflict in Sudan primarily involves the Rapid Support Forces (RSF) and the Military Forces of Sudan. Here's a brief overview of the situation:

- **Rapid Support Forces (RSF):**
 - Originally formed from the Janjaweed militia, the RSF is a paramilitary group that has been involved in various conflicts within Sudan, including the Darfur conflict.
 - They are known for their significant influence and control over various regions in Sudan.
- **Military Forces of Sudan:**
 - The national military of Sudan, responsible for the country's defense and security.
 - Historically, they have been involved in multiple internal conflicts and have a complex relationship with various paramilitary groups, including the RSF.

Key Actors and Strategies

The conflict in Sudan involves multiple actors with diverse agendas, including government forces, rebel groups, and ethnic militias. ACLED data reveals that government forces have primarily engaged in offensive operations to regain control over rebel-held territories in regions such as Darfur and South Kordofan. Rebel groups, on the other hand, have employed guerrilla tactics and targeted attacks on government installations and military convoys.

Ethnic militias have also played a significant role, often exacerbating violence against civilians aligned with opposing groups. This dynamic has led to widespread displacement and humanitarian suffering, particularly among vulnerable populations.

Spatial Analysis

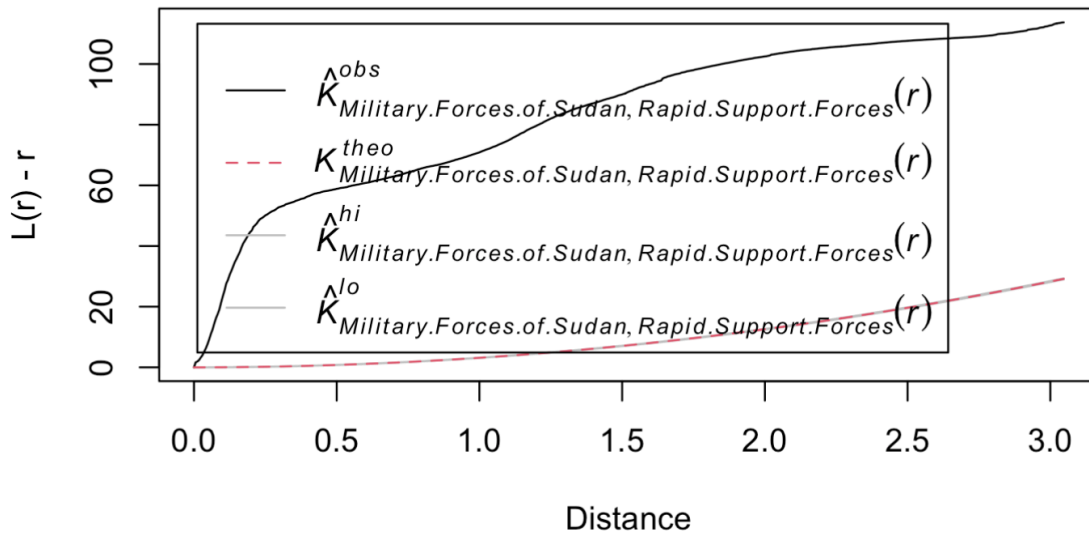
Spatial analysis of ACLED data illustrates the geographic spread of violence across Sudan. Conflict hotspots are concentrated in border regions and resource-rich areas where competition over land and natural resources is intense. For instance, clashes between government forces and rebel groups have been prevalent in Darfur, where historical grievances and ethnic tensions have fueled prolonged conflict.

Moreover, the expansion of violence into urban centers such as Khartoum underscores the evolving nature of the conflict, posing challenges for civilian protection and humanitarian access. The spatial distribution of violence highlights the need for targeted interventions and localized peacebuilding efforts to mitigate the impact on affected communities.

Lambda Cross K Function Analysis

We performed a lambda cross k function analysis to examine the spatial distribution of conflict events over different distances. The objective of this analysis is to investigate the spatial interaction between two types of actors involved in the conflict: “Military Forces of Sudan” and “Rapid Support Forces.” We use the Lambda Cross K Function to determine whether these actors exhibit spatial clustering or dispersion at various distances.

Lambda Cross K Function - Envelopes



Moran's I & Geary's C

We generated correlograms using Moran's I and Geary's C statistics to assess spatial autocorrelation at different distance intervals.

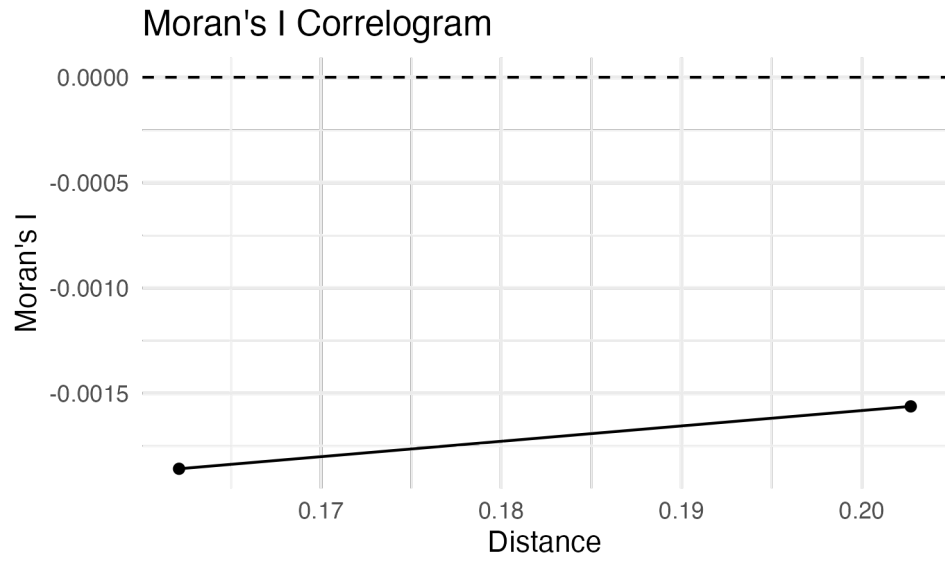


Figure 1: Moran's I

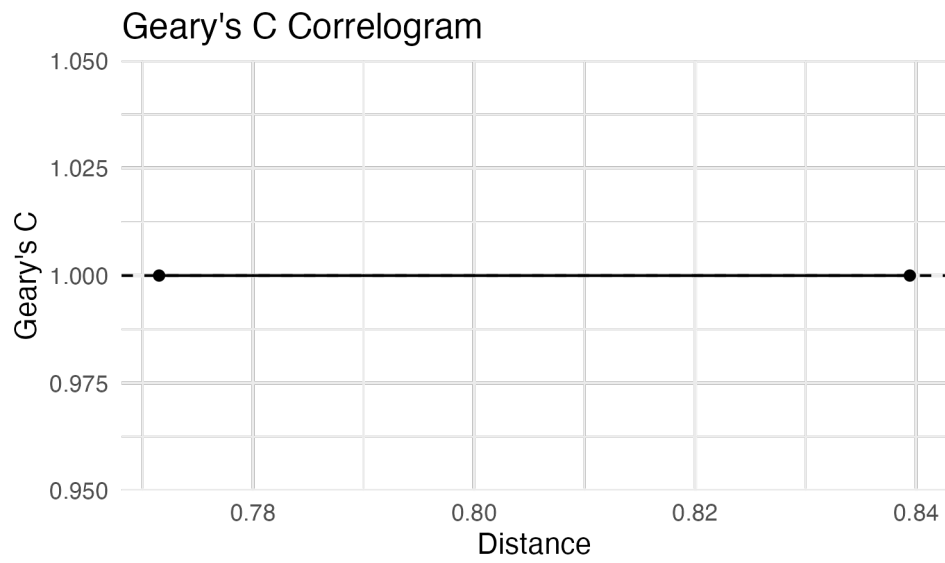


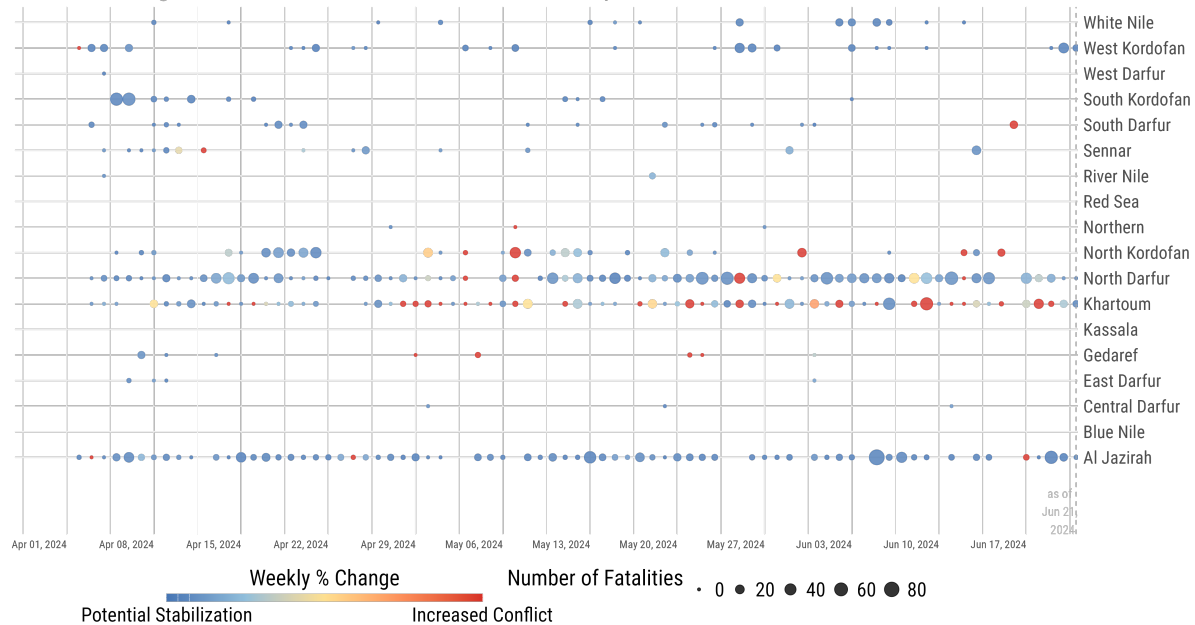
Figure 2: Geary's C

Heatmap of 7-Day Percent Change in Armed Conflict Events

To visualize changes in armed conflict events, we created a heat map showing the 7-day percent change in conflict intensity across Sudan.

Understanding Armed Conflict in Sudan

Percent change in armed conflict events and fatalities per week

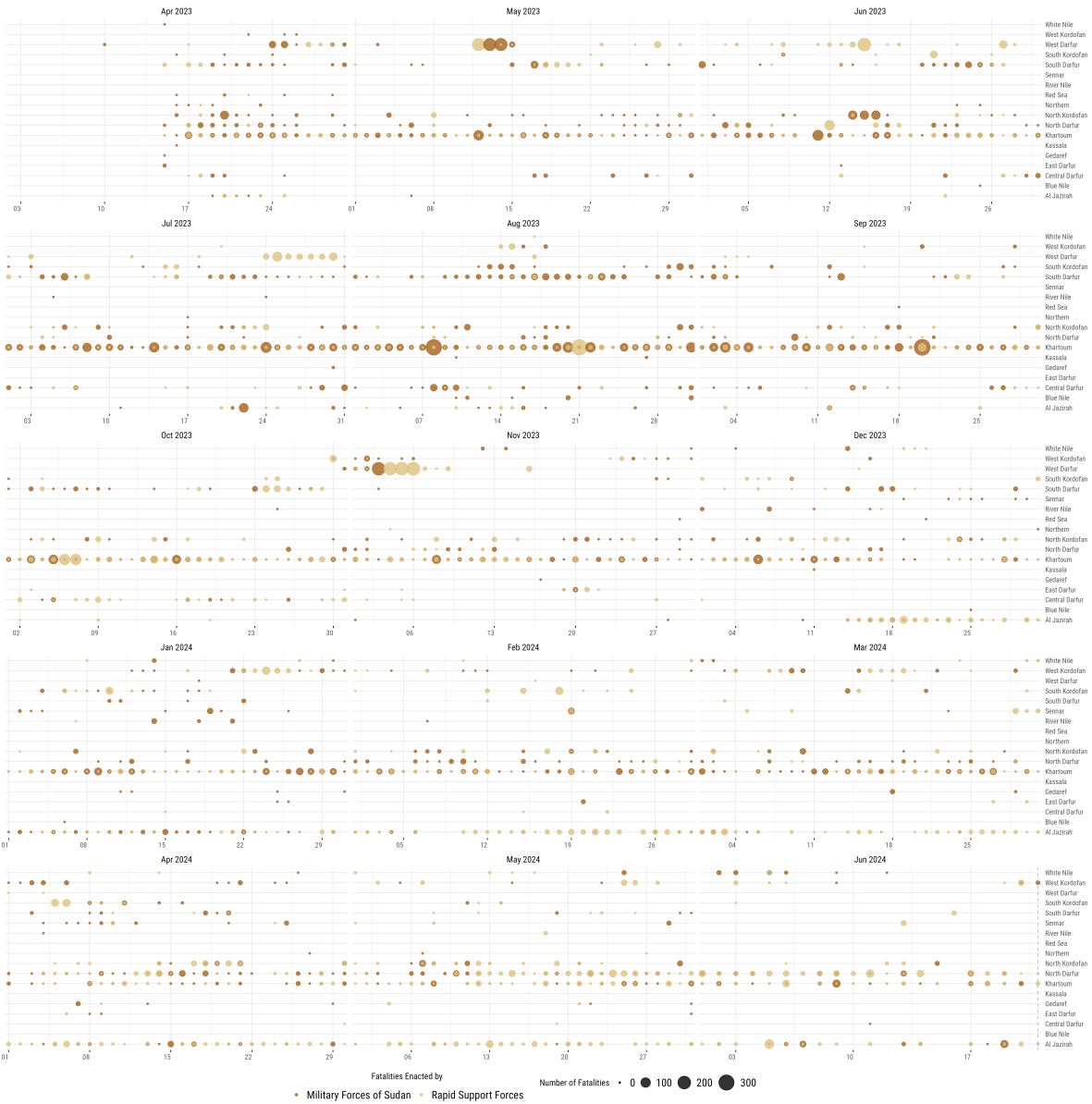


Telling a War Story | Sudan.

Percentage of Total Fatalities by Actor in Sudan Conflict Since April 2023



Number of Fatalities by Actor and State over Time



Generated by geo-truth team at 2024-08-01 02:20:11
Data source: ACLED

Geographic Map Intensity of Armed Conflict Events

Findings

Lambda Cross K: The lambda cross k function analysis indicates that conflict events are significantly clustered at certain distances, suggesting intense localized violence in specific areas.

Moran's I & Geary's C: Both Moran's I and Geary's C correlograms reveal significant spatial autocorrelation, indicating that conflict events are not randomly distributed but tend to cluster together, especially at shorter distances.

Heatmap: The heat map reveals areas with significant increases or decreases in conflict intensity over a 15-day period. Regions with increased conflict are highlighted in red, indicating a need for urgent intervention, while areas with decreased conflict are shown in blue, suggesting potential stabilization. **Story By Actors:** Actor Involvement: - Military Forces of Sudan: Often involved in violence across multiple regions, suggesting a broader operational scope or strategic deployment. - Rapid Support Forces: Also active in various regions, with specific incidents highlighting their role in security operations or conflicts. Most Affected Areas: West Darfur and Khartoum are the most affected regions in terms of fatalities attributed to both Military Forces of Sudan and Rapid Support Forces.

Deadliest Events: The deadliest incidents occurred in September and November 2023, with fatalities reaching up to 331 in Khartoum by the Military Forces of Sudan and 210 in West Darfur by the Rapid Support Forces.

Actor Involvement: Military Forces of Sudan and Rapid Support Forces are the primary actors involved in these conflict events, with varying levels of fatalities reported across different months and regions.

Temporal Patterns: There is a notable clustering of events and fatalities in mid-2023 and late 2023, particularly in June, July, August, September, and November.

Regional Variances: The distribution of events and fatalities shows significant variation between different administrative regions, highlighting localized conflict dynamics.

Geographic Distribution

Hotspots: Violence involving Military Forces of Sudan and Rapid Support Forces is concentrated in various administrative regions across Sudan, including Al Jazirah, Blue Nile, Central Darfur, East Darfur, and others. **Regional Variances:** Certain regions consistently experience higher incidences of violence compared to others, indicating localized conflict dynamics.

Conclusion

In conclusion, the conflict in Sudan remains a humanitarian crisis with profound implications for regional stability and global security. ACLED data provides critical insights into the dynamics of violence, offering a nuanced understanding of the actors involved, their strategies, and the spatial distribution of conflict. Addressing the root causes of conflict and promoting inclusive peacebuilding efforts are essential for achieving sustainable peace and preventing further atrocities in Sudan.

References

Armed Conflict Location & Event Data Project (ACLED). (2024). Retrieved from [ACLED Database].