Summary

Food security conditions nationwide are satisfactory, strengthened by completed harvests from the vuli season in the bimodal rainfall areas around the Lake Victoria Basin, early harvests in unimodal rainfall areas in central and southern highlands regions, increased market supplies from the release of on-farm stocks due to good prospects of the 2001/02 production season, and large government reserves and trader-held stocks.

Increased maize exports to neighboring countries to the south have kept prices rising significantly in the Tanzania’s southern highlands and central markets. Whereas these high prices are benefitting producers and traders, they have triggered unwarranted concerns among consumers and government authorities about possible maize shortages in local markets that could cause food insecurity in the country. Indeed, these high prices are not likely to cause serious food security consequences for the majority of the population, considering that households in the southern highlands regions have diverse sources of food and the country has good crop production prospects in the 2001/02 seasons. However, the government could consider releasing part of its Strategic Grain Reserve (SGR) maize to stabilize market prices in the event that food prices rise beyond affordable levels for the poorest households.

Through its collaborating partners WFP continued distributing the 3,800 MT of maize meal from the extended EMOP 6298 to populations vulnerable to food insecurity in seven districts of three regions in northern Tanzania.

According to the consensus forecast from the Ninth Climate Outlook Forum for the Greater Horn of Africa for March-May 2002, there is an increased probability of normal to above-normal rainfall over the northern half of Tanzania but enhanced chances of normal to below-normal rainfall over the southern half, and a possible occurrence of an El Niño episode toward the end of this period. The March-to-May period coincides with the entire long rainy (masika) season in bimodal rainfall areas of northern and eastern regions and the continuation of the long seasonal rains over the unimodal rainfall regions of central and southern Tanzania.

If the forecast holds true, normal to above-normal rains could increase crop production and renew hopes of recovery from food insecurity, which has plagued northern and central Tanzania stemming from a series of poor food production seasons. Conversely, below-normal rains could destabilize the food security conditions of households in the southern coastal regions but only reduce surplus production in the southern highlands.
1. Current Food Security Conditions in the Country

Food security conditions are satisfactory nationwide.

The state of food security nationwide is satisfactory, reflecting completed harvests from the *vuli* season in the bimodal rainfall areas around the Lake Victoria Basin and ongoing harvests in unimodal rainfall areas in central and southern highlands regions. Market supplies have also improved as farmers have released old stocks in light of good prospects for the 2001/02 production season. Overall food availability is good, with the Strategic Grain Reserve (SGR) holding 60,000 MT of maize and private traders holding more than 50,000 MT of cereals and pulses.

Normal to above-normal rains from January to early March over the unimodal central Tanzania have facilitated early harvests of seasonal crops, increasing on-farm stocks and market supplies and subsequently stabilizing food security conditions among households in Dodoma, Singida, and Tabora Regions. Figure 1 illustrates normal to above-normal rains as measured by METEOSAT rainfall estimates (RFE) and good maize crop conditions as measured by the Water Requirement Satisfaction Index (WRSI). Farmers have reported the first harvests of green maize, sorghum, sweet potatoes, pumpkins, and green vegetables in most areas, with the effect of lowering prices or holding them stable.

![Figure 1: METEOSAT Rainfall Estimates (RFE) and Water Requirement Satisfaction Index (WRSI)](image-url)

The spatially explicit WRSI is an indicator of crop performance based on the availability of water to the crop during a growing season. The soil water content is obtained through a simple mass balance equation where the level of soil water is monitored in a bucket defined by the water holding capacity (WHC) of the soil and the crop root depth, i.e., $SW_i = SW_{i-1} + PPT_i - AET_i$ (where $SW$ is soil water, $PPT$ is precipitation, $AET$ is actual evapo-transpiration, and $i$ is the time step index). At the end of the crop growth cycle, or up to a certain dekad in the cycle, the sum of deficits ($WR - AET$) and total water requirements ($WR$) are used to calculate WRSI at 0.1-degree (about 10-km) spatial resolution. A case of no deficit will result in a WRSI value of 100%, which corresponds to the absence of yield reduction related to water stress. A WRSI value less than 50% is regarded as a crop failure condition. However, it does not give an indication of the effect of water logging and excess soil moisture, and does not take into account any irrigation activities, which may be taking place.

Source: NOAA, USGS-EROS Data Center
2. Market Conditions and Impact on Food Security

Maize prices rose in February in the southern, central, and eastern coastal markets, but remained stable or lower in northern, Lake Victoria, and western Tanzania markets.

Maize prices kept rising in February in the southern highlands, southern and eastern coastal markets but remained stable or lower in northern and Lake Victoria markets (Figure 2). Continuing sharp increases of maize prices in the Dodoma, Mbeya, and Sumbawanga reference markets were influenced by extended exports to the Democratic Republic of the Congo (DRC), Malawi, and Zambia, which have experienced heightened maize shortages since last year, causing domestic prices to rise significantly (Table 1). For the past several months,

![Figure 2: Percent Difference in Wholesale Maize Prices in Reference Markets](image)

<table>
<thead>
<tr>
<th>Markets</th>
<th>Feb-02</th>
<th>Jan-02</th>
<th>Feb-01</th>
<th>Feb 97-01 Average</th>
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<tr>
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<td>13,500</td>
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<tr>
<td>Shinyanga</td>
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<td>9,500</td>
<td>10,000</td>
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<td>17,317</td>
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<td>Dodoma</td>
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<td>Mbeya</td>
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<tr>
<td>Sumbawanga</td>
<td>18,000</td>
<td>15,929</td>
<td>5,706</td>
<td>8,629</td>
</tr>
</tbody>
</table>

FEWS NET/Tanzania  
Source of Data: Marketing Development Bureau, Dar es Salaam

the southern highlands were the main sources of maize, but due to diminishing supplies, traders have recently turned to central Tanzania for supplies, increasing competition for maize among traders to the benefit of those holding maize stocks. For example, February maize prices in Dodoma in central Tanzania rose by 6 percent and 39 percent over prices in January this year and February last year, respectively, due to increased export demand.
A comparative analysis of February 2002 retail maize prices in the Mbeya market in Mbeya Region (Tanzania) and Lilongwe market (Malawi) reveals a gross price difference of US$0.25 per kg sold, or US$25.17 per 100-kg sack (Figure 3.a.), equivalent to Tanzania shillings (Tsh) 23,910. The price difference per kg in February between the Sumbawanga market in Rukwa Region (Tanzania) and Mbala market in Northern Province (Zambia) is US$0.16, or US$15.80 per 100 kg (Figure 3.b.), equivalent to Tsh 15,010.

These large price differences are likely to trigger more maize exports from Tanzania until new harvests reach markets in Malawi and Zambia. The assessment report by FEWS NET and WFP VAM/Tanzania confirmed that Tanzanian traders and a few from neighboring countries are purchasing almost all available surplus maize in the southern highlands and central Tanzania for the export market.

Continuing large exports and rising maize prices in domestic markets have triggered concerns among consumers and government authorities about possible maize shortages with consequences of food insecurity in areas where trading is active and elsewhere in the country.
However, the concerns are unfounded because these exports, which are absorbing surplus maize that otherwise would not have been sold, pose little long-term risk. Most of this maize would have been carried over to the next market year, consequently causing prices to decrease to even lower levels than those in previous years.

Moreover, exports are not likely to cause serious food insecurity for the majority of the population, considering that households in the southern highlands regions have alternative sources of food. Similarly, the good performance of the current production season with first harvests of early-planted crops starting to come in will improve on-farm stocks and consolidate household food security. The good performance of the current production season is also expanding income opportunities, such as agricultural and casual employment, that provide income and enable poor households to access food in markets. Nevertheless, in the event that food prices rise beyond affordable levels for the poorest households, the government could intervene by releasing part of the SGR maize to stabilize market prices within the range of seasonal prices. Such maize releases should be announced in advance for greater transparency, allowing traders to purchase this maize for local sale. Maize should be released in phases, based on frequent monitoring of prices, to guard against possible destabilizing effects.

3. **Responses to Food Insecure Households**

Free food distributions of 3,800 MT of maize meal from the extended WFP EMOP 6298, which began in February, continued in March to food insecure people in seven districts of Arusha, Kilimanjaro, and Iringa Regions. These distributions should be completed by the end of March.

4. **Food Security Outlook for 2001/02 Production Seasons**

*Between March and May 2002, the northern half of the country is likely to have normal to above-normal rainfall while the southern half is likely to experience normal to below-normal rainfall. An El Niño episode could also occur toward the end of this period.*

The Ninth Climate Outlook Forum for the Greater Horn of Africa for March to May 2002 predicted an increased probability of normal to above-normal rainfall (a combined probability of 75 percent) over the northern half of Tanzania, but an increased probability of normal to below-normal rainfall over the southern half (likewise, a combined probability of 75 percent), as shown in Figure 4. The Climate Outlook Forum also predicted the possible occurrence of an El Niño episode toward the end of this period, which could result in above-normal rains over northern Tanzania. However, since these forecasts cover large spaces and longer periods, local areas may experience significant variability in the volume and distribution of rainfall within these 90 days.

The March-to-May period constitutes the entire long rainy (*masika*) season in bimodal rainfall areas of northern and eastern regions and the continuation of the long seasonal rains over the unimodal rainfall regions of central and southern Tanzania. The predicted probabilities for normal to above-normal rainfall between March and May could result in increased crop production over the bimodal northern areas of Arusha, Kilimanjaro, and Tanga Regions, Lake Victoria Basin areas of Kagera, Mara, Mwanza, and Shinyanga Regions, and parts of Coast and Morogoro Regions and unimodal central areas of Dodoma, Singida, and Tabora Regions.
Well-distributed rainfall throughout the season should improve prospects for good seasonal harvests and renew hopes of recovery from food insecurity following a series of poor food production seasons. Given that the masika season begins in March in the bimodal rainfall areas, farmers should be encouraged to increase acreage and plant appropriate crops. Similarly, predictions of normal to above-normal rains should favor production of important cash crops such as coffee, cotton, and sunflower, and boost pasture growth in key livestock regions. Nevertheless, the possibility of an El Niño episode and above-normal rainfall could cause new and long-lasting floods in northern Tanzania that destroy crops and cause loss of property. The Tanzania Meteorological Agency, the Disaster Management Department, the extension services of the Ministry of Agriculture and Food Security, and other grassroots institutions should advise farmers and the public at large what to watch for and the precautions to take in each location.

If the seasonal forecast holds true, below-normal rains could reduce crop production in the southern highlands (Iringa, Mbeya, Rukwa, and Ruvuma Regions) and southern coast (Lindi and Mtwarra Regions). The consequences of below-normal rainfall in the southern highlands would be mainly decreased marketable surpluses of cereals, particularly maize, during the 2002/03 market year that begins in July. The possible consequences in southern coastal areas would be weakened food security conditions of households in Lindi and Mtwarra Regions. However, near-normal rainfall is likely to keep serious food insecurity at bay for the majority of the population in southern Tanzania in the 2002/03 market year.