**S P E C I A L  R E P O R T**

# FAO/WFP CROP AND FOOD SUPPLY ASSESSMENT MISSION TO MOZAMBIQUE

**20 June 2003**

**Mission Highlights**

- Total cereal production in Mozambique for 2002/03 is estimated at over 1.8 million tonnes, some 2.5 percent above last year's level.
- However, in southern and some of central provinces prolonged dry spells and high temperatures caused almost total failure of the maize crop.
- Elsewhere, the season was normal in Zambezia (centre) and in all northern provinces, where a bumper crop has been harvested.
- Severe difficulties in marketing surplus production from the north and centre to the south, due to high transport costs and local municipal taxes, will be aggravated this year by limited export opportunities to neighbouring countries.
- Cereal prices at the end of marketing year 2002/03 were below their levels of a year ago. They are expected to remain depressed in the north but to rise in the south in 2003/04, reflecting surplus and deficit situations under current marketing conditions.
- Emergency food aid estimated at 156 000 tonnes will be needed for some 949 000 drought-affected and vulnerable people in southern and parts of central provinces. Most of the food aid requirement will have to be imported, but a part of it could be procured locally.
- Assistance with agricultural inputs for the next cropping season will also be necessary.

## 1. OVERVIEW

An FAO/WFP Crop and Food Supply Assessment Mission visited Mozambique from 27 April–24 May 2003 to estimate food crop production of for the 2002/03 production season, assess the overall food supply situation, forecast cereal import requirements and possible exports in 2003/04 and determine likely food aid needs. The Mission was accompanied by observers from the European Union (EU), the United States Agency for International Development (USAID), the Southern Africa Development Community (SADC) Regional Early Warning Unit (REWU), the Famine Early Warning System Network (FEWS-NET), GTZ, Ministry of Agriculture and Rural Development (MADER), National Institute of Disaster Management (INGC) and Ministry of Industry and Commerce (MIC).

The Mission was split into three regional teams which covered respectively, the southern provinces of Inhambane, Gaza and Maputo; the central provinces of Sofala, Manica and Tete; and the two northern provinces of Cabo Delgado and Nampula. A sub-team of the third assessed the situation in Zambezia province. Niassa province was not covered because of logistical difficulties. However, information on the situation in the province was obtained from the Government, NGOs working in the province and from other secondary sources. The Mission received full cooperation from relevant Government departments, donor agencies and non-governmental organizations in Maputo and government authorities in the provinces and districts visited.

**FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS, ROME**

**WORLD FOOD PROGRAMME, ROME**

Prior to departure to the field the Mission was briefed by representatives of FAO and WFP and by Government officials, who provided information on the current situation in the country. A meeting with donors and NGOs also provided valuable information on the situation in the districts where they work. Key documents and information on the general economic situation in the country were also collected at this stage.

In the field the teams were briefed by provincial authorities (Governors and Directors for Agriculture, Commerce and INGC), who provided an overview of the agricultural situation in the province and assigned staff to accompany the teams to the districts. At each district the teams met with the district administrators and technical staff of the Ministry of Agriculture and other relevant departments. These meetings were followed by visits to farms to evaluate the crops and interview farmers. Interviews were also held with formal and informal traders, households and NGOs working in the area.

The main statistical information was provided by the National Early Warning System (SNAP) in the MADER, supplemented with data obtained at provincial and district levels. Other sources of useful data were SIMA, MIC, FEWS-NET, SADC and WFP.

The Mission visited a total of 51 districts in nine provinces (about 40 percent of total districts) and gathered information on production and the factors influencing food supply, formal and informal trade, consumption and the situation of populations affected by disasters and the HIV/AIDS pandemic. Information on those districts not visited was derived from official data and briefings at national and provincial levels, supplemented by accounts from NGOs and by perceptions formed in neighbouring districts that were visited. Satellite imagery of vegetation and rainfall patterns were also used.

The total area planted to the seven main food crops in 2002/03 was estimated at 3.9 million hectares (35 percent maize, 27 percent cassava, 16 percent sorghum and millet, 5 percent rice, 11 percent beans and 7 percent groundnuts.. The area planted to cereal crops increased by about 5 percent from the previous year. At regional level, over half of the area planted to maize crop is located in the central region, while the northern provinces accounted for 61 percent of cassava plantings.

The rains began normally in all regions, but total amounts and distribution varied markedly. The southern provinces of Maputo, Gaza and Inhambane had erratic rainfall coupled with high temperatures. Maputo province registered the lowest cumulative rainfall in 50 years. In the central region, rains were normal to below normal. A number of districts in southern Sofala, northern and southern Manica and southern Tete had low and irregular rainfall while others, including the important cereal growing Zambezia province, had satisfactory amounts. In the northern provinces of Nampula, Cabo Delgado and Niassa, the rainfall was adequate and broadly regular.

Total cereal production (in rice paddy terms) in 2003 is estimated at 1 810 946 tonnes, some 2.5 percent higher than last year. This includes 1 247 897 tonnes of maize which remained around the level of 2002. More than half of the cereal grain (56 percent) was produced in the central provinces and only 6 percent in the drought-affected south. The production forecast for cassava is 6 149 897 tonnes (fresh weight), an increase of 3.8 percent over last year.

The skewed distribution of cereal production between regions will translate into serious food shortages in southern provinces and abundant supplies in the north and centre. Prices of maize are below their levels of last year but they are significantly higher in southern markets. High transport costs to move the maize from the North to the South, coupled with reduced export opportunities due to improved cereal harvests in neighbouring Zambia and Malawi, are likely to result in large volumes of stocks in the Northern and Central regions. The shortfall in the South and part of the Centre is expected to be covered by food aid and commercial imports.

The Mission reckons that up to 90 000 tonnes of maize could be exported informally to neighbouring countries. Cereal imports are estimated at 744 000 tonnes. This includes 539 000 tonnes of commercial imports to cover structural deficits in rice and wheat, and 86 000 tonnes of maize (mainly meal) for southern areas. Programme food aid is estimated at 84 000 tonnes of wheat. Emergency food aid needs are estimated at 156 000 tonnes, including 12 000 tonnes of rice and 144 000 tonnes of maize. Most of the food aid requirement will have to be imported largely due to internal transport constraints but the Mission recommends that efforts should be placed on local purchases in the north and centre to support production in these regions. Some 35 000 tonnes of the maize food aid requirement could be procured locally, leaving

109 000 tonnes to be imported. Out of this, 36 000 tonnes are already in the pipeline.

The Mission estimates that 949 000 people in 40 districts of southern and central Mozambique will require food aid in marketing year 2003/04. This is as a result of the near-total failure of the 2003 crops due to drought, the cumulative effect of four poor harvests, the prevalence of animal diseases, the impact of HIV/AIDS and high levels of poverty. The affected population represents 30 percent of the total population in the 40 affected districts but only 5 percent of the country's total population.

Emergency agricultural interventions focusing on asset protection and improved access to inputs are also needed. Intensification of production through rehabilitation of existing small irrigation systems is also a priority.

## 2. ECONOMY AND AGRICULTURE

### 2.1 Economy

Mozambique's gross domestic product (GDP) in 2002 stood at 96 367 billion meticais (US$ 2.81 billion) at current market prices, to which agriculture and fisheries contributed 20.7 per cent. Other sectors of the economy include services (54.4 percent), construction (11.7 percent), manufacturing and mining (11 percent) and electricity and water (2.1 percent). The economy has registered high growth rates over the past few years; this trend is predicted to continue at around 9 percent in 2003/04. The rate of inflation currently stands at 7 percent and this is forecast to fall to 5 percent in 2004. The value of the meticais has also held firm against major currencies after a sharp depreciation in 2000. The current market rate stands at 24 000 meticais to the US$, compared with 23 500 meticais/US$ in 2002 and 22 000 meticais/US$ in 2001.

This robust economic performance is the outcome of sound policies and associated reforms, largely at the macro level, buoyed by strong direct foreign investment. Mozambique has enjoyed sustained international goodwill, especially with the World Bank, the International Monetary Fund (IMF) and the donor community. The World Bank contributed to a US$ 152 million debt write-off under the Heavily Indebted Poor Country (HIPC) initiative. The country has good relations with its neighbours (especially its major trading partner, South Africa) and with SADC and other African countries, and is due to host the next African Union (AU) Summit in July 2003.

These favourable external conditions, low energy prices and generous incentives to investors have strongly contributed to investment and dramatic growth in exports. The largest investment company – Mozal aluminium smelter (a consortium of South African and Australian firms) – tripled the value of the country's export between 1992 and 2002, effectively overtaking agriculture and fisheries as the main sources of exports. The company has concluded expansion to double production and this will raise export values from US$ 881 million in 2003 to US$ 1.07 billion in 2004. Another large investment, the construction of a gas export pipeline to South Africa, is expected to be completed in 2003/04.

However, these favourable conditions mask major structural problems in the economy, including the high transaction costs inherent in a heavy bureaucracy, weak competition, a small domestic market and low sales volumes; and high transportation cost due to long distances and poor road network. Moreover, there is relatively little investment in agriculture, the largest source of employment. This sector will be central to achieving the government's policy priority of high and sustainable levels of poverty-reducing growth. The government's capacity to finance many of its initiatives is constrained by low tax revenues and relatively low levels of direct donor funding to agriculture. The banking sector also remains weak while interest rates are high, with lending rates at over 30 percent.

### 2.2 Agriculture

Forty-five percent of Mozambique's total land area of 789 800 $km^2$ is suitable for agriculture, but only 11 percent is utilized. Agriculture employs more than 80 percent of the labour force and provides livelihoods to the vast majority of over 18 million inhabitants. It is also an important source of foreign exchange earnings.

Mozambique has diverse climatic conditions influenced by latitude, variations in altitude, topography, and coastal or inland locations. It also has diverse soils that are suitable for a wide variety of crops and livestock. Agricultural production is predominantly rainfed; both total and spatial distribution of rainfall are critical to production. There is one main production season (September–March) in most parts of the country, with a short second season in some areas. About 97 percent of production takes place on small subsistence farms

averaging 1.2 hectares, with very few commercial farms in the country. The use of purchased agricultural inputs (improved seeds, fertilizers and pesticides) is very limited, and yields are generally low.

Maize is a major staple grown in all regions of the country. Other crops include rice, sorghum, millet, cassava, Irish potatoes, sweet potatoes, beans and a wide variety of vegetables. Cassava is grown mainly in the north where it is the main staple, but it is being introduced along with sweet potatoes under government initiative in drought-prone areas throughout the country. The main export crops are tobacco, cotton, cashew, sugar, copra, tea and citrus. Cattle, goats, pigs, sheep and poultry are raised in sizeable numbers across the country.

## 3. FOOD PRODUCTION IN 2002/03

The Early Warning System Department of the Ministry of Agriculture and Rural Development (MADER) estimates area planted to crops using a model developed in the 1990s with the support of FAO. In this model, the area planted to food crops is estimated by multiplying the number of farm households with the average area planted by farmers and with the cropping pattern (percentage of each crop in the fields). This model relies on a projection of the number of families from the 1997 census and annual farm-size surveys to update the average farm size. However, no surveys have been undertaken in the past two years while a new model to estimate planted areas and production was being developed. The new model is currently being tested using data from the recent agricultural census, and it will eventually replace the old model when the tests have been concluded.

### 3.1 Factors affecting production

**Area planted**

The average area planted by smallholders is estimated at 1.18 hectares on two or more plots that are generally intercropped.

Table 1 shows the estimated areas planted to the major food crops during the 2002/03 agricultural season.

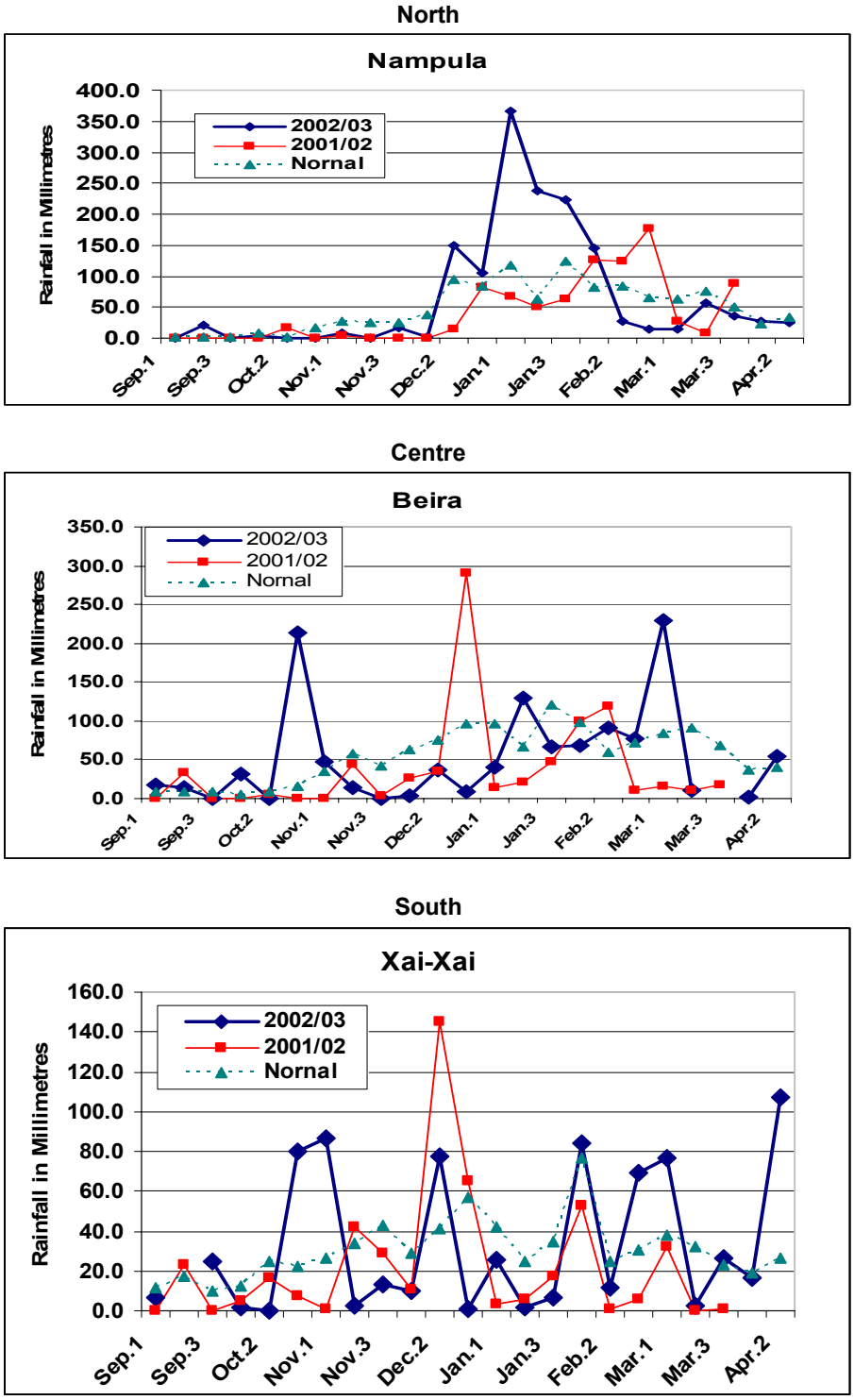
**Table 1. Mozambique: Area planted to the major food crops, 2002/03 (hectares)**

| Provinces | Maize | Sorghum | Millet | Rice | Beans | Groundnuts | Cassava |
|---|---|---|---|---|---|---|---|
| **Country Total** | **1 356 177** | **515 342** | **105 821** | **178 992** | **424 633** | **292 537** | **1 045 625** |
| **Total North** | **346 586** | **233 816** | **13 342** | **55 529** | **193 616** | **111 017** | **637 525** |
| Niassa | 139 358 | 40 055 | 1 931 | 4 690 | 62 518 | 3 980 | 25 588 |
| Cabo Delgado | 88 805 | 68 412 | 4 573 | 14 933 | 57 268 | 45 189 | 172 958 |
| Nampula | 118 423 | 125 349 | 6 838 | 35 906 | 73 830 | 61 848 | 438 979 |
| **Total Centre** | **687 500** | **241 263** | **72 409** | **115 385** | **124 667** | **63 833** | **297 304** |
| Zambezia | 215 538 | 71 514 | 14 697 | 83 653 | 55 095 | 33 400 | 280 777 |
| Tete | 171 042 | 59 535 | 29 070 | 300 | 46 222 | 17 017 | 1 423 |
| Manica | 207 553 | 49 928 | 16 903 | 754 | 4 661 | 4 827 | 14 370 |
| Sofala | 93 367 | 60 286 | 11 739 | 30 678 | 18 689 | 8 589 | 734 |
| **Total South** | **322 091** | **40 263** | **20 070** | **8 078** | **106 350** | **117 687** | **110 796** |
| Inhambane | 113 149 | 24 163 | 10 994 | 3 448 | 54 225 | 77 815 | 67 604 |
| Gaza | 144 221 | 14 640 | 9 076 | 2 900 | 39 660 | 28 930 | 37 076 |
| Maputo | 64 721 | 1 460 | 0 | 1 730 | 12 465 | 10 942 | 6 116 |

**Rainfall**

The main growing season starts with the first rains in September in the south and December in the north. There is also a minor growing season that extends from March to July, based on residual ground moisture, that accounts for approximately 10 percent of total output. Figure 1 shows rainfall for selected locations in the south, centre and north in 2002/03.

**Figure 1. Rainfall patterns in Mozambique by region – 2002/03 season**




**Source**: Instituto Nacional de Meteorologia (INAM).

In the southern provinces of Maputo, Gaza and Inhambane the rains started normally in the last dekad of September and first dekad of October. However, they later became irregular with long dry spells coupled with high temperatures. The dry spells at the critical stages of flowering and grain filling damaged the crops and resulted in the loss of vast areas and very low yields for all crops. Records from the Instituto Nacional de Meteorologia (INAM) suggest that cumulative rainfall for Maputo province was at its lowest in more than 50

years. In early March, the districts in northern Inhambane and Gaza were hit by tropical cyclone Japhet, which resulted in heavy rains and floods that affected some crops. However, overall the rains were beneficial and enabled areas previously lost to drought to be replanted.

In the central provinces the rains began at the normal time in October but distribution was irregular. A number of districts in the southern part of Sofala, northern and southern Manica and southern Tete experienced dry spells during flowering and grain-filling stages, which led to loss of area planted and low yields. The remaining districts of these provinces had sufficient rainfall, resulting in good crops. In Zambezia province the quantity and distribution of rainfall were good and the water satisfaction index for the maize crop was estimated to be 100 percent in most districts.

In the northern provinces of Nampula, Cabo Delgado and Niassa, rains also started normally and remained regular and abundant throughout the season. Crop development was thus very good and high yields are expected throughout the three provinces. Southern Nampula (along with northern Zambezia) were affected by tropical depression Delfina in early January. Some of the planted areas were lost, but these were replanted and good crops are expected. The water satisfaction index for maize in most districts is also estimated at 100 percent.

**Inputs**

In Mozambique, agricultural practices have remained predominantly traditional. Land is generally cultivated using hand tools (hoes), but ox-drawn ploughs are used in some areas to a limited extent. Most farmers plant their crops with seeds from the previous season's production. Seed companies (including SEMOC, SEEDCO and Pannar) supply some seed to farmers, but adoption rates are generally low. A few farmers close to the main towns and those along the borders with Zimbabwe and Malawi, make limited use of improved seeds, fertilizers and pesticides. These improved inputs are also used on the demonstration farms promoted by the extension services.

The commercial agricultural sector (including small-, medium- and large-scale farms and agricultural companies) uses tractors and oxen-drawn ploughs for land preparation. They also use improved seeds, fertilizers and pesticides and have access to institutional credit.

The Ministry of Agriculture and Rural Development (MADER) has distributed inputs (mainly seeds) and organized fairs this year as a partial response to last year's drought in the southern and part of the central regions. Lack of seeds was not reported as a major problem during the assessment.

**Pests and diseases**

No serious cases of diseases and pests were widely reported during the 2002/03 season. The main problems included the brown streak disease and mealy bug (*phenacoccus manihoti*) affecting cassava, leaf miner worm (*aproarema modicella*) affecting groundnuts and Quelea birds eating rice grains. However, other minor cases of disease and pest situations were reported across the country, but at normal levels. The African mosaic virus in cassava, downy mildew in maize, lethal yellowing disease in coconut trees and oidium in cashew trees were also reported.

Some steps have been taken by MADER to deal with these problems, including the introduction of cassava varieties resistant to the brown streak disease. Other measures have been directed at reducing the incidence of mealy bug and leaf miner worm that affect cassava and groundnuts, respectively.

### 3.2 Food production in 2002/03

Table 2 gives production estimates for the main crops at national, regional and provincial levels for the 2002/03 cropping season. Overall, production was good in the northern provinces and Zambezia in the centre; about average in the central provinces of Sofala, Manica and Tete; and very poor in the southern provinces.

Aggregate cereal production (maize, sorghum, millet and rice) in 2002/03 is estimated at 1 810 946 tonnes comprising 69 percent maize, 11 percent rice and 20 percent sorghum and millet combined. Total maize production is estimated at 1 248 000 tonnes, some 1 percent above last year. In the central and southern provinces, more than 165 000 hectares were lost because of dry weather. Production of sorghum and millet is forecast at 362 600 tonnes, which is 0.3 percent lower than last year. By contrast, paddy production is

forecast at 200 000 tonnes, 19 percent higher than in 2001/02, mainly reflecting good yields in both the rain-fed production in northern provinces and in irrigated fields in the south. Yields in the family sector are 0.60 t/ha in Inhambane (rainfed), 1.98 t/ha in Gaza (irrigated); the yields are, however, much higher in the commercial irrigated sector (4 t/ha).

Production of cassava is forecast at 6.15 million tonnes (fresh weight), 4 percent higher than in the 2001/02 cropping season. The northern region accounts for 59 percent of the total output, while only 8 percent was produced in the south. High yields of about 7 t/ha were obtained in the northern provinces and in Zambezia where favourable growing conditions prevailed, while only 4 to 5 t/ha were obtained in the southern provinces. Total output of beans is estimated at 180 000 tonnes; for groundnuts at 110 000 tonnes.

**Table 2. Mozambique: Production of major food crops 2002/03, by province ('000 tonnes)**

| Provinces | Maize | Sorghum | Millet | Rice (Paddy) | Beans | Groundnuts | Cassava |
|---|---|---|---|---|---|---|---|
| **COUNTRY TOTAL** | **1 247 897** | **314 589** | **48 021** | **200 439** | **179 553** | **109 915** | **6 149 897** |
| **Total North** | **468 194** | **158 900** | **8 343** | **55 844** | **94 675** | **53 869** | **3 603 781** |
| Niassa | 199 556 | 26 907 | 1 179 | 4 225 | 28 221 | 1 792 | 179 118 |
| Cabo Delgado | 133 293 | 48 165 | 2 966 | 17 538 | 33 177 | 18 050 | 1 203 284 |
| Nampula | 135 345 | 83 828 | 4 198 | 34 081 | 33 277 | 34 027 | 2 221 379 |
| **Total Centre** | **704 940** | **142 624** | **34 067** | **131 865** | **61 902** | **28 811** | **2 062 447** |
| Zambezia | 265 461 | 49 160 | 8 998 | 100 845 | 35 163 | 19 373 | 1 965 438 |
| Tete | 182 068 | 26 882 | 12 037 | 210 | 17 050 | 4 817 | 7 824 |
| Manica | 177 261 | 25 741 | 6 942 | 603 | 1 462 | 1 210 | 7 683 |
| Sofala | 80 150 | 40 841 | 6 090 | 30 207 | 8 227 | 3 411 | 81 502 |
| **Total South** | **74 763** | **13 065** | **5 611** | **12 730** | **22 976** | **27 235** | **483 669** |
| Inhambane | 28 206 | 8 580 | 3 425 | 2 045 | 13 127 | 19 654 | 347 768 |
| Gaza | 30 885 | 4 047 | 2 186 | 7 726 | 7 500 | 4 259 | 123 176 |
| Maputo | 15 672 | 438 | 0 | 2 959 | 2 349 | 3 322 | 12 725 |

Table 3 compares production forecasts for the 2002/03 cropping season with those for 2001/02, revealing a general increase in production for all crops except millet, and reflecting the dramatic effect of the drought in the south.

**Table 3. Mozambique: Crop production in 2002/03 and 2001/02, by region ('000 tonnes)**

| Provinces | Maize | Sorghum | Millet | Rice (Paddy) | Beans | Groundnuts | Cassava |
|---|---|---|---|---|---|---|---|
| **North** | | | | | | | |
| 2002/03 | 468 194 | 158 900 | 8 343 | 55 844 | 94 675 | 53 869 | 3 603 781 |
| 2001/02 | 395 780 | 162 046 | 8 331 | 52 549 | 92 538 | 52 768 | 3 530 076 |
| Percentage | 18.30 | -1.94 | 0.14 | 6.27 | 2.31 | 2.09 | 2.09 |
| **Centre** | | | | | | | |
| 2002/03 | 704 940 | 142 624 | 34 067 | 131 865 | 61 902 | 28 811 | 2 062 447 |
| 2001/02 | 715 989 | 134 460 | 31 959 | 102 906 | 57 119 | 28 214 | 1 870 030 |
| Percentage | -1.54 | 6.07 | 6.60 | 28.14 | 8.37 | 2.12 | 10.29 |
| **South** | | | | | | | |
| 2002/03 | 74 763 | 13 065 | 5 611 | 12 730 | 22 976 | 27 235 | 483 669 |
| 2001/02 | 123 889 | 17 630 | 9 209 | 12 470 | 27 699 | 28 805 | 524 444 |
| Percentage | -39.65 | -25.89 | -39.07 | 2.09 | -17.05 | -5.45 | -7.77 |
| **Mozambique** | | | | | | | |
| 2002/03 | 1 247 897 | 314 589 | 48 021 | 200 439 | 179 553 | 109 915 | 6 149 897 |
| 2001/02 | 1 235 658 | 314 136 | 49 499 | 167 925 | 177 356 | 109 787 | 5 924 550 |
| Percentage | 0.99 | 0.14 | -2.99 | 19.36 | 1.24 | 0.12 | 3.80 |

### 3.3 Livestock

Livestock production consists of cattle, goats, pigs, sheep and poultry (chicken and ducks). The agricultural census of 2000 revealed that there were 700 000 cattle concentrated in the centre and south and 5 million goats concentrated in the centre. Pigs were estimated at 2 397 493 and sheep at 174 096. Poultry is widely distributed throughout the country.

## 4. SITUATION BY PROVINCE

### 4.1 Northern region (Niassa, Cabo Delgado and Nampula)

**Niassa**

Niassa is located in the northwestern corner of the country, bordering on the provinces of Cabo Delgado and Nampula to the east and south. It shares a long coast-line with Lake Niassa and a land border with Malawi to the west and the United Republic of Tanzania to the north. Agricultural potential is very high, with favourable rainfall and large tracts of fertile soils. Production is predominantly of the rain-fed subsistence type, characterized by intercropping and average individual holdings of 1.42 ha. The main food crops are maize, beans, sorghum, millet, cassava and groundnuts. Cotton and tobacco are the main cash crops. The Mission did not visit Niassa, but information was provided by the central government, NGOs and other sources.

The rains in 2002/03 started on time in the last dekad of November and continued until the last dekad of March. Rainfall was above normal and well-distributed throughout the province (even in the usually drought-prone districts of Lago, Mandimba, Cuamba and Macanhelas), resulting in very good crop yields for this season.

Farmers had enough tools and seeds and did not report any serious shortages of these inputs. No planted areas lost to natural calamities were reported. There were reports of grasshoppers affecting maize and some damage by wild animals. Overall, pests and diseases did not cause significant crop loss during this season.

The total production of cereals in the province is expected to reach 232 000 tonnes, which is 10 percent higher than last season and will result from an increase in the area planted and very favourable weather conditions. Maize yields range from 1.31 t/ha in Marrupa to 1.50 t/ha in more than half of the districts. The province is expected to produce 28 000 tonnes of beans, 1 800 tonnes of groundnuts and 179 000 tonnes of fresh cassava.

**Cabo Delgado**

Cabo Delgado is situated in the northeast corner of Mozambique, bordering Niassa province to the south and the Indian Ocean to the east; it is separated from the United Republic of Tanzania to the north by the Rovuma River. It is one of the provinces with the highest agricultural potential because of its vast coastal plain and the network of the tributaries of the Rovuma and Lugenda rivers has created fertile valleys in the interior. Rainfall is usually well distributed and above the normal requirements for cereal production. Agricultural production is rain-fed subsistence farming on holdings averaging 1.22 ha. The main crops are cassava, maize, sorghum, millet, rice, beans and groundnuts.

The 2002/03 rainy season started in the second dekad of December and continued until the first dekad of April. There was little rain in the third dekad of February, but this did not seriously affect crop development. Overall, the rains were above normal and fairly well distributed throughout the province, resulting in very good yields this season.

The farmers had enough tools and seeds and did not report any shortages. About 4 900 hectares planted to food crops were reported to have been destroyed by wild animals and 4 000 families were affected. Pests and diseases were not significant this season, but rats were reported to have eaten seeds and caused damage to plants on a limited scale.

Total production of cereals in the province is expected to reach 202 000 tonnes, 15 percent higher than the last season because of an increase in the area planted and above-average yields from favourable rainfall. Maize yields range from 1.15 t/ha in Palma to 1.58 t/ha in about half of the districts. The province is expected to produce 33 000 tonnes of beans, 18 000 tonnes of groundnuts and 1 200 000 tonnes of fresh cassava.

**Nampula**

The province is situated south of Cabo Delgado and is bordered by Zambezia to the south and Niassa to the west. It has a long coastline on the Indian Ocean, with the important port town of Nacala. The main food crop is cassava, grown mainly in the sandy soils of the coastal districts. Other food crops are maize, sorghum,

millet, rice, beans and groundnuts. Cotton and cashew are important cash crops for smallholder farmers. The average size of holdings is 1.16 ha.

The 2002/03 rains started in the second dekad of December and continued until the first dekad of April. There was a short period of low rains in the third dekad of February and first dekad of March. However, this did not affect crops because of good accumulation of water in the soil during previous dekads. Overall, the rains were above normal and fairly well distributed in the province and helped to produce very good yields. Tropical depression Delfina hit the southern part of the province in early January, affecting crops in some areas of the coastal districts. A few of the areas were replanted and the crops are doing well.

The farmers had enough tools and seeds and no shortages were reported. However, elengans grasshopper and leaf miner worms were reported to have affected maize and groundnuts, although the effects were not significant. The main problem is brown streak disease, which is seriously affecting cassava roots and reducing yields. About 1 200 hectares planted to cassava were reported as lost, affecting 1 000 families.

The total production of cereals in the province is expected to reach 257 000 tonnes, which is 11 percent higher than last season. This increase is the result of an increase in the area planted and above-average yields due to favourable weather conditions. Maize yields are 0.98 t/ha in Angoche and Moma and 1.30 t/ha in Ribaue, Malema and Lalaua. The province is expected to produce 33 000 tonnes of beans, 34 000 tonnes of groundnuts and 2 220 000 tonnes of fresh cassava.

### 4.2 Central region (Zambezia, Tete, Manica and Sofala)

**Zambezia**

Zambezia is situated north of the Zambezi River, which separates it from the rest of the central region. It borders Malawi to the west and Niassa and Nampula provinces to the north. Zambezia possesses some of the best agricultural land in the country. Parts of the coastal districts of Pebane, Maganha da Costa and Inhassunge have porous sandy soils. Weather conditions (rainfall and temperature) are favourable for agriculture, especially in upper Zambezia. The average farm holding is 1.00 ha; the main food crops are cassava and maize, followed by sorghum, millet, rice, beans and groundnuts, while coconut, cashew and tea are important cash crops.

The 2002/03 rainy season started in the second dekad of December and continued until the third dekad of March. However, there were two dekads of low rainfall, but this did not affect production since there was sufficient moisture retained in the soils from previous dekads of rainfall. The rains were normal in most districts of the province, with the exceptions of Mocuba, Morrumbala and Lugela where it was lower and more irregular. Tropical depression Delfina affected parts of the coastal districts in January, destroying crops; but the fields were replanted and good yields are expected.

Farmers had enough tools and seeds and shortages have not been reported. However, 1 100 hectares planted to food crops were waterlogged in the district of Maganha da Costa, affecting 1 000 families. Meanwhile elengans grasshoppers were reported as having affected maize and sunflowers; and coconut lethal yellowing disease has significantly reduced production in Chinde and Inhassunge.

The total production of cereals in the province is expected to reach 424 000 tonnes (7 percent higher than last season) due to an increase in the area planted and good yields, especially of rice. Maize yields range from 0.80 t/ha in Namacurra and Maganha da Costa to 1.40 t/ha in Alto Molocue. The province is expected to produce 35 000 tonnes of beans, 19 000 tonnes of groundnuts and 1 965 000 tonnes of fresh cassava.

**Tete**

Tete province is situated in the northwestern part of the central region, bordering Zimbabwe, Zambia and Malawi; and Manica province to the south. The northern districts of Angonia, Tsangano and Macanga are important cereal-producing areas, where a large proportion of farmers use animal traction, improved seeds and fertilizers. These districts normally have good rainfall in contrast to others to the south (including Chiuta, Moatize and Changara), which have low and uncertain rainfalls. The main food crop is maize and others are sorghum, millet, beans and groundnuts; cassava and rice are less important. Tobacco is an important cash crop in the smallholder sector, especially in the districts bordering Malawi, including Angonia. The average farm size is about 1.17 ha.

The rains started late in most parts of the province; rainfall distribution was uneven and ended in March. The cumulative rainfall was generally below normal, especially in the southern district of Changara, and parts of Moatize and Chiuta, with regular distribution in the districts of Angonia and Machanga.

Farmers had sufficient tools and seeds and no major shortages were reported. However, 16 000 hectares planted to food crops were lost due drought in the southern districts, and more than 13 000 families were severely affected. Some districts reported destruction of maize by army worms and crop damage by elephants. Meanwhile post-harvest losses caused by grain weevils were reported in Angonia and Chiuta.

Total production of cereals is expected to reach 221 000 tonnes, about 1.13 percent higher than last season as a result of the increase in area planted and good yields in the northern districts. However, the good production in these areas will be partially offset by lower yield in the drought-affected districts. Maize yields range from 0.25 t/ha in Changara and Magoe to 1.35 t/ha in Angonia, Tsangano and other districts in the north. About 17 000 tonnes of beans, 5 000 tonnes of groundnuts and 8 000 tonnes of fresh cassava are expected.

**Manica**

Manica province borders Zimbabwe to the west, Tete to the north, Sofala to the east and Gaza to the south. Three important topographic features influence agriculture in the province: the western mountain range; the central plateau; and a series of valleys along the Pungue and Buzi rivers and the tributaries of the Zambezi and Save rivers. The province has large tracts of fertile soils in the districts of Gondola, Manica, Sussundenga, Mossurize and Barue. Maize is the main food crop, followed by sorghum, millet, beans and groundnuts; rice and cassava are less important. Tobacco, cotton and sunflower are important cash crops in the province. Many farmers in the province, especially in districts bordering Zimbabwe, use fertilizers, and average farm size is about 1.58 ha.

Rainfall began late and ended in March; the distribution was generally irregular and the cumulative amount was below normal. The main exceptions were Manica district, where rainfall levels were above those of last year, and Sussundenga where the rains started earlier than usual.

No problems concerning tools or seeds were reported, but 36 000 hectares of food crops were lost as a result of drought in districts in the north and the south. As a result, more than 23 000 families have been severely affected. Damage by army worms and elephants was also reported.

Total production of cereals is expected to reach 211 000 tonnes, 11 percent lower than last season, the result of a loss in areas planted and low yields in districts in the north and south of the province. Maize yields range from 0.25 t/ha in Machaze to 1.35 t/ha in Mossurize. The province is expected to produce 1 500 tonnes of beans, 1 200 tonnes of groundnuts and 7 700 tonnes of fresh cassava.

**Sofala**

Sofala province is situated in the eastern sector of the central region and south of the Zambezi River. It is bordered by Manica to the west and Inhambane to the south and has a long coastline on the Indian Ocean. Diverse types of soils characterize the province in a series of strips that run north–south. A variable rainfall pattern (east–west) creates distinct and identifiable agro-ecological zones. Consequently there are diverse agricultural systems that have led to major variations in production on average holdings of 1.14 ha. The main food crop is maize, followed by sorghum and millet, rice, beans, groundnuts and cassava. Sugar cane is an important cash crop in the commercial sector.

The rains began normally and finished in March, with periods of dry spells between November and December, and good rainfall starting again from January onward. The main exceptions were the late start of rains in Gorongoza and cyclones in Machanga and south of Chibabava in February and March.

Farmers had enough tools and seeds. However, 8 000 hectares were lost because of the drought in districts in the north, centre and south of the province, with 7 000 families severely affected. Some pests and diseases were reported, and these included army worms, mealy bug and African mosaic in cassava.

Total production of cereals in the province is expected to reach 157 000 tonnes, which is 13 percent higher than last season. The increases result from an expansion in the area planted and good rice yields. However, the yields of maize range from a low of 0.40 t/ha in Machanga to 1.00 t/ha in Nhamatanda and Gorongosa.

The province is expected to produce 8 000 tonnes of beans, 3 400 tonnes of groundnuts and 82 000 tonnes of fresh cassava.

### 4.3 Southern region (Inhambane, Gaza and Maputo)

**Inhambane**

Inhambane is located in the southeastern part of the country and is bordered by Gaza province to the south and west, Sofala and Manica provinces to the north and the Indian Ocean to the east. The province has comparatively high humidity along the coastal zone, extending up to 50 km inland. Rainfall decreases progressively from east to west and agricultural production is concentrated within 80 km of the coastline. The main food crop is maize, followed by cassava, beans and groundnuts; millet and rice are also grown. Coconuts, cashew and citrus are important cash crops. Average farm size is 1.35 ha.

There were light rains in late September, but proper rains started only in October. The rains became irregular with long dry spells and high temperatures in most districts of the province. The cumulative rainfall was below normal in all districts. These conditions affected the development of the crops, especially during the critical stages of flowering and grain filling, which led to below-average yields in all districts. The water satisfaction index was 63 in Zavala district and 81 in Funhalouro. Tropical depression Japhet affected some parts of the districts, but also led to heavy rains that enabled replanting in northern districts.

About 38 000 hectares were lost as a result of drought that affected all districts, leaving more than 28 000 families severely affected. The main pests reported were army worms, elengans grasshopper, mealy bugs, African mosaic and leaf miner.

The total production of cereals in the province is expected to reach 42 000 tonnes, 29 percent lower than last season, mainly because of areas lost to drought and very low yields, which in the case of maize ranged from 0.25 t/ha in Funhalouro, Mabote and Vilankulos to 0.40 t/ha in Maxixe, Massinga and Morrumbene. The province is expected to produce 13 000 tonnes of beans, 20 000 tonnes of groundnuts and 348 000 tonnes of fresh cassava.

**Gaza**

Gaza province has a long coastline on the Indian Ocean and borders on Zimbabwe to the west, Inhambane to the north and Maputo to the south. Much of the interior is dry, and rain-fed agriculture is found in coastal areas and along the Limpopo, Elephant and Changane rivers and their tributaries. Production is also carried out on the irrigation schemes of Chokwe covering 30 000 ha, of which only 6 000 hectares are currently cultivated. Maize is the main crop, followed by beans, groundnuts, cassava, rice, sorghum and millet. Cashew, rice and vegetables are important cash crops.

The rainfall pattern was similar to that in Inhambane, where rains started in late September and early October, followed by irregular and below-normal rains and high temperatures in most districts. The cumulative rainfall was below average, and this affected the development of crops and led to low yields in all districts. Maize yields were about 75 percent of their levels last year. However, tropical depression Japhet generated heavy rains that led to replanting in the northern districts of Massangena and Chicualacuala.

As a result of the drought, many farmers lost seeds. Although MADER distributed some seeds, not all of the requirements were covered. Some 96 000 hectares planted to food crops were lost because of the drought affecting all districts, and this severely affected more than 77 000 families. The main pests reported here were stem borer, mealy bug, African mosaic, leaf miner worms and quelea birds.

Total production of cereals is expected to be 45 000 tonnes, 35 percent lower than last season because of large losses in areas planted and the very low yields. Maize yields ranged from 0.20 t/ha in Chicualacuala to 0.30 t/ha in Xai-Xai, Chokwe and Guija. The province expects to produce 7 500 tonnes of beans, 4 300 tonnes of groundnuts and 123 000 tonnes of fresh cassava.

**Maputo**

This province lies in the southern tip of the country, with a coast-line on the Indian Ocean. It borders on Swaziland and South Africa to the south and west and Gaza province to the north. Possessing the smallest agricultural area of all ten provinces, Maputo is divided into seven districts, of which two, Manhica and

Boane, account for more than 40 percent of total area planted to food crops. The main crop is maize, followed by beans, groundnuts and cassava; others include sorghum and rice on a limited scale. Cash crops include cashew, rice, vegetables and citrus in irrigated areas. Sugar cane is an important cash crop in the commercial sector.

The pattern of rainfall was similar to that in the other southern provinces, though cumulative rainfall was lowest here. Following a start in late September and early October, the rains became irregular, with long dry spells accompanied by high temperatures in all districts. The cumulative amount of rainfall was below normal in all districts and the lowest in 50 years. Crop development was seriously affected resulting in low yields across all crops, with yields for maize at levels almost 49 percent of last year.

About 35 000 hectares planted to food crops were lost, affecting more than 32 000 families. Stem borers, mealy bug and leaf miner worms, along with quelea birds and fresh water crabs were reported.

Total cereals production in the province is expected to be 19 000 tonnes, about 45 percent lower than last season due to loss of areas planted and very low yields where yields of maize were 0.20 t/ha in Marracuene and 0.30 t/ha in Namaacha. The province is expected to produce 2 300 tonnes of beans, 3 300 tonnes of groundnuts and 13 000 tonnes of fresh cassava.

## 5. FOOD SUPPLY SITUATION

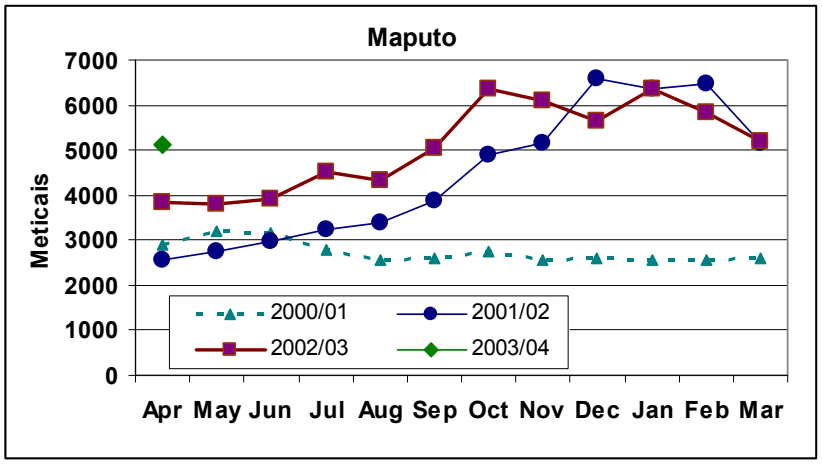
### 5.1 Food prices

There are marked differences in maize prices between regions reflecting high internal transport costs that make it generally uncompetitive to move maize from the north/centre to the south, compared with imported South African maize. Figure 3, depicting retail prices of maize for three past marketing years in selected regional markets, illustrates price differences between regions.

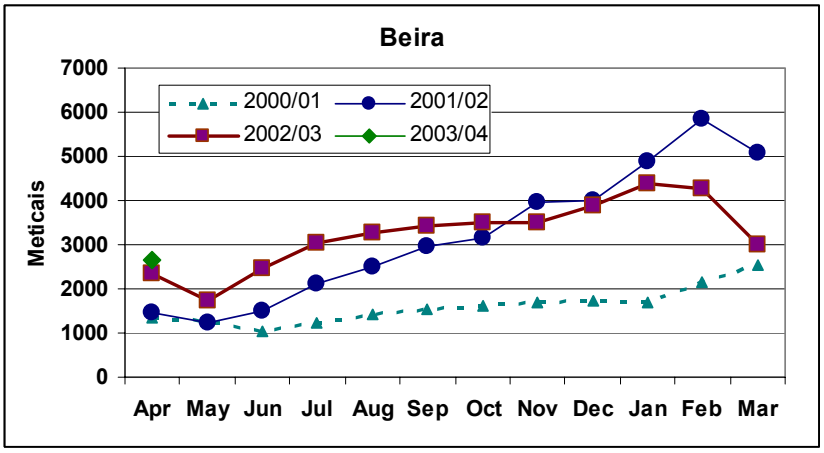
Prices of maize normally peak from November to March, falling sharply at onset of the harvest season in April and gradually recovering thereafter. In 2002/03 price levels were higher than in the previous year during the first half of the marketing year reflecting increased demand from neighbouring Malawi and Zambia and tight supply in the south. The pattern was reversed during the lean period from October to March in the centre and the north, because of anticipated better 2003 harvests in these regions, as well as in neighbouring countries. However, in southern provinces, where production is reduced for the third consecutive year, prices remained at high levels. Prices have continued to decline in surplus northern and central regions during April-May and to increase in the maize deficit southern provinces. At the beginning of marketing year 2003/04 (April), prices in the south were above those in the central and northern region reflecting the different supply situations and the above mentioned marketing difficulties.

**Figure 2: Monthly retail maize prices in major regional centres (2000/01–2002/03)**

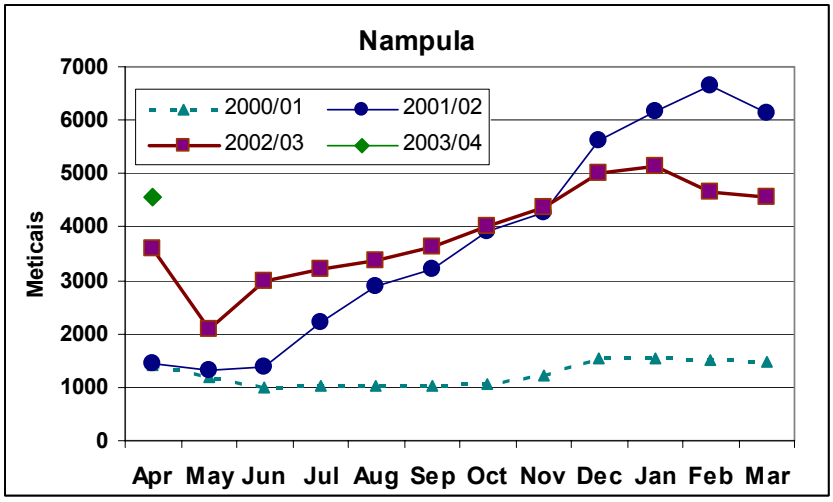
**South**




**Centre**




**North**




**Source**: SIMA-MADER (Data compiled by DNCI/MICTUR).

## 5.2 Overall food situation and access to food

The mission estimates that total cereal production in 2002/03 increased by 2.5 percent from last year's good level to 1.74 million tonnes (rice in milled terms). There were also increases in the production of cassava, beans and groundnuts. Overall, the food supply situation in the 2003/04 marketing year will remain satisfactory.

This aggregate picture, however, masks stark regional disparities, similar to those observed during the previous assessments. Substantial increase in maize production in northern provinces (18 percent) is offset by a large drop (40 percent) in the south. In the central region, production remained around the previous year's level. The same pattern is observed for both sorghum and millet crops that recorded significant decreases in the south. Only the minor rice crop registered positive growth in all regions, albeit at a modest level in south.

As a result, it appears that there will be serious food shortages in the south, together with abundant supplies in the north. Reflecting this situation, prices of maize in southern markets are above those in other regions, adversely affecting household food security in this region. By contrast, consumer food prices in the north and parts of the centre have begun to show strong signs of decreasing which will benefit households that must purchase food. However, farmers in these regions will face problems in marketing their large surpluses due to the high internal transport costs and reduced prospects for exports. Large stocks are likely to be built up in the northern and central provinces.

Food assistance will be required in the drought-affected areas of the south and parts of the centre, as well as for vulnerable groups, particularly those affected by the HIV/AIDS pandemic. Although there was a general lack of systematic data on the incidence of the disease, available information suggests increasing rates of infection, particularly along the corridors to neighbouring countries. Test results from local hospitals reveal alarming rates of infection in Manica, Tete and Gaza provinces with high numbers of orphans.

## 5.3 Supply/demand balance for 2003/04

The food supply/demand balance (Table 4) is calculated on the basis of an estimated total population of 18 634 000 for the mid-2003/04 marketing year.

### Opening stocks

Opening stocks of maize at the beginning of marketing year 2003/04 (April/March) are estimated at 70 000 tonnes, most of which were held by large traders and farmers in the north and centre. Following two poor harvests in the Southern region, carry-over stocks are estimated to be negligible. Stocks of imported wheat and rice held by traders are estimated at 30 000 tonnes and 40 000 tonnes respectively.

### Utilization

The annual per capita cereal consumption rates used in the previous assessment are revised upwards for maize to 57 kg (from 54.5 kg), 19.3 kg for rice (from 19 kg) and 14.7 for wheat (14 kg) to reflect increases in consumption associated with large imports (commercial and food aid) of these commodities in the past years. Meanwhile the consumption of sorghum and millet has fallen slightly reflecting lower production this year, which will be compensated by higher maize consumption. In aggregate, a per caput consumption of 108.2 kg of cereals has been used in the food balance. Cassava consumption has also been raised somewhat to 228.6 kg as a result of expected higher production this year.

### Other uses and losses

Post-harvest losses have been estimated at about 15 percent for maize and 10 percent for the other domestically produced grains. Most of these losses will occur in the north and the centre, where production has been average to above average and farmers' surpluses will be stored over a long period of time. By contrast, farmers in the south are expected to consume or sell most of their harvests within three to five months. The quantities of maize, sorghum and millet that farmers will retain as seeds for the next planting season are expected to take into account the need for possible replanting, which in 2002/03 took place 3-4 times in most affected areas. The seeding rates used are 20 kg/ha for maize, 80 kg/ha for rice and 10 kg/ha each for sorghum and millet. Industrial uses of maize and sorghum, mainly for beer manufacture have also

been included.

**Exports**

Informal exports of maize to neighbouring Malawi and Zambia will fall below levels of last year because of the improved maize productions large quantities of stocks in these countries. However, at the time of the Mission, active trade was observed in Milange (Zambezia) on the Malawi border, reflecting the competitive price of the Mozambican maize. There is a potential for exports to Zimbabwe, but weak purchasing power caused by the poor economic conditions in that country will be a constraint. Exports (formal and informal) are projected to be some 90 000 tonnes.

**Closing stocks**

Good harvests in the north and centre regions and reduced export prospects this year, are forecast to result in higher levels of closing stocks. However, this estimate is dependent on the amounts actually exported and the extent of local purchases for food aid.

**Table 4. Mozambique: Staple food supply/demand balance 2003/04 ('000 tonnes)**

| | Maize | Rice (milled) | Wheat | Sorghum/ millet | Total cereals | Cassava |
|---|---|---|---|---|---|---|
| **Domestic availability** | **1 318** | **163** | **40** | **373** | **1 894** | **6 200** |
| Opening stocks | 70 | 30 | 40 | 10 | 150 | 50 |
| Production | 1 248 | 133 | 0 | 363 | 1 744 | 6 150 |
| **Utilization** | **1 513** | **423** | **329** | **373** | **2 638** | **6 200** |
| Food use | 1 063 | 359 | 274 | 320 | 2 016 | 4 260 |
| Other uses, losses | 260 | 34 | 5 | 43 | 342 | 1 845 |
| Closing stocks | 100 | 30 | 50 | 10 | 190 | 95 |
| Exports | 90 | 0 | 0 | 0 | 90 | 0 |
| **Total imports:** | **195** | **260** | **289** | **0** | **744** | **0** |
| of which: | | | | | | |
| **- commercial** | 86 | 248 | 205 | 0 | 539 | 0 |
| **- programme food aid** | 0 | 0 | 84 | 0 | 84 | 0 |
| **- emergency food aid** | 109 1/ | 12 | 0 | 0 | 121 | 0 |
| *Pipeline* | *36 2/* | *12 2/* | *0* | *0* | *48* | *0* |
| *Still to be pledged* | *73* | *0* | *0* | *0* | *73* | *0* |

1/ Total maize food aid requirements amount to 144 000 tonnes. It is recommended that the difference of 35 000 tonnes will be procured locally.
2/ Pipeline food aid of WFP.

**Imports**

The balance sheet shows structural deficits of wheat (289 000 tonnes) and rice (260 000 tonnes) which are expected to be covered by commercial imports and programmed food aid. In the case of maize, the balance between supply and demand at national level takes into account the difficulties in moving cereals from surplus to deficit regions, thus showing imports and exports. It is forecast that 86 000 tonnes of maize, in the form of maize-meal, will be imported commercially from South Africa, mostly for urban consumption in southern maize-deficit areas. Emergency food aid needs for the drought affected populations of the southern and part of the central provinces are estimated at 156 000 tonnes. This includes 12 000 tonnes of rice, already in the pipeline, and 144 000 tonnes of maize. In view of the abundant supplies and low prices of maize in northern and central parts, the Mission believes that food assistance should be provided as much as possible through local purchases. This will provide support to farmers in the surplus areas of the country who are expected to incur large losses due to reduced export prospects in 2003/04. Therefore, out of the maize food aid requirement of 144 000 tonnes it is expected that some 35 000 tonnes could be procured locally. This leaves 109 000 tonnes to be supplied from abroad. With 36 000 tonnes of maize in the pipeline, there is still 73 000 tonnes to be covered by additional donors contributions.

## 6. EMERGENCY FOOD AID REQUIREMENTS

This section of the report will provide indications on the causes and implications of the current food insecurity situation faced by households in the semi-arid zones in the south and central regions.

Forty districts of the southern and central regions are facing critical to alarming levels of food insecurity and malnutrition as a result of a combination of the following causes:

- A near total failure of the current harvest of cereal and grains for most households as a result of a prolonged drought
- The accumulated impact of the fourth failed cropping season, with a below normal harvest for the main staple crops, including maize and beans
- The prevalence of animal diseases, leading to market bans and / or movement restrictions
- The impact of chronic illness and a general deterioration in the health status on a significant number of food insecure households
- The prevalence of structural constraints, including isolation, resulting in the need to travel long distances to markets and difficulty accessing food and other goods, as well as the decline of income generating activities and the lack of basic infrastructure.
- A sharp decline in trade opportunities with Zimbabwe, coupled with an influx of vulnerable populations.
- A decline of remittances from South Africa due to tighter immigration controls, and
- A significant reduction of natural resources (used as coping strategies) as result of overuse beyond the typical level during the last four years.

Studies show that most of these districts are within remote food economy zones characterized by difficult access, poor sandy soils and a tropical semi-arid climate where rain fed agriculture is unproductive in most years. Due to the lack of markets and employment opportunities, poor households heavily rely on their limited crop production, complemented by hunting and the collection of wild foods. Poor households in these food economy zones are chronically food insecure during the lean season from September to December.

### 6.1 Food availability

Consecutive natural disasters have had a negative impact on the performance of the rain fed agricultural output of the small-scale Mozambican farmers in the semi-arid districts of the southern and central provinces. Devastating floods that began in 1999, in conjunction with successive dry spells, have caused below normal harvests in districts where average food production output is insufficient to cover the requirements.

The mission has estimated that crop production in the northern region was better this harvesting season than in the last five years. In the central region, there is a mixed situation with good production in the ‘planaltos’, or high plains, and in the midlands; however, in the semi-arid locations in Tete and Manica provinces, this year’s harvest was worse than last year’s already bad harvest. In the southern provinces the impact is clear and widespread, resulting in one of the most severe losses in recent years.

Current conditions have deteriorated beyond ‘normal’ as a result of a series of crop failures, caused by two consecutive dry seasons. The current season is best characterized by a substantial loss of the area planted and a dramatic reduction of yields leading to an unprecedented low output in many areas. Unlike previous years, the failure of the current season was near total, and the lack of rain also affected crops traditionally tolerant to dry spells, such as cassava.

### 6.2 Income and employment opportunities

Remittances from South Africa and Zimbabwe have declined in recent years following policy changes in these two countries, therefore reducing an important source of income in most of the deficit districts in the southern and central regions.

In addition, the current crisis is affecting the ability of better-off households to provide employment to poor farmers, as they too are facing consecutive disasters that have reduced their own reserves, assets and cash resources.

The demand for cash crops, especially cotton to Zimbabwe, has declined sharply in the last two seasons, which has dramatically affected income and access to food for large populations of border districts. In addition, many districts along the border with Zimbabwe including Changara, Guro, Manica, Barue, Mussorize, Machaze, Masangena and Chicualacuala have noted a collapse of the cross border trade, resulting in a shortage of the consumer goods traditionally imported through formal or informal trade.

Cashew production is gradually recovering after a fungal disease outbreak (oidium), but market prices tend to show a declining trend.

Pasture condition has deteriorated over the last two years and water sources for animals are drying up. This is combined with an outbreak of foot and mouth disease in districts bordering Zimbabwe. As a result, a significant number of animal deaths have been registered.

At the same time that animal production is worsening in districts with a cereal deficit, the terms of trade have also worsened, sometimes to the point that farmers in some of these locations are substituting maize with rice.

Ownership of animals is correlated with wealth in these zones. Better-off households, which account for about 20 to 30 percent of the population, are able to sell additional animals to purchase food, while the poorer groups, comprising from between 40 to 60 percent of households in these areas, have no animals or other kind of marketable asset to exchange for food.

### 6.3 HIV/AIDS, nutrition and health

Specialized reports indicate that Mozambique has the tenth highest HIV/AIDS level in the world. Approximately 1.4 million people are infected with 13 percent of people between 15 to 49 years living with the virus. Nationwide, over 500 new infections occur everyday and an estimated 220 people die from related causes. Gaza Province, which has suffered from repeated natural disasters, has the highest infection level in the country at 19 percent.

Local leaders consistently informed the mission of rising numbers of deaths and the consequent increase in households with numerous dependents as children are orphaned in food insecure districts of southern Tete and northern Manica provinces, both of which share the border with Zimbabwe. Although hard to quantify in the absence of statistically valid samples, the local authorities are reporting increasing numbers of households with chronically sick parents seeking community or public support.

Malnutrition rates are showing worrying levels of about 11 percent in the Gaza Province, and 8 percent in Maputo (wasting in children 6 – 59 months). Recent reports have also indicated high malnutrition rates in the food insecure district of Magoe (Tete Province), especially in the localities along the border with Zimbabwe, where food access conditions have been deteriorating over the last two years.

During meetings with local leaders in Tete (Changara, Magoe,), Gaza (Chokwe, Massingir, Chicualacuala), Sofala (Muanza) and Manica (Guro) provinces, concerns were raised regarding the numbers of households with sick adults, resulting in those households being ‘de facto’ headed by children less than 18 years of age.

Authorities in districts near Zimbabwe are concerned with the unusual influx of vulnerable transient groups living along the border returnees in search of land and natural resources. For instance, in Magoe district about 2 000 people entered formally and an estimated 6 000 entered without registering with the district administration, some of them suffering from chronic illnesses.

While HIV/AIDS and the associated chronic illnesses affect the ability of households to sustain themselves, the nutritional conditions of these families is also being seriously challenged. Drought conditions over the last two years have deteriorated already fragile conditions of these households, including a reduction of sources of safe water, as well as a lack of food.

### 6.4 Coping mechanisms

Natural resources exploited to offset adverse situations are becoming scarce, as they have been used intensively for many years as a means of survival. With a lack of other income options, forest resources, including wood, charcoal, food and wild animals have been extracted beyond sustainable levels following consecutive crop production failures.

Households indicated that they have to walk longer distances to get wood or charcoal. Hunting is widespread despite strict regulations and fishing is practiced without a traditionally recommended break. While the consequences for the local populations may not be clear, there are concerns that continued intensive use of these resources might result in long-term negative social and environmental impacts.

Consumption patterns have changed dramatically. The quantities and quality of food consumed have declined. Family members reported to be consuming one to two meals per day. The composition of food does not include cereals and in most cases, meals are generally dominated by low quality wild foods. Consumption of unusual wild foods has resulted in numerous cases of diarrhea and other illnesses.

In some districts, such as Magoe, health officers indicated that most people in hospital with diarrhea reported having consumed a certain root of a wild plant. The widespread consumption of that root has caused same diarrhea, as well as fainting spells, in most of the local people. To ‘cure’ the weak patients, health officers keep the ill at the clinic feeding them maize porridge until they recover. In Changara, the local administrator reported that populations are walking more than twenty kilometers in search of food, and more often than not, return home with inadequate and often unhealthy wild foods.

Local leaders also reported that young girls are engaging in prostitution and boys are leaving their villages in search of work, as a way of coping, especially in districts located along development corridors like Changara, Guro, Machaze and Chibabava. There are reasons to suspect that similar situations may be emerging in other places, which raises the concern that an endless cycle of food insecurity, prostitution, HIV/AIDS and chronic vulnerability is being triggered.

In Muanza district, the local administration gave clear indications that due to HIV/AIDS and chronic sicknesses, household dependency ratios are increasing, the number of orphaned households is on the rise and school drop out rates are growing.

Unusual levels and types of robberies were also reported in these and other districts visited by the Mission.

The Mission noted that women usually carry the greatest burden during prolonged food deficits, as they are the principal food gatherers, water fetchers, cooks and caretakers. By custom, women also serve as the main caretaker of sick family members. The extra workload is only exacerbated by HIV/AIDS.

Women-headed households face further difficulties because of their relative social position. This is an important factor of vulnerability in many localities as they are placed in a secondary position for access to good land and other assets. Divorced women and widows may not qualify for entitlements and social rights if not associated to a man or his family.

This group of households represents about 30 to 35 percent of the total number of households in many communities in the semi-arid, chronically food insecure districts of southern and central Mozambique.

### 6.5 Current intervention

The mission took note of a number of positive actions being implemented with the aim of mitigating the effects of the drought and address the HIV/AIDS pandemic:

- Through agricultural fairs and free distribution, the GoM has been able to supply new maize, bean, sorghum and millet seeds for about 60 000 families in the drought-affected districts.

- The GoM launched a campaign encouraging farmers to concentrate most of their cereal production in the low-lying areas. They also emphasized the need for crop diversification, combined with the introduction of cassava and sweet potato cuttings and investment in short- cycled varieties.

- Small irrigation schemes and water reservoirs are also emerging in all provinces affected by drought, which take advantage of seasonal rivers and lakes. Pedal water pumps are beginning to be disseminated as well.

- A successful post harvest program has introduced improved storage bins and technology for conservation of agricultural produce, mainly grain in some districts.

An emergency food aid program provides assistance to 450 000 vulnerable persons in 38 drought-affected districts. The main activities include: i) food-for-work targeted to food insecure communities with high levels of malnutrition; and ii) targeted free food distribution to orphans, elderly, women-headed households and others unable to participate in food-for-work activities. In addition, another 100 000 pregnant women, lactating mothers and children under 5 years of age receive corn-soya blend through a supplementary feeding activity.

HIV/AIDS mitigation activities include an awareness campaign concentrated in main towns and development corridors, using panels, banners, painted logos on trees, posters, theatre plays, among others to disseminate positive and educational messages.

Food security conditions have deteriorated to alarming levels due to the effects of consecutive disastrous agricultural seasons and the growing inability of HIV/AIDS affected households to maintain adequate income earning activities. Observations support the view that the HIV/AIDS pandemic is becoming a leading factor of difficult access to food for poor households, especially in food deficit districts.

Interventions to mitigate these disasters are still in their initial stages and confined to small pockets in scattered locations, most of them being pilot activities. It is therefore difficult to determine the impact in the medium and longer term.

Efforts to improve and expand these projects have been faced with the following difficulties: i) insufficient levels of sectoral technical support; ii) weak co-ordination mechanisms which need to be strengthened through a clear definition of responsibilities and iii) lack of identification of appropriate activities. It is recommended that interventions should take into consideration the constraints and limitations of communities facing the HIV/AIDS pandemic.

The mission estimates that approximately 788 000 people of the poorest households in 40 districts of the southern and central Mozambique (see table below) will require food aid from April 2003, peaking to 949,000 people from October onwards, totalling 156 000 metric tons through March 2004. This marks an increase of 299,000 people compared to the December 2002 VAC estimates of 650 000 people. It represents about 30 percent of the total population in the affected districts in two regions, although only less than 5 percent of the country's total population of 18 000 000. These estimates result from assessments of the following set of sources:

- Indications from government early warning reports and food security bulletins/reports from NGOs, the UN and donors.
- Updated food security reports and nutrition and health information from the multi-disciplinary 'Vulnerability Assessment Committee'. This includes the assessment of the baseline food economy information, the composition of wealth groups, and their livelihoods.
- Information from local authorities, NGOs and the UN on levels of vulnerability, the types of/ and most recent interventions and the number of beneficiaries.
- Mission members assessments of observed local conditions, including interviews with local households.
- Verification of the above information with the relevant analysts of the National VAC.

The alarming food insecurity situation results from near total failure of the current cropping season in the south and parts of the central zones of Mozambique, an exhaustion of coping mechanisms due to over-use during consecutive years of floods and droughts and the growing incidence of HIV/AIDS and related

diseases.

Most of the targeted populations have already reduced their levels of consumption of staple foods as a direct result of total crop failure. In many cases, consumption of wild foods is limited to leaves and tubers of insignificant nutritional value. Moreover, some of this wild food is said to be unusual and has caused negative health effects. A large number of populations of Chinthopo, Chitete and Mocumbura in Magoe and most of the population in Guro and Tambara, are facing this reality. In most of the targeted areas in the southern and central regions, acute malnutrition levels have shown a rising trend.

Emergency food assistance and sustainable medium and longer-term activities are the appropriate interventions in order to support these populations, prevent widespread hunger and halt the rising levels of malnutrition. Subsequently, it will help prevent harmful and dangerous natural resource over-use and other negative coping strategies that may further trigger a cycle of chronic vulnerability.

Emergency food assistance should be targeted to the most severely affected (women and children) and to those who cannot cope with the current disaster, including;

i) HIV/AIDS-affected households,
ii) Women-headed households with a high dependency ratio,
iii) Child-headed households and,
iv) Food insecure households living in communities with high malnutrition rates.

More detailed assessments, including the upcoming VAC, will provide more specific information on the above vulnerable groups for targeting purposes.

**Table 5. Affected Populations, Food Aid Needs and Phasing of Needs**

| Province/ District | Population Proj.July '03 1/ | Population in need of Assistance Apr.- June '03 | Population in need of Assistance July-Sept. '03 | Population in need of Assistance Oct-Dec.-'03 | Population in need of Assistance Jan.- March '04 |
|---|---|---|---|---|---|
| **North Region** | **247 074** | **54 000** | **54 000** | **65 000** | **65 000** |
| Chinde | 140 841 | 43 000 | 43 000 | | |
| Inhassunge | 106 233 | 11 000 | 11 000 | | |
| **Zambezia** | **247 074** | **54 000** | **54 000** | **65000** | **65000** |
| **Central Region** | **844 834** | **275 000** | **275 000** | **332 000** | **332 000** |
| Cahora Bassa | 71 530 | 29 000 | 29 000 | | |
| Changara | 140 298 | 85 000 | 85 000 | | |
| Magoe | 51 341 | 31 000 | 31 000 | | |
| Moatize | 121 819 | 13 000 | 13 000 | | |
| Mutarara | 138 292 | 14 000 | 14 000 | | |
| Zumbo | 44 015 | 5 000 | 5 000 | | |
| **Tete** | **567 295** | **177 000** | **177 000** | **213 000** | **213 000** |
| Chemba | 44 740 | 7 000 | 7 000 | | |
| Machanga | 44 363 | 18 000 | 18 000 | | |
| Muanza | 13 447 | 7 000 | 7 000 | | |
| **Sofala** | **102 550** | **32 000** | **32 000** | **39 000** | **39 000** |
| Guro | 43 375 | 22 000 | 22 000 | | |
| Machaze | 81 689 | 25 000 | 25 000 | | |
| Macossa | 15 814 | 2 000 | 2 000 | | |
| Tambara | 34 111 | 17 000 | 17 000 | | |
| **Manica** | **174 989** | **66 000** | **66 000** | **80 000** | **80 000** |
| **South Region** | **2 003 048** | **459 000** | **459 000** | **552 000** | **552 000** |
| Funhalouro | 33 789 | 21 000 | 21 000 | | |
| Govuro | 30 655 | 16 000 | 16 000 | | |
| Homoine | 105 812 | 16 000 | 16 000 | | |
| Inhassoro | 50 719 | 11 000 | 11 000 | | |
| Mabote | 38 523 | 16 000 | 16 000 | | |
| Panda | 49 676 | 15 000 | 15 000 | | |
| Vilankulo | 132 751 | 20 000 | 20 000 | | |
| **Inhambane** | **441 925** | **115 000** | **115 000** | **138 000** | **138 000** |
| Bilene | 165 932 | 34 000 | 34 000 | | |
| Chibuto | 163 685 | 33 000 | 33 000 | | |
| Chicualacuala | 38 829 | 28 000 | 28 000 | | |
| Chigubo | 14 945 | 8 000 | 8 000 | | |
| Chokwe | 236 036 | 48 000 | 48 000 | | |
| Guija | 65 729 | 14 000 | 14 000 | | |
| Mabalane | 29 087 | 18 000 | 18 000 | | |
| Mandlakazi | 177 873 | 36 000 | 36 000 | | |
| Massangena | 14 051 | 10 000 | 10 000 | | |
| Massingir | 25 097 | 16 000 | 16 000 | | |
| Xai-Xai | 215 847 | 11 000 | 11 000 | | |
| **Gaza** | **1 147 111** | **256 000** | **256 000** | **308 000** | **308 000** |
| Boane | 74 806 | 8 000 | 8 000 | | |
| Magude | 32 264 | 17 000 | 17 000 | | |
| Manhiça | 139 139 | 14 000 | 14 000 | | |
| Marracuene | 48 299 | 5 000 | 5 000 | | |
| Matutuine | 37 444 | 19 000 | 19 000 | | |
| Moamba | 39 529 | 20 000 | 20 000 | | |
| Namaacha | 42 531 | 5 000 | 5 000 | | |
| **Maputo** | **414 012** | **88 000** | **88 000** | **106 000** | **106 000** |
| **TOTAL** | **3 094 956** | **788 000** | **788 000** | **949 000** | **949 000** |
| **Total estim. food aid (maize)** | | **35 460** | **35 460** | **42 705** | **42 705** |

1/ Source: 1997. Instituto Nacional de Estatística. II Recenseamento geral da polulação e habitaçao 1997.

## 7. RECOMMENDATIONS

The Mission identified a number of issues that may require government and donor attention. Most of these issues are recurrent; they are listed to serve as a reminder for continuing action that may be needed.

- Transport costs remain a key factor in cereal trade within the country: improvements in transport infrastructure would have significant positive impact.
- On-farm storage facilities are poor and contribute to high post-harvest losses: there is a need for assisting farmers to improve their storage conditions.
- Productivity on farms remains low but the potential to increase it exists: higher levels of support to raise adoption rates for yield-enhancing technologies will raise production levels.
- Municipal taxes on the purchase and sales of maize add to marketing costs and contribute to low producer prices and much higher consumer prices in the deficit-prone south; reforms in this area will improve the situation for both producers and consumers.
- Most forms of assistance to drought-affected regions were observed to focus on agriculture. Support to other activities (fishing, for example) in line with local resource base is needed.
- Drought is cyclical; longer-term programmes of support are required.
- Improvements in information systems are needed, especially for marketing of food; this will promote market responses to inter and intra- district/ province disparities in supply conditions.
- Government support to the Early Warning Information System is necessary to improve the quality of crop forecasting and thus the reliability of assessments.
- In districts where sorghum production is important, some farmers plant short-cycle varieties alongside longer-cycle varieties to limit their losses. Assistance to promote these initiatives in a more systematic way in affected areas would contribute significantly to food security. The same recommendation applies to maize.
- Greater use of water resources in agriculture in some locations is needed.
- Appropriate measures by government and donors are needed to further support existing regional trade in cereals.
- Alternative uses for cassava (processing for export, for example) need to be explored.

*This report is prepared on the responsibility of the FAO and WFP Secretariats with information from official and unofficial sources. Since conditions may change rapidly, please contact the undersigned for further information if required.*

*Henri Josserand*
*Chief, GIEWS, FAO*
*Fax: 0039-06-5705-4495*
*E-mail:* giews1@fao.org

*Mr. M. Sackett*
*Regional Director, ODJ. WFP*
*Fax: 0027-11-5171642*
*E-mail Mike.Sackett@wfp.org*

*Please note that this Special Report is also available on the Internet as part of the FAO World Wide Web (*www.fao.org*) at the following URL address:* http://www.fao.org/giews/

*The Special Alerts/Reports can also be received automatically by E-mail as soon as they are published, by subscribing to the GIEWS/Alerts report ListServ. To do so, please send an E-mail to the FAO-Mail-Server at the following address:* ***mailserv@mailserv.fao.org****, leaving the subject blank, with the following message:*

*subscribe GIEWSAlertsWorld-L*

*To be deleted from the list, send the message:*

*unsubscribe GIEWSAlertsWorld-L*

*Please note that it now possible to subscribe to regional lists to only receive Special Reports/Alerts by region: Africa, Asia, Europe or Latin America (GIEWSAlertsAfrica-L, GIEWSAlertsAsia-L, GIEWSAlertsEurope-L and GIEWSAlertsLA-L). These lists can be subscribed to in the same way as the worldwide list*

.