TANZANIA METEOROLOGICAL AGENCY

DEKADAL WEATHER REVIEW

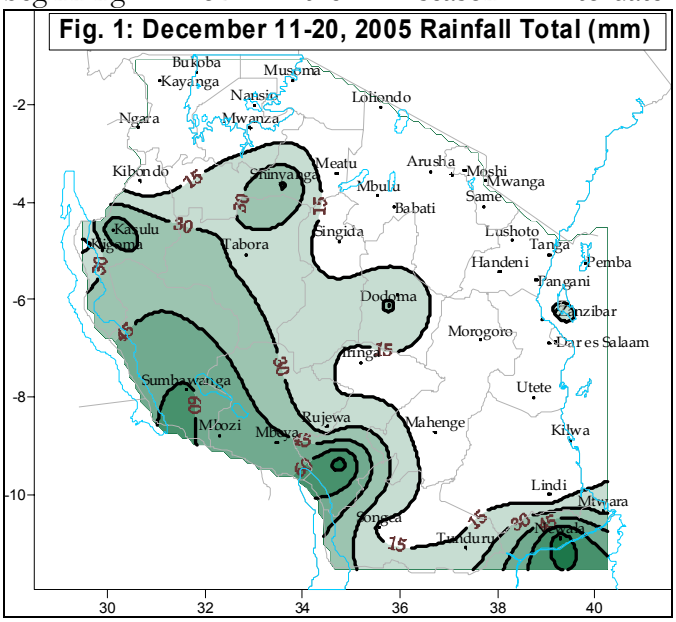
No. 11 2005/06 Cropping Season December 11 - 20, 2005

SYNOPTIC SITUATION

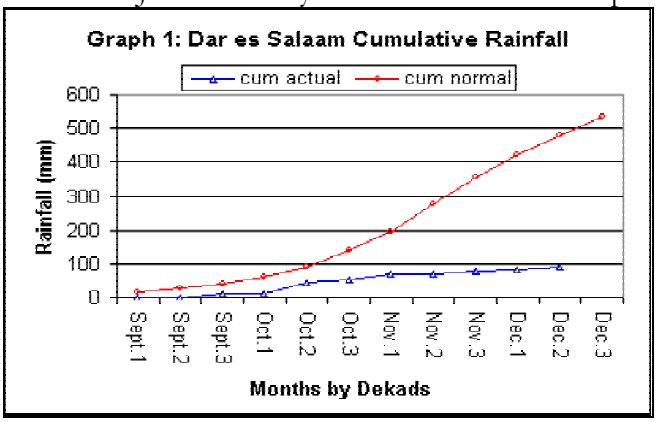
During the period 11 –20th December, southern hemisphere anticyclones, St. Helena and the Mascarene were relatively weak as there were passages of frontal systems over the southern tip of Africa. The Azores and Arabian anticyclones over northern hemisphere remained intense, thus pushing the meridional and zonal components of the Inter-Tropical Convergence Zone (ITCZ) further south. The Northeasterly wind flow from northwestern Indian Ocean prevailed for the entire period of the dekad although more continental than oceanic, thus laden with less moisture content. The convergence of northwesterly to westerly wind flow from the Congo basin with a northeasterly flow from the western part of India was evident. The weak convergence of a weak easterly wind flows from western Indian Ocean and a northeasterly from the northern Indian Ocean over the northern coast maintained fair weather over the area although few showers were observed over Tanga and surrounding areas due to the ITCZ being over the areas.

RAINFALL SUMMARY

During the period, marked increases of rainfall activities were reported over central, western, southwestern highlands and southern areas (Fig.1). The highest total rainfall recorded was 84.3 mm for the dekad at Newala in Mtwara region. On the other hand very little rainfall activities over areas with a bimodal rainfall pattern (northern Kigoma, western areas of Kagera region, northeastern highlands and northern coast) were reported, a condition which marked the end of *Vuli* (short rains) season. In this regard therefore, *vuli* rains have performed very poorly over most of the regions including northern coast and the northeastern highlands. Rainfall over these areas has been below normal while in other areas (eg. Loliondo, Mbulu, and Babati in Arusha region) no rainfall has been observed since the beginning of the season to-date.



For the northern coast, Graph 1 compares the current cumulative rainfall to the long-term mean for the period from September 1st dekad to-date at Mwalimu Julius K. Nyerere International Airport.



Rainfall over this area indicates a shortfall of about 49 mm during the past 10-days and about 389 mm since September.

The observed rainfall activities over the southern sector of the country mark a delayed onset of the seasonal rains (*mvua za Mwaka*) in those areas.

IMPACT ASSESSMENT

Agrometeorological

Soil moisture levels continued declining during the period particularly over the bimodal rainfall areas of Lake Victoria Basin (LVB), northeastern highlands and northern coast of the country. The deficits had largely been felt over northeastern areas and the coastal region where reported tasseling maize and ripening beans were hit by prolonged soil moisture stress in Tarime, Pangani and Lushoto districts. Over the unimodal rainfall regime (central southern, southwestern and southern) the setting-in of the season was widely pronounced in the area leading to improved supply of soil moisture that was conducive to field activities mainly being final land preparations and planting as were reported over Kasulu, Urambo, Sumbawanga and Newala districts.

Hydrometeorological

Low water levels in rivers and lakes were generally experienced during the period. Water for domestic and industrial purposes should be used sparingly.

Environmental

Warm/hot conditions and high evaporation rates are being experienced in many parts of the country.

EXPECTED SYNOPTIC SYSTEMS DURING DECEMBER 21 – 31, 2005

The Arabian and Azores anticyclones are expected to remain strong over the northern hemisphere thus squeezing the ITCZ further south. The southern hemisphere systems, the Mascarene and St. Helena anticyclones are expected to continue weakening southeastward.

The position of the ITCZ is expected to maintain its position during this dekad although there will be some slight shifting of the meridional arm of the ITCZ further south over southwestern and western parts of the country hence making the area active. Westerly wind flows from the Congo basin are expected to persist over the western areas and parts of LVB converging with western Indian wind flow (northeasterly). Hence, rainfall activities over southwestern highlands and southern regions are expected to increase gradually towards the end of the dekad.

EXPECTED WEATHER DURING DECEMBER 21 – 31, 2005

Western parts of the country (Kigoma region) and southwestern highlands, southern region and parts of LVB are expected to feature cloudy conditions with showers and thunderstorms over most areas and sunny intervals. Northern Coast (Dar es Salaam, Tanga, Zanzibar and Pemba Islands) is expected to experience partly cloudy conditions with occasional light showers over few areas and sunny periods. Southern coast (Mtwara region) and central areas (Dodoma and Singida regions) will feature partly cloudy conditions with showers and thunderstorms over few areas and sunny periods. Northeastern highlands and hinterlands of northern Morogoro are expected to feature partly cloudy conditions with occasional light showers and sunny periods.

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