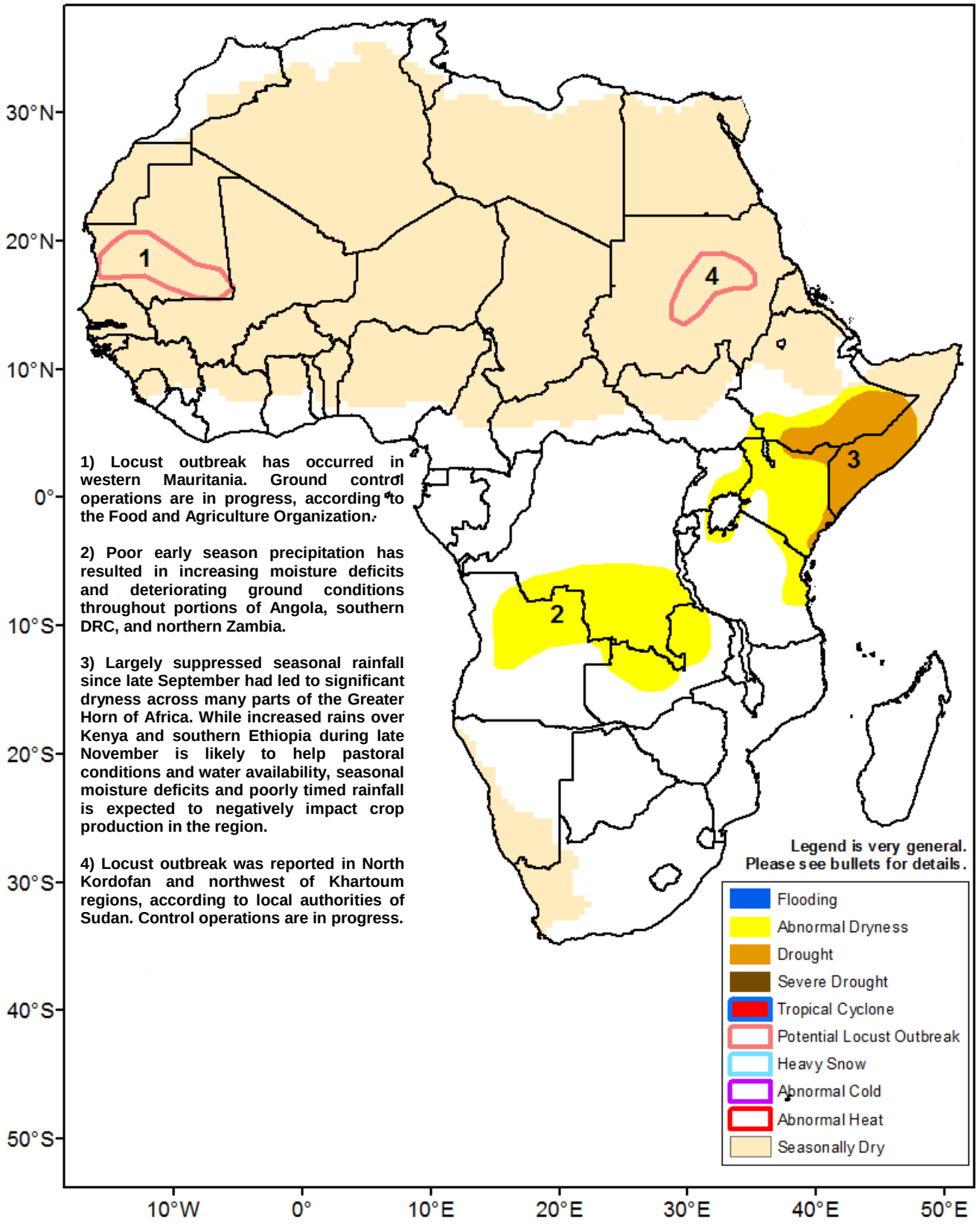
Climate Prediction Center's Africa Hazards Outlook
December 1 – December 7, 2016

- **Increased rains in southern Ethiopia help lessen moisture deficits; dryness strengthens in eastern Tanzania.**
- **Heavy rains in Zambia this past week helped Improve moisture deficits there.**



1) Locust outbreak has occurred in western Mauritania. Ground control operations are in progress, according to the Food and Agriculture Organization.

2) Poor early season precipitation has resulted in increasing moisture deficits and deteriorating ground conditions throughout portions of Angola, southern DRC, and northern Zambia.

3) Largely suppressed seasonal rainfall since late September had led to significant dryness across many parts of the Greater Horn of Africa. While increased rains over Kenya and southern Ethiopia during late November is likely to help pastoral conditions and water availability, seasonal moisture deficits and poorly timed rainfall is expected to negatively impact crop production in the region.

4) Locust outbreak was reported in North Kordofan and northwest of Khartoum regions, according to local authorities of Sudan. Control operations are in progress.

Insufficient and uneven rainfall exacerbates ground conditions in East Africa.

During the last week, a significant increase in seasonal precipitation was received across parts of southern Ethiopia, with weekly amounts locally exceeding 50mm in the Oromia and Somali provinces. To the south, moderate, bur poorly distributed precipitation was received in Kenya. Some rains stretched eastward into Somalia, but remained only in the southern portion of the country (**Figure 1**). Extremely sparse rains persisted over bimodal areas of Tanzania. Low to locally moderate totals were observed in the Lake Victoria region of Uganda and northern Tanzania.

After the first six dekads of the Oct-Dec season, anomalous dryness throughout the Greater Horn of Africa has been significant. With seasonal rainfall climatologically expected to rapidly diminish during the next weeks, particularly over Ethiopia and Somalia, it has reached a point where recovery is vary doubtful. While rainfall did increase for certain areas during the last 2 weeks, many local areas in eastern Kenya, Somalia, and eastern Ethiopia have received less than a quarter of their normal rainfall accumulation since the beginning of October (**Figure 2**). This anomalous dryness is also becoming increasingly evident further south across southern Kenya and northeastern Tanzania, where poorly distributed rains in November have led to a deterioration of ground conditions. It is anticipated that any increase in shower activity during the remainder of November and early December will help improve water availability and pastoral conditions, however, adverse agriculture impacts appear imminent.

During the upcoming first week of December, precipitation models suggest that moderate rainfall will persist over central Kenya and southern Ethiopia. However, light rainfall totals are forecast in southern Somalia and eastern Tanzania.

Increased seasonal rainfall was observed in parts of Zambia and Zimbabwe.

Last week, coverage of seasonal rainfall continued to increase throughout much of southern Africa, with heavy rains received across southern Botswana and parts of Mozambique. Rainfall increased greatly in coverage and magnitude throughout Zambia as well. Analysis of satellite estimated precipitation anomalies since late October (**Figure 3**) depicts fairly normal starts to the monsoon for many regions in southern Africa. Most notable are anomalously wet conditions across some parts of southern Angola, northern Namibia, Botswana, eastern South Africa and eastern Zimababe. Indications of strenghtening moisture deficits across southern Tanzania and the Zambezi River basin of Mozambique suggest a delayed start of the monsoon in these areas.

For next week, models suggest a potential for enhanced rain accumulations (>75mm) in northern/western Angola, and southern DRC, with suppressed rainfall in the southern part of the region. Heavy rain (>100mm) is likely in Madagascar.

Satellite-Estimated Rainfall (mm)
Valid: November 23 – November 29, 2016

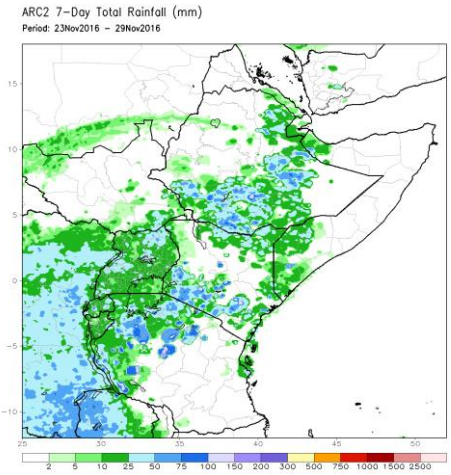


Figure 1: NOAA/CPC

Satellite Estimated Percent of Normal Rainfall (%)
Valid: October 1 – November 29, 2016

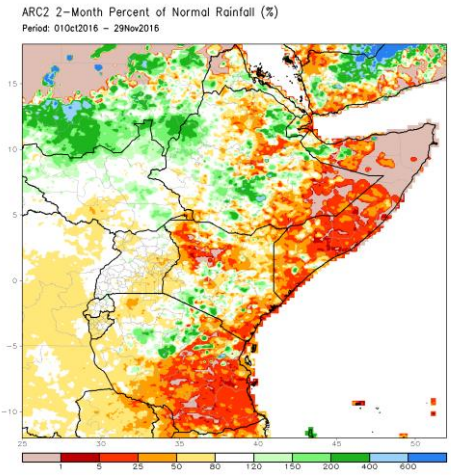


Figure 2: NOAA/CPC

Satellite Estimated 30-day Rainfall Anomalies(mm)
Valid: October 31 – November 29, 2016

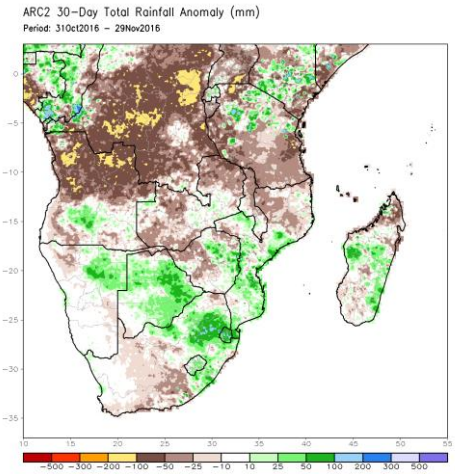


Figure 3: NOAA/CPC

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.

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