

6. REGIONAL CLIMATES—K. A. SHEIN,⁸² Ed.

a. Overview—K. A. Shein⁸²

While the anomalous global warmth of 2005 is generally reflected in regional temperatures, various regions of the planet respond differently to climate forcings at many scales, both spatial and temporal. An analysis of globally averaged climate may mask a number of important climatic conditions that have impacted some areas more than others. This section chronicles regional climatic conditions relative to their historical context, and highlights notable atmospheric events of 2005. In fact, most regions experienced some form of record-breaking weather or climate conditions in 2005.

This section is distributed by continent or major land region, and each regional subsection is further divided into logical climatic divisions, either geographic or political. The use of national names in no way implies political preference or precedence. Also, it should be noted that while the large-scale temperature and precipitation anomaly maps (i.e., Figs. 6.1, 6.7, 6.16, 6.17, 6.24, 6.29, and 6.39) all use a 1971–2000 base period for temperature and a 1979–2000 base period for precipitation, discussions of anomalies in individual regions may refer to alternate base periods.

b. Africa

1) EASTERN AFRICA—C. Oludhe,⁶¹ P. Ambenje,² and L. Ogallo⁶⁰

The rainy seasons in the Greater Horn of Africa (GHA) are influenced by the intra-annual north-south migration of the ITCZ. In the GHA region, rainfall exhibits strong variability both in space and time. Much of the variability is strongly accounted for by the existence of complex topographic features, including the East African lakes, and is also partly influenced by the movement of the ITCZ. The subregion can, however, be divided into three sectors (Southern, Equatorial, and Northern) based on rainfall onsets and withdrawals. The Southern sector (central and southern Tanzania) experiences a unimodal precipitation regime, with rain occurring between December and April. The Equatorial sector (northern Tanzania, Kenya, southern and extreme eastern Ethiopia, southern Sudan, and the southern half of Somalia) generally exhibits a bimodal rainfall regime, with the “Long Rains” season from March to May and the “Short Rains” extending from October to December. However, both the western and coastal areas also receive substantial rainfall during July and August. In the Northern sector (central and northern Ethiopia, Eritrea, Djibouti, and the northern half of

Sudan), the major rainy season is between June and September, but a few areas receive a secondary peak from March to May.

The climate over the GHA is largely regulated by sea surface temperatures in the Indian and Atlantic

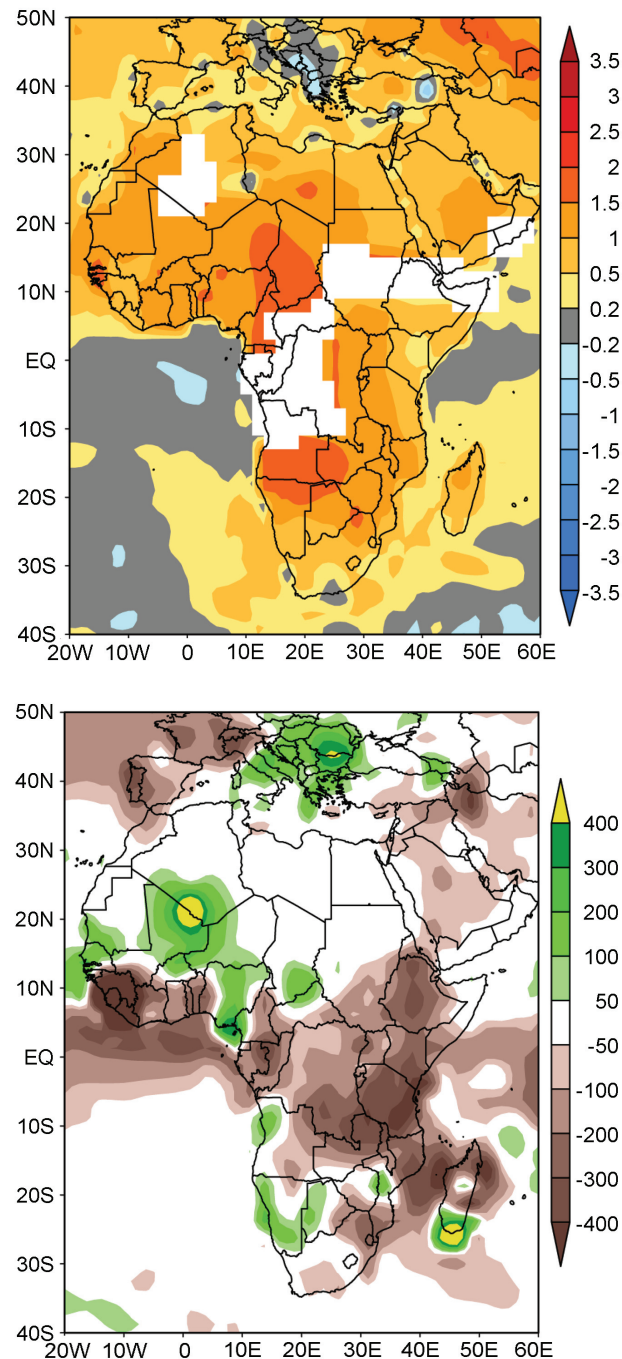


FIG. 6.1. African 2005 annual (top) temperature anomalies (°C; 1971–2000 base), and (bottom) precipitation anomalies (mm; 1979–2000 base) from the CAMS–OPI dataset (Janowiak and Xie 1999). [Source: NOAA/NCDC]