REGIONAL FOOD SECURITY PROGRAMME

Special Agromet-Update

Seasonal Climate Forecast

2003/2004 Growing Season

SPECIAL ISSUE

Month: September **Season: 2003/2004** **Release date: 12-09-2003**

Summary: The seventh Southern Africa Regional Climate Outlook Forum was held from 3 to 4 September 2003 in Lusaka, Zambia. The main objective of the forum was to come up with a consensus forecast regarding the prospects for the 2003/2004 rainy season. Indications of the forecast are that south-western and eastern parts of the SADC region (South Africa, northern Mozambique and Malawi, Seychelles, southern Tanzania and Namibia) are likely to receive normal to below normal rainfall for the period October to December 2003. The rest of the region is likely to experience normal to above normal rainfall during the same period. During the second half of the season, January to March 2004, there are high probabilities of normal conditions across much of southern Africa. However, there is a chance of rainfall sliding into the below-normal category over the western parts of the region (South-western and central Botswana, southern Namibia and western South Africa.

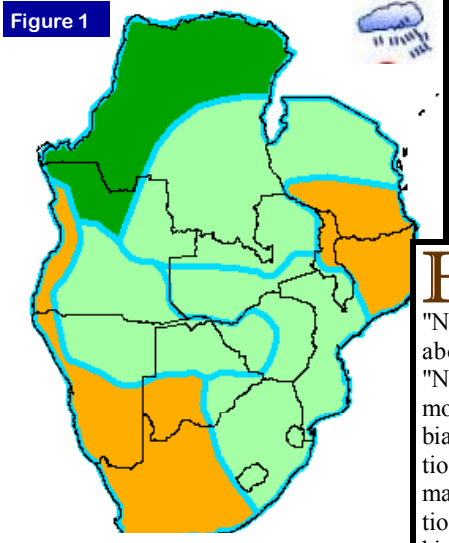
No early indications for extreme climate conditions in 2003/2004 season

Early indications of causes of unusually heavy rainfall and of exceptionally dry conditions for the coming rainfall season, 2003/2004 are weak. This was established at the SARCOF meeting held in Lusaka, Zambia, organized by SADC DMC, from 01-04 September 2003. This was based largely on recent satellite measurements of sea temperatures, including El Niño in the Pacific Ocean.

Annually, the amount of rainfall varies considerably across the SADC region. Users need to interpret these predictions relative to what they are used for. National Meteorological Services, may provide additional guidance relative to the situation in each country as the season progresses. This applies to tropical cyclone conditions that cannot be predicted at the moment. Both timing and amount of rain cannot be predicted precisely, and it was reiterated that rainfall is more difficult to predict in the absence of unusual climatic indicators. In comparison with last season when there was an El Niño and the Indian Ocean was unusually warm, scientists were being more cautious in issuing their predictions for the 2003/2004 season. It was emphasized that although normal rainfall is the most likely outcome, heavy rainfall and exceptionally dry conditions could still occur in some areas. The RRSU and DMC will continue to monitor adverse weather and report accordingly.

Probability Rainfall Forecast for Oct-Nov-Dec 2003

Figure 1

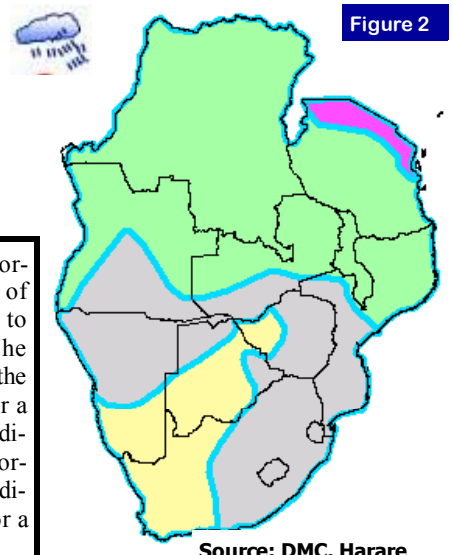


Source: DMC, Harare

Explanation: "Above normal to normal" is different from a probability of "Normal to above normal". "Normal to above normal" implies that the "Normal" (or about average rainfall) is the most likely scenario, with a likelihood for a bias towards "above normal" rainfall conditions. In contrast, "Above normal to normal" implies that the "above normal" conditions are most likely, with a likelihood for a bias towards "normal" rainfall conditions.

Probability Rainfall Forecast for Jan-Feb-Mar 2004

Figure 2



Source: DMC, Harare

Food Security Sustainable food security in the region may only be realized if appropriate strategies are applied during the growing season. With significant grain deficits in two consecutive seasons and millions of people in need, input availability is critical.

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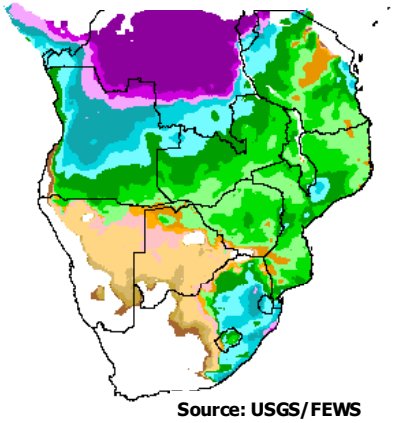
Impact on Agricultural and Livestock Production in the Region

Figure 3

Mean Onset of Rainfall



Source: USGS/FEWS

Legend

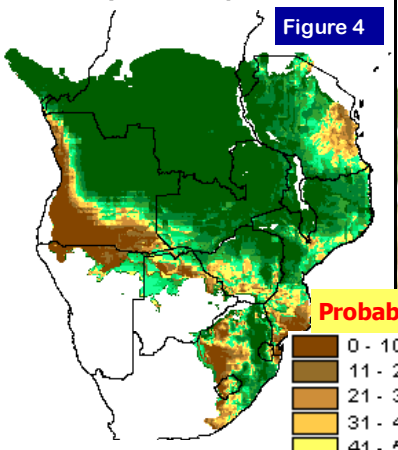
- <= Sep 1
- Sep 2
- Sep 3
- Oct 1
- Oct 2
- Oct 3
- Nov 1
- Nov 2
- Nov 3
- Dec 1
- Dec 2
- Dec 3
- Jan 1
- Jan 2
- Jan 3
- >= Feb 1
- Possible Start
- No start

Planning for agricultural production and food security assuming accessibility, begins with a climate forecast. This provides information for decision making regarding what crop variety to cultivate. Knowledge of the mean rainfall onset (fig. 3) provides a basis on when to plant as this information is not provided in a forecast. Figure 3 provides mean onset of rainfall and farmers need to have all the input prior to onset. In general, the season appears quite promising, however, its potential will only be realized if the necessary socio-economic production conditions are conducive. Farmers in Angola, DRC, Swaziland, Lesotho and parts of Tanzania, Zambia and South Africa should have all the inputs by now. It is advised that governments, NGOs and International organizations pay particular attention to those areas where poor harvest were realized last season and humanitarian assistance is being administered. Countries requiring special attention include Angola, DRC, Namibia, Tanzania, Zambia and Zimbabwe. Close monitoring of pastures in Botswana, South Africa, southern Zimbabwe and Namibia as livestock contributes significantly to the economies.

Probability of Satisfying 80% Crop Water Requirement in 2003/2004 season

90-day Maize Crop in OND

Figure 4



Source: USGS/FEWS/RRSU

Probability

- 0 - 10
- 11 - 20
- 21 - 30
- 31 - 40
- 41 - 50
- 51 - 60
- 61 - 70
- 71 - 80
- 81 - 90
- 91 - 100
- No Data

90-day Maize Crop in JFM

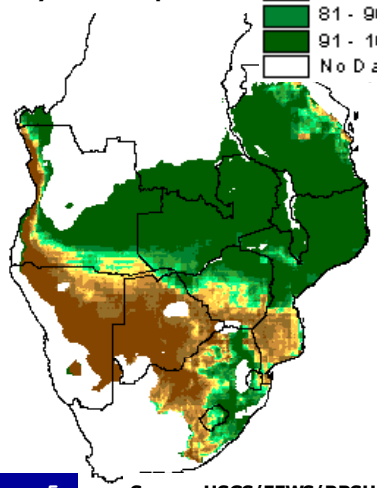


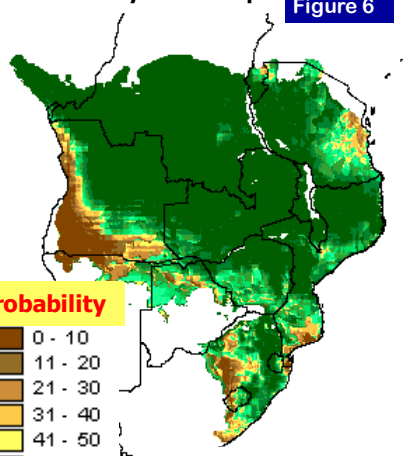
Figure 5

Source: USGS/FEWS/RRSU

Maize, is the main staple food crop in southern Africa. Using a FACT tool and historical rainfall data for 30 years, probabilities for reaching 80% of water requirement were estimated incorporating the seasonal climate forecast for 2003/2004 season. Varieties requiring 90 and 120 days to mature were used. When 80% (dark green) of water requirement is reached, crop yields are good. Assuming planting takes place soon after onset, a 90-day crop will perform well in most parts of the region except in parts of Angola, Tanzania, Botswana, Mozambique, South Africa and Zimbabwe during OND where less than 80% of the moisture required will be satisfied (fig. 4). The situation is similar during JFM (fig. 5). A 120-day crop will have 80% requirement met during OND (fig. 6) and experience probable stress during JFM (fig. 7). Forecasting water needs, provides vital information for decision making regarding appropriate varieties, management practices, soil moisture conservation methods and planting density. RRSU will continue monitoring.

120-day Maize Crop

Figure 6



Source: USGS/FEWS/RRSU

Probability

- 0 - 10
- 11 - 20
- 21 - 30
- 31 - 40
- 41 - 50
- 51 - 60
- 61 - 70
- 71 - 80
- 81 - 90
- 91 - 100
- No Data

120-day Maize Crop in JFM

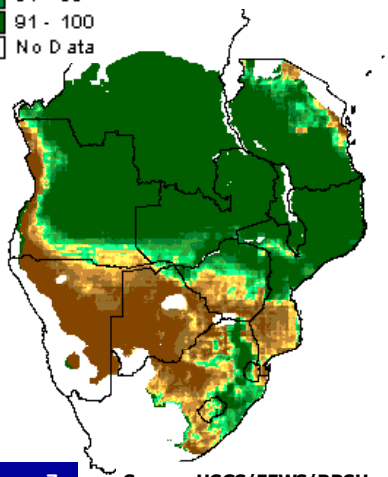


Figure 7

Source: USGS/FEWS/RRSU

Human Impact in the SADC region

There is a chance that if the agricultural system is not managed properly, humanitarian assistance will continue for the third consecutive season. In Mozambique, 659000 people in 40 districts, Tanzania about 2 million and Zimbabwe about 3 million need assistance. Humanitarian activities are also taking place in Namibia, Swaziland, Malawi and parts of Zambia.

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