



Ongoing extreme temperatures in the IGAD Region

Heat wave update
March 2025

Overview

During the 69th Greater Horn of Africa Climate Outlook Forum (GHACOF 69), ICPAC released the March-May (MAM) 2025 seasonal forecast, which projected a higher likelihood of warmer-than-normal conditions across most parts of the IGAD region. During the release of the seasonal forecast, it was emphasized that the region should follow up with updated forecasts, especially on the sub-seasonal timescale where most climate hazards manifest.

Weekly forecasts generated throughout February indicated **persistence of warmer than usual temperature anomalies** across most parts of the Greater Horn of Africa (GHA), putting the region at a likelihood of extreme temperature hazards.

Further, analysis of the observed temperatures in February indicated that most areas in South Sudan, Uganda, northern and western Kenya experienced persistence of extreme temperatures (Figure 1 left). The analysis of the average daily maximum temperatures from February 1 to 28 indicates that much of South Sudan, parts of southeastern Sudan, northern Kenya, and southern Somalia experienced temperatures exceeding 38°C (Figure 1 right).



With daily maximum temperatures hitting 40 degrees Celsius in parts of South Sudan and Kenya. There is a high chance of extreme temperatures negatively affecting humans, livestock and socio-economic activities.



A heatwave is generally understood as a hot period of at least three consecutive days when temperatures exceed the normal range, usually reaching the highest 10 percent on record. This prolonged heatwave is an emerging climate hazard that all stakeholders should take note of, to protect the vulnerable, especially the elderly, infants and children, those with medical ailments, expectant mothers and outdoor workers.

38°C

February 1 to 28 indicates that much of South Sudan, parts of southeastern Sudan, northern Kenya, and southern Somalia experienced temperatures exceeding 38°C.

120 years

The IGAD region has experienced a consistent warming trend in mean annual temperatures over the past 120 years, with a significant increase observed since the early 1980s.

0.7°C

Historical temperature analysis shows a steady rise, with an estimated warming rate of approximately 0.7°C per decade.

Early Warnings

Early warning must be integrated across all levels, with key sectors like health, education, and livestock taking proactive action.

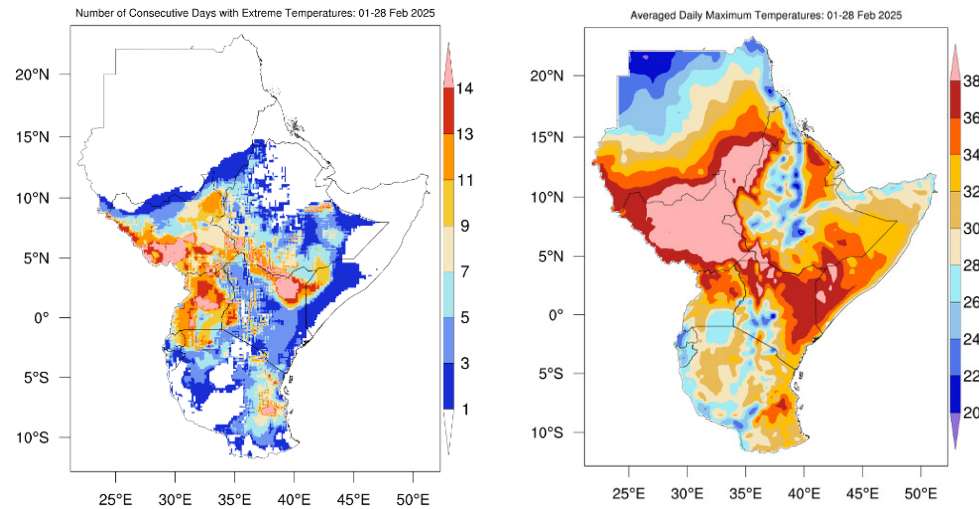


Figure 1. Number of consecutive days with extreme daily maximum temperatures (left) and average daily maximum temperatures (right) from February 1 to 28, derived from ERA5 reanalysis data.

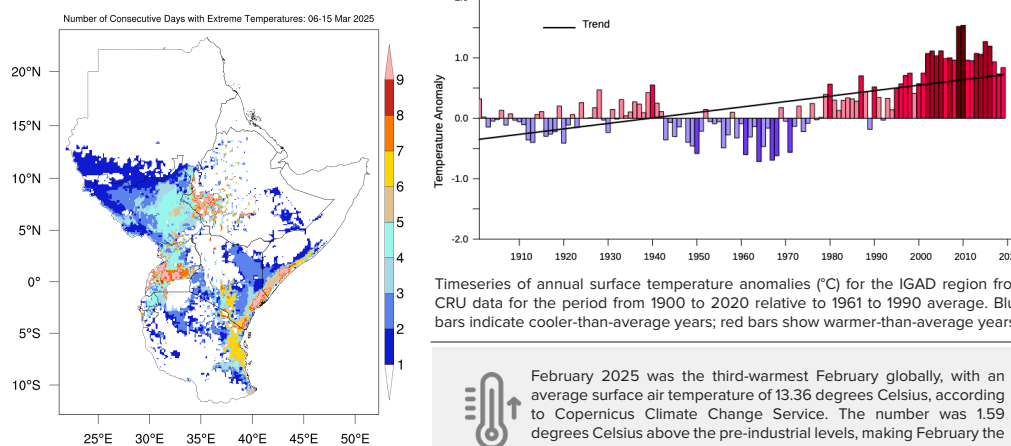


Figure 2. Number of consecutive days when temperatures are forecasted to reach heatwave threshold between the 6th and 15th March 2025.



February 2025 was the third-warmest February globally, with an average surface air temperature of 13.36 degrees Celsius, according to Copernicus Climate Change Service. The number was 1.59 degrees Celsius above the pre-industrial levels, making February the 19th month out of the past 20 months in which the global average surface air temperature exceeded 1.5 degrees Celsius above the pre-industrial level, a critical threshold set by the Paris Agreement.

Possible impacts



Increased heat stress to outdoor workers, including those preparing farms for the next cropping season, negatively impacting productivity and health.



Increased likelihood of wildfires as high temperatures and dry conditions sustain conducive environmental conditions for wildfires.



Elevated levels of heat stress are likely to cause dehydration, exhaustion, fainting, and in extreme cases, heat stroke in humans.



Worsening of respiratory diseases such as Asthma.



Reduced livestock productivity especially in terms of milk.



Reduced grazing time for animals due to excess thermal heat comfort.

Advisories

- Pause/minimise intensive activities, especially for outdoor workers, including sportsmen, women, and farmers, are advised to avoid exposure to peak sunshine hours, and focus activities to early morning or late evening.
- The vulnerable groups, including the elderly, infants and expectant mothers, should take extra precautions in terms of sufficient cooling, hydration and reduced physical activity.
- Hydrate frequently and seek medical attention in case dehydration symptoms worsen.
- Closely monitor livestock behavior, provide sufficient water to avoid stress.
- Withdraw the young livestock from grazing fields and provide enough shading and water.

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