

Coping with Crisis

Livelihood Vulnerabilities and Food Insecurity in Sudan's Current Conflict

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Background

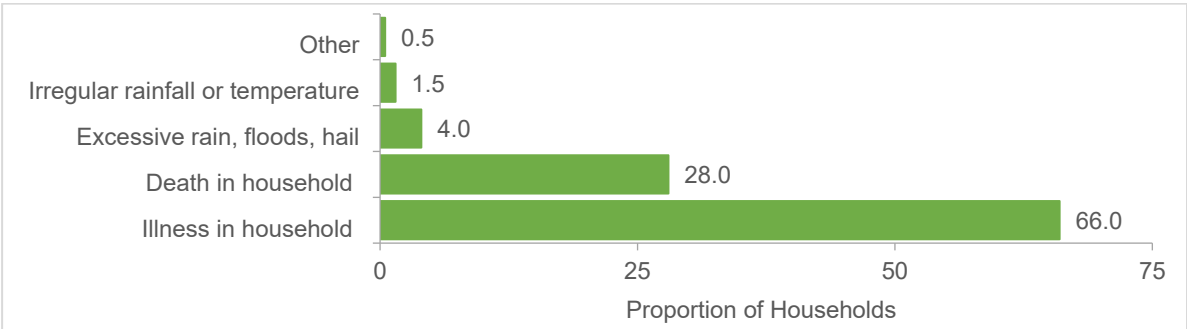
Sudan's conflict, reignited in April 2023, represents not just a military contest between the Sudanese Armed Forces (SAF) and the Rapid Support Forces (RSF), but a total systemic collapse that has engulfed governance, infrastructure, markets, and public services. This conflict did not arise in a vacuum. Sudan has long faced structural vulnerabilities including weak institutions, a fragile economy, and climate-related stressors such as erratic rainfall and land degradation. The war, however, accelerated these pre-existing fault lines into a full-blown crisis.

Key urban economies such as Khartoum have been devastated by airstrikes and sieges, while transport corridors and trade routes have been severed. Local governance structures in many regions have been displaced or dissolved, leaving civilians without recourse to basic services or protection. Simultaneously, the banking sector has fractured, disrupting remittances, cash transfers, and supply chains across the country. Insecurity has driven over 12.8 million people from their homes – 8.6 million internally and 3.9 million seeking refuge neighboring countries, as of May 2025 (UNHCR, 2025).

Shocks, Coping Mechanisms, and Livelihood Strategies

Sudanese households are facing a cascade of overlapping shocks that affect every dimension of survival. In rural areas as depicted in Figure 1, the most reported shocks include serious illness (66 percent of households), death in the family (28 percent), excessive rain/floods (4 percent) and irregular rainfalls or temperature (1.5 percent). Urban households, by contrast, face more acute economic shocks – job loss, price volatility, and asset destruction – compounded by insecurity and urban violence (Kirui et al., 2024).

Figure 1: Types of Shocks Experienced by Rural Households



Source: Sudan Rural Household Survey 2023 and authors' calculations.

Sudanese households employ a wide range of coping strategies to manage the combined impacts of these shocks. To systematically capture the extent and intensity of these responses, two commonly used composite indices were adopted: the Food-Based Coping Index (FCI) and the Livelihood Coping Strategy Index (LCSI).

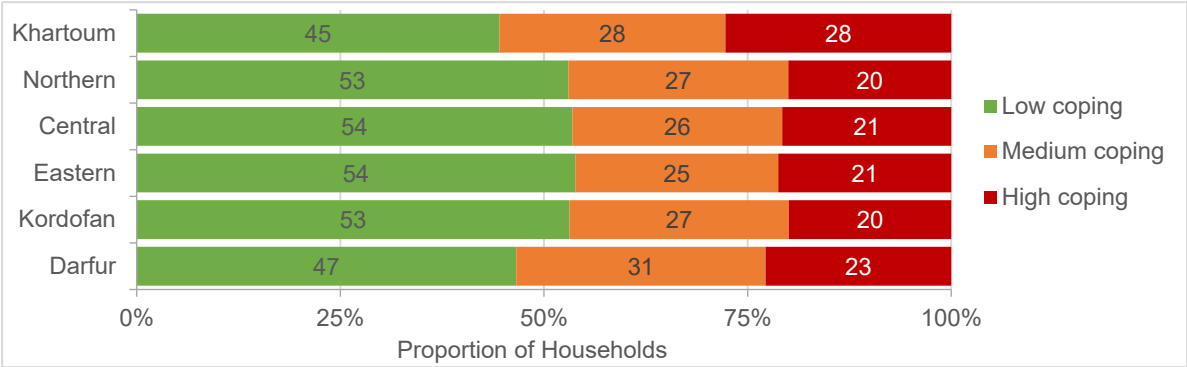
On one hand, the FCI measures short-term food-related coping behaviors. Households reported the number of days in the past week they relied on actions such as consuming less preferred foods, borrowing food or seeking help, reducing meal frequency, limiting portion sizes, or restricting adult consumption so children could eat. These responses were summed to create a total coping score per household, with households classified as Low Coping (5–15 days), Moderate Coping (16–25 days), or High Coping (26–40 days). Higher scores reflect greater food insecurity and stress. While these food-based coping mechanisms are adaptive in the short term, they are often erosive in the long term.

On the other hand, the LCSI captures longer-term livelihood-related coping mechanisms. Households were asked the three classical questions – whether they had reduced agricultural input spending, sold household goods, or sold productive assets since the onset of the conflict in April 2023. Responses are then combined to categorize households as having used No Coping Strategies, 1–2 Strategies, or 3 or more Strategies. Higher LCSI values indicate deeper livelihood stress and an exhaustion of coping capacity.

Findings suggest that while a majority of households in certain regions still maintain some food security buffer, a significant share is already relying on severe, erosive food-based coping strategies, particularly in urban and conflict-affected areas. For instance, in highly affected states such as Darfur and Kordofan, over 30 percent of households reported repeated reliance on such food rationing (Figure 2). In Darfur, 47 percent of households fall into the low coping category, 31 percent into the medium coping category, and 23 percent into the high coping category. Kordofan shows a similar pattern, with 27 percent in medium coping, and 20 percent in high coping.

Eastern and Central Sudan record the highest proportions of households in the low coping category about 54 percent each – indicating both widespread food stress and a possible lack of access to even minimal coping resources. Khartoum exhibits the highest share of households in the high coping category at 28 percent, suggesting a sharper intensity of food stress among some urban households despite the availability of markets.

Figure 2: Use of Food-based Coping Strategies, by region.



Source: Authors' calculations using data from the Sudan Rural and Urban Household Surveys.

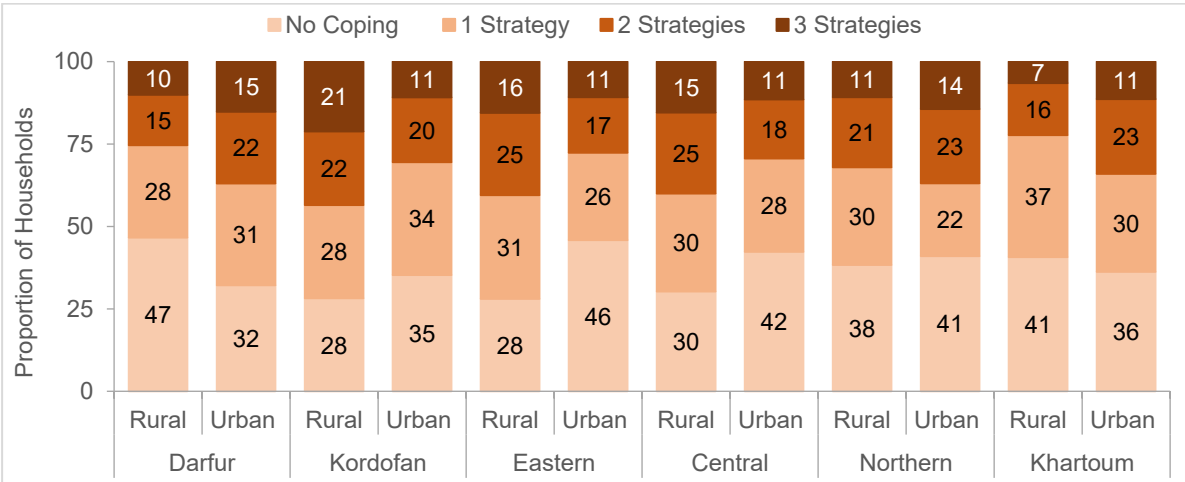
Further insights into the depth of livelihood stress across regions are illustrated by the number of livelihood coping strategies reported by households, including reducing agricultural input expenditures, selling household goods, and selling productive assets. The data reveals distinct patterns when disaggregated by urban and rural areas (Figure 3).

Eastern Sudan stands out with the highest proportion of urban households (46 percent) reporting no livelihood coping strategies, followed closely by Central region (42 percent) and Northern region (41 percent). Among rural households, the Darfur region leads with 47 percent reporting no coping strategies, followed by Khartoum (41 percent) and Northern (38 percent). These figures may reflect either relatively stronger economic resilience or limited asset ownership, constraining some households' ability to engage in asset-based coping altogether.

Conversely, Kordofan and Darfur show much higher engagement in multiple livelihoods coping strategies. In Kordofan's urban areas, 34 percent of households reported using one strategy, 20 percent two strategies, and 11 percent all three strategies. In Darfur, 31 percent of urban households used one strategy, 22 percent two strategies, and 15 percent all three. Rural households in both regions reflect similarly high use of multiple strategies, underscoring more acute livelihood stress.

Khartoum displays a mixed profile. Among urban households, 36 percent reported no strategy, but 30 percent used one strategy and 23 percent two strategies. Among rural households in Khartoum, 41 percent reported no strategy, while a notable 37 percent used one strategy. This pattern highlights that even in urban centers, a substantial share of households relies on asset sales and related erosive coping mechanisms, reflecting the broad reach of Sudan's economic and conflict-related pressures.

Figure 3: Intensity of Livelihood Coping Strategies, by region.



Source: Authors’ calculations using data from the Sudan Rural and Urban Household Surveys.

Remittances, Migration, and Social Support

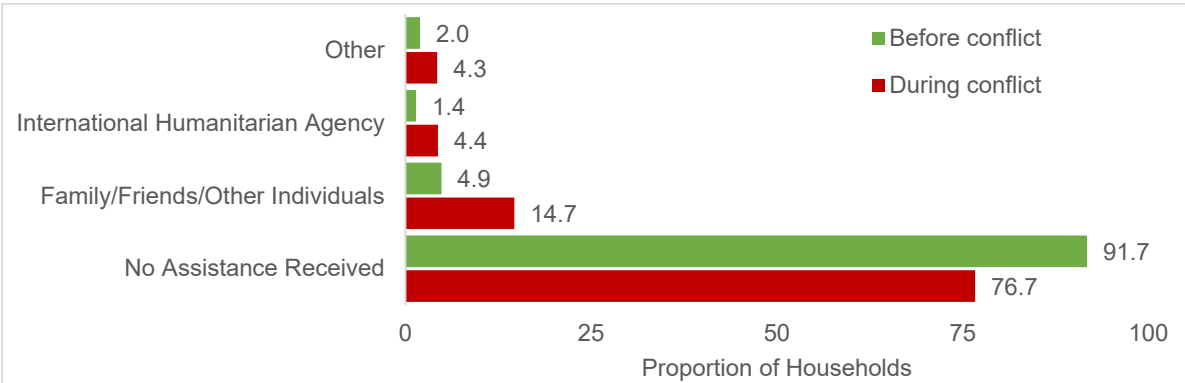
As state functions have eroded, survival in Sudan is increasingly mediated through informal networks and transnational connections. Remittances have emerged as one of the few dependable income streams in some regions. Households receiving remittances reported higher food consumption and reduced reliance on negative coping strategies. However, access to these lifelines is highly unequal. Rural areas are especially disadvantaged due to limited mobile and banking infrastructure. Female-headed households, again, are least likely to benefit from remittances.

Migration has become both a cause and consequence of vulnerability. Young men are increasingly leaving home to seek labor opportunities in Egypt, South Sudan, and Chad, or within Sudan in agricultural areas that are temporarily secure. Migration helps diversify income, but it also places significant social and economic pressure on households left behind – often composed of women, children, and the elderly. Furthermore, displacement-related migration exposes people to trafficking, exploitation, and legal precarity.

In the absence of adequately functioning government support systems, communities have turned to informal means of resilience. Informal social protection mechanisms such as rotating credit groups, food sharing networks, mosque-based aid, and kinship donations have become the last line of defense. These systems are effective in localized contexts, but they lack scalability and are increasingly strained.

Only 4.4 percent of urban households reported receiving assistance from international organizations, and government safety nets and all other sources reached fewer than 4.3 percent of surveyed households, despite soaring need (Figure 4). This disconnect between humanitarian need and institutional response reflects access limitations, donor fatigue, and political fragmentation (UNOCHA, 2024a; UNOCHA, 2024b)

Figure 4: Assistance Received by Source (Urban Households)

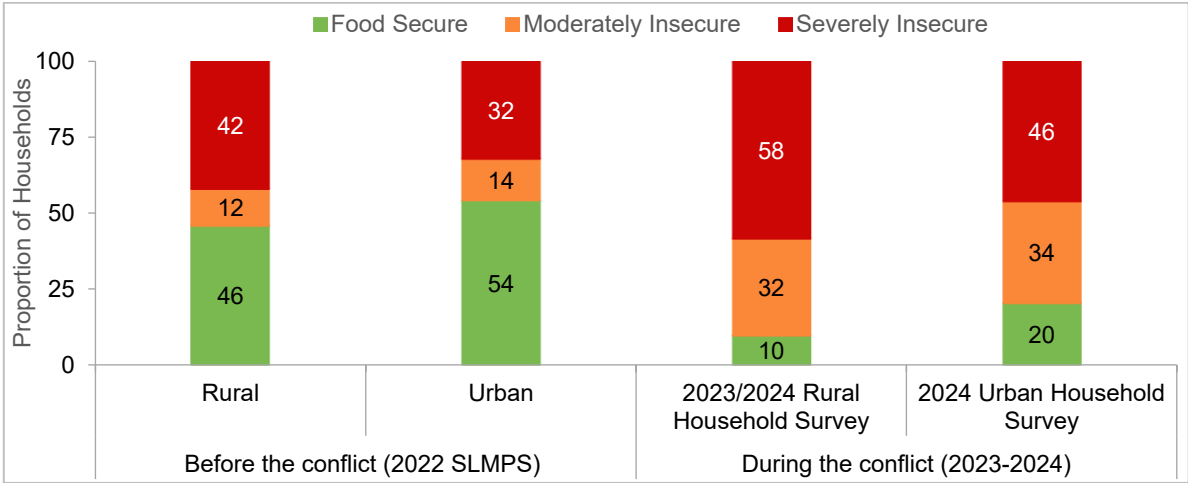


Source: Authors' calculations using data from the Sudan Urban Household Survey 2024 calculations.

Food Security Outcomes

Household food security in Sudan has collapsed over the past year. Based on household-level survey data collected in late 2023 and early 2024, rural food security declined from 46 percent to just 10 percent, and urban food security dropped from 54 percent to 20 percent. Over 90 percent of rural households and 80 percent of urban households are now classified as moderately or severely food insecure (Figure 5).

Figure 5: Decline in Food Security (2022–2024) Based on Raw Food Insecurity Experience Scale (FIES) Scores



Source: Authors' analysis of 2022 SLMPS, 2023/24 SRHS, 2024 SUHS.

The drivers of food insecurity are multifaceted. Agricultural production has been interrupted by violence, displacement, and the destruction or looting of farming equipment and inputs. Many farmers could not access land during the critical planting season. Livestock has been lost to raiding or sold in distress. Local markets have been disrupted by insecurity and high transport costs, while inflation has pushed staple food prices beyond reach (Kirui et al., 2023).

Food access in urban areas has been affected by economic collapse. With employment opportunities disappearing and inflation spiraling out of control, households have seen a

dramatic reduction in real income and purchasing power. Those living in IDP settlements are especially vulnerable, often reliant on unreliable aid or limited rations.

The Rasch-based measurement of food insecurity (which is used to assess the severity of food access constraints) shows the highest levels of insecurity in South Darfur, Blue Nile, West Kordofan, and parts of North Darfur. Even traditionally food-producing regions are now experiencing high levels of food consumption gaps (IPC, 2024a; IPC, 2024b).

Conclusion

Sudanese households have displayed remarkable resilience in the face of a sustained and complex crisis. Yet that resilience is being exhausted. The widespread reliance on coping strategies—many of them erosive—underscores a grim reality: families are running out of options. Women, children, and displaced persons face especially acute risks. In many areas, livelihoods have collapsed entirely, and food insecurity has reached emergency levels.

The findings of this brief make clear that without urgent and coordinated action, Sudan risks a prolonged humanitarian disaster with long-lasting developmental consequences. The country's food system has been fractured by war, but it can be rebuilt. Recovery, however, will require more than emergency relief. It will demand inclusive, evidence-informed investments in livelihoods, infrastructure, and local governance.

Resilience alone cannot ensure food for families, restore lost assets, or reopen markets. What is needed now is solidarity, resources, and vision—from national stakeholders, humanitarian partners, and the international community. The path to recovery must begin with targeted support for the most vulnerable, the restoration of local food systems, and a renewed commitment to human dignity and security.

Policy Recommendations

Addressing the humanitarian and livelihood crisis in Sudan requires urgent, multi-pronged policy action. First, mobile, cash-based safety nets must be scaled up, with inclusive targeting systems that prioritize displaced families, women-headed households, and other marginalized groups. These digital delivery mechanisms offer flexibility and timeliness in insecure environments (Abay et al., 2025). Second, gender-responsive programming is essential. Female-headed households have consistently shown lower coping capacity and limited access to remittances, land, and aid. Direct support (including cash transfers, asset protection, and access to legal services) can help address these disparities. Third, agricultural recovery must be made a top priority. Increasing access to farming inputs, strengthening extension services, and promoting climate-adaptive techniques can boost food production in safer areas. Support for livestock protection and irrigation infrastructure will also be critical. Fourth, safe and legal migration pathways should be protected and expanded. Remittances remain a vital coping mechanism, and formalizing migration channels can help sustain them while reducing risks to migrants. Finally, short-term emergency relief must be linked to long-term recovery planning. Investments in local markets, cooperative structures, and infrastructure (especially in roads, storage, and communication) will be crucial to restoring livelihoods and building resilience.

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REFERENCES

- Abay, K.A., Abushama, H., Mohamed, S. and Siddig, K., 2025. Rethinking delivery modalities in conflict-affected settings: Why beneficiaries in Sudan prefer digital transfers.
- IPC (Integrated Food Security Phase Classification). 2024a. Sudan: IPC Acute Food Insecurity Analysis: June 2024 - February 2025. IPC Alert: Sudan. Rome: IPC Global Support Unit. https://www.ipcinfo.org/fileadmin/user_upload/ipcinfo/docs/IPC_Sudan_Acute_Food_Insecurity_Jun2024_Feb2025_Report.pdf.
- IPC (Integrated Food Security Phase Classification). 2024b. Famine Review Committee: Combined Review of: (i) the Famine Early Warning System Network (FEWS Net) IPC Compatible Analysis for IDP Camps in El Fasher, North Darfur; and (ii) the IPC Sudan Technical Working Group Analysis of Zamzam Camp (North Darfur), Sudan. Rome: IPC Global Support Unit. https://www.ipcinfo.org/fileadmin/user_upload/ipcinfo/docs/IPC_Famine_Review_Committee_Report_Sudan_July2024.pdf.
- Kirui, O.K., Ahmed, M.O., Siddig, K., Abushama, H., Intini, V., AlAzzawi, S., Adam, S.A., Terefe, F., Fallaha, H., Merouani, W. and Durrani, A., 2024. *The socioeconomic impact of armed conflict on Sudanese urban households: Evidence from a National Urban Household Survey* (No. 159599).
- Kirui, Oliver; Siddig, Khalid; Ahmed, Mosab; Abushama, Hala; and Seyoum, Taffesse. 2023. Impact of the ongoing conflict on smallholder farmers in Sudan: Evidence from a nationwide survey. Sudan SSP Working Paper 17. Khartoum, Sudan: International Food Policy Research Institute (IFPRI). <https://doi.org/10.2499/p15738coll2.137064>.
- UNHCR (2025, May 15). Sudan Emergency: Population Movement Overview (As of 15 May 2024). UNHCR Operational Data Portal. Retrieved from <https://data.unhcr.org/en/documents/details/116124>
- UNOCHA (United Nations Office for the Coordination of Humanitarian Affairs). 2024a. Humanitarian Needs & Response Plan: Sudan. Geneva: UNOCHA. https://www.unocha.org/attachments/9a4e22b6-967b-4846-8cfc-6f6409cab8b1/HNRP_2024_SDN_EN.pdf
- UNOCHA (United Nations Office for the Coordination of Humanitarian Affairs). 2024b. Sudan Humanitarian Update 01 October 2024. Geneva: UNOCHA. <https://www.unocha.org/publications/report/sudan/sudan-humanitarian-update-1-october-2024>

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