



From insight to action: an update on mortality patterns in Somalia

HIGHLIGHTS



This report, the fifth and final in a planned series of reports on mortality across Somalia, provides a retrospective analysis of the effect of the drought on population mortality in 2024 and offers forecasts based on different scenarios for the last 5 months of 2024.



The estimates suggest that between January 2022 and June 2024, this drought crisis caused 71,100 excess deaths, with 41% of these deaths occurring in children younger than 5 years.



The ongoing drought crisis appears as high as the previous one (2017-2018) in terms of mortality toll.



During 2022-2024, notable differences in death rate were evident across Somalia, with the northeast regions experiencing relatively low mortality despite high levels of food insecurity, and south-central regions including Banadir, Bay and Lower Shabelle seeing the majority of excess deaths.



With these estimates, the report suggests that the current crisis is virtually over and was as severe as the drought of 2017-2018.

Background

Somalia, like other countries in Eastern Africa, has been experiencing the effects of a severe drought, the fourth in 15 years. Consecutive failed rainy seasons have affected crop yields and livestock production across the country, but especially in the south-central regions. The crisis occurs against a backdrop of multiple challenges resulting from decades of insecurity, the socioeconomic impacts of the COVID-19 pandemic, global inflationary pressures and shrinking humanitarian and development budgets.

The London School of Hygiene and Tropical Medicine (LSHTM), SIMAD University, the United Nations Children's Fund (UNICEF) and the World Health Organization (WHO), in collaboration with the Federal Government of Somalia and the Somalia Food Security and Nutrition Analysis Unit of the Food and Agriculture Organization (FSNAU) are undertaking a statistical project to monitor mortality patterns across Somalia as a key contribution to tracking the crisis' impact on health. In March 2023, this partnership published its first report [1], estimating that about 43,000 excess deaths attributable to the drought-triggered crisis had occurred during 2022, of which about half among children aged less than 5 years. The same report also presented scenario forecasts of the possible evolution of mortality during the first half of 2023, ranging from 18,000 to 34,000 further excess deaths.

As an update of the above, estimates of how many excess deaths have occurred in Somalia from January 2022 to June 2024 inclusive will be presented. Scenario-based forecasts for the second half of 2024 are being developed and will be presented separately.

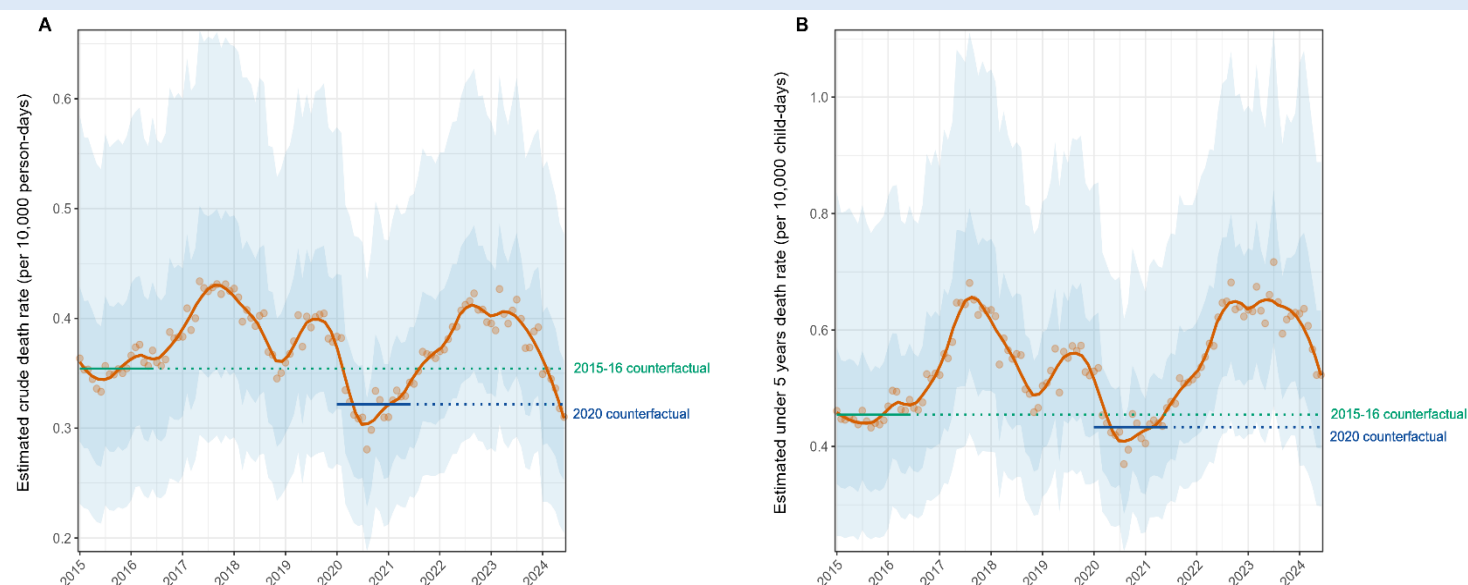
Methodology

Somalia, like other low-income countries, does not have full coverage of death registration, meaning that mortality must be *estimated* based on different data sources. Humanitarian partners, however, regularly conduct standardized monitoring of relief and transitions (SMART) surveys across the country, in which experienced Somali field researchers collect data on nutritional status and mortality from representative samples of households. The estimation method relies on 496 such surveys (about 180,000 households), a considerably larger sample than the previous report covering more areas of rural Somalia than in previous analyses.

The raw data from SMART surveys was supplemented with a variety of datasets of rainfall and drought conditions, insecurity, food insecurity, displacement, admissions for malnutrition and infectious disease morbidity collected by various actors for each district and month. The evolution of population denominators was also reconstructed for each Somali district, taking into account natural growth but also refugee and internal displacements. All of these data inputs has been combined into a statistical model that estimates the death rate by district and month, going back to January 2015. Mortality levels in 2015 and 2016, before the last drought, were taken as a baseline, and this baseline was subtracted from the estimated deaths to determine the surplus.

The statistical method underpinning this analysis was first developed by the LSHTM for Somalia following the 2010-2012 famine [2] and has progressively been refined [3] [4]. It has also been applied in South Sudan [5] and Nigeria [6]. A more detailed technical report with statistical annexes is available on request.

Figure 1. Trends in the crude death rate, Somalia, 2015–2024



Notes: Panel A is the overall rate and panel B is the rate in children younger than 5 years. The orange line is the estimated rate with 95% confidence intervals (blue shading), the orange dots are observed death rates, and the green and blue lines are the counterfactual estimates of deaths in 2019–2021 and 2015–2016, respectively.

Updated estimates

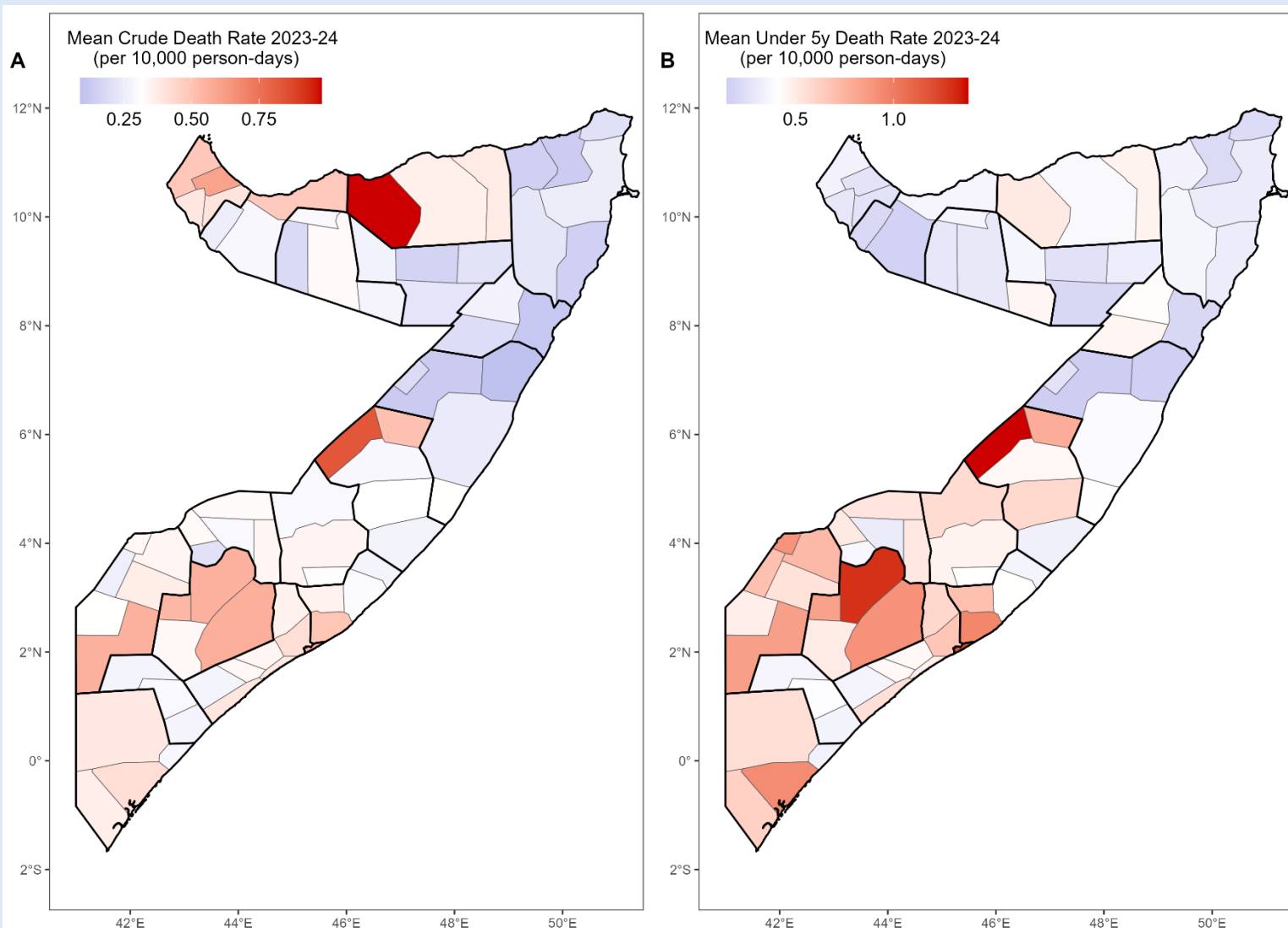
This update report, comprising a further 30 months in the timeline of the ongoing crisis, estimates that cumulative excess deaths have risen to a most likely estimate of 71,100, with the margin of error going from 28,200 to 125,100. Children under 5 years old make up some 41% of these deaths (with an excess of death about 67,500). This report revises the estimated number of deaths for 2022 slightly to 36,200, and projects an additional 38,500 deaths attributable to the crisis in 2023. However, it estimates that during the first half of 2024 mortality reduced considerably, with less deaths in the general population than pre-drought (-3600) but residual excess mortality among children.

Our analysis is able to reconstruct mortality patterns since 2015, including the previous drought that affected Somalia between 2016 and 2018. When comparing the first 30 months of both drought crises, our analysis suggests similar excess mortality levels so far, though so

far less than the approximately 260,000 people who were estimated to have died during the 2010-2012 drought and resulting famine.

Over the 30 months covered by this report, the average death rate has varied considerably across Somalia. Our analysis suggests that northeastern regions have seen relatively lower mortality than south-central regions, despite being projected back in 2022 by the Integrated Phase Classification to have comparatively similar percentages of their populations in critical or acute food insecurity situations (<https://www.ipcinfo.org/ipc-country-analysis/details-map/en/c/1155883/?iso3=SOM>). This suggests that the effect of drought is being felt differently across the country, possibly due to the exacerbating effects of insecurity and inaccessibility in south-central regions. In 2022 and 2023, the largest numbers of excess deaths likely occurred in Banadir region (14,400 in 2022, 14,600 in 2023), Bay (6,800, 8,700), and Lower Shabelle (4,000, 3,700).

Figure 2. Estimated mean crude death rates per 10 000 person-days, by district, Somalia, 2023-2024



Notes: Panel A is the overall mean crude death rate and panel B is the rate in children younger than 5 years.

Analysis limitations

The study has few key limitations, mainly related to problems with the quality and availability of some of the data used. SMART surveys done in rural areas estimated considerably lower child mortality than those done elsewhere, which may indicate problems with under-reporting bias. Population estimates are all-important when projecting death *tolls* from death *rates*: due to limited information on the true extent of displacement and return to communities of origin, district-level populations feature considerable uncertainty. Lastly, the range of mortality ‘predictors’ available does not include data on availability and performance of food security and health services: such data would be extremely useful to better account for the effect of routine and humanitarian services.

In light of these limitations, results should be interpreted with caution and triangulated with other information on the severity of the crisis in different locations of Somalia.

References

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- [3] Checchi F, Testa A, Gimma A, Koum-Besson E, Warsame A , "A method for small-area estimation of population mortality in settings affected by crises.," *Popul Health Metrics.*, 2022;2024..
- [4] Warsame A, Frison S, Checchi F, "Drought, armed conflict and population mortality in Somalia, 2014–2018: A statistical analysis.," p. 3, 2023.
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- [6] Checchi F, Jarvis CI, Van Zandvoort K, Warsame A, "Mortality among populations affected by armed conflict in northeast Nigeria, 2016 to 2019," *Proc Natl Acad Sci USA*, 2023.

Call to Action

This report confirms impressions of a severe impact of the drought on the health of Somalis, and should also spur constructive reflection on the part of humanitarian actors about how the crisis could have been mitigated more effectively through stronger anticipatory action. A concerted scale-up of food security and livelihoods, nutritional and health interventions by government, international and national humanitarian actors has undoubtedly saved large numbers of lives, but has not fully addressed emergent threats and gaps. The global contraction in humanitarian response budgets, which has also hit the ongoing Somalia drought response, runs counter to the escalating needs both in Somalia and across the Horn of Africa region, resulting from ongoing insecurity, population growth and, in particular, an increasingly evident pattern of man-made climate change. This report offers an evidence basis for renewed investment in both humanitarian and long-term support to Somali livelihoods by donor countries and entities. It also suggests that the drought crisis in Somalia has peaked, and other humanitarian indicators also suggest an improvement in food security and other factors. Now is, however, not the time to discontinue essential support: instead, acute humanitarian response interventions should be transitioned to more sustainable, multi-year funding and programming to support Somalis to become more resilient to future climate abnormalities. The analysis also shows that, when it comes to mortality impacts, within-country differences are significant. Improved sub-national analysis and more efficient targeting of humanitarian resources to specific communities (e.g. marginalized tribes, groups with specific livelihoods) could be one practical way to make better use of limited funding.

For further details, please contact:

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