

STRUCTURED SUMMARY

ASSESSING AND FINANCING LOSS AND DAMAGE DUE TO CLIMATE CHANGE IN SOMALIA

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Motivation

If losses and damages triggered by climate change are to be addressed in national and international policy, finance and action, losses and damages need to be specified and estimated.

Purpose

To support national planning and international advocacy, we provide policy-makers in Somalia with new estimates of current and potential future climate-attributable losses and damages. We examine economic losses, both direct and indirect, and non-economic losses.

Approach and methods

We review studies of floods and droughts attributable to climate change for East Africa and the Horn of Africa. We draw on EM-DAT data on deaths, number of people affected and economic damage associated with events between 2000 and 2021. Estimates of climate change's role in the events – the 'fractions of attributable risk' or FAR – are derived from extreme event attribution studies.

We estimate direct agricultural loss and damage by taking the average share of agricultural losses to all losses, as reported in post-disaster needs assessments conducted from 2008 to 2024 in the Sahel and Greater Horn of Africa. These direct agricultural losses and damages are then multiplied by the FAR to find the climate-attributable proportion.

Indirect economic and non-economic losses and damages are estimated from post-disaster needs assessments, Federal Government of Somalia documents, and grey and academic literature.

Estimates probably understate actual loss and damage to drought and flood in Somalia, because losses to past events are underreported in disaster databases like EM-DAT – especially for Africa, for economic impact, for small local events that may cumulatively have large impact, and for hazards such as drought and heatwaves that matter in Somalia.

Findings

On average, between 2000 and 2021, direct economic losses from floods and droughts attributable to climate change amounted to 3.3% of Somalia's gross domestic product (GDP) every year. Agriculture and livestock loss and damage to climate change amounted to \$2.84 billion from 2000 to 2021, \$129 million a year on average, equivalent to 4.5% of agricultural GDP.

These direct losses are compounded by their indirect ramifications for the rest of the economy, through multipliers – as lower agricultural output leads to less activity in manufacturing and services.

Non-economic losses include environmental degradation, loss of biodiversity, involuntary migration, potentially more conflict, and increased exposure to disease. Although real, these losses are too difficult to quantify in this analysis.

Unless action is taken to slow climate change and help Somalia to adapt through climate-resilient development, economic losses and damages will rise. Projections indicate that, by the 2050s, the total attributable direct economic loss and damage from floods and droughts could reach between \$5 billion to \$100 billion.

Our analysis does not consider changes to area climate, sea level and other changes that have slower onset than extreme events. Such changes will impose further losses to Somalia.

Policy implications

- Somalia is already experiencing significant loss and damage to climate change. Somalia's contributions to global emissions are minimal; the rest of the world should therefore provide equitable finance to help Somalia adapt and develop.
- The new Loss and Damage Fund needs to be large enough to provide equitable finance to Somalia. Its funds need to be accessible to Somalia.
- Disaster risk financing arranged in advance can help the Federal Government of Somalia, with its development and humanitarian partners, to address loss and damage.
- Disaster risk financing set up in advance can help the Federal Government of Somalia – with support from its development and humanitarian partners – to address loss and damage to climate change.
- The Federal Government of Somalia needs support to collect data on loss and damage to climate change.

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