Despite average rainfall over East Africa, risk of flooding remains high in Sudan and Ethiopia

Africa Weather Hazards

1. Inconsistent and below-normal rainfall in August and early September has produced moderate to large moisture deficits in parts of southern Burkina Faso and northern Ghana.

2. Below-average rain over the past three months has resulted in poor ground conditions in the Western Cape province of South Africa.

3. Consistent rainfall during the past several weeks has resulted in moisture surpluses across eastern Sudan and western Ethiopia. The forecast rain over western Ethiopia next week could potentially trigger flooding downstream.

4. Recent heavy showers and strong winds have caused flooding and damaged infrastructures over the Durban area of South Africa. The additional rain is forecast.
Africa Overview

Light rainfall recorded in many areas of West Africa

During early October, moderate to heavy rain fell over eastern Liberia, coastal areas of Côte d’Ivoire and Ghana, northern Benin, and southern Nigeria. Meanwhile little to light rain was recorded throughout Guinea-Conakry, Sierra Leone, western Liberia, western Mali, Burkina Faso, western Niger, and northern Nigeria (Figure 1). Since early September, positive rainfall anomalies were observed over Côte d’Ivoire, northwestern Burkina Faso, and central Mali, while negative anomalies spread across southern Senegal, The Gambia, Guinea-Bissau, western Mali, southern Niger, and northern Nigeria. Additionally, moderate to large rainfall deficits were also recorded throughout northern Ghana and the southern parts of Togo, Benin, and Nigeria, due to a poor rainfall distribution in early September.

On a longer time scale, since August, many areas of West Africa received ample rainfall, with surpluses exceeding 50mm. These included Senegal, southern Mauritania, Guinea-Conakry, Sierra Leone, eastern Mali, northern Burkina Faso, Côte d’Ivoire, western and southeastern Niger, northern Benin, southern Nigeria, and southeastern Chad (Figure 2). In contrast, areas such as western Mali, Guinea-Bissau, western Liberia, southern Burkina Faso, northern Ghana, portions of Nigeria, southwestern Niger, and western Chad have recorded below-average rain as the West African season is coming to an end.

Next week, light rain is expected along the Gulf of Guinea. However, moderate to heavy rain is forecast across Guinea-Conakry, Sierra Leone, Liberia, western Côte d’Ivoire, and southeastern Nigeria.

Average rainfall recorded in Eastern Africa

Last week, average rainfall was recorded over the Greater Horn of Africa. Light to locally moderate rain fell over western Ethiopia and eastern Sudan. The largest (>25mm) rainfall totals were recorded throughout southern Sudan and northeastern South Sudan. Since August, positive rainfall anomalies dominated Eastern Africa, with seasonal surpluses exceeding 100mm across eastern Sudan and western Ethiopia. The frequent and above-average rain over the past several weeks has benefited ground conditions over most areas, but also caused flooding.

Next week, moderate to heavy rainfall is forecast over South Sudan, northern Uganda, western Kenya, and southwestern Ethiopia. Light to moderate rain is also expected over central Somalia.
Central Asia Weather Hazards

**Temperatures**

Below-normal temperatures (1-8°C) continued across Kazakhstan, Kyrgyzstan, Turkmenistan, and Uzbekistan during the first week of October, while near to above-normal temperatures were recorded across Afghanistan and Tajikistan. Minimum temperatures fell to -10°C over central Kazakhstan with freezing temperatures observed as far south as northern Uzbekistan and Turkmenistan. The GFS model indicates that minimum temperatures are likely to average above normal throughout the region with freezing temperatures limited to northeast Kazakhstan and the higher elevations of Afghanistan, Kyrgyzstan, and Tajikistan.

**Precipitation**

Widespread precipitation (2-83mm, liquid equivalent) was observed across eastern Kazakhstan, Kyrgyzstan, Tajikistan, and eastern Uzbekistan from October 1 to 7. The first significant snow of the season occurred at the higher elevations of northeast Afghanistan, Kyrgyzstan, and Tajikistan. The recent precipitation alleviated dryness across northeast Afghanistan, although small deficits (>25mm) continue over parts of eastern Afghanistan.

Next week, widespread precipitation (2-25mm, or more) is forecast across much of Kazakhstan along with northern parts of Turkmenistan and Uzbekistan. Little or no precipitation is expected throughout the remainder of the region.

Central America and the Caribbean Weather Hazards

1. Heavy rainfall is in the forecast for next week. Flooding and landslides are possible in southern Honduras, western Nicaragua, El Salvador, and Guatemala.

2. Abnormal dryness observed over southern Hispaniola
Central America and the Caribbean Overview

Tropical Storm Nate brought wind damage and widespread flooding to the region
Nate tracked over eastern Honduras and Nicaragua as a tropical storm. The storm left wind damage, landslides, widespread flooding in its wake. Fatalities have been reported. Rainfall totals well in excess of 200mm were recorded in many areas including central Guatemala, western Nicaragua, Costa Rica, and local portions of Honduras. A gauge in Liberia, Costa Rica measured 278mm of rain in just 24 hours. These torrential downpours add to the extended period of above-normal rainfall in the region. 30-day surpluses are currently upwards of 100-200mm in many cases, twice the normal amount. However, the Gulf of Belize region and southeastern Nicaragua still have moisture deficits. Vegetation health index shows positive values for much of Central America, but there are some lower values in northern Guatemala and Belize.

Next week, more heavy rain is likely over Guatemala, Honduras and Nicaragua. The center of the heaviest precipitation is expected to be located in southern Guatemala where well over 100mm of rain is expected. Weekly totals in excess of 50mm should spread across areas of southern Honduras and western Nicaragua. Light rains are expected in areas of central/eastern Nicaragua and Honduras, as well as Belize. No further tropical cyclone activity is expected to impact the region next week.

Dryness has expanded over Haiti during the past few weeks
Moderate to heavy rain was recorded over the Dominican Republic last week. Much of the country received at least 25mm of rain, according to satellite estimates. Local areas such as Monte Plata and San José de Ocoa received more than 100mm. Southwestern departments of Haiti received 50-75mm of rain, while other parts of the country received around 25mm or less of rain. Seven-day totals were 25-50mm below normal. Abnormal dryness continues to be a problem across much of Haiti. Many weeks of slightly below-average rain has led to 30-day moisture deficits of 50-100mm or more in many central and southern departments of Haiti. Additionally, less than 80% of expected rain was recorded during the last 90 days along the southern peninsula. However, positive vegetation health index values are recorded throughout the island. A relatively seasonable weather pattern is expected to continue through the end of the outlook period. According to forecast models, 7-day rainfall totals are expected to be between 10-50mm, with perhaps slightly higher amounts in central parts of the island where topography plays a role.

Tropical cyclone activity is not expected to be a concern next week.