REGIONAL FOOD SECURITY PROGRAMME

Agromet-Update

Special Issue on Drought Impact 2004/2005 Growing Season

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Rainfall Performance

Despite a good rainfall performance in many parts of the SADC region in the first half of the rainfall season, the second part of the season has been characterized by poor rains in a large part of the southern half of the region.

Apart from some of the northern areas that experience two seasons annually, the rainfall season in much of the SADC region commences in October/November and terminates in April/May. 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. The rainfall improved in November and December 2004 in most areas, and cumulative rainfall up to December was satisfactory in most of the SADC region. Northern South Africa, southern Zimbabwe, and some areas in southern Mozambique, northern Botswana, Lesotho and Swaziland however had low rains during this first half.

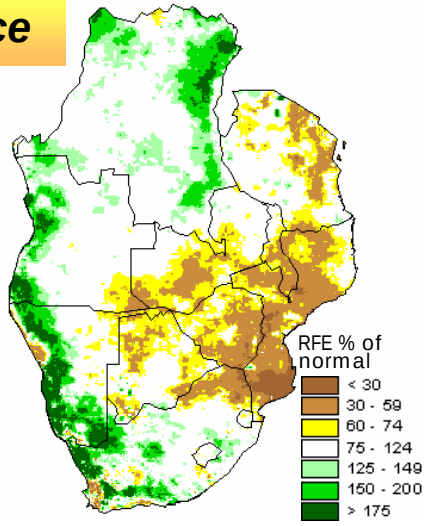

Figure 1: 1 Jan – 10 March 2005 rainfall totals compared with normal

The second half of the season (January up to current) experienced rainfall below average amounts in some parts of SADC. Southern Mozambique received less than 30% of normal rainfall (dark brown areas, figure 1) while areas in parts of northern and eastern Botswana, central and southern Malawi, much of Mozambique, southern and central Zambia, eastern and southern Zimbabwe, northern parts of South Africa, parts of northeast Namibia, and parts of Tanzania and received between 30-60% of normal rainfall (brown colours, Figure 1). Parts of Lesotho and Swaziland had poor rainfall distribution earlier in the year – recent rains have brought their percentages of normal rainfall to near-normal levels, although in many cases too late to revive affected grain crops. Table 1 summarizes the rainfall patterns during the January-March 10 period, as well as the potential implications of the rainfall pattern on agriculture, for selected zones in the Member States. The low rainfall received during this period was associated with long dry spells of up to 20-30 days which occurred from late January into February 2005, a critical time for crop development.

Impact on Agricultural Production

The rainfall performance in much of the southern half of the region has been quite poor during the second half of the season (Figure 1, brown colours). This has negative implications for cereals and pulses, with pasture for livestock being affected in areas with more extreme rainfall deficit areas and high livestock densities, while roots and tubers are not likely to be affected.

For maize, the dry spells are likely to reduce yields by about 10-20% on average in parts of central and southern Malawi, Mozambique and Zambia, eastern and southern Zimbabwe, parts of Lesotho, northern South Africa and Swaziland. In some areas though, the reduction in yield could be even higher.

Where sorghum and millet were planted, these were less affected by the dryness. Pulses were also affected. However, some pulses had already reached maturity by the time the dry spell started. Despite the recent dryness, roots and tubers are likely to experience a minimal reduction in yield. The situation may impact slightly on livestock in terms of pasture availability, as pastures are more resilient than crops in terms of surviving soil moisture deficits. However, areas that have received less than 60% of normal rainfall will experience reduced pasture availability especially where livestock densities are high.

This Agromet Update is a product of the Regional Remote Sensing Programme (RRSU) in the SADC FANR, in collaboration with the USAID FEWSNET. Ground information used is obtained from the National Early Warning Systems in the SADC Member States

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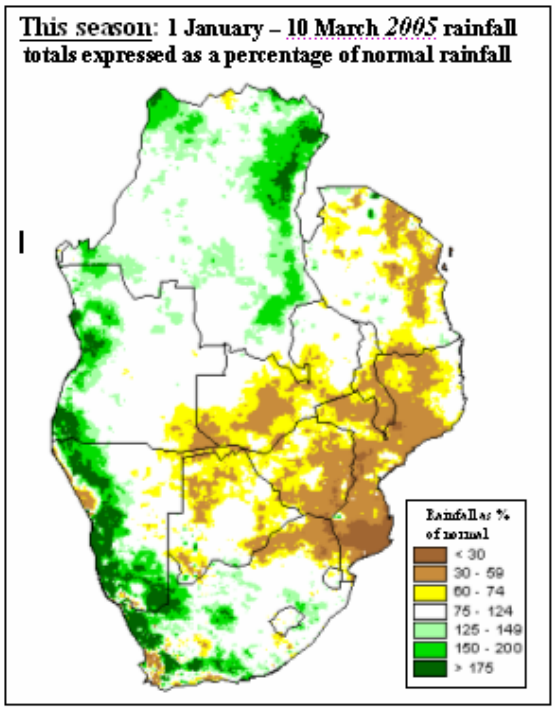
South Africa – the biggest grain producer in the region, is having a very good season in the main grain producing areas, and expects a bumper harvest this production year; this is on top of the residual surplus from last season. The surplus grain from South Africa could be sufficient to meet the shortfalls likely to be experienced in other countries this season.

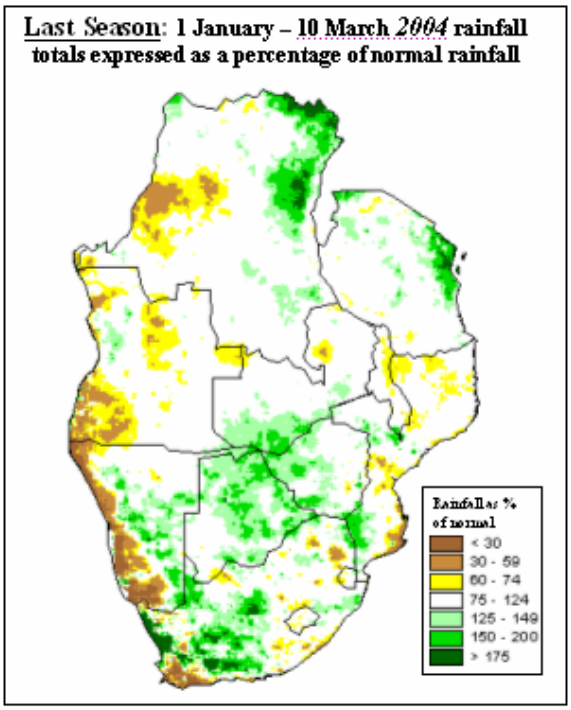
In most areas in the southern half of the region, the season has progressed for more than three quarters of its normal duration. Little rainfall is expected in these areas as the rainfall systems are moving northwards. Even in the event of more rains in the remainder of the season, most grain crops that have been affected in these southern areas are beyond recovery.

However, pasture for livestock will be improved by any anomalous rains. In the northern half of the region, the season is still continuing. Forecasts are calling for higher chances of good rains in these areas, which should improve the current poor performance in some of these areas such as northern Tanzania.

Comparison of Seasons 1January – 10 March 2004 and 2005

How does this rainfall season compare with last season in the SADC Region?





Maps comparing rainfall in the last part of the current season (2004-2005, map on the left) with rainfall in the last part of the previous season (2003-2004, map on the right). Rainfall performance for this season is much worse than the performance last year in many areas. The maps can be interpreted as follows:

- Brown colours: Areas with rainfall that was much less than normal
- Yellow colours: Areas with rainfall that was slightly less than normal
- White colours: Areas with rainfall that was approximately the normal rainfall for that area
- Green colours: Areas with rainfall that was above normal.

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Table 1. Cumulative rainfall received from 1 January to 10 March 2005 compared to average, and associated implications					
Zone of country	**Normal rainfall (mm)**	**2004/05 rainfall (mm)**	**Rainfall as Percentage of average**	**Moisture**	**Agricultural Conditions**
Angola Central	427	451	105.6	Normal	The productive *Planalto* region of Angola. First season appears to have performed well in terms of rainfall, good implication for crops.
Angola Southeast	333	258	77.5	Dry	Dryness in December/January, as well as recent dryness may have disturbed crop growth and maturity, especially in more eastern areas.
Botswana	193	143	74.1	Dry	Mainly livestock farming area, central areas ok, northern and eastern areas dry
Eastern Botswana	178	108	60.7	Dry	Livestock pasture may be affected if dryness persists
D.R. Congo	293	353	120.5	Normal	First season of the year just starting and has performed well so far.
Lesotho	261	248	95.0	Normal	Cumulative rainfall suggests god situation. However, dry spells in south-western parts of the country have affected crops.
Southern Malawi	497	205	41.2	Very dry	Grain agriculture severely affected
Central Malawi	531	300	56.5	Dry	Grain agriculture badly affected in some areas
Southern Mozambique	279	84	30.1	Extremely dry	All agricultural activities affected
Central Mozambique	491	186	37.9	Very dry	Grain agriculture severely affected
Namibia	192	216	112.5	Normal	Pastures should be mainly in good condition
Northern Namibia	252	225	89.3	Normal	Northwest parts have good rainfall, but crops moisture in the northeast (Caprivi strip) may be suffering due to recent dryness over last few dekads
Northern South Africa	235	119	50.6	Very dry	Communal maize production and livestock affected
Central South Africa	203	215	105.9	Normal	Main grain production area of South Africa, crops are doing well
Swaziland	270	248	91.9	Normal	Crops affected by February dry spell, though recent rains have increased seasonal average; livestock pasture is mostly satisfactorily
Northern Tanzania	190	105	55.3	Dry	Agricultural season has been delayed due to poor rains. Still potential for recovery. First season did not perform well due to delayed start and poor distribution.
Southern Zambia	428	227	53.0	Dry	Grain agriculture badly affected in some areas
Central Zambia	457	283	61.9	Dry	Main grain production area of Zambia has been negatively affected
North Eastern Zimbabwe	392	206	52.6	Dry	Main grain production area of Zimbabwe, has been negatively affected
Southeast Zimbabwe	252	107	42.5	Very dry	Agriculture has been severely affected. Not enough rains for planting in some areas