The dominant feature for April was the non-propagating (stationary) easterly wave which maintained its position along the coast of East Africa thus advected moist air from the Indian Ocean towards northern coast and north-eastern highlands. During April, the Azores and Siberian anticyclones over the northern hemisphere relaxed while the Arabian ridge remained weak, thus allowing the southern systems especially the East African ridge to extend further north. In the southern hemisphere systems, the anticyclones (St. Helena and Mascarene) continued to intensify giving way to an East African ridge to dominate over most areas in the country. The zonal component of the Inter-Tropical Convergence Zone (ITCZ) was active over northern coast, northeastern highlands and Lake Victoria basin. The meridional component of the ITCZ was weak due to relaxation of the Azores high pressure cell. Towards the end of the month there were some influences of the southerly flow more over lower levels than upper levels.

**APRIL – HIGHLIGHTS**

- Long rains (Masika) continued over much of the bimodal rainfall regime while rainfall activities tapered off over unimodal areas of the central and southwestern highlands
- Wet and cloudy conditions in May will further improve growth of immature crops but also impede drying and harvesting of matured crops

**SYNOPTIC SUMMARY**

The rains continued over much of the bimodal rainfall regime (Masika) while declined rainfall activities tapered off over unimodal areas of the central and southwestern highlands particularly during the third dekad of the month. However, during the third dekad most parts of the northern coast recorded substantial amounts of rainfall. The highest rainfall amount recorded during the month was 563.3 mm at Pemba Airport, with about 360 mm reported during the third dekad. Over most of central region and parts of southern Lake Victoria basin rainfall totals were generally less than 80 mm (Figure 1). The decreased trend in rainfall activities over central areas indicates a cessation of the rainfall season which is the norm for the area for this time of the year.

**WEATHER SUMMARY**

**RAINFALL**

The rains continued over much of the bimodal rainfall regime (Masika) while declined rainfall activities tapered off over unimodal areas of the central and southwestern highlands particularly during the third dekad of the month. However, during the third dekad most parts of the northern coast recorded substantial amounts of rainfall. The highest rainfall amount recorded during the month was 563.3 mm at Pemba Airport, with about 360 mm reported during the third dekad. Over most of central region and parts of southern Lake Victoria basin rainfall totals were generally less than 80 mm (Figure 1). The decreased trend in rainfall activities over central areas indicates a cessation of the rainfall season which is the norm for the area for this time of the year.

**Graph 1:** January - April 2006 Rainfall Performance at Pemba A/p

Graph 1 depicts rainfall performance at Pemba airport...
from January to date. *Masika* rains over this area and parts of the northern coast started during second dekad of March with above normal levels for most of the period. The third dekad of April recorded the highest rainfall amount of about 160 mm above normal as shown by Graph 1.

**MEAN AIR TEMPERATURE**

Temperature conditions for the month of April were expressed as mean air maximum and minimum temperatures as shown in Figs. 2A and 2B respectively. Observed mean maximum temperature ranged between about 25 °C over southern Morogoro, Rukwa, Mbeya and southern Iringa regions and just above 31 °C over Tanga region in the northern coast (Fig. 2A). The highest maximum temperature recorded during the period was 32.7 °C over Tanga region in the northern coast during second dekad of the month. The mean minimum air temperatures ranged from just below 14 °C to slightly above 24 °C (Fig. 2B). The highlands in the southwestern part of the country (Rukwa and Mbeya and Iringa regions) experienced cooler conditions, with Mbeya town recording the lowest mean minimum temperature of about 12.8 °C; the town had the lowest minimum temperature value of about 10 °C during the second dekad of the month. Generally, temperature conditions for April changed significantly from that of March 2006 as the southwestern highlands experienced cooler conditions during nights and early morning hours of about 3 °C lower than experienced during March.

**SUNSHINE HOURS**

Figure 3, indicates the spread of mean sunshine hours across the country during April. Durations of mean bright sunshine hours ranged between about 5 and 8 hrs/day. A few pocket areas over Kagera, northern Morogoro and Arusha regions, and Pemba Island experienced shorter durations of about half daylight hours due to predominant cloudy activities in the areas.

The longest durations of about 8 hrs/day dominated mainly over Tabora, Dodoma, Tanga and Mtwara, areas enclosed by 8 °C isotherm in Figure 3.
Mean wind speed across the country ranged from just below 3 km/hr to just above 8 km/hr as depicted in Figure 4. The core of maximum speed of about 8 km/hr was located over central areas (Dodoma region). Shinyanga, Rukwa and Ruvuma regions continued reporting lowest wind speeds of about 3 km/hr. The month indicated no significant changes in wind strength from that of the previous month, as such light winds which persisted during the period maintained conditions of decreased occurrence of dust devils, wind erosion and reduced evaporation rates.

Figure 4: April 2006 Mean Wind Speed (km/hr)

AGROMETEOROLOGY

Soil moisture levels over parts of the unimodal rainfall regime (southwestern highlands, southern, central and western) declined during the period following the decreased rainfall activities depicting a normal trend of cessation of the season at this time of year. The growing season over central areas (Dodoma and Singida regions) has performed poorly following a late onset of the season and inadequate soil moisture supply as well as uneven soil moisture distribution that resulted from poor rainfall distribution during the growing season, thus crop yield is anticipated to drop to below average. Wilted and stunted maize were reported over some parts of Kongwa districts (Mlali and Zasa), Mpwapwa west, Bahi and areas surrounding Dodoma Municipality where the crop was still at tasseling stage as soil moisture supply has started to decline, as the season ends, though over a few pocket areas, Iramba district in Singida region and Kondoa district in Dodoma region maize crop was fairly good at wax ripeness stage. However, millet and sorghum over central areas were near wax ripeness stage in moderate state. Over southwestern highlands and southern regions maize crop was in good state between tasseling to full ripeness. Second phase beans crop over the south western highlands (Mbeya, Iringa, and Rukwa regions) and southern (Ruvuma region) was reported at between flowering and ripeness, in good state. Most parts of the bimodal rainfall regime had soil moisture replenishment maintained throughout the period. Over Lake Victoria Basin,
northern coast and northeastern highlands the state of
crops (maize and beans) was generally good. Maize
crop was between tasseling and ripeness stages in the
districts of Babati and Mbulu in Manyara region,
Mwanga and Pangani districts in Kilimanjaro and
Tanga regions respectively, with the state of the crop
being generally good. The beans crop was reported to
be in good state at between pod filling and ripeness
stages in Kagera region (districts of Ngara and
Karagwe) and Mbulu in Manyara region at early
vegetative stage. Elsewhere the crop was generally in
moderate state at vegetative growth stage. As for
cassava, the state of the crop was good at various
stages across the country.

Pasture and water for livestock/wildlife generally
improved to a satisfactory level over bimodal areas.

The expected wet and cloudy conditions over bimodal
areas during May will further improve growth of
immature crops although over unimodal areas these
conditions will impede drying and harvesting of
matured crops.

**HYDROMETEOROLOGY**

Water levels in rivers, lakes and dams have
continued to increase during the period except in
the central belt. However, water for domestic and
industrial purposes should be used sparingly.

**ENVIRONMENTAL**

Temperatures are getting lower as we get into a
cool/cold season and winds are weakening while
evaporation rates are also coming down in many parts
of the country.

**EXPECTED SYNOPTIC SITUATION**

Lake Victoria basin (Kagera, Mwanza and Mara
regions) will experience partly cloudy to cloudy
conditions at times with showers and thunderstorms
over few areas and sunny periods. Southwestern
highlands (Rukwa and Mbeya regions), central
(Dodoma and Singida regions), Morogoro region,
southern (Ruvuma region) and southern coast are
expected to experience partly cloudy conditions with
light rains at times followed by chilly weather towards
the end of the month. Northeastern highlands
(Arusha, Kilimanjaro and Manyara regions) will
experience partly cloudy conditions with light showers
and thunderstorms at times mainly over high grounds
and sunny periods. The northern coast (Tanga, Coast
and Dar es Salaam regions, and Zanzibar and Pemba
Islands) will feature partly cloudy conditions with light
rainshowers over few areas during the first two weeks
of the month and sunny periods. Western parts of the
country (Kigoma and Tabora regions) will feature
partly cloudy conditions with light showers and few
thunderstorms over few areas and sunny periods.