

Annual Climate Assessment

# State of the Climate in Eastern Africa 2025

IGAD Climate Prediction and Prediction Applications Centre (ICPAC) is one of the World Meteorological Organisation's (WMO's) Regional Climate Centres (RCCs) that provides climate services to 11 East African countries.

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## State of the Climate in Eastern Africa 2025

*The State of Climate 2025* report is structured to deliver a comprehensive assessment of climate conditions across Eastern Africa, integrating scientific analysis of observed atmospheric and hydrometeorological variables with a systematic examination of climate-driven impacts across key socioeconomic sectors.



## Acronyms

|                 |                                                     |                  |                                                        |
|-----------------|-----------------------------------------------------|------------------|--------------------------------------------------------|
| AMHEWAS         | Africa Multi-Hazard Early Warning and Action System | MPA              | Marine Protected Areas                                 |
| CDC             | Centre for Disease Control                          | NMHS             | National Meteorological and hydrological Services      |
| CDD             | Consecutive Dry Days                                | N <sub>2</sub> O | Nitrogen Oxide                                         |
| CWD             | Consecutive Wet Days                                | NOAA             | National Oceanic and Atmospheric Administration        |
| CH <sub>4</sub> | Methane                                             | OCHA             | Coordination of Humanitarian Affairs                   |
| CO <sub>2</sub> | Carbon Dioxide                                      | OHC              | Ocean Heat Content                                     |
| DHWs            | Degree Heating Weeks                                | OND              | October-November-December                              |
| DOC             | Disaster Operations Centre                          | Ppb              | Parts per billion                                      |
| DRM             | Disaster Risk Management                            | RFCS-GHA         | Regional Framework Climate Services in the GHA         |
| EM-DAT          | Emergency Events Database                           | SMS              | Short Message Service                                  |
| ENSO            | El Niño–Southern Oscillation                        | S-NPP            | Suomi National Polar-orbiting Partnership              |
| FAW             | Fall armyworm                                       | S-NPP VIIRS      | S-NPP Visible Infrared Imaging Radiometer Suite        |
| GBV             | Gender-based violence                               | SSTs             | Sea Surface Temperatures                               |
| GDACs           | Global Disaster Awareness and Coordination System   | UNICEF           | United Nations International Children’s Emergency Fund |
| GHA             | Greater Horn of Africa                              | WASH             | Water, Sanitation and Hygiene                          |
| GHACOF          | Greater Horn of Africa Climate Outlook Forum        | WHO              | World Health Organization                              |
| GHGs            | Greenhouse Gases                                    | WIO              | Western Indian Ocean                                   |
| GIS             | Geographic Information System                       | WMO              | World Meteorological Organization                      |
| GLIDE           | GLobal IDentifier Number                            | WRTI             | Wildlife Research and Training Institute               |
| GMSL            | Global Mean Sea Level                               |                  |                                                        |
| GTS             | Global Telecommunication System                     |                  |                                                        |
| IDP             | Internally Displaced Persons                        |                  |                                                        |
| IGAD            | Inter-Governmental Authority on Development         |                  |                                                        |
| IGAD TAC        | IGAD-Technical Advisory Committee                   |                  |                                                        |
| IOD             | Indian Ocean Dipole                                 |                  |                                                        |
| ITCZ            | Inter-Tropical Convergence Zone                     |                  |                                                        |
| IMERG           | Integrated Multi-satellitE Retrievals for GPM       |                  |                                                        |
| JJAS            | June-July-August-September                          |                  |                                                        |
| KMFRI           | Kenya Marine and Fisheries Research Institute       |                  |                                                        |
| KWS             | Kenya Wildlife Service                              |                  |                                                        |
| LTM             | Long Term Mean                                      |                  |                                                        |
| MAM             | March–April-May                                     |                  |                                                        |
| MJO             | Madden–Julian Oscillation                           |                  |                                                        |



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## Executive Summary

Eastern Africa experienced significant climate variability and extremes in 2025, driven by large-scale climate systems including El Niño–Southern Oscillation (ENSO), the Indian Ocean Dipole (IOD), and the Madden–Julian Oscillation (MJO). Rainfall performance was highly uneven, with above-normal rainfall in parts of the region during the March–May (MAM) and June–September (JJAS) seasons, followed by below-average rainfall during October–December (OND) across the eastern sector, particularly in eastern Kenya, Somalia, and southeastern Ethiopia. Temperatures remained consistently above average, with 2025 ranking among the warmest years on record, reinforcing the region's warming trend and increasing heat-related risks.

These conditions triggered widespread socio-economic impacts: a total of 68 disaster events were recorded, causing approximately 5,049 deaths, affecting over 30 million people, and displacing more than 2.3 million. Floods were the most frequent and deadly hazard, while drought conditions intensified in eastern parts of the region during the latter part of the year. Climate-related shocks also compounded humanitarian pressures, contributing to displacement alongside persistent conflict.

Food insecurity remained critical, with approximately 42 million people facing crisis or worse levels of acute food insecurity. While favourable rainfall supported agricultural production in some areas earlier in the year, poor OND rainfall contributed to crop failure, degraded rangelands, and livestock losses in vulnerable pastoral and agro-pastoral areas.

Climate-sensitive health impacts also intensified, with floods, drought, heat, and displacement contributing to increased transmission of malaria, cholera, dengue, malnutrition, and acute respiratory infections. Water resources and ecosystems experienced both flood-related damage and water deficits, further increasing pressure on livelihoods and natural systems.

Despite these challenges, strengthened climate services, early warning systems, and coordinated preparedness measures supported improved anticipatory action and response across the region. Overall, 2025 highlighted Eastern Africa's growing exposure to climate extremes and the urgent need to strengthen resilience, scale anticipatory action, and integrate climate risk into planning across sectors to inform preparedness for 2026 and beyond.



## Key findings

- Rainfall distribution was highly uneven, with wetter-than-normal conditions during MAM and JJAS in parts of the region, followed by below-average OND rainfall across the eastern sector.
- 2025 ranked among the warmest years on record in Eastern Africa, reinforcing the region's long-term warming trend and increasing heat-related risks.
- A total of 68 disaster events were recorded, causing approximately 5,049 deaths and affecting over 30 million people.
- Floods were the most frequent and deadliest climate-related hazard, while drought intensified in eastern parts of the region during OND.
- Climate-related disasters displaced more than 2.3 million people, compounding existing humanitarian pressures alongside conflict-driven displacement.
- Approximately 42 million people faced crisis or worse levels of acute food insecurity across the region.
- Climate-sensitive disease outbreaks, including malaria, cholera, dengue, and acute respiratory infections, increased significantly due to floods, drought, heat, and displacement.
- Climate variability placed growing pressure on water resources, ecosystems, and biodiversity, contributing to both flooding and water deficits, environmental degradation, and ecosystem stress.
- Strengthened climate services, early warning systems, and anticipatory action mechanisms improved preparedness and response, but greater investment is needed to build long-term resilience.



### Key messages

- Flooding emerged as a major security threat across the Greater Horn of Africa during the JJAS 2025 season, distinct from but as serious as drought. Together, drought and flooding affected more than six million people and caused 1,668 deaths, with the wetter parts of the region bearing the heaviest flood burden.
- The flooding took multiple forms with wide-ranging consequences. Flash floods struck Ethiopia and Sudan, while riverine flooding hit South Sudan and Uganda. Across these areas, the floods damaged infrastructure, disrupted markets, and displaced large numbers of people.
- In South Sudan, flooding was closely linked to insecurity, especially when displacement crossed state boundaries. Floods in Unity, Lakes, Warrap, and Western Bahr-el-Ghazal forced herders to move into farming areas, generating tensions and conflict with agricultural communities.
- Flooding also directly shaped cattle-related violence, including raiding and retaliatory (revanche) killings. It did so both by displacing herding communities and by determining access to key grazing routes and strategic areas, which influenced where and when raids took place.
- In Somalia, flooding along the Shabelle and Hiraan rivers destroyed crops and damaged infrastructure, disrupting food distribution and access for affected populations.
- Finally, a consistent cross-cutting pattern emerged: flood-induced displacement increased gender-based violence cases across multiple countries. This link was documented at GHACOF 69 and reinforced in subsequent forums, underscoring displacement as a driver of heightened protection risks.
- Seasonal patterns. The MAM season saw 19 events (mostly floods, but epidemics drove 98.5% of its 1,581 deaths). JJA was the busiest season with 27 events, where flood-related mortality made up 92% of 1,668 deaths. The OND season recorded 22 events and about 1,800 deaths, again driven mainly by floods and epidemic outbreaks.

## Global Climate Overview: Indicators and Impacts

Global mean near-surface temperature has exhibited a consistent and sustained upward trajectory since 1980, with 2025 recording a significant anomaly of  $+1.43 \pm 0.13^\circ\text{C}$  above the 1850–1900 pre-industrial baseline<sup>1</sup>. This unprecedented warming has been primarily driven by the accelerating accumulation of greenhouse gases (GHGs) in the atmosphere.

Notably, the annual mean carbon dioxide ( $\text{CO}_2$ ) concentration in 2024 reached  $423.9 \pm 0.2$  parts per million (ppm) — representing the largest single-year increase since systematic measurements commenced at the Mauna Loa Observatory in 1957.

Methane ( $\text{CH}_4$ ) concentrations similarly reached elevated levels of  $1,942 \pm 2$  parts per billion (ppb), further intensifying the radiative forcing on the Earth's energy budget<sup>1</sup>.

The elevated GHG concentrations amplify the greenhouse effect, producing varied and regionally differentiated impacts across the globe.

These thermal imbalances do not act in isolation; they interact dynamically with a range of other Earth system indicators that compound and accelerate climate-related risks.

1. World Meteorological Organization (WMO). (2025). State of the Global Climate 2024. WMO-No. 1355. Geneva: WMO. Available at: <https://wmo.int/publication-series/state-of-global-climate-2024>

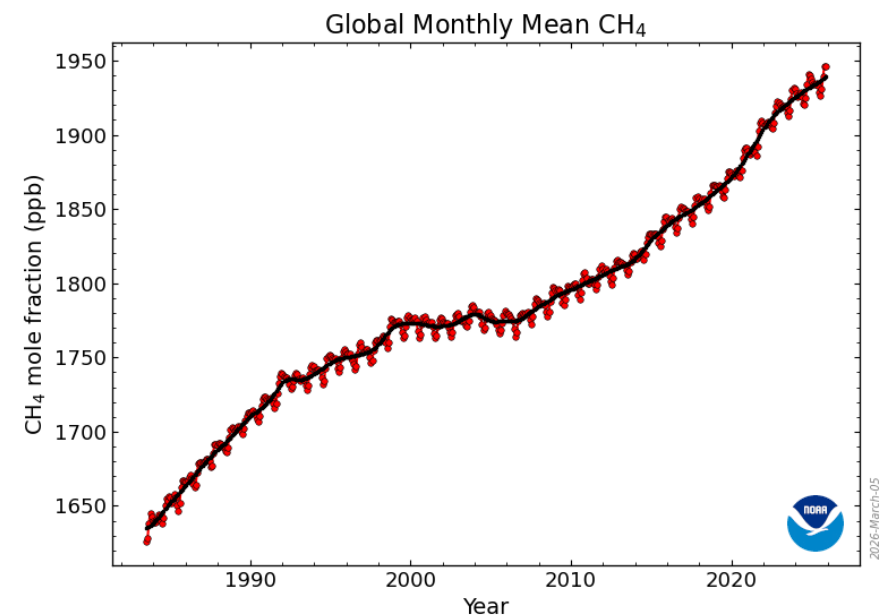
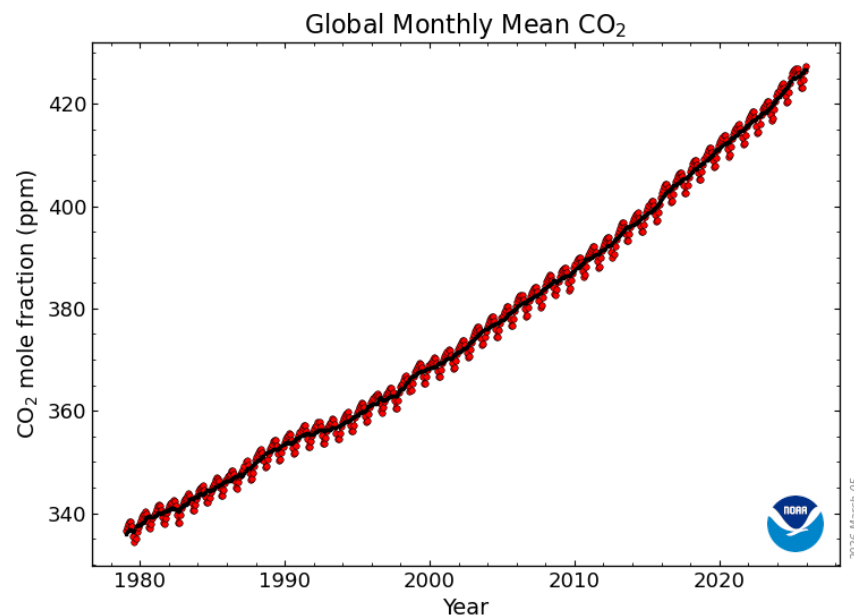


Figure 1: Global trends of carbon dioxide ( $\text{CO}_2$ ) using full record of combined Scripps data and NOAA data and Methane ( $\text{CH}_4$ ).

Key global climate indicators have recorded alarming trends that collectively amplify both the drivers and consequences of climate variability.

- **Ocean Heat Content (OHC):** continues to reach record highs, reflecting the ocean's role as the primary reservoir absorbing excess atmospheric energy.
- **Global Mean Sea Level (GMSL):** is rising at an accelerating rate, driven by thermal expansion of seawater and the accelerated melting of ice sheets and mountain glaciers (WMO 2025).
- **Ocean pH:** is declining (ocean acidification), threatening marine biodiversity and carbonate-dependent ecosystems.
- **Glacier Mass Balance:** is increasingly negative across most glaciated regions, contributing to freshwater scarcity and sea-level rise.
- **Sea Ice Extent:** in both the Arctic and Antarctic has experienced significant reductions, with cascading effects on albedo feedbacks and polar ecosystems.

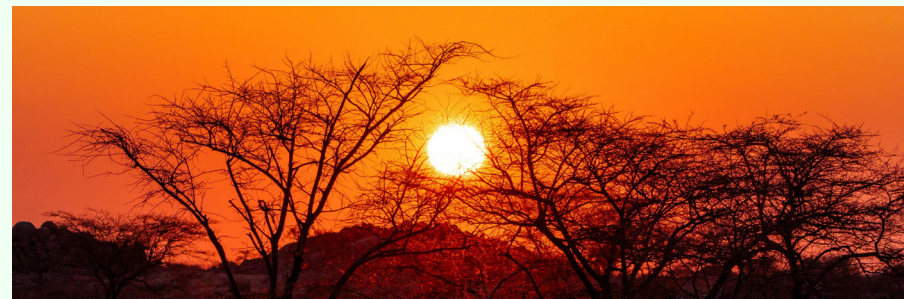
These shifting baseline conditions in turn modulate and amplify regional climate drivers, particularly large-scale ocean–atmosphere teleconnection patterns such as the **El Niño–Southern Oscillation (ENSO)** and the **Indian Ocean Dipole (IOD)**. The intensification of these modes of variability exacerbates extreme weather events — including droughts, floods, heatwaves, and tropical cyclones — with disproportionate impacts on vulnerable communities across most regions.

## Global climate context

The global annual mean near-surface temperature in 2025 was 1.43 °C [1.39 °C to 1.47 °C] above the 1850–1900 pre-industrial average and 1.08 °C [1.04 °C to 1.11 °C] above the 1961–1990 baseline. The global mean temperature in 2025 was the second or third highest on record for the period 1850–2025 according to all nine datasets that WMO uses to monitor global mean temperature. The year 2024 remains the warmest year on record at 1.55 °C [1.51 °C to 1.60 °C] above the 1850–1900 pre-industrial average. Each year from 2015 to 2025 was among the eleven warmest on record, and each of the past three years was among the three warmest on record. Atmospheric concentrations of the three major greenhouse gases reached new record observed highs in 2024, the latest year for which consolidated global figures are available, with levels of carbon dioxide (CO<sub>2</sub>) at 423.9 ± 0.2 parts per million (ppm), methane (CH<sub>4</sub>) at 1 942 ± 2 parts per billion (ppb) and nitrous oxide (N<sub>2</sub>O) at 338.0 ± 0.1 ppb – respectively 152%, 266% and 125% of pre-industrial (the year 1750) levels.



## State of the Climate in Africa 2025



In 2025, annual mean surface air temperature in Africa ranked between the third and seventh highest on record, at 0.51 °C above the 1991–2020 average

Africa's glaciers have lost more than 90% of their area since the late nineteenth century. On Mt. Kilimanjaro, glacier area has declined from 11.4 km<sup>2</sup> in 1900 to less than 1 km<sup>2</sup> in recent years.

Ocean warming continues across the region, although in 2025 ocean heat content and sea-surface temperature were lower than the record levels observed in 2023 and 2024. Ocean acidification is continuing, with record low surface pH observed across most of the region in 2025.

Sea-level rise along African coasts from 1999 to 2025 exceeded the global average of 3.6 mm per year in several regions, reaching around 4.2 mm per year along the Atlantic coast, 5.2 mm per year along the Indian Ocean coast, and 5.6 mm per year in the Red Sea.

In 2025, reported climate-related extreme events affected at least 13 million people and led to over 3 000 fatalities. Floods accounted for more than half of reported events, while drought affected more than 8.5 million people in East Africa.

Critical gaps remain in multi-hazard early warning systems, with fewer than 40% of countries in the region reporting preparedness and response capabilities. At the same time, improved collaboration between meteorological services, disaster management agencies and local authorities is strengthening preparedness.

**Source: World Meteorological Organization (2025). State of the Global Climate 2025. WMO-No. 1355. Geneva: WMO. Available at: <https://wmo.int/publication-series/state-of-global-climate-2024>**





Part I

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# State of The Climate in Eastern Africa, 2025

# 1.0

## Introduction

Eastern Africa remains one of the most climate-vulnerable regions globally, with livelihoods, economies, and ecosystems closely tied to rainfall patterns, temperature variability, and the availability of natural resources. In this context, timely and accessible climate information is critical for planning, preparedness, and risk management. This State of the Climate in Eastern Africa 2025 report addresses that need by consolidating climate observations, impacts, and responses into a single, structured reference. The report provides a comprehensive assessment of the region's climate system, its observed trends, and associated sectoral impacts over the year. Developed as a regional knowledge product, the report aims to support evidence-based decision-making by governments, practitioners, and partners working across climate-sensitive sectors.

*The State of Climate 2025* report is structured to provide both a scientific and sectoral impact overview. It presents an overview of the regional climate drivers and observed conditions, followed by an analysis of sectoral impacts, including agriculture and food security, water resources, health, conflict, livestock and the environment. It also highlights disaster events and humanitarian implications, recognizing the interconnected nature of climate risks across sectors.

# 2.0

## Climate Systems

The observed climatic conditions over Eastern Africa in 2025 were influenced by several local as well as large-scale climate drivers, most notably the ENSO, IOD, MJO, and tropical cyclones. The year 2025 was characterised by cooler-than-usual sea surface temperatures across the central and eastern Pacific Ocean, typical of a negative ENSO phase. When the ENSO is in a negative phase, it leads to enhanced rainfall during the JJAS season over Ethiopia, Sudan, South Sudan and Somalia. Later in the year, the development of a negative IOD played

a dominant role in shaping the OND short rains, typically suppressing convection and leading to below-average rainfall across eastern sectors of the region, including eastern Kenya, Somalia, and southeastern Ethiopia. In addition to these ocean–atmosphere interactions, intraseasonal variability linked to the Madden–Julian Oscillation and the seasonal migration of the Intertropical Convergence Zone further modulated rainfall distribution and timing across the region. Together, these climate drivers resulted in high spatial variability, delayed rainfall onset in some areas, and contributed to warmer-than-average temperatures, highlighting the strong influence of coupled ocean–atmosphere processes on Eastern Africa's climate during 2025.

## i.Observed Rainfall Conditions

### Seasonal Rainfall Performance

**March–May (MAM):** The equatorial and southern sectors recorded a generally productive season. Tanzania, Kenya, Somalia, and southern Ethiopia observed wetter-to-much wetter than normal conditions, consistent with an active ITCZ passage. Conversely, drier than normal conditions prevailed across Eritrea, Djibouti, northern Somalia, much of Ethiopia, and the Sudan–South Sudan border zone.

**June–September (JJAS):** Rainfall enhancement shifted northward in line with seasonal ITCZ migration. Southwestern Ethiopia, Sudan, and Djibouti recorded much wetter than normal conditions, with additional wet anomalies along the Kenya–Tanzania coast and isolated pockets in southern Burundi. Notably, the Mandera Triangle — the tri-border region of Kenya, Ethiopia, and Somalia — began exhibiting drier than normal conditions, signalling an early onset of a dry anomaly that would intensify in subsequent months.

**October–December (OND):** The dry signal that emerged over the Mandera Triangle during JJAS persisted and intensified into the OND season, with Somalia recording much drier than normal conditions — indicative of a severely suppressed short rains performance. In contrast, the Kenya–Uganda–Ethiopia border zone recorded much wetter than normal conditions, as did isolated areas across Sudan and along the Sudan–Ethiopia border, reflecting a spatially heterogeneous rainfall distribution characteristic of the OND season.



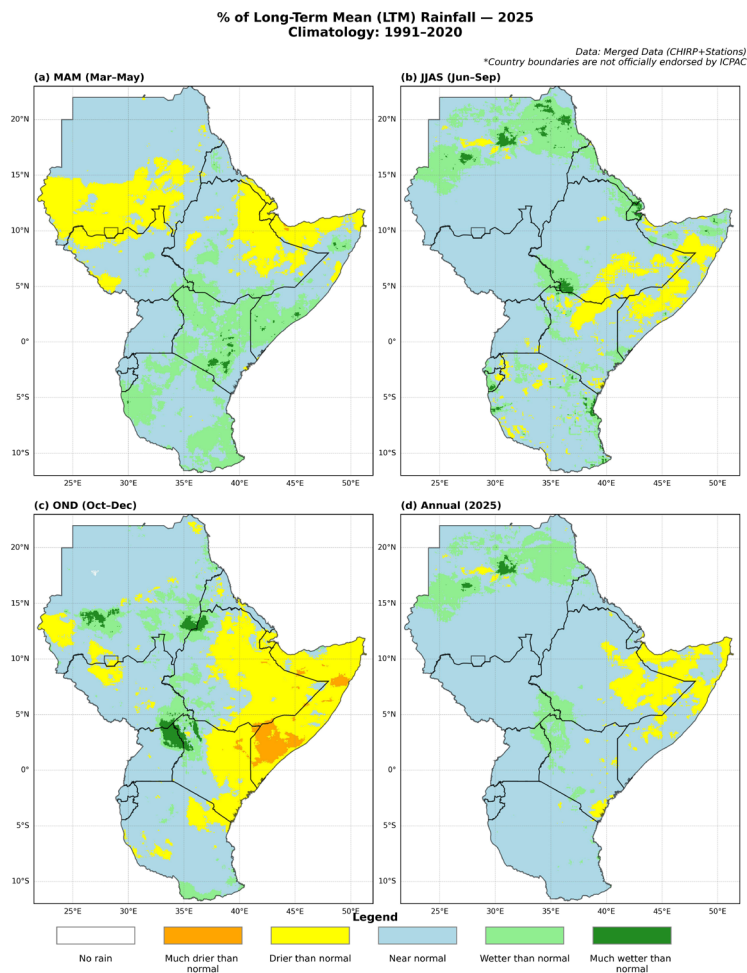


Figure 2: Seasonal and annual rainfall performance expressed as a percentage of the Long-Term Mean (LTM) over the Greater Horn of Africa (GHA) for 2025, relative to the 1991–2020 climatological baseline. Panels show: (a) March–May (MAM), (b) June–September (JJAS), (c) October–December (OND), and (d) Annual. Data: Climate Hazards Group InfraRed Precipitation with Stations (CHIRPS).



Residents use push poles to maneuver their makeshift rafts over a flooded access road to their residential blocks at Kohoto estate in Naivasha on November 17, 2025. Photo by TONY KARUMBA / AFP

## Wet and Dry Episodes

The year 2025 was marked by a series of notable extreme precipitation events across the Greater Horn of Africa (GHA), characterised by pronounced spatial and seasonal variability in both consecutive wet and dry days.

During the March–May (MAM) long rains season, widespread wet spell activity was recorded across equatorial and southern parts of the region. Several areas reported maximum consecutive wet days (CWD) exceeding 11 days, encompassing large parts of Tanzania, Rwanda, Burundi, Uganda, Kenya, South Sudan, and Ethiopia. On the contrary, most of the region registered less than 20 Consecutive Dry Days (CDD).

In the June–September (JJAS) season — the primary rainfall season for the northern sector of the GHA — the spatial footprint of elevated consecutive wet days shifted markedly northward, reflecting the seasonal migration of convective activity. The highest CWD values during this period were concentrated predominantly over Ethiopia and South Sudan, with isolated pockets of extended wet spells also observed within equatorial East Africa, particularly over western Kenya and Uganda. In this season, the lowest CDD (less than 5 days) were recorded mostly in the northern sector including South Sudan and Ethiopia.

During the October–December (OND) short rains season, the spatial distribution of extreme wet spells exhibited a southward return, with the highest CWD values recorded across several parts of Tanzania, Rwanda, Burundi, western Kenya, Uganda, South Sudan, and western Ethiopia. This pattern aligns with the re-establishment of near-equatorial convection during the secondary rainfall season. More CDD were recorded during this season throughout the region contributing to the recorded depressed rainfall especially in Somalia.

At the annual scale, the cumulative CWD pattern broadly mirrors the MAM spatial signature, reflecting the dominant influence of the long rains on annual precipitation totals across the region. However, the annual composite reveals amplified wet spell activity — characterised by an enhanced number of

consecutive wet days — particularly over Ethiopia, northeastern South Sudan, western Kenya, Uganda, and extensive portions of Tanzania, underscoring the disproportionate contribution of episodic wet spells to annual precipitation totals in these sub-regions.

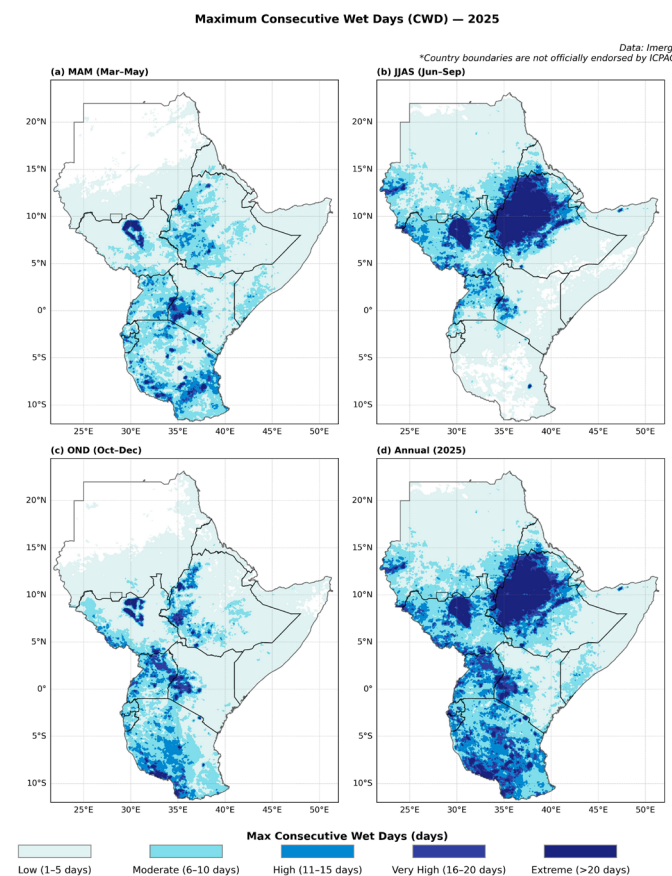


Figure 3: Seasonal and annual Maximum Consecutive Wet Days (CWD) over the Greater Horn of Africa (GHA) for 2025, derived from merged rainfall data (IMERG). Panels show: (a) March–May (MAM), (b) June–September (JJAS), (c) October–December (OND), and (d) Annual.

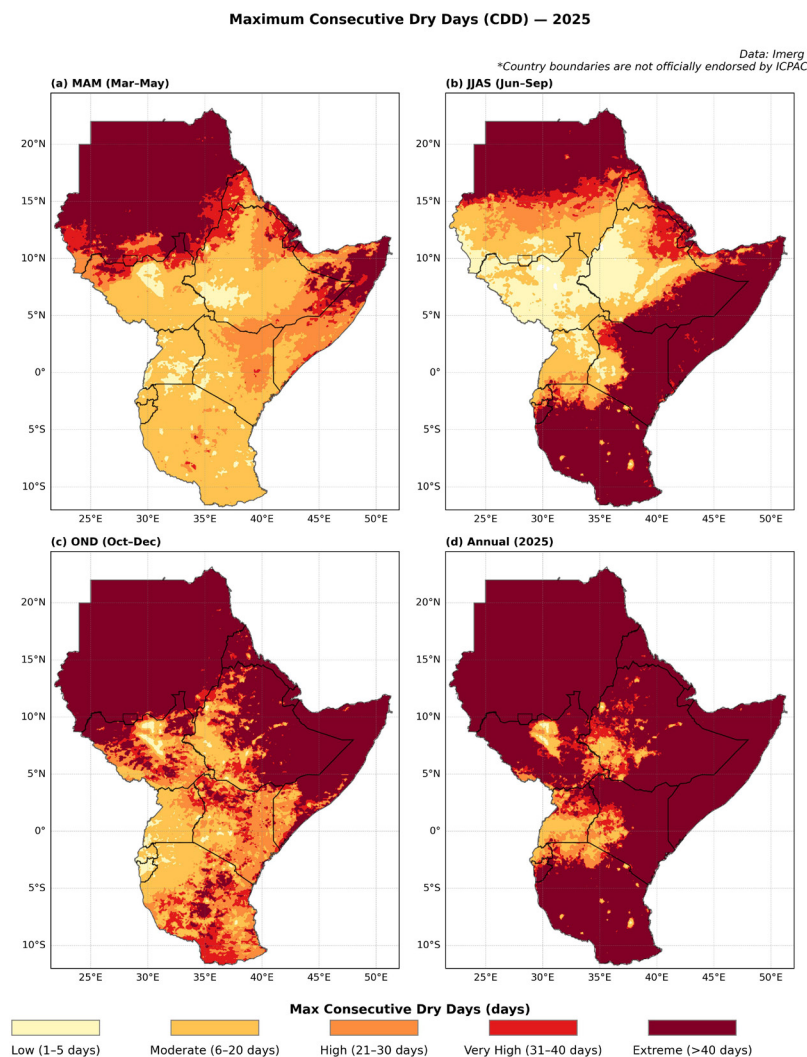


Figure 4: Seasonal and annual Maximum Consecutive Dry Days (CDD) over the Greater Horn of Africa (GHA) for 2025, derived from merged rainfall data (IMERG). Panels show: (a) March–May (MAM), (b) June–September (JJAS), (c) October–December (OND), and (d) Annual.

## ii. Observed Temperature Conditions

### Nighttime Temperature ( $T_{\min}$ ) Analysis

Regional nighttime temperatures ( $T_{\min}$ ) exhibited seasonal shifts, with an overarching warming in the equatorial and northern sectors.

**MAM:** Cooler conditions dominated Sudan and Somalia, while warming events were localized in the Ethiopia, Uganda, Kenya, Tanzania and Rwanda.

**JJAS:** Warmer-than-average nighttime temperatures ( $T_{\min}$ ) was concentrated in the equatorial regions and the northern tip (Ethiopia, Eritrea, Sudan).

**OND:** Coastal sectors from Kenya to Somalia, alongside Sudan, experienced warmer-than-average nighttime temperatures ( $T_{\min}$ ) conditions, while negative anomalies (cooler) were noted in South Sudan and the Horn.

**Annual:** Warmer-than-average nighttime temperatures ( $T_{\min}$ ) recorded in the equatorial, southern, and northernmost regions.

### Daytime Temperature ( $T_{\max}$ ) Analysis

Daytime ( $T_{\max}$ ) performance in 2025 was marked by enhanced temperatures, particularly in the northern and western parts of the region.

**MAM:** Warmer-than-average daytime temperatures ( $>2.25^{\circ}\text{C}$ ) were highest in the northwestern, northeastern and southwestern areas.

**JJAS:** Above-normal daytime temperatures prevailed across nearly the entire region with northeastern and northwestern recording some of the highest increases ( $>2.25^{\circ}\text{C}$ ).

**OND:** Widespread warming continued; notably, the western parts of the northern sector recorded extreme anomalies exceeding  $+2.75^{\circ}\text{C}$  above the Long-Term Mean (LTM).

**Annual:** The eastern and western northern sectors, plus the southwestern GHA, experienced the highest annual temperatures.



Long-term Trends

The region continues to show a warming signal, with  $T_{min}$  rising faster than  $T_{max}$ .

- **Warming Rates:** Since 1979, the region has warmed at a rate of  $0.222^{\circ}\text{C}$  per decade for  $T_{min}$  and  $0.207^{\circ}\text{C}$  per decade for  $T_{max}$ .
- **2025 Context:** Based on the 1991–2020 climatology, 2025 was the second warmest year on record for  $T_{max}$  since 1979 after 2024.
- **Recent Variability:** The period from 2000 to 2005 represents a notable peak in the regional climate record, accounting for the majority of the highest recorded daytime temperature ( $T_{max}$ ) values.

 **Heatwave**

The South Sudan heatwave of 2025 reached deadly levels, with extreme heat soaring above  $40^{\circ}\text{C}$  and leaving communities struggling to cope. The climate crisis exacerbated existing vulnerabilities, particularly affecting South Sudan's children and women.

According to the World Weather Attribution group, climate change made these heat events at least 10 times more likely and  $2^{\circ}\text{C}$  hotter than they would have been in a pre-industrial climate. If global temperatures rise to  $2.6^{\circ}\text{C}$  above pre-industrial levels, heatwaves of similar intensity are projected to occur every year.

In February 2025, dozens of students in South Sudan's capital, Juba, collapsed from heat exhaustion, prompting a nationwide school closure for two weeks.



Schoolgirls walk back home after being turned away from their school due to an ongoing extreme heatwave in Juba, South Sudan. AP Photo/Florence Miettaux

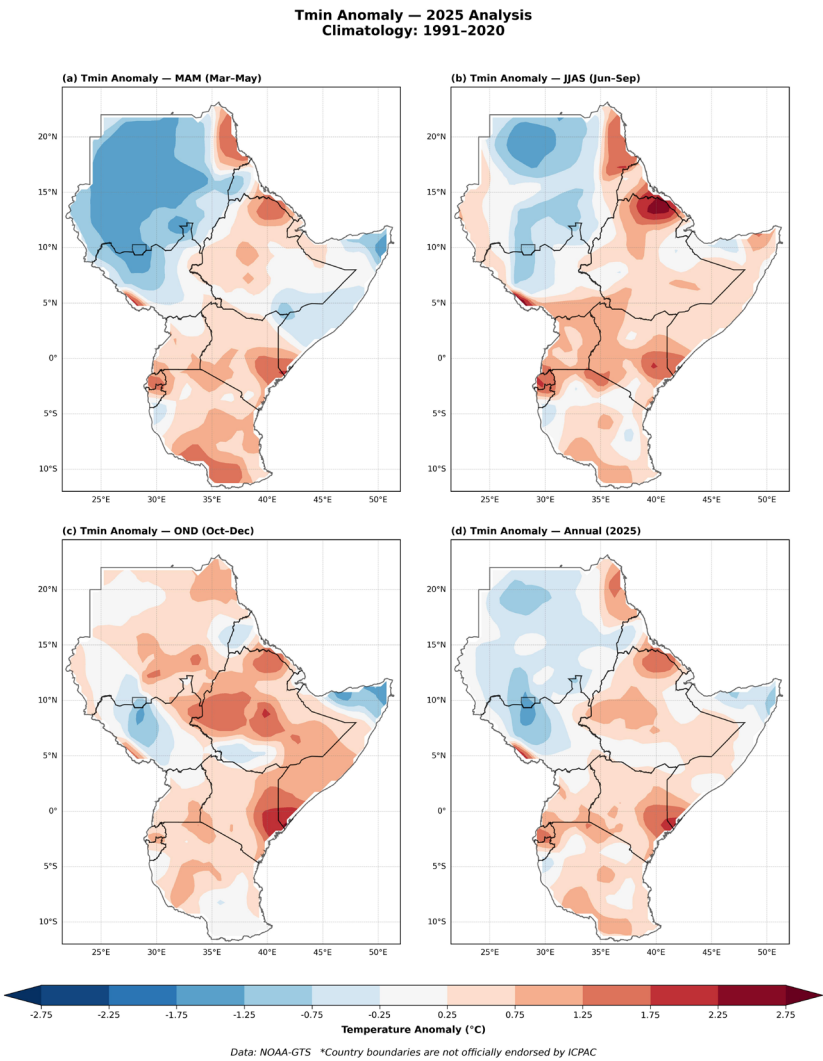


Figure 6: Seasonal and annual minimum temperature ( $T_{min}$ ) anomalies ( $^{\circ}\text{C}$ ) over the Greater Horn of Africa (GHA) for 2025, relative to the 1991–2020 climatological baseline. Panels show: (a) March–May (MAM), (b) June–September (JJAS), (c) October–December (OND), and (d) Annual mean. Warm colours (red) indicate above-normal  $T_{max}$ ; cool colours (blue) indicate below-normal  $T_{max}$ , as indicated by the diverging colour scale. Data Source: Gridded station records from NOAA GTS



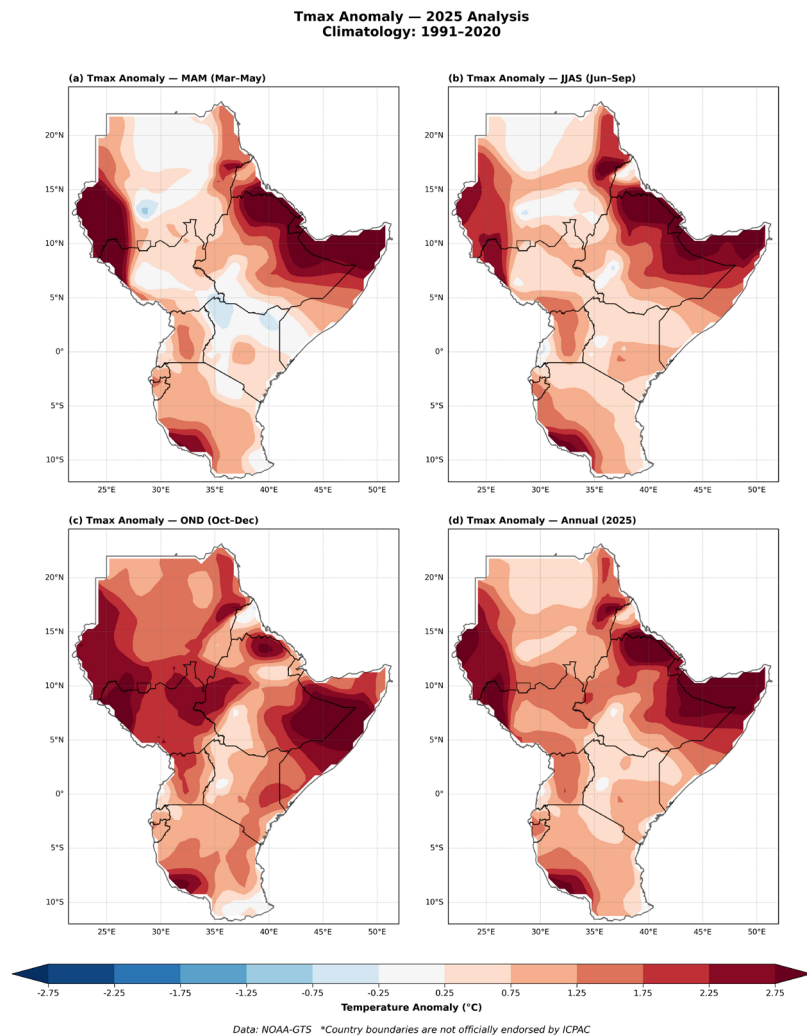


Figure 7: Seasonal and annual maximum temperature (Tmax) anomalies (°C) over the Greater Horn of Africa (GHA) for 2025, relative to the 1991–2020 climatological baseline. Panels show: (a) March–May (MAM), (b) June–September (JJAS), (c) October–December (OND), and (d) Annual mean. Warm colours (red) indicate above-normal Tmax; cool colours (blue) indicate below-normal Tmax, as indicated by the diverging colour scale.

## Temperature Historical Trends

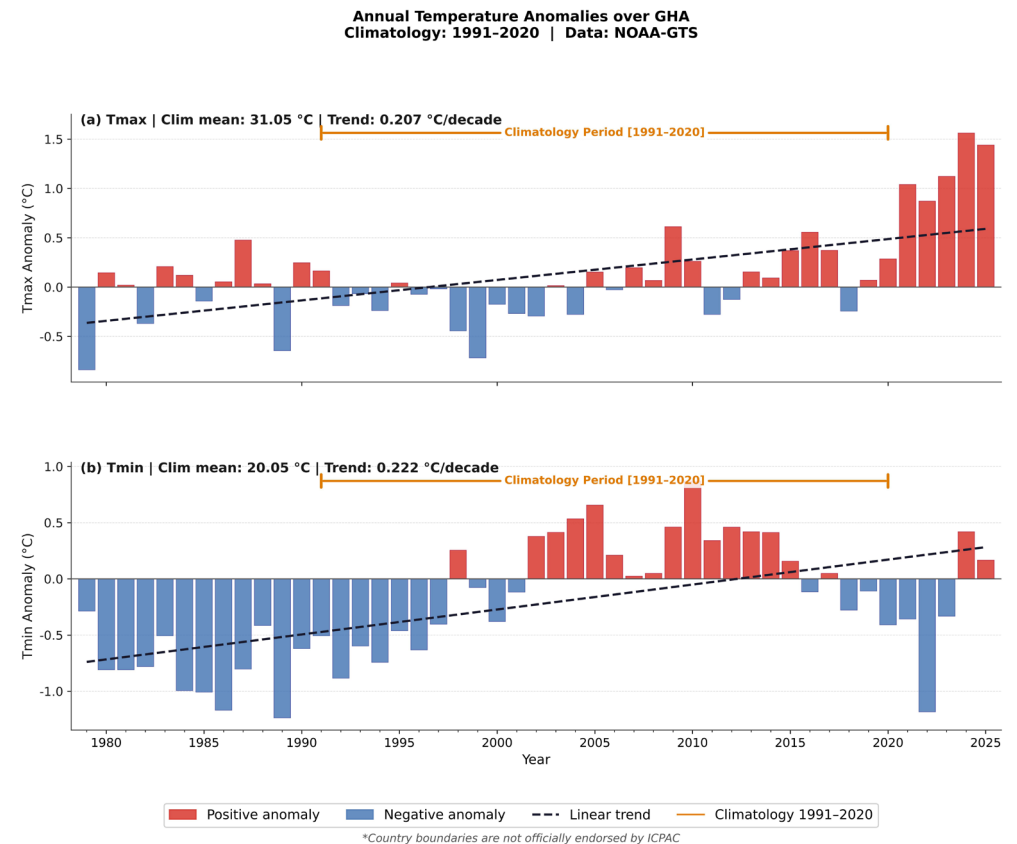


Figure 8: Annual maximum (Tmax, top) and minimum (Tmin, bottom) temperature anomalies (°C) over the Greater Horn of Africa (GHA) for the period 1979–2025, relative to the 1991–2020 climatological baseline. Red and blue bars denote positive and negative anomalies, respectively. The dashed black line indicates the linear trend, while the orange horizontal bracket marks the 1991–2020 climatology reference period. Data Source: Gridded station records from NOAA GTS



Part II

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## Impacts Across Sectors

# 1.0

## Disaster Risk Management

### i. Overview

The DRM sector across the Greater Horn of Africa faced sustained pressure throughout 2025, as successive seasonal hazards tested national and regional response capacities.

Across the three seasons, a cumulative total of 68 disaster events were recorded, resulting in approximately 5,049 deaths, over 30 million people affected, and more than 1.1 million displaced. (EM-DAT, Relief Web, Glide Number, GDACs and IGAD-TAC) Floods were the dominant hazard type across all three seasons, while drought, epidemics, landslides, and conflict-driven displacement compounded the overall humanitarian burden. National governments, regional bodies, and humanitarian partners shaped their responses according to hazard severity and geographic spread of these events, with increasing emphasis on anticipatory action, early warning dissemination, community engagement, and gender-sensitive programming.

| Indicator       | MAM (Jan–Apr) | JJAS (Jun–Aug) | OND (Oct–Dec) | Annual Total |
|-----------------|---------------|----------------|---------------|--------------|
| Disaster Events | 19            | 27             | 22            | 68           |
| Deaths          | 1,581         | 1,668          | ~1,800        | ~5,049       |
| People Affected | 13.6M         | 6.68M          | 10.6M         | ~30.9M       |
| Displaced       | ~1.348M       | ~119,279       | ~877K         | ~2.344M      |

Table 1: Disaster types across Eastern Africa, categorised by season and total annual occurrence.



Goal 16 is about promoting peaceful and inclusive societies, providing access to justice for all and building effective, accountable and inclusive institutions at all levels. People everywhere should be free of fear from all forms of violence and feel safe as they go about their lives whatever their ethnicity, faith or sexual orientation.

### ii. Disaster Events and Mortality

The MAM season recorded 19 disaster events, with floods accounting for 55.6% and epidemic outbreaks for 44.4% of all events. Despite their lower frequency, epidemics were overwhelmingly lethal, responsible for 98.5% of the 1,581 deaths recorded during the season, with floods contributing to the remaining 1.5%.

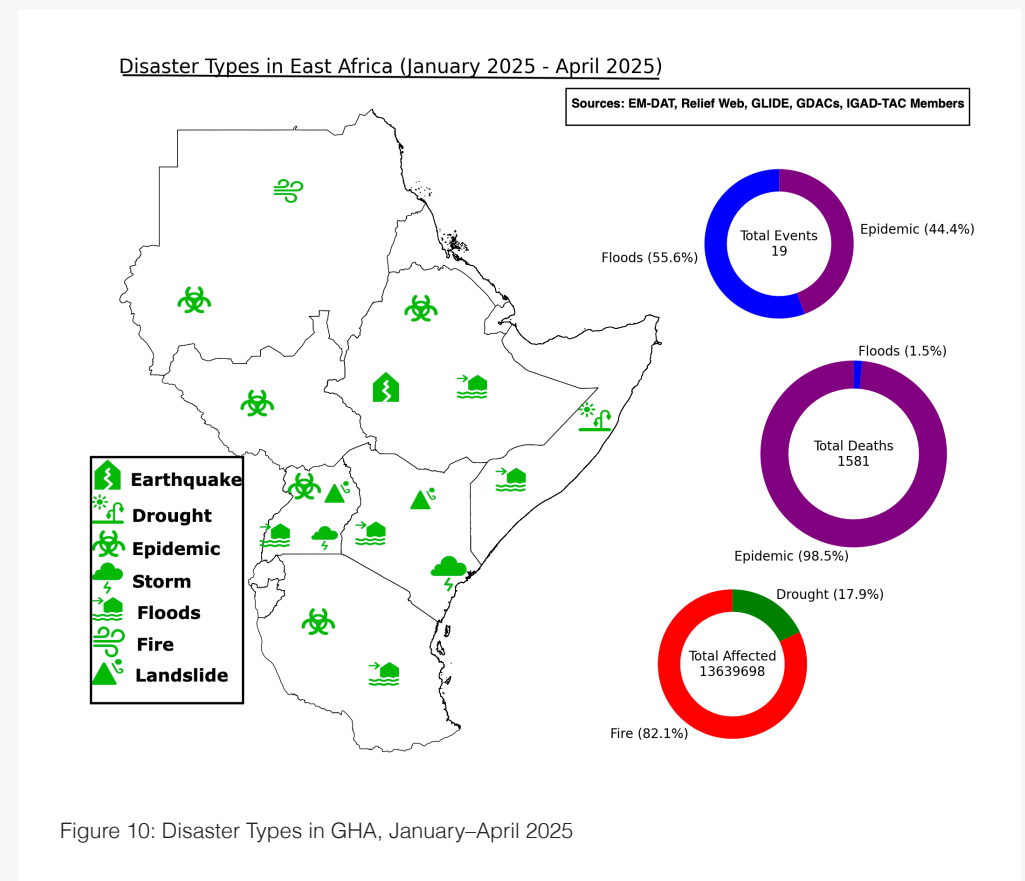


Figure 10: Disaster Types in GHA, January–April 2025

The JJA 2025 season was the most active in terms of disaster frequency, recording 27 events (floods constituting 58.7% and drought 41.3%).

Flood-related mortality accounted for 92.0% of the 1,668 deaths, with drought accounting for the remaining 8.0%. The OND season recorded 22 events and approximately 1,800 deaths, with floods and epidemic outbreaks as the

primary mortality drivers.

Across all three seasons, the pattern was consistent: floods were the most frequent and most deadly hazard, while drought and epidemics amplified the overall impact on affected populations, particularly in Somalia, Sudan, South Sudan, and Ethiopia.

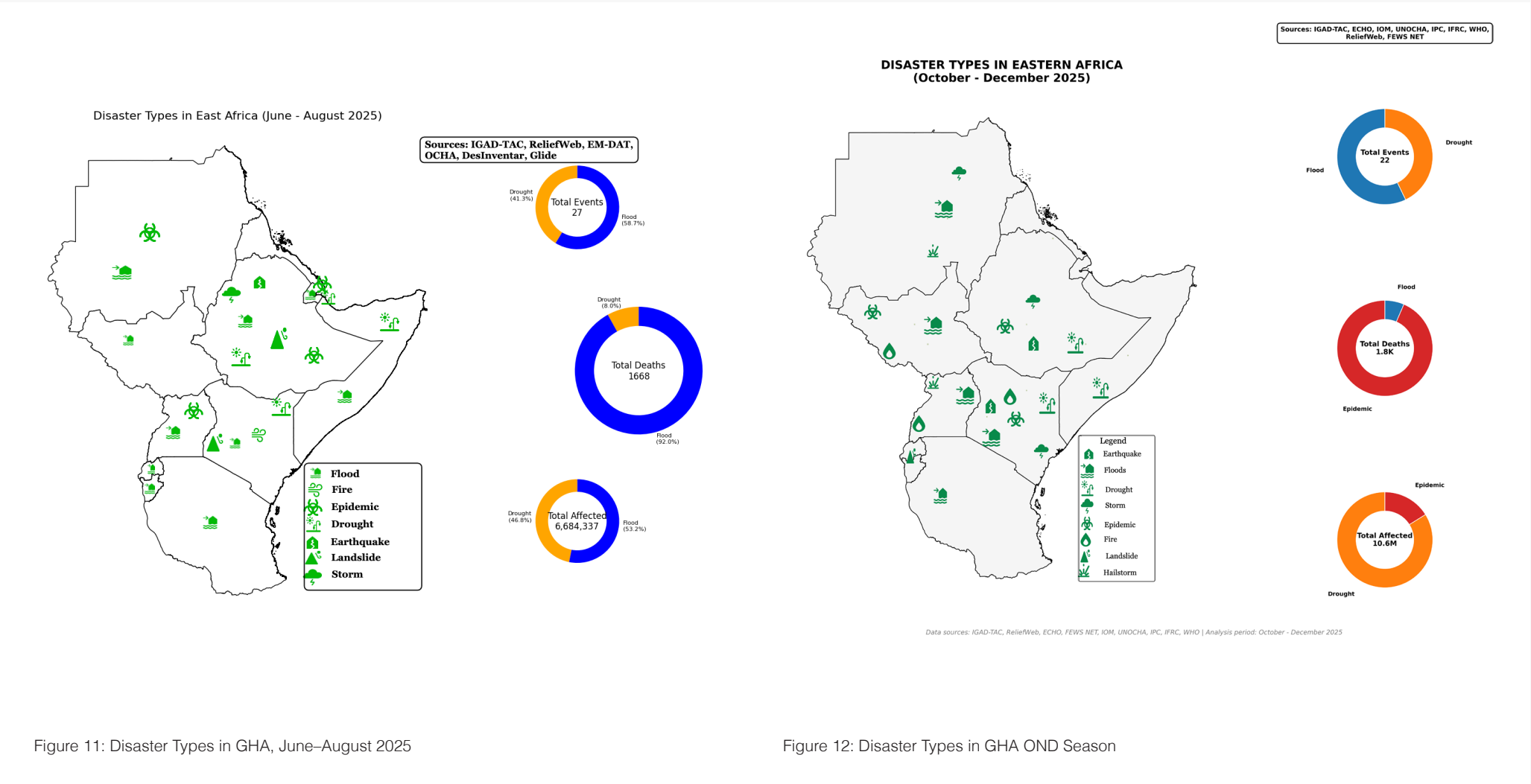


Figure 11: Disaster Types in GHA, June–August 2025

Figure 12: Disaster Types in GHA OND Season



### iii. Population Impacts and Displacement

In 2025, Eastern Africa recorded a total of 6,227,072 internally displaced persons across 9 countries through 639 distinct displacement events. Conflict was the dominant driver, accounting for 4,730,816 displacements or 76.0% of the regional total, while disasters triggered 1,496,256 movements (24.0%).

Sudan remained the most affected country with 2,677,298 displacements (43.0%), followed by South Sudan (1,682,754) and Ethiopia (1,085,752). These three nations represented 87.5% of all displacements. Among disasters, floods were by far the leading contributor to displacement, causing 1,035,524 displacements (69.2% of all disaster-related cases). The data underscores the persistent dual burden of conflict and climate-related hazards in the region. Across the three seasons, a clear temporal pattern emerged: conflict intensity peaked during MAM and gradually eased, while disaster-driven displacements rose sharply in OND.

Floods consistently represented the dominant natural hazard, contributing to over two-thirds of all disaster displacements annually. The concentration of 87.5% of movements in just three countries further illustrates the need for targeted interventions in Sudan, South Sudan, and Ethiopia, alongside climate adaptive measures in flood-prone nations such as Somalia and Kenya.

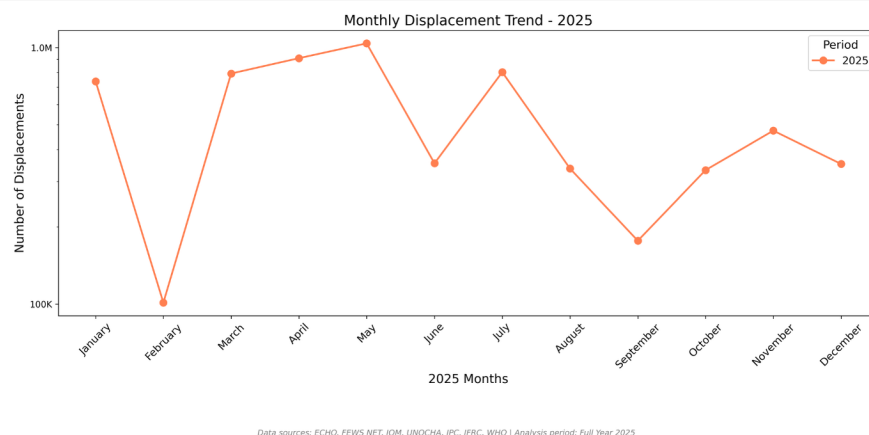


Figure 13: Monthly displacement trend for Full Year 2025, showing temporal patterns in displacement activity across

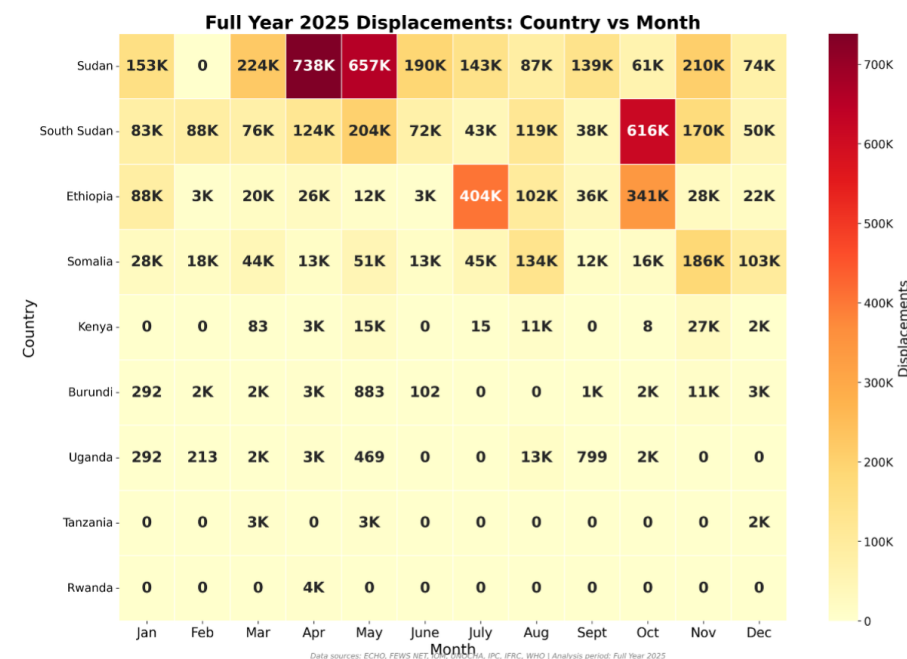


Figure 14: Country-by-month displacement heatmap for Full Year 2025. Darker shading indicates higher displacement intensity, enabling identification of spatial-temporal hotspots

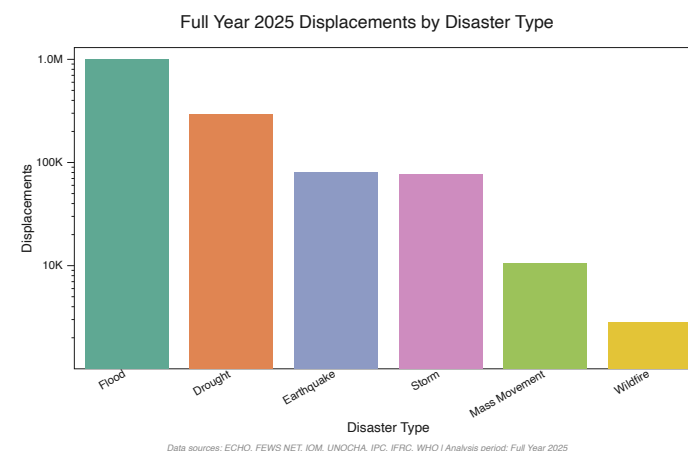


Figure 15: Disaster-induced displacements by hazard type for Full Year 2025.

## iv. Infrastructure Damage

Infrastructure damage was recorded across all three seasons and represented one of the most economically significant disaster impacts of 2025. During MAM, floods, landslides, lightning, and strong winds damaged roads, bridges, power lines, residential structures, and water systems across Kenya, Uganda, Sudan, and South Sudan.

According to the IGAD DRM Technical Advisory Committee (TAC), JJAS produced the most quantifiable losses, with over 10,000 houses destroyed or damaged, seven schools affected, and 21 hectares of cropland lost, alongside widespread disruption to water systems, hospitals, roads, bridges, and power infrastructure across Ethiopia, Kenya, Uganda, Sudan, and Djibouti.



Left: An image of the aftermath of a landslide that occurred in Moror Village and Chesongoch Centre in Elgeyo Marakwet county on Saturday, November 1, 2025. Photo | Kenya Government

In Djibouti, strong winds linked to drought conditions caused additional structural damage to buildings and facilities.

Infrastructure losses continued during OND, affecting water systems, residential areas, schools, hospitals, roads, railways, bridges, and power lines across multiple countries, with Kenya, Uganda, Sudan, and Somalia among the hardest hit.

In Uganda, recurring flood and landslide damage in Kasese, Ntoroko, and the Mount Elgon sub-region underscored persistent structural vulnerability, prompting the resettlement of at-risk households as a longer-term disaster risk reduction measure.



Landslide in Kapsomo Village, West Division, Kapchorwa District, in Eastern Uganda on November 1, 2025. Photo | Uganda Red Cross Society



## v. DRM Response Measures

National DRM agencies and humanitarian partners implemented a range of preparedness and response measures across 2025, with sustained emphasis on early warning dissemination, community engagement, and resource pre-positioning.

During MAM, Kenya's National Disaster Operations Centre issued alerts to local administrative authorities, while Uganda's Office of the Prime Minister conducted community sensitisation in high-risk districts. Disaster risk financing mechanisms, including drought insurance, were activated ahead of projected impacts, and Sudan's Humanitarian Aid Commission facilitated humanitarian access through the issuance of over 14,000 travel permits.



Kenya Red Cross Rescue Operations During OND 2025 (Source: IGAD DRM TAC)

In South Sudan, the World Health Organisation trained 30 health and nutrition personnel to strengthen response capacity.

During JJAS, preparedness efforts centred on large-scale warning dissemination through bulk SMS and formal advisories. Sudan launched cholera vaccination campaigns in response to flood-linked outbreaks, while Red Cross societies supported the evacuation of approximately 86,000 people across Uganda and Kenya.

Structural mitigation measures, including dyke rehabilitation and construction along high-risk riverbanks, were also implemented to reduce future flood risk.



A cholera vaccination exercise in Port Sudan on 24 September 2025. Photo | WHO

In the OND 2025 season, response measures included multi-channel early warning dissemination via SMS, radio, bulletins, and press releases; physical community engagements at identified hotspots; the purchase of drought parametric insurance to safeguard lives and assets; and contingency planning with humanitarian partners.

The resettlement of households from landslide-prone areas of Mount Elgon and the flood-affected districts of Kasese and Ntoroko in South Western Uganda was a significant structural DRM intervention during this season.



### Cholera outbreak

By July of 2025 alone, over 32,000 suspected cholera cases had been reported in Sudan, fuelling a total of more than 83,000 cases and 2,100 deaths since the outbreak began in July 2024, according to the Federal Ministry of Health. More than 33.5 million people — including 5.7 million children under five—were at risk, with rising cases in Darfur and reports of cross-border transmission into Chad and South Sudan.

Source: OCHA



People fill water containers at a distribution point due to water outages in Khartoum, Sudan on May 25 [AP]

### Summary



**Overall burden in 2025.** The disaster risk management sector across the Greater Horn of Africa was under sustained pressure throughout 2025, with 68 disaster events recorded across the three seasons. These caused roughly 5,049 deaths, affected over 30 million people, and displaced more than 1.1 million. Floods were the dominant hazard in every season, while drought, epidemics, landslides, and conflict-driven displacement deepened the humanitarian toll.



**Displacement dynamics.** Eastern Africa recorded over 6.2 million internally displaced persons across 9 countries through 639 displacement events. Conflict was the leading driver at 76% of the total, while disasters accounted for 24%. Sudan was the most affected country (43%), followed by South Sudan and Ethiopia—these three nations together represented 87.5% of all displacements.



**Temporal and geographic concentration.** A clear pattern emerged: conflict intensity peaked during MAM and then eased, while disaster-driven displacement rose sharply in OND. Floods consistently accounted for over two-thirds of disaster displacements annually.



**Infrastructure damage.** Infrastructure losses were among the most economically significant impacts of the year and occurred across all three seasons. JJAS produced the heaviest quantifiable damage. Damage continued through OND, with Uganda's recurring flood and landslide losses in Kasese, Ntoroko, and Mount Elgon prompting resettlement of at-risk households as a longer-term risk-reduction measure.



**Preparedness and response.** National agencies and humanitarian partners sustained a strong focus on early warning, community engagement, and resource pre-positioning.



In the OND 2025 season, response measures included multi-channel early warning dissemination via SMS, radio, bulletins, and press releases; physical community engagements at identified hotspots; the purchase of drought parametric insurance to safeguard lives and assets; and contingency planning with humanitarian partners.



# 02.

## Agriculture and Food Security

Food security across the Horn of Africa remained severely strained throughout 2025 due to the combined effects of climate extremes, persistent conflict, and economic volatility. An estimated 42 million people across six IGAD Member States, Djibouti, Kenya, Somalia, South Sudan, Sudan, and Uganda, faced Crisis or worse levels of acute food insecurity (IPC Phase 3+).

A primary driver was the poor October–December (OND) rainfall season, which triggered widespread crop failure, pasture degradation, and acute water shortages across eastern parts of the region. In several areas, this represented the second or third consecutive below-average season, compounding drought impacts and deepening humanitarian needs. Below is the country-specific summary of agricultural and food security conditions:

**Somalia** experienced sharp contrasts between seasons and regions. During the Gu season, southern areas recorded cereal production 14% above the long-term average, supported by favourable rainfall and early onset, while northern regions suffered near-total crop failure and severe livestock losses due to erratic rainfall, prolonged dry spells, and pest pressure.

By July, drought conditions had left approximately 2.5 million people across 26 districts in moderately to severely drought-affected areas. Conditions deteriorated further during the Deyr season, one of the poorest on record, with rain-fed production in some areas falling to just 10% of typical levels and crop output in the worst-affected zones 83% below the long-term average. Resulting shortages drove sharp market pressures, with red sorghum prices in Baidoa rising 44% above the previous year's average by December 2025.

**Kenya's** agricultural season also produced mixed outcomes. While North Rift and Western Kenya recorded favourable production during MAM, maize yields in Kitui fell 40% below the long-term average, with similarly reduced output in Makueni due to erratic rainfall. Conditions worsened significantly during

OND, particularly across ASAL and bimodal areas, where maize production reached only 106,958 tonnes (68% of the long-term average) and several counties experienced partial to near-total crop failure. Rapid deterioration of pasture and water resources further undermined livestock production, with nearly 30,000 livestock deaths reported in Mandera County and milk production falling 87% below average. By February 2026, an estimated 3.7 million people were facing Crisis or worse levels of acute food insecurity (IPC Phase 3+).

**Ethiopia's** agricultural performance was shaped by pronounced rainfall contrasts across the country. Below-average rainfall in Afar and Somali regions constrained crop and livestock production early in the year, while delayed but intense June–September rains caused flooding in parts of the northern highlands. Despite localised weather-related losses, including approximately 6,000 hectares of farmland damaged in Meket Woreda, Amhara, national Meher production remained close to the long-term average, supported by improved soil moisture, pasture, and water recharge.

However, severe drought in southern and southeastern pastoral areas, including Liben, Borena, Afder, and Guji, drove widespread pasture decline and localised crop collapse, with total crop failure reported across much of Borena Zone, contributing to reduced staple food access and rising food prices.

### 2025 Meher season crop harvesting performance

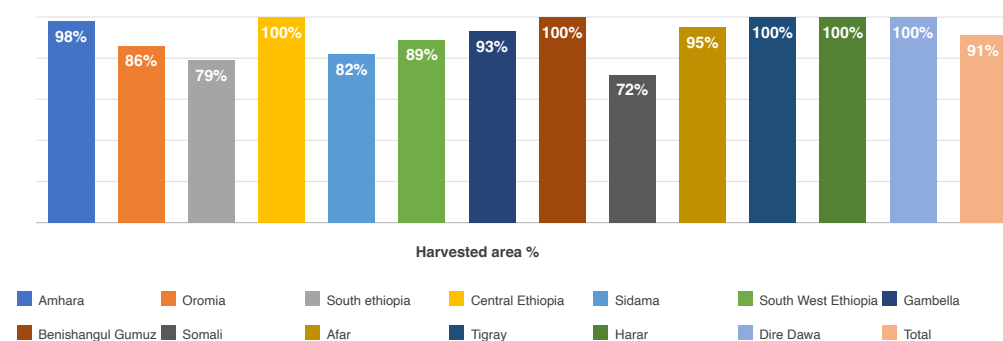


Figure 16: 2025 Meher season harvesting performance (MoA, Ethiopia)

**Sudan** experienced generally favourable climatic conditions for agriculture in 2025; however, ongoing conflict significantly constrained cultivation, access to inputs, and harvesting operations, particularly in Darfur and Kordofan. As a result, production gains from favourable rainfall were limited, and several areas remained at risk of Famine or worse outcomes.

**South Sudan** recorded mixed agricultural performance, with rainfall supporting crop development in some areas but delayed onset, flooding, insecurity, and localized drought constraining production elsewhere. These factors damaged cropland, reduced planted area, and contributed to uneven harvest outcomes across the country.

**Uganda** experienced a delayed onset of rains in its bimodal regions, disrupting planting and requiring replanting in some areas. However, improved rainfall distribution later in the season supported crop recovery, resulting in favourable yields and improved local food availability.

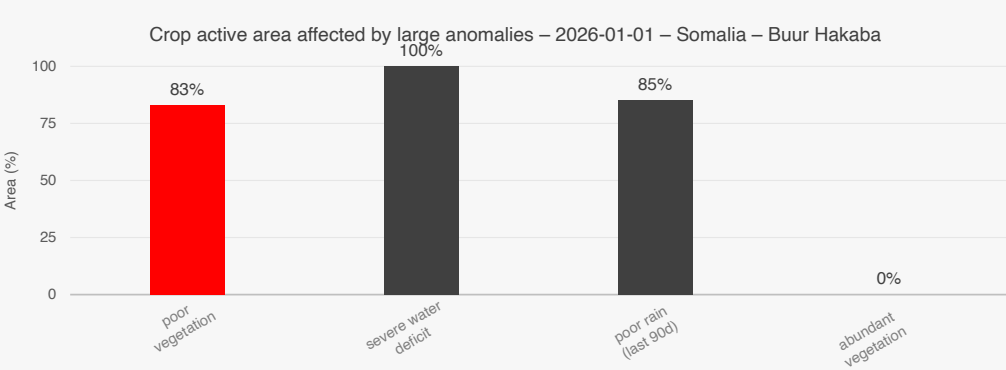
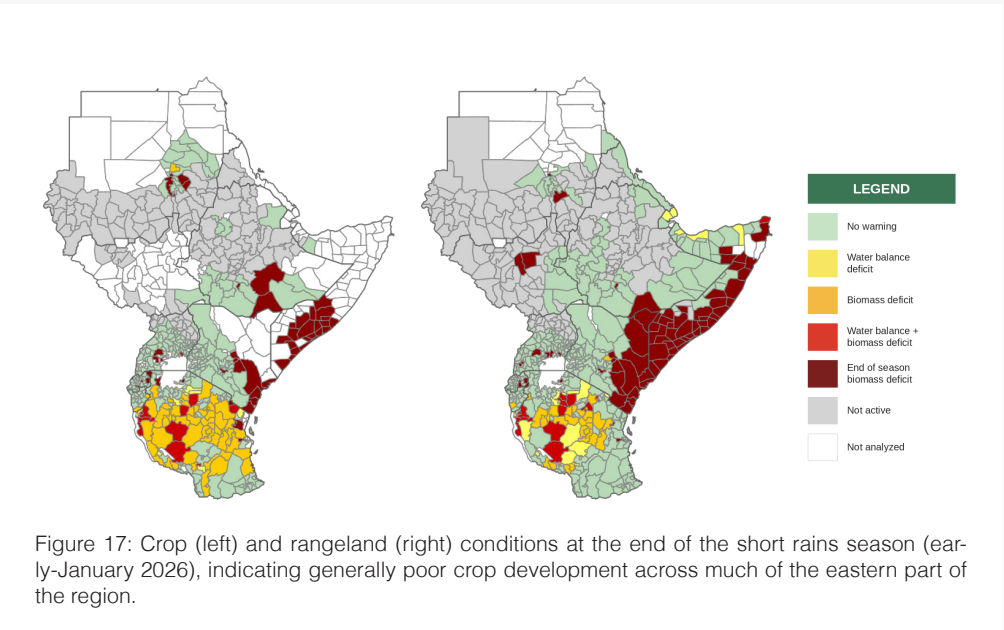
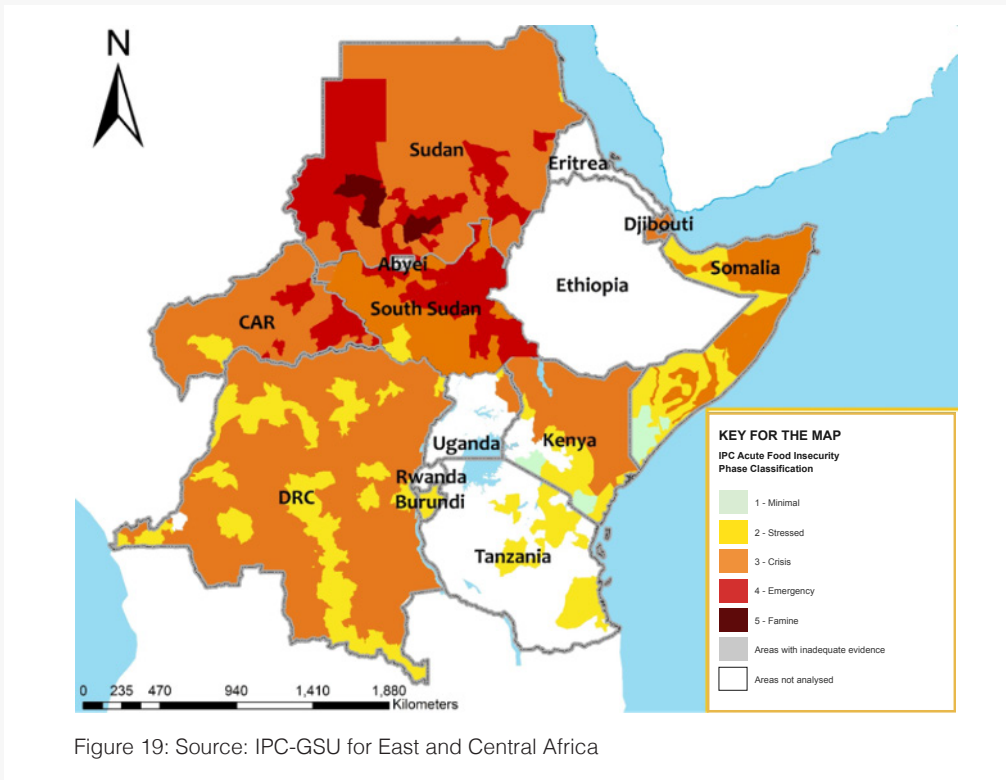


Figure 18: Buur Hakaba area in Somalia showing cropping areas affected by large anomalies during the Deyr season (early January)

### Regional Food Security Situation, as of June 2025



## Transboundary pest dynamics

During March–May (MAM) 2025, transboundary pest conditions in the Horn of Africa were variable. Desert locust activity remained generally low, with extensive surveys in Sudan's Northern and Red Sea States (covering 100,708 ha) indicating localised, low-density presence rather than a region-wide upsurge[1].

Quelea birds posed a more immediate but geographically concentrated risk, particularly in irrigated wheat areas of Afar (Ethiopia, Zone 3), where infestation required active control. The most significant and quantifiable MAM impact was Fall armyworm (FAW) in Kenya, where it emerged as the most widespread pest affecting maize and sorghum, with reported impacts including 25% maize yield losses in Samburu, 10% in Marsabit, approximately 12% of maize acreage affected in Baringo, and around 10% yield loss in Lamu associated with pest and disease pressure in which FAW was prominent[2].

During June–September (JJAS) 2025, the pattern of low desert locust pressure continued, alongside localised quelea activity and major FAW impacts, especially in Ethiopia. Desert locust conditions remained calm, with surveys in Sudan (covering 94,600 ha) detecting only scattered solitary adults, while neighbouring countries reported no escalation[3].

For quelea, outbreak incidence was generally limited, but sustained flock movements toward roosting and breeding areas—particularly around Dire Dawa—created localised risk where bird movement corridors intersected cropping zones. The dominant outbreak signal in JJAS was FAW in Ethiopia, with infestation estimated at 140,121 ha across 36 zones, 293 districts, and 4,086 villages.

Control operations were undertaken at scale, including 121,124 ha managed through cultural methods and 15,004 ha treated through chemical control using 28,036 litres of pesticide[4]. Across the region, FAW presence was widely reported in maize and sorghum production areas in the region.

During October–December (OND) 2025, reporting indicates that desert locust activity in the Horn remained low with isolated/scattered adults in

Sudan[5] and only conditional potential for small-scale breeding along Red Sea coastal areas if rainfall occurred. In contrast, quelea and fall armyworm (FAW) presented more immediate localised impacts.

A major quelea outbreak in Oromia (Ethiopia) was recorded in late September 2025, estimated at approximately 7 million birds, entering the OND risk window. In Kenya, county-level assessments for the OND season explicitly identified quelea activity as a cause of localised crop damage and cited FAW infestation among the key factors contributing to food security pressures during the period.

Overall, irregular rainfall patterns in 2025 kept desert locust activity generally low but contributed to increased quelea movements and fall armyworm outbreaks in regenerating crop and pasture areas. This underscores the need for sustained surveillance, seasonally aligned preparedness, and strengthened cross-border pest monitoring and response systems.

### In Brief



Quelea birds posed a more immediate but geographically concentrated risk, particularly in irrigated wheat areas of Afar (Ethiopia, Zone 3), where infestation required active control. The most significant and quantifiable MAM impact was Fall armyworm (FAW) in Kenya, where it emerged as the most widespread pest affecting maize and sorghum.



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Throughout 2025, transboundary pest conditions in the Horn of Africa were dominated by Fall armyworm and quelea rather than desert locusts, which stayed generally low across all three seasons—extensive surveys in Sudan detected only localised, low-density or scattered solitary presence with no regional upsurge. In MAM, quelea posed a concentrated risk in irrigated wheat areas of Afar, Ethiopia, while FAW was the most significant quantifiable impact, causing notable maize and sorghum losses in Kenya (up to 25% in Samburu).



03.

River Discharge, Water Levels, and Hydrological Impacts – 2025

River discharge remained a key indicator of rainfall variability and hydrological conditions across Eastern Africa in 2025.

To provide a comprehensive assessment of regional hydrological conditions, an analysis of river and lake water level variability was undertaken alongside Member State reporting on climate impacts affecting water and energy resources. Between March and December 2025, elevated inflows into the Great Rift Valley lakes, including Turkana, Bogoria, Nakuru, Naivasha, Tanganyika, Rukwa, and Malawi, drove water levels above their 33-year LTM (Figures 25, 26, 27 & 28).

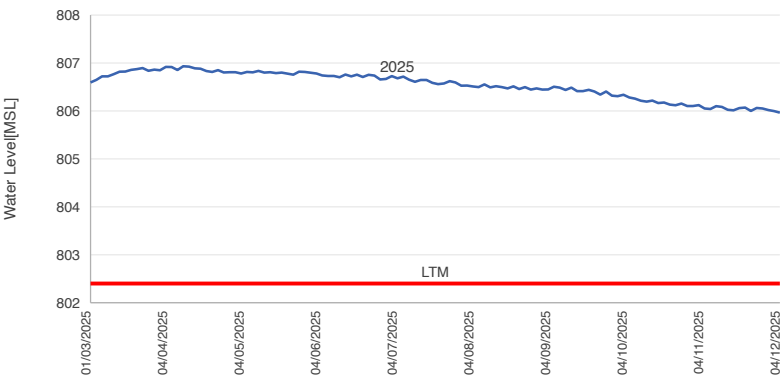


Figure 25: Variation of Water Levels of Lake Rukwa (Left) and Tanganyika (Right) in 2025

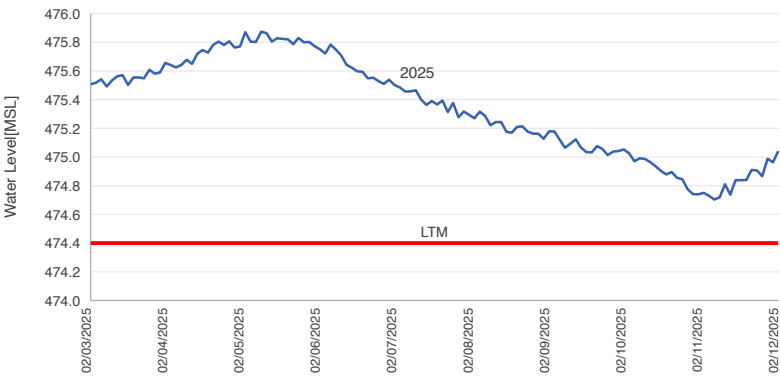
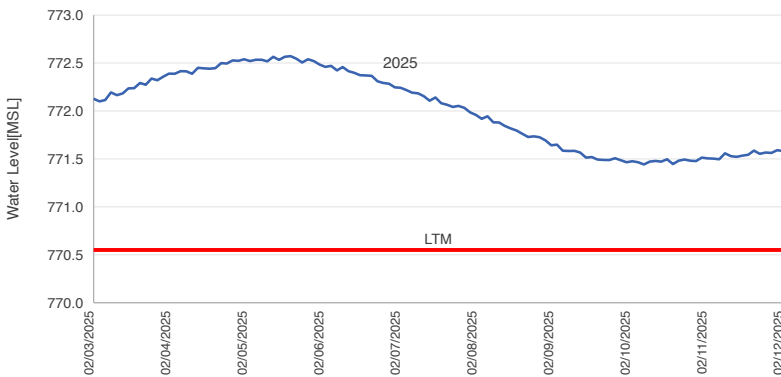
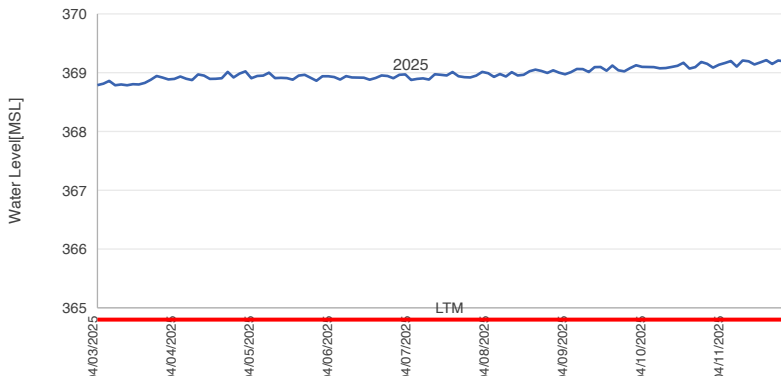


Figure 26: Variation of Water Levels of Lake Malawi (Left) and Turkana (Right) in 2025



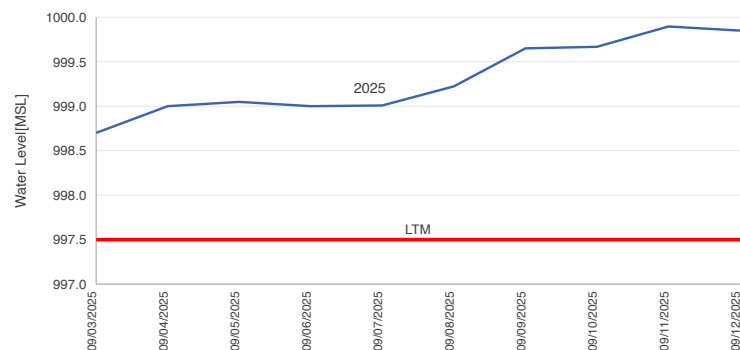


Figure 27: Variation of Water Levels of Lake Bogoria (Left) and Naivasha (Right) in 2025

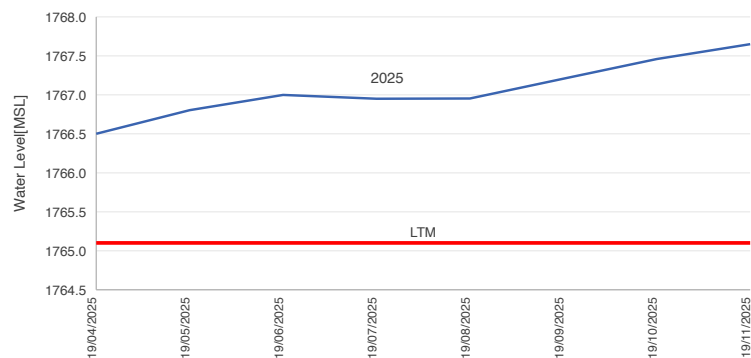
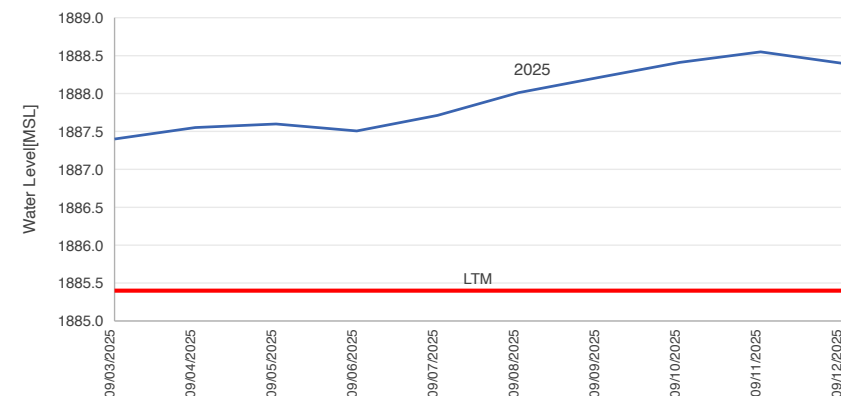


Figure 28: Variation of Water Levels of Lake Nakuru in 2025



Elevated water levels in Lake Victoria increased outflows into the White Nile, which, combined with inflows from Lakes Albert and Tana, generated high flows throughout the Nile system and caused riverine flooding in downstream sections. These floods damaged cropland along the Nile floodplains, particularly in Sudan, contributing to localised food insecurity. In approximately 45% of basins that received normal to above-normal rainfall during the MAM and OND seasons.



Elevated water levels in Lake Victoria increased outflows into the White Nile, which, combined with inflows from Lakes Albert and Tana, generated high flows throughout the Nile system and caused riverine flooding in downstream sections. These floods damaged cropland along the Nile floodplains, particularly in Sudan, contributing to localised food insecurity.

Although water levels in Lakes Victoria, Albert, and Tana remained below their 2024 peaks (Figures 22 & 23), they were sufficiently elevated to cause persistent inundation. Similarly, water levels in Lakes Tanganyika, Rukwa, and Malawi remained lower than in 2024 but high enough for many of the previous year's hydrological and socio-economic impacts to persist into 2025.

In approximately 45% of basins that received normal to above-normal rainfall during the MAM and OND seasons, particularly across Burundi, Rwanda, and parts of Kenya, South Sudan, Ethiopia, Tanzania, and Uganda, increased river discharge was accompanied by above-normal water levels.

Downstream countries such as South Sudan and Sudan also experienced elevated flows despite these not being primary rainfall seasons, reflecting the influence of upstream hydrological conditions.

## Hydrological impacts of above- and below-average water levels

Above-average water levels in 2025 generated both benefits and adverse impacts across the region. Elevated flows improved water availability for domestic, livestock, irrigation, and industrial use; supported stable hydropower generation; enhanced groundwater recharge; facilitated navigation in navigable waterways; and sustained wetland and riparian ecosystem health. However, these benefits were offset by significant negative impacts.

Elevated river and lake levels caused widespread inundation of low-lying areas, farmlands, and settlements, resulting in displacement, infrastructure damage, and disruption to livelihoods and economic activity. Saturated soils triggered landslides in vulnerable highland areas, while increased sedimentation degraded river and reservoir conditions. Floodwaters also reduced water quality through the introduction of pollutants, pathogens, and high turbidity levels.



Recharged water pan, Siaya, Kenya

In contrast, nine basins across the eastern Greater Horn of Africa recorded declining river flows between the MAM and OND seasons, resulting in below-normal water levels, particularly in Djibouti, Somalia, eastern Kenya, and southwestern Tanzania. Sustained reductions in river flows limited recharge of surface and groundwater resources and reduced overall water availability across affected areas.

These below-average water levels constrained access to water for domestic, livestock, irrigation, and industrial use; reduced hydropower generation in affected systems; and accelerated groundwater depletion. Water scarcity also increased the cost of access, heightened competition over limited resources, and extended trekking distances to water points—particularly affecting women and children. In many affected areas, reduced water availability further undermined livelihoods, agricultural productivity, and local economic activity.



Floods in Bujumbura Province, Burundi. Photo: THE DUNNINGS IN KENYA



## 04.

## Climate and Health

## i. Annual health impacts at a glance

|                                                                     |                                                                         |                                                                         |                                                                             |
|---------------------------------------------------------------------|-------------------------------------------------------------------------|-------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| <b>~7.4 M+</b><br><b>Malaria Cases</b><br><i>Full-year regional</i> | <b>976+</b><br><b>Malaria Deaths</b><br><i>All seasons combined</i>     | <b>~124,000+</b><br><b>Cholera cases</b><br><i>All seasons combined</i> | <b>1,616+</b><br><b>Cholera Deaths</b><br><i>All seasons combined</i>       |
| <b>~20,900+</b><br><b>Dengue Cases</b><br><i>Primarily Sudan</i>    | <b>50,000+</b><br><b>Acute Malnutrition</b><br><i>South Sudan alone</i> | <b>9 of 10</b><br><b>Countries Affected</b><br><i>All ICPAC members</i> | <b>7.4M+</b><br><b>Vaccinated (Cholera)</b><br><i>Cross-border coverage</i> |

**Note:** Figures represent reported and estimated cases from ICPAC GHACOF 70, 71, and 72 health sector analyses, supplemented by WHO and Africa CDC surveillance data. Actual numbers are likely higher due to underreporting, conflict-related data gaps, and disrupted surveillance

## Annual disease burden summary

| Disease / Condition     | Annual Cases (2025)      | Annual Deaths | Most Affected Countries                       | Climate Drivers                                |
|-------------------------|--------------------------|---------------|-----------------------------------------------|------------------------------------------------|
| Malaria                 | ~7.4 million+            | 976+          | Ethiopia, South Sudan, Sudan, Uganda, Somalia | Flooding, warm temps, extended breeding season |
| Cholera / AWD           | ~124,000+                | 1,616+        | Sudan, South Sudan, Burundi, Djibouti         | Flooding contamination; drought unsafe sources |
| Dengue Fever            | ~20,900+                 | 68+           | Sudan (Khartoum, Al Jazirah)                  | Warm temps, vector habitat expansion           |
| Measles                 | ~7,270+                  | 13+           | Sudan, South Sudan, Uganda, Ethiopia          | Displacement, disrupted immunisation           |
| SARI / Respiratory      | 103,655+                 | 10+           | South Sudan, Uganda                           | Flooding, overcrowding in IDP settings         |
| Hepatitis E             | 1,204                    | 41            | Sudan (Al Jazirah)                            | Flooding, contaminated water                   |
| Acute Malnutrition      | 50,000+ (S. Sudan alone) | -             | South Sudan, Ethiopia, Sudan, Kenya           | Crop failure, floods, displacement             |
| Heat Stress / Stroke    | Widespread               | -             | South Sudan, Sudan                            | Above-normal temperatures (OND)                |
| Mental Health Disorders | Widespread               | -             | Kenya, S. Sudan, Sudan, Uganda                | Displacement, livelihood loss, conflict        |

## ii. Climate drivers of the 2025 health burden

Three interconnected climate mechanisms shaped health outcomes across Eastern Africa in 2025. First, above-normal rainfall during MAM and JJAS triggered widespread flooding across Sudan, South Sudan, Uganda, and parts of Kenya and Ethiopia, contaminating water sources, damaging WASH and health infrastructure, expanding mosquito breeding habitats, and displacing populations into overcrowded settings with poor sanitation.

Second, below-normal OND rainfall across the eastern sub-region—including southern Ethiopia, Somalia, eastern Kenya, and parts of Tanzania—shifted but did not reduce health risks. Water scarcity increased reliance on unsafe water sources, sustaining cholera and acute watery diarrhoea transmission, while reduced rainfall intensified heat stress, particularly in Sudan and South Sudan.

Third, persistent warming extended vector breeding seasons beyond historical norms. ICPAC data indicates a 14% increase in months suitable for malaria transmission in African highland areas, while the spread of the invasive *Anopheles stephensi* mosquito—now confirmed in Kenya—expanded malaria risk into urban centres. Similarly, dengue cases in Sudan surged from 1,688 during MAM to 19,183 during OND, reflecting warming-driven expansion of *Aedes* mosquito habitats.

## iii. Humanitarian context and compounding factors

Climate was rarely the sole driver of health outcomes in 2025, with conflict and health system fragility significantly compounding impacts. Armed conflict in Sudan, South Sudan, and Somalia drove mass displacement into overcrowded IDP camps and informal settlements with limited WASH access and disrupted healthcare delivery. Sudan reported 48,768 cholera cases by mid-August, 72% of them in conflict-affected flood states, while South Sudan recorded 71,825 cases across 55 of 80 counties, with insecurity constraining health worker deployment and vaccine cold chain maintenance. Structural weaknesses across health systems further amplified climate-related health risks. Damaged health facilities, loss of trained personnel, disrupted surveillance and communication networks, and interrupted vaccination

programmes reduced system resilience, while limited funding for anticipatory and preventive action left responses largely reactive.

UNICEF's February 2025 regional alert warned that concurrent outbreaks of cholera, mpox, and viral haemorrhagic fevers were creating overlapping public health emergencies that strained child health systems across Eastern and Southern Africa.

#### iv. Gender and Equity dimensions

Health impacts in 2025 were not evenly distributed, with women, children, persons with disabilities, and remote communities disproportionately affected. Among women and girls, gender-based violence increased in displacement settings, particularly in Sudan, while insecurity and distance to facilities reduced antenatal care attendance in South Sudan.

Women and girls also bore disproportionate caregiving burdens during illness outbreaks, limiting access to education and livelihoods, while sexual and reproductive health services were frequently disrupted during floods and conflict.

Children faced heightened vulnerability across multiple health indicators. Children under five continued to bear the highest malaria fatality burden, consistent with regional trends, while interrupted immunisation contributed to significant measles incidence among children in South Sudan.

Acute malnutrition also remained concentrated among children, particularly in conflict- and climate-affected areas, with school closures during floods further reducing access to health and protection services.

Persons with disabilities and remote communities faced persistent barriers to access. Early warning information was rarely disseminated in accessible formats, many health facilities remained physically inaccessible, and remote or displaced populations experienced delayed health messaging, reduced mobile health coverage, and limited access to treatment commodities, contributing to higher vulnerability and poorer outcomes in underserved areas.

#### v. Positive outcomes and system strengths

Despite severe challenges, 2025 demonstrated the measurable value of preparedness and coordinated response when adequately resourced. Cholera vaccination campaigns exceeded targets, achieving 101% coverage with 1.2 million individuals vaccinated, while South Sudan's cross-border campaign reached over 5.3 million people, one of the largest cholera vaccination efforts in the region's history.

Measles vaccination campaigns achieved 97% coverage, helping contain outbreak risk in densely displaced populations, while malaria vaccine rollout expanded across 74 counties in South Sudan, and diphtheria campaigns reached over 2 million people.

Targeted disease prevention and response measures also strengthened resilience. Uganda deployed Indoor Residual Spraying across 17 districts to reduce malaria transmission, Kenya expanded multi-sectoral health response through mobile clinics, sexual and reproductive health services, mental health programming, and outbreak commodity distribution, and Ethiopia implemented targeted interventions for women and persons with disabilities.

At the regional level, early warning systems and multi-sectoral task forces were activated, with GHACOF 70–72 health advisories informing government preparedness and pre-positioning decisions.



##### Vaccination

Despite severe challenges, 2025 demonstrated the measurable value of preparedness and coordinated response when adequately resourced. Cholera vaccination campaigns exceeded targets, achieving 101% coverage with 1.2 million individuals vaccinated. Measles vaccination campaigns achieved 97% coverage. Targeted disease prevention and response measures also strengthened resilience.



# 05.

## Environment

The year 2025 was marked by increased climate variability and extremes, including drought, heat stress, and episodic heavy rainfall. These climatic regimes have carried a compounding impact across ecosystems, including vegetation production (rangelands and wildlife reserves conditions), forestry and marine/coastal zones. Notable impacts of the 2025 rainfall seasons have been grouped into three categories:

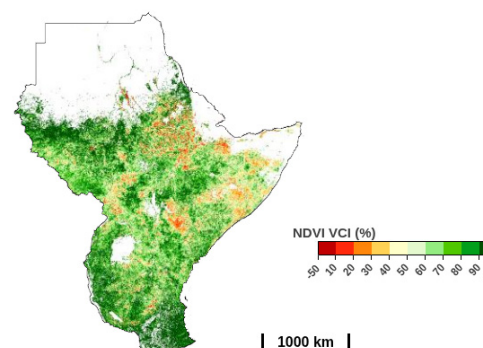
### i. Environment and biodiversity

The MAM and JJAS heavy rainfall contributed to land degradation, soil erosion, tree uprooting and hydro-climatic hazards (floods/landslides), especially in highland areas of Ethiopia, Kenya, Rwanda, Burundi, Tanzania and Uganda, and the Great Rift Valley escarpments. The MAM and JJAS rainfall seasons were favourable for rangeland productivity and increased vegetation cover, leading to improved forage availability for wildlife and livestock. The OND low rainfall and higher temperatures contributed to ecosystem stress, altering phenological cycles, reducing vegetation cover, reducing tree regeneration and survival of planted trees, habitats degradation, reducing water points, affecting wildlife food sources, as well as migrating corridors and patterns, increasing human-wildlife conflicts.

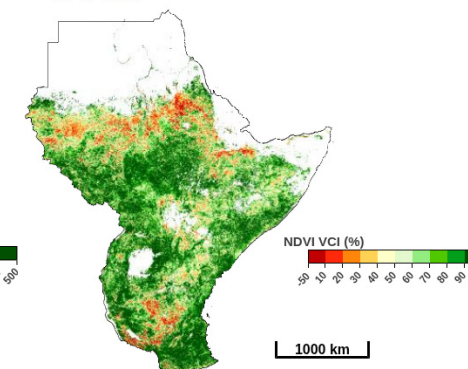
Kenya Wildlife Service (KWS) reported that in 2 years, from 2023 to the end of 2025, Kenya recorded 26,641 human wildlife conflict incidents resulting in the deaths of 255 people, 725 people injured, 9300 farm raids, 5200 livestock predation cases, over 1,000 incidents of property damage and nearly 10,000 direct threats [1].

In South Sudan, human-wildlife conflicts were largely driven by resource competition as a result of the interaction of wildlife and communities due to flooding, displacement of communities and disruption of traditional cattle and wildlife migration routes [2].

Greater Horn of Africa  
SPOT.VGT/PROBA.V - NDVI - 1 Month NDVI VCI  
01-04-2025



Greater Horn of Africa  
SPOT.VGT/PROBA.V - NDVI - 1 Month NDVI VCI  
01-07-2025



Greater Horn of Africa  
SPOT.VGT/PROBA.V - NDVI - 1 Month NDVI VCI  
01-11-2025

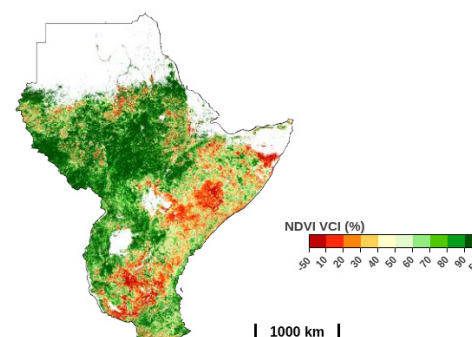


Figure 26: Vegetation condition indices maps of the EA region for April, July and November 2025

The OND low rainfall and higher temperatures contributed to ecosystem stress, altering phenological cycles, reducing vegetation cover, reducing tree regeneration and survival of planted trees, habitats degradation, reducing water points, affecting wildlife food sources, as well as migrating corridors and patterns, increasing human-wildlife conflicts.

#### Why a poor OND season is disproportionately damaging

OND failure combined with elevated temperatures compounds stress rather than just adding to it, because:

**Phenological disruption:** Plants and trees cue flowering, seeding, and leaf-flush to expected rainfall timing.

**Reduced vegetation cover:** Without the short rains to sustain grass and shrub growth into the dry months, cover thins out faster, exposing soil to wind and water erosion and reducing the “buffer” of standing forage going into the next dry spell.

**Poor tree regeneration and seedling survival:** Newly planted or naturally regenerating trees are most vulnerable in their first dry season.

**Habitat degradation:** Compounding loss of cover and woody vegetation degrades structural habitat complexity.



ii. Wildfires

The Eastern Africa fire season typically extends from November to March, with wildfire severity strongly influenced by antecedent rainfall and the number of rainy days during the pre-fire period (Holden et al., 2018).

Above-normal rainfall during the MAM and JJAS seasons in 2025 promoted substantial vegetation growth, which, combined with drier conditions and higher temperatures during OND, provided abundant fuel for increased wildfire activity across the region.

Wildfires remain a major threat to the conservation and management of rangelands and forest resources, contributing to biomass loss, environmental degradation, soil erosion, nutrient depletion, biodiversity decline, and air pollution. In 2025, the ecosystems affected by wildfires were as detailed in the table below:

| Country     | Protected Area          | Detections (SNPP-VIIRS) |
|-------------|-------------------------|-------------------------|
| South Sudan | Southern National Park  | 31716                   |
| Tanzania    | Selous Game Reserve     | 21730                   |
| South Sudan | Boma National Park      | 20053                   |
| Tanzania    | Ruaha National Park     | 13147                   |
| Tanzania    | Moyowosi Game Reserve   | 12328                   |
| Tanzania    | Serengeti National Park | 11894                   |
| Sudan       | Dinder National Park    | 9285                    |
| Tanzania    | Katavi National Park    | 7409                    |
| Ethiopia    | Gambella National Park  | 7061                    |

Table 3: Wildfire-affected ecosystems

It was noted that from 1st January to 31st Dec 2025, there were 212,429 wildfire alerts from satellite observations (S-NPP VIIRS).

Wildfire alerts per month

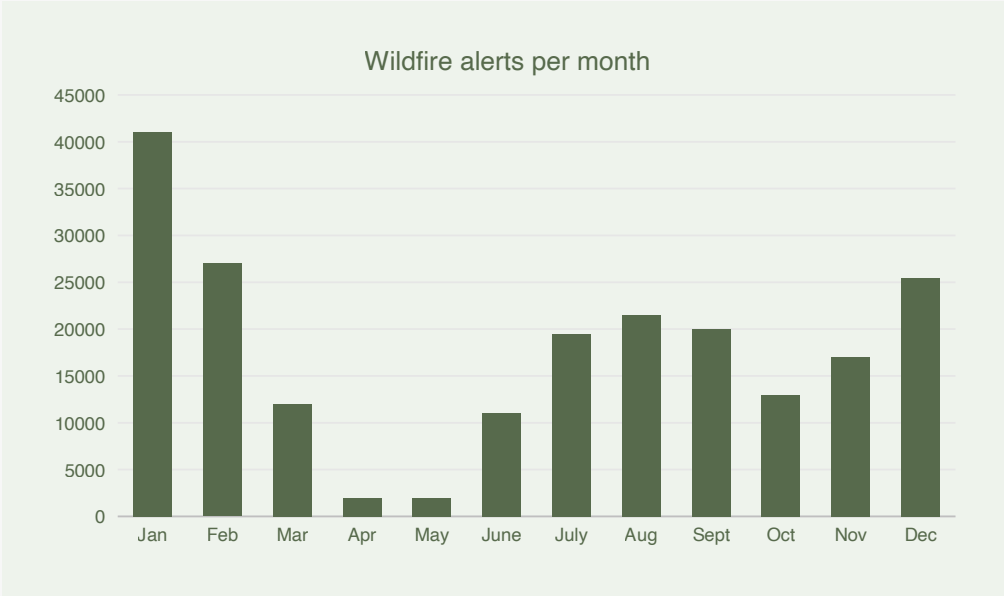
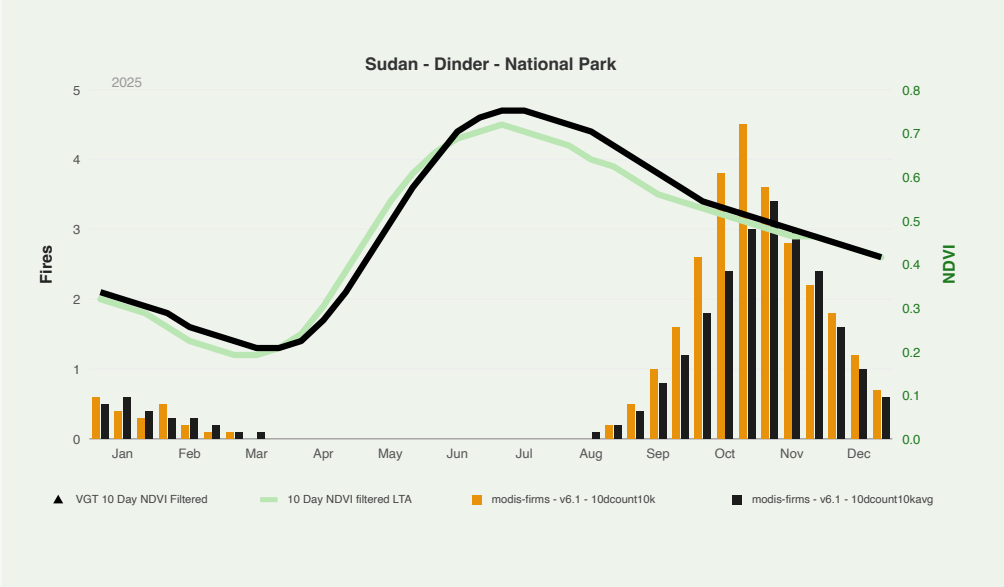


Table 4: represents satellite-based wildfire detections in 2025



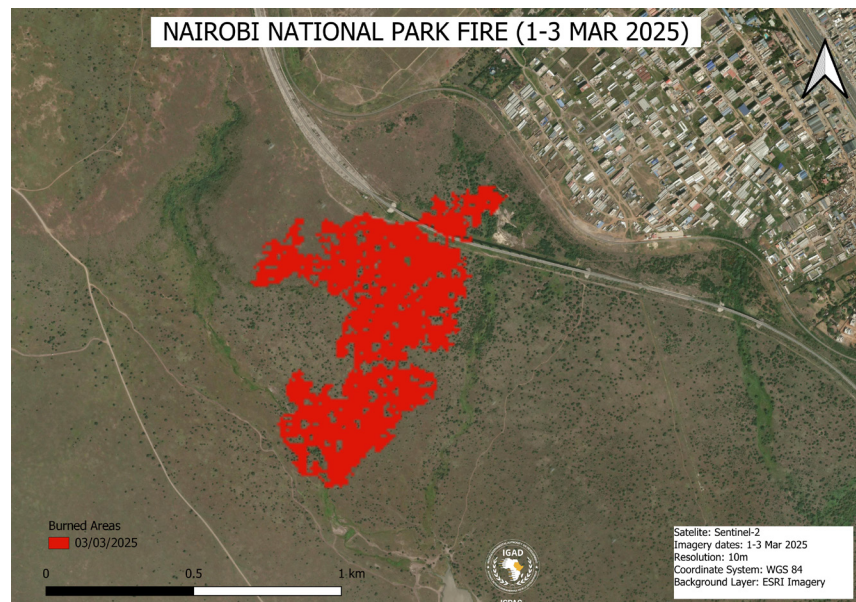
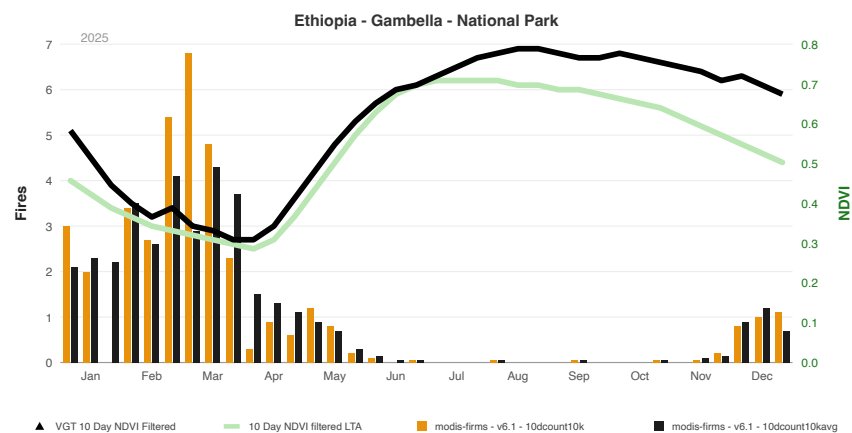


Figure 28: represents a wildfire in Nairobi National Park (Kenya), that burned between 27 and 28 February 2025. The fire affected approximately 80 acres of grassland and associated biodiversity. Satellite imagery – Sentinel 2



KWS officers battle fire at a section of Nairobi National park on February 28, 2025/KWS



### iii. Marine and coastal areas

Western Indian Ocean (WIO) Sea Surface Temperatures (SSTs) in general are rising above historical averages, intensifying marine heatwaves and affecting the health of coral reefs and fish stocks.

In 2025, Sea temperatures had risen as high as 33.1°C (figure sst), and heat stress reached dangerous levels between 9 and 12-Degree Heating Weeks (DHWs), a measure of prolonged heat stress that can kill corals. A joint survey team by the experts from Wildlife Research and Training Institute (WRTI),

Kenya Marine and Fisheries Research Institute (KMFRI), and KWS conducted field assessments after alerts about unusually high sea surface temperatures. The surveys showed widespread coral bleaching in all four Marine Protected Areas (MPA) studied [1].

Sea level rise combined with high waves, tides, storms and human activity accelerated the coastal erosion, saltwater intrusion and vulnerability of coastal ecosystems and communities.

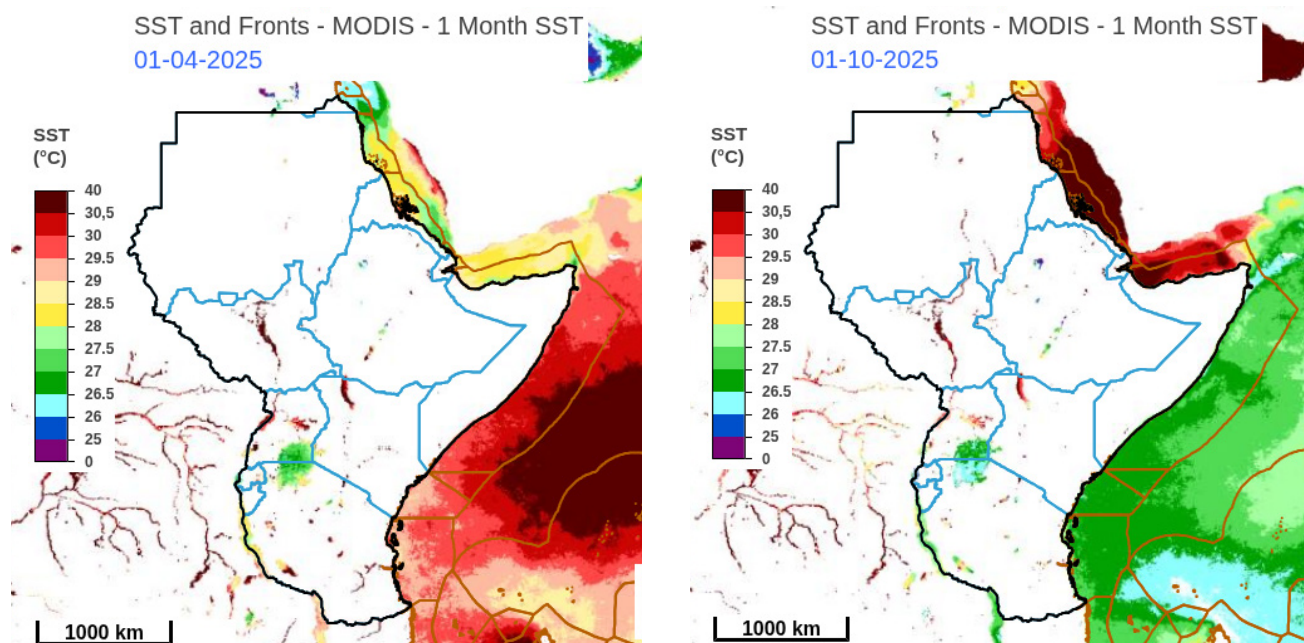
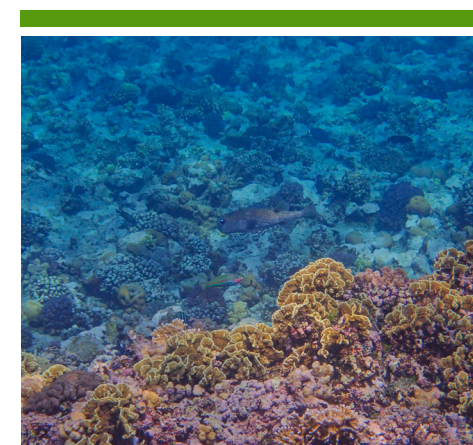
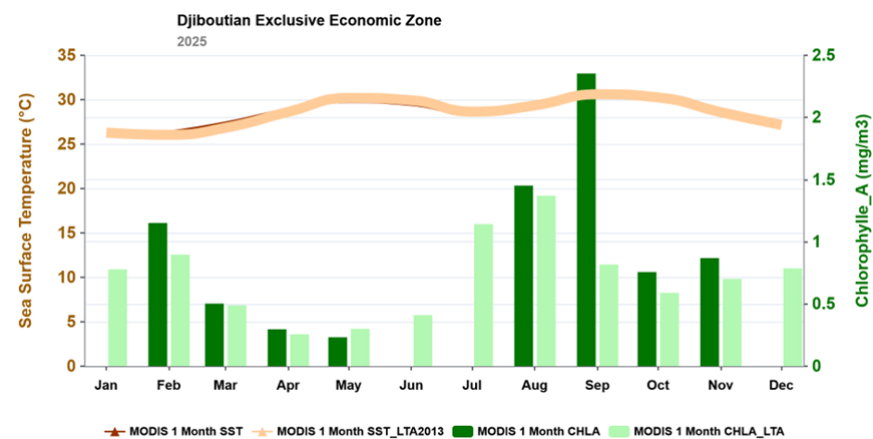


Figure 29: Sea surface temperature for the WIO for April and October 2025



Western Indian Ocean (WIO) Sea Surface Temperatures (SSTs) in general are rising above historical averages, intensifying marine heatwaves and affecting the health of coral reefs and fish stocks. In 2025, Sea temperatures had risen as high as 33.1°C (figure sst), and heat stress reached dangerous levels between 9 and 12-Degree Heating Weeks (DHWs), a measure of prolonged heat stress that can kill corals.





[18.1]Figure 30: Time series of SST and Chlorophyll-A for the Dibouti EEZ

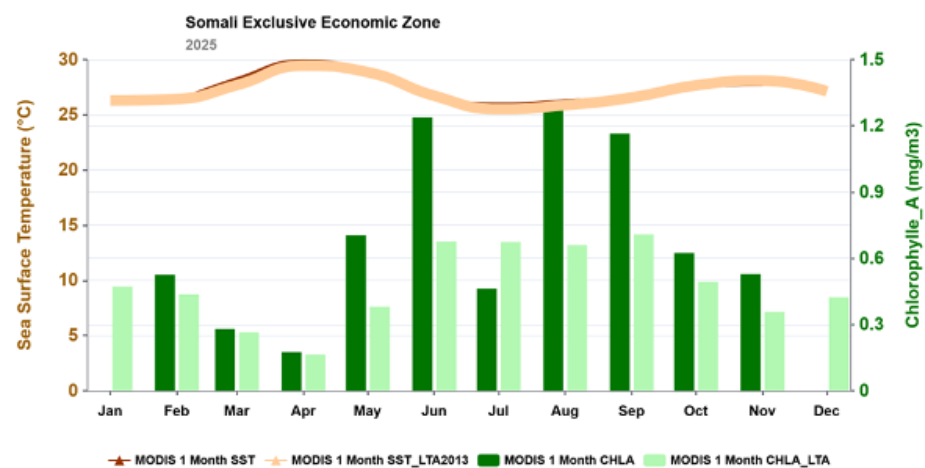


Figure 31: Time series of SST and Chlorophyll-A for the Somalia EEZ



## 06.

## Livestock and Rangelands

The climatic situation for the year 2025 largely had favourable and mixed outcomes for the livestock sector. A full year analysis shows that the March–May long rains (MAM), the June–September season (JJAS), and the October–December short rains (OND) reveal a fair to good year for livestock and rangeland despite isolated countries and sub-regions navigating climate extremes such as floods, drought, heat stress and conflicts. The observed rainfall variability, recurrent dry spells, and above-average temperatures during the 2025 seasonal cycles carried significant implications for the livestock sector and pastoral systems across the Greater Horn of Africa. For example, across all three seasons, the early and well-distributed rainfall and above-normal and normal rainfall in most countries have led to improved livestock body conditions and increased productivity in meat, milk, hides, and skins, as well as enhanced food security and household incomes through stable or improved livestock prices.

Conversely, drier-than-normal conditions in parts of Somalia, eastern and northern Kenya, southern Ethiopia, and Djibouti during MAM and OND seasons likely reduced pasture regeneration and water availability, exacerbating feed shortages and increased livestock body stress. Prolonged dry spells and delayed onset of rains in some parts disrupted traditional grazing calendars, heightened competition over shrinking rangeland resources, and increased the risk of livestock mortality, particularly among small ruminants and young stock. Elevated temperatures further intensified heat stress, lowered productivity (milk yield, weight gain, fertility rates), and elevated susceptibility to pests and animal diseases. For pastoral and agro-pastoral communities whose livelihoods depend heavily on seasonal rainfall patterns, these forecasted anomalies triggered increased mobility in search of or access to pasture and water, potentially amplifying cross-border movements and localised resource-based tensions. In areas that received above-normal rainfall, localised flooding and waterlogging also affected animal health through increased incidence of waterborne and vector-related diseases.



## Livestock sector



Overall, 2025 was a fair to good year for the livestock and rangeland sector across the Greater Horn of Africa, with largely favourable but mixed outcomes. Analysis across all three seasons—the MAM long rains, the JJAS season, and the OND short rains—showed generally positive results despite isolated countries and sub-regions facing climate extremes such as floods, drought, heat stress, and conflict. Early, well-distributed, and normal-to-above-normal rainfall across most countries improved livestock body conditions and boosted productivity in meat, milk, hides, and skins. This in turn strengthened food security and household incomes through stable or improved livestock prices.

However, drier-than-normal conditions in parts of Somalia, eastern and northern Kenya, southern Ethiopia, and Djibouti during the MAM and OND seasons reduced pasture and water availability, worsening feed shortages and livestock stress. Prolonged dry spells and delayed rains disrupted grazing calendars, intensified competition over shrinking resources, and raised the risk of livestock mortality, especially among small ruminants and young stock.

Elevated temperatures added heat stress, lowering productivity and increasing vulnerability to pests and disease, while pushing pastoral communities toward greater mobility that risked amplifying cross-border movements and resource-based tensions. In wetter areas, localised flooding and waterlogging also harmed animal health by spreading waterborne and vector-related diseases.

# 07.

## Climate, Peace and Security

Climate variability and extremes across the Greater Horn of Africa in 2025 continued to intersect with fragility, displacement, and resource competition in ways that at times directly affected peace and security. Evidence gathered through four consecutive sessions of the Greater Horn of Africa Climate Outlook Forum (GHACOF 69 through 72), held between January 2025 and January 2026 and covering all major rainfall seasons, consistently documented how drought, flooding, and erratic rainfall amplify existing vulnerabilities in conflict-prone areas, while also demonstrating that timely climate information can serve as a tool for conflict prevention.

### i. Resource-based conflict and cross-border pastoral tension

The most consistently observed climate–security dynamic in 2025 was the link between below-normal rainfall in pastoral areas and heightened resource-based conflict. Reduced pasture and water availability forced herding communities to move livestock across administrative and international boundaries, increasing competition over scarce resources and elevating intercommunal tensions.

This pattern was particularly evident along the Dollow–Beled Hawo–Mandera cross-border corridor between Somalia, Ethiopia, and Kenya. During JJAS 2025, significantly below-average and poorly distributed Gu rainfall led to early water and pasture depletion ahead of the Hagaa dry season, prompting livestock movements from Dollow and Beled Hawo in Somalia into Dollo Ado in Ethiopia and Mandera North in Kenya. These movements increased pressure on already limited grazing areas and heightened tensions among Somali, Degodia, and other local communities.

Similar pressures emerged in the Turkana–Karamoja cluster along the Kenya–Uganda border, where erratic rainfall followed by prolonged dry spells

reduced access to water and pasture. The near-depletion of Kobebe Dam, a critical shared resource for Turkana communities in Kenya and Matheniko pastoralists in Uganda, intensified resource stress before subsequent heavy rains triggered flooding and property damage, illustrating how rapidly climate risks can shift from scarcity-driven conflict to flood-induced displacement. In Turkana Central, prolonged rainfall absence between March and July forced pastoral migration and contributed to localised tensions as herders moved into neighbouring territories.

At the same time, the season also demonstrated the inverse relationship between climate conditions and conflict risk. In areas where rainfall remained adequate, including parts of the Turkana–Toposa cluster, communities reported reductions in cattle raiding and intercommunal violence. The celebration of an 18-month peace milestone between the Turkana and Toposa communities during this period underscored how favourable climatic conditions can create enabling conditions for peacebuilding.

### ii. The Sudan conflict as a driver of vulnerability to climate risks

The ongoing armed conflict in Sudan functioned throughout 2025 as a significant regional multiplier of climate-related vulnerability. GHACOF forums documented the interaction across multiple dimensions. Agriculturally, operations in Darfur and Kordofan were constrained by a combination of armed conflict, erratic rainfall, fertiliser shortages, and the loss of farm labour, as youth migration and women's reluctance to work in fields due to safety concerns reduced the available workforce. The Gezira scheme's winter season was severely disrupted, and food grain prices continued to rise despite harvest periods, driven by ongoing instability. Five Darfur states were effectively isolated by the conflict, compounding food insecurity for youth, women, and persons with disabilities.

The displacement crisis generated by the Sudan conflict had direct security consequences for neighbouring countries. Sudan recorded the highest number of internally displaced persons in the region during the first months of 2025, approximately one million people, while South Sudan recorded over 100,000.



In South Sudan's Upper Nile and Northern Bahr-el-Ghazal states, a heavy influx of refugees from Sudan brought thousands to millions of cattle and small livestock, intensifying competition for pasture, water, and services in communities already under stress, and in some cases triggering conflict. Peace initiatives between local communities and migrant pastoralists were required, and GHACOF forums called for sustained cross-border coordination to manage these dynamics. The conflict in Sudan also severely limited access to climate information services in affected areas, reducing communities' capacity to use early warning for preparedness and adaptation.

### iii. Displacement, and protection

Flooding presented distinct but equally serious security risks, particularly in wetter parts of the region. During the JJAS 2025 season, more than six million people were affected by a combination of drought and flooding across GHA, with 1,668 deaths reported. Flash floods in Ethiopia and Sudan, and riverine flooding in South Sudan and Uganda, caused significant infrastructure damage, disrupted markets, and displaced populations.

In South Sudan, insecurity was closely tied to flood-induced displacement, particularly when it occurred across state boundaries. Flooding in Unity and Lakes states, as well as in Warrap and Western Bahr-el-Ghazal, displaced herders who moved into farming areas, generating tensions with agricultural communities.

Cattle raid and retaliatory killings (revanche killings) was equally shaped by flooding, both through the displacement of herding communities and through the way floodwaters determined access to key grazing routes and strategic areas, influencing where and when raids took place.

In Somalia, flooding along the Shabelle and Hiraan rivers destroyed crops and damaged infrastructure, disrupting food distribution and access. Across multiple countries, displacements caused by flooding consistently increased gender-based violence (GBV) cases, a pattern documented at GHACOF 69 and reinforced in subsequent forums.



## Flooding



During the JJAS 2025 season, flooding posed serious security risks across the Greater Horn of Africa, contributing alongside drought to over six million people affected and 1,668 deaths. Flash floods (Ethiopia, Sudan) and riverine flooding (South Sudan, Uganda) damaged infrastructure, disrupted markets, and displaced people.

The security impacts were especially pronounced in a few areas. In South Sudan, flooding in states like Unity, Lakes, Warrap, and Western Bahr-el-Ghazal pushed displaced herders into farming areas, sparking tensions with agricultural communities.

Floodwaters also shaped cattle-related violence—raiding and retaliatory killings—by displacing herders and controlling access to grazing routes and strategic areas, thereby influencing where and when raids occurred. In Somalia, flooding along the Shabelle and Hiraan rivers destroyed crops and damaged infrastructure, disrupting food access.

A cross-cutting pattern was that flood-induced displacement consistently drove up gender-based violence cases across multiple countries, as documented at GHACOF 69 and later forums.



Part III

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## Climate Services & Resilience

# 01.

## Early Warning Systems

The relevant early warning systems at ICPAC are structured under the East Africa multi-hazard early warning and early action framework, which aims to improve the region’s preparedness and response to various natural hazards. These systems (Table 5) utilise advanced technology and data analysis to

monitor weather patterns, crop and rangeland conditions, drought events, and other potential threats in near real time. These systems help lessen the effects/impacts of disasters by giving decision-makers timely and accurate information.

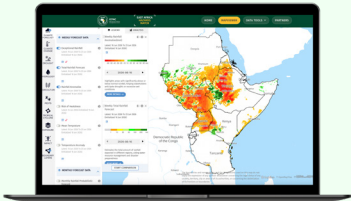
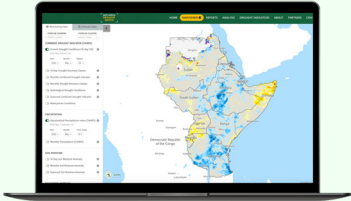
| No | Early Warning Systems                                                                                                | Hazard Focus       | Time Scale                                                                                               |
|----|----------------------------------------------------------------------------------------------------------------------|--------------------|----------------------------------------------------------------------------------------------------------|
| 1  | <br>East Africa Hazards Watch       | Multi-hazard       | Weekly-Seasonal<br><a href="https://eahazardswatch.icpac.net/">[https://eahazardswatch.icpac.net/]</a>   |
| 2  | <br>East Africa Drought Watch      | Drought            | Dekadal-Seasonal<br><a href="https://droughtwatch.icpac.net/">[https://droughtwatch.icpac.net/]</a>      |
| 3  | <br>East Africa Agriculture Watch | Crop and Rangeland | Dekadal<br><a href="https://agriculturehotspots.icpac.net/">[https://agriculturehotspots.icpac.net/]</a> |

Table 5: ICPAC early warning systems that are currently operational, covering different hazards at different timescales.



The ICPAC Disaster Operations Centre (DOC) serves the broader Greater Horn of Africa region. Its core purpose is anticipatory action. Forecasts made by the situation room are meant to trigger anticipatory actions by authorities to prevent or mitigate disaster impacts. It operates within the Africa Multi-Hazard Early Warning and Action System (AMHEWAS), accessing, exchanging and analyzing disaster-risk data and information under defined Standard Operating Procedures. When a forecast crosses a pre-agreed threshold, it activates pre-positioned funding and pre-planned actions. This links government agencies, meteorological services, humanitarian organizations and other actors so they can carry out cost-effective and timely early actions to reduce impacts.



# 02.

## From Forecast to Action: ICPAC Climate Information Dissemination 2025

In 2025, climate information services became increasingly critical across the Greater Horn of Africa as recurrent droughts, floods, heat stress, and climate variability intensified regional risks. IGAD Climate Prediction and Applications Centre strengthened the production, packaging, and dissemination of climate information to support early warning, disaster risk reduction, food security planning, and climate adaptation. Dissemination evolved beyond the publication of forecasts to more targeted, impact-oriented communication and co-production approaches in response to growing demand for anticipatory action.

The Greater Horn of Africa Climate Outlook Forums remained central to regional forecasting, integrating impact-based forecasting, sectoral engagement, media participation, and hybrid delivery formats. Their outputs informed preparedness and contingency planning by governments and humanitarian partners ahead of anticipated climate extremes.

ICPAC also expanded the provision of multi-timescale climate products, including sub-seasonal alerts, monthly bulletins, seasonal outlooks, and long-term projections, while strengthening digital dissemination through dashboards, maprooms, GIS platforms, downloadable bulletins, and social media channels.

Climate information dissemination continued to follow a cascade model from ICPAC to National Meteorological and Hydrological Services, sector ministries, media, and community actors, supported by capacity-building on forecast downscaling and risk communication. Media engagement and sector-specific co-production further improved the accessibility and relevance of climate advisories for agriculture, health, and disaster management stakeholders. Despite these advances, challenges persisted in communicating probabilistic forecasts to non-technical audiences, reaching underserved rural communities, and addressing uneven institutional capacity and coordination gaps. Going forward, priorities include strengthening community-level communication channels, enhancing NMHS technical capacity, improving regional data integration, and institutionalising anticipatory action mechanisms to ensure climate information increasingly translates into early and effective action.



# 03.

## Regional Climate Outlook Forums, 2025

The Greater Horn of Africa Climate Outlook Forums (GHACOFs) remained the region's principal platform for the co-production and dissemination of seasonal climate forecasts in 2025, with GHACOFs 69–71 convened to support forecasting for the March–May, June–September, and October–December rainfall seasons.

Organised by IGAD Climate Prediction and Applications Centre under the Intergovernmental Authority on Development, the forums brought together National Meteorological and Hydrological Services, regional and global climate centres, policymakers, humanitarian actors, development partners, media, and sectoral experts to develop consensus seasonal outlooks and translate them into sector-specific advisories.

Throughout the year, the GHACOF process strengthened regional collaboration, advanced implementation of the Regional Framework for Climate Services, and reinforced commitments to closing the early warning gap through more effective translation of forecasts into anticipatory action. The forums increasingly integrated impact-based forecasting, hybrid participation, sectoral working groups, and media engagement to enhance the relevance and accessibility of climate information.

Seasonal outlooks issued through the GHACOFs informed preparedness and contingency planning across agriculture, water, health, livestock, disaster risk management, and humanitarian sectors, while also supporting governments and partners in responding to projected drought, flood, heat, and rainfall variability risks. Amid continued global warming, evolving ENSO and Indian Ocean conditions, and growing sub-seasonal climate variability, the GHACOFs underscored the importance of sustained investment in climate services, stronger institutional coordination, and enhanced climate-risk-informed planning across the Greater Horn of Africa.





# 04.

## Collaboration with Member States Policies and Frameworks

### Development and Launch of National Anticipatory Action Roadmaps

In 2025, IGAD Climate Prediction and Applications Centre advanced anticipatory action and climate services governance across the Greater Horn of Africa through support to national roadmaps and regional institutional frameworks.

South Sudan launched its Anticipatory Action Roadmap (2025–2030) with ICPAC's technical support, while Somalia made significant progress in operationalising its national roadmap through its first National Dialogue Platform on Anticipatory Action, which strengthened stakeholder coordination, validated technical advances in forecasting and anticipatory interventions, and highlighted priorities for institutionalising anticipatory action from national to community level. These processes reinforced the importance of stronger government leadership, local coordination mechanisms, and inclusive approaches in scaling anticipatory action. At the regional level, ICPAC further consolidated its leadership through the Regional Framework for Climate Services in the Greater Horn of Africa (RFCS-GHA), the first framework of its kind developed by a Regional Climate Centre under updated World Meteorological Organization guidelines. The framework strengthens coordination among regional institutions, National Meteorological and Hydrological Services, sector ministries, and development partners; supports Member States in establishing National Frameworks for Climate Services; and enhances the delivery of impact-based climate services, early warning systems, and anticipatory action mechanisms.

Together, these developments mark a significant step toward more coordinated, institutionalised, and climate-informed resilience systems across the region.





## Conclusion

The climate conditions observed across Eastern Africa in 2025 reaffirm the region's increasing exposure to climate variability and extremes, with significant implications for lives, livelihoods, ecosystems, and economic development. The year demonstrated how recurrent floods, droughts, heat stress, and shifting rainfall patterns continue to interact with existing vulnerabilities, including conflict, displacement, food insecurity, and weak infrastructure, to compound risk across sectors.

At the same time, 2025 highlighted the growing value of strengthened climate services, early warning systems, and anticipatory action in reducing the impacts of climate-related hazards. Improved forecasting, regional coordination, and proactive preparedness measures supported more timely and targeted responses across the region, demonstrating the benefits of investing in climate-informed decision-making.

As climate risks intensify, the findings of this report underscore the urgent need for sustained investment in climate services, stronger institutional coordination, and greater integration of climate risk into policy, planning, and development processes. Building resilience in Eastern Africa requires moving beyond reactive response towards more anticipatory, inclusive, and risk-informed systems that enable governments, communities, and partners to act timely and prepare better for future climate shocks.

# Annexe

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