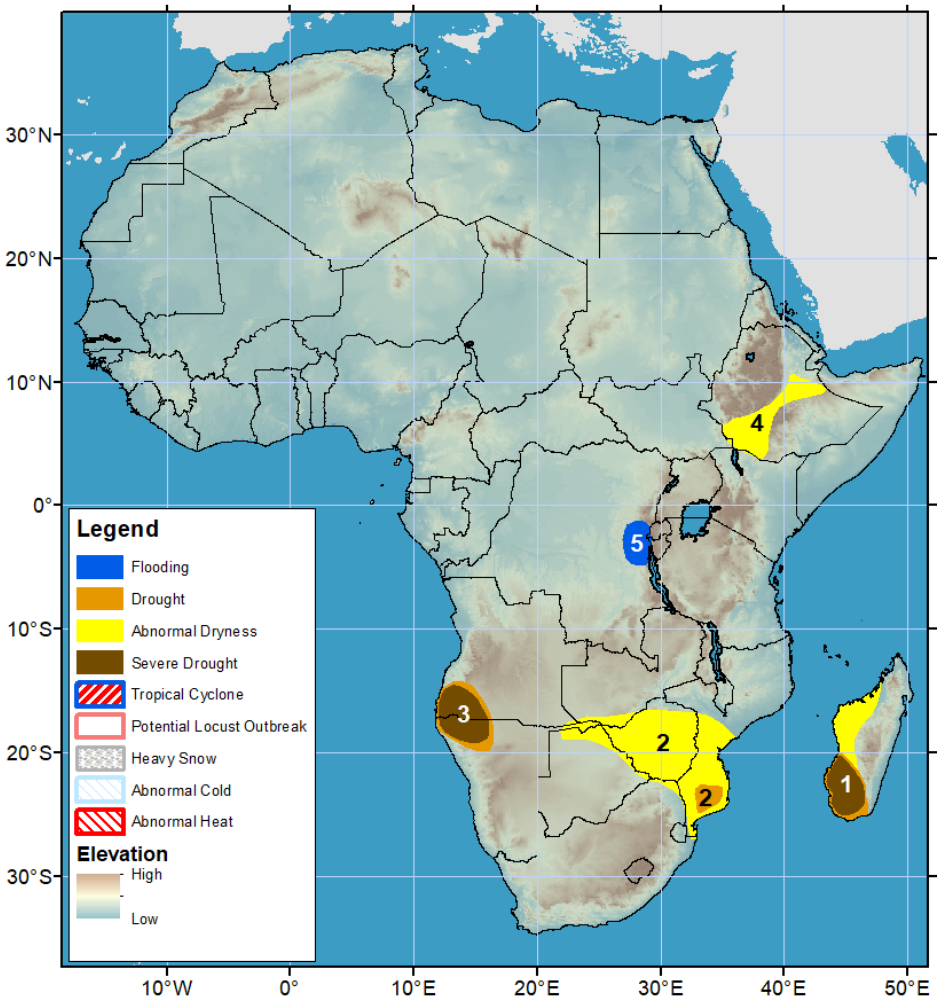
Climate Prediction Center's Africa Hazards Outlook
24 – 30 March 2022

- **Dryness strengthens in the Horn of Africa despite recent enhanced rains over parts of Ethiopia.**
- **Dryness and droughts impact many areas in southern Africa due to an erratic rainfall distribution.**



1) While some areas in Madagascar received increased rain over the past recent weeks, the southwest continued to register long-term large moisture deficits, which have already negatively impacted vegetation conditions. The continued poor conditions have led to severe drought. Forecasts indicated reduced rain over the south during the outlook period.

2) Below-average rainfall since January has led to large seasonal moisture deficits, which have already negatively impacted vegetation conditions and resulted in drought over portions of southern Mozambique. Insufficient rainfall since February has also spread and resulted in abnormal dryness across Zimbabwe and parts of Zambia, Botswana, and Namibia.

3) Below-average rainfall since December of the past year has resulted in severe drought over southwestern Angola and northwestern Namibia. Despite this past month's increased rain, long-term rainfall deficits and deteriorated vegetation conditions persisted.

4) Below-average rainfall over the past five weeks has resulted in moderate thirty-day rainfall deficits over southwestern and eastern Ethiopia. Rainfall forecasts for the upcoming weeks indicated a continuation for drier conditions, potentially strengthening dryness over the region.

5) Reports have indicated that this past week's heavy rain triggered flooding, leaving fatalities over the South Kivu Province in eastern DRC. Abundant rains are forecast to continue during the outlook period, which maintain heightened risks for flooding.

Insufficient rain spreads over the Horn of Africa.

Since the beginning of the *Belg*, March – May, rainfall season, poor rains have been received over the Horn of Africa. This past thirty days, the accumulated rainfall remained below-average, with rainfall deficits between 25 – 50 mm over southwestern and eastern Ethiopia, western and southern Kenya, Uganda, southern South Sudan, and northern Tanzania (**Figure 1**). Over Ethiopia, negative anomalies spread northeastward further despite this past week's scattered moderate rains over the north-central. The delayed onset to the season and uneven rainfall distribution was partially attributable to negative Indian Ocean Dipole (IOD) index over the previous months.

An analysis of the most recent Vegetation Health Index (VHI) has shown that poor and degraded biomass conditions dominated over Ethiopia, indicating a poor start in ground conditions to the ongoing growing cycle.

During the outlook period, model rainfall forecasts suggested that light to locally moderate rains are expected over southern Ethiopia, southern Kenya, and southern Uganda. Little (< 10 mm) rains are forecast over southern South Sudan, southeast Ethiopia, southern Somalia, and eastern Kenya. While the forecast return of seasonal rains may help partially reduce moisture deficits over some local areas in the Horn of Africa, limited rains would likely maintain drier-than-average conditions over many areas in the region.

30-Day Satellite Estimated Total Rainfall Anomaly (mm)
Valid: 21 February – 22 March 2022

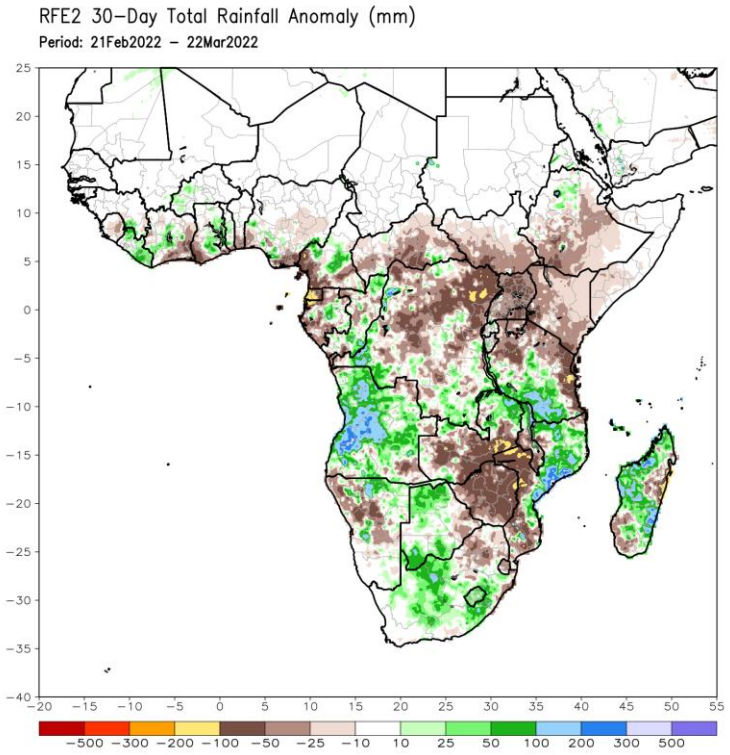


Figure 1: NOAA/CPC

Increased rain was observed in eastern southern Africa.

During mid-March, a slight increase in rainfall was registered over the dry portions in eastern southern Africa. Light to locally moderate rains fell over Zimbabwe, southern Zambia, southern Mozambique, and northern South Africa (**Figure 2**). Meanwhile, torrential (> 100 mm) rains were received over central and along coastal central Mozambique, western and northern Madagascar. In contrast, suppressed rain was observed over the western parts of the sub-region, including southwestern Angola, western Namibia, and parts of South Africa. This past week's slight increase in rainfall was insufficient to fully eliminate thirty-day rainfall deficits over these dry portions of southern Africa. Additionally, long-term seasonal rainfall deficits persisted over southwestern Angola, northwestern Namibia, southern Mozambique, and southwestern Madagascar.

According to the latest VHI, deteriorated vegetation continued to be observed over southwest Angola, northwest Namibia, southern Mozambique, and southwest Madagascar. Conversely, favorable conditions prevailed over a wide area of central southern Africa, including much of South Africa, Zimbabwe, Botswana, northeast Namibia, and southern Zambia despite poor rains during February.

For next week, model rainfall forecasts indicated that moderate to heavy rains are expected over eastern Angola, Zambia, Malawi, northern and southernmost Mozambique, Zimbabwe, Madagascar, northeastern South Africa, and eSwatini. While this wet weather pattern could exacerbate many already-flooded areas, the forecast limited rains may maintain dryness over the dry portions in the sub-region.

7-Day Satellite Estimated Total Rainfall (mm)
Valid: 16 March – 22 March 2022

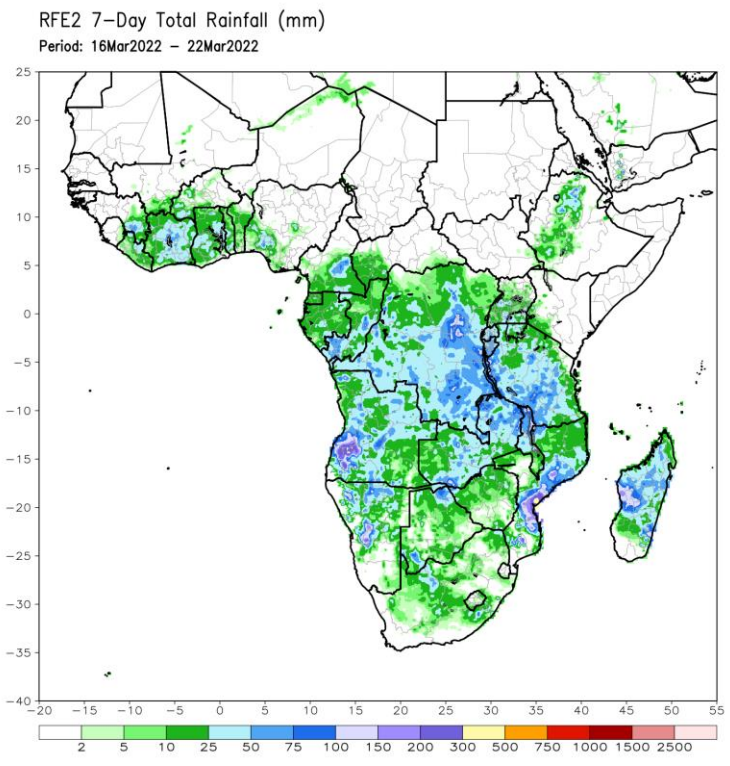


Figure 2: NOAA/CPC

Note: The hazards outlook map on page 1 is based on current weather/climate information and short and medium range weather forecasts (up to 1 week). It assesses their potential impact on crop and pasture conditions. Shaded polygons are added in areas where anomalous conditions have been observed. The boundaries of these polygons are only approximate at this continental scale. This product does not reflect long range seasonal climate forecasts or indicate current or projected food security conditions.

Questions or comments about this product may be directed to Wassila.Thiaw@noaa.gov or 1-301-683-3424.

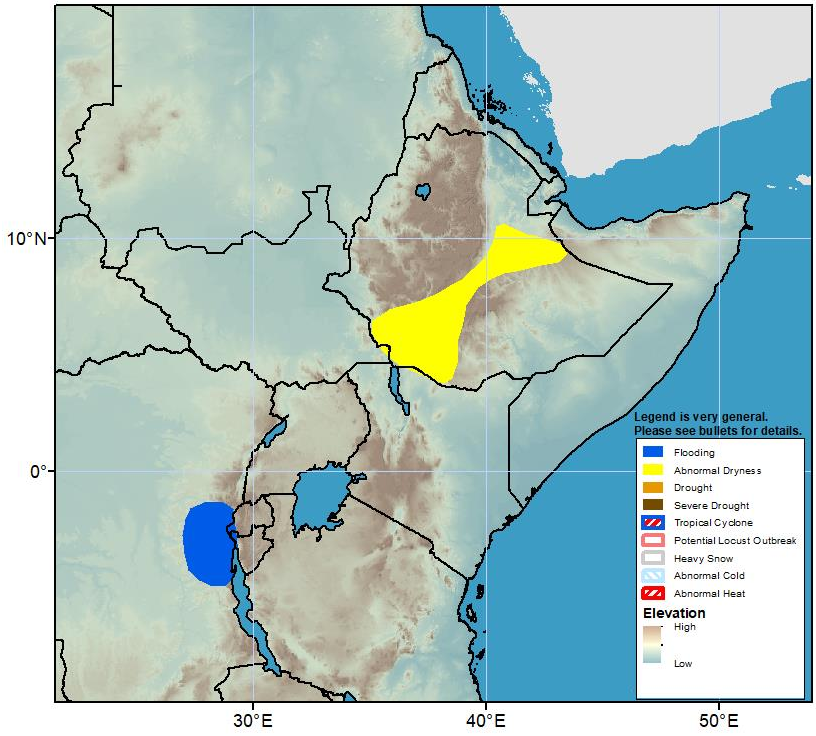
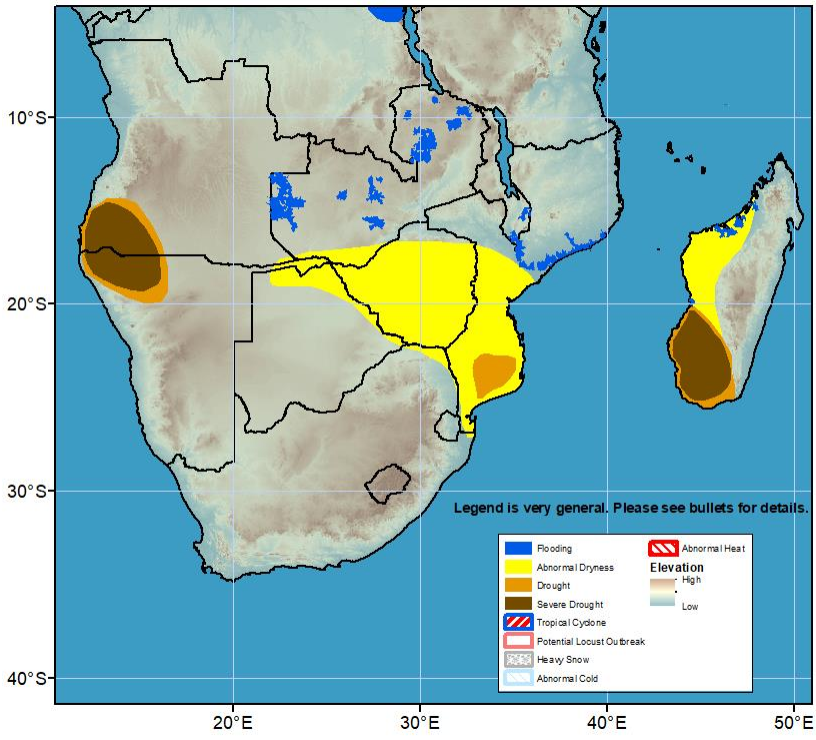


Figure 3: Hazards, focused over eastern Africa



Heavy and consistent rains have triggered flooding over parts of western central and northern Zambia, southern Malawi, central and coastal northern Mozambique, and coastal western Madagascar.

Figure 4: Hazards, focused over southern Africa