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

FAO/WFP CROP AND FOOD SECURITY ASSESSMENT MISSION TO MOZAMBIQUE

12 August 2010

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS, ROME

WORLD FOOD PROGRAMME, ROME

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Acronyms and Abbreviations

CFSAM	Crop and Food Security Assessment Mission
EIU	Economist Intelligence Unit
FAO	Food and Agriculture Organization
GDP	gross domestic product
GoM	Government of Mozambique
ha	hectare
IMF	International Monetary Fund
INE	Instituto Nacional de Estadistica (National Statistical Office)
INGC	Instituto Nacional de Gestão de Calamidades (National Institute for Disaster Management)
kg	kilogramme
MCA	Millennium Challenge Account
MIC	Ministry of Industry and Commerce
MINAG	Ministry of Agriculture
mm	millimetre
MZN	New Mozambican Metical
NGO	Non-Governmental Organization
PAPA	Plano de Acção para a Produção de Alimentos (Food Production Action Plan)
PARPA	Plano de Acção de Redução da Pobreza Absoluta (Action Plan for the Reduction of Absolute Poverty)
PEDSA	Plano Estratégico de Desenvolvimento do Sector Agrário (Strategic Plan for Development of the Agricultural Sector)
SETSAN	Secretariado Técnico de Segurança Alimentar e Nutricional (Technical Secretariat for Food Security)
SIMA	Sistema de Informaçao de Mercados Agricolas de Moçambique (Agricultural Market Information System)
t	tonne
USD	United States Dollar
WFP	World Food Programme

Mission Highlights

- Maize production in 2010/11 is estimated at 1.878 million tonnes, about 3 percent down on the record level of 2009/10.
- Large differences were observed between regions; in the North production was up by 12 percent on last year, while in the South and Centre it was down by 38 percent and by 4 percent respectively.
- Large areas of rainfed rice were lost along the central-region littoral as a result of the prolonged dry spell at the beginning of the season.
- The new bridge over the Zambezi River and road improvements in the north are expected to improve the movement of agricultural produce.
- Prices of maize have declined in the North and Centre with the arrival of the new harvest but remain high in Maputo reflecting the reduced harvest in the South and burgeoning demand from the feed industry. In June, the price of maize in Maputo, at MZN 13.45 per kg, was twice as high as prices in northern Nampula.
- Total cereal imports in the current marketing year 2010/11 (April/May), including rice and wheat, are projected at 919 000 tonnes, slightly higher than last year, mainly due to the reduced rice harvest.
- The overall food security situation is better than originally expected back in March 2010. However, an estimated 250 000 people in parts *Tete, Gaza*, *Inhambane* and *Sofala* Provinces are in need of food assistance. An additional 50 000 persons among poor households in *Maputo, Gaza* and *Inhambane* provinces may also require assistance from September until April 2011, if food prices remain high.

1. OVERVIEW

Following reports of poor harvest expectations in central and southern provinces due to a prolonged dry spell, an FAO/WFP Crop and Food Security Assessment Mission (CFSAM) visited the country from 6 to 29 May 2010. The Mission evaluated food crop production in the 2009/10 agricultural season, assessed the overall food supply situation, forecast cereal import requirements and possible exports in marketing year 2010/11 (April/March) and determined the eventual food aid needs.

The Mission received full support from the Ministry of Agriculture (MINAG) and the Ministry of Industry and Commerce (MIC), both of which provided technical staff to accompany the Mission on its field visits. Prior to departure to the field the Mission was briefed on the current situation in the country by officials of MINAG, the Agricultural Market Information System (SIMA), MIC, the National Institute for Disaster Management (INGC), the Technical Secretariat for Food Security (SETSAN) and FEWSNet, and by representatives of FAO and WFP.

The Mission, divided into six teams, travelled to all ten provinces, covering 41 districts. The districts visited were selected to give a representative view of the agricultural, marketing and vulnerability situation of each province. In the provinces and districts, the teams met the administrative authorities, representatives of Agriculture, Health and Commerce Ministries, INGC, and NGOs working in the various areas. After these meetings, the sub-teams travelled to selected production areas to conduct interviews with farmers, carry out field inspections, and make crop yield estimates. The Mission also visited markets and interviewed traders.

The preliminary crop assessment of the season, carried out by MINAG in February, was analysed by the Mission, cross-checked against observations in the field, and against information from farmers, traders, NGOs and international agencies working in the agricultural sector. Data on rainfall, growing conditions, pest and disease status, prices and input supply obtained during the field visits were compared with remote-sensing data and intelligence reports prepared by FAO. Where necessary, the production forecast figures of February were adjusted to reflect the current situation. Household interviews were conducted to ascertain levels of household food security in the various parts of the country. On its return to Maputo from the field, the Mission held further meetings with ministries and other Government, non-government and commercial organizations in order to consolidate the data, information and impressions gathered in the field.

Rainfall anomaly was a main factor affecting this year's cereal production. In the north of the country it was timely and well distributed. However, in southern and some western parts of the central region and in the entire southern region the first rains arrived late and were followed by a period of up to two months of poor or negligible rainfall which necessitated extensive re-planting. This situation improved in many of the affected areas in late February and March. What could have been a much more disappointing year in terms of crop production was also significantly redeemed by the support to farmers afforded through the Government's Food Production Action Plan (PAPA).

National cereal production (maize, sorghum, millet and paddy rice) for the 2009/10 agricultural season is estimated at 2.49 million tonnes, which is 5 percent down on the record harvest of 2008/09. Maize accounted for 74 percent of cereal production, while sorghum, millet and rice accounted for 15, 2 and 7 percent respectively. Nationally, maize production was down 3 percent on last year, the reductions in the South being largely compensated for by extremely good production in the North. Nationally, rice production declined by more than 30 percent compared with last year, as a result of extensive losses and yield reduction in central coastal areas due to the long dry spell early in the year. Both sorghum and millet registered a slight increase in production on last year, attributable mainly to an increase in the area planted. Other major crops - beans, groundnuts and cassava - performed satisfactorily, also showing some increase in area cultivated.

By the end of April, maize prices throughout the country had started falling from their peaks earlier in the year when it was feared that the harvest would be worse than in fact it was. In the north and in the centre prices started to fall in March, but in Maputo prices remain high. A large difference in maize prices between north and south remains, reflecting the regional differences in production and high transport costs despite recent improvements in infrastructure. In June the price of maize in Maputo was approximately twice as high as the price in Nampula. Substantial stocks of maize remain in the north after last year's excellent harvest.

The opening of the new bridge across the Zambezi in August 2009 has facilitated the movement of commodities and may have an increasing impact on the distribution of grain from areas of surplus production to those that are in deficit. Another bridge across the Rovuma River has recently been opened between Cabo Delgado Province and southern Tanzania, which may enhance the flow of trade into and out of Mozambique's productive northern region. In the immediate period it is to be hoped that it will ease the pressure of surplus maize in store since last year's harvest. The formal and informal export of maize to Malawi across the border at Milange continues as normal despite the imposition of a USD 100 levy on trucks of more than 3.5 tonnes.

Livestock are generally in good condition, with numbers of cattle and small ruminants gradually increasing. There has been very substantial growth in the poultry industry in recent years, in-line with the Government policy of import substitution.

Overall, the national food security situation is satisfactory. However, an estimated that 250 000 people from low-income households in the semi-arid and arid areas of Tete, Gaza, Inhambane and Sofala provinces will require some 40 000 tonnes of emergency food assistance to meet their basic dietary requirements from August until the next harvest in March 2011.

In addition, if current high food prices persist in Maputo, Gaza and Inhambane up to 50 000 more people may require food assistance from September.

2. ECONOMY AND AGRICULTURE

2.1 Economy

With a total area of 799 380 km^2 and a population projected at 21.7 million by October 2010[1], Mozambique has a relatively low population density. The most populated provinces are Nampula in the north and Zambezi in the centre, which, combined, account for nearly 40 percent of the total population. The country is richly endowed with natural resources, including arable land, forest, grasslands, inland water resources, marine fisheries, minerals and hydroelectricity. As a result, the economy is diversified, and agriculture, manufacturing, energy, fisheries, tourism and wage remittances all make important contributions to the economy. The completion of two large coal projects (Moatize and Benga) and a second fuel pipeline to South Africa, in addition to a projected rise in foreign direct investment, which contracted in 2009, will further contribute to strengthening the economy.

Economic performance was more robust than anticipated during the global economic crisis. In spite of a significant decline in export receipts during 2009, the decline in international food and fuel prices helped to stabilise the current account, through the reduction of import payments. GDP growth was estimated to have increased by 4.5 percent in 2009, below the average growth of the past three years (7.5 percent), but the economy is projected to perform better in 2010, with GDP forecast to expand by 5.4 percent. Despite favourable economic growth over the last decade, particularly in comparison to other sub-Saharan Africa

[1] Mid-point of 2009/10 (April/March) cereal marketing year. Based on growth rate of 2.3 percent per annum. (2007 Population Census).

countries, Mozambique remains one of the poorest countries in the world, ranking 172 out of 182 countries in the 2008 UN Human Development Index. Table 1 shows the country's key economic indicators.

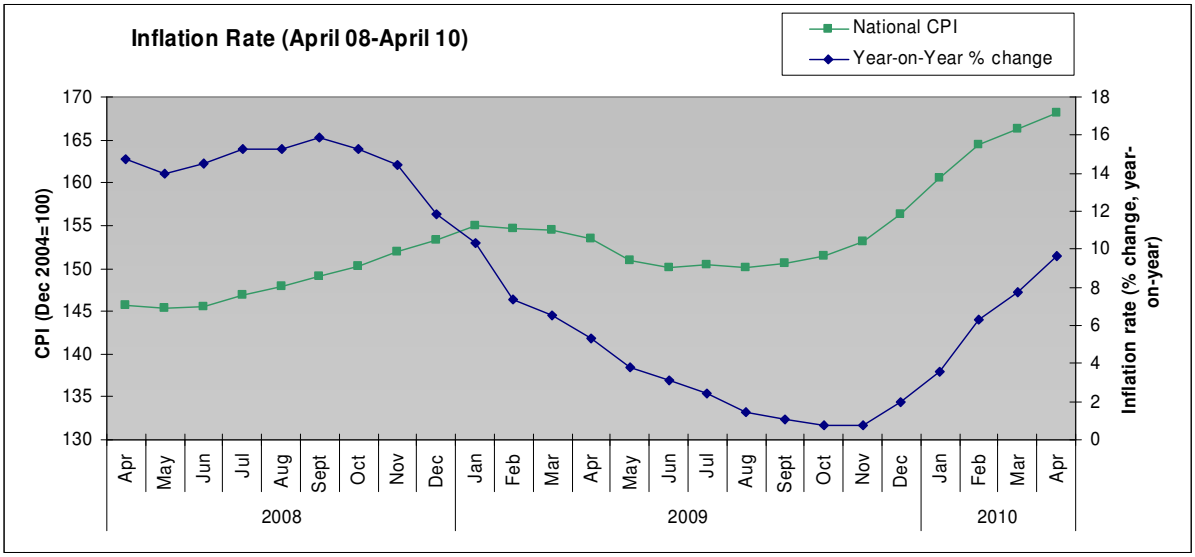
Table 1: Mozambique - Key economic indicators, 2006–2010

	2006	2007	2008	2009	2010 1/
GDP per capita in USD 2/	362	399	478	465	473
Real GDP growth (%) 2/	8.7	7.3	6.7	4.5	5.4
Agricultural GDP growth rate (%) 3/	10.9	6.6	7.0	7.5	7.6
Consumer price inflation (%) 4/	13.2	8.2	10.3	3.5	9.5
Exchange rate USD/MZN (annual average) 5/	25.4	25.84	24.3	27.42	30.55
Current account balance USD (bn) /2	-0.773	-0.785	-1.179	-1.171	-1.391

1/ Projected.
2/ Mozambique authorities and IMF.
3/ EIU.
4/ INE.
5/ IMF.

Increased Government expenditure and rising domestic consumption are expected to lead to higher inflation levels in 2010, forecast to increase to an average of 9.5 percent in 2010, up from 3.5 percent recorded in 2009. Furthermore, the depreciation of the Metical and gradual removal of fuel subsidies, which were implemented in May 2009 and coincided with a decline in national Consumer Price Index, are likely to contribute to amplifying inflation increases. The National Consumer Price Index has been on an upward path since August 2009, following a decline recorded at the beginning of 2009.

Figure 1: National inflation rates April 2008-April 2010



Source: National Institute of Statistics, GoM.

2.2 Agriculture policy

The Government's development policy will continue to focus on executing the country's poverty reduction plan (PARPA II) that, in board terms, aims to strengthen governance, improve human capital and enhance economic growth, notably through integrating the agriculture sector and the rural economy with the national and world economy. The recently approved 2010 budget indicates that expenditure will increase by 20 percent this year, in nominal terms, while it is also forecast that revenue will rise by 24 percent over 2009's level. The Government has committed to improving and strengthening the tax administration systems, which is anticipated to contribute to the increased revenue, raising tax revenues as a percentage of GDP to an estimated 14.7 percent in 2010, up from 14.3 percent in 2009.

In regards to agriculture, following strong growth of the industrial sector, the share of agriculture in national GDP has been falling since the early 1990s, but has maintained a steady rate of 28 percent since 2002. Despite this decline it still remains the largest sector of the economy with approximately 80 percent of the

population dependent on agricultural for their livelihood[2]. Government support to the agricultural sector has focused on three main strategies, the Green Revolution (2007), the Food Production Action Plan (Plano de Acção da Produção Agrícola, PAPA, 2008-2011) and the Strategic Plan for Development of the Agricultural Sector (Plano Estratégico de Desenvolvimento do Sector Agrário, PEDSA, 2009-2019). These initiatives have led to increased investment in the sector enhancing domestic production of main food staples, market integration between regions and agricultural value chains which has reduced the country's reliance on imported food commodities. One objective of PAPA's strategy is to enhance the country's storage capacity, which is cited as a key obstacle preventing small scale farmers participating in the commercial maize market as well as restricting an increase in inter-regional trade. Currently, national capacity (silos and warehouses) both private and public is estimated at 560 735 tonnes, however, there is still a need for the construction of small scale rural silos to incorporate farmers into market system, in addition this will allow farmers to store maize until prices rise. The Government is planning to increase storage capacity by 143 000 tonnes by 2012.

2.3 Agriculture sector

Forty-five percent of Mozambique's total land area is suitable for agriculture, but only 11 percent, around 4 million hectares, is estimated to be cultivated. Farming is conducted by some 3 million peasant families, a small number of commercial farmers cultivating a total of less than 60 000 hectares, and refurbished agro-industrial units growing about 40 000 hectares of sugar-cane. Agriculture occupies 81 percent of the country's population of 21.7 million. Production of food staples is dominated by smallholders, with an average of 1.2 hectares of cultivated land. Use of purchased inputs is very limited; according to a national survey conducted in 2007, only 4 percent use fertilizers.

Mozambique's diverse soils and climatic conditions, influenced by latitude, altitude, topography and proximity to the coast, offer a wide range of production opportunities. However, as agricultural systems are predominantly rainfed, production can fluctuate widely from year to year. According to MINAG, the existing potential for irrigation, where basic infrastructural requirements are already in place, is 120 000 hectares. However, only 55 000 hectares are used at present; about 35 000 are under sugarcane and most of the remaining 20 000 are under rice and vegetables.

Tree crops, especially coconut and cashew, grown by small farmers are an important source of foreign exchange earnings, and contribute to household food security. Tree numbers are particularly significant in the heavily populated littorals of Inhambane and Gaza, where the contribution to the household food economy of such crops is substantial as individual farm families may own from 100 to 200 trees.

Other major cash crops grown by small farmers include cotton and tobacco, which generally occupy between 150 000 and 180 000 hectares and between 30 000 and 35 000 hectares respectively. These cash crops, along with oilseeds, tea, citrus and horticultural crops (particularly tomatoes), offer alternative sources of income to the small farmers in inland districts, where coconuts and cashews are not grown.

On a larger scale, about 40 000 hectares of industrial plantations of sugarcane (35 000 under irrigation) are grown at four operational sites surrounding sugar mills in Maputo (2) and Sofala (2) provinces. Sugarcane production has increased rapidly from 386 000 tonnes in 1998 to approximately 3 million tonnes by 2010 as a result of improved production practices and increased area planted.

Maize and cassava are the major staples; other food crops of significance include sorghum, beans, groundnuts, millet and rice. Cassava is grown mainly in the north where it is the main food staple, and it is being introduced, along with sweet potatoes, under a Government initiative in drought-prone areas throughout the country. The area under sweet potatoes is also increasing.

The use of purchased agricultural inputs, (improved seeds, fertilizers and pesticides) is limited to a small number of modern farm enterprises growing cash crops and vegetables and to out-growers of tobacco and cotton, producing crops on contract. The yields of cereals in the peasant sector are generally low, and losses in the field and stores are high.

Cattle, goats, sheep are reared in extensive grass-based systems and at such low stocking rates, that body conditions are generally excellent. Tsetse fly precludes the keeping of cattle in some parts, mostly in the central and northern regions. At household level, pigs and poultry are kept mainly under back-yard, scavenger systems. There is, however, a fast-growing modern poultry industry which has almost replaced the importation of chickens from Brazil.

[2] Donovan, C. & E. Tostão. 2010. "Staple Food Prices in Mozambique" Comesa policy seminar (Maputo).

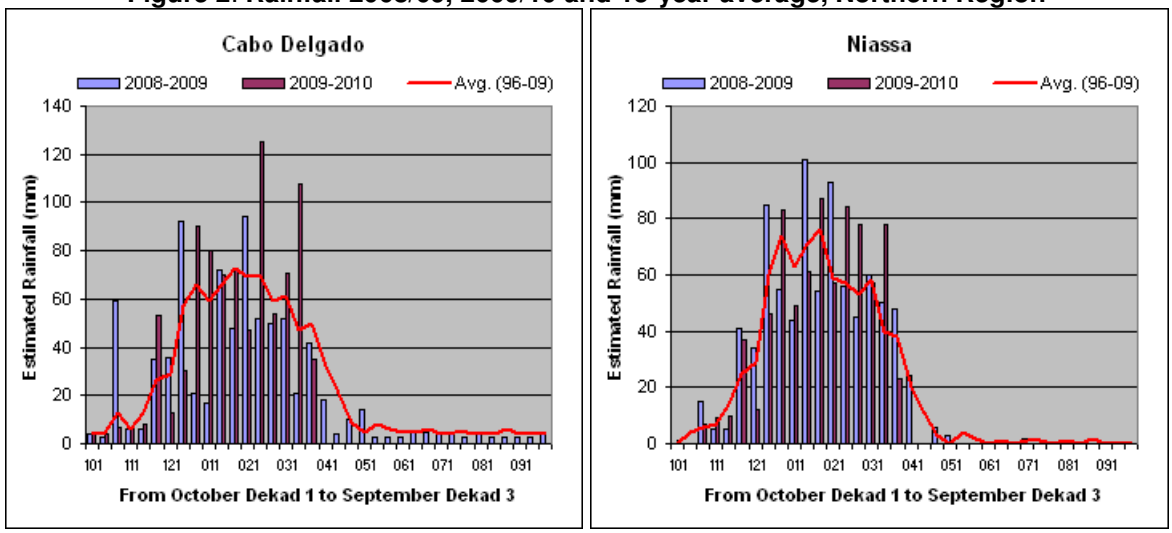
3. FOOD PRODUCTION IN 2009/10

3.1 Factors affecting production

Rainfall

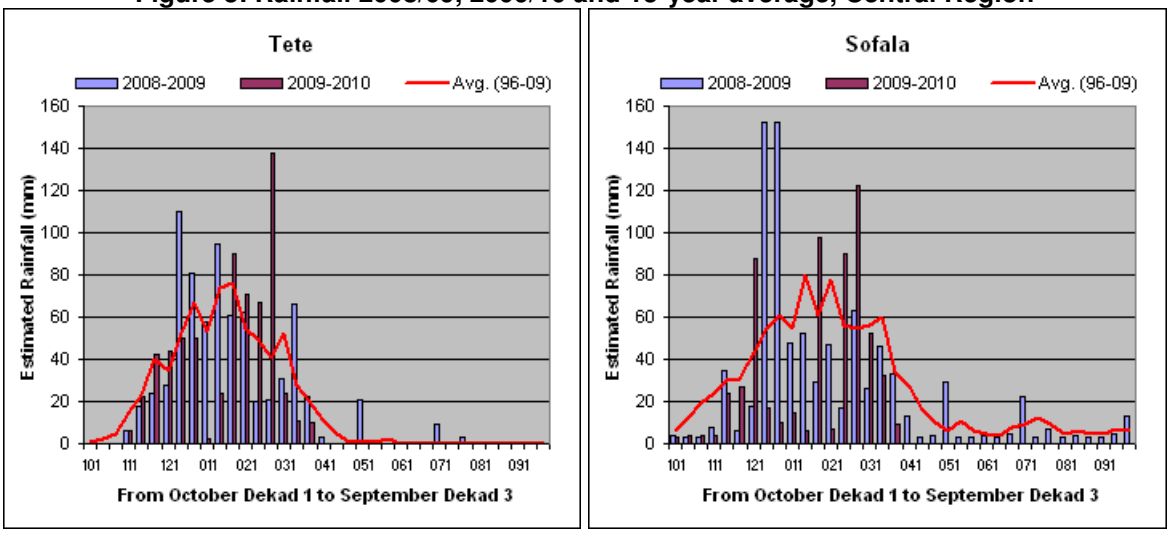
In contrast to the generally good rainfall throughout the country in 2008/09, there was wide variation in the quality of rainfall from north to south of Mozambique during the 2009/10 main cropping season. In the northern region (Cabo Delgado, Niassa and Nampula Provinces) the rains started on time in October and early November and continued with satisfactory amounts and distribution throughout the main cropping season (see Figure 2), resulting in good crop production.

Figure 2: Rainfall 2008/09, 2009/10 and 15-year average, Northern Region



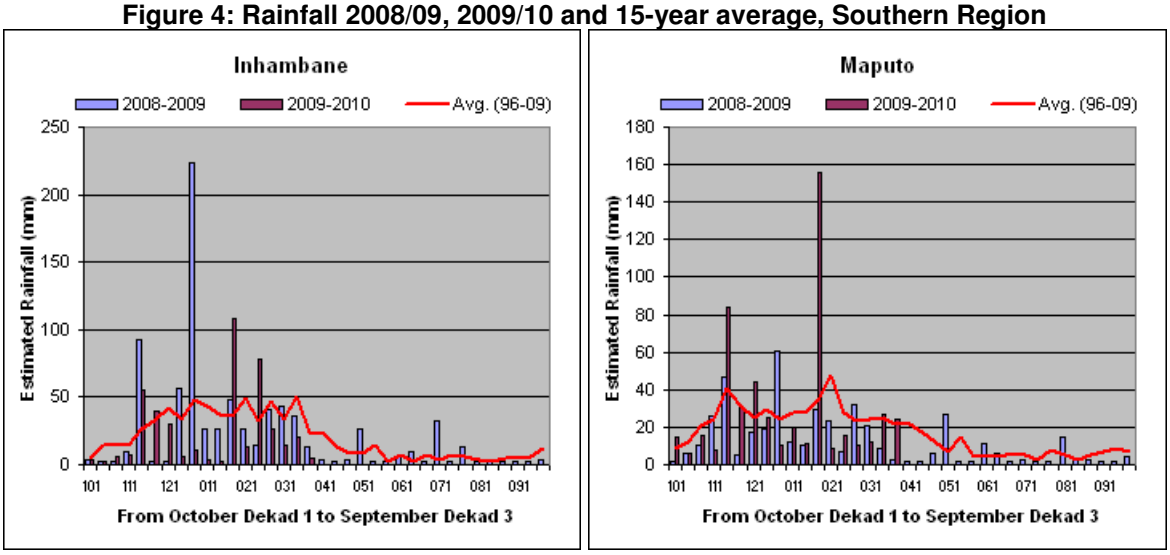
The rains in northern Zambezia and northern Tete were not dissimilar to those in the northern region, but further south the situation began to deteriorate. In those areas - southern Zambezia, southern Tete, southern Manica, and much of Sofala - a weak and often late start to the rains was followed by up to two months (December-January) of inadequate or negligible rainfall which, in the worst-affected areas, necessitated several re-plantings of maize. This relatively dry period was then followed in many places by heavy rains which, apart from causing some localised flooding, generally improved the prospects for the later planted or re-planted maize crop. Figure 3 shows typical rainfall patterns in Tete and Sofala Provinces. Some of the areas worst-affected by dry weather lay along the right bank of the Zambezi River, especially in and around Caia District in western Sofala Province. In the floodplain of the Zambezi and on islands revealed at low water levels, it is the normal practice of farmers to grow late crops on residual moisture. This year, however, much of this planting was swept away by surges of high water resulting from releases from the Cabora Bassa reservoir which was unusually full because of heavy rain further upstream.

Figure 3: Rainfall 2008/09, 2009/10 and 15-year average, Central Region



The southern region (Inhambane, Maputo and Gaza Provinces) is habitually drought-prone. This year a delayed start to the rains was followed by a period of erratic and often negligible rainfall, accompanied by unseasonably high temperatures. The rains returned briefly and often heavily at the end of January, but rapidly diminished again till the end of the season (see Figure 4). The heavy rains resulted in flooding and localised crop loss in some areas.

Figure 4: Rainfall 2008/09, 2009/10 and 15-year average, Southern Region



Area

Owing in large part to the support provided by PAPA programme in terms of inputs, the overall harvested area of maize this year was only 2 percent lower than 2008/09, despite the unfavourable rainfall in southern parts. The northern three provinces showed an increase of 12 percent compared with last year, as is shown in Table 2. In the central region there was virtually no change in the overall area under maize compared with 2008/09, although there were large differences between provinces. Sofala registered a reduction of 13 percent in harvested maize area compared with 2008/09, but this was offset by significant increases in Tete and Manica. The southern region suffered most from poor rainfall this year, with an overall reduction of harvested maize area by 28 percent compared with 2008/09. However, the situation would almost certainly have been worse without the support of PAPA. It is instructive to compare the maize area with those of the more drought-tolerant sorghum and millet which both showed overall increases in harvested area compared with last year.

Given the large amount of maize remaining in store from last year's harvest in the northern region, many farmers there are reported to be considering changing to more lucrative crops such as sesame or soya in the coming year. Although this is a logical short-term response to the current glut of maize in the region, a change away from maize could have negative implications for the country's long-term food security. The

current Government programme of silo construction should, however, go some way towards reducing this threat, especially if it achieves a measure of price stabilization that encourages maize production.

The harvested area of rainfed rice this year in Zambezia was significantly reduced by the dry conditions at the beginning of the season. Parts of Sofala were also affected. Some re-planting was achieved with the return of the rains on land where there had been complete crop loss, but seed was not always available, with the result that Zambezia saw a reduction of almost 40 percent in its harvested rice area compared with last year. On the other hand, the irrigated area under rice in Gaza, where yields of 3 tonnes/ha are achieved, expanded by some 17 percent from a low base of about 13 000 hectares.

The areas under beans, groundnut and cassava showed a slight increase this year in the north and central regions. This was presumably attributable to the very favourable results of last year's harvest and support from PAPA.

Table 2: Mozambique - Harvested areas of main field crops by province ('000); 2009/10 compared with 2008/09, and percent change

	Maize			Sorghum			Millet			Rice			Cereals			Beans			Groundnut			Cassava		
	08/09	09/10	%	08/09	09/10	%	08/09	09/10	%	08/09	09/10	%	08/09	09/10	%	08/09	09/10	%	08/09	09/10	%	08/09	09/10	%
Cabo Delgado	112	128	14	87	92	5	5	5	2	17	17	-1	222	243	9	66	67	2	51	54	7	197	206	4
Niassa	174	198	14	48	50	4	3	3	2	6	6	2	230	256	11	75	76	2	5	5	8	30	33	7
Nampula	143	154	8	152	152	0	10	10	2	41	41	0	345	357	4	85	87	2	75	79	6	504	534	6
North	429	481	12	287	294	2	17	18	2	64	64	0	797	856	7	226	230	2	131	139	6	731	772	6
Zambezia	247	245	-1	86	86	0	9	10	2	96	59	-39	439	400	-9	65	66	2	40	41	2	318	326	3
Tete	209	224	7	72	72	-1	34	35	2	0	0	1	316	331	5	55	57	3	20	21	3	2	2	2
Manica	255	268	5	64	64	0	17	17	3	1	1	2	332	350	6	6	6	4	7	7	5	3	3	4
Sofala	110	95	-13	71	71	0	14	15	4	36	35	-4	231	216	-7	23	24	2	11	11	3	19	20	2
Centre	821	832	1	293	293	0	74	76	3	134	95	-29	1 317	1 296	-2	150	153	2	78	80	2	342	350	3
Inhambane	125	85	-32	27	27	1	13	13	6	4	5	1	169	130	-23	63	64	2	87	89	3	77	80	4
Gaza	160	110	-31	4	4	6	1	1	10	13	15	17	177	130	-26	49	53	9	32	35	8	42	43	3
Maputo	77	65	-16	0	0		0	0		3	3	0	80	68	-15	16	16	4	13	14	8	8	9	14
South	362	260	-28	30	31	1	14	15	6	20	22	11	427	328	-23	128	134	5	132	138	4	127	132	4
Mozambique	1 612	1 573	-2	610	617	1	106	109	3	218	182	-17	2 541	2 481	-2	503	517	3	341	357	5	1 199	1 254	5

Table 3: Mozambique - Time series for maize and sorghum production, Mozambique 2004/05-2009/10

	2004/05			2005/06			2006/07			2007/08			2008/09			2009/10		
	Area '000 ha	Yield t/ha	Prod. '000 t	Area '000 ha	Yield t/ha	Prod. '000 t	Area '000 ha	Yield t/ha	Prod. '000 t	Area '000 ha	Yield t/ha	Prod. '000 t	Area '000 ha	Yield t/ha	Prod. '000 t	Area '000 ha	Yield t/ha	Prod. '000 t
Maize	1 440	0.92	1 332	1 471	1.04	1 534	1 532	1.03	1 579	1 556	1.08	1 678	1 606	1.20	1 932	1 573	1.19	1 878
Sorghum	529	0.60	315	544	0.62	339	558	0.62	348	576	0.63	366	610	0.62	378	617	0.62	384

Crop yields

Average maize yields, at about 1.19 tonnes/ha nationally, were close to those of last year (1.20 tonnes/ha), indicating that reduction in harvested area, rather than yield reduction, was the main contributor to this year's lower production. It is notable that last year's average yields were not considerably higher, compared to this season, given the fact that rainfall last year was good. However, the small difference between the national averages for the two years masks the larger yield differences in the lower-yielding, drought-prone areas of the Centre and the South, as can be seen in Table 4 showing declines in maize yields from the previous year. Average sorghum and millet yields at 0.6 and 0.4 tonnes/ha were similar to those of last year. Rice in 2008/09 gave an average yield, nationally, of 1.2 tonnes/ha. This year it is down to 1.0 tonnes/ha, depressed partly by the poor yield from much of the crop planted late in Zambezia after the early drought had eased. The yield of the irrigated rice in Gaza fell also, from 3.3 tonnes/ha last year to 3.0 tonnes/ha this year.

Inputs

The use of purchased inputs in Mozambican agriculture is very limited; according to a national survey conducted in 2007, only 4 percent of farmers use any fertilizers. However, the Government this year distributed, through PAPA, 1 600 tonnes of maize seed to all provinces, 2 000 tonnes of rice seed to all provinces except Tete and Manica, and 150 tonnes of soya seed to the provinces of Sofala, Manica, Tete, Zambezia and Nampula. In an effort to increase crop production in the second season and compensate for the relatively poor season in the South and parts of the Centre, the Government also distributed 497 tonnes of maize seed, 1 412 tonnes of wheat seed, 2 125 tonnes of seed potatoes, 107 tonnes of bean seed and 1.7 tonnes of assorted vegetable seed. Ninety tractors and various other pieces of agricultural equipment, including hand-held cultivators and irrigation pumps, were also distributed. These efforts were further supplemented by FAO and various NGOs which provided large numbers of farmers with seed.

Pests and diseases

Most crop pests and diseases were at normal levels this year. However, some parts of the central region reported a higher-than-usual incidence of elegant grasshopper on cereals.

Coconut plantations, especially in Sofala Province but also in Nampula Province, have, since about 2005, suffered increasingly from lethal yellowing. The virus has taken a severe toll on very large numbers of palms to the evident detriment of many livelihoods. The Millennium Challenge Account (MCA) is reported to be supporting the multiplication of replacement planting material in the form of short-stature lethal-yellowing-tolerant palms, but producers are reluctant to expend the energy required to grub out the dead palms and wait for eight or nine years for the new palms to start producing. The disease has not yet spread to Inhambane Province.

Commercial citrus and mango plantations were infested by fruit fly in the second half of 2009, to the extent that exports to South Africa were halted by MINAG in November. However, exports of these food items resumed in March 2010.

3.2 Estimated production in 2009/10

Main crops

Despite poor results in the southern region and in parts of the central region, national maize production was satisfactory this year at 1.878 million tonnes (Table 4). This was down less than 3 percent on last year's excellent harvest but surpasses preceding years. Regionally, production in the South was down on last year by a substantial 38 percent and by 4 percent in the Centre. These reductions, however, were largely redeemed on the national level by a 12 percent increase in production in the northern region. Given the significant distance between the north and south that precludes large-scale transport of produce, this year's production in the south must be regarded as unsatisfactory. Last year's excellent and geographically more evenly distributed harvest gave a maize production ratio of 35:53:12 for north, centre and south. This year's ratio of 40:52:8 clearly shows the increased dominance of the north at the expense of the south.

Table 4: Mozambique - Maize area, yield and production, by province, 2006/07-2009/10

Province	Area '000 ha				Yield tonne/ha				Production '000 t			
	06/07	07/08	08/09	09/10	06/07	07/08	08/09	09/10	06/07	07/08	08/09	09/10
Cabo Delgado	96	105	112	128	1.67	1.64	1.64	1.62	161	171	184	208
Niassa	165	168	174	198	1.61	1.55	1.67	1.63	264	261	291	323
Nampula	133	137	143	154	1.25	1.28	1.40	1.44	165	175	200	222
North	*394*	*410*	*429*	*481*	*1.50*	*1.48*	*1.57*	*1.57*	*591*	*607*	*675*	*753*
Zambezia	234	240	247	245	1.30	1.31	1.40	1.27	304	314	345	310
Tete	192	200	209	224	1.24	1.22	1.25	1.21	237	245	261	270
Manica	230	238	255	268	1.17	1.24	1.27	1.21	269	295	317	325
Sofala	106	108	110	95	0.76	0.74	0.85	0.76	82	80	93	72
Centre	*762*	*786*	*821*	*832*	*1.17*	*1.19*	*1.24*	*1.17*	*892*	*933*	*1 017*	*977*
Inhambane	97	111	125	85	0.35	0.47	0.66	0.64	34	53	82	54
Gaza	152	127	160	110	0.34	0.41	0.63	0.50	52	67	101	55
Maputo	36	46	77	65	0.34	0.34	0.73	0.60	12	16	56	39
South	*285*	*284*	*362*	*260*	*0.35*	*0.48*	*0.66*	*0.57*	*99*	*136*	*240*	*148*
Mozambique	**1 441**	**1 480**	**1 612**	**1 573**	**1.10**	**1.13**	**1.20**	**1.19**	**1 582**	**1 676**	**1 932**	**1 878**

Source: 2006/07-2008/09 data MINAG, GoM.

At the national level, production of sorghum and millet was slightly above last year's level (see Table 5), while rice production was significantly lower than last year because of the substantial losses suffered at the beginning of the season in the central region. Nationally, it is estimated that 384 000 tonnes of sorghum, 49 000 tonnes of millet and 179 000 tonnes of rice were produced.

Table 5: Mozambique - Sorghum, millet and rice; area, yield and production by region, 2008/09 and 2009/10

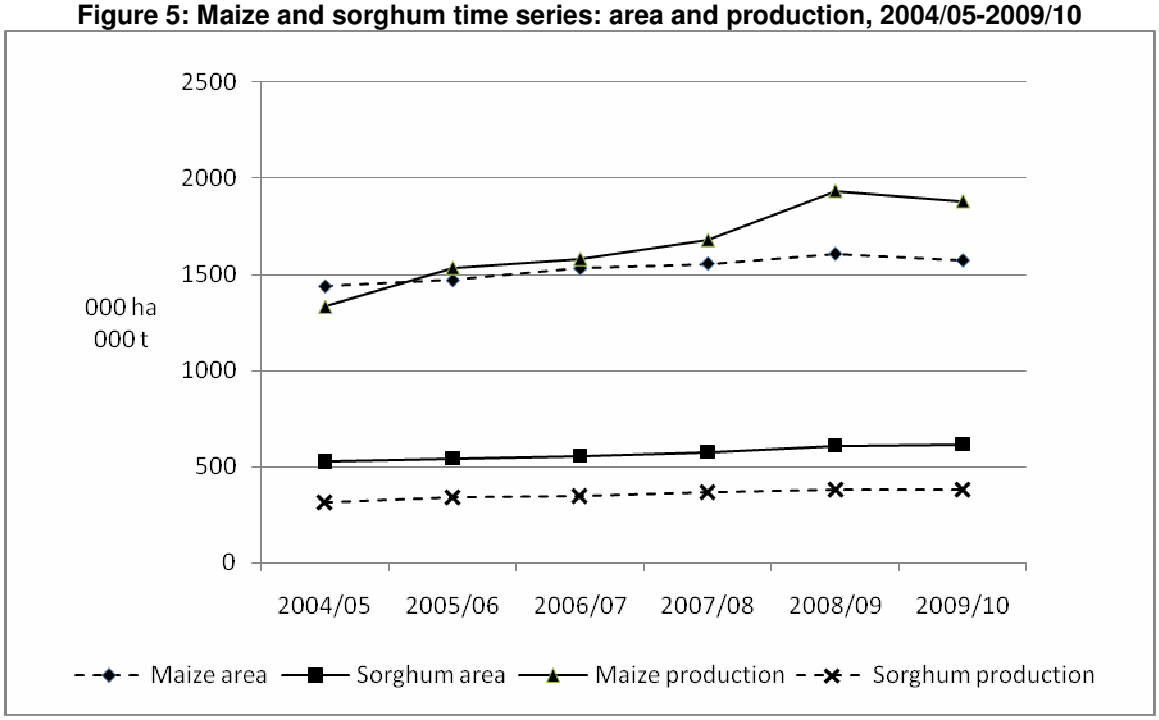
Crop	Region	Area '000 ha		Yield t/ha		Production '000 t	
		2008/09	2009/10	2008/09	2009/10	2008/09	2009/10
Sorghum	North	287	294	0.72	0.71	205	210
	Centre	293	293	0.55	0.56	160	163
	South	30	31	0.41	0.37	12	12
	Mozambique	610	617	0.62	0.62	378	384
Millet	North	17	18	0.64	0.64	11	11
	Centre	74	76	0.44	0.44	33	33
	South	14	15	0.27	0.27	4	4
	Mozambique	106	109	0.45	0.45	48	49
Rice	North	64	64	0.93	0.93	60	59
	Centre	134	95	1.13	0.72	152	69
	South	20	22	2.40	2.26	48	50
	Mozambique	218	182	1.19	0.98	260	179

Source: 2008/09 data MINAG, GoM.

Table 3 and Figure 5 show the national area and production time series for the two most important cereals, maize and sorghum. The graph demonstrates the steadily increasing area under both crops in recent years and a more rapidly increasing maize production on account of rising yields.

Cassava production is notoriously difficult to estimate as it may remain in the ground for as little as eight months or for up to three years depending on the variety; and if other foods are plentiful it may never be harvested. This year the production of cassava would seem to be slightly higher than last year as a result of MINAG's efforts to expand the area with the objective of increasing household food security.

Figure 5: Maize and sorghum time series: area and production, 2004/05-2009/10



Second season

MINAG, through its provincial offices, normally provides farmers in vulnerable areas with some seed for a second-season crop. This year the amount of seed and planting material provided by MINAG increased in an initiative that aimed to compensate for the expected shortfall in the main-season harvest. This was further augmented by contributions from FAO and various NGOs. MINAG contributions (see Table 6) consisted of planting material for field crops and a variety of horticultural crops including tomato, onion, cabbage, lettuce, kale, cucumber, carrot, pepper, okra and eggplant.

Table 6: Mozambique - Seed and planting material distributed by MINAG for second-season cropping, 2010

Crop	Maize	Wheat	Irish potato	Haricot bean	Horticultural
Tonnes	497	1 412	2 125	107	1.7

FAO distributed maize, bean and vegetable seed in Tete, Sofala, Inhambane, Gaza and Maputo Provinces. Maize planted in the second season without irrigation normally gives a very low yield, while irrigated crops usually provide yields of less than 1 tonne/ha because of the reduced number of daylight hours and lower temperatures compared with the summer months.

Other crops

Cashew is important along the coast and especially in Nampula and Inhambane Provinces. In the early 1970s, Mozambique's cashew crop accounted for about half of the world's production. Subsequent abandonment of plantations during the civil war, bush fires, increasing pest and disease infestation, and aging of the trees brought about a sharp decline in production. It is currently estimated that there are about 38 million cashew trees in the country, almost half of which are over 40 years old. The Cashew Promotion Institute, Incaju, established in the 1990s, encourages and supports phytosanitary care (especially against powdery mildew and anthracnose), the production of seedlings and the establishment of new plantations. In recent years annual production has been running at an average of 60 000 to 70 000 tonnes of raw nut per annum; this year, with favourable total rainfall in Nampula, the harvest is expected to exceed 90 000 tonnes. Producers receive between MZN 11 and MZN 16 per kilogramme.

In 2009, sugarcane covered almost 40 000 hectares, of which about 35 000 were irrigated. The African Development Bank and the World Bank are supporting an expansion of this crop, aiming to add an additional 47 000 hectares, with an emphasis on outgrowers. Average yields run at about 80 tonnes of cane per hectare, with an extraction rate of 12 percent. Four large companies dominate the industry.

This year's cotton crop suffered in parts of the central region from incomplete germination as a result of the poor rains at the beginning of the season. The overall performance, however, was in line with that of recent years. In 2007/08 and 2008/09, 69 500 and 60 300 tonnes respectively of seed cotton were produced. This year's harvest, from 156 000 hectares, is expected to be in the range of 65 000 tonnes, with an average yield of 420 kg/ha. Ninety percent of Mozambique's cotton fibre is exported to Asia.

Sesame production has been increasing recently in response to favourable prices, especially in Cabo Delgado, Nampula, Tete, Manica and Zambezia Provinces, with a reported national production of about 37 000 tonnes in 2008/09. Sesame often replaces cotton and soya, but in areas in the northern region with large surpluses of maize, farmers are frequently tempted to change from maize to sesame.

Tea production has recovered gradually since the end of the civil war, with production estimated at 12 500 tonnes for the 2008/09 agricultural season. Tobacco production, however, has fallen from last year's 94 000 tonnes, largely in response to depressed world prices.

Mozambique's copra industry has been increasingly threatened by lethal yellowing of coconut since about 2005. Zambezia Province has been most affected, with a significant loss of palms, and the disease has progressed south into Sofala and the north of Inhambane. The MCA is providing funds to combat the spread of the disease.

Fruit fly infestation of citrus and mango in the second half of 2009 triggered a temporary suspension of export to South Africa between November 2009 and March 2010.

3.3 Livestock

By the end of the civil war in 1993, livestock had been severely depleted and the cattle population was estimated to number a mere 250 000. Since then, numbers have increased at a rate which is currently estimated to average about 10 percent per annum. Table 7 shows the numbers of cattle, goats, sheep and pigs by province according to a livestock census undertaken in 2009, and Table 8 shows the increases in the numbers of cattle between 1999 and 2009, the greatest increase having taken place in the south.

Table 7: Mozambique - Livestock numbers by province, 2009

Province	Cattle		Goats		Sheep		Pigs	
	Number '000	**Percent of national total**	**Number '000**	**Percent of national total**	**Number '000**	**Percent of national total**	**Number '000**	**Percent of national total**
Cabo Delgado	14	1	540	19	194	33	71	14
Niassa	8	1	65	2	7	1	7	1
Nampula	42	3	603	21	179	31	141	28
North	*64*	*5*	*1 208*	*42*	*380*	*65*	*220*	*44*
Zambezia	33	3	155	5	14	2	76	15
Tete	251	20	243	8	8	1	24	5
Manica	171	14	284	10	46	8	38	8
Sofala	45	4	350	12	10	2	75	15
Centre	*499*	*40*	*1 032*	*36*	*77*	*13*	*213*	*42*
Inhambane	166	13	342	12	15	3	37	7
Gaza	302	24	114	4	76	13	16	3
Maputo	205	17	168	6	36	6	20	4
South	*672*	*54*	*624*	*22*	*127*	*22*	*73*	*14*
Mozambique	**1 235**		**2 865**		**584**		**505**	

Source: Animal Production Department, GoM.

Table 8: Mozambique - Increases, by province, in cattle numbers ('000) between 1999 and 2009

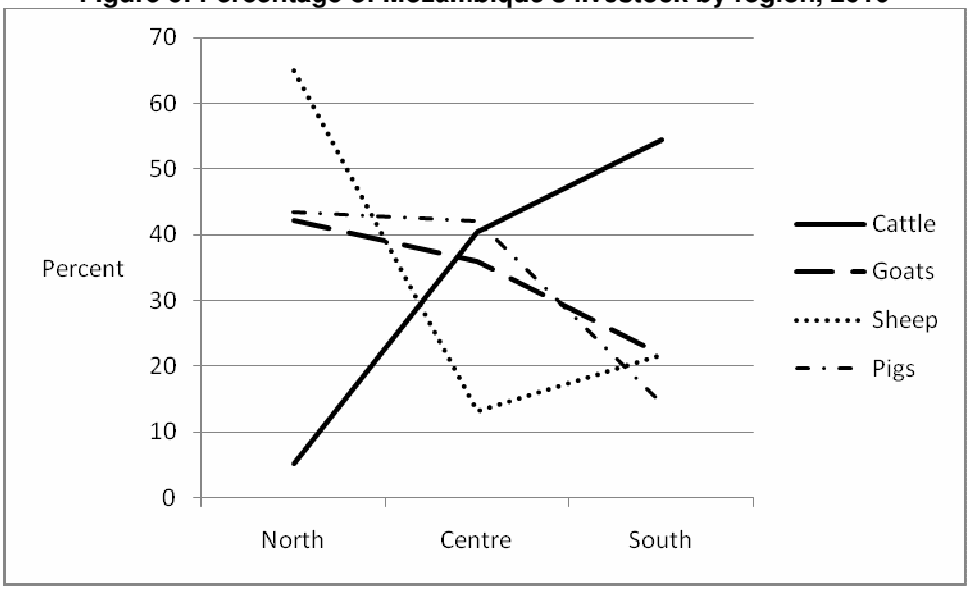
Province	1999	2009	Percent increase
Cabo Delgado	9	14	44
Niassa	6	8	38
Nampula	27	42	53
North	*43*	*64*	49
Zambezia	16	33	102
Tete	196	251	28
Manica	119	171	44
Sofala	20	45	123
Centre	*351*	*499*	42
Inhambane	105	166	58
Gaza	178	302	69
Maputo	46	205	346
South	*329*	*672*	105
Mozambique	**722**	**1 235**	**71**

Source: Animal Production Department, GoM.

It will be seen from Table 8 and Figure 6 that there are two distinct trends from north to south in the relative importance of cattle on the one hand, and small ruminants and pigs on the other. North of the Rio Save, which forms the boundary between Sofala and Inhambane Provinces, the country is increasingly subject to tsetse fly infestation, hence the relatively small numbers of cattle further north and the greater importance of goats, sheep and pigs. Some districts in Gaza and Maputo Provinces are also susceptible to tsetse, but a measure of control has been achieved through a joint programme with Swaziland and South Africa.

PAPA has attempted to introduce animal traction in the north - with 72 pairs of animals being provided for training. Due to the lack of experience in handling cattle and given the problem of tsetse fly, there is uncertainty whether this programme will be successful.

Figure 6: Percentage of Mozambique's livestock by region, 2010



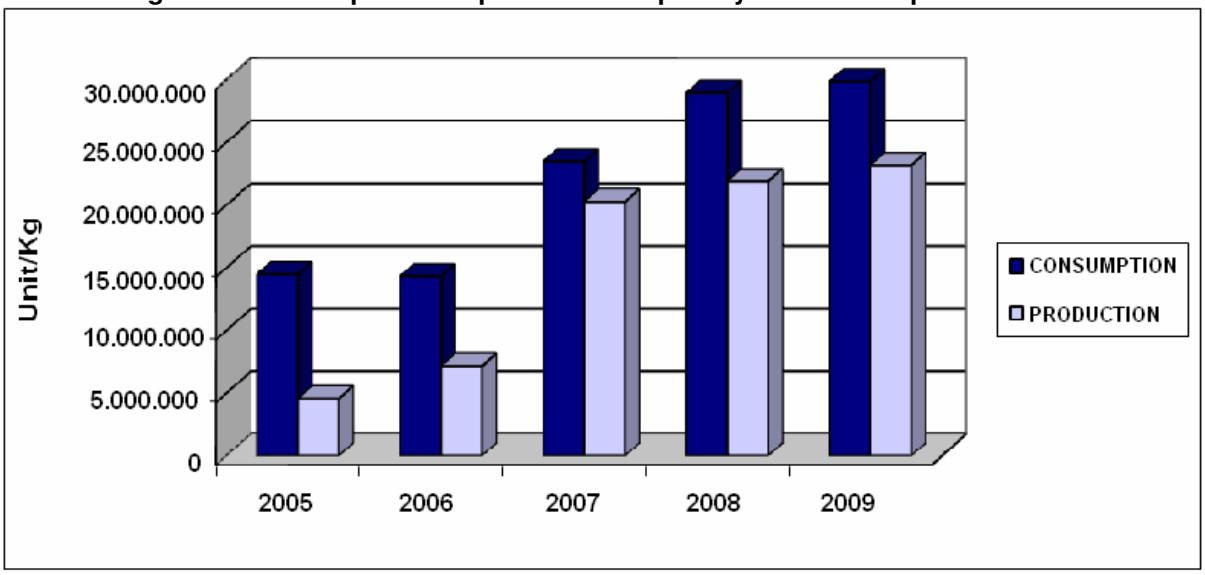
Tick-borne diseases are ubiquitous in Mozambique. About ten years ago the Government changed its policy of free distribution of acaricides and started to charge cattle owners at cost price. This led to owners no longer dipping their cattle; consequently, a nominal pricing system was introduced as a response. This brought about an improvement, but even at the reduced price many owners still do not dip their cattle at the recommended frequency (weekly during the summer months and fortnightly in the winter). The number of dip tanks and crushes for spraying is said to be adequate for the present cattle population. Foot-and-mouth

disease has been reported, especially near game parks; and Rift Valley fever poses a threat along the Malawi border in Niassa Province as well as along parts of the border with South Africa.

Currently, livestock health and condition are good, and pasture is adequate to plentiful, due in part to the late seasonal rains. Livestock prices have risen steadily in recent years. Slaughtered livestock are consumed in the country, which, with the increasing livestock population and a growing demand for meat, indicates an increasing dietary intake and possibly more disposable income in urban centres. However, to keep this in context, it should be borne in mind that, according to the Animal Production Department, only about ten percent of the country's existing abattoir capacity is currently being used.

The national flock of poultry has increased significantly in recent years (52 percent annually in the past five years), in accordance with the Government's policy of import substitution, assisted by the intervention of some commercial companies such as Technoserve, by which imported chicken is subject to a 25 percent tariff and 3 to 5 percent taxes. Newcastle disease remains a ubiquitous problem at household level; there is still resistance to vaccinations (on the stated grounds of taste) despite the availability of very cheap vaccine (MZN 1.00 for three birds in Sofala).

Figure 7: Consumption and production of poultry in Mozambique 2005-2009



Source: Associação Moçambicana de Avicultura.

4. FOOD SUPPLY AND DEMAND SITUATION

4.1 Trade

At the start of the 2010 harvest, there still remained a large quantity of maize stocks carried over from the previous marketing season. Given the good production levels in 2010, significant stocks are expected to remain in the northern region of the country for current marketing year (April 2010-March 2011). This situation has arisen after two consecutive bumper harvests, combined with Government policies that encourage storage of maize to mitigate against price shocks. Given the abundant availability of maize in northern provinces and the proximity to structurally deficit regions in neighbouring countries (southern Malawi), there exists considerable export potential for Mozambican maize. It is estimated that cross-border trade with Malawi will continue to be high this year, despite the imposition of a USD 100 levy on trucks of more than 3.5 tonnes. Furthermore, the opening of a new bridge over the Rovuma River, between Cabo Delgado and southern Tanzania, provides an opportunity for increase trade between the two countries.

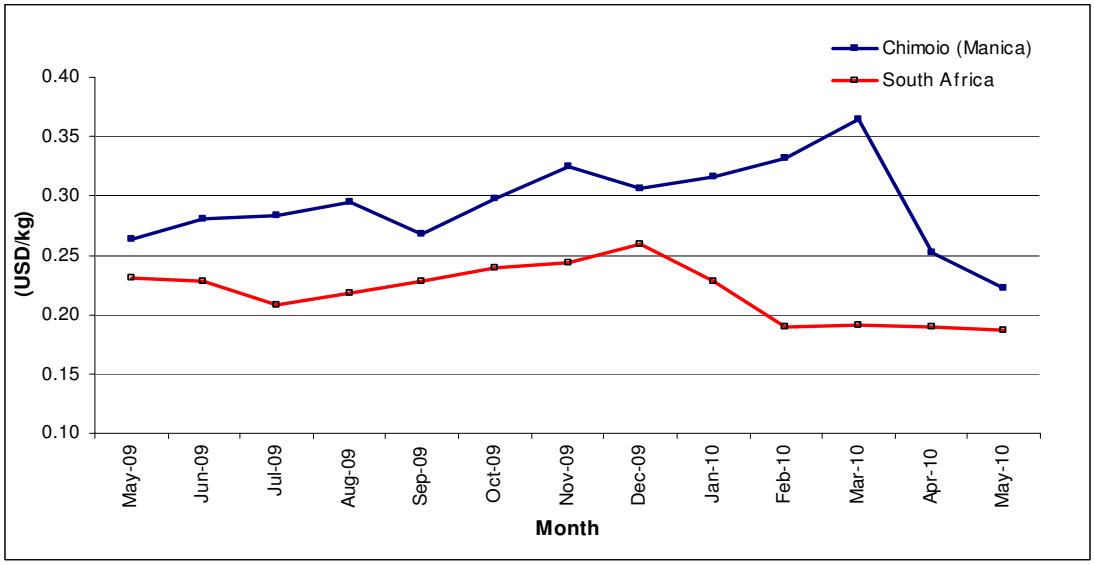
The stock situation is similar in parts of the Centre; in Zambezi, most traders would have normally cleared their stocks by the start of current harvest. However, 2009 production levels were abundant and consequently stock levels are higher than usual. Whilst central provinces are anticipating a slightly reduced harvest in 2010, poor roads and high transport costs (and historically a lack of demand) hinders the movement of maize from the North. As the Centre is normally self-sufficient, maize trade from North to Centre are not well established but large amounts of maize are exported to neighbouring Malawi, particularly through Milange. By contrast, there is significant amount of trade in higher value produce, such as beans and ground nuts.

Estimates of maize exports from the northern and central regions to neighbouring countries vary widely. According to FEWNet reports, between 2005 and 2009 informal exports averaged 66 372 tonnes[3] per marketing season, but estimates from the Ministry of Industry and Commerce suggest that up to 200 000 tonnes could have been exported in 2009. The exact quantity of traded grain, however, will be dependent on both relative prices and transportation costs during the season.

However, the opening of the Zambezi Bridge in 2009 has significantly cut travel costs and time between the northern and central provinces, providing an opportunity for an increase in inter-regional trade. Previously, delays of up to four days were mentioned by traders, but this time has now been reduced significantly. Central province traders are expected to begin purchasing northern maize from October 2010, when maize prices in the Centre are expected to rise.

Internal movement of maize to southern provinces is limited by the distances from surplus producing regions and high transportation costs but also by the comparatively open trade regime that supports the importation of grain from South Africa. Value Added Tax (VAT), currently set at 17 percent, is applied to imported maize grain, but millers are able to obtain a rebate if maize is processed into flour. The lower grain prices in South Africa and the current transportation costs makes South African maize (white) more competitive than local produce. As an indicative comparison, prices of maize (white) purchased in Manica (second largest producing province) and prices from South Africa (Randfontain, SAFEX), including transportations costs (see Figure 8), illustrate the comparative advantage of South African maize. Nonetheless, ongoing rehabilitation of road networks may reduce time and costs of transporting produce to the south, improving the competitiveness of domestic grain. However, concurrently, Mozambique's fuel subsidy has been gradually removed since March 2010, after a period of relative stability during the preceding 12 months. Fuel price rises – diesel costs increased by 24 percent since March 2010 – will have a greater impact on transport costs for lower value produce.

Figure 8: Cost of purchasing and transporting maize grain from Manica and South Africa [1/] to Maputo



[1/] Based on the assumption that grain is processed into flour and VAT is redeemable.

Additionally, the appreciation of the Rand against the Metical, which has risen by approximately 30 percent between May 2009 and May 2010, will play a crucial role determining the continuation of the import competitiveness. Although, over the same period the price of maize in South Africa declined by just over 30 percent offsetting the Metical's loss of value.

Moreover, for commercial millers, the quality of maize grain is a major factor when procuring grain supplies. Uniform moisture content and higher extraction rates render South Africa maize more attractive. Consequently, large-scale millers import between 95 to 99.5 percent[4] of their grain from South Africa citing quality as one of the main determining factors – the higher moisture content in locally produced maize requires that the grain be milled immediately to avoid rotting – as well as the high local transportation costs.

[3] Based on figures from FEWSNET Informal Cross Border Food Trade January 2010, Issue 57
[4] Sources: Mission's interviews with millers (Maputo)

To improve marketing opportunities for local farmers, there is a need to increase both the storage and drying capacity in surplus producing regions.

However, quality of the grain is less a concern for the feed and poultry industry, which has been increasing sharply in the past five years as a result of the strong growth in poultry consumption, at a rate of 20 percent annually, associated to the expansion of the economy. The feed industry procures maize mostly domestically from the central provinces and it is reported now to require up to 100 000 tonnes of feed annually.

4.2 Prices

Maize price movements, historically, conform to annual seasonal patterns, with prices declining with the beginning of the harvest in April, followed by a period of relatively stability before rising from July onwards, as household stocks dwindle and demand for market supplies strengthen. Regionally, there exits distinct variations in price levels indicating limited market integration, high transport costs as well as reflecting differences in regional maize production. As of June 2010 the price of maize in Maputo (MZN 13.45/kg) was more than double the level recorded in Nampula (MZN 5.71/kg). On average, over the previous three years (June 2007-June 2010), prices in Maputo are 25 percent greater than those recorded in Nampula and Manica.

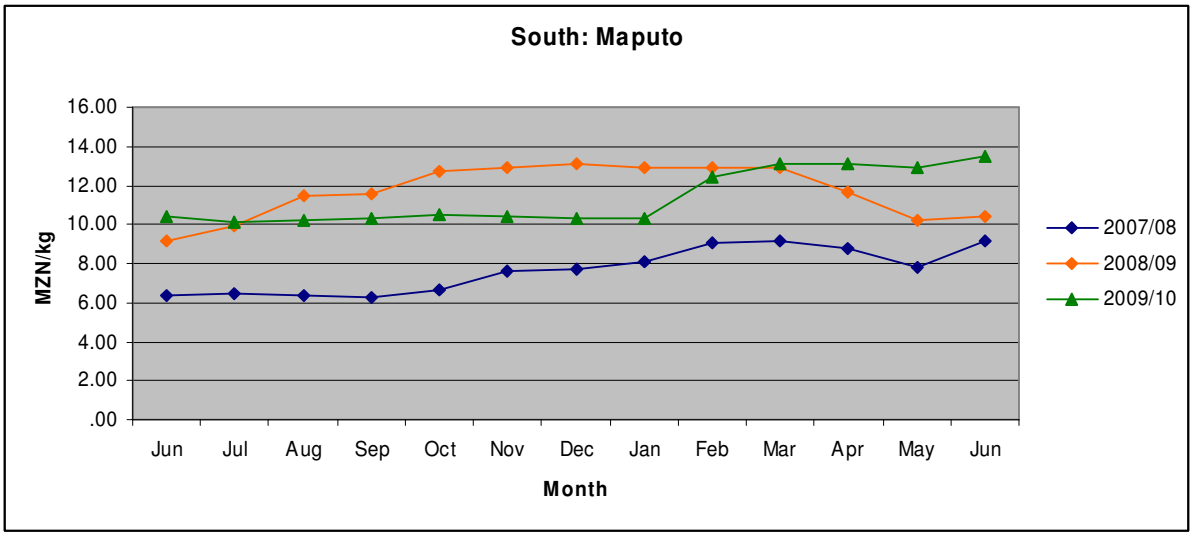
Despite the comparatively higher prices observed in the south, price fluctuations in the north are more pronounced. The less volatile prices in the south (Maputo) suggest that imports from South Africa ensure the stability of market supplies. The relatively stable prices also reflect the lower variability of South African prices.

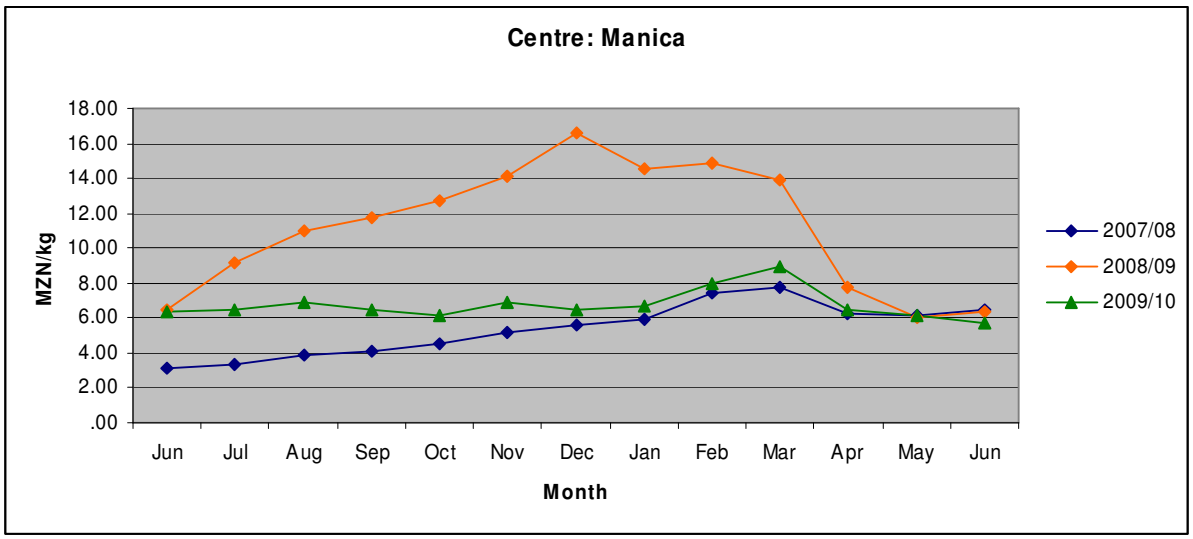
At the time of the CFSAM, prices were just beginning to fall in northern and central markets as the new harvest entered the market, whilst prices in Maputo remain high (Figure 9). By June 2010 maize quotations in central and northern markets were below levels recorded two years earlier but those in Maputo remain at above normal levels. This reflects the impact of late rainfall in 2010 that have delayed harvesting in the south. Maputo is the largest consumer market in the country and maize prices are sustained by the augmenting demand for domestic grain from poultry feed industry associated. It is projected that maize requirements for the poultry industry will increase to 108 810 tonnes in 2011, up from 59 004 in 2008[5]. Furthermore, the recent rise in fuel prices is also expected to put further pressure on price levels.

Prices of rice, the most consumed cereal in Maputo and in southern urban areas, have remained at high levels and increased in June (Figure 11) reflecting this year's poor harvest. This is affecting food access of the low income population.

[5] Food Production Action Plan (PAPA), Government of Mozambique, pp 36

Figure 9: Monthly maize retail prices in major regional centres (nominal terms)





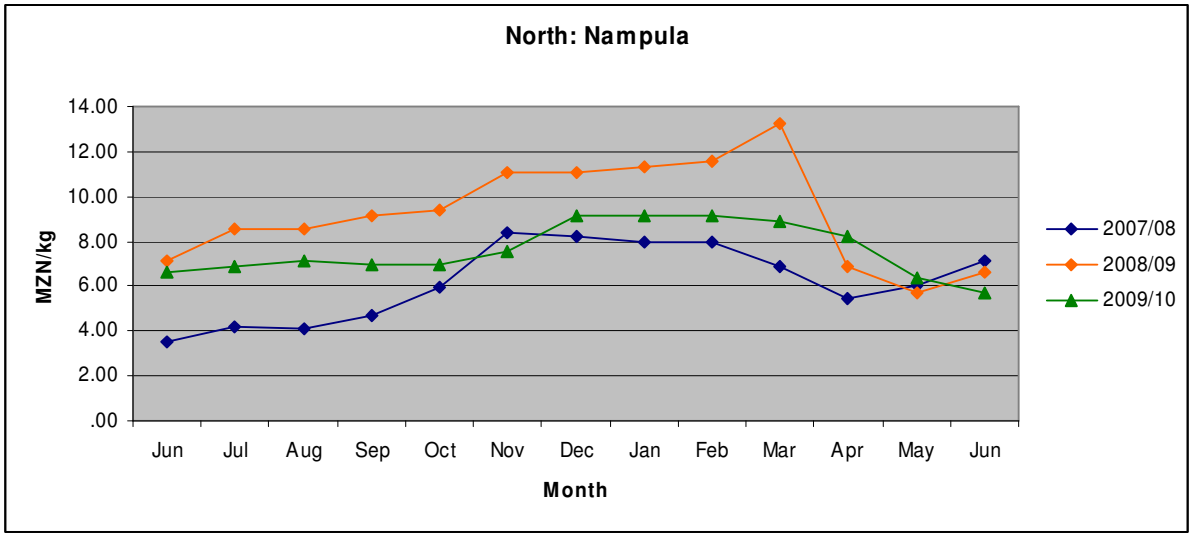


Figure 10: Regional comparison of monthly retail prices (nominal terms)

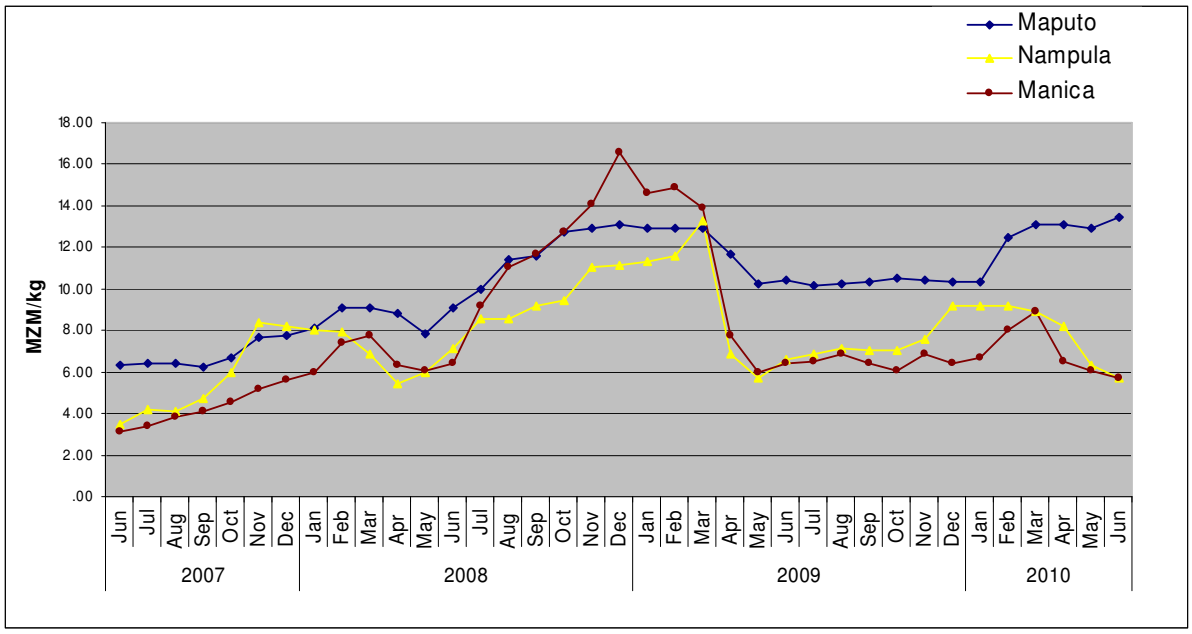
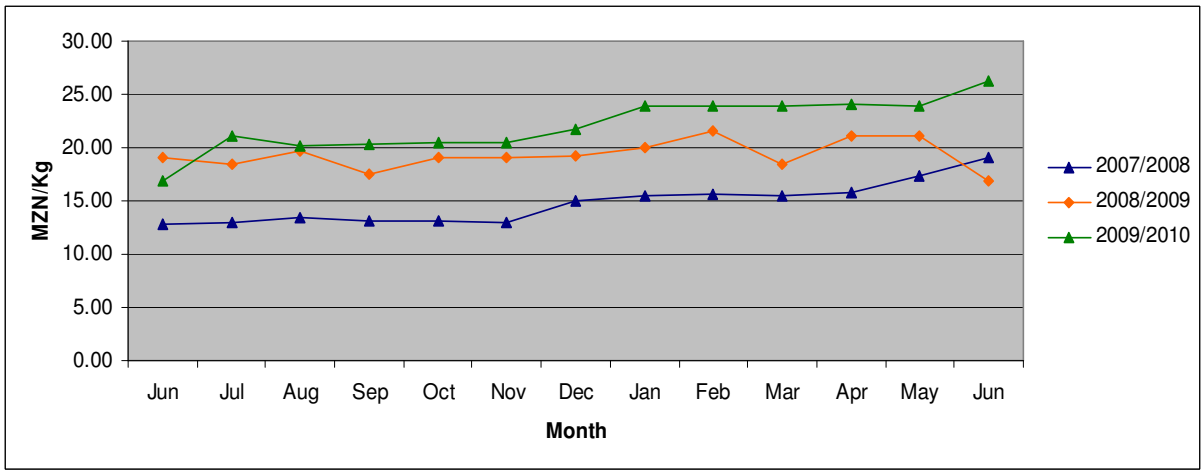


Figure 11: Monthly rice retail prices in Maputo (nominal terms)



4.3 Consumption

In Maputo and urban areas of the south rice and maize flour are the main food staples. Consumers tend to shift consumption patterns in accordance with relative prices of the main staples. Thus, when rice prices are higher than maize flour prices in urban areas, many households shift from rice to maize consumption.

In much of northern Mozambique, maize is seen as a cash crop, with cassava being the main staple. When maize prices are low, farmers retain more for consumption, but when prices are remunerative, farmers will sell the majority of their maize production and cassava remains the most important consumption staple.

The central region remains strongly tied to maize as a consumption staple, although rice, and more recently wheat, can also be very important for some consumers.

4.4 Supply/demand balance in 2010/11

In order to reflect the very different crop production scenarios and consumption patterns in the north, centre and south of the country, as well as the limited market integration, a separate balance sheet has been prepared for each geographical region (see Annex 1), in addition to a national balance sheet for Mozambique (Table 11). The following assumptions have been made:

Population

Population figures are projected for the middle of the 2010/2011 (April-March) marketing year, i.e. October 2010. An annual growth rate of 2.3 percent has been applied to the population figures released by the National Institute of Statistics from the 2007 census. Total population for October 2010 has thus been projected as 21.74 million. Division of the national population into three regional populations was achieved using the same percentages as were recorded in the 2007 census - 33.4, 42.9 and 23.7 percent respectively for northern, central and southern regions. A uniform growth rate for all three regions has been assumed.

Opening Stocks

Opening (carryover) stocks of maize in marketing season 2010/11 are assumed at relatively high levels because of last year's record production. The Government-monitored stocks held by millers and large traders, and the un-monitored stocks held by households, are estimated at 410 000 tonnes. About 40 percent of stocks are held in the northern region.

Food use

Average annual rates of consumption per caput, are based on historical apparent consumption derived from GIEWS cereal balances. At national levels these rates are: 64.4 kg of maize, 21.8 kg of rice and 16.9 kg of wheat. There are large differences in the levels of maize, sorghum and cassava consumption between the north and the south.

Table 9: Mozambique - Apparent per caput consumption of main foods by region (kg/person/year)

Food	National	North	Centre	South
Maize	64.4	35	81	76
Rice	21.8	9	22	39
Wheat	16.9	8	17	31
Sorghum/Millet	18.3	30	17	4
Cassava (fresh)	216.2	368	144	133

Feed use

Feed use has been increased, especially in the south and centre, as a result of the burgeoning poultry industry which, alone, is reported to require approximately 100 000 tonnes of maize annually.

Post-harvest losses

There is uncertainty about the level of post-harvest losses for maize in Mozambique, with some suggesting a figure as high as 25 percent in certain locations. In the present balance, a figure of 12 percent has been used for maize in the northern and central regions and 18 percent in the south. The lower figure represents the often better storage facilities (including some silos) in the north and centre compared with the mostly traditional and less protective ones in the south. Post-harvest losses of sorghum and millet have been put at 6 percent throughout, reflecting their lower susceptibility to storage pests and lower volumes stored. 10 percent loss has been assumed for wheat and rice. For cassava, much of what is deemed post-harvest loss is, in fact, loss due to lack of harvest. It may be argued therefore that losses will be greatest in areas of high production as these are the areas where surpluses can most reasonably be expected. To reflect this, cassava 'post-harvest' losses have been assumed to be 40 percent, 25 percent and 15percent in the north, centre and south respectively.

Seed use

The figures for seed use are derived from the areas under each of the cereals in 2009/10 and the standard seed rate used in Mozambique for that cereal, as shown in Table 12.

Table 10: Mozambique - Cereal seed use

Crop	seed rate kg/ha	'000 ha			'000 tonnes seed		
		North	Centre	South	North	Centre	South
Maize	25	481	832	260	12	21	7
Rice	80	64	134	22	5	11	2
Wheat	60	0	5	0	0	0.3	0
Sorghum/ millet	10	312	369	46	3	4	0.5

Closing stocks

Closing stocks are expected to be very low in the south but high in the north. It is envisaged that the marketing problems of the north will not be solved quickly and that, following this year's excellent production in the north, stocks in April 2011 will be at a similar level to those reported in April 2010.

Exports

Even in years of poor harvests, substantial quantities of maize are exported both formally and informally to neighbouring countries, mainly Malawi. It is expected that this year will be no different with regard to the central region. Despite the reduction in production, there is still a surplus of maize after covering consumption requirements in the region. However, given the large amount of carryover stocks in the North, the good 2010 harvest, the opening of the new bridge across the Ruvuma River, the construction of silos for the collection of grain, and the increasing interest in shipping grain rather than transporting it by road, it is anticipated that more maize will exported during this marketing year. It is estimated that a total of 180 000 tonnes of maize will be exported (informal and formal) during the 2010/11 marketing year.

Imports

Given the large distance that separate surplus producing regions in the North and structurally deficit areas in the South, and consequently the substantial transportation costs, it is anticipated that commercial maize imports from South Africa will cover the bulk of the consumption requirements of the South. Despite the depreciation of the Metical against the Rand, the fall in maize prices in South Africa[6] maintains the competitiveness of maize imports. Import requirements for maize are estimated at 173 000 tonnes, with commercial imports of maize forecast at 163 000 tonnes. Imports of rice and wheat needed to maintain consumption at historical levels are estimated at 386 000 and 360 000 tonnes, respectively. Most of these are expected to be commercial imports, except for the quantities brought in under monetized food aid (bilateral transfers), estimated at 100 000 tonnes for wheat. Over the last three marketing years, Mozambique received 108 000 (2009/10), 61 000 (2008/09) and 31 000 tonnes (2007/08) of wheat through bilateral transfers. It is also expected that a small quantity of rice will be received under this form of food aid. Emergency food aid requirements are estimated to be close to 40 000 tonnes of cereals[7], 50 percent of which is expected to be purchased locally by WFP.

Overall, total cereal import requirements in 2010/11 are projected at 919 000 tonnes, slightly higher than the previous marketing year, mainly reflecting the reduced output of rice.

[6] Maize (white) prices (Randfontein - SAFEX), decreased by 30 percent between June 2009 and June 2010.
[7] Rations used in calculation: 15kg cereal per month; 17.5 kg food aid (including cereals, pulses and oil) per month.

Table 11: Mozambique - National food balance sheet, April 2010-March 2011

	Maize	Rice (milled) [1/]	Wheat	Sorghum/ Millet	Total Cereals	Cassava
Domestic availability	**2 288**	**160**	**42**	**443**	**2 933**	**11 978**
Opening stocks	410	40	32	10	492	2 240
Production	1 878	120	10	433	2 441	9 738
Utilization	**2 461**	**546**	**402**	**443**	**3 852**	**10 218**
Food use	1 405	476	369	400	2 650	4 714
Seed use	39	18	0	7	64	0
Feed use	160	0	0	0	160	0
Other uses/losses	297	12	1	26	336	3 264
Closing stocks	380	40	32	10	462	4 000
Exports	180	0	0	0	180	0
-of which informal	160	0	0	0	160	0
Import Requirements	**173**	**386**	**360**	**0**	**919**	**0**
-Commercial imports	163	371	260	0	794	0
-Food aid [2/]	10	10	0	0	20	0
-Monetized food aid imports	0	5	100	0	105	0

[1/] 67 percent of paddy.
[2/] An additional 20 000 tonnes of food aid is expected to be purchased locally by WFP. See details in sections below.
Notes: Calculations computed from unrounded data.

The Mission has prepared three separate regional food balance sheets, due to the lack of regional integration as discussed above. Please see Annex 1.

5. HOUSEHOULD FOOD AND NUTRITION SECURITY

5.1 Background

In February 2010 the Technical Secretariat for Food Security and Nutrition (SETSAN), through its Vulnerability Analysis Group (GAV), carried out a monitoring of the Food and Nutritional Security (FSN) situation, taking into account the drought/dryness alert issued by the Ministry of Agriculture for some region in country earlier in the month. They also took into account that MINAG/DNSA/DCAP projected that 61 districts from 7 provinces were at risk of losing their production, based on observed rainfall anomalies.

At that time, field data indicated that most affected households still had food reserves from the 2008/09 agricultural season which was one of the best in recent years. However the drought/dryness led to approximately 30 percent reduction of cultivated areas, which would have a negative influence on the availability of food from the 2009/10 agricultural season.

The report concluded that about 456 000 people were extremely food insecure with most of them found in *Tete* province (142 000), followed by *Sofala* (90 210), *Inhambane* (47 720), *Manica* (42 950), *Gaza* (30 000), *Maputo* (22 000) and *Nampula* (9 410) provinces. The report recommended humanitarian interventions including immediate food assistance, the distribution of drinking water and supplementary feeding facilities for some health units. It was also recommended that social assistance programmes be expanded.

Since then hardly any humanitarian interventions were undertaken. Instead, a large scale agricultural inputs programme was implemented in order to ensure an improved second season crop in all parts of the country due to very favourable rains later in the season.

The food security component of the current mission used both secondary and primary information to present the food security and vulnerability of the affected populations. Initially, consultations were carried out with key stakeholders, most notably GAV/SETSAN. The mission then carried out field visits, conducting Key Informant interviews in all visited provinces before proceeding to a selected number of villages for household interviews.

In the absence of a VAC assessment for 2009/10, and given the short timeframe during which this mission was carried out, it is important to note that this report cannot be expected to provide sufficient details for programming decisions. The quantification of needs presented below is based on limited information while

the current food security assessment being carried out by the Mozambique Vulnerability Assessment Committee will provide greater details.

5.2 Food security status and prospects

The food security situation as observed in all field visits was satisfactory except for two areas: *Chigubo* (*Gaza*), where people were eating their seed stocks, and *Machanga* (*Sofala*) where people were completely dependent on food assistance at the time of the mission. Overall people are eating 2 to 3 meals a day consisting of cereals (maize, rice or cassava) and leaves, and occasionally beans. The dietary diversity and food frequency of consumption at household level was calculated on a random sample of households by the mission and overall was found to be acceptable. However, the diet quality is rarely nutritionally satisfactory since consumption of proteins is low across the country. It is clear that the late second season production expected in August will be crucial, especially for those who have access to lowlands with enough moisture or irrigation facilities.

However, the arid and semi-arid zones including the interior of *Gaza* (especially the lowlands) and *Inhambane*, parts of southern *Manica* and *Sofala*, southern *Tete* and northern parts of *Maputo* are the most affected, since food reserves at the household level are limited as a result of partial or complete failure of maize production and limited or no prospect for second cropping and alternative source of food or income in these areas. Southern *Zambézia* province also deserves special attention since it is a rice producing area and those crops couldn't be replanted. Households depending completely on rice production for food or income may face some serious food access difficulties in the near future.

Although cassava and sweet potatoes may compensate for the lack of cereals in the arid and semi arid areas affected by crop failure, the mission estimates that overall the food reserves will not last more than 5 months for households in these affected areas. For those who will not benefit from the second agricultural season, the market will be then the primary source of food.

5.3 Household food access

Access to food through own production

Although adequate food is available within Mozambique, from domestic production and imports, inadequate access to food is clearly an issue. This is closely related to poverty and lack of income opportunities, as both urban and some rural households purchase a significant proportion of their food needs. For many rural Mozambicans, access to staple foods is largely from home production.

According to the VAC's Comprehensive Food Security and Vulnerability Analysis (CFSVA) survey conducted in 2009, households in rural areas access most of their food from own production with the greatest reliance found amongst households in *Nampula, Zambézia* and *Inhambane* and the least in *Maputo* province households where purchase count for up to 63 percent of total food consumed. Rural households in *Cabo Delgado*, *Sofala* and *Inhambane* are the most likely to depend on hunting, gathering or fishing to access food.

Agriculture in Mozambique is dominated by smallholders who farm in a risky environment that is vulnerable to droughts and floods, which have occurred in 15 of the last 25 years. Mozambique is a vast country with a wide variety of regional cropping patterns. Although the country is grouped into 10 agro-ecological zones it can be broadly divided into three geographical regions: **North** (*Niassa, Cabo Delgado*, and *Nampula*), **Central** (*Zambézia, Tete, Manica,* and *Sofala*) and **South** (*Inhambane, Gaza, and Maputo*).

Mozambique's agro-climatic zones (see Map in Annex 2) range from arid and semi-arid (mostly in the south and southwest) to the sub-humid zones (mostly in the centre and the north) to the humid highlands (mostly the central provinces). The arid regions of the south and south-western part of Gaza province are suitable only for livestock. The principal regional variation of cropping practices is based on soil conditions and rainfall with changes in quantity and predictability from north to south.

Agriculture in Mozambique provides a precarious livelihood with the smallholder farmers characterized by holdings of multiple small plots, multiple crops, low input use, and low productivity with their average crop yields about one half of the regional average. Smallholders have limited access to capital, little schooling, are at the mercy of highly variable rainfall, and suffer seasonal price fluctuations. They typically use manual cultivation techniques and little or no purchased inputs or irrigation.

Access to food through purchase

Small holder farmers also access food through purchase relying on income from cash crops (cotton, cashews, and others), employment and petty trading, as well as from formal and informal social protection activities, including remittances.

For people living in the interior of *Maputo*, *Gaza* and *Inhambane* the most important source of cash income for poor households is **'mining' employment in South Africa**. The practice of sending one or two men from the household to work in either the mines or on large-scale commercial farms is entrenched in local seasonal patterns, although some of the bigger farmers cultivating five or more hectares in the *baixo* (low lands) areas tend get higher returns from putting the labour into their fields at home.

There are visible indicators of South African remittances in these areas such as houses were built with cash from South Africa as well as stereos, bicycles, furniture or kitchen equipment from South Africa in or around these rural villages. For the mission, reduction of remittances has been reported to the team in various areas. According to a recent paper on the impact of the global financial crisis in Mozambique[8], funded by DfID, workers' remittances reduced by about USD 2 million in the first three quarters of 2009 in relation to the same period of 2008 going against the continuously increasing trend (from USD 50 million in 2005 to USD 82 million in 2008) over the previous four years.

Expansion of natural resource extraction is a livelihood strategy to increase household income during times of crisis in all rural areas. Natural resource activities are mainly related to handicrafts, fishing, and collection of firewood and charcoal. During the CFSAM field work, teams noticed the over-reliance on firewood and charcoal especially in the arid and semi-arid areas of *Gaza*. The team observed there piles of bags of charcoal and firewood in railways station, mainly in *Chicualacuala* district and trucks full of charcoal bags on the road.

Finally, **livestock sales** make significant contributions to the livelihood of smallholders and the rural poor. The number of livestock has grown significantly over the past decade for rural poor in order to increase and diversify income, and to reduce risk. The very poor can afford only some chickens and pigs, while those at the next level can add goats and a few cattle, and the better off among the poor can afford larger numbers of chickens, pigs, and cattle.

In this context, the more vulnerable households are those dependent on crop production, without stocks from last year or from early planting, without livestock and without other sources of income (charcoal production, cut of firewood, remittances). It seems common in these arid and semi arid areas to see extended and multi-generational families eating from the same pot, sharing production and daily life, although sleeping in different houses. The mission met households with more than 20 members with about half being children. Similarly, the situation of household composed of elderly and their grandchildren receiving little help from their children living and working in Maputo and South Africa.

Markets, prices and food access

Markets are the main source of food for households not having much second season production, especially in the south, but prices are expected to be higher than normal. Food is currently available on most markets, including some from the second harvest. In the South many traders reported that there was no market for maize yet since most of the people had some remaining stocks from the previous season as well as from the recent harvest. Retail prices of maize have stabilized in recent months, but they remain very high and are limiting food access of poor households. Poor households facing regular food insecurity will once more not produce enough grain for their own consumption and will not earn enough money from cash crops or labour to purchase sufficient too expensive food at the markets. Especially for poor consumers who normally spend a large share of income on basic foods; these high prices in the South can have a major impact on their ability to maintain adequate consumption.

According to the government, fuel prices in Mozambique are still below the international market price. There are indications that the government has adopted the strategy of increasing the fuel prices progressively to match international market prices, while at the same time subsidising public transport to avoid social disturbances.

[8] Global Financial crisis Discussion series paper 18: Mozambique phase 2, Carlos Castel- Branco and Rogerio Ossemane, ODI, Feb 2010.

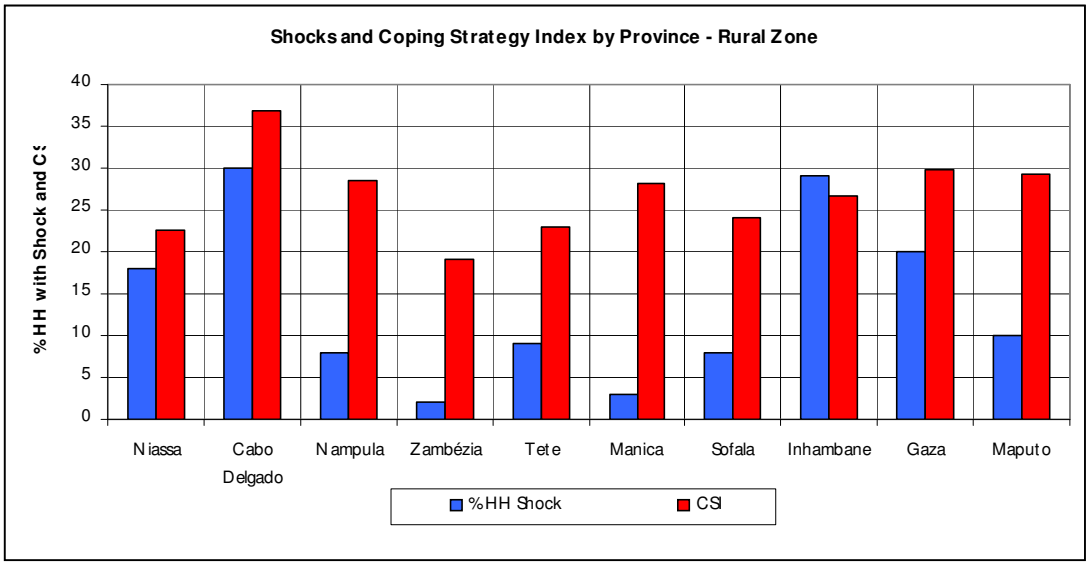
Coping with food insecurity

The Coping Strategies Index (CSI) measures the frequency and severity of a number of common household coping strategies[9] for addressing shortfalls in food supply and combines the information into a single CSI score. With the CSI, a lower score implies reduced stress on the household's ability to meet its food needs and thus, relatively better food security. For the 2009 VAC CFSVA, households were asked to name the frequency of use of particular strategies during the 30 days prior to the survey. The average CSI was 25.0 and was higher amongst rural households (25.7) compared to those in peri-urban areas (24.0).

For peri-urban areas, households in *Cabo Delgado* were the most likely to have experienced a shock that negatively affected household food security in the past 12 months, followed by those in *Niassa, Gaza* and *Inhambane*. Households in *Cabo Delgado* also had the highest CSI, indicating the highest levels of stress in the peri-urban areas of the country. Households in *Sofala, Gaza* and *Maputo* province also had fairly high CSI but much lower reported shocks. An explanation could be that these are the provinces most affected by HIV and AIDS.

The percentage of households experiencing shocks and the CSI by province for rural households is in the chart below. The incidence of shocks was highest amongst households in *Cabo Delgado,* followed by those in *Inhambane* and *Gaza* and was lowest amongst households in *Zambezia* province.

The CSI was also highest amongst rural households in *Cabo Delgado*, followed by *Gaza, Maputo*, *Nampula, Manica* and *Inhambane*. The CSI indicates higher stress amongst households in these provinces with particular linkages for HIV and AIDS in *Gaza* and *Maputo*. Households in *Zambézia* are the least stressed of all in rural areas.



Historical CSI data[10] shows that in the past five years, the most critical districts where the CSI is highest are located in the west of *Gaza* province, and the south of *Tete* province. The frequency and intensity of use of coping strategies is during the lean season – October onwards - especially in the southern region, when cereal stocks are low, and there is no food in the fields. March tends to be better because of the proximity to harvest time, when green maize, leaves and other vegetables are available, and households can begin to sell these products (see Annex 3).

[9] Coping strategies assessed: skipping meals, reducing portion sizes, reducing the number of meals, borrowing food, eating less preferred foods, eating wild foods, eating immature crops, begging and engaging in casual labour.

[10] Collected through the WFP Community and Household Surveillance System/Post-Distribution Monitoring (CHS/PDM)

5.4 Food consumption, nutrition and HIV/AIDS

Composition of diet

Cereals, tubers, vegetables, green leaves, beans and peanuts are the staple diet of the majority of Mozambicans. Cassava is mainly eaten in the north including *Zambézia* Province as the main staple food while maize is the main staple amongst households in the central and south regions. Rice is also a staple food in the central region.

Sources of food containing animal proteins are less often consumed, only on festive days and traditional ceremonies. In the coastal areas people also eat fish and other sea food[11]. Energy-rich foods, such as oil and sugar are consumed in extremely small quantities by most families. However, in the areas where coconut, groundnut, cashew nuts and other oil crops are produced as cash crops they are as well consumed but often only in small quantities[12].

The majority of the families have on average 2 to 3 meals a day; during the hungry season they reduce the number of meals and consume more wild foods (fruits, tubers, seeds). Related to infant feeding patterns supplementary feeding is very poor in terms of energy and nutrients. It is mainly composed by a cereal porridge that is not enriched with foods containing energy and protein.

Data from the 2009 CFSVA shows that households in the Northern provinces, rural households are mainly living on daily consumption of maize plus beans/peas 4 days per week and oil/fats only 3 days. They also consume leafy green vegetables and fish/shell fish about 2 days per week. Peri-urban households have a slightly more diversified diet by adding other cereals twice a week and also eating tubers and sugar at least once a week.

For households in the Central provinces, consumption is more diverse, except in *Zambézia* where most households rely on starches and some fish/shellfish for regular consumption. In general, peri-urban consumption is more diverse than rural except for households in *Sofala* province.

For the Southern provinces, households in peri-urban areas of *Inhambane* have a more diverse diet than those in rural areas while rural households in *Maputo* appear to have a more diverse diet than in peri-urban areas. In general consumption in *Gaza* is poor with rural households eating on average, maize 5 days a week, other cereals the remaining 2 days and then sugar, nuts and greens a few times a week with peri-urban households eating the same foods but at slightly different frequencies.

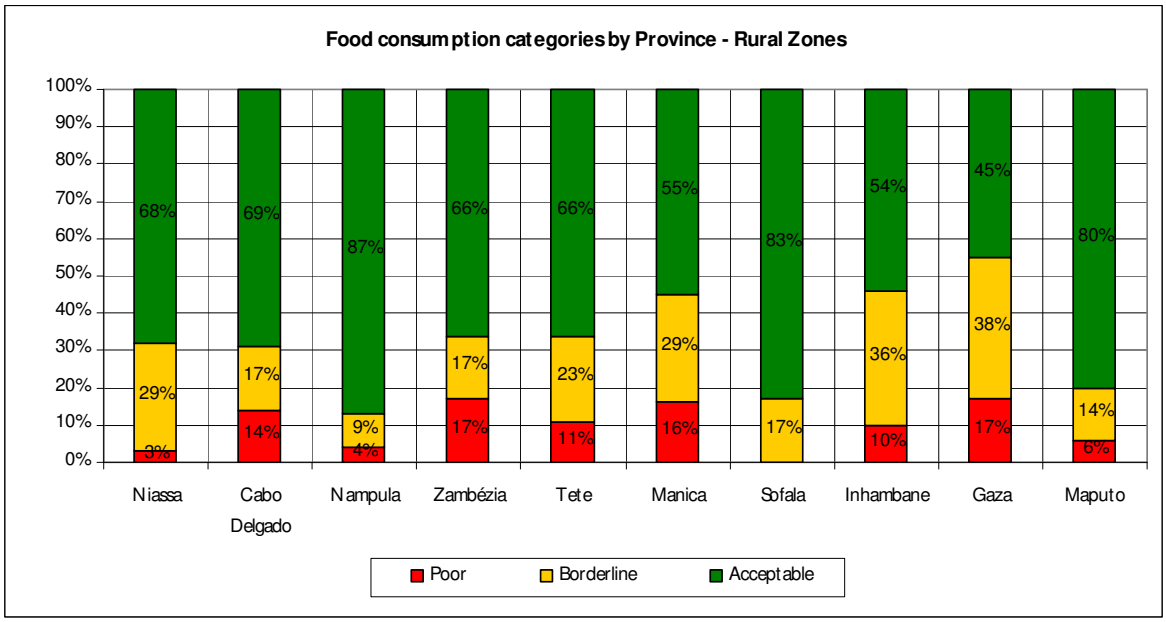
In the 2009 CFSVA, overall, 7 percent of peri-urban households and 11 percent of rural households had poor food consumption while 16 percent of peri-urban and 20 percent of rural households had borderline consumption, leaving only 78 percent of urban and 66 percent of rural households with acceptable food consumption in terms of food frequency and dietary diversity.

In peri-urban zones, there is quite a variation between provinces in terms of food consumption. Peri-urban households in *Gaza* have the worst consumption, with only half reaching acceptable levels of consumption. In *Cabo Delgado, Manica* and *Inhambane*, only about two-thirds of the peri-urban households have acceptable levels of consumption. Food consumption is best in *Nampula* peri-urban areas, followed by *Zambézia* and *Maputo* where 84 percent of the households have acceptable consumption.

For rural zones, households in *Gaza* also have the worst consumption with only 45 percent achieving acceptable levels and 17 percent with poor consumption. Around 55 percent of the rural households in *Manica* have acceptable consumption – 16 percent have poor consumption. *Zambézia* province has 17 percent of rural households with poor consumption but two-thirds also have acceptable consumption. Overall, the best levels of consumption in rural zones are found in *Nampula, Sofala* and *Maputo* provinces where more than 80 percent of the households have acceptable consumption.

[11] Perfis Distritais de Seguranca Alimentar e Nutricao, 1996-2000

[12] Ibid



It is also important to understand the characteristics of households by food consumption levels. The main distinguishing feature of the few households with **'poor'** consumption is that they are more likely to have an elderly head. In addition, they are the most likely to have experienced the recent death of a member and to have a chronically ill member and to be hosting orphans compared to the other groups. In general, households with **'acceptable'** consumption are less likely to have key demographic characteristics that are linked with vulnerability and food insecurity.

Lastly, there is a clear relationship between asset wealth and household food security as measured by food consumption, indicating that food access is a main determiner in household food security in Mozambique.

Nutrition and health

The prevalence of malnutrition in young children in Mozambique is of major concern. Relatively high levels of stunting in tandem with comparatively lower levels of acute malnutrition suggest factors other than availability of food may be significant determinants of child stunting. These factors might include disease arising from poor health and sanitation as well as poor caring and feeding practices for young children.

The 2008 Multiple Indicator Cluster Survey (MICS) found that there have been some improvements in the prevalence of malnutrition over the past five years, with acute malnutrition or wasting[13], decreasing from 5 percent in 2003 to 4 percent in 2008. The prevalence of chronic malnutrition or stunting[14] has decreased from 48 percent in 2003 to 44 percent in 2008, which is quite a remarkable improvement. Lastly, the prevalence of underweight[15] has also decreased from 20 to 18 percent during the same time period.

However, by province, there are still areas where the prevalence of malnutrition is still unacceptable. Acute malnutrition is highest among children in *Nampula* province (8.9 percent), followed by *Niassa* (5.4 percent). For the rest of the provinces, the prevalence is less than five percent which is considered acceptable by WHO standards.

The chart below shows that the highest prevalence of stunting is found in *Cabo Delgado* province where more than 55 percent of the children are chronically malnourished. More than half the children in *Nampula*

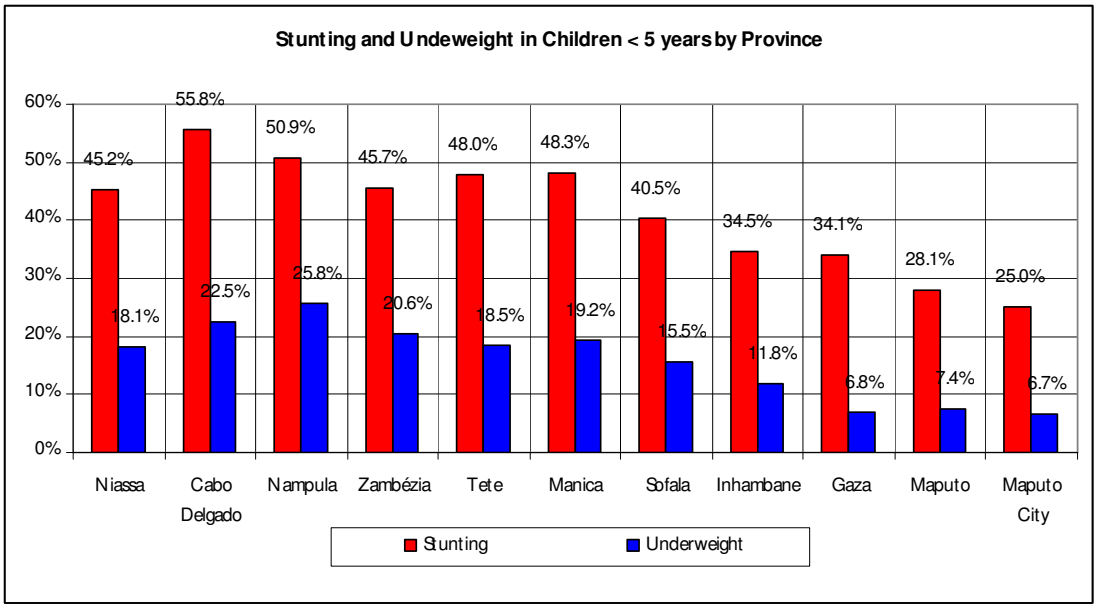
[13] A **wasted child** has a weight-for-height Z-score that is below -2 SD based on the NCHS/CDC/WHO reference population. Wasting or **acute** malnutrition is the result of a recent failure to receive adequate nutrition and may be affected by acute illness, especially diarrhoea.

[14] A **stunted child** has a height-for-age Z-score that is below -2 SD based on the NCHS/CDC/WHO reference population. Stunting or **chronic** malnutrition is the result of an inadequate intake of food over a long period and may be exacerbated by chronic illness.

[15] An **underweight child** has a weight-for-age Z-score that is below -2 SD based on the NCHS/CDC/WHO reference population. This condition can result from either chronic or acute malnutrition or a combination of both.

province are stunted. The levels of chronic malnutrition decrease from north to south and are lowest in *Maputo* province and city.

Similarly the prevalence of underweight in young children is highest among children in the northern provinces of *Nampula* and *Cabo Delgado* and lowest in the southern provinces of *Gaza* and *Maputo/Maputo city*.



Factors that may influence the north-south differential in malnutrition could include maternal health and well-being, feeding practices such as exclusive and extended breastfeeding and the consumption of tubers rather than maize. Additional factors could include access and utilisation of ante-natal care and children's access to timely and appropriate immunisations and other neo-natal care.

Micronutrient indicators

The MICS also assessed the coverage of vitamin A supplementation programmes as well as the household use of adequately iodised salt. Vitamin A coverage was best in *Manica* province, followed by *Sofala* and *Inhambane* and was the worst in *Tete* and *Zambézia* where less than two-thirds of children 6-59 months received a vitamin A capsule.

Use of adequately iodised salt varied greatly across the country, being extremely low in *Nampula*, *Cabo Delgado* and *Zambézia* and quite high in *Gaza* province. There are a lot of small scale local salt producers in the coastal areas and most do not have equipment or expertise to produce iodised salt despite efforts of the Government. The high levels in *Gaza* could be a reflection of their access to salt from South Africa.

HIV and AIDS

Although the nutrition situation is improving for young children in the country as a whole, there are still significant problems, especially for children in the north. Causes could include poor access to services including water and sanitation, health care and immunization, there are also factors such as feeding practices and maternal education that can influence these outcomes. For other provinces, it appears that HIV and AIDS is playing a role in higher levels of mortality and poorer nutritional outcomes such as in *Gaza* province. More in-depth analysis by province of the MICS data to better understand the causal linkages between household food security, health and hygiene and caring and feeding practices would be useful in addressing the specific issues for children in each province and by rural and urban location.

Mozambique has a population of 21 million, including 1.8 million orphans - of these, 420 000 are estimated to be AIDS orphans. Due to the scale and severity of the HIV and AIDS pandemic, this number is constantly increasing. The national adult HIV and AIDS prevalence rate is over 16 percent, with four provinces registering rates above 20 percent. Reducing malnutrition remains a challenge, with chronic malnutrition among children under five as high as 44 percent, and 22 percent of HIV and AIDS patients on anti-retroviral treatment suffering from acute malnutrition.

According to World Health Organisation and UNAIDS[16], in 2007, the estimated adult HIV prevalence is 12.5 percent with rates of over 20 percent in four provinces (*Sofala, Gaza, Inhambane* and *Maputo*) and there are an estimated 1.5 million adults and children living with HIV in Mozambique. The estimated number of HIV-related deaths in 2007 was 81 000, up from 47 000 in 2001.

5.5 Chronic versus transitory food insecurity

Chronic food insecurity is a common situation for many households in the dry and semi-dry areas of Mozambique where the current production failure will be impacting an already precarious situation. Many families simply do not have the capacity to withstand yet another shock. Even during 'normal' times and throughout the year there are households that are never able to meet their food requirements on their own. Such households are chronically food insecure, and require regular assistance. This is found more often among households that support persons that are chronically ill (e.g. HIV and AIDS cases), pregnant and lactating mothers, orphaned and vulnerable children, children under 5 and also other households categorized as 'very poor'.

As demonstrated by Giesbert and Schindler[17] using the 2002 and 2005 panel data from the Trabalho de Inquerito Agricola (TIA) household survey collected in Mozambique[18], overall well-being has declined between 2002 and 2005. Asked to evaluate their economic situation during the survey period, 52 percent of households found their situation to have worsened, while only 18 percent indicated their personal situation to have improved.

According to the same study, exposure to shocks is widespread and the majority of households faced losses in agricultural production during the past season. Drought is the shock with the largest magnitude, impacting three-quarters of sample communities and about 90 percent of households. In addition, drought is reported by households to be the most important reason for losses in crops and, albeit less important, for leaving some plots fallow. In contrast, crop pests and livestock disease occur in an equally large number of communities, but the proportion of affected households is much lower as compared to drought.

Furthermore, the rising inequality across households seems to suggest that a group of households that lack productive assets cannot benefit from improved infrastructure and better access to market.

Mozambique is prone to a wide range of natural hazards such as floods and recurrent drought, and is among those countries most affected by climate change. The reoccurring natural disasters result in major structural damages and stifles economic growth. Over the last decade, on a yearly basis humanitarian assistance has been provided to 200,000 to 800,000 people, depending on the severity of the drought or flood. Disasters in Mozambique have become cyclic and predictable; drought and floods have become a structural rather than a conjuncture problem.

The 2009 CFSVA also found more than 1.1 million households were chronically food insecure. These households are characterised by having 4 persons on average. Only 12 percent are headed by a woman and 20 percent headed by an elderly person, the second highest of all groups. Eleven percent have a disabled member, 5 percent have a chronically ill member and only 4 percent have experienced the recent death of a member. Seventeen percent are hosting orphans. Less than half of these households access drinking water from improved sources, the lowest of all food security groups while only 7 percent have adequate sanitation.

The highest percentage of chronically food insecure households was found in *Tete* (45 percent) and *Zambézia* (45 percent) provinces, followed by *Niassa* (44 percent). The livelihood groups with the highest percentage of chronically food insecure are those that mostly rely on casual labour (43 percent), those relying on a combination of skilled trade and food crop production (41 percent) and those relying mostly on food crop production and sales (39 percent).

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[16] UNAIDS/WHO Epidemiological Fact Sheets on HIV and AIDS, 2008 Update

[17] Assets, Shocks and Poverty Traps in Rural Mozambique, Lena Giesbert, Kati Schindelr, Extended abstract submitted to the International conference on "Poverty Traps: an empirical and theorical assessment", Universita degli studi di Napoli Parthenope, Naples, October 2009.

[18] The TIA is a nationally representative rural household survey, including approximately 4,100 farm households in 80 of the 128 rural districts of the country.

5.6 Population in need of emergency assistance

The overall food security situation is better than originally expected back in March 2010. However, chronically deficit areas are once again in deficit this year and it is expected that many households in the dry and semi-dry areas of Mozambique will face once again serious difficulties to meet their minimum food requirement beyond August.

Food assistance, beyond normal safety-nets programming will be therefore required for some groups, from August through to the next harvest. The situation is expected to worsen for households in affected areas as the season progresses.

Additional assistance may be required for households in the South if the food prices remain high or increase, especially for the poor households who are completely reliant on market purchases to meet their food needs.

Mozambique in 2009 had a record crop production across the country and the food security situation was qualified as stable overall, including in many areas affected by last year's drought. However, the Technical Secretariat for the Food Security and Nutrition Vulnerability Assessment Group (GAV) anticipated that about 250 000 people, especially low-income and resource poor households were to face food access constraints in some areas, particularly those that are semi-arid, arid, and remote. The mission therefore considers that this caseload can be considered as the minimum caseload of people in need of assistance in a "normal" year, i.e. chronic food insecure people. Using these data on chronic food insecurity (2009 VAC) as a reference, the mission considers that as early as August an estimated of **250 000 persons** in the critical districts in the provinces of *Tete, Gaza*, *Inhambane* and *Sofala* are in need of food assistance, until the 2010/11 harvest. An additional **50 000 persons** among poor households in *Maputo, Gaza* and *Inhambane* provinces may require assistance from September until April 2011 if food prices remain high.

The ongoing food security and vulnerability assessment will provide more detailed information on the needs of the affected populations.

6. RECOMMENDATIONS

Because of the chronic nature of the situation described above, where possible, the mission recommends that the emphasis is placed on long term interventions in order to break the cycle of emergency response and develop a more predictable, reliable and structured national response which would allow households, in time of disasters, to protect livelihoods or develop other alternative livelihoods.

While general food distributions might not be required, targeted food assistance to the most vulnerable households is deemed necessary. Relief food assistance should be provided through targeted vulnerable group feeding, community asset creation and agriculture based livelihood support programs. These activities should aim to provide opportunities to rehabilitate livelihoods and strengthen coping mechanisms. The creation, maintenance or rehabilitation of sustainable assets should be envisaged simultaneously with support in meeting the basic needs of the most vulnerable households and marginalised groups.

The Government's Green Revolution Strategy, and the action plan to increase agricultural productivity launched by the Ministry of Agriculture in July 2008, both focus on increasing agricultural productivity. But these initiatives will only be sustainable over the long run if improved technology is financially profitable for farmers.

Greater attention needs to be given to an analysis of the profitability of improved technology for different crops and regions of the country. Given the importance of rainfed agriculture for the majority of households, and the very high costs of irrigation, greater use should be made of conservation farming practices and animal traction.

The mission recommends that the forthcoming VAC assessment further investigates the impacts of the crop failure and price increases at household level, in particular for the most vulnerable groups.

ANNEX 1

Regional food balance sheets

Table 1: Mozambique (Northern Region) - Food balance sheet, April 2010-March 2011

	Maize	Rice (milled) [1/]	Wheat	Sorghum/ Millet	Total Cereals	Cassava
Domestic availability	**913**	**42**	**0**	**221**	**1 176**	**7 643**
Opening stocks	160	2	0	0	162	1 500
Production	753	40	0	221	1 014	6 143
Utilization	**608**	**87**	**55**	**236**	**1 006**	**6 639**
Food use	253	69	55	220	597	2 682
Seed use	12	5	0	3	20	0
Feed use	29	0	0	0	29	0
Other uses/losses	124	4	0	13	141	2 457
Closing stocks	190	9	0	0	219	1 500
Surplus/Deficit	**305**	**-45**	**-55**	**-15**	**170**	**1 004**

Table 2: Mozambique (Central Region) - Food balance sheet, April 2010-March 2011

	Maize	Rice (milled) [1/]	Wheat	Sorghum/ Millet	Total Cereals	Cassava
Domestic availability	**1 162**	**51**	**12**	**206**	**1 431**	**3 174**
Opening stocks	185	5	2	10	202	500
Production	977	46	10	196	1 229	2 674
Utilization	**1 063**	**232**	**158**	**186**	**1 640**	**2 515**
Food use	759	206	155	160	1 280	1 347
Seed use	21	11	0	4	36	0
Feed use	40	0	0	0	40	0
Other uses/losses	114	5	1	12	131	669
Closing stocks	130	11	2	10	153	500
Surplus/Deficit	**98**	**-181**	**-146**	**20**	**-209**	**659**

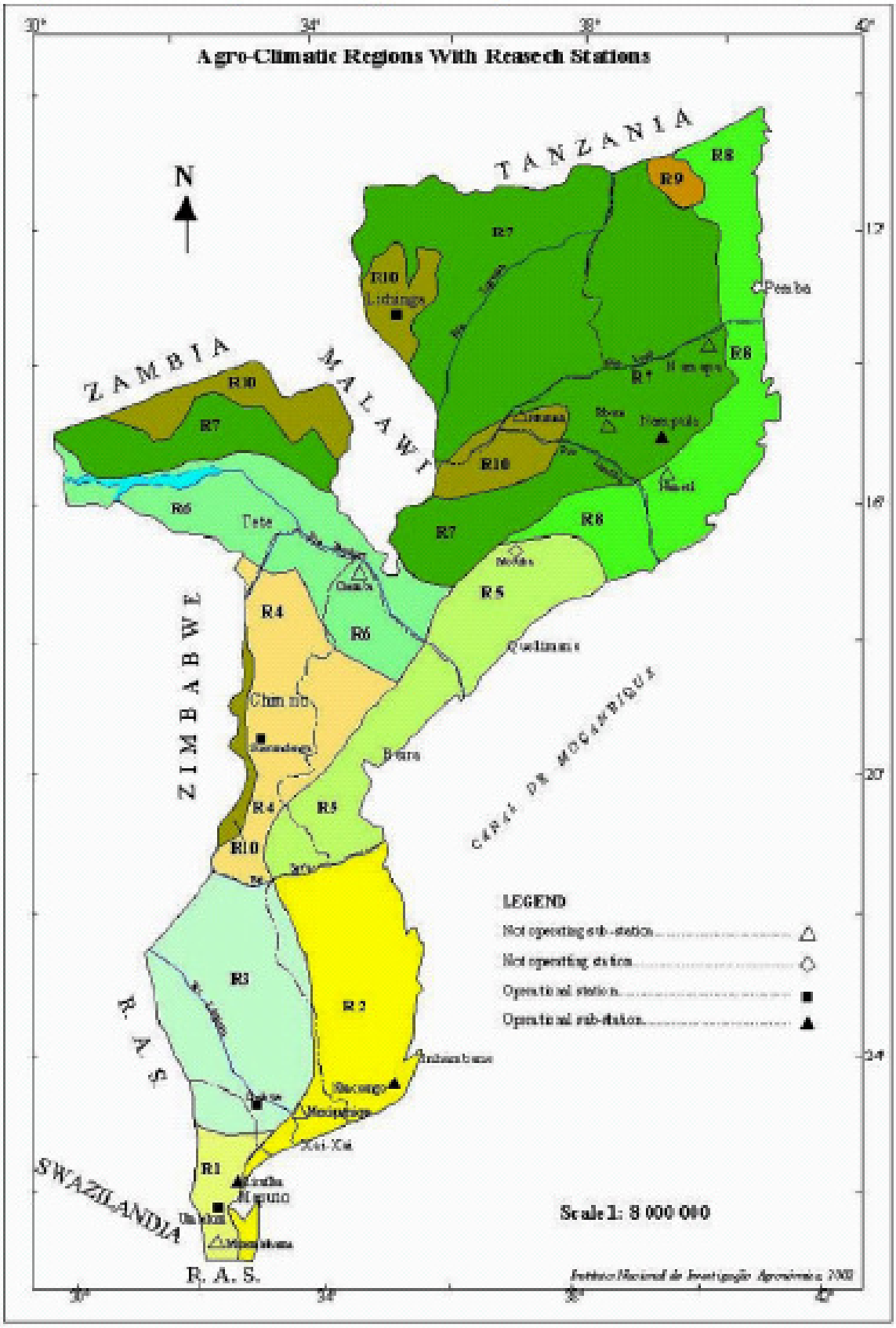
Table 3: Mozambique (Southern Region) - Food balance sheet, April 2010-March 2011

	Maize	Rice (milled) [1/]	Wheat	Sorghum/ Millet	Total cereals	Cassava
Domestic availability	**214**	**67**	**30**	**16**	**326**	**1 160**
Opening stocks	66	33	30	0	128	240
Production	148	34	0	16	198	920
Utilization	**610**	**227**	**189**	**21**	**1 047**	**1 063**
Food use	393	201	159	20	773	685
Seed use	7	2	0	0	9	0
Feed use	91	0	0	0	91	0
Other uses/losses	59	3	0	1	63	138
Closing stocks	60	20	30	0	110	240
Surplus/Deficit	**-397**	**-160**	**-159**	**-5**	**-721**	**97**

[1/] 67 percent of paddy.

ANNEX 2

Agro-ecological Maps



ANNEX 3

Indication of Coping Strategies Index (CSI) 2005-2009