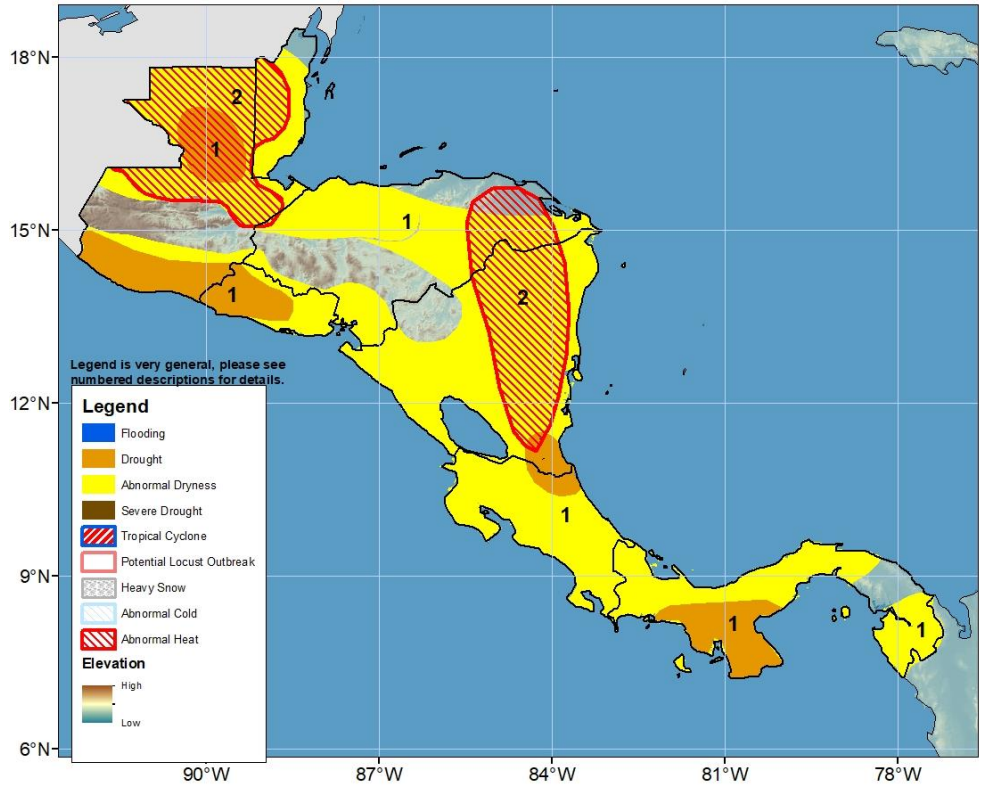
Climate Prediction Center's Central America Hazards Outlook
For USAID / FEWS-NET
22 June – 28 June 2023

Dry and hot conditions persisted throughout Central America during June.



1) **Inconsistent and insufficient rainfall since the beginning of the "Primera" season starting in April has led to large reductions in total rainfall and expanding abnormal dryness across the region. As the period of below-average rainfall extends to 8 weeks and deficits deepen, drought is placed in northern/southern Guatemala, El Salvador, southern Nicaragua, and south-central Panama.**
2) **Weekly mean maximum temperatures are forecast to be above average by 2-4°C across northern Guatemala, Belize, eastern Honduras, and eastern Nicaragua with maximum temperatures exceeding 30°C and reaching as high as 40°C in northern Guatemala.**

Note: The Hazards outlook map is based on current weather/climate information, short and medium-range weather forecasts (up to 1 week), sub-seasonal forecasts up to 4 weeks, and assesses the potential impact of extreme events on crop and pasture conditions. Shaded polygons are added in areas where anomalous conditions have been observed and predicted to continue during the outlook period. The boundaries of these polygons are only approximate at the spatial scale of the map. This product takes into account long-range seasonal climate forecasts but does not reflect current or projected food security conditions. FEWS NET is a USAID-funded activity whose purpose is to provide objective information about food security conditions. Its views are not necessarily reflective of those of USAID or the U.S. Government. The FEWS NET weather hazards outlook process and products include participation by FEWS NET field and home offices, NOAA-CPC, USGS, USDA, NASA, and a number of other national and regional organizations in the countries concerned.

Questions or comments about the hazards outlooks may be directed to Dr. Wassila Thiaw, Head, International Desks/NOAA, wassila.thiaw@noaa.gov. Questions about the USAID FEWS NET activity may be directed to Dr. James Verdin, Program Manager, FEWS NET/USAID, jverdin@usaid.gov

Parts of Nicaragua, eastern Guatemala, eastern/western Honduras, and southern Belize received heavy and beneficial rains this past week.

During the last week, heavy rainfall (75-200mm) occurred in portions northern/eastern Nicaragua, western/eastern Honduras, eastern Guatemala, southern Belize, as well as portions of Costa Rica and Panama. Many of these areas of heaviest rain registered surpluses for the week. Other areas, however, mainly received light rainfall which led to substantial 7-day deficits. Areas of northern/western Guatemala, northern Belize, southern Nicaragua, eastern Costa Rica, and Panama all registered negative anomalies greater than 50mm. The 30-day cumulative rainfall analysis shows dry conditions prevailing across the region. Deficits of at least 100mm are present throughout many areas and larger deficits 200-300mm or more are present in northeastern Costa Rica, central Panama, southern Nicaragua, parts of Belize, as well as much of Guatemala. Many of these deficits equate to 50% or even 75% reductions in rainfall, with up to 20 fewer days of rain than normal. 90-day deficits are similarly expansive. As a result, abnormal dryness is steadily expanding through Central America and patches of drought are now present. Vegetation health is relatively poor through northern Honduras, Nicaragua, northern and southeastern (up to Chiquimula) Guatemala, Belize, El Salvador, and parts of central Panama. Maximum temperature anomalies were at least 2 to 4^{o}C above normal through Guatemala, Belize, northern El Salvador, and western Honduras. The high temperatures have quickly evaporated any moisture from the soil making agriculture difficult for local farmers. Some farmers may have elected not to plant yet to this point in the year.

During the outlook period, forecasts suggest moderate to heavy rains will cover much of Central America. Totals of more than 50mm are widely predicted by weather models, with more than 100mm possible in southwestern Guatemala parts of Costa Rica and Panama. This may bring beneficial rains to several parched portions of the region. Even so, northern Guatemala, Belize and eastern Nicaragua are expected to continue to receive below-normal totals leading to 10mm to 60mm rainfall anomalies (Fig 1). Maximum temperatures are forecasted to be 2 to 4^{o}C warmer than average across central/northern Guatemala, Belize, and portions of Honduras and Nicaragua. Maximum temperatures will be >90th percentile for 3 or more days in Guatemala leading to the placement of an Abnormal heat hazard.

Week 1 GEFS Rainfall Total Forecast and GEFS Rainfall Anomaly forecast (mm): 29 June – 5 July, 2023

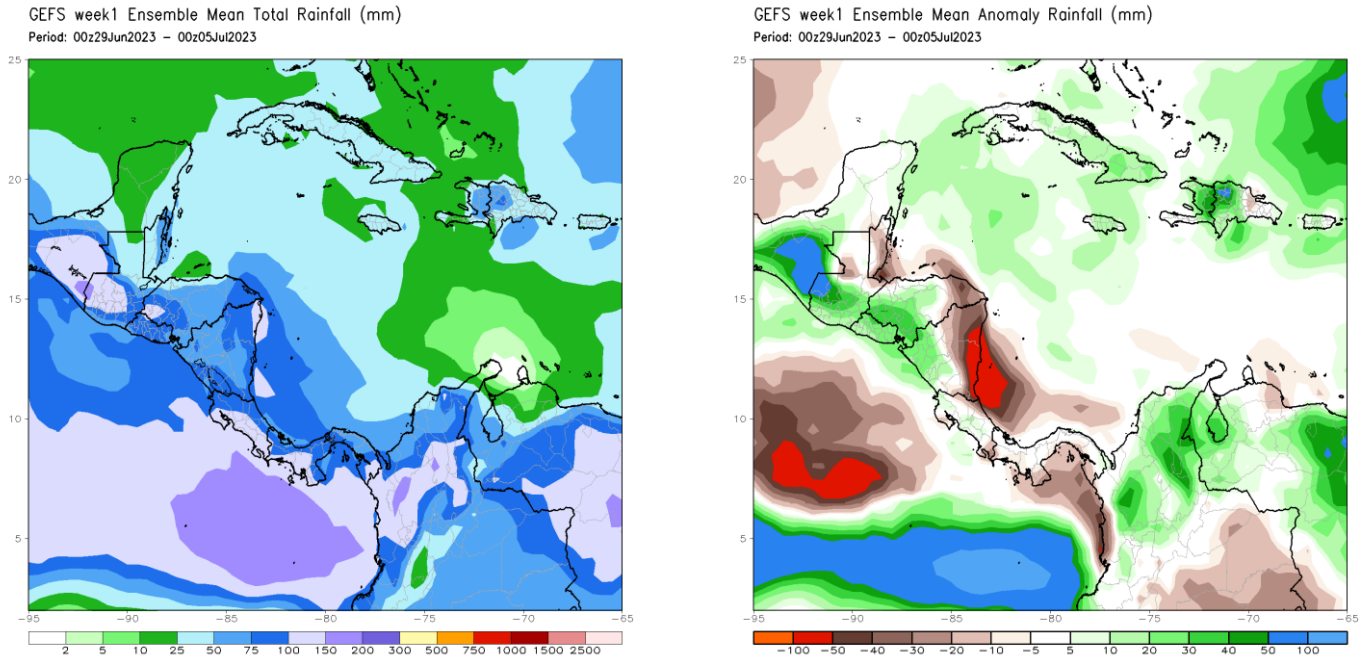


Figure 1: Source NOAA / CPC