

d. *Central America and the Caribbean*—E. K. Grover-Kopec³¹

i) TEMPERATURE

Annual mean surface temperatures were slightly above average across Central America and the Caribbean during 2005 (Fig. 6.16). Temperatures were at least 0.5°C above normal for the year over the entire region except for western Cuba and the Pacific coastal regions of Costa Rica and Panama. The warmest conditions, relative to climatology, were observed in Guatemala and Belize, where annual departures from the 1971–2000 mean exceeded 1°C.

ii) PRECIPITATION

Most of the Central American isthmus experienced drier-than-normal conditions in 2005, though precipitation deficits were not as severe and widespread as those seen in recent years. The most significant standardized 12-month precipitation anomalies occurred across Honduras, Nicaragua, central Costa Rica, and southern Panama (Fig. 6.16). The largest absolute annual precipitation deficits compared to the 1979–2000 base period were observed in this same region. Negative anomalies exceeding 1000 mm were observed in eastern Honduras and Nicaragua, accounting for approximately half of the climatological mean annual precipitation in these areas, typically among the wettest regions in Central America.

The largest contrast between the precipitation regime of 2005 and that of recent years was observed in the Caribbean, particularly in Jamaica, eastern Cuba, and western Haiti. Drought conditions, which have had a large impact on water resources and agriculture over the past few years in Cuba (Levinson 2005), eased a bit as the eastern portion of the island

received 25% more precipitation than normal during the year. Much of this excess precipitation came during May, June, and October, which are among the wettest months of the year in that area. The climatological precipitation distribution across most of the Caribbean and Central American region is bimodal, with relative maxima occurring in May–June and September–October.

iii) NOTABLE EVENTS

The record-breaking 2005 Atlantic hurricane season (see section 4 sidebar) caused devastating losses across the region from July to November. Most damage came from Hurricanes Dennis, Emily, Stan and Beta, and Tropical Storm Gamma, which primarily affected the countries of Cuba, Grenada, Guatemala, Nicaragua, and Honduras, respectively.

While all of these storms had tremendous localized impacts, Stan was arguably the most destructive and certainly the deadliest in the region, affecting eight countries in early October. The storm brought 150–400 mm of precipitation to western Guatemala. One-third of the population of Guatemala was affected by Stan and more than 1000 deaths were reported. Agence France-Presse and Reuters reported that most of these deaths occurred when mudslides buried the villages of Panabaj and Tzanchal in the southwestern department of San Marcos, where some of the largest precipitation accumulations were reported.

e. *South America*

i) OVERVIEW—M. Rusticucci⁷⁸ and J. L. Camacho¹³

South America experienced below-normal precipitation anomalies across a majority of the conti-

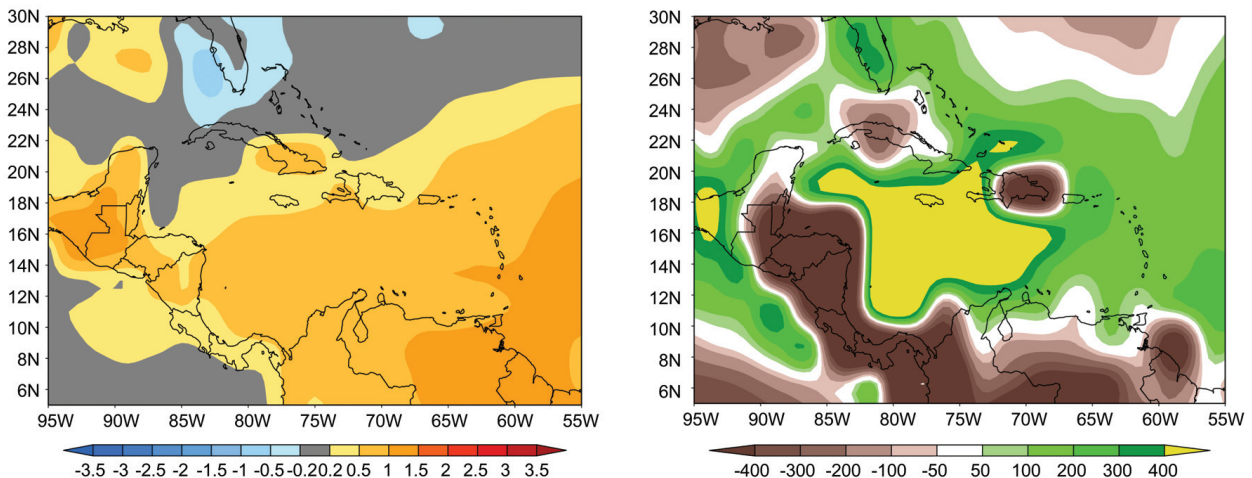


FIG. 6.16. Central American and Caribbean 2005 annual (left) temperature anomalies (°C; 1971–2000 base), and (right) precipitation anomalies (mm; 1979–2000 base) from CAMS–OPI.