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

FAO/WFP CROP AND FOOD SUPPLY ASSESSMENT MISSION TO MALAWI

9 June 2003

Mission Highlights

- Maize production in 2003 is expected to increase by 22 percent over last year's final harvest estimate. Higher rainfall this year and more widespread use of improved maize seed and fertilizers largely account for this result, amounting to some 1.9 million tonnes.

- There will be a shortage of some 94 000 tonnes of cereal in the 2003/04 marketing year (April/March). Available cereal is estimated at 2.319 million tonnes against an expected utilization of 2.413 million tonnes.
- There should be adequate food supply. Substantial but unrecorded quantities of maize and rice continue to be informally imported into Malawi from neighbouring countries. These imports, together with substantial carryover stocks and other crops, should obviate the need for additional cereal imports in the 2003/04 marketing year, except for the usual wheat imports.
- Although overall food production has increased significantly, several areas have experienced crop failures for the third consecutive year. The Mission estimates that approximately 131 500 people will require food assistance beginning in July 2003; this will peak to 400 000 people in January 2004 with a total cereal requirement of 30 600 tonnes. In view of high levels of maize stocks in the country, the necessary cereal food aid should be procured locally.
- Insufficient access to available food by a significant proportion of the population is a key food-security concern. In particular, the HIV/AIDS-affected, the destitute, and households that have experienced crop failure will need assistance. Assistance with agricultural inputs for the next cropping season will also be necessary.

1. OVERVIEW

Maize is the preferred staple of the vast majority of Malawians, and a lack of maize is generally interpreted as a lack of food. A number of factors, including a reasonably good harvest in 2003, high levels of maize stocks on hand and current low market prices for maize, all point to a better cereal supply position in Malawi during the 2003/04 marketing year than was the case the previous year. Nevertheless, as a precautionary measure following the food crisis of the past two years, the Government of Malawi requested that FAO and WFP carry out an assessment of the food situation in the country. Accordingly, an FAO/WFP Crop and Food Supply Assessment Mission visited Malawi on 6–26 April 2003. The Mission's objectives were to assess the country's 2002/03 crop production, estimate the levels of existing food stocks, review the overall food supply situation and draw up a national food balance sheet. Officials from the Ministry of Agriculture and Irrigation (MAI) accompanied the Mission, while representatives of the Famine Early Warning System (FEWS-NET) participated as observers.

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WORLD FOOD PROGRAMME, ROME

The Mission was briefed in Lilongwe by the staff of various departments in the Ministry of Agriculture and Irrigation (MAI), the National Food Reserve Authority (NFRA), the Agricultural Marketing Development Corporation (ADMARC), the Ministry of Economic Planning and Development, United Nations and other international and bilateral organizations and NGOs. In addition, the Mission received extensive documentation prepared by the Government and non-government agencies on recent weather conditions and current crop assessments and forecasts. Most importantly, the Mission had access to MAI's Second-Round Agricultural Production Estimates prepared at the end of March 2003.

Following initial briefings, the Mission was divided into two teams in order to permit the maximum time for interviews and discussion in each of Malawi's eight Agricultural Development Divisions (ADDs) during visits over a period of ten days. Work began in the southern region and part of the central region of Malawi. The two Mission teams next visited the northern region of the country. Starting from Lilongwe, both teams completed rural visits by travelling to the remainder of the central region. In addition to travelling to each of the country's eight ADDs, the teams visited most of the districts within them. The local situation was discussed with ADD staff and local District Commission staff, often including the District Commissioner in person. ADMARC representatives also usually attended the meetings, whose purpose was to establish whether the forecasts presented in the Second-Round Agricultural Production Estimates were still valid or not, and to obtain local perceptions of the overall food security situation.

The teams travelled extensively in the field, observing and evaluating standing crops, and discussing with farmers their experiences of the summer cropping season, their plans for the winter cropping season, and the anticipated food security situation in the twelve-month period until the end of March 2004. Crops were sampled and measured for yield estimates. Finally, in this phase of the Mission, local markets were visited in order to observe the level of grain availability and the current market prices of staples, especially of maize grain. Anticipated maize prices for the year to March 2004 were also discussed with traders.

Upon returning to Lilongwe, the Mission briefed the Government and donor agencies on preliminary findings.

Hopes for a better harvest in 2002/03 were generally confirmed by the second-round crop production estimates made at the end of March 2003. The Mission found the estimates acceptably reliable at ADD and national level, although it was agreed that the application of the survey method may have suffered at lower levels due to the reduced number of Extension Field Assistants in some areas.

Unlike in the previous season, the actual harvest for the 2002/03 crop season is not expected to be lower than the second-round estimates. After the second-round forecasts in 2002, maize yields were reduced as a result of the widespread pre-harvest consumption of maize in the field. The Mission found little evidence that maize in the green or immature state was being consumed in 2003.

With substantial carryover stocks brought forward, a forecast cereal harvest of 2.056 million tonnes and informal cross-border imports of maize and rice, the Mission estimates the total national cereal availability to be about 2.319 million tonnes, adequate for meeting utilization requirements without additional imports, apart from the usual commercial wheat imports. Utilization requirements include 1.925 million tonnes of cereals consumed as food and 385 000 tonnes for other purposes, leaving 103 000 tonnes as closing stock at the end of March 2004. It is assumed that there will be no cereal exports in the period covered.

Malawi's production of roots and tubers is also estimated to rise substantially above the level achieved in the previous year. This Mission confirms the finding of last year's Mission that these commodities are being increasingly accepted, especially in certain regions of Malawi, as important contributors to overall household food security. As such these crops will contribute to reducing any localized cereal deficits.

The Mission noted that informal maize and rice imports were taking place. These occur across the border with Mozambique, particularly into the southern region of Malawi, and to a lesser extent in the north and west across Malawi's borders with the United Republic of Tanzania and Zambia. These unrecorded imports were observed entering unhindered across regular border crossings. Importers are attracted to Malawi because of the relatively higher cereal prices that generally prevail there.

In Malawi, the main cereal harvest starts in the southern region, followed by the central and northern regions approximately four to six weeks later. At the time of the Mission's visit, informal imports, together with the increasing arrival on the market of Malawi's own harvest and the absence of ADMARC as a buyer on the market, were keeping the market price of maize below the ADMARC selling price of 17 Malawi Kwacha (MK) per kilo. Depending on area, this situation is expected to prevail until the end of July, August or September 2003. It was the general view of government officials, ADMARC staff and grain traders that, between late July and late September, maize prices were likely to rise again, closer to but probably not above the present

ADMARC selling price and to remain at that level until the end of the marketing year (end of March 2004). The current market prices make it difficult for the National Food Reserve Agency (NFRA) to dispose of the 151 000 tonnes of maize stocks it wishes to sell, but the position could improve when maize prices rise in a few months' time. The final outcome will, however, depend on the relation between the price of the maize imported from neighbouring countries and the price at which the Government is willing to offer the NFRA maize.

Regarding informal grain imports, the Mission believes that one should be able to measure the volume of imports where they enter Malawi at official border crossings. As long as these imports are permitted to enter Malawi unhindered, such crossings provide convenient points of entry and are therefore likely to account for a major part of these imports. An actual count, or even sample data, would help gauge the magnitude of the inflow.

2. SOCIO-ECONOMIC CONTEXT

2.1 Macro-economic situation

For more than twenty years Malawi has faced two central economic challenges: reducing the level of absolute poverty and cutting the budget deficit. The strategies for poverty alleviation have included liberalization of domestic markets, relaxation of agricultural marketing arrangements and privatization of parastatal companies, including through specific rural development programmes. Overall, there has been little noticeable diversification of the production base, agriculture being by far the dominant sector.

According to the 2002 report of Malawi's National Economic Council, total GDP declined by 1.5 percent in 2001 compared to an average annual growth rate of 2.6 percent in the three previous years. With the population recognized to be increasing at an average annual rate of 1.9 percent, the rise from poverty has been very modest in recent years and was reversed in 2001. During 2002, GDP grew at a marginal positive rate of 0.1 percent. However, mainly because of more favourable weather conditions for agriculture in 2002/03, it is anticipated that GDP growth will be higher in 2003.

In his 2002/03 budget statement to Parliament, the Malawi Minister for Finance said that poverty in Malawi had reached unacceptable levels. He pointed out that the 1998 Integrated Household Survey revealed that 65.3 percent of Malawians – 6.3 million people – were poor, and that 28.7 percent of these were extremely poor. He regarded the key causes of poverty to include limited access to land, low education, poor health status, limited off-farm employment and a lack of access to credit.

In December 2000, the International Monetary Fund approved a three-year poverty reduction and growth facility that formalized the objective of poverty reduction and emphasized fiscal policy reform and promotion of private-sector development and investment.

Macro-economic instability has been a major problem in recent years. In spite of the Government's expressed desire to control public spending, expenditure has continued to increase significantly. In 2002 it rose by 13 681.02 million Kwacha over the previous year, a rise of nearly 49 percent. Recurrent expenditure rose by 23.3 percent while development expenditure increased by 283.2 percent. Even after taking into account grants received, the budget/deficit ratio stood at –3.3 in 2002 compared with –1.5 the previous year.

Money supply has grown rapidly in Malawi. It grew by 15.9 percent in 2002, compared to 12.1 percent one year earlier. However, the growth rates in both years were more modest than in the three previous years.

The figures in Table 1 reveal that after four successive years of high inflation rates, the level declined significantly in 2002. It remains to be seen if this downward trend will continue in 2003.

Table 1. Annualized rate of inflation in Malawi during the last six years

Year	Percentage
1997	9.2
1998	29.8
1999	44.7
2000	29.6
2001	20.2
2002	10.7

Source: Reserve Bank of Malawi.

The Malawi Kwacha has continued to depreciate against a number of important currencies as illustrated in Table 2.

Table 2. Value of the Malawi Kwacha compared to several major foreign currencies

Year	US$	Rand	EURO	UK Pound
1999	43.86	7.18	46.78	70.96
2000	59.24	8.45	54.13	89.01
2001	71.83	8.52	64.37	103.44
2002 (January)	88.76	10.38	95.99	146.74
2002 (June)	76.22	7.36	75.29	116.39

The depreciating value of the national currency has naturally acted to raise the cost of imports, including agricultural inputs and grains.

Malawi's total foreign exchange reserves at the end of 2002 stood at US$211.3 million and declined further to US$188.08 million during January 2003. This latter figure is equivalent to three months of imports. According to the Reserve Bank of Malawi's *Monthly Economic Review* dated January 2003, "the outlook for reserves in the coming few months continues to be bleak with the ongoing lean period and also as donor inflows keep being scaled down".

2.2 Performance of the agricultural sector

Malawi is highly dependent on agriculture. Although the sector produces only about one-third of the GDP it contributes more than 90 percent of the country's foreign exchange earnings. Tobacco, tea and sugar – three of the country's major agricultural products – contributed an average of about 82 percent to Malawi's total annual export earnings in the eight years prior to 2001.

The agricultural sector is composed of two sub-sectors: small-scale farmers and larger estates. The two sub-sectors have been historically distinguished on the basis of legal and institutional rules regulating land tenure, type of crops and marketing arrangements. The smallholder sub-sector is based on a customary land-tenure system and is primarily subsistence, providing the bulk of food production. The main food crop is maize, supplemented by rice, sorghum, pulses, cassava and sweet potatoes. Since the mid-1990s, smallholders have been allowed to produce/export industrial crops, and this has generated great response in production, particularly of tobacco. The great challenge arising from this development is to maintain the quality of tobacco produced. Other cash crops include cotton, groundnuts and pulses. The estate sub-sector comprises about 14 700 estates occupying some 850 000 ha of leased land. The main crops are tobacco, tea and sugarcane. Approximately 80 percent of the workforce is employed in the smallholder sub-sector and 11 percent on estates.

Agricultural production grew at an annual rate of 2.1 percent from 1980 to 1993, down from a high of 4.4 percent per annum between 1970 and 1980. This was mainly because ADMARC's purchases were drastically reduced in 1986/87, with maize purchases decreasing from 271 000 tonnes in 1985 to 59 500 tonnes in 1987, as result of excessive stocks and Government budgetary constraints. Furthermore, guaranteed producer prices were held down to reduce Government expenditure, with the price of maize constant for three years up to 1997. This led to a steep fall in marketed maize and a resurgence of food shortages after many years of surpluses.

Throughout the 1990s, agricultural production was characterized by marked swings due mainly to droughts. Following a drop in maize production in 1996/97, there was a significant recovery in 1998/99 and 1999/00, which was attributed to increased use of modern agricultural inputs (improved seed and fertilizer) especially under the Starter Pack scheme. An increase in cropped area also contributed to the rise in the level of production. During the poor 2000/01 season, the distribution of inputs was drastically reduced because of very limited donor involvement in financing the scheme, and reduced credit availability following extensive defaults by farmers in 1999/00 partly caused by very low maize prices. The 2001/02 cropping season was also poor, principally because of unfavourable weather conditions.

The high interest rates currently prevailing in Malawi, with bank rates at 40 percent or more, have adversely affected agricultural producers in two important ways. Firstly, they have increased pressure for the rate of inflation generally to rise thereby driving up the cost of agricultural inputs. Secondly, high interest rates have

increased the cost of borrowing to finance agricultural production. Malawi has thus been prevented from realizing full potential for agricultural production.

2.3 Population

The size of Malawi's population remains a contentious issue, with significant implications for the assessment of national food security. In 2002, the MAI and the FAO/WFP Mission used the official Central Statistic Office (CSO) figure of 11.44 million. This was based on an annual growth rate of 2.7 percent since the 1998 census. This is higher than the inter-censual annual growth rate of 1.9 percent for 1989-1998. Even that growth rate is regarded as too high by international agencies, which attempts to take into account the effects of high mortality attributable to AIDS. The Reserve Bank of Malawi uses the lower population growth rate of 1.9 percent when preparing its annual macro-economic projections. Therefore, the Mission decided to take the 2002 population figure of 11.44 million as previously used and project it forward at the inter-censual growth rate of 1.9 percent per annum. This method of calculation resulted in a population of 11 657 360 for 2003. This is the figure used by the Mission to calculate the national cereal requirement.

3. FOOD CROP PRODUCTION IN 2002/03

3.1 Main factors affecting production in 2002/03

Rainfall

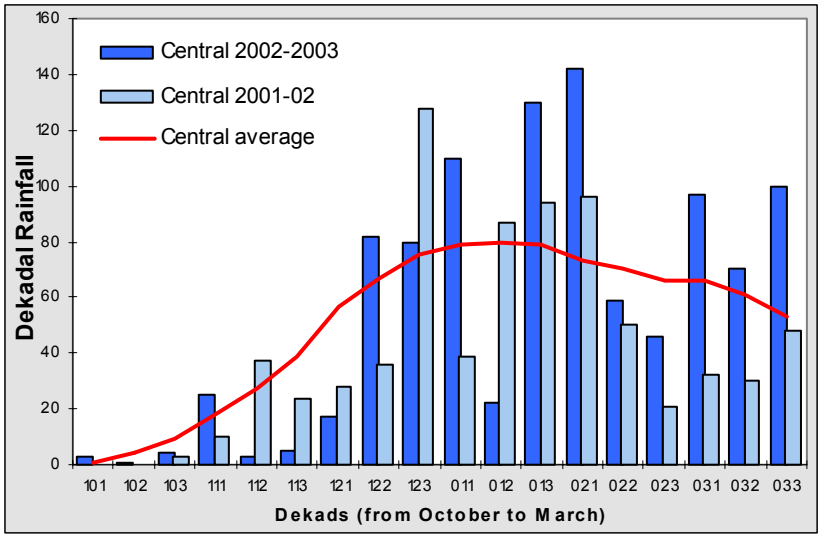
The long term average rainfall for Malawi of around 1100 mm per year should be enough to grow sufficient food to feed the country if well distributed. In the 2002/03 season, the rainfall recorded at the various ADD sections averaged 903 mm between October and March 2002/03, which was 118 mm more than last year (785 mm), but still some 200 mm less than the average.

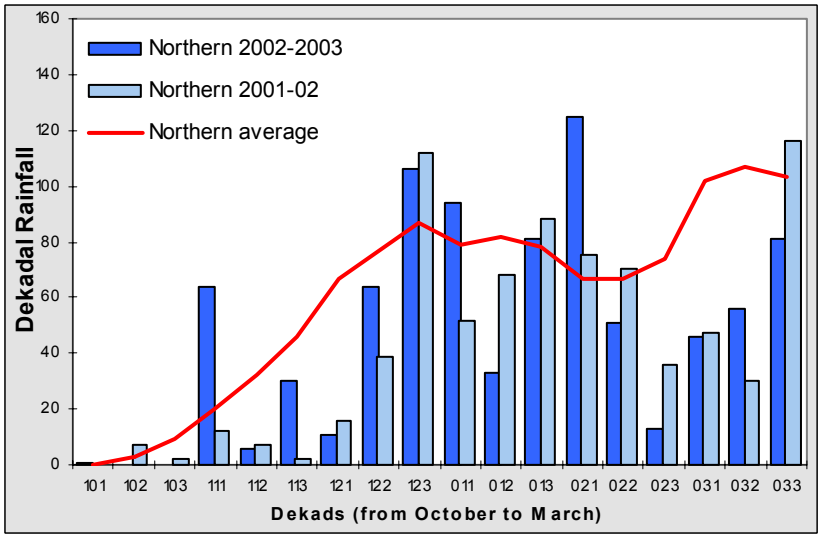
The rainy season for 2002/03 started late October/November in most areas but was delayed by over a month in others, mainly in the south and central regions. However, planting got well underway with good rains in second and third dekads of December 2002, but heavy rains in early January 2003 caused flooding and crop destruction, particularly in the south and central regions, necessitating some replanting of both maize and cassava. This was apparently a result of the tropical cyclone “Delfina”.

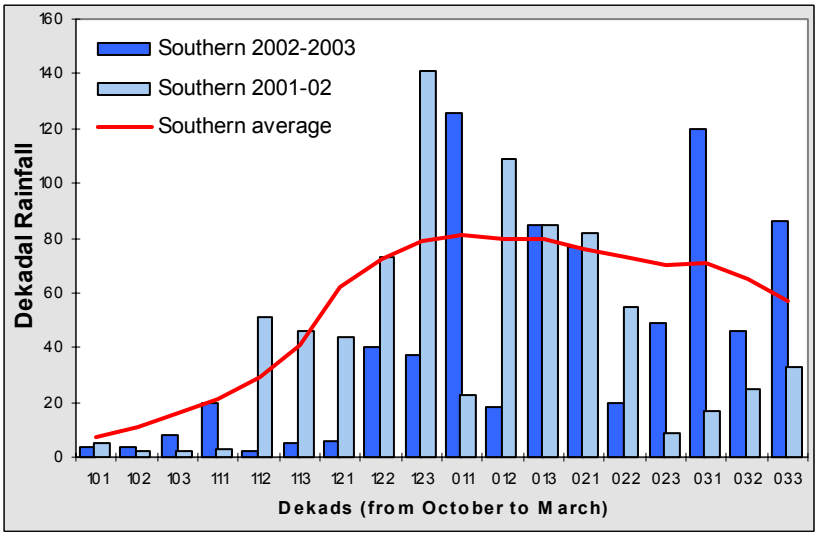
Some parts of the country then experienced dry spells in February, affecting the early planted maize crop at cob filling stage and later plantings at tasselling. Stunted maize was the result in the worst affected areas of the lower Shire valley and the lakeshore areas.

The rainy season then continued longer than normal with substantial rains in March 2003. This benefited the later crops which had been replanted after the December floods, but also caused lodging and germination of mature maize, forcing farmers to harvest early at high moisture contents and sun dry the grain before storage. There was still some flood damage in the Northern Region at the time of the Mission. Mzuzu in particular stands out with nearly 2 200 mm recorded in 2002/03, compared with 1 400 mm last year (800mm more), which explains the flood damage reported from that area this season. The ten year average (88-98) for the Northern Region is 1 367 mm/annum. The graphs in Figure 1 show how the rainfall recorded by Regions compared with 2002/03 and the long-term average.

Figure 1. Malawi Estimated Rainfall by Region







Source: NOAA/FEWS; FAO/Agromet Group elaborated by FAO GIEWS

Area planted

The steady increase in population has resulted in farm sizes becoming smaller, particularly in the south of the country. According to the MAI, some 75 percent of farming households have less 1.0 hectares and 55 percent have less than 0.5 ha. In the Southern region, where 50 percent of Malawi's population lives the average farm size is only 0.17 hectares and in the Central and Northern Regions it is 0.26 hectares on average. These small areas in the south particularly limit the area of crops that each farmer can grow and there appears to be little movement from south to north, for mainly cultural reasons. Spare labour available in the south is therefore not generally inclined to move to the north, where there is more room for expansion.

However, the area of crops grown in 2002/03 has increased compared with 2001/02 for the main staple food crops of maize, cassava and sweet potatoes. Maize area and production increased by 4 percent and 22 percent respectively, while the respective increases for cassava are estimated at 8 and 15 percent. Sweet potatoes area and production increased by an estimated 27 percent and 36 percent, respectively.

One of the factors responsible for an increase in crop area is better availability of seeds to a large number of farmers through the Targeted Input Programme (TIP), more availability of cassava cuttings and sweet potato vines through NGOs programmes and the emergency food aid distributions which allowed people to concentrate on land preparation instead of hunting for food. It could also be the case in some areas that the earlier rains in 2002 allowed more time for cultivation, thereby adding to the overall areas cultivated. ADD staff have also attributed some increase in cassava areas to MAI campaign to promote more planting of drought tolerant crops.

Other reasons for the increased area compared with 2001/02 include the promotion of more winter cropping on wetlands, with residual moisture and irrigated cropping. It is planned to issue farmers with packs of seed and fertilizer as well as a large number of treadle pumps for irrigation in the 2003 dry season. Each pump is said to be capable of irrigating 0.33 ha. Table 4 shows the amount of maize planned for winter cropping in 2003 – 118 110 hectares and other winter crops including rice, groundnuts, beans and Irish potatoes. Apart from increasing the crop area, winter cropping is aimed at reducing dependence on rainfed production and to prolong the period when food will be available. Planting of winter crops will start in May and continue until July.

Crop yields

The early start to the rains, which some areas experienced, is likely to have contributed to higher yields of maize this season, since timely planting is closely correlated to yield. The better overall rainfall and distribution than last season also, undoubtedly, helped to improve yields of all crops. However, the weather also had adverse effects on yields where flooding or extended dry spells were experienced and in such areas local opinion is that yields will not be as good as last year. Localized flooding (in low lying land) and washouts (on upland slopes) caused complete crop destruction of both maize and cassava and 4-6 week long dry spells in mid season led to stunting or poor cob filling of maize, depending on the stage of growth. Replanting was also necessary where the damage occurred earlier in the season, with lower yields as a consequence.

Another main reason, given by farmers and ADD staff for higher yields this year was the better availability of improved seed of both hybrid and OPV maize varieties, as well as fertilizer, which were distributed by MAI under the TIP programme. Although only a very small amount of seed, sufficient only for 0.1 hectares per farm was given out, a large number of farmers benefited (see "Inputs" below). ADD staff also emphasized the success of their campaign to promote the use of farm yard manure as another factor contributing to better yields.

Although there has been an increase in the estimates of crop yields for 2002/03, with maize at 1.2 tonne/hectare compared with 1.0 tonne/hectare in 2001/02, the maize yield in particular is still well below potential. Maize production in the 1999/00 season was 2.5 million tonnes from 1.5 million ha, giving an average yield of 1.7 tonne/ha. That was when the ASIP credit programme was operating and, as a result, farmers were able to buy more fertilizer.

Cassava yields have always given rise to controversy, being notoriously difficult to estimate with confidence. Although most cassava in Malawi is grown in pure stands and not intercropped as a rule, the problems of yield forecasting still arise from a variety of factors, e.g. cassava is planted at all times of the year and a single plot will contain plants of all different ages, new plants replacing old as they are consumed.

Furthermore, cassava can take as long as 9-24 months to mature, according to the variety and growing conditions, but may be harvested at any time from 6 months or so, with a correspondingly reduced yield.

Up to the year 1998/99 the average yield of cassava was around 5.5 t/ha annually (MAI records), but in 1999/00 it jumped to 13.4 t/ha and the current estimate for cassava harvested in 2002/03 is 16.0 t/ha. The "sweet" type of short term cassava, such as that which is being multiplied under an FAO programme this year, is capable of yields of 25-30 t/ha at nine months old under good management, and the longer term, bitter varieties, which predominate in those areas where cassava is the preferred staple, could also achieve similar yields at full maturity. It is quite possible that the 2002/03 estimate of 16 t/ha may be optimistic but in the absence of verifiable evidence to the contrary, the Mission has decided to include the official MAI Second Round estimate of 16 t/ha in this report, without adjustment. However yields and production figures should be treated with caution when considering cassava as part of the overall food availability.

Agricultural inputs

The Targeted Input Programme (TIP), financed by the EU and DFID, provided a large number of the poorest farmers with small packs of inputs, free of charge, in the 2002/03 season. These were made up of 5kg basal fertilizer, 5kg of Nitrogen fertilizer for top dressing and 2kg of maize seed (Open Pollinated Varieties (OPV) or hybrid), sufficient for 0.1 hectares of rainfed maize, plus small packets of seed of beans/ soybeans/ pigeon peas or groundnuts (depending on the location). Table 3 gives the amounts of improved maize seed and fertilizers used, by the end of March 2003 in each ADD, for the 2002/03 summer crop.

Table 3. Malawi: Uptake of improved maize seed (Hybrid & OPV) and fertlizer in 2002/03 and 2001/02

Agricultural Development Division	Maize Seed (tonnes)				Fertilizer (tonnes)			
	2002/03			2001/02	2002/03			2001/02
	TIP (Free)	Trade/NGOs Cash/Credit	Total	Total	TIP (Free)	Trade/NGOs Cash/Credit	Total	Total
Karonga	130	35	165	n.a	672	780	1 452	n.a.
Mzuzu	623	139	762	52	2 086	12 003	14 089	10 212
Kasungu	671	303	974	534	3 358	10 085	13 443	11 047
Salima	239	125	364	257	1 216	1 920	3 136	1 601
Lilongwe	2 510	317	2 827	663	11 555	22 503	34 058	14 082
Machinga**	n.a.	n.a.	1 874	874	n.a.	n.a.	14 168	4 485
Blantyre*	1 425	248	1 673	455	7 095	1 490	8 585	3 646
Shire Valley	350	227	577	145	1 748	240	1 988	586
***	5 948	1 394			27 730	49 021		
Malawi Total			**9 216**	**2 980**			**90 919**	**45 659**

Source: Agricultural Development Division reports – March 2003

* TIP only reported for 2001/02
** TIP not separated
*** Sub-total excluding Machinga
n.a. = not available

Table 3 shows that the use of improved maize seed in 2002/03 increased by 200 percent over that in the 2001/02 cropping season, and fertilizer usage increased by 100 percent. The increase in the estimated maize yields of 16 percent, given in the Second Round Crop Estimates for 2002/03, is attributed as much to this better uptake of crop inputs as to the generally better rainfall experienced in most of Malawi. The TIP pack was usually only enough for a small part of the maize area on each farm and as a result it was very common to see good stands of maize on the 0.1 hectares fertilized area, alongside very poor stands on unfertilized land in the same field, clearly illustrating the benefit of applying adequate fertilizer.

Until 19 March 2003, 183 000 tonnes of fertilizer had been officially imported for the 2002/03 cropping season, according to Malawi Agricultural Input Markets Development Project. Approximately half appears to have been used in the smallholder sector as reported by the ADDs (90 919 tonnes) and the remainder presumably used by the large commercial tobacco, sugar, tea and coffee estates.

Weeds, pests and diseases

Several ADDs reported attacks by Army Worm caterpillars early in the season, which necessitated some replanting of maize and therefore loss of improved seed, but it was not serious in most areas. There were also some losses from White Grub and Grasshoppers, but not of major significance.

Agricultural credit

The Agricultural Sector Investment Programme (ASIP), which had provided seeds and fertilizers to farmers on credit in previous years, was discontinued after the 2001/02 season due to poor debt recovery, and only some very limited schemes funded by NGOs were operating in 2002/03. The effect has been a major reduction in fertilizer use with a corresponding reduction in production potential. The NGO schemes, which are based on the village group credit principle, have been reported as having good rates of debt recovery.

Food aid

The emergency food aid programme which operated during the 2002/03 season is reported to have had a significant effect on crop productivity. Apart from the obvious benefits to health and strength, the time saved by farmers not having to look for food was used to cultivate more land and to spend more time on crop management like weeding. Some families which grew no crops at all last season had land under cultivation this year. Another important effect of food aid was to minimize the premature consumption of green maize and cassava, thereby improving final yield and production.

3.2 Food crop production estimate

The MAI's Second Round Agricultural Production Estimates, which were prepared in March 2003, provided the figures for the crops grown in 2002/03. The major dry spells and floods, which reduced crop yield in some areas, had occurred before the 2nd round estimates and were therefore taken into account.

Estimates for maize for the eighth Agricultural Development Divisions (ADDs) are given in the Table 4. Tables 5 and 6 show, respectively, estimates for all cereals and roots and tubers. Table 7 gives the areas and production of all the major food crop groups (cereals, roots/tubers and legumes), comparing the 2001/02 and 2002/03 seasons. The estimated total production of all major crop types in the 2002/03 season is as follows:

- Cereals: 2.057 million tonnes of which maize 92 percent, rice 4 percent, sorghum 2 percent, millet 1 percent and wheat 1 percent;
- Root & tuber crops: 3.6 million tonnes of which cassava 50 percent, sweet potatoes 40 percent and Irish potatoes 10 percent;
- Legumes: 500 000 tonnes of which pulses 65 percent and groundnuts 35 percent.

Table 4. Malawi: Maize estimates for 2002/03 - Summer and Winter Crops

Agricultural Development Division	Unit	Total Maize	Summer Maize		Winter Maize
			Smallholder	Estate	Smallholder
Karonga	Area (ha) Yield (tonnes/ha) Production (tonnes)	43 528 1.04 45 153	39 460 1.00 38 345	28 1.07 30	4 040 1.68 6 778
Mzuzu	Area (ha) Yield (tonnes/ha) Production (tonnes)	148 922 0.76 113 642	138 792 0.72 99 753	5 181 1.27 6 592	4 949 1.47 7 297
Kasungu	Area (ha) Yield (tonnes/ha) Production (tonnes)	289 340 1.42 411 815	213 550 1.27 271 674	51 292 1.68 86 082	24 498 2.21 54 059
Salima	Area (ha) Yield (tonnes/ha) Production (tonnes)	78 910 1.35 106 648	63 647 1.26 80 482	6 945 1.96 13 616	8 318 1.51 12 550
Lilongwe	Area (ha) Yield (tonnes/ha) Production (tonnes)	348 590 1.21 422 318	316 175 1.12 354 646	2 515 2.98 7 497	29 900 2.01 60 175
Machinga	Area (ha) Yield (tonnes/ha) Production (tonnes)	309 150 1.23 379 717	289 274 1.17 337 503	5 138 3.15 16 202	14 738 1.76 26 012
Blantyre	Area (ha) Yield (tonnes/ha) Production (tonnes)	243 218 1.24 301 632	234 948 1.21 283 835	656 4.68 3 067	7 614 1.93 14 730
Shire Valley	Area (ha) Yield (tonnes/ha) Production (tonnes)	107 080 1.12 119 425	83 027 0.98 81 499	- - -	24 053 1.58 37 926
Malawi Total	**Area (ha)** **Yield (tonnes/ha)** **Production (tonnes)**	**1 568 738** **1.21** **1 900 350**	**1 378 873** **1.12** **1 547 737**	**71 755** **1.85** **133 086**	**118 110** **1.86** **219 527**

Source: Ministry of Agriculture and Irrigation – Second Round Estimates (March 2003)
Note: Winter maize estimates are “as planned”. Planting will start in May 2003.

Table 5. Malawi: Cereal production in 2002/03

Agricultural Dev. Division	Unit	Maize	Rice	Sorghum	Millet	Wheat	Total cereals
Karonga	Area (ha)	43 528	5 336	284	2 086	0	51 234
	Yield (t/ha)	1.04	1.84	0.14	0.85	0	1.11
	Production (t)	45 153	9 812	39	1 783	0	56 787
Mzuzu	Area (ha)	148 922	2 021	0	11 069	0	162 012
	Yield (t/ha)	0.76	1.88	0	0.65	0	0.77
	Production (t)	113 642	3 791	0	7 151	0	124 584
Kasungu	Area (ha)	289 340	615	90	1 412	37	291 494
	Yield (t/ha)	1.42	1.32	0.61	0.45	0.92	1.42
	Production (t)	411 815	813	55	639	34	413 356
Salima	Area (ha)	78 910	8 719	227	124	0	87 980
	Yield (t/ha)	1.35	1.49	0.71	0.48	0	1.36
	Production (t)	106 648	12 966	162	60	0	119 836
Lilongwe	Area (ha)	348 590	3 756	1 575	14 129	132	368 182
	Yield (t/ha)	1.21	2.29	0.70	0.56	0.86	1.20
	Production (t)	422 318	8 606	1 099	7 970	113	440 106
Machinga	Area (ha)	309 150	20 554	19 452	2 322	0	351 478
	Yield (t/ha)	1.23	1.59	0.76	0.60	0	1.22
	Production (t)	379 717	32 671	14 847	1 396	0	428 631
Blantyre	Area (ha)	243 218	8 133	30 343	1 208	1 500	284 402
	Yield (t/ha)	1.24	1.22	0.75	0.52	0.80	1.18
	Production (t)	301 632	9 956	22 615	623	1 200	336 026
Shire Valley	Area (ha)	107 080	5 325	7 956	6 408	0	126 769
	Yield (t/ha)	1.12	1.55	0.74	0.71	0	1.09
	Production (t)	119 425	8 267	5 921	4 528	0	138 141
Malawi	**Area (ha)**	**1 568 738**	**54 459**	**59 927**	**38 758**	**1 669**	**1 723 551**
	Yield (t/ha)	**1.21**	**1.60**	**0.75**	**0.62**	**0.81**	**1.19**
	Production (t)	**1 900 350**	**86 882**	**44 738**	**24 150**	**1 347**	**2 057 467**

Source: Ministry of Agriculture & Irrigation – Second Round Estimates (March 2003)

Table 6. Malawi: Roots and tubers production 2002/03

Agricultural Dev. Division	Unit	Cassava	Sweet potato	Irish potatoes	Total roots and tubers
Karonga	Area (ha)	9 394	3 699	33	13 126
	Yield (t/ha)	14.71	10.65	10.00	
	Production (t)	138 165	39 384	330	177 879
Mzuzu	Area ('000 ha)	23 933	20 994	1 705	46 632
	Yield (t/ha)	22.53	12.72	9.79	
	Production (t)	539 230	267 010	16 699	822 939
Kasungu	Area ('000 ha)	10 017	15 071	4 659	29 747
	Yield (t/ha)	18.07	16.14	12.86	
	Production (t)	180 993	243 190	59 910	484 093
Salima	Area (ha)	24 708	4 641	0	29 349
	Yield (t/ha)	16.66	10.76	0	
	Production (t)	411 684	49 933	0	461 617
Lilongwe	Area (ha)	8 976	12 319	19 793	41 088
	Yield (t/ha)	13.17	12.29	13.29	
	Production (t)	118 197	151 399	263 001	532 597
Machinga	Area (ha)	16 441	20 710	247	37 398
	Yield (t/ha)	12.42	12.72	9.73	
	Production (t)	204 268	263 487	2 403	470 158
Blantyre	Area (ha)	17 286	29 317	4 360	50 963
	Yield (t/ha)	10.00	12.55	16.35	
	Production (t)	172 913	367 813	71 270	611 996
Shire Valley	Area (ha)	716	5 536	0	6 252
	Yield (t/ha)	12.22	11.18	0	
	Production (t)	8 746	61 871	0	70 617
Malawi	**Area (ha)**	**111 471**	**112 287**	**30 797**	**254 555**
	Yield (t/ha)	**15.92**	**12.86**	**13.43**	
	Production (t)	**1 774 196**	**1 444 087**	**413 613**	**3 631 896**

Source: Ministry of Agriculture & Irrigation – Second Round Estimates (March 2003)

Table 7. Malawi: Areas and production of the major food crop groups - 2002 and 2003

Agricultural Development Division	Unit	Cereals			Roots and Tubers			Legumes		
		2002	2003	% Diff.	2002	2003	% Diff.	2002	2003	% Diff.
Karonga	Area (ha)	47 948	51 234	7	10 401	13 126	26	17 868	23 049	-29
	Production (t)	62 862	56 787	-10	113 469	177 879	57	11 210	12 535	12
Mzuzu	Area (ha)	155 814	162 012	4	30 572	46 632	53	69 417	73 472	6
	Production (t)	166 051	124 584	-25	510 014	822 939	61	37 842	34 091	-10
Kasungu	Area (ha)	266 365	291 494	9	23 656	29 747	26	118 460	135 503	14
	Production (t)	331 769	413 356	25	330 878	484 093	46	69 426	94 178	36
Salima	Area (ha)	133 825	87 980	-34	30 445	29 349	-4	28 248	18 173	-36
	Production (t)	157 646	119 836	-24	557 097	461 617	-17	25 830	22 099	-14
Lilongwe	Area (ha)	298 039	368 182	24	40 274	41 088	2	149 013	161 393	8
	Production (t)	288 647	440 106	52	534 087	532 597	0	87 734	109 421	25
Machinga	Area (ha)	337 275	351 478	4	35 721	37 398	5	117 784	130 277	11
	Production (t)	304 283	428 631	41	376 084	470 158	25	80 136	88 871	11
Blantyre	Area (ha)	275 478	284 402	3	39 516	50 963	29	185 899	203 447	9
	Production (t)	290 334	336 026	16	436 953	611 966	40	111 814	130 833	17
Shire Valley	Area (ha)	120 732	126 769	5	5 807	6 252	8	30 857	34 664	12
	Production (t)	109 055	138 141	27	67 916	70 617	4	16 897	21 145	25
Malawi	**Area (ha)**	**1 635 476**	**1 723 551**	**5**	**216 392**	**254 555**	**18**	**717 546**	**779 978**	**9**
	Production (t)	**1 710 647**	**2 057 467**	**20**	**2 926 498**	**3 631 896**	**24**	**440 889**	**513 173**	**16**

Source: Ministry of Agriculture and Irrigation – Second Round Estimates (March 2003) and Final Estimates (June 2002)

3.3 Livestock and pasture

Livestock contribute about 12 percent of total agricultural production in Malawi and cattle numbered about 700 000 head in 1997, when the last estimate was made, some 12 000 of which were recorded as dairy animals. Most cattle are found in the Northern Region where more land is available for grazing. Goats are found throughout Malawi and pigs are also kept by smallholders in all districts. Meat and milk consumption is low at an estimated 6.3 kg/person/year and 4.5 lit/person/year respectively, whereas the average meat consumption for other African countries is estimated at around 13.0 kg/person/year and the FAO recommendation for milk consumption is 200 lit/person/year. Poultry are common in all homesteads but generally only sold when cash is badly needed.

Last year, when food was scarce, it was apparently common to see poultry and goats offered for sale, very cheaply, all over Malawi, but this year the situation is very different. A goat which sold for K40 last year will cost K500 at present and a chicken which was K 10-20 is now selling at K70-150. Livestock numbers are generally said to have declined in recent years, for several reasons. An increase in cattle theft, dwindling of farm sizes resulting in inadequate grazing, the high cost of feed, poor health and low productivity are among the factors responsible. The numbers of oxen have also fallen, which has implications for crop production, putting limitations on the area that a framer can cultivate. Another difficulty facing animal draft users is the difficulty of obtaining spare parts for ploughs and other implements, which are no longer readily available in rural areas.

4. SITUATION BY AGRICULTURAL DEVELOPMENT DIVISIONS

Karonga

In 2003, Karonga, the most northerly ADD in Malawi, is estimated to have 382 764 people or 3.3 percent of the country's total population. The weather in the ADD was conducive to increased crop production at the start of the 2002/03 growing season. However, as the season progressed conditions became less favourable. From the fourth week of January, when most maize grown in the area was at the tasselling stage the rainfall ceased until the end of February. Yield potential for maize, groundnuts and sorghum was adversely affected by the dry spell lasting nearly one month. The ADD has endeavoured to ameliorate the adverse consequences of this situation by promoting such measures as winter cropping, crop diversification and the use of treadle pumps in all irrigable areas. The production of pulses, cassava and potatoes is expected to increase quite significantly in the 2002/03 cropping season compared with the year before.

Mzuzu

This ADD just south of Karonga is estimated to have 1 098 732 people or 9.4 percent of the country's total population. While the cumulative rainfall recorded at Mzimba and Rumphi rainfall stations indicates that total precipitation for the 2002/03 crop growing season was better than in the previous year, the distribution was much less satisfactory. Sometimes the ADD received intense downpours of rain over comparatively short periods of time which caused flooding. At other times the ADD experienced dry spells lasting three or four weeks. These phenomena caused some crop damage with the result that yield potential of maize, rice, groundnuts, millet, pulses and sweet potatoes is reduced. In spite of this, overall millet production rose due to an increase in area grown which offset the drop in yield per hectare compared with the 2001/02 season's crop. Also in contrast to many of the food crops grown, the average yield of cassava per hectare in the ADD is expected to rise by 15 percent due to favourable weather last year and good weather conditions for the crop at the start of 2003. This together with an increase in the area of cassava is expected to result in the production of 33 percent more of the crop in Mzuzu ADD during the 2002/03 season compared with the year before.

Kasungu

This large ADD south of Mzuzu and stretching westward to the border with Zambia is estimated to have 1 667 562 people in 2003 or 14.3 percent of the country's total population. The ADD received moderate to heavy rains in the 2002/03 crop growing season. Although in some areas wash aways, water logging and leaching of fertilizer were reported, in general the weather conditions were better for crop production than in the previous year. Largely as a result of more seed being available and the better weather conditions for crop production, both area grown and yield per hectare achieved are anticipated be higher in the 2002/03 cropping season than in the previous season for all major food crops. Consequently, total production of these commodities is expected to be markedly higher this year.

Salima

Salima ADD lies east and south of Kasungu. Much of the area lies along the shore of Lake Malawi. In 2003 the ADD is estimated to have 576 857 people representing 4.9 percent of the country's total population. The ADD received the first effective planting rains about the second week of December 2002. The rains became continuous and heavy during the first week of January resulting in the flooding of some of the ADD's river valleys. From about the second week of January to the end of the second week of February the ADD experienced normal rainfall. However, from then to about the end of the first week in March the ADD experienced dry conditions coupled with high temperatures. These dry and hot conditions have reduced crop yields somewhat as they occurred at a critical time of plant growth, especially in the case of grain crops. From about the second week of March the rains resumed. As far as the major food crops grown in the ADD are concerned, increases both in yield per hectare and production are expected for maize, millet, groundnuts, beans and pulses in the 2002/03 cropping season compared with the year before. However, some reductions in both yield and production are anticipated for rice, potatoes and cassava. As far as the latter crop is concerned the reduction is due to a fall in expected yield per hectare brought about by the dry spell and by an outbreak of a cassava mosaic virus disease.

Lilongwe

Lying south of Kasungu and west of Salima, Lilongwe ADD is estimated to have 2 595 249 people in 2003,. accounting for 22.3 percent of the country's total population. Most of the ADD's farmers planted their crops between the end of November and the middle of December 2002 with the rains which came at that time. In most areas the distribution of rainfall over time was good for crops although in some areas from the end of December 2002 until the end of the first week of January 2003 downpours were intense and caused flooding. Total rainfall in the ADD during the 2002/03 cropping season has been higher than in the previous season. At the time of the Mission's visit to the ADD in April 2003 the condition of all the major food crops was considered good and better yields were expected than in the previous season. Due to increases in the area grown and improvements in yields, the total output for nearly all the major food crops grown in Lilongwe ADD is expected to rise in 2003 compared with the year before. The only exception is in the case of cassava where a slight reduction in area and yield is expected to result in a modest fall in total output.

Machinga

Machinga ADD lies south east of Lilongwe. Part of it runs along the southern shores of Lake Malawi and it is also bounded along part of its perimeter by Mozambique. In 2003 the ADD is estimated to have 2 074 775 people representing 17.8 percent of Malawi's total population. As at the end of March rainfall records for the ADD show that the 2002/03 total of 716 mm received was slightly higher than the year before (714.2mm). In addition, it is noteworthy that the 42 rainy days in the season now ending was also higher than the 35 rainy days received in the year before. However, some parts of the ADD experienced a three week dry spell from February 17th to March 4th 2003. Coming at a critical time in the development of growing crops, this dry spell had a somewhat negative impact on the yield potential of some crops, such as maize, in the affected areas of the ADD. The 2002/03 maize area is estimated to be less than in the year before. The yield per hectare of rice is also estimated to be 30 kilos less than in 2001/02. Groundnut, millet and pulse crop yields are thought to be unchanged compared with last year. Nevertheless, the production of all major food crops in the ADD is expected to increase in the 2002/03 cropping season. This is due either to an increase in the area grown or an increase in yield per hectare or for both reasons combined.

Blantyre

South of both Lilongwe and Machinga, Blantyre ADD stretches across the country from east to west where it is bounded by the Mozambique border. In 2003 the ADD is estimated to have 2 645 601 people or 22.7 percent of the population of the country as a whole. The ADD received rains ranging from heavy to light but generally favourable to crop production up to the end of the first week of February 2003. From then until the last week of February the ADD experienced a period of dry weather. As this occurred when maize was at the tasselling to cobbing stage, crop development was reduced in the areas affected. In contrast some other areas of the ADD experienced heavy and incessant rain which disrupted farming operations such as weeding. Even so the rains facilitated the planting of crops such as cassava and sweet potatoes. In spite of the weather problems, virtually all major food crops in the ADD are expected to do better than last year. This is because the area planted and yield per hectare are anticipated to be higher. As a result, total production is also expected to be higher. The only exception among the major food crops is wheat. While the area sown to

wheat is believed to be somewhat higher than last year, anticipated lower wheat yields will result in lower wheat production than in 2001/02.

Shire Valley

Shire Valley is the most southerly ADD in Malawi. As its name implies much of it lies along the Shire River. The ADD is bounded on two sides by the border with Mozambique. In 2003 it is estimated to have a population of 615 820 people accounting for 5.3 percent of the overall population of Malawi. Cumulative rainfall both in terms of recorded quantity and rainy days in the 2002/03 cropping season was less than in the year before. Although it varied in different parts of the ADD, two dry periods occurred during the season. The first lasted from the 3rd week of January to the 3rd week of February 2003. The second took place in the first week of March but the rainfall situation improved from the second week of March onwards. The production of all major food crops is expected to rise in the ADD during the 2002/03 cropping season compared with the year before. This is due to an increase in both area grown and yield per hectare for all crops except potatoes. Although the yield per hectare forecast for potatoes is lower than in the 2001/02 season, potato production shows an increase because the area planted is greater.

5. FOOD SUPPLY SITUATION

5.1 Market conditions

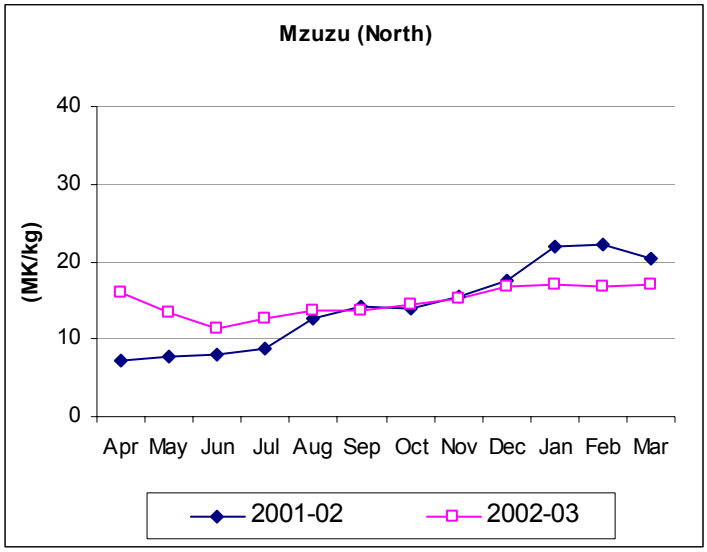
The market price of maize in Malawi is freely determined and has an effect on national grain production and consequently on the country's food security. It is, therefore, important to comment on current maize prices and a number of factors influencing them.

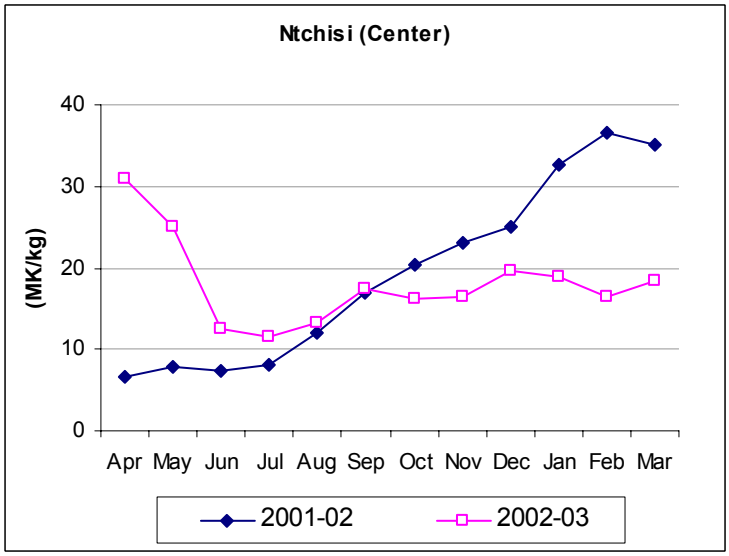
At the start of the 2003-04 marketing year, on 1 April 2003, the National Food Reserve Agency (NFRA) held 251 000 tonnes of maize and the Agricultural Development and Marketing Corporation (ADMARC) 9 000 tonnes. The Government built these stocks mainly through commercial imports of 235 000 tonnes of maize in the previous year to deal with the food crisis now coming to an end. The NFRA stock includes also grain bought in the previous marketing year and held by the agency on behalf of the European Union (EU). These purchases consisted of a consignment bought outside Malawi amounting to 20 741 tonnes, together with a local purchase of some 28 000 tonnes.

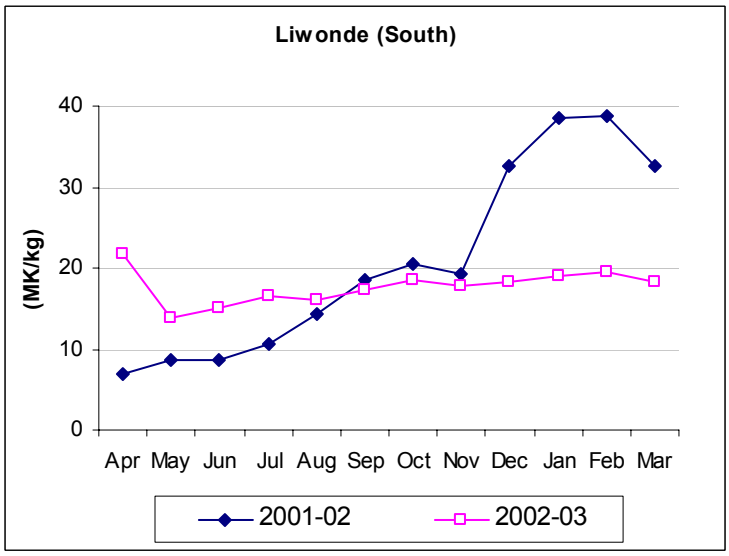
The unprecedented level of carry-over stocks is the result of low sales of the NFRA maize in the ADMARC markets. The landed price of the maize imported by the NFRA in the 2002/03 marketing year was 23 Kwacha per kilo (roughly US$ 290 per tonne) and it was offered for sale to ADMARC at 14 Kwacha/kilo and to the public at 17 Kwacha/kilo, implying a subsidy of around US $80-100 per tonne, according to variations in the exchange rate. Despite this subsidized price, by the end of March only 39 000 tonnes of maize had been sold by ADMARC. The main reason for the large volumes of unsold maize appears to be substantial amounts of informal cross-border maize from Mozambique and Tanzania (estimated to be at least 100 000 tonnes), at lower prices of 10 to 12 Kwachas per kilo in border areas.

Overall, maize imports stabilized prices at around 17 Kwacha/kilo during marketing year 2002/03. Figure 2 shows retail prices of maize in selected markets for the North, Central and Southern regions. Maize prices reached record levels in February 2002 as a result of the poor harvest in 2001 and delayed imports, and only started to decline in March in anticipation of the new harvest coupled with cross-border informal imports from neighbouring countries.

Figure 2. Retail prices of maize in marketing year 2001/02 – 2002/03







Source: Ministry of Agriculture and Irrigation/FEWSNet

At the time of the Mission's visit in April 2003, the prevailing market price of maize in most areas was lower than ADMARC's selling price and is likely to remain so for some time. While the current market price of maize has a positive impact on the food security of maize consumers, it is a disincentive to local maize production and the planted area may be reduced next season.

The Malawi Government wishes to maintain the NFRA's Strategic Grain Reserve (SGR), at 100 000 tonnes of maize. It is understood that discussions are underway with donors to assist the NFRA achieve this objective. While the NFRA would usually expect to sell and replace about one third of its stock each year it does not expect to do so in the 2003-04 marketing year.

After allowing for the SGR, the NFRA's remaining maize stocks amount to 151 000 tonnes and the Government is attempting to interest traders and donors to purchase some of this maize. The eventual draw-down of NFRA stocks up to the desirable level will depend on the evolution of the maize prices in the market and the price at which the Government is willing to offer the NFRA maize.

5.2 Food supply/demand in marketing year 2003/04

The 2003/04 projected supply/demand balance for cereals is summarized in the Table 8 and is based on the following parameters and assumptions:

- Cereal production in 2003 is estimated at 2.056 million tonnes consisting of 1 000 tonnes of wheat, 69 000 tonnes of sorghum and millet , 86 000 tonnes of rice and 1.9 million tonnes of maize.

- The opening stock of cereals on 1 April 2003 amounts to 263 000 tonnes consisting of small quantities of wheat and rice together with 260 000 tonnes of maize held by the NFRA and ADMARC.

- Aggregate food consumption in marketing year 2003/04 is forecast on the basis of the projected mid-marketing year population of 11 657 360 people, and an annual per caput consumption of cereals of 165 kilos, comprising 150 kilos of maize and 15 kilos of rice, sorghum, millet and wheat combined. Substantial quantities of cassava and sweet potatoes which Malawi is forecast to produce in 2003/04 will contribute to cover the remaining energy requirements of the population.

- The non-food use of cereals in 2003/04 marketing year is calculated to be 385 000 tonnes. This comprises 7 000 tonnes or 10 percent for sorghum and millet post harvest losses, 33 000 tonnes or 38 percent of post harvest and processing losses for rice and 345 000 tonnes for maize. The non food maize uses comprise 285 000 tonnes or 15 percent for post harvest losses, 38 000 tonnes for seed and quantities used for brewing clear beer and for livestock (chicken) feed.

- The Mission assumes that the SGR will be 100 000 tonnes of maize at the end of March 2004 as planned by the Government. Therefore, closing stocks of cereals are projected at 103 000 tonnes consisting of small quantities of wheat and rice, together with the 100 000 tonnes of SGR maize. This implies a drawdown of 160 000 tonnes from the NFRA stocks.

- At the assumed level of closing stocks, import requirements, to be met mostly by informal trade, amount to 30 000 tonnes. There will be no need for any formal maize imports in 2003/04.[1]

[1] A small food aid import, amounting to 5 000 tonnes of maize is allowed for in order to cater for certain ongoing NGOs programmes. The donor supplying the NGOs with this maize is legally obliged by its national laws to provide this type of assistance in the form of grain sourced from its own stocks.

Table 8. Malawi: Cereal Balance Sheet for the period 1 April 2003 to 31 March 2004 ('000 tonnes)

	Maize	Rice	Sorghum/ Millet	Wheat	Total
Domestic availability	**2 160**	**87**	**69**	**3**	**2 319**
Opening stocks	260	1	0	2	263
Production	1 900	86	69	1	2 056
Total utilization	**2 195**	**87**	**69**	**62**	**2 413**
Food use	1 750	53	62	60	1 925
Other uses	345	33	7	0	385
Closing stocks	100	1	0	2	103
Import requirements	**35**	**0**	**0**	**59**	**94**
Estimated commercial imports	30	0	0	59	89
Food aid	5	0	0	0	5

6. HOUSEHOLD VULNERABILITY ANALYSIS AND IMPLICATIONS OF THE ACCESS ISSUE

Traditionally this section of the CFSAM report deals with food needs assessments required to respond to widespread food scarcities that define an emergency situation. The findings of the current CFSAM indicate that cereal supplies from domestic production, carryover stocks and formal and informal imports would be adequate to meet the estimated cereal requirements of the population at the national level. In general, the increases in cereal and other subsidiary food production this year have tended to allay fears of a continuation of the widespread food scarcities and food consumption failures seen during the last two years, except in certain areas which experienced crop failures for the third year in succession due to bad weather.

However, a reasonable food supply situation at the national level does not translate into adequate food consumption by all because the bulk of the population does not have sufficient incomes to obtain adequate food. This conclusion is reasonable because Malawi, one of the poorest countries in the world, has nearly two-thirds of its population living in poverty. This access problem may have become more serious because of profound deepening of poverty resulting from two consecutive years of crop failure. These failures in agricultural production, the mainstay of the livelihoods of the majority of the population, compound the impact of structural development failures reflected in low economic growth, low productivity, insufficient diversification and low growth in employment opportunities. The worst impact of all these factors may be felt by those poor households affected by HIV/AIDS.

The presence of a serious problem of access to food while food supplies seem adequate nationally amply justifies a discussion of this problem in this report. Accordingly, this section of the report will examine issues of vulnerability and access to food and discuss some of the policy responses that may help alleviate the problem. The discussion is based on the observations during the field visits, information obtained from key informants and current literature on food insecurity and vulnerability. The latest comprehensive analysis of the food security situation in the country was conducted during November-December 2002 in the midst of a distressed hungry season.

6.1 Underlying vulnerability

The crux of the vulnerability issue in Malawi is insufficient incomes. Earnings from agriculture, sale of labour or other forms of livelihoods do not bring sufficient incomes to meet basic needs of the majority of households. Even in a normal food production year, nearly two-thirds of the population is likely to be food insecure – some throughout the year and others during varying periods of the year. This is brought out by the assessment that 65 percent of the population is below the poverty line, which is defined as the expenditure needed to afford minimum nutritional requirements and a basket of basic non-food goods and services.

Low incomes and the lack of opportunities to improve incomes are primarily explained by an overall development crisis. Following are some of the main elements of this crisis:

- High dependence on one sector – the agricultural sector – for incomes and growth
- Low productivity and production in the agricultural sector; high population density has not led to agricultural intensification but rather to rapid depletion of soil nutrients
- Dominance of one food crop; conversely, insufficient crop diversification especially towards drought-resistant crops

- Insufficient attention to soil fertility management, water management and holistic farming in the rural farming systems
- Insufficient resources going into agricultural support services
- Lackluster performance in the cash crops sector
- Insufficient expansion in rural labour markets
- Inadequate rural infra-structure
- Low levels of educational achievement
- The HIV/AIDS pandemic

The developmental problem in Malawi is also reflected in some disturbing social indicators: Malawi's life expectancy at birth of 37.8 years is one of the lowest among developing countries; under five mortality rate stands at 189 per 1 000 live births and 49 percent of children under five are stunted.

The prevalence of a relatively high incidence of stunting is of particular concern because this indicator is a close reflection of the existence of chronic food insecurity and poverty that have prevented children from achieving the normally expected height in a given age. Data available from UNICEF studies shows that the stunting rates in 2001 among the 27 districts range from 38.1 to 54.6; hence, not a single district is exceptionally better-off than others (see Table 9 below). The relative poverty assessment released by the government in 2001 indicates that the poorest 50 percent of the population regularly consume on average approximately 1 800 calories per capita per day, which is about 15 percent less than the 2 100 calories per capita per day on average indicated by WHO standards.

A relatively recent phenomenon that is rapidly rupturing the already fragile food insecurity structure, especially in the rural areas, is the prevalence of high rates of HIV/AIDS. According to data available for the year 2001, the HIV/AIDS prevalence rate at the national level is 19.5 percent, indicating that this problem has reached crisis proportions, as in other southern African countries. The incidence in the districts ranges from 9.6 percent to 38.5 percent, with half of all the districts having rates over 20 percent (Table 9**).** Apart from being a serious health issue that is making increased demand from the national and household budgets, HIV/AIDS also undermines developmental efforts and further weakens the poverty and food insecurity situation because it predominantly affects economically active adults.

Table 9. Percent of stunting among children under 5 years of age and HIV/AIDS prevalence, by District

District	Stunting (% children under 5 with height-for-age <2SD)	HIV/AIDS prevalence (% among 15-49 age group)
Chitipa	51.3	12.1
Karonga	38.8	16.9
Nkhata Bay	51.3	13.7
Rumphi	51.3	12.3
Mzimba	43.9	13.8
Likoma	51.3	21.9
Kasungu	47.4	12.6
Nkhotakota	51.3	12.6
Ntchisi	51.3	9.6
Dowa	51.3	10.1
Salima	54.6	21.8
Lilongwe	54.2	19.4
Mchinji	51.3	11.7
Dedza	51.3	10.1
Ntcheu	51.3	10.0
Mangochi	47.5	24.7
Machinga	44.5	24.4
Zomba	45.7	27.2
Chiradzulu	51.3	24.8
Blantyre	38.1	38.5
Mwanza	51.3	25.1
Thyolo	46.3	26.0
Mulanje	49.5	26.2
Phalombe	51.3	24.6
Chikwawa	51.3	25.8
Nsanje	51.3	25.7
Balaka	51.3	24.7
Average	49.3	19.5

Source: UNICEF and UNAIDS, 2001

There are no estimates of poverty that capture the impact on the economy during the last two years. Given the greatly weakened performance in the agricultural sector, the likely scenario is a worsening of poverty during this period both in terms of magnitude and severity. The crucial question is whether the population facing chronic food insecurity would ever have the opportunity of moving out of the dire situation they are in. The general outlook appears to be one of pessimism; however, certain opportunities do exist to bring about greater agricultural productivity - hence improved food security - if a concerted effort with supportive investments can be mustered for this purpose (see below).

6.2 Issues of availability

This year's maize availability is deemed sufficient at the national level to meet the average cereal requirement of 165kg /capita/year. This amount of cereal consumption will provide about 75 percent of the average energy requirement of 2 100 calories/capita/day. The rest of the energy requirement is expected to come mainly from pulses, cassava, potatoes and groundnuts. Production estimates of these crops indicate that their total supply is capable of meeting the energy deficit at the national level. The overall food availability situation, therefore, seems to be satisfactory.

Crop failures

While the average situation appears to be satisfactory, there have been relatively large areas that suffered crop damage - some permanent and some less serious- due to excessive rain, floods, hailstorms and

prolonged dry spells. The following picture emerges from the assessments provided in the 2nd Round Crop Estimates in March 2003 by the Agricultural Development Divisions (ADD):

- -Mzuzu ADD: 77 800 families in Mzimba and 7 151 families in Rumphi affected by permanent wilting of the maize crop
- Karonga ADD: 57 469 families affected by permanent crop damage due to prolonged dry spells, floods and hailstorms
- Salima ADD: 22,000 families affected by flood damage
- Lilongwe ADD : 12,000 families affected by heavy rainfall and floods
- Blantyre ADD: Some areas in Blantyre RDP, Mwanza RDP, and Phalombe RDP affected by dry spells (no estimates of farm families facing permanent damage).

Discussions with the relevant ADD officials during field visits revealed that some of the affected farmers may have re-planted their crops, while others have been advised to undertake winter cropping and diversify crops (cassava, sweet potatoes). The mission is of the view that a relatively large number of households have been seriously affected by the unfavourable weather conditions during planting and immediate post-planting period in some areas. The prospects of winter cropping may alleviate their problem only to a limited extent. This is a matter of concern because the affected families will be facing a poor agricultural season for the third year in succession. Without external assistance, the affected families will face drastically reduced food availability at a time when most others will have better food availability at the harvesting time and beyond. This situation warrants an urgent humanitarian intervention based on a careful targeting exercise both as to the choice of beneficiaries and timing of food distribution.

6.3 Issues of access

During the last two years the lack of purchasing power turned into an acute problem leading even to some deaths due to inadequate food consumption. There is no doubt that food aid averted a crisis . However, during this consumption year, the conditions that brought about the acute food scarcity situation have by and large disappeared allowing the chronic problem of insufficient access to food to surface again.

A pre-requisite for interventions to assist the poor improve their access to food is an understanding of the distribution of the access problem. The mission sought information and views regarding different categories of vulnerable groups from key informants during the field visits. Accordingly, it is possible to identify the following categories facing the access problem and food insecurity among the rural poor:

- Destitute population

Estimates by key informants indicated that 15 to 20 percent of the population is characterized by serious food consumption problems throughout the year. This estimate would have been influenced by the distress situation in food supplies and reduced income earning opportunities that prevailed during the previous two years. A stricter definition of the destitute population to include those who have either extremely low or no potential to earn incomes from own labour or any other assets they have would result in about 10 percent of the population falling under the destitute category. This category would typically include the handicapped, the elderly, child-headed households, orphans-dominant households, all of who depend on transfers from the community, friends, relations or external donors for survival. The humanitarian imperatives associated with this group have to be addressed within a national social welfare system.

- HIV/AIDS affected population

Over 19 percent of the economically active adults in the 15 to 49 age group are affected by HIV/AIDS, with a relatively high proportion in the Southern region. Although individuals are affected, it has deleterious effects on the whole household, because of the erosion of the income earning capacity, additional household expenditures related to the sickness and changes in the mobility patterns and livelihood strategies as well as funeral expenses. In this sense, the proportion of the households affected by the HIV/AIDS would be quite close to the proportion of individuals affected. It is likely that some of the HIV/AIDS affected category may overlap with the destitute category. At present, this overlap cannot be estimated. Highly specialized interventions which should have both humanitarian and developmental underpinnings are needed to help this group.

- Critically poor population

About 20 to 25 percent of the population is characterized by highly inadequate food consumption for about 6 to 9 months of the year. Typically, their land holding size would be around 0.5 to 0.8 ha dominated by traditional maize varieties and with yields around 500 to 600 kg per hectare and no income to use fertilizer. Technical support to increase productivity and diversification coupled with productivity-increasing in-kind transfers are needed to help this group.

- Moderately poor population

About 20 to 25 percent of the population is characterized by inadequate food consumption for about 3 to 6 months of the year. Typically, their landholding size would vary between 0.8 to 1.0 hectare with a combination of hybrid and traditional varieties of maize and yields around 600 kg to 900 kg per hectare. Focussed technical assistance for increasing productivity and crop and income diversification will help this group.

6.4 Coping strategies

Poor households resort to a number of coping strategies during periods of food shortages. *Ganyu* (casual farm labour) is the main channel that virtually all distressed households use to seek out a living. At the same time, they would intensify some of the normal livelihood activities such as sale of charcoal, fishing, and weaving as well as reduce the level of daily consumption as a means of coping. Additionally, some may resort to thefts of other's food crops.

Sale of livestock is another way of redressing the problem of food scarcity. Compared to the 2001/02 agricultural season, food thefts or sale of livestock or pre-mature harvesting were not rampant during the last lean season because of food aid distribution that covered a high percentage of the vulnerable population.

Low productivity and Ganyu: a vicious cycle?

Would the poor have increased the degree of access to food this year compared with the last year? In general, higher production by the poor farmers and the relatively low prices imply that the poor may increase their overall consumption and face at least marginally a reduced hungry season than the last year. But it is unlikely that these expected changes will have a significant impact on nutritional welfare of the poor. The yield levels of the poor farms are relatively low, around 500 to 600 kilograms per hectare, which does not allow more than three to four months of consumption for an average family. On the other hand, their main source of income, *ganyu*, during the food deficit periods is not regular and the wages earned in the form of cash or food are not sufficient to obtain an adequate food supply for the household. If food aid distributions are not available during the lean season (as was the case during the last lean season), there will be an increased supply of labour in the market for *ganyu* , which is likely to result in lower wage rates. The overarching reliance on *ganyu* during the food deficit period will put the poor farmers into a vicious cycle of low attention to their own farms – low output – longer periods of food deficits – and subsequent higher dependence on *ganyu.* The poor need assistance to break away from this cycle; help to increase their land and labour productivity will be a strong form of such assistance.

Fragility of community support structures

An important social aspect of the typical coping structure is the role that communities play to help the distressed. The prospects of unhindered continuity of such community-based mutual help are becoming increasingly bleak. The cohesiveness of the community self-help structures is fast breaking down because of the deterioration of the rural economies. Rapid population increase means that a limited and deteriorating resource base has to cater to a larger number of persons. Decreasing size of farms and low and stagnant productivity means a smaller output. The increasing incidence of HIV/AIDS means a breakdown in livelihood patterns, increases in medical and funeral expenses, lowering of overall community productivity and an increase in the dependence on the community for humanitarian assistance. These negative factors in the economy of rural communities not only work towards further lowering the already low living standards, but also deplete the "savings" content in the community that is much needed for development and sharing. This entails that if a policy intervention is intended to help increase the coping capacity of the communities, it must aim at increasing the overall savings component in the community through assistance that help increase productivity.

Although some households may have the option of doing winter cropping, they will face a food scarce period up to winter harvest and very likely beyond that too because almost always the winter crop is a smaller crop, which will not make a significant contribution to reduce the customary hungry season.

6.5 Estimated food aid requirements

From a national perspective, overall cereal supplies will be sufficient to meet the cereal consumption requirements in 2003/04 consumption year. However, emergency food assistance will be needed for the population affected by erratic weather conditions in nine districts.

The Mission estimated that a total of 175 000-200 000 households have suffered crop losses in 9 districts. Out of this group, it is estimated that 15 percent of this population, or 131 500 people, will need assistance from July to September 2003 with a peak population of 400 000 people requiring assistance from January to March 2003, with a total cereal requirement of 30 600 tonnes. This estimate is based upon the following criteria:

- 15 percent of the population (131 500 people) in the districts affected by crop require immediate assistance. This group comprises of population with land areas of less than 0.5 ha that have suffered crop failures of more than 50 percent of their crop, HIV/AIDS affected households and destitute population whose scanty livelihood structures, such as dependence on *ganyu,* have been virtually made inoperative by the regional crop failures.
- It is estimated that 30 percent of the population in the affected districts may need assistance from September to December 2003. This groups comprises of the highly resourced poor population, particularly those with land area of less than 0.8 ha and had crop failures of 40 percent plus the 131 500 already identified above.
- Approximately 40 percent of the population, including the moderately resource poor will need assistance from January to March 2004. This category the two groups identified above plus a small population of the moderately resourced poor who would have run of food and have no additional sources to access food.

An innovative-targeted food assistance programme will be needed to enable reach vulnerable groups during the 2003/4-consumption year. A rigorous and fine targeting criteria will need to be established to enable reach the most vulnerable group and avoid disincentive to production and markets.

Table 10 summarizes food aid needs for the nine districts affected by adverse weather. Food assistance for HIV/AIDS affected households and other vulnerable groups outside the nine districts will be identified through analysis to be conducted in June. The VAC assessments to be conducted in June 2003 will undertake an analysis of access problems and will therefore further clarify on the food aid needs for the general population of Malawi. For the immediate, it is also recommended that a targeting expert be engaged to assist defining targeting criteria for Malawi.

Table 10. Estimated Food Assistance for Populations affected by Adverse weather in 9 Districts

Time Period	Percent of Population Affected in need	Population in Need of assistance	Cereal Needs in tonnes
July-Sept 03	15	150 000	5 400
Oct-Dec 03	30	300 000	10 800
Jan-Mar 03	40	400 000	14 400
July 03 – Mar 04		400 000	30 600

In view of substantial carryover maize stocks, the cereal food aid requirement will be purchased locally.

6.6 Current WFP assistance

Direct transfers

Malawi has been a part of a Regional EMOP that covered the period from July 2002 to June 2003. The total amount of food to be distributed amounted to 259 817 tons with maize accounting for 196 417 tons. The total number of beneficiaries envisaged during the peak of the lean period was 3.6 million people out of which over 80 percent have been reached by February 2003 (the shortfalls accounted for by logistical problems

associated with the rainy seasonand consequent bad road conditions). With the beginning of the harvesting season, the ration size has been reduced and in the South, geographical targeting was adopted to avoid disincentive price effects.

HIV/AIDS

The current programme targets 7 500 households in four districts. Food aid complements the care and support provided by community-based volunteers for affected and infected households and persons.

School feeding

WFP's school feeding project seeks to promote attendance and enrolment of girls and orphans in primary schooling in food insecure areas. The current programme targets 160 000 pupils in eight food insecure districts.

Supplementary and therapeutic feeding

This longstanding intervention targets moderately and severely malnourished children under five, the caretakers of severely malnourished children and malnourished pregnant and lactating women. Currently WFP supports all 94 NRUs and 158 supplementary feeding centres across Malawi.

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.

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