Heavy rainfall associated with Tropical Cyclone Ava causes flooding in Madagascar

Africa Weather Hazards

1. Since November, rainfall has been below-average in South Africa. The early season abnormal dryness has expanded into several parts of southern and western Mozambique, Zimbabwe, eastern Botswana, and southern Zambia, where rainfall is forecast to be low during the middle of January.

2. Although rainfall has increased in some areas of Madagascar since mid-November, the negative impacts of the delayed onset of the rainfall season is still present. Rainfall is below average in several western provinces of the island.

3. Below-average rain during the past month has resulted in large moisture deficits and below-average vegetation conditions in northwestern Angola.

4. In early January, the passage of Tropical Cyclone Ava resulted in flash floods and fatalities in Madagascar. Additional rainfall may trigger landslides in the higher elevations.

5. High temperatures have accompanied abnormal dryness over southeastern Africa during the last several weeks. Above-average temperatures and below-average rainfall during mid-January is expected.
Africa Overview

Erratic rainfall continues in southern Africa

During the last week, heavy rainfall (>150mm) was received over northern and eastern Madagascar due to the passage of Tropical Cyclone Ava, with torrential rainfall also recorded across central and southern Tanzania and northern Mozambique. Rainfall in excess of 200mm were recorded in Madagascar, which led to flooding and fatalities. Further west, limited rainfall was received across southern DRC, Angola, and northern Zambia. Throughout many dry regions of Mozambique, Botswana, Zimbabwe, South Africa and Lesotho, rainfall was poorly distributed and very light (Figure 1). Many areas in southern Angola, and northern Namibia saw little to no rainfall during the last week.

Since early October, the performance of southern Africa monsoon has been uncharacteristically erratic, leading to both short-term and long-term moisture deficits throughout the region. Abnormally high temperatures have resulted in unfavorable conditions for ongoing cropping activities.

During the months of October and November, many portions of Angola, Namibia, Botswana, South Africa and Madagascar experienced a delayed start of the monsoon. By late November and early December, brief periods of rain helped alleviate the early season dryness, however, a broad scale suppression of seasonal rains since mid-December has eliminated moisture recovery, leading to the re-strengthening of moisture deficits across the western parts of the Maize Triangle region of South Africa. The recent dry pattern has left many areas in Zimbabwe, eastern Botswana, and neighboring areas of Mozambique and Zambia with below-average moisture conditions. Overall, the percent of normal analysis over southern Africa since November shows widespread abnormal dryness with many areas ranging between 25-80% of their normal rainfall totals during the timeframe (Figure 2). Conversely, wet conditions remain present across many northern provinces of Mozambique, eastern Madagascar, and southern Tanzania due to the heavy rainfall over the past two weeks.

Next week, models again suggest little relief to the anomalous dryness and high temperatures concentrated over southeastern Africa. Higher rainfall amounts are forecast north of the Zambezi River. Light rainfall is expected over eastern Mozambique in the wake of Tropical Cyclone Ava.
Central Asia Weather Hazards

Temperatures
During the first week of January, below-normal temperatures (negative anomalies of 10-14°C) were recorded in northeast Kazakhstan where minimum temperatures fell to -36°C. Above-normal temperatures (1-8°C) were recorded across the remainder of the region. Minimum temperatures fell below -20°C across northern Kazakhstan which is typical for December.

Below-normal temperatures are expected to shift south into Kazakhstan during mid-January. An abnormal cold hazard is posted for the northern third of Kazakhstan where temperatures are forecast to average more than 8°C below normal. Minimum temperatures are forecast to fall below -25° in this same area.

Precipitation
Light snow or rain (2-16mm, liquid equivalent) was limited to northwest Afghanistan, southern areas of Turkmenistan and Uzbekistan, and Tajikistan from December 31, 2017 to January 6, 2018. Based on below average snow water equivalent values, an abnormal dryness hazard is posted for parts of northeast Afghanistan, the central highlands of Afghanistan, and Tajikistan.

Light to moderate snow (locally up to 25mm, liquid equivalent) is expected across eastern Kazakhstan, Kyrgyzstan, and Tajikistan during the next week. Only light snow (less than 10mm, liquid equivalent) is expected across the northern third of Afghanistan.

Central America and the Caribbean Weather Hazards

1. Cooler temperatures expected across northern Central America. Sub-freezing temperatures may be recorded in Guatemala.

2. Heavy rainfall across southwestern Haiti, northwestern Haiti, and northern provinces of the Dominican Republic, may result in flash flooding and mudslides.
Cooler than normal temperatures continue in Guatemala and Honduras

Heavy rainfall was recorded in Panama and Costa Rica this week. Reports indicate that 100-300mm of rain has fallen in northern coastal regions, with even greater amounts in Panama. The northern coast of Honduras received significant rainfall, but elsewhere was generally dry. Thus far, performance during the Apante season has been near normal across many portions of Guatemala, El Salvador, Belize, and western Honduras. Contrastingly, areas of eastern Honduras, Nicaragua, Costa Rica and Panama, have positive rainfall anomalies exceeding 100mm since December 1, 2017. Overall, ground conditions are healthy. Temperatures were cooler than average.

Over the next week, rainfall should be seasonal. Temperatures are forecast to remain cooler than normal for the northern Half of the region. Minimum temperatures will likely approach or dip below freezing in the higher elevations of Guatemala. This may negatively impact the livelihoods of those living in the region.

Heavy rains recorded in many parts of the island last week

Several days of heavy rainfall this week were recorded in many areas, but especially across southwestern Haiti, Northwestern Haiti and northern provinces of the Dominican Republic. Total rainfall of over 150mm has been reported. Since January is usually dry, the past week’s rain resulted in large positive 7-day anomalies. The rain served to eliminate the marginal moisture deficits which had been sustained across the island since the beginning of December. Despite dryer conditions to start the winter, vegetation is healthy across most of the island.

Next week, above-average rainfall will continue, especially during the beginning of the week. While rains are unlikely to be as heavy as last week, totals of 25-50mm are possible.