Regional Food Security Early Warning System

FOOD SECURITY UPDATE

SADC Food Security Update 2007/2008 Issue 4 **FEBRUARY 2008**

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Highlights

- **The northern half of the region received moderate rains during the month of February 2008 while the central and some southern parts received minimal rains.**
- **Dry spells and erratic rains prevailed for the entire month in the northern Democratic Republic of Congo, central and southern Mozambique and Zimbabwe, impacting on crops.**
- **Cyclone Fame hit Madagascar, resulting in loss of life, damage to agricultural land and infrastructure as most of the island received more than 200 mm during the second dekad of February.**
- **Analysis of satellite derived rainfall imagery shows significant rains concentrated in the flood plains of Angola, Zambia, Namibia, Botswana and most of Tanzania.**

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RAINFALL PERFORMANCE FOR FEBRUARY 2008

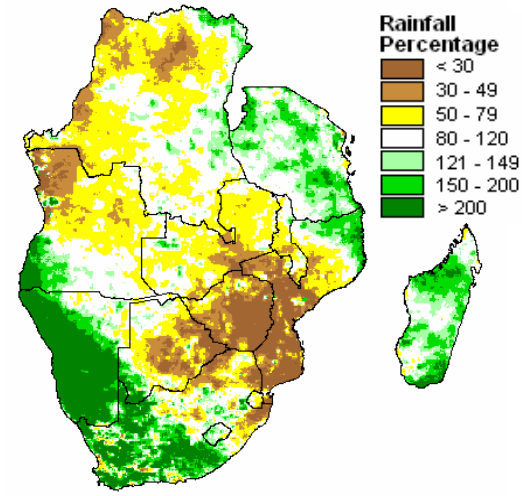

Figure 1. Satellite based rainfall estimate for 1-29 February 2008, as a percentage of average. Data source: NOAA/FEWSNET

Rainfall declined over most of the central parts of the region during the month of February. Figure 1 shows the rainfall for February 2008 expressed as a percentage of average. It indicates that above normal (green colours) monthly rainfall was recorded over western South Africa (Cape Province), south and western Namibia and extreme western Angola and Botswana. Most of Madagascar and Tanzania and parts of northern Mozambique had above normal rains and this could be attributed to Cyclone Ivan which brought excessive rains during the second dekad. Cyclone Ivan mainly affected Madagascar, and led to floods which culminated in loss of life, livestock and crops, destruction of infrastructure, as well as an outbreak of cholera. On the other hand, the central parts of the region were much below normal (brown colours) as the entire month of February was dry. The reduced rains had negative impact in some areas across the region and resulted in some crops suffering from moisture and heat stress. The impact might result in reduced yields and hence compromise food security in the affected countries such as Zimbabwe, Mozambique and Swaziland (Figure 1). In Mozambique, the reduced rains allowed water levels in flooded areas to recede. In Angola, heavy rains have been falling in southeast Angola causing flooding in downstream provinces including Cunene and Namibia's Caprivi area. Analysis of cumulative rainfall for the region from September suggests good cumulative rainfall performance so far, despite the dry conditions that prevailed up to end of February in the central parts of the region.

SADC Member States:
Angola, Botswana, Democratic Republic of Congo, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, South Africa, Swaziland, Tanzania, Zambia, Zimbabwe.
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2. REGIONAL DISASTERS/HAZARDS/VULNERABILITY ANALYSIS

Reports of disasters and vulnerability during this time of the crop growing season (lean season) were received from Angola, Madagascar and Mozambique.

ANGOLA: Drought conditions had been reported in the provinces of Cuando Cubango, Cunene, Namibe and Huila. The Angola Civil Protection unit indicated approximately 30000 people lost their homes and 37000 animals were lost due to floods. The same provinces experienced heavy rains that led to floods that resulted in destruction of infrastructure, displacement of people, loss of life and disease outbreaks. Very poor harvest was being anticipated particularly in Cunene.

MADAGASCAR: Heavy rains over the north-eastern and north-western regions of Madagascar brought by Cyclone Ivan during the second dekad of February 2008 resulted in flooding these regions. These resulted in thousands of people losing their homes and crops, damaged infrastructure and agricultural land being flooded in the central Antananarivo plains. Crop production is anticipated to be well below average due to the massive flooding and hence compromising food security.

MOZAMBIQUE: Flooding concerns had eased in Mozambique at the end of February after reductions in rainfall in most parts of the region feeding into the major river basins in Mozambique. The discharge from the Cahora Bassa dam has decreased significantly from levels as high as 6000 m3/s in January to 1850 m3/s by 21 February 2008. Reports indicate that the opening of the spill gates at Kariba did not exacerbate the flooding situation. Over 102,000 people have so far been moved to resettlement centers, according to the Mozambique National Institute of Disaster Management, INGC. According to a UN Country Team report dated 21 February, river levels continue to go down in the major river basins that were affected by flooding, namely, Zambezi, Pungue, Buzi, and Save.

More information on the regional flood emergency situation can be found at www.sadc.int/floods.

3. RAINFALL PERFORMANCE MONITORING

The rainfall estimates images suggest that during the month of February, 2008, the region mainly had normal to below-normal rains in most areas. Northern Angola, eastern Zimbabwe, southern half of Mozambique, extreme southern Malawi and some parts of Madagascar received below normal rainfall during the first dekad. The central parts of the region particularly eastern and southern Zimbabwe, parts of Swaziland and

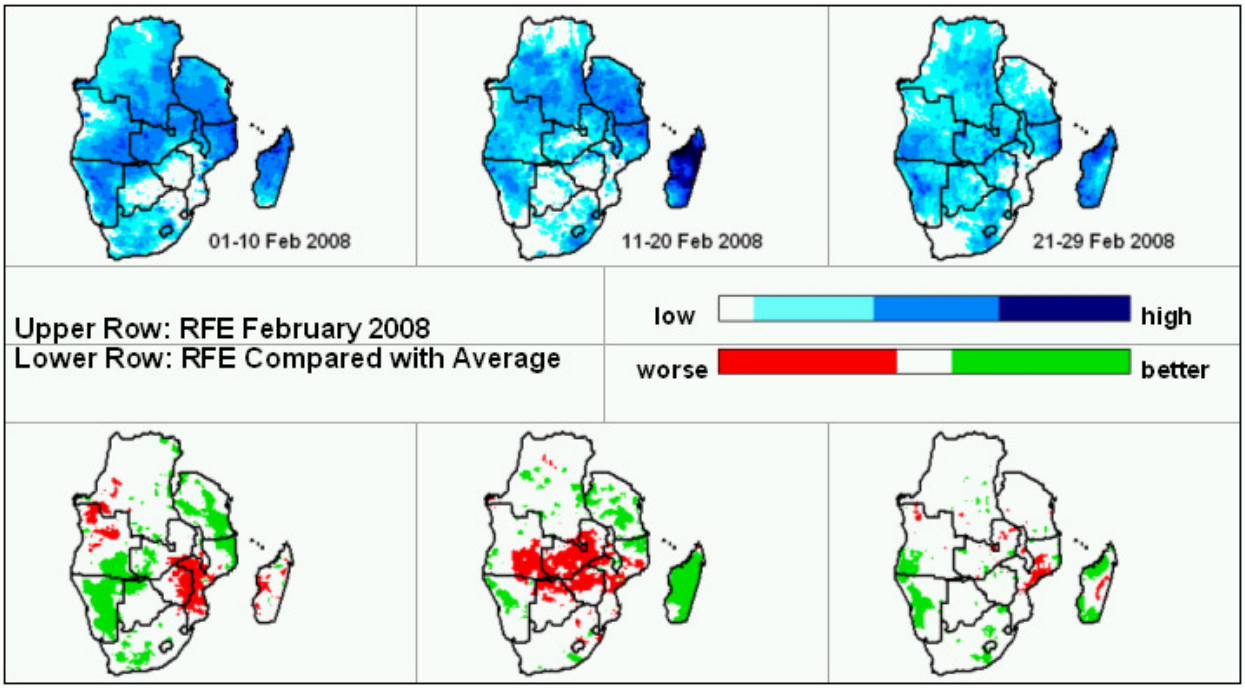
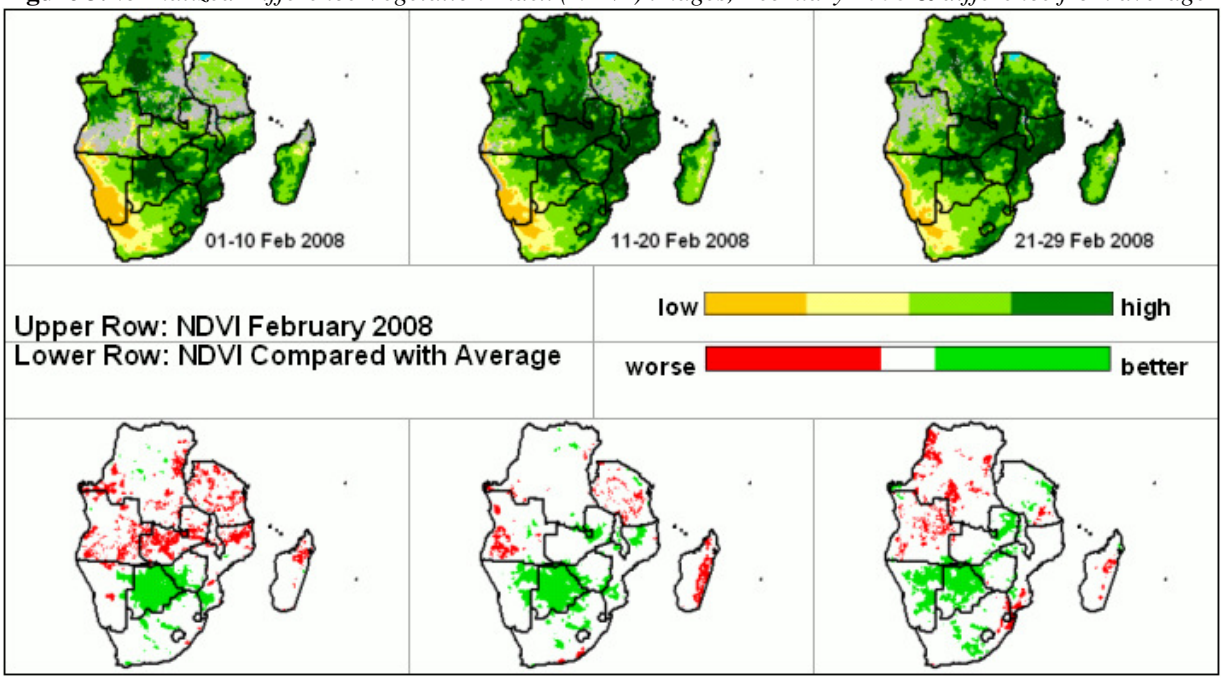


Figure 2. *Rainfall Estimates (RFE) images, February 2008 and difference from average. From left to right are Dekads 1 (1-10 Feb), 2 (11-20 Feb) and 3 (21-29 Feb) Differences from average, lower row are based on a 10-year average of 1995-2007*§

southern half of Mozambique continued receiving below normal rains throughout the month. This impacted on crops planted in or after December which were at the critical stages of tasseling and cobbing. Both the bimodal and unimodal rainfall regimes of Tanzania received moderate rains during the first two dekads but minimal rains were received over the bimodal areas during the last dekad. Madagascar received above-normal rainfall rains in the central and northern half due to the passage of cyclones Fame in late January and Ivan during the second dekad. Moderate to high rains were received over the entire island during the last dekad of the month. (Figure 2 below).§

4. VEGETATION PERFORMANCE MONITORING

Figure 3.*Normalized Difference Vegetation Index (NDVI) images, February 2008 & difference from average*



From left to right are Dekads 1 (1-10 Feb), 2 (11-20 Feb) and 3 (21-29 Feb)
Differences from average, lower row, are based on a long term average of 1982-2007

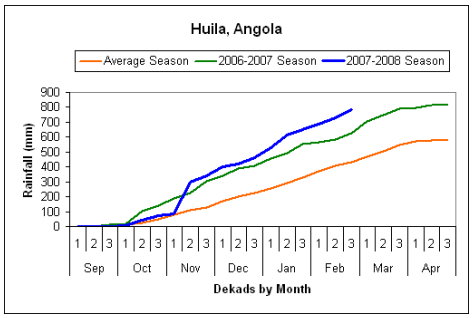
Normalized Difference Vegetation Index (NDVI) images for February 2008. (Figure 5 above) suggest that the vegetation conditions were above normal for most of Botswana, southern parts of Mozambique, parts of Zimbabwe, parts of South Africa and Lesotho. The month of February was relatively dry but the vegetation vigor was maintained due to residual moisture from previous months. §

5. REGIONAL MAIZE FORECAST

The maize production forecast is provided in the table below for those countries where a maize forecast has already been done, and where the information was made available for this report. For many countries in the SADC region, the maize production forecast has not yet been done, due to various factors such as timing. Some countries have done a national area-planted estimate, but the production forecasts may be yet to be done or still underway. Most countries will have released a production forecast by some time in April. More information will be added to the table in the next issue.

COUNTRY	2007 ESTIMATE Maize Tonnes	2008 FORECAST Maize Tonnes
Botswana	1000	7265.82
Namibia	52,000	57,700
South Africa	7 125 000	10 580 850

6. RAINFALL TIME SERIES AND COUNTRY UPDATES/PROFILES

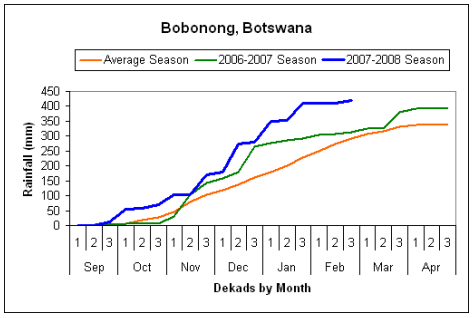


ANGOLA: Substantial amounts of rain received over the western half…

Satellite imagery for February suggested that the northern half of Angola received moderate to substantial rains during the month. These exacerbated the effects of flooding in some areas while in southern Angola, Cuando Cubango, Cunene, Namibe and Huila provinces heavy rainfall experienced during the second dekad of February resulted in serious floods. For the Cunene Province which had suffered the effects of prolonged dry spell since late December 2007, floods washed away the crop that could have been salvaged hence very poor harvests are expected. The floods also resulted in loss of life, destruction of infrastructure, displacement of people and disease outbreaks. Elsewhere crops were in good condition and at tasseling and cobbing stages. Pastures and livestock condition continued to improve. Cumulative rainfall analysis (RFE graph) for Huila for the month of February suggests a continuation of above-normal rainfall totals.§

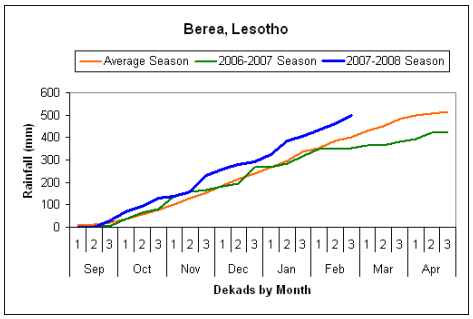
BOTSWANA: Dry but substantial amounts of rain in the south eastern parts…

Below normal rains were received in most parts of the country. The heaviest rains were received in the north western parts during the first dekad. Below normal rains were received elsewhere and the dryness affected mostly maize planted in late November and December that was at tasseling stage. Sorghum and the early maize crop were in good condition as well as pastures. Cumulative rainfall for the Bobonong district indicates a very dry month even though the seasonal totals are way above normal.



DEMOCRATIC REPUBLIC OF CONGO (DRC): Light to significant rains received during the month…

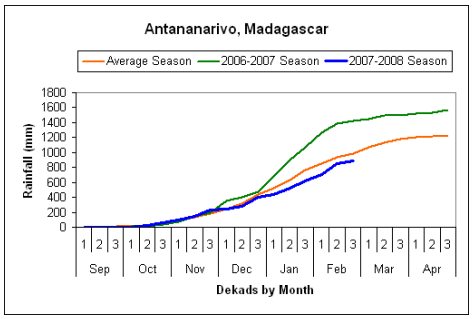
Satellite imagery suggests light to moderate rains throughout the month of February for the northern half of the country while the southern half had moderate to heavy rains. There were some isolated areas that experienced short dry spells. Some areas in the eastern Democratic Republic of Congo received significant rainfall throughout the entire month. §



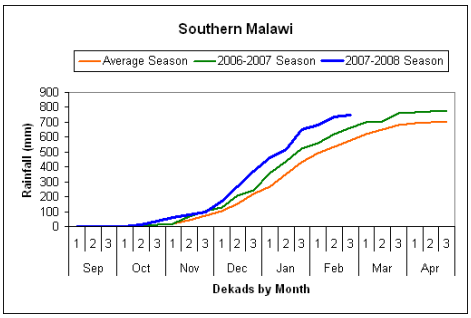
LESOTHO: Normal to above normal rainfall…

Dry conditions were experienced for almost the entire month especially over the north-eastern and western parts of the country. Scattered thunder showers brought relief in some areas towards the end of February. Generally, Lesotho had experienced good rains since the beginning of the season so the reduced soil moisture had little impact on most of the maize and sorghum crops which ranged from flowering to grain-filling stages and were in good condition. However, some crops were beginning to show symptoms of moisture stress due to the dry conditions and high temperatures. Concerns were raised that an early onset of frost may negatively impact crop yields, since most crops may not have reached maturity if the frost starts by early March. Cumulative rainfall remains at normal to above normal countrywide.§

MADAGASCAR: Excessive rains pelt the northern parts...

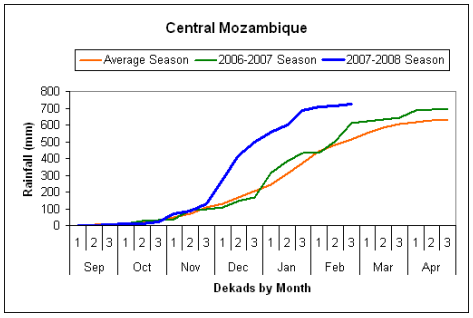


Satellite imagery as well as ground data indicate that northern Madagascar received excessive rains during the second dekad due to Cyclone Ivan in the second dekad of February. These rains led to flooding in parts of central and northern Madagascar, claiming lives, submerging crops, destroying infrastructure (schools, clinics, villages etc.), displacing people and killing livestock. The third dekad was relatively drier. Water availability, especially in the south, continued to improve. Cumulative rainfall graph for Antananarivo for based on RFE suggests that the rains so far have been below normal.§



MALAWI: Erratic rains experienced throughout…

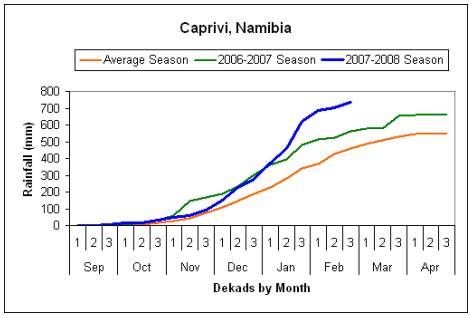
Significant rainfall amounts were registered mainly over northern and some parts of the central regions during the month. Most parts of southern Malawi experienced decreased rainfall and the conditions prevailed for the whole month negatively impacting on crops in low lying areas and therefore reducing the prospects of good yields that had previously been expected. National estimates suggested that impacts of the dry spells and floods could reduce production by approximately 4% compared to last year. The early crop had already reached maturity by the time the dryness set in but some of it was stunted due to erratic start of rains (most farmers planted late). Crops in the northern and central parts of the country were in good condition and had reached early maturity stages. Pasture and livestock are generally in good condition throughout the country. Due to last season's good harvest the food security situation in the country is under control, except for distribution problems experienced due to the bad condition of most roads in rural areas. §



MOZAMBIQUE: Northern Mozambique received heavy rain but the south is very dry …

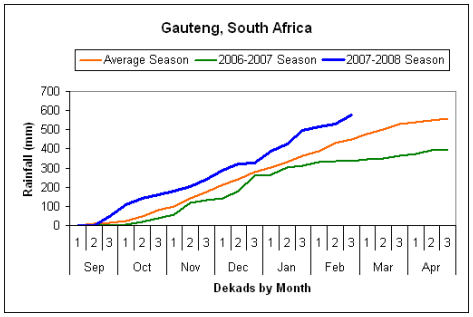
The northern parts of Mozambique received very heavy rains throughout the entire month. Cabo Delgado, Nampula and Niassa provinces received heavy rains. Central and southern Mozambique experienced very low rainfall. This, coupled with very high temperatures, negatively affected the crops which started showing symptoms of wilting. This could lead to reduced crop yield. There was hope that the rains would resume in the south to facilitate adequate accumulation of soil moisture for the second growing season. In some areas where flooding occurred, this was not a concern, as sufficient soil moisture would remain after the recession of the flood waters. In the north, there was continued improvement in vegetation and pasture conditions while effects of the dry conditions were being noticed in the south. Cumulative seasonal rainfall graphs for central Mozambique show the prevailing dry spell that started in January up to end of February.

NAMIBIA: Light to significant showers over the major crop growing areas.



Heavy and constant rains in northern Namibia resulted in flooding, waterlogging and leaching of nutrients adversely affecting the crops and ultimately the yield prospects in the North Central and Caprivi regions. This was exacerbated by an outbreak of army worms in Oshana and Oshikoto regions posing a major threat to the final harvest. Pastures were recovering from the prolonged dry spells experienced from October to December. The central parts received moderate

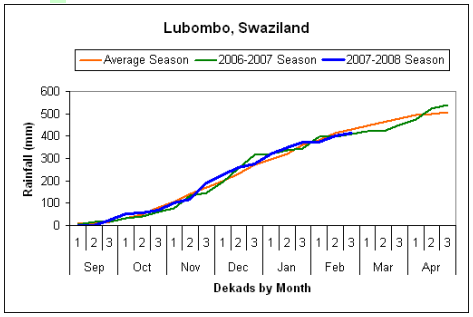
to heavy rainfall during February. In Omusati, Ohangwena and Oshikoto region, production might well be reduced due to the reduction in area planted caused by delayed rains, flood and weak condition of the draught animals at the beginning of the season. Cumulative seasonal rainfall graphs for northern Namibia suggests above average rainfall performance.§



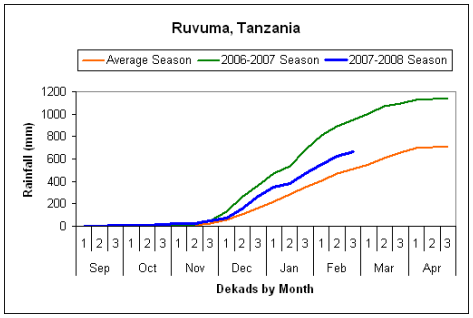
SOUTH AFRICA: 48.5% increase in production from the previous season anticipated …

Dry spells with pockets of light showers to significant rainfall, were experienced in South Africa during the month of February. The western half was generally wet during the third dekad while the eastern and northern parts were relatively dry. The dryness had minimal impact on the crop in the major maize growing areas as there was adequate residual moisture after the good rains from the beginning of the season and most of the crop was at an advanced stage of grain-filling by the time the dry-spell set in. The Crop Estimation Committee indicated that a maize harvest of 10.58 million metric tons was being expected. However in the northern parts of South Africa, particularly northern Limpopo Province, a four-week dry spell caused significant damage to the crop. Livestock and pastures were still in good condition. Cumulative rainfall analysis (RFE graph) for the Gauteng province suggested above normal seasonal rains.§

SWAZILAND: Dry spell impacts on crops in the Lowveld…



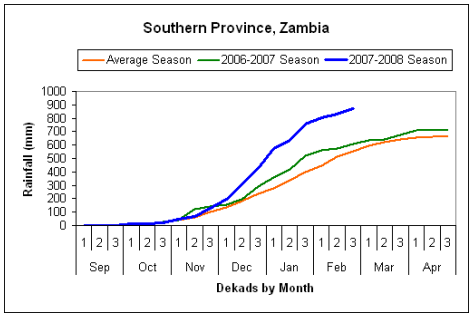
Fairly good widespread rains were received in most areas during the first and last dekads of February 2008. The eastern parts experienced a prolonged dry spell from January to end of February. The dry conditions negatively impacted on crops especially in the Lowveld and hence a major reduction in yield is anticipated. However, the early crop was not affected, and was nearing maturity by the end of the month. The crops in the western half, the Highveld and the Middleveld, were doing well and a good harvest was expected. The cumulative rainfall graph for Lubombo shows declining rainfall performance for January and February. §



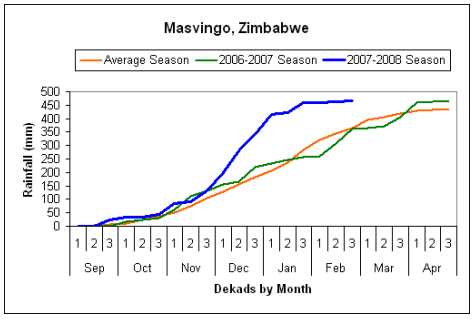
TANZANIA: Vuli crops negatively affected by soil moisture stress…

The first dekad in February, was dry over most of Tanzania. Good seasonal (Msimu) rains continued over many of the unimodal rainfall areas and significant rainfall was observed over much of the southern, western, and southwestern highlands regions where the highest amount reported was 445.2 mm at Ifakara. Maize in unimodal areas was in good condition and ranged from vegetative to tasselling. Reduced soil moisture supply in the last dekad of February facilitated weeding of crops at various stages ranging from early vegetative to pre-tasselling mainly for maize, sorghum and paddy. In the bimodal areas (mainly the northern coast and northeastern highlands) the early planted maize crops was at early vegetative stages and had been negatively affected by low soil moisture and farmers had to replant. Pasture conditions and water availability for livestock and wildlife were generally good across the country but poor over the lowlands of the northeastern highlands as a result of prolonged dry season. Many households over bimodal areas are currently food insecure. Poor crop production due to failure of Vuli short rains (October- January 2007/2008), and high cereal prices reduced food accessibility to food insecure vulnerable groups. §

Zambia: Maize at grain-filling stage



Most of Zambia was drier than normal, as light to moderate rains were received during the month of February. There were reports of crops experiencing moisture stress in the central parts of the country. Isolated parts of Kabompo and Mufumbwe districts received very high rainfall that was above 200mm. The late maize crop was at grain filling stages, while the early-planted crop has already reached maturity. Pastures were in good condition. Cumulative rainfall graphs for southern Zambia based on RFE suggest above normal seasonal rainfall accumulations. §



ZIMBABWE: Prolonged dry spells to impact on crop yields …

February was marked by a prolonged long dry spell in most areas in south-eastern and southern Zimbabwe. The eastern half of Zimbabwe received virtually no rain during February 2008 which negatively impacted on crops, especially those planted in December. Widespread dry spells severely affected most of the country except in the Mashonaland areas (northern Zimbabwe) where light to moderate rains were recorded in February, with isolated areas receiving substantial amounts of rainfall. Large rainfall deficits for January and February were recorded in most areas, including Midlands, Masvingo, Matabeleland South, Mashonaland east, Manicaland and south of Mashonaland West provinces. Crop yields were likely to be reduced due to the effects of the heavy incessant rains in December and January that led to leaching of nutrients and the limited availability of fertilizers. Weed control (maize and other crops) and spraying (cotton) were the main agricultural activities. Generally crops were at grain filling stages and in poor condition especially over the southern half of the country. The early planted crop was not seriously affected by the dry spell as it had reached maturity by the time the dry spell set in. However, the magnitude of the impact of the dry spell was yet to be established. Livestock condition was good except where tick borne diseases were not being controlled. Water and pasture were readily available and pastures were in good condition following the good rains received in December and January. Household food security is quite bad especially for the southern half of the country, where the early crop was water logged, the late crop has experienced moisture stress following the dry spell which started in February. Cumulative rainfall graphs for Masvingo confirm the February dry spell. §