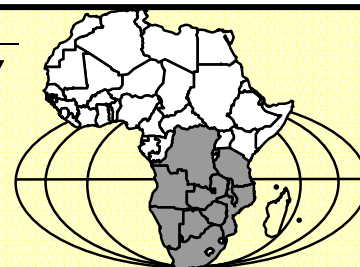




REGIONAL FOOD SECURITY PROGRAMME

GROWING SEASON STATUS Rainfall, Vegetation and Crop Monitoring



2004/2005 Issue 6

October 2004 - April 2005

Release date: 30 May 2005

SEASONAL BULLETIN

Highlights

- The 2004/2005 rainy season performed well in northern parts of the SADC region and not as well for the south central parts.
- Heavy rains increased soil saturation in northern Mozambique southern Malawi and north-eastern Zambia in December.
- The prolonged dry spell which persisted from January to March developed into a drought affecting southern Malawi, northern South Africa, southern Mozambique, Tanzania, southern Zambia and Zimbabwe.
- Analysis of satellite-derived Rainfall Estimates (RFE) and NOAA NDVI satellite imagery confirmed the northern half of the SADC region performed very well

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SADC Member States: Angola, Botswana, Democratic Republic of Congo, Lesotho, Malawi, Mauritius, Mozambique, Namibia, South Africa, Swaziland, Tanzania, Zambia, Zimbabwe

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EDITORIAL

The Regional Remote Sensing Unit (RRSU) is pleased to present the sixth and final issue of the Growing Season Status Report for the 2004/2005 rainy season, covering all dekads (10-day periods) from October 2004 to April 2005.

The RRSU acknowledges financial support from member states (through REWS) and from the EC through an EC-funded FAO project. FAO and USGS/FEWSNET provide technical support and data inputs.

The analysis presented in this bulletin is based on Meteosat derived Cold Cloud Duration images, which are received through the RRSU managed PDUS receiving station located at the Zimbabwe Meteorological Department in Harare, Zimbabwe; NOAA-AVHRR derived NDVI processed by NASA; and Rainfall Estimates (RFE) data obtained through United States Geological Survey (USGS) in South Dakota, USA.

The RRSU provided regular updates on the progress of the 2004/2005 rainy season through the 10-day Agromet Update, which were distributed by the SADC Regional Early Warning System and posted on the SADC web-site (www.sadc.int) and the Southern Africa Flood and Drought Network site (www.sadc-hazards.net), which was produced in collaboration with FEWS Net.

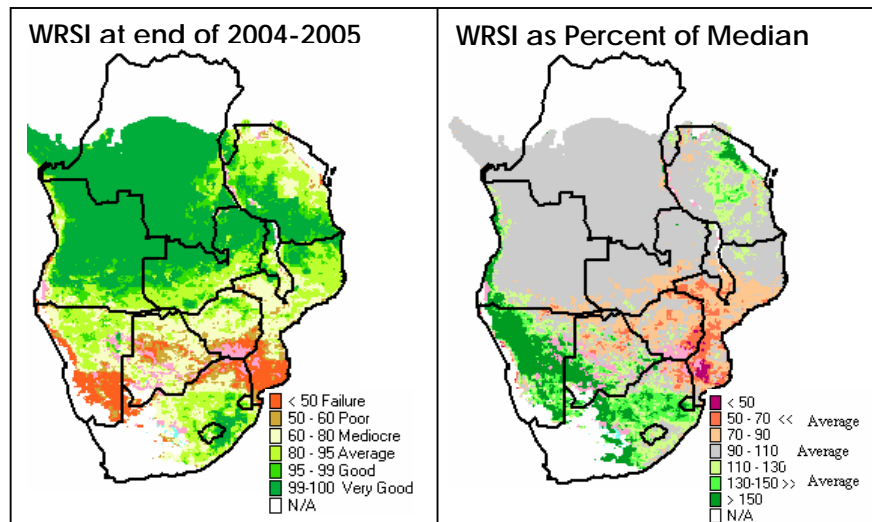
Despite good rainfall performance in many parts of the SADC region in the first half of the rainfall season, the second part of the season was characterized by poor rains and prolonged dry conditions leading to permanent wilting of crops in a large part of the southern half of the region.

Analysis in this bulletin is primarily an interpretation of satellite imagery, with incorporation of appropriate ground information. Ground data and interpretation are provided by the collaborating national meteorological services and national early warning units of the SADC Member States.

The focus of this bulletin is primarily at the regional level. At the moment the RRSU satellite image archive does not include Mauritius, which will be included in future bulletins. However, any information available has been included in this report. For more detailed sub-national analysis, readers should consult the national meteorological agencies and food security early warning units.

REGIONAL WATER REQUIREMENT SATISFACTION INDEX (WRSI) AS AT END OF APRIL 2005

The Water Requirement Satisfaction Index (WRSI) (Figure 1), indicates the extent to which the water needs of the crop were met by the rainfall during the course of the season. The latest WRSI analysis, as at 30 April 2005, suggests that generally, maize in the northern half of the region had enough water, while that in the southern part of the region did not. The image shows that southern Angola, central and southern Zambia and Malawi, southern Tanzania, most of Mozambique and Zimbabwe and parts of Lesotho and Swaziland had poor water satisfaction ratio. A WRSI



of below 50% implies that it is highly likely that there may be complete crop failure. This was the situation in southern Zimbabwe and Mozambique and northern South Africa (figure 1). The implications in South Africa may not be severe as the main grain producing areas are having a good harvest. The WRSI anomaly map (Figure 2) shows the relative magnitude of the WRSI as a percentage of the median WRSI. This provides an indication of how the current season performed compared to median, normal or expected conditions. Figure 2 shows that in 2004-2005 season, parts Zambia, Malawi, Botswana, most of Mozambique and Zimbabwe are below the long term median, an indication of poor performance. Areas with orange and purple colors have had a poor rainfall performance and expected to yield a below average crop, while the green colors show areas with potentially better than average performance. Grey indicates areas where average or normal crop performance is expected.

Potential Regional Disasters

Regional Floods: Northern/central Mozambique, Malawi and eastern/northern Zambia experienced prolonged heavy rains which persisted into January 2005 resulting in localized flooding. The excessive rains also resulted in leaching impacting on crops. In central/southern Malawi, crops were washed away, however, the rains diminished towards the end of the month allowing floods to recede. In eastern Zambia, some areas were negatively affected by heavy rains but information on the extent of the damage was not available. It was indicated that the areas in Malawi, Zambia and central/northern Mozambique were negatively affected impacting on final yields. The water level of the Zambezi River was rising and being monitored by the Zambezi River Authority

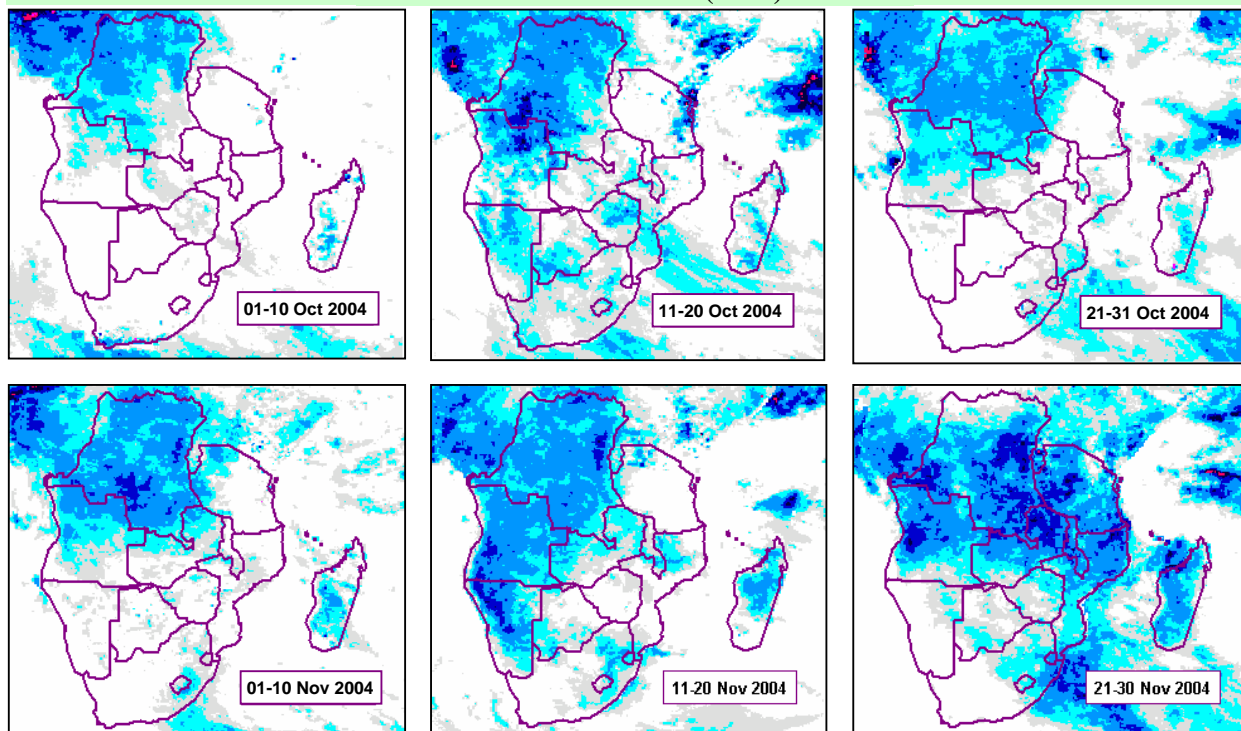
Regional Droughts: Significant below normal rains were received over southern Mozambique, southern Malawi, northern South Africa, and southern and western Zimbabwe (Masvingo, Matabeleland North and South)) during the second half of the rainy season (January to March). Very high temperatures exacerbated the effect of the prolonged drought conditions. These impacted negatively on production and hence the food security situation in these areas.

Locust Outbreak: The International Red Locust Control Organization for Central and Southern Africa (IRLCO-CSA) reported an outbreak of the African Migratory Locust (*Locusta migratoria migratorioides*), in northern Namibia (eastern Caprivi) and Western Province of Zambia in September and October, but these dissipated as control and eradication measures were implemented.

DISCUSSION OF THE SEASON DEVELOPMENT

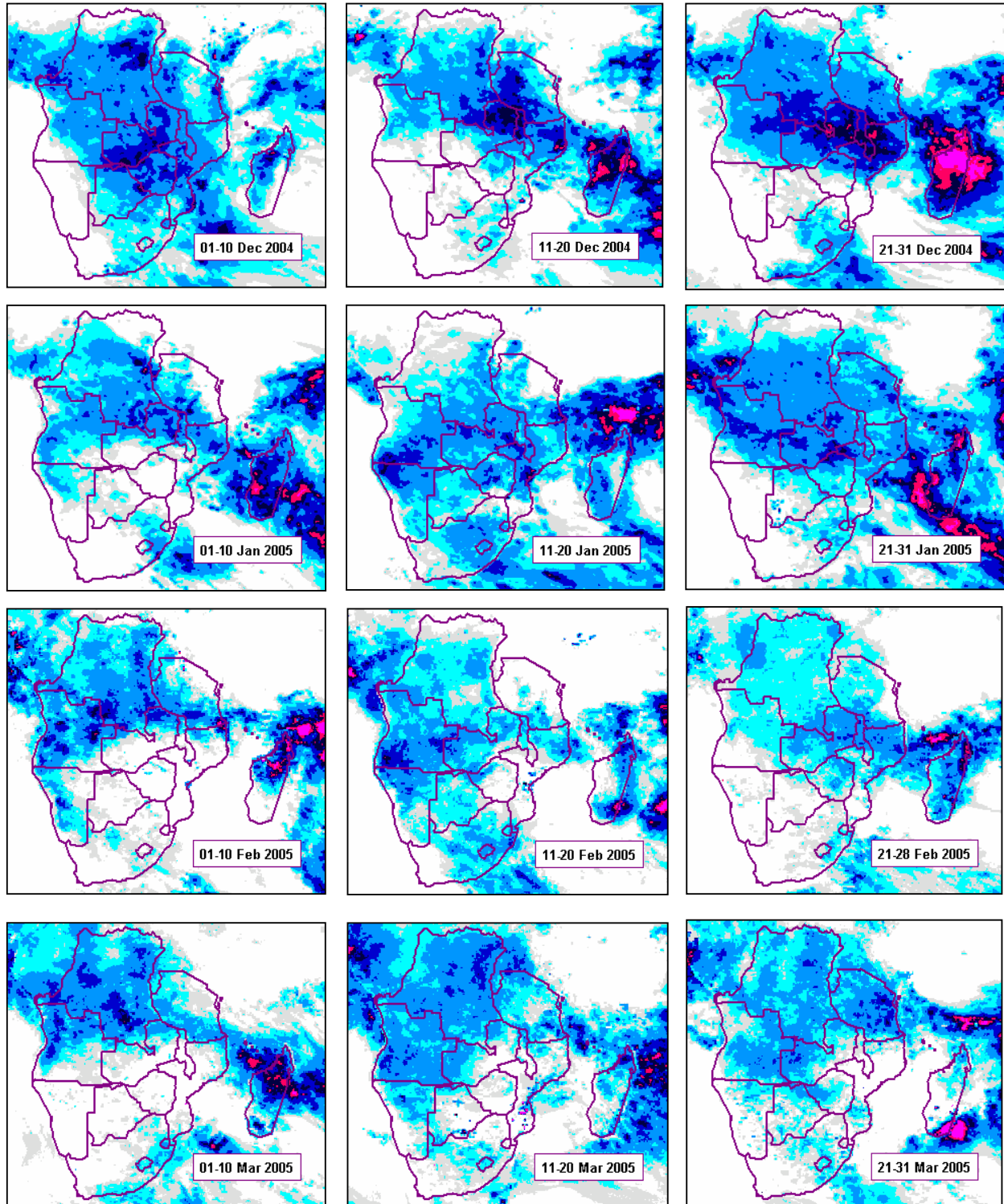
Spatial Aspects

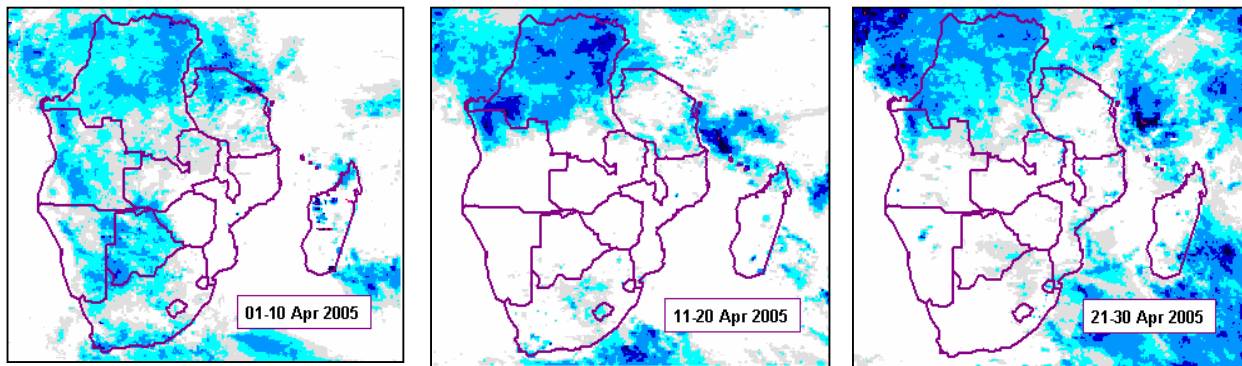
RAINFALL ESTIMATES (RFE) IMAGES



During the 2004-2005 agricultural season, the rainfall commenced on time in the northern parts of the sub-region while the southern parts experienced delayed onset in parts of Botswana, Mozambique, Lesotho, Swaziland, South Africa, Zimbabwe and Namibia. Rainfall improved in November and December 2004 in most areas. Rainfall Estimates images for November indicate that significant parts of the region received good rains during the month. This indicated a good start to the 2004/2005 rainy season. The month of December saw the north-eastern part of the sub-region receiving good rains throughout the month. The central parts of the region received well above average rainfall totals in this first ten days of the month, while the western parts of Angola had below

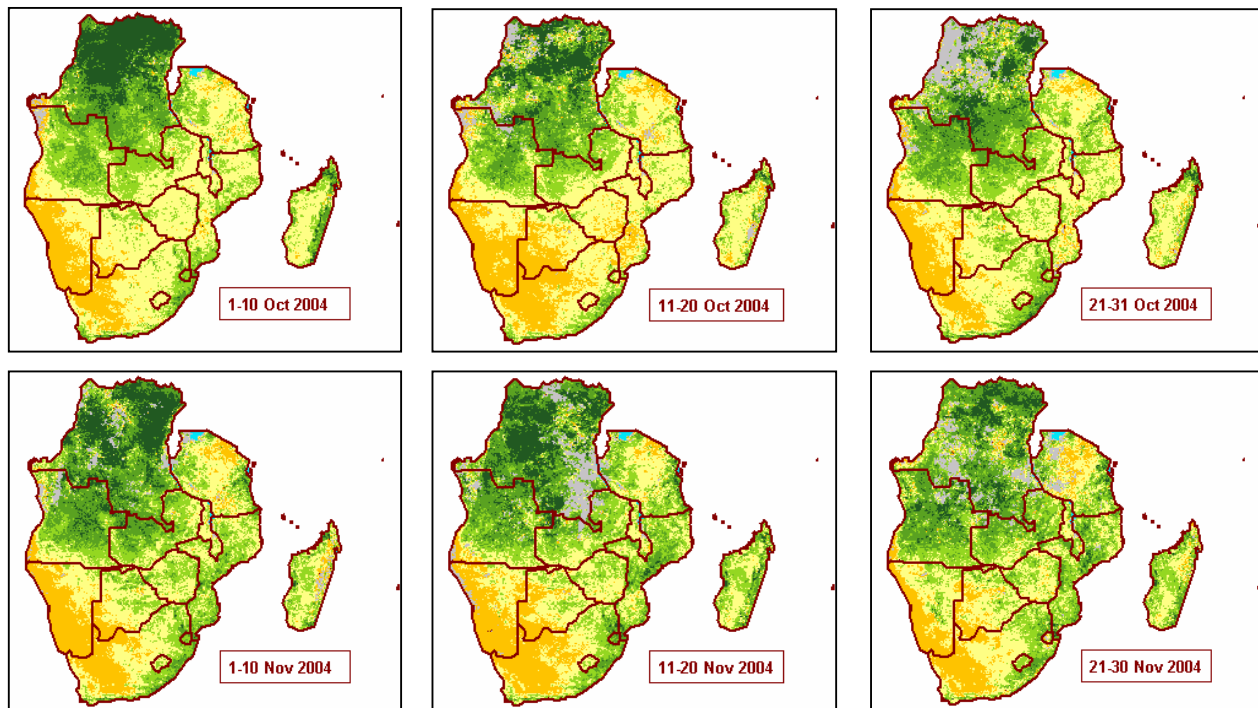
average rains. Some dry spells were experienced in the central parts of the region in the second and third decades of the December. The north eastern part of the region recorded well above average rainfall totals throughout the month and this led to some localized flooding. Cumulative rainfall totals for September to December show that the north-eastern parts of South Africa (including the maize triangle area), southern Zimbabwe, southern Mozambique, Swaziland, parts of Lesotho and northern Tanzania had below average rainfall performance. The north-eastern part of the region recorded above average totals in the same period.

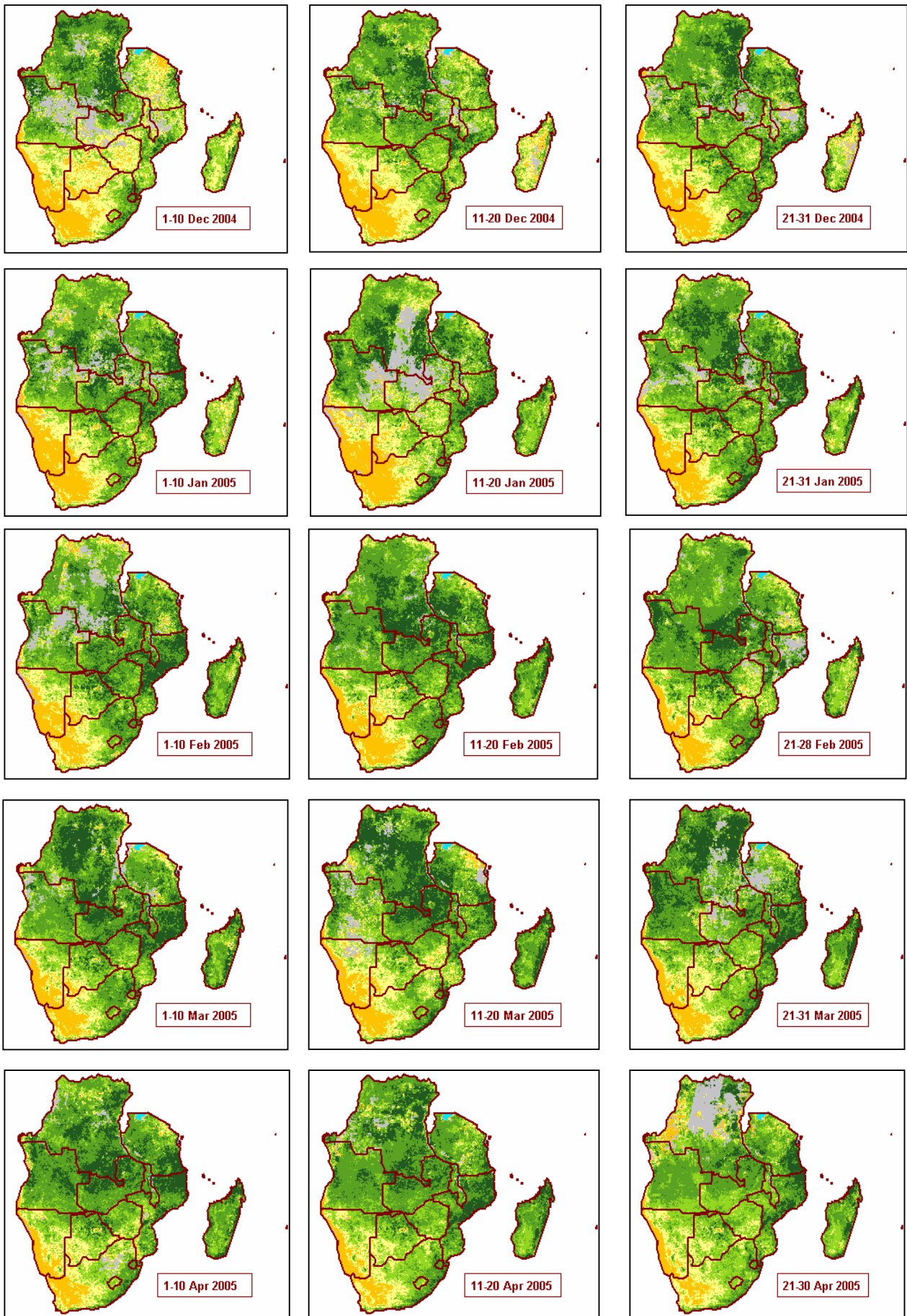




The second half of the season (January to April) experienced rainfall below average amounts in some parts of SADC. January saw reduced rainfall activity over the central parts of the region, covering southern Zambia, eastern Botswana, Zimbabwe, southern Mozambique, southern Malawi and northern South Africa. Dry spells persisted in these areas and led to moisture stress that led to crops failure in some cases. Some widespread showers were received in South Africa, Lesotho, Swaziland, Namibia, Botswana, Angola, Zambia, DRC, most of Malawi and northern Mozambique. In March, a continual of poor rainfall performance was noted in the drought stricken areas of south eastern Zimbabwe and southern Mozambique. Southern parts of Zambia and Malawi were also affected by the poor rainfall performance, which continued to the end of the season. The central parts of South Africa, the major grain producing area of the region, enjoyed a good second half of the season. April saw the expected diminishing of rainfall activity over most of the southern parts of the region as the ITCZ retreated northwards. The eastern parts of the region generally had a poor rainfall season with most affected countries including Zimbabwe, Mozambique, southern Malawi, southern Zambia, eastern and northern Tanzania, northern South Africa and parts of Swaziland. Some of these areas received less than 60% of the normal rainfall totals. The already bad food security situation in some of the affected countries will be worsened by this poor rainfall season.

Spatial Aspects NORMALIZED DIFFERENCE VEGETATION INDEX (NDVI) IMAGES



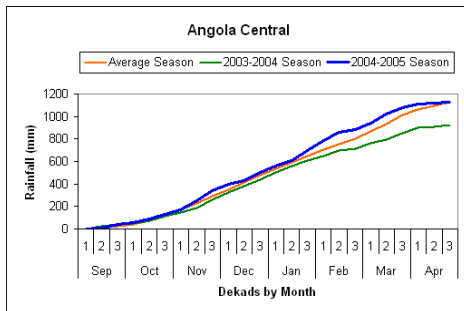


Normalized Difference Vegetation Index images for November showed an average start to the season for most parts of the region. Significant portions of the region showed expected vegetation conditions by the end of November. However, vegetation conditions for South Africa indicated a slow start to the season. Vegetation conditions improved significantly in the eastern half of the region sub-region from November to December owing to the good rains received in most parts of the region in December. Good vegetation development was noted in most parts of the region by the end of December, indicating a good first half of the 2004/2005 season. In comparison with the 2003/2004 season, the vegetation conditions of December of this season are much better than those of the last season at the same time, with the exception of a few areas of the region. By end of January, signs of poor vegetation performance could be seen in parts of southern Mozambique and southern Zimbabwe where vegetation development was below average. Dry spells experienced over the eastern parts of the region from January to February led poor vegetation developments in the affected areas. There was good vegetation development elsewhere by the end of February. Comparison with average shows that most areas had average to above average vegetation conditions by end of February, continuing in March. An extended dry spell worsened vegetation conditions in southern Mozambique and southern Zimbabwe. These areas have endured poor seasons in the past three years and this has led to a deteriorating food security situation in these areas. Parts of northern and eastern Tanzania showed poor vegetation development by the end of March, a carry over from the failed vuli rains. Other parts of the region, notably central South Africa, Namibia and Botswana enjoyed well above average vegetation development. The above average conditions in the major grain producing areas of South Africa confirm the good agricultural season enjoyed in these areas.

Time series and country updates

One of the RRSU products derived from satellite information are rainfall data extracts from RFE imagery, which are presented as cumulative values compared with a 9-year (1995-2004) average for specified sub-regions of SADC. These sub-regions can be administrative boundaries, watersheds, or agricultural areas. Suggestions for new areas to allow a more focussed monitoring are welcome. A number of RFE curves are here presented with an update for the SADC countries for which satellite and/or field information is available. Ground information provided by collaborating NEWUs is used to assist in interpreting the RFE images and curves.

The agricultural and climatic situation in each of the SADC member states can be summarised as follows:



Angola:

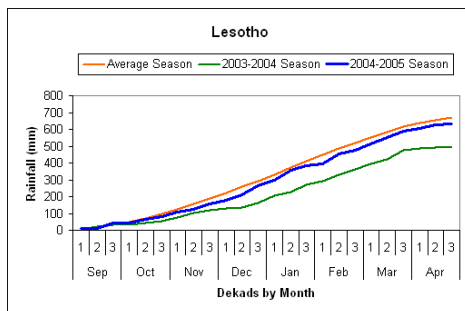
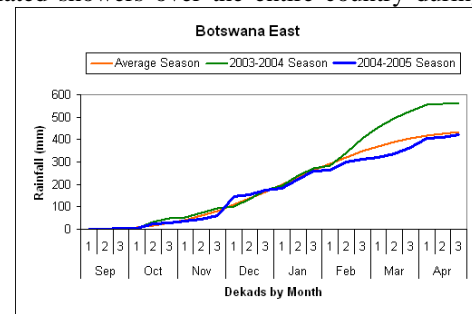
Satellite imagery indicated that the entire country received moderate to heavy rainfall during November with the heaviest rainfall amounts being experienced over the parts of Cuanza Sul, Huambo and Bie provinces in central Angola. The extreme southern and southwestern parts received light showers. Consistent moderate to heavy rainfall distribution continued from December to February over the north and northeastern parts and Central Angola (the Moxico, Alto Zambezi, Camanojue, Lumege, Luacano, leua, Cuembe, Dala and Luau districts). These substantial rains received in January resulted in flooding in some areas in the central region. Most of the coastal

regions received substantial amounts during the second dekad of January. The south-western parts received the heaviest rainfall in during the second dekad of February as the country experienced widespread moderate to substantial amounts of rainfall. Rainfall declined in the last dekad of February when light to heavy showers were received over most parts except the southwestern and coastal areas. Moderate to heavy rainfall was received over the north-western half of the country during the first dekad of March while the entire country received widespread moderate to substantial amounts of rainfall during the second and third dekads with the exception of some parts of the coastal areas. Heavy rains continued into the first dekad April over large parts of the western half. The extreme north-western parts continued receiving substantial amounts of rainfall while for the rest of the country, rainfall was declining as the ITCZ was retreating northwards signaling the end of the growing season. Cumulative rainfall (RFE curve) suggests that Central Angola received above-normal rains. Livestock condition and water availability improved as the season progressed.

Botswana:

At the onset of the season, almost the entire country received moderate to significant rains with the southern half receiving the heaviest rains which revived pastures that were in poor condition after a long dry winter. Poorly distributed rainfall was received in the third dekad of October, however, land preparation continued. For the month of November, rainfall was much below normal for the greater part of the country with very few isolated areas

(Molepolole, Mochudi, Jackalas II, Shorobe, Mamuno, Kanagas, Tshane, Moeding and Mahalapye) experiencing normal to above-normal rainfall. Most parts received planting rains during the second and third dekads. Southwestern areas received light to moderate rains in the second dekad while areas in the extreme north and northwestern parts received light to heavy showers in the third dekad. During the first dekad of December, light to moderate rains were received across the south-western parts while substantial amounts were received over the northern and eastern areas. Erratic light showers with pockets of moderate rains were received over the entire country during the last two dekads. Pastures and livestock conditions continued improving as the season progressed. Widespread light to moderate rains were received across the south-western parts of the country at the beginning of January. The northern and eastern areas received substantial amounts of rain during the second dekad. The first and last dekads of February were dry with isolated light showers while widespread moderate to isolated heavy showers were received over the entire country in the second dekad. Only the extreme north-eastern parts received heavy rains during the third dekad. There were isolated showers over the entire country during March; however, rainfall performance improved during the second and third dekads with heavy rains being experienced over the extreme southern parts and northeastern parts respectively. April was wet in the first dekad with the whole country benefiting from the widespread light to moderate showers. A few isolated showers were experienced over the southern half of the country during the last two dekads. Cumulative rainfall (RFE curve) for the east of the country indicated below-normal rains for March and normal for April. From February to the end of March, rainfall performance was not good and the dry spell was detrimental to the crop as a whole. Pastures and livestock conditions continued improving as well as water availability.



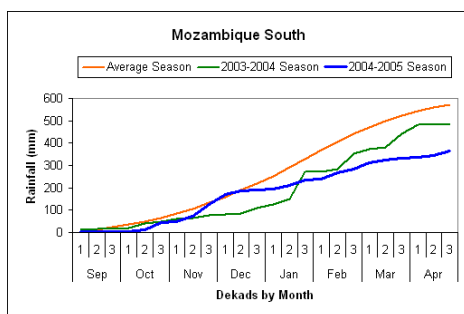
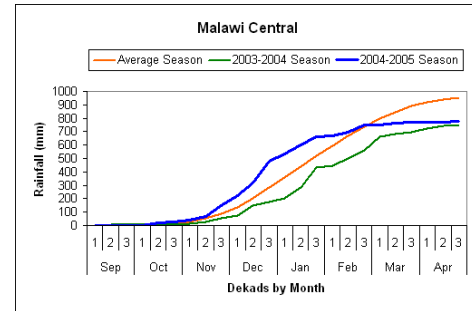
Lesotho

During October, poorly distributed below normal rainfall was registered over most of the country. Significant and normal rains were received over the eastern parts. Planting was undertaken over the highland areas while in the lowlands, land preparation was in progress over some areas and planting was delayed due to insufficient soil moisture. In November, the country received below normal to near normal monthly rainfall while Semonkong, Qacha's Nek and Oxbow registered relatively high monthly rainfall amounts. Winter wheat in the Lowlands was at maturity stage ranging from

fair to good condition but reduced production was being expected due to reduced area planted as a result of erratic rains. The northern parts of Lesotho received above-normal dekadal rainfall during the first and second dekads of December while near normal rainfall was registered at Mafeteng, Mokhotlong and Maseru airport. Elsewhere, below normal rainfall was recorded. During the last dekad, the country continued to receive normal in the highlands and near-normal rainfall in the lowlands, but high temperatures compounded the effects of low rainfall in the lowlands, as the rainfall was insufficient to sustain crop growth hence some crops were showing symptoms of severe moisture stress. The crops were further affected by hailstorms in most parts of the country which could affect the country's total production. Light showers to moderate rains were received during the first dekad of January with widespread moderate to heavy rainfall being received over the entire country during the second dekad. During the last dekad, the country recorded below normal dekadal rainfall with the exception of Butha-Buthe, Leribe, Mafeteng and Semonkong where near-normal to above-normal rainfalls were registered. Crop condition was good at some places like Mokhotlong, Leribe and Butha-Buthe, but countrywide, there were still cases of hail damage which negatively affected the progress of the crops. Grasshoppers destroyed vegetables and peach trees in Mafeteng. Below normal rains were experienced throughout the country during the first dekad of February resulting in some eastern and southern parts experiencing soil moisture stress. The second dekad was wetter and most areas received moderate to heavy amounts of rain. The third dekad was dry in some parts with dekadal rainfall figures. Erratic rains experienced in high-lying areas hampered crop development as they came at critical stages of plant development (flowering, tasseling and grain-filling) resulting in unsatisfactory crop conditions. April was drier as the season was coming to an end although the last dekad of April was wet. The available soil moisture will be adequate for winter cropping. By the end of April, cereal crops (maize, sorghum) had matured in most parts of the country with just a few places with crops nearing maturity. Cereal crops condition ranged from bad (for those affected by hailstorms and impacting on total production) to good. Livestock condition and water availability improved as the season progressed. Cumulative rainfall averaged over the whole country is near-normal to normal.

Malawi

The southern half received moderate to heavy rainfall at the beginning of November while almost the entire country experienced significant rains during the last dekad, improving soil moisture levels favourable for seed germination as well as crop and pasture growth. In December, there was good rainfall distribution both in space and time which supported planting, germination of seed, crop growth and development raising prospects of a good season. On the contrary, excessive rain resulted in flooding in some of the central and northern parts of the country. The early maturing hybrid maize varieties planted mid-November in low altitude areas had reached tasseling stage. An outbreak of army worms (according to Malawi News Agency (MANA)) destroyed approximately 500Ha of maize in Karonga (222 hectares) and Chitipa (235.04 hectares) districts. Meanwhile, farmers were continuing planting, application of fertilizer and weeding. The rains also increased pasture availability for communal grazing. There was slight reduction in rainfall at the beginning of January which facilitated weeding, fertilizer application and crop photosynthesis, however, incessant heavy rains resulted in localized leaching of soil nutrients, flooding and water-logging in some areas. Planting of tuber crops was implemented in January in most parts of the country. The early-planted maize particularly in south had reached maturity stage. Widespread dry spells were experienced in many areas and these prolonged and persisted into February as very low rains, coupled with high temperatures, were experienced over almost the entire country. The situation was particularly worse along the Shire river valley from Mangochi through Balaka to Chikwawa and Nsanje districts where high temperatures and long sunshine hours enhanced evaporation resulting in most crops at flowering and tasseling stages (a critical stage where crops require a lot of water) reaching permanent wilting point. Heavy rains were only received in the last dekad of February, however, these could not resuscitate the crops (maize, tobacco, beans, groundnuts) that had been severely affected by the dry spell. Cumulative rainfall analysis (RFE curve) as well as gauge data for central Malawi (convergence of evidence) indicated an above-normal season from mid-November to mid-February when total declined to way below normal. This was the opposite of the seasonal forecast where poor and erratic rains were expected during the first half and good rains expected from January 2005 onwards. In the northern half, livestock condition and water availability improved as the season progressed. The dry spell impacted negatively on the final maize production, initially estimated at 1.7 million tonnes, as it came during the critical tasseling and grain-filling stages of crop development. It was indicated that due to the prolonged dry spell, some farmers were not going to harvest anything thus impacting on food security during the coming consumption period (April 2005 – March 2006). It was also indicated that production dropped to approximate 1,306,983 metric tonnes which is drop was 24% from the initial estimate and 25% from 2003/05 production. The Government was devising ways of importing maize to mitigate hunger. Cumulative rainfall analysis (RFE curve) for central Malawi suggested an above-normal season, but this is primarily due to the high rainfall in November and December, January and February totals were below normal.



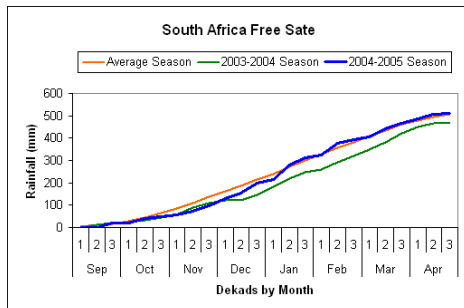
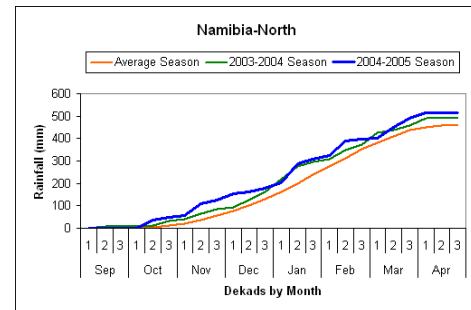
Mozambique

The southern half of the country received some rain during the first dekad of October while elsewhere it was dry. Almost the entire country registered moderate rains with the northern parts getting isolated showers during the second. Significant rains were experienced over the southern parts during the third dekad while the north received rain over some of the major growing areas. Land preparation and inputs procurement were the main activities as farmers were anticipating the onset of rains. By the end of the month, land preparation and planting were in progress throughout the southern Mozambique as significant rains with good distribution were received during the third dekad. The country was relatively dry as heavy rainfall was limited to the extreme southern tip and north central Mozambique during the first and second dekads of November. During the third dekad, almost the entire country received moderate to heavy rainfall with the northern half of Mozambique receiving substantial amounts of rain. In December, widespread moderate to heavy rainfall was received over almost all provinces with substantial amounts being received in central Mozambique and lighter rain over the extreme north and south during the first dekad. During the second and third dekads, light to heavy rainfall concentrated in the central and northern parts of the country with substantial amounts being received over Niassa, Cabo Delgado, Nampula, Zambezia, Tete, Sofala and Manica and these could have resulted flooding in low lying areas. Planting and land preparation continued in the north, where the normal start of season is December. The early crop in these areas was at vegetative stages and was in good condition. Mozambique north continued to experience high amounts of rainfall throughout the month while the central part received excessive rains bringing

the cumulative rainfall to approximately 600mm during the last two dekads. The southern part continued battling the dry spell experienced over most parts during the first two dekads and over isolated areas during the last dekad of January. The month of February was characterized by erratic rainfall in the south and central zones of the country while the northern zone received moderate to heavy rainfall. During the third dekad, some isolated areas in central Mozambique (Sofala and Zambeze Provinces) as well as in North province (Nampula and Niassa) experienced excessive rainfall. In the south zone, although the crops were planted in October/ November had reached maturity, crop condition was bad as the prolonged dry spell persisted. In some areas of the central zone, crops were at vegetative to maturity stages and in good condition. The erratic and below normal rainfall since January in the south and some parts of central Mozambique affected many crops, especially maize, and approximately 137.950 ha of crops were lost due to the drought conditions. By the end of February, rice in the coastal districts of Zambeze was not good while maize was showing severe symptoms of moisture deficiency in the southern districts of the Tete province. Overall this will compromise the food security of the estimated affected 459,681 people in the south. Cumulative rainfall analysis (RFE curve) for Mozambique south continued to indicate well below normal rainfall performance. In the northern zone, crops reached maturity stages. The crops, pastures and livestock were all in good condition.

Namibia

The country was mostly dry during the first dekad of October. The northern half received significant rains in the second dekad while showers to moderate rains were received elsewhere. In the last dekad of October, the rest of the country remained dry while the northern parts experienced light showers to moderate rains. Land preparation was the major activity in all cropping regions with planting being implemented in the Caprivi Strip. The country was mostly dry during the first dekad of November and received moderate to substantial amounts of rain over central and north-western Namibia during the second dekad. Light to moderate rains were experienced over the north-eastern parts during the third dekad. The Caprivi region received moderate to heavy rains during the third dekad. In December, moderate to significant rains were received in the northern parts of the country including the Caprivi Strip (the main agricultural area) during first dekad of the month. The second and third dekads were dry for most of Namibia with the exception of the Caprivi, which got more rains in the third dekad. The dry conditions experienced elsewhere resulted in water stressed pastures hence affecting livestock. Northern Namibia benefited from the moderate to heavy rains during the first dekad of January while the southern and coastal areas received minimal to no rains at all. The second was wet with substantial rains being received in the northern half and light to moderate rains being received in the south. The third dekad was dry with the exception of the Caprivi region. However, rains have been persistently poor in the eastern Caprivi region. The dry conditions experienced in January retarded crop growth and further hampered hopes of a bumper harvest. The overall food supply situation in the eastern Caprivi region, however, is generally improved with good harvest of last season's crops. Cumulative seasonal rainfall (curve) for northern Namibia indicates an above normal rainfall performance. Livestock condition and water availability improved as the season progressed.



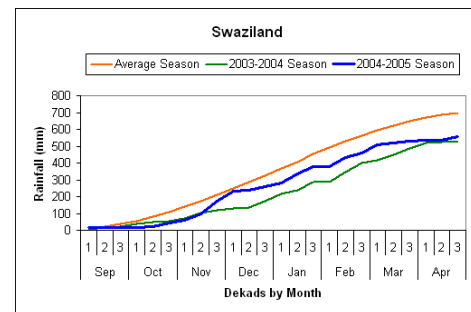
South Africa

Most of the country was relatively dry in the first dekad of October, with the exception of the Western and Eastern Cape Province. Moderate to substantial amounts of rain were received over most of the country with the Western Cape, isolated parts of the Free State and Gauteng receiving the heaviest during the second dekad and light showers to moderate rains over the eastern parts during the third dekad. These resulted in increased land preparation and isolated planting over the maize producing areas. Rainfall during November was still below normal over large parts of the country and especially over the maize producing area. Most of the country was relatively dry in the first dekad while moderate to heavy rains were received over the center and eastern parts of the country in the second and third dekads. The maize producing areas received moderate to heavy rains prompting farmers to embark on planting. The winter crop had reached maturity. Rainfall in December 2004 was above normal over most of the central, eastern and north-eastern interior. Almost the entire maize producing areas of South Africa received good rains. Farmers in the central to western parts planted later than normal due to delayed rains while those in the Free State Province planted early thus reducing risk of frost damage. The extreme northern parts were dry during the last two dekads. January was wet over the southern half of the Northwest Province, eastern parts of

the Free State, the whole of Gauteng and Mpumalanga as well as the western and southern parts of Kwazulu Natal and northern parts of the Eastern Cape. Widespread rains were received over most parts of the country during the second dekad. By the end of the month, most of the maize growing areas had received more than 150% of the normal rainfall. Small areas in Northwest, Kwazulu Natal and the Free State received below normal rainfall while the extreme northern parts continued experiencing prolonged drought conditions. During the first dekad of February, moderate to significant rains were received over most of the maize growing areas while on the other hand, prolonged drought conditions prevailed in the extreme northern parts resulting in crops experiencing severe moisture stress, leading to permanent wilting. Widespread rains were received over most parts of the country during the second dekad, however, some isolated pockets in the central part of the Free State, eastern Gauteng and Mpumalanga continued to experience prolonged dry spells. The main maize growing areas in central South Africa however received good rains. Due to the favourable rains and good crop development in the maize growing areas so far, the RSA maize crop production estimate was about 10 million tons and a bumper harvest was being anticipated. Grazing conditions were very favourable. Cumulative rainfall analysis (RFE curve) for the Free State suggested a normal rainfall performance.

Swaziland

The entire country was dry during the first dekad of October. The central Highveld region received moderate rainfall while the southern Highveld and northern part of the Lowveld received very little rainfall compared to dekad average rainfall. In the third dekad, average to above dekad average rainfall was received in the Highveld and most Middleveld regions of the country. However, average to lower than average rainfall was received elsewhere. In terms of agricultural activities, there were traces of land preparation but no major activity due to the little rainfall that had been received. Below average rainfall was recorded over the whole month of

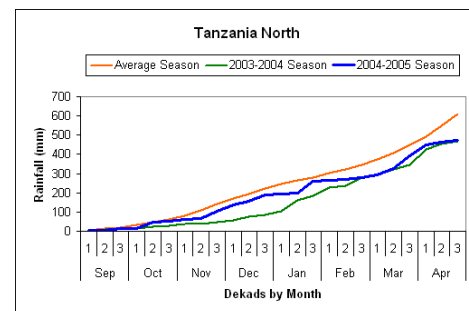


November, mainly in the southern and the central parts of the country. Excessive rainfall was received in the central Highveld region and the central Lubombo plateau. A localized heavy downpour experienced in November resulted in excessive waters flooding Mbabane causing damage to infrastructure and caused one fatality. Hot to very hot conditions prevailed during the month. In the Lowveld region, the crop had good germination while in the Highveld region, the crop had good germination while in the Highveld region. As the season progressed into December, widespread light to heavy rains were experienced during the first dekad almost normalizing the season that was below normal, however, rainfall diminished during the second and thirds dekads. The maize crop was generally in good condition and at early vegetative stages in most parts of the country except in the lower Lowveld areas (Siphofaneni, Sithobela and Kalanga RDAs), where tasseling and cobbing maize crops were showing symptoms of severe moisture stress and wilting due to the prevailing dry conditions. Weeding and fertiliser application were the main agricultural activities although some farmers in the Highveld and Middleveld were still planting. In January, light showers to moderate rains were received during the first dekad. In the second and third dekads, above average rains were received countrywide with the exception of the Lowveld. Isolated heavy storms were experienced and in Manzini, they destroyed grain-filling and late vegetative maize crops beyond recovery, whereas the maize crops in the south were slightly affected. In general, maize was at tasseling to grain-filling with a small percentage at maturity and a significant percentage still at vegetative stages. By the end of the month, the slightly affected crop had improved while the heavily damaged crops showed no signs of recovery and this is bound to have a negative impact on the final harvest prospects. There were insignificant rains over most parts during the first dekad of February. The second dekad was wetter, but the rains were not adequate to replenish moisture required for crop development to maturity. During the last dekad, insignificant rains again were received over most parts of the country with only a few areas in the northern Highveld receiving above average rainfall. High temperatures experienced exacerbated the effects of the prevailing dry spells resulting in crops in some areas reaching permanent wilting point or drying prematurely. Matured maize benefited from the temperatures as they promoted drying of the crop in readiness for harvesting. The moisture stressed premature and permanently wilted crop was likely to have adverse effect on the final national harvest production. Also the farmers whose maize crop was damaged by the January hailstorm replanted beans donated through the Disaster Task Force, thus impacting on the final cereal harvest production. Pastures and livestock remained in good condition. Cumulative rainfall analysis (RFE curve) for Swaziland suggests a rainfall season below normal rains.

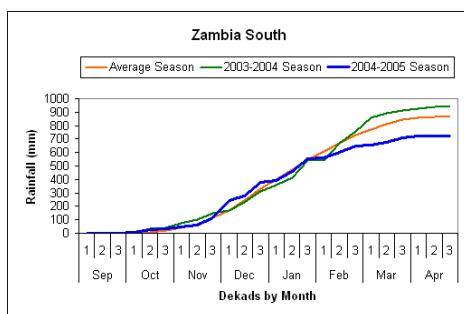
Tanzania

Soil moisture was replenished in October over the bimodal rainfall areas when the southern coast belt was hit by a cyclone. Farmers in northeastern and northern coastal belt (vuli areas) in increased land preparation, planting and input procurement activities. In November, rainfall activity was limited to the western half and isolated areas along

the coast of the country during the first and second dekads. Widespread moderate to heavy rains covered almost the entire country except for parts of north-eastern areas where dry conditions dominated, indicating failing short rains (*vuli* season). Good crop development (maize at tasseling) was registered over the Lake Victoria Basin although in some parts where rains were excessive, maturing beans lacked necessary dry conditions needed to fully mature (Karagwe and Bukoba districts). Over the coastal belt, maize at various stages benefited from good soil moisture supply while crops over the low lands in northeastern areas (Simanjiro, Monduli, Loliondo, Moshi rural and Karatu districts) experienced some level of soil moisture deficits that hampered normal crop development. Planting and land preparation were the main agricultural activities over the central, southern and south-western areas. Decline in the water levels in rivers and water reservoirs was recorded as the dry period continued while lack of adequate moisture degraded the quantity and quality of pastures. During December, rainfall was recorded over most parts of the country. Higher amounts exceeding 300mm were recorded in areas in Mahenge and Tabora districts while lower amounts were experienced over the north-eastern sector (Kilimanjaro region received less than 50mm). Generally, the 2004 short rains (*vuli*) performance was below normal and some localized north-eastern areas had severe soil moisture deficits. Soil moisture supply ranged from adequate over most parts to excessive levels over western areas (Tabora and Sumbawanga districts), mid-eastern areas (Mahenge district) and southern areas (Mtwara district). Water flooded soils were beneficial to paddy growing. Maize, beans and sorghum crops were at different stages of development and in good condition. In the unimodal region, final land preparations and planting were major activities. December marked the normal ending of the short rain season and yield for the *vuli* crops grown over the area (such as Arusha, Simanjiro, Monduli, Loliondo, Moshi rural and Karatu districts) fell far short of expectations. In January, above-normal rainfall was recorded over the southern, south-western and the western parts reaching a maximum total for the month of about 200mm. Central Tanzania recorded near normal total rainfall for the period while the north-eastern areas observed below-normal rainfall with 50mm being the maximum amount recorded adding to the poor short rains since October 2004. In general, soil moisture supply over most parts of the country ranged from poor to moderate levels. Over the Lake Victoria Basin including northern parts of Kigoma region, maize and beans generally in moderate state had reached maturity and were being harvested. In the *vuli* region (over the lowlands of northeastern and northern coastal belt), below normal performance of short rains resulted in poor yields of maize. Most farmers over these areas started land preparations in anticipation of the long long. Over unimodal rainfall areas, the maize crop was generally at vegetative stage and in good condition. Paddy, which was being transplanted in Shinyanga and in a few areas over the coastal while cassava at various stages across the country continued well. There was a late start of the long rains in the bimodal areas as the rainfall was very much below normal in the northern, north eastern and coastal regions of Tanzania. Prolonged dry spells also persisted in all the unimodal areas i.e. central (Dodoma and Singida), western (Tabora and Kigoma), south western (Iringa, Mbeya and Rukwa) and southern regions (Lindi, Mtwara and Ruvuma). Dodoma and Singida and parts of Tabora were the most affected and crops covering more than 50% of the total planted area had reached permanent wilting. Generally, all other unimodal rainfall regions (western, south western and southern regions) were also affected to some extent. Perennial crops in bimodal areas of northern, north eastern highlands, northern coast and hinterland areas were negatively impacted by cumulative soil moisture stress resulting from poor *vuli* rains. However, water availability for livestock was adequate. Cumulative rainfall analysis (RFE curve) for north of Tanzania suggests prolonged dry conditions from January and below normal seasonal rainfall.



Zambia



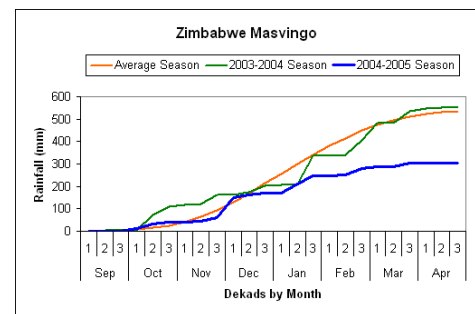
Central western Zambia received moderate rains while the rest of the country was dry during the first dekad of October. Light showers to moderate rains were received over most parts of Zambia during the second and third dekads with the Luapula and Northern provinces registering the heaviest rains. Land preparation and inputs procurement countrywide were major activities while dry planting was being implemented in some provinces. Light to moderate rainfall occurred over most areas in Zambia throughout the November. During the first and second dekads, the northern half benefited as light to heavy showers were received with isolated areas getting moderate rains. By the third dekad, almost the entire country had received enough sowing rains and planting was the major activity and some farmers had almost finished planting major crops. During December, moderate to heavy rainfall was received over almost the entire country with the northern parts recording the highest. The second dekad was dry in the Southern and Western provinces and

most parts of these provinces received very little rainfall. In the southern province, some crops were experiencing retarded growth due to low rainfall. Towards the end of the month, some areas experienced excessive rainfall which hampered weeding. Weeding and fertilizer application were the main agricultural activities in the southern province, while replanting was being undertaken in some parts of Livingstone and Kazungula district. At the beginning of January, significant rainfall occurred in many areas of the country thereby improving the crop condition. The excessive rains received over parts of Eastern province retarded crop development in some areas, however, the crops had recovered by the end of the month. Elsewhere there was good crop development. During the same month, floods were experienced in the Luangwa Valley of Eastern Province, the areas surrounding Lake Bangweulu in the Luapula Province and Gwembe Valley and these adversely impacted on the crops and hence ultimately compromising on food insecurity. By February, crops in parts of Eastern and Western Provinces were maturing while the late-planted crop was either at tasseling or grain filling stage. The prolonged dry spell over the Southern and parts of Western provinces resulted in severe moisture stress, some of the crop was recovering although the rains came too late for meaningful recovery that would culminate in a reasonable yield. Livestock condition and water availability improved as the season progressed. Cumulative rainfall analysis (RFE curve) for Masvingo province suggests little rainfall alleviating the prolonged dry spell which prevailed since mid-January.

Zimbabwe

The onset of the season was marked as the second dekad of October when almost the entire country was wet. Land preparation, input procurement and tobacco transplanting were the major agricultural activities. Maize planting was implemented in areas with enough planting moisture. In November, most of the country was relatively dry during the first two dekads as light to heavy showers were received over isolated parts. Widespread moderate to heavy rainfall fell over almost the entire country during the third dekad resulting in increased land preparation and planting activities. Widespread moderate to heavy showers continued into the first dekad of December.

These continued over north-eastern Zimbabwe in the second dekad while the south and western areas were dry with isolated parts showers. During the last dekad, there were widespread light thundershowers across the country with heavier showers confined over the north-eastern districts. Low rainfall was experienced in the southern parts of the country. By the end of December, the productive areas of the country (Mashonaland West, Mashonaland Central and Mashonaland East) had received sufficient rainfall for good crop development. The first dekad of January was mostly dry with light rainfall being experienced along the Zambezi valley. Widespread moderate to heavy showers were experienced during the second and last dekads with the central and extreme northern districts received more than 100% of their normal rainfall. Dry conditions prevailed in the south resulting in predominantly dry conditions as middle level circulation inhibited meaningful cloud development. The western and southeastern districts continued to receive less rainfall, having received 80% or less of the normal by the end of January. February is supposed to be the wettest month, however, a major prolonged dry spell persisted from January to mid-February 2005. The dry spells were longest in the Midlands, Masvingo and Matebeleland provinces whilst some isolated showers were experienced over the northern areas during the dry spells. Some districts in the Midlands and the Mashonaland provinces were within the normal category whilst the rest of the country received below normal rainfall. The Lowveld and the southern parts of Eastern Highlands received amounts between 50% and 75% of their long-term mean. The highest percentages of normal were at Kwekwe with 109% and Guruve with 106%. Cumulative rainfall analysis (RFE curve) for Masvingo province suggests little rainfall alleviating the prolonged dry spell which prevailed since mid-January.



SITUATION MAP

