

## DEKADAL WEATHER REVIEW

No. 12

2005/06 Cropping Season

December 21 - 31, 2005

### SYNOPTIC SITUATION

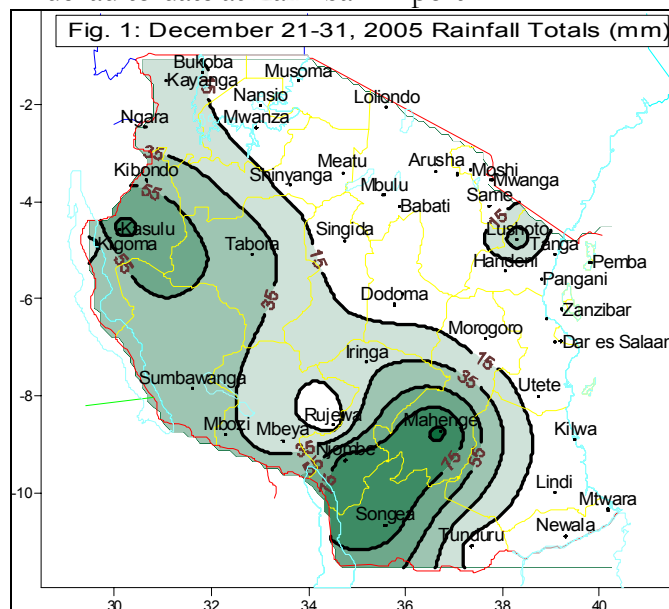
During the period 21–31<sup>st</sup> December, the Azores and Arabian anticyclones remained intense thus pushing the meridional and zonal components of the Inter-Tropical Convergence Zone (ITCZ) further south. The St. Helena and Mascarene anticyclones remained weak due to passage of frontal systems over the southern tip of Africa. The northeasterly wind flow becoming northwesterly over the southern coast prevailed for the entire period, although more continental than oceanic and hence less moisture content. The convergence of a northwesterly wind flow from the Congo basin and a northeasterly wind flow from the western part of India were evident and maintained its line of convergence that resulted into rainfall activities over the western sector of the country. Divergence of the northeasterly flow becoming northwesterly flow over the southern coast led to fair weather over northeastern highlands and the northern coastal strip.

### RAINFALL SUMMARY

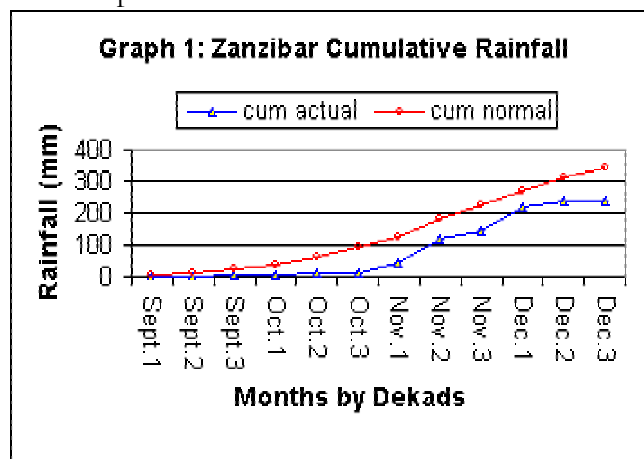
During the period, rainfall activities increased over western, southwestern highlands and southern regions, areas with a unimodal rainfall pattern (Fig.1). The highest total rainfall recorded was 100.5 mm for the dekad at Mahenge, south of Morogoro region. Other areas, southwestern highlands, central and southern coast were generally dry with rainfall totals between 0 -15 mm for the dekad.

Very little rainfall amounts were reported over areas with a bimodal rainfall regime, except over a few areas of western Lake Victoria Basin (LVB), and Lushoto in the northern coast where rainfall amounts reported were above 15 mm. For the northern coast, Graph 1 compares the current cumulative rainfall to

the long-term mean for the period from September 1<sup>st</sup> dekad to-date at Zanzibar Airport.



Rainfall over this area indicates a shortfall of about 33 mm during the past 10-days and about 109 mm since September.



These observations indicate a delayed onset of seasonal rains (*Mvua za Mwaka*) over central and southern coast and the cessation of *vuli* rains over bimodal rainfall pattern areas.

## IMPACT ASSESSMENT

### Agrometeorological

During the period low soil moisture levels were experienced over the LVB, northeastern highlands and the coastal belt. The situation has led to permanent wilting of field crops in some areas of Kagera, Mara and Tanga regions where maize was between earing and ripeness stages. Over other areas of Arusha, Manyara, Morogoro (Kilosa) and coastal regions dry conditions hampered normal field activities for the period especially land preparations for paddy growing. Except for a few areas in the unimodal rainfall regime realizing improved soil moisture levels, most areas observed a delayed seasonal onset that generally caused poor supply of soil moisture during planting, thus, interfered with the usual cropping calendar in the areas.

Pasture conditions are getting worse over many areas.

### 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.

The southern hemisphere systems, the Mascarene and St. Helena anticyclones are expected to continue weakening southeastward. Westerly to northwesterly wind flow from the Congo basin is expected to persist over the western areas. Hence, rainfall activities over Western (Kigoma), southwestern highlands and southern regions are expected to increase towards the end of the Dekad.

## EXPECTED WEATHER DURING JANUARY 01 – 10, 2006

Northern coast (Dar es Salaam and Tanga regions) and Islands of Zanzibar and Pemba are expected to experience partly cloudy conditions with early morning light rains over few areas and sunny periods. Western parts of the country (Kigoma region), southwestern highlands and southern regions are expected to feature cloudy conditions with showers and thunderstorms over few areas and sunny intervals. 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. The LVB mainly over Kagera region is expected to feature partly cloudy conditions with showers and thunderstorms at times over few areas and sunny periods. Northeastern highlands will feature partly cloudy conditions with predominant sunny periods.

## EXPECTED SYNOPTIC SYSTEMS DURING JANUARY 01 – 10, 2006

The position of the ITCZ is expected to maintain its position during the dekad. The Arabian and Azores anticyclones are expected to remain intense over the northern hemisphere thus squeezing the ITCZ further south.

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