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Forum for Food Security  in Southern Africa

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Consultation Draft

Food security options in Mozambique: one country, two worlds?

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Acronyms

CBNRM	Community-Based Natural Resources Management
CF	Contract Farming
DPCCN	Department for Prevention and Combat of Natural Disasters
ESAN	(Food and Nutrition Security Strategy)
FAO	Food and Agricultural Organisation
FARE	Support fund for Economic Rehabilitation
FC	Market Fund
FEWS	Famine Early Warning System
FFA	Agricultural Development Fund
FFPI	Small Industry Development Fund
GAM	Global Acute Malnutrition
GAPVU	Gabinete de Apoio à População Vulnerável (Office for Assistance to the Vulnerable Population)
ICM	Mozambique Cereals Institute
IMF	International Monetary Fund
INGC	National Disaster Management Institute
INCAJU	National Cashew Institute
INIA	National Institute for Agronomic Investigation
MADER	Ministry of Agriculture and Rural Development
MMCAS	Ministry for Women and Coordination of Social Action
MPF	Ministry of Planning and Finance
MSU	Michigan State University
PARPA	Action Plan for the Reduction of Absolute Poverty (the PRSP)
PESU	Emergency Seeds and Tools Programme
PRA	Rural Action Plan
PRSP	Poverty Reduction Strategy Paper
SESTSAN	Technical Secretariat for Food Security and Nutrition
SIMA	Agricultural Market Information System
SOFI	State of Food Insecurity
t	Ton, metric
UN	United Nations
UNDP	United Nations Development Programme
VAC	Vulnerability Assessment Committee

Map of Mozambique

Preface and acknowledgements

This paper discusses the food security situation in Mozambique over the last twenty years and potential policy options for strengthening food security in the lights of the findings to date of the Forum for Food Security in Southern Africa across the region as a whole. Please send comments to foodsecurity@odi.org.uk

The Forum aims to contribute to analytical and strategic thinking on longer term food security options in Southern Africa following the 2001–03 crisis, by providing a platform for improved linkages between food security analysis, policy making and implementation in the Southern Africa region.

The Forum is a consortium of international and regional institutions committed to achieving food security for all in Southern Africa. To find out more about the work of the Forum for Food Security in Southern Africa, the consortium, or to access full versions of the Forum's Country Issues Papers, Theme Papers, and other information products, visit:

www.odi.org.uk/food-security-forum

This paper and other information produced by the Forum are intended to stimulate informed debate about issues and options for food security policy in the countries of Southern Africa. They do not necessarily represent the views of all Forum consortium members and funders.

We wish to acknowledge our grateful thanks for the contributions made to the work of the Forum for Food Security by colleagues at FANRPAN, and for the contributions to the Mozambique country issues paper http://www.odi.org.uk/Food-Security-Forum/docs/MozCIP.pdf by Kerry Selvester and Maria Adela Castro.

In addition, each Country Food Security Options Paper has benefited from consultations with a wide range of stakeholders in each country and across the region during 2004.

The citation for this paper is:

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www.odi.org.uk/food-security-forum

1. Introduction

In the first half of 2002 it became clear that Southern Africa was at risk of a food and humanitarian crisis. Between February and April 2002 the governments of Lesotho, Malawi, and Zimbabwe declared emergencies, while in Mozambique an emergency plan to combat the effects of drought was begun. Subsequently in July 2002 the UN issued a consolidated appeal for US$611 million to address the crisis in the six countries most affected: Lesotho, Malawi, Mozambique, Swaziland, Zambia and Zimbabwe.

At the height of the crisis, in late 2002 and early 2003, nearly 15 million people, fully 25% of the population of the six countries, were considered food insecure. In response large amounts of additional food were shipped into the region, including food aid provided by donors.

These events prompt three sets of questions, namely:

- What exactly took place during the crisis?
- What were its causes? And,
- What policy lessons are there to be learned to prevent or mitigate similar occurrences in future?

Addressing these questions is the purpose of the Forum for Food Security in Southern Africa (FFSSA). Food security problems in Southern Africa have arisen due to what combination of lack of food, inability to access plentiful food, or food utilisation problems? Why are there such divergent narratives concerning the causes of food insecurity in the region and appropriate policies to strengthen long-term food security? Why has there been a pre-occupation with food production at the expense of other components of food security? Why has the policy process, and the political will and institutions that drive it, not received the attention it deserves?

The Forum has tried to take a broad approach, looking beyond the immediate concerns of emergency relief to embrace longer-run issues, and beyond a narrow focus on food supplies to wider considerations of food security and vulnerability. In particular, the Forum has sought the views of a wide range of stakeholders in each country and across the region, with a particular focus on soliciting the views of civil society.

Annex 1 sets out and discusses various terms and concepts relating to food security and vulnerability used in the publications produced by the Forum.

1.1 Food security in Southern Africa 2001–03

What did happen from 2001 onwards in the region to provoke the crisis seen? The immediate facts are not in doubt. Food supplies faltered owing to harvest failures in some countries in 2001 and in most countries in 2002. Stocks were run down, so food prices soared upwards. The poor would not be able to afford food, and so would go hungry or even starve; they might also fall into destitution – both lives, it was thought, and livelihoods were at risk. Hence the declarations of national emergencies and the organisation of large-scale international relief effort.

In the event, the worst consequences were averted. Deaths were limited, mercifully extremely so. On the face of it, the relief effort succeeded. But did it?

Despite disruptions to the food aid pipeline that eventually meant that no more than three-quarters[1] of the food considered to be necessary was delivered in time, rates of malnutrition did not increase to emergency levels, except in what proved to be isolated locations. People, it seemed, coped better than expected with the crisis. Or perhaps the degree of need was exaggerated. Or a combination of the two.

Two points however are reasonably clear, one well understood amongst the policy community of governments, donors and NGOs in the region; the other less widely appreciated.

First, the crisis was a shock to all concerned: the immediate triggers, the climatic variability in the cropping seasons of 2000–01 and 2001–02, were not that bad and the subsequent harvests were not that poor. In 1991–92 the region had suffered a much harder blow. Yet the current crisis has been more severe than that event. It seems that the population of the region has become more food insecure, probably as a result of a widespread increase in vulnerability to bad weather and economic and social trends. If this is the case, development efforts over the last decade have clearly failed on a considerable and worrying scale.

Second, a look at child nutrition statistics – and it has to be said that the collection and analysis of nutritional data has lagged behind assessments of needs and programming of relief efforts – reveals another dimension to food security in the region. As Table 1 shows, child nutrition is poor in the region, with several countries having rates of stunting similar to that seen in Ethiopia.

[1] No more than 77% of estimated food aid needs had reached beneficiaries by end of March 2003, and probably and perhaps substantially less (MSU 2004).

Table 1. Nutritional status of children under five years of age, by percentages

Country	Survey date	Stunting	Wasting	Underweight
Malawi	2000	49.0	5.5	25.4
Zambia	2001-02	46.8	5.0	28.2
Zimbabwe	1999	26.5	6.4	13.0
Ethiopia	*2000*	*51.2*	*10.7*	*47.1*

Source: Demographic and Health Surveys, most recent years http://www.measuredhs.com/
Notes: Stunting compares height against age; wasting, weight against height; and underweight, weight against age. The percentages record those who had indices more than two standard deviations below the median for the population.

Surveys of the nutrition of adults, however, do not show the same kinds or rates of malnutrition. Indeed, in Southern Africa there appear to be more adults overweight than underweight. There are two interpretations possible of this data: either children suffer from specific conditions of nutrition that are different to those of their elders; or, conditions are deteriorating.[2] The second possibility does not correspond with historical nutrition data: the adults of today were not significantly better nourished when they were five years or younger. That leaves the first proposition.

Could it be that while adults are reasonably well fed, children are not? This is hard to believe: parents, and mothers in particular, take great pains to feed their children. To be sure, there are problems with the energy density of weaning foods, but are they so large? A more likely explanation for the divergence lies in health and sanitation conditions. Young children are much more susceptible to the problems of poor sanitation, contaminated water, and to diseases such as malaria and measles. If this is correct, then there is a continuing, chronic problem – perhaps a crisis – of child health in the region.

One of the major implications of the evidence accumulated by the Forum for Food Security, as we shall explain in more detail later, has been that the 2001–03 crisis in Southern Africa was a manifestation of an *expansion in food insecurity,* not temporary hunger of the kind traditionally addressed by international humanitarian response. Around 8 million individuals across the countries of Southern Africa are food insecure year in year out (CARE SWARMU, 2003). For many other households, however, food insecurity can occur when they are unable to cope with a particular hazard or combination of hazards. It is this latter group that appeared to be expanding significantly during 2001–03, as a result of localised climatic events *in combination with* longer-term economic trends and the HIV/AIDS epidemic: in Southern Africa

[2] Yes, child nutrition statistics in Southern Africa have worsened of late – but since 1998 or so. For much of the 1990s there was improvement in these statistics, albeit slow improvement. **UNICEF Nutrition Fact Sheet June 2004**
at: http://www.reliefweb.int/w/rwb.nsf/0/d85614da7e2f75fbc1256ee4004bb76f?OpenDocument

as a whole, by late 2002 doubling the number of food insecure people to approaching16 million.

Current thinking suggests that the root causes of food insecurity lie in poverty (lack of social capital as well as physical assets) and negative physical, economic and social trends, rather than in unpredictable shocks. Failure to access food, because of lack of income or access to social welfare as well as problems with own-account production, and to utilize it effectively, are major problems over and above harvest shortfalls. The negative influence of vulnerability on households' livelihood decisions is increasingly recognised: persistent vulnerability can produce extreme risk aversity (seen, for example, in high levels of livelihood diversification amongst poor people) and sale of assets. These may allow households to cope over the short term, as they did in Southern Africa in 2001–03, but jeopardise investment by the household for the longer term. These problems occur at the level of individuals and households and persist regardless of the availability of food at national level.

Better policies and stronger and better governed institutions have a major role to play in strengthening access to food. Strengthening food security is likely to be achieved only through a combination of production, market, and consumption-based interventions: a long-term commitment to social protection for those who are unable to feed themselves, and more productive agriculture for subsistence, and more efficiently functioning markets. Not only responding to temporary hunger, which can conflict with effectively addressing high levels of food insecurity over the longer term. Food insecurity – and the fear this induces – can be a major determinant of coping strategies, producing a downward spiral for affected households. The necessary public policy response is to attempt to address the underlying factors contributing to the risk of food insecurity.

1.2 Food security policy arena

All this implies that strengthening food security in Southern Africa requires action across a broad front. Figure 1 shows how the Forum has conceptualized the policy arena for strengthening food security. A number of points are worth emphasising:

- this scheme promotes equal attention to the three components of food security;
- it shows the importance of longer-term policy options as well as short-term response to food crises, as may apply widely across Southern Africa;
- it shows clearly the wide range of policies that can have a significant impact on components of food security. Many of these policies may have primary objectives unrelated to strengthening food security, and yet impact on a number of components.

A full discussion of this conceptualization is included in the Forum *Synthesis Paper* (FFSSA, 2004).

We have used this conceptualization as the basis for highlighting potential policy options for strengthening food security within selected countries in Southern Africa and across the region as a whole. Appropriate policy objectives and activities will, of course, vary significantly between countries according to underlying causes: our analysis for Lesotho, Malawi, Mozambique, Zambia and Zimbabwe is presented in these Country Food Security Options Papers.

Figure 1. Policies affecting food security

Source: FFSSA (2004).

1.3 FFSSA Country Food Security Options Papers

The purpose of these Country Food Security Options Papers is to discuss food security in particular countries of Southern Africa over the last twenty years or so; and, based on this, to identify public policy options for

strengthening food security in the light of emerging findings across Southern Africa as a whole.

The Papers are *not* intended to be prescriptive. Rather, they are intended to make observations for consideration by policy-makers, drawing on the best of the considerable good practice in the Southern Africa region and internationally, and the views of civil society. The Papers have benefited from contributions from a wide range of stakeholders in each country and across the region during 2004. A number of countries in the region have put in place mechanisms for conducting thorough reviews and overhaul of policies for supporting food security, and a number will be re-examining policy in connection with mid-term PRSP reviews in the immediate future. Both these provide ideal opportunities for standing back and re-assessing what we know about food security and how better food security can be strengthened by effective public policy in the future.

The papers follow a common format. Following this Introduction, Chapter 2 provides a historical perspective on the food security situation within the country, presenting information on food availability, access and utilisation going back two decades where data permit, to put in context the events of and response to the 2001–03 crisis. In particular, we have attempted to identify key factors which appear to affect food availability, access, and utilisation in each country. These vary significantly between countries and thus critically influence appropriate policy response.

Chapters 3 and 4 set out the main components of the policy response to food insecurity over the last twenty years and in response to the 2001-03 crisis and the events that have contributed to the outcomes seen. These Chapters also discuss aspects of how policy affecting food security has been made, because issues to do with political will and implementation capacity are critical determinants of policy response.

The final Chapter 5 concludes with observations on the policy response to date, commenting on fit of response to the identified key factors affecting food security in each country, and on policy implementation issues, including discussion of the similarities and contrasts between the specific case and other countries in the region. Chapter 5 draws on the findings to date of the Forum for Food Security to make observations about potential policy options in each country for strengthening long-term food security.

2. Food Security in Mozambique

Mozambique differs from its neighbours in that it is a coastal country, with few areas more than 100 km from the sea. It is also a country still recovering from the effects of the bitter strife from the early 1980s until the 1990s; that left a legacy of poor physical infrastructure, and low levels of government services.

Unlike most of its neighbours, however, Mozambique has seen rapid economic growth over the last ten years in response to peace – albeit from a very low baseline. That said, there is a question over whether this growth can be sustained over and above the repair of war damage, and whether the growth will translate into jobs and incomes for the majority.

Mozambique may have been the least affected country by the regional crisis of 2001–03, although its problems began earlier than most. In 2000, flooding displaced 380,000 people in the south and central regions, out of the country's total population of around 18.6 million, prompting the Government to declare a state of emergency. Poor rains in the subsequent 2001–02 and 2002–03 seasons led to estimates of yearly needs for food aid for roughly 600,000 people, only partially met. Rains, though erratic, improved for the 2003–04 season, with significant increases in food production and reductions in food prices. Over 100,000 people, however, still needed aid.[5]

2.1 Food Security Indicators

Table 2 suggests that the absolute number and proportion of the population undernourished increased greatly from 1979–81 to 1990–92, during the war years. Subsequently the proportion has fallen, but the absolute numbers at the end of the 1990s remained the same as at the beginning of the decade. With more than half the population inadequately fed, the country faces a serious problem of hunger.

Table 2. Person undernourished, Mozambique, 1979–81 to 1999–2001

	1979-81**	1990-92*	1995-97**	1999-01*
Numbers undernourished, millions	6.65	9.7	10.3	9.7
Proportion	55	69	62	53

Source: FAO data from *SOFI 2003; **SOFI 2006

The most recent Demographic & Health Survey in 1997 shows poor nutrition for children. Over 35% of young children were stunted in the late 1990s, the result of long-term malnutrition. Moderate and severe levels of wasting, indicating short-term distress, at 8% were very high. More than one quarter of under-three's suffer a combination of these forms of malnutrition and were

[5] www.fews.net

[6] http://www.fao.org/docrep/006/j0083e/j0083e06.htm#P1_6

underweight. Smaller surveys carried out more recently suggest that these levels have not declined in many provinces.

Table 3. Child Nutrition

	1997 Children under 3	2002
Underweight (low weight for age)	26.1%	
Stunted (low height for age)	35.9% (39% Rural, 24% Urban,)****	38***
Wasted (low weight for height)	8%	6.4**

Sources: **VAC (2003)7; ***Bias and Donovan (2003); ****Garrett and Ruel (1999: 1970); 1997 data from DHS

In 1997, although food insecurity levels were roughly equal in rural and urban areas, child malnutrition was worse in rural areas, possibly owing to lower income and maternal education in rural areas (Garrett & Ruel 1999) (more recent figures are awaited).

Health conditions are poor. Estimates for 2002 show infant mortality and under-five mortality are 128 and 205 deaths per 1,000 live births, respectively.[8] Estimates of access to health services range from 30% to 62%, and access to safe water is estimated at around 50%.[9] Most health and sanitation resources are concentrated in provincial capitals.[10]

2.2 Food Availability

2.2.1 Food production

In recent years, the average energy value of the food available in Mozambique has been more than 2,000 kcal a day a person; an amount that has been rising gradually since the late 1990s, see Table 4.

Table 4. Per-capita Availability of Food (in kilocalories)

	1997	1998	1999	2000	2001	2002
Total	1,910	1,935	1,960	1,988	2,033	2,079
Cereals	771	766	822	844	828	862
Roots and Tubers	723	729	679	668	662	719

Source: FAOSTAT

[7] The VAC data is based surveys of selected areas, and did not cover Zambezia, Cabo Delgado, Nampula, and Niassa Provinces.

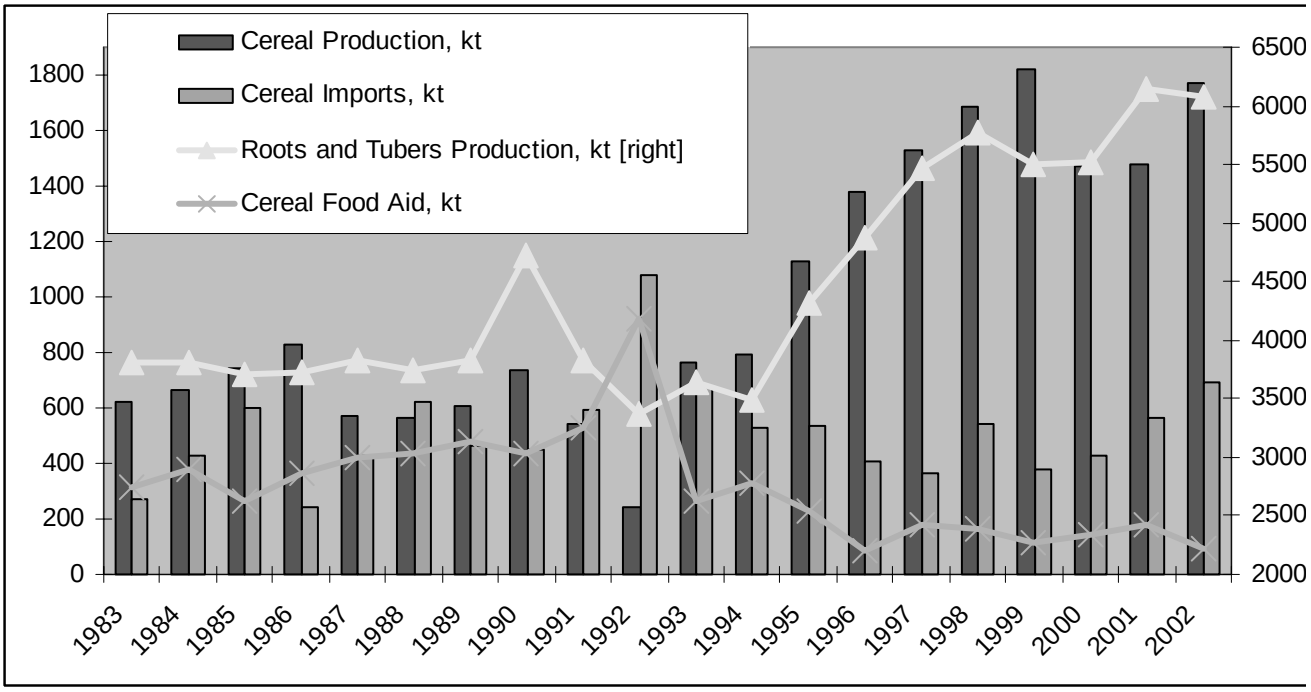
[8] http://devdata.worldbank.org/external/CPProfile.asp?CCODE=MOZ&PTYPE=CP

[9] http://www.usaid.gov/pubs/bj2001/afr/mz/, http://www.worldvision.org/worldvision/projects.nsf/0/0c81d5e057ab6443882569920007042 5?OpenDocument, http://www.fao.org/es/ESN/nutrition/moz-e.stm, http://www.sarpn.org.za/RegionalViews/mozambique.php

[10] WHO, (2004) Global Tb Report, p. 86, http://www.who.int/tb/publications/global_report/2004/en/Mozambique.pdf

The main part of energy available comes from cereals – with maize prominent, and from roots and tubers – mainly cassava.

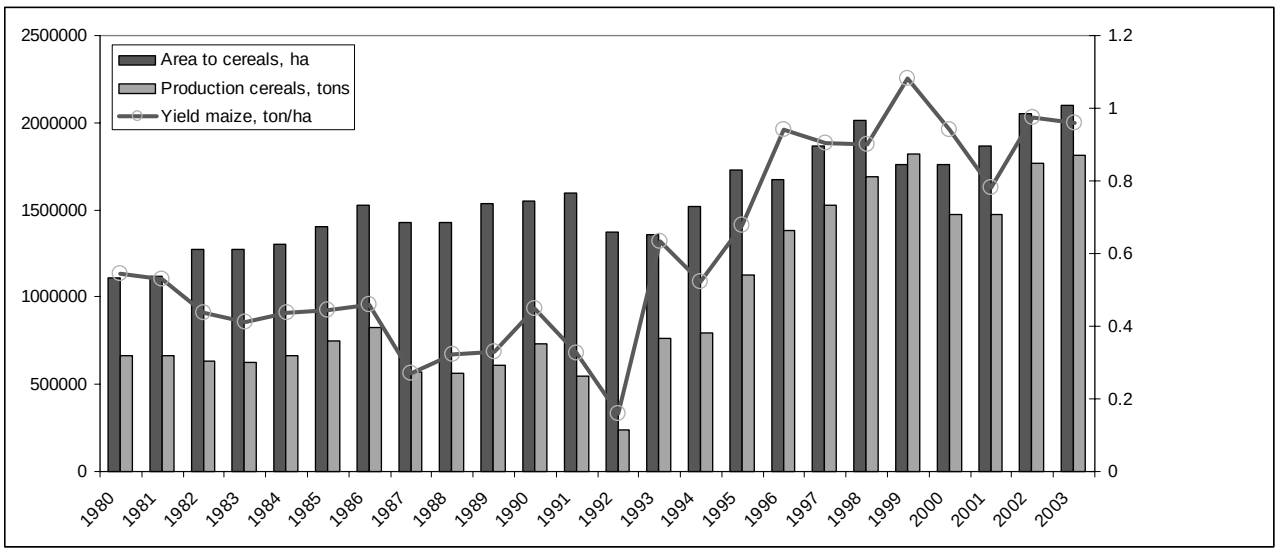
Figure 2. Staple food production and imports, Mozambique, 1983–2002



Source: FAOSTAT

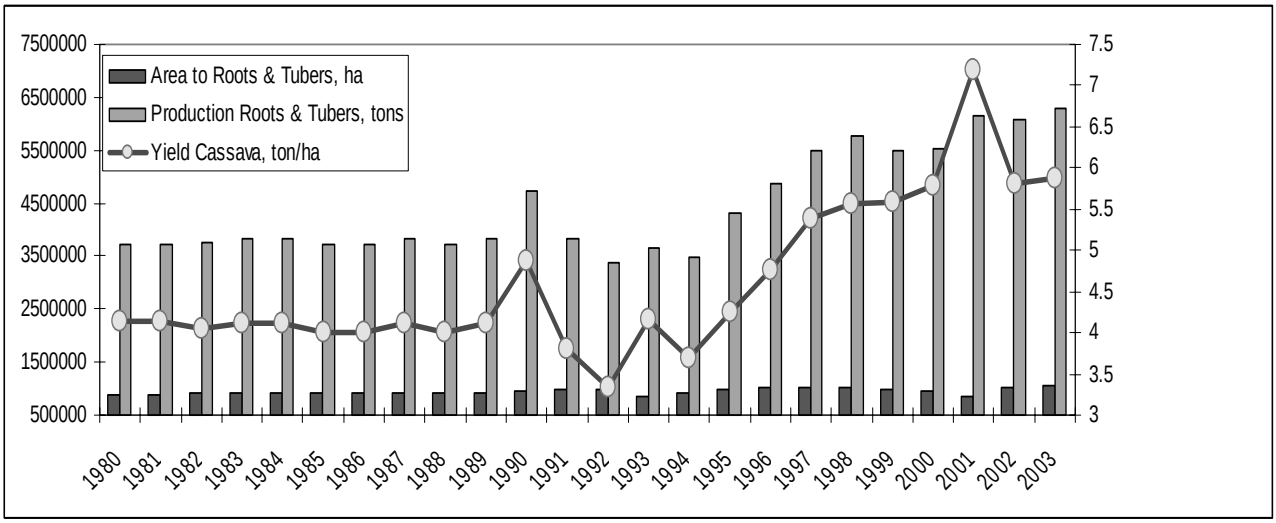
From Figure 2, we can see that during the war years, food production was limited and stagnant, with large quantities of cereals imported every year, including major shipments of food aid. Since the cease-fire of 1992, production of cereals has more than doubled, and that of roots and tubers has increased by two-thirds. Cereals imports, however, continue to be an important source of food, but the food aid shipments fell considerably, from hundreds of thousands of tons, to tens of thousands of tons a year.

Figure 3. Production of cereals, Mozambique, 1980–2003



Source: FAOSTAT

Figure 4. Production of roots and tubers, Mozambique, 1980–2003



Source: FAOSTAT

As can be seen in Figures 3. and 4., most of the increase in production of staples, both cereals and roots and tubers seen since the early 1990s can be attributed in the main to increases in yields of the main products concerned, maize for cereals, and cassava amongst the roots and tubers. There has been an expansion of the area to cereals as well, but yields have played a larger part in raising production overall.

The pattern of food production varies considerably by region. Northern provinces usually produce net food surpluses, while southern and central provinces experience a net deficit – as shown in Table 5 and Figure 5.

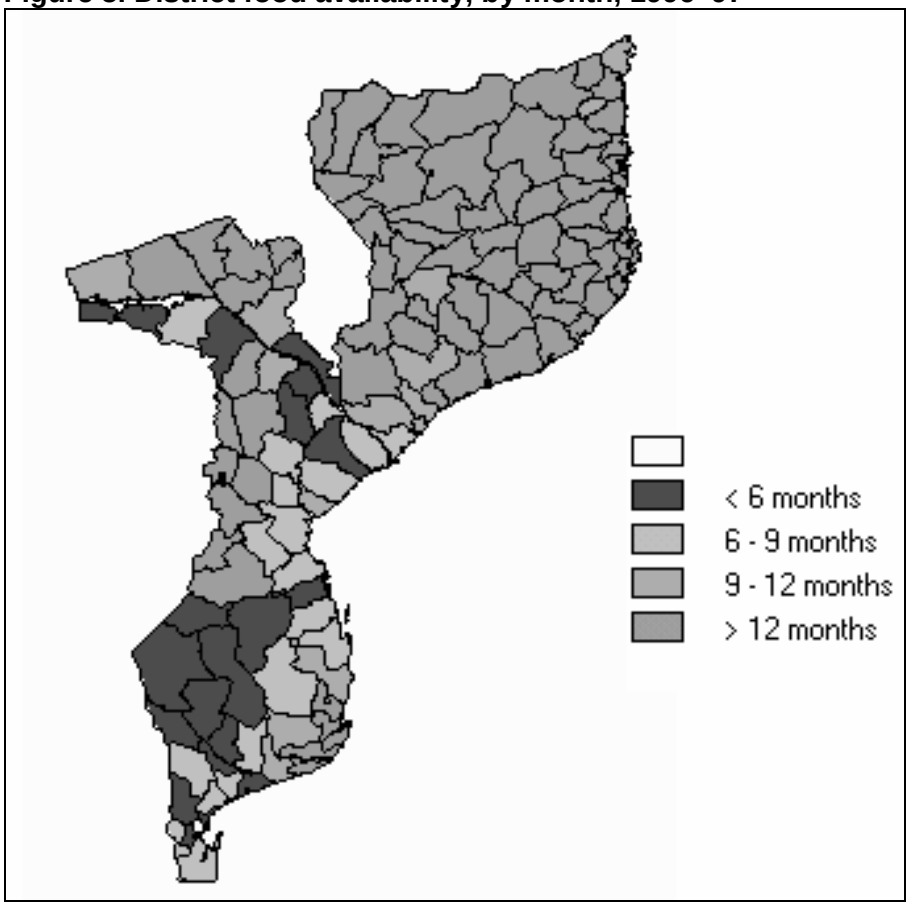
Table 5. Projected Regional Cereal Balance for 2004–05

	South	Centre	North
Total Availability, 000 tons	298	715	1124
Consumption, 000 tons	865	936	766
Deficit/Surplus, 000 tons	-567	-222	358
Deficit/Surplus (2002–03)*, 000 tons	-612	Not Available	273

Source: Ministry of Industry and Commerce/ National Directorate of Commerce, 2004; *Bias and Donovan (2003: 4).[11]

[11] After an unpublished memo from the Ministry of Commerce and Tourism

Figure 5. District food availability, by month, 1996–97



Source: IVAMG (1998)
Note: This image has been calculated from 1996/97 production and population figures based on 80% kcal needs from crop sector and 20% kcal needs from other sources. Note production is converted into kcal for all crops and then divided by the total population to arrive at the number of months.
IVAMG, 1998, Vulnerability assessment Mozambique 1997/98, Inter-Sectoral Vulnerability Assessment and Mapping Group, Maputo March 1998

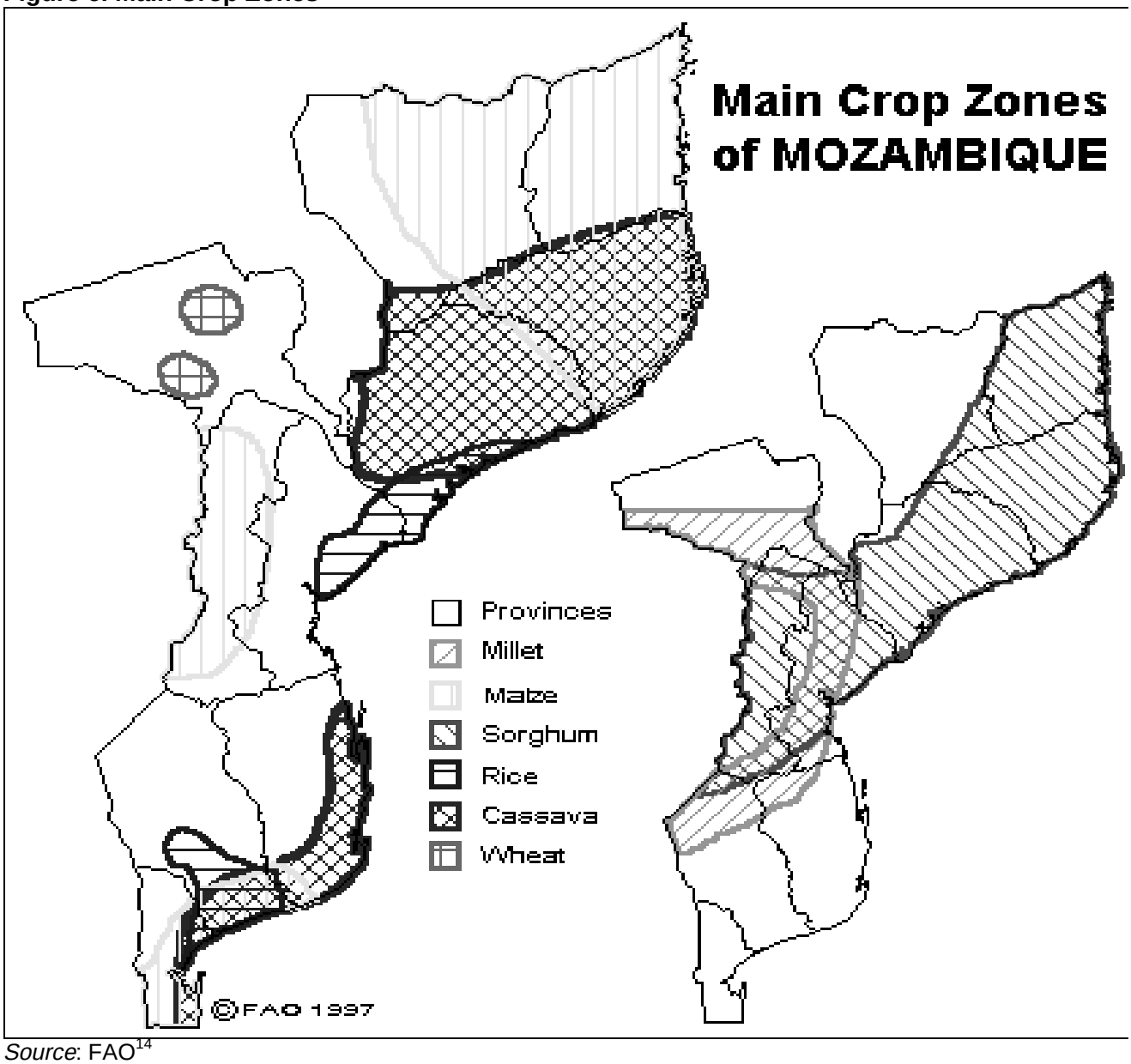
Agriculture is seasonal, the main crop season running from October-November through to May-June. From January onwards a 'hungry season' marked by high prices for food sets in, that ends with the harvest after which prices fall substantially.[12] (for more on food prices, see Section 2.2.5) During the winter season that runs July to August–September), farmers use lowlands near rivers and lakes to grow other crops, such as sweet potatoes, onions, tomatoes, pumpkins, watermelons, cabbage, lettuce and maize.

Some farming systems in Mozambique are relatively diversified, above all those that combine cereals and root crops, see Figure 6. Significantly,

[12] See SIMA's monthly market bulletins at: http://www.aec.msu.edu/agecon/fs2/mozambique/monthlybulletin.htm.

however, the poorer and vulnerable Provinces of Tete, Manica and Sofala appear to be focusing production heavily on maize, and less on cassava.[13]

Figure 6. Main Crop Zones



Source: FAO[14]

Soil fertility does not seem to be as big an issue as in other countries in the sub-region.[15] Mozambique has moderately fertile soils, less so in the south where soils tend to be sandy.

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[13] FEWSNET (2004) *Mozambique Food Security Update* 24 June, p. 3 , http://www.fews.net/centers/current/monthlies/report/?f=mz&m=1001180&l=en

[14] http://www.fao.org/giews/english/basedocs/moz/mozcul1e.stm

[15] Though Bias and Donovan (2003: 74) state 'Inadequate soil fertility is one of the major biophysical crop production and yield constraints in Mozambique', they provide no supporting evidence besides low yields, which may be due to any number of factors.

Malaria is a severe constraint on labour (VAC 2003). The leading cause of morbidity and mortality, it is endemic throughout most of Mozambique, with more than 200,000 cases per Province throughout the country in 2002 (except Niassa) and more than 500,000 cases in Gaza, Zambezia and Nampula (ie affecting over 15% of the population every year). This represents a significant increase across the country since 1999 (Queface , n.d.) . Malaria increased after the floods in 2000 (Chilundo, Sundby, & Aanestad 2004; Sidley 2000).

National HIV prevalence is estimated at 13%, somewhat lower than other countries in the area, but prevalence is greater in the central region at 21%. HIV incidence ranges from 26.5% in the coastal trading city of Sofala, to 7.5% in Cabo Delgado Province. Mather et al. (2004) suggest that the production effects of adult mortality are generally not as great as claimed by the more general literature. As Selvester and Castro (2004: 17) point out, households have long had to cope with labour shortages due to migration and war.

2.2.2 Stocks and Storage

Government intends to operate 'a food reserve that is adequate for ensuring the distribution of food in the event of sudden and unexpected natural disasters – cyclones, floods, earthquakes etc. – when there is a need for rapid distribution of food aid and local or imported supplies cannot be obtained quickly' (Ministry of Planning and Finance 1998: 10); but this has never been implemented Costs and low capacity probably make such a reserve unjustifiable (Tickner 1998), particularly given Mozambique's good access to international and regional imports through its ports and road links to South Africa.

ICM, the previous maize-marketing parastatal, retains warehouses, which it leases to the private sector. Many of its rural stores were damaged during the war, and had a low capacity anyway (Bias and Donovan 2003). Previous policies included pan-territorial pricing that may have weakened incentives for storage, although the reach of these policies was limited and ended more than a decade ago.

2.2.3 Commercial import, exports and food aid

Commercial imports are most relevant for the food deficit southern and central provinces. Formal imports have totalled between 300,000 and 500,000 tonnes over the last decade, or about 20% of total cereals availability In the past the main source of imports has been international supplies, often food aid. Since the end of the war, an increasing fraction of imports have come from neighbouring countries, above all South Africa and Zimbabwe – although supplies from the latter have been virtually nil since 2001 due to the supply constraints there.

Official data on imports is likely to underestimate food trade, owing to unrecorded informal trade with neighbouring countries. Macamo's (1999: 47) survey, for instance, found US$135 million worth of un-recorded informal

cross-border trade, with Mozambique a net importer of agricultural goods by US$33 million.

Given the diversity of Mozambique and its size, the North of the country often has a net surplus of cereals. For lack of cheap transport, it is not economic to ship this south to the deficit areas. Instead, this surplus is often sold to Malawi, much of it by small traders. The amounts involved can be substantial – from 50,000 to 200,000 tons, depending on demand in Malawi. When prices are attractive in Malawi, farm households in the North often sell their maize, and rely for their own consumption on cassava and sweet potato. (Whiteside 2002, 2003)

During the civil war, food aid provided around 30% of Mozambique's cereal needs. Food aid levels have declined greatly since then, but were significant following the floods and droughts around 2000.

In the early 1990s, in-kind food aid was found to stimulate small-scale milling and informal marketing, but depressed incentives to invest in maize production and marketing (Tschirley, Donovan, & Weber 1996). This analysis was based on SIMA price data for Maputo from 1990 to 1995, as well as trader interviews and available data on other provinces throughout the country.

2.2.4 Food Markets and Prices

Trade of all kinds was hampered by the war, which disrupted transport and production, and involved emergency grain provisions. Socialist marketing policies also restricted prices and traders, although there was a large proportion of marketed produce which the state did not control. The combined result is that trade remains undeveloped, and NGOs often provide the links between traders and farmer associations (Bias and Donovan 2003: 78-84). Based on 1996 data, Bias and Donovan (2003: 11) note: 'Although 80% of the poor and very poor grow maize in Mozambique, only 8% of them participate in the selling of maize.'. Between 20,000 and 70,000 tonnes of rice are imported from Asia annually, competing with that from the main rice production areas of lowland Zambézia.[16]

Food trade is poorly integrated between South and North, with the South, above all the cities of Maputo and Beira, integrated with Swaziland and South Africa,[17] and the North trading to Malawi and Zimbabwe (Arndt, Schiller, & Tarp 2001). Each year, as stocks run out in the South, maize and other crops are sourced by traders from farther away (de Vletter and Polana 2001).

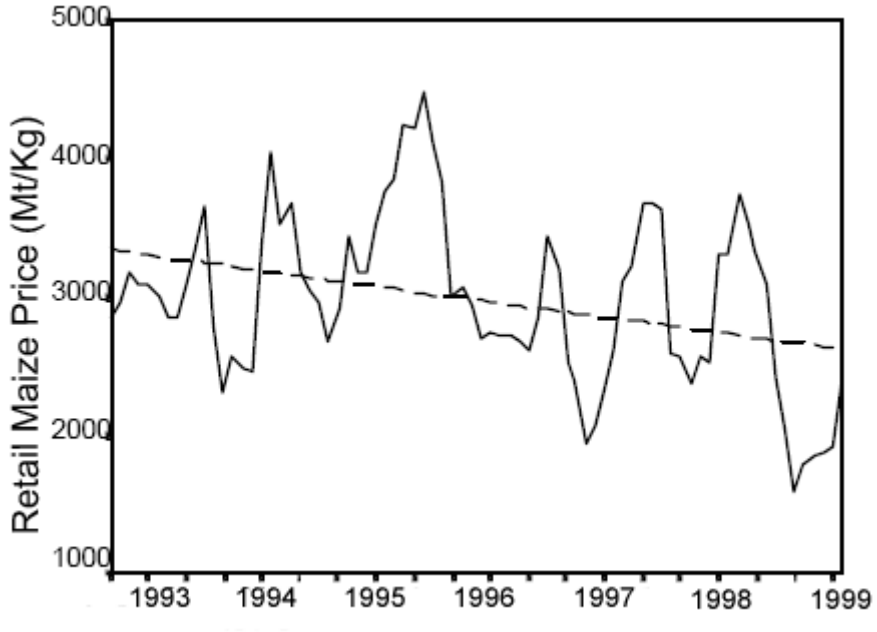
Maize prices peak seasonally around December or January, and bottom out in June following the harvest. Seasonal and inter-annual maize price

[16] According to FAOSTAT, rice imports vary annually and arrive mainly from India, Thailand China and Vietnam. See also FAO's RICEINFO database at http://www.fao.org/ag/AGP/AGPC/doc/riceinfo/AFRICA/Mozambique.HTM

[17] http://www.portmaputo.com/corridor/

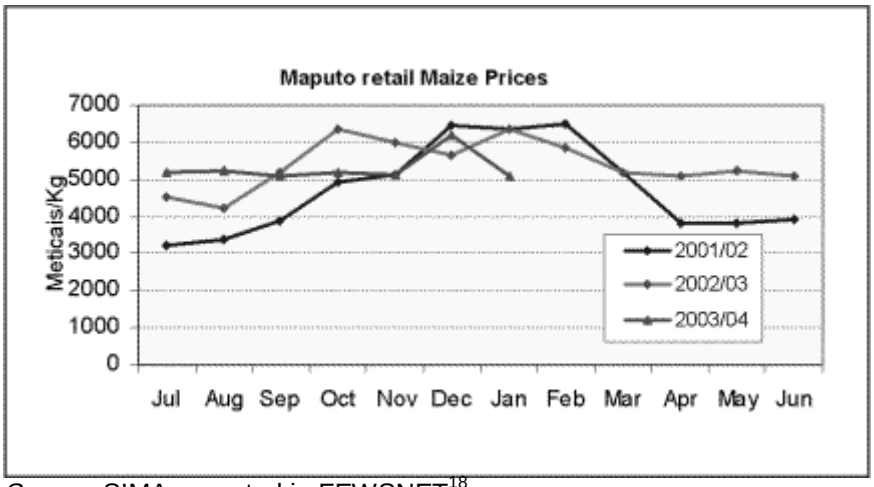
fluctuations have been dramatic – up to 200% – since liberalisation, see Figure 7 below. However, seasonal fluctuations may be weakening over the past few years, at least in Maputo. As Figure 8 shows, prices peaked by about 100% in 2001/02, and by 'only' about 50% the year after.

Figure 7. Fluctuations in Retail Maize Prices in Maputo, 1993–1998
[at constant prices]



Source: Santos et al. (1999: 4)

Figure 8. Recent Retail Maize Prices in Maputo



Source: SIMA, reported in FEWSNET[18]

[18] FEWSNET (2004) 'Rains Improve; Deficits Persist', *Mozambique Monthly Report*, 27 February, http://www.fews.net/centers/current/monthlies/report/?f=mz&m=1001180&l=en

2.3 Access to Food

For many rural Mozambicans, access to staple foods is largely from home production. Access to land should not be a problem given the country's relatively low population density: indeed, only about 11% of potentially cultivable land is used, 4.5M ha out of the 47M ha potentially available.[19] Notwithstanding, some people are nonetheless land-poor due to differences in social power and consequent ability to obtain land (Francisco de Marrule 1998; Gengenbach 1998; Strasberg & Kloeck-Jenson 2002).[20]

Women's rights to land are an issue (Bonate 2003). Northern Mozambique, like parts of southern and central Malawi, is characterized by matrilocal inheritance, in which land is passed through the mother's line (Pitcher 1996). The south, however, is patrilocal, and it is in the south and centre where most de-facto female-headed households are concentrated, owing to migration by men.

Access to food, beyond what families produce themselves, can come through income from cash crops (cotton, cashews, and others), employment and petty trading, as well as from formal and informal social protection.

Nationally, it is reported that people in urban areas on average purchase 83% of their food, compared to 30% in rural areas (Garrett and Ruel 1999: 1960).

2.3.1 Poverty, vulnerability and coping strategies

Mozambique has near the lowest human development in the world (UNDP 2003). Life expectancy is roughly 40 years, about a quarter of children are underweight, and literacy is below 50%.

1996 survey data showed 70% of the population lived on incomes below the national poverty line of US$0.40 per day. The recent 2003 national survey showed poverty had declined significantly to 54%, and furthermore 'the average consumption levels of those remaining below the poverty line has increased in real terms' (National Directorate 2004: 18).[21] Whether such reductions can be sustained, or were simply a peace windfall, remains to be seen.

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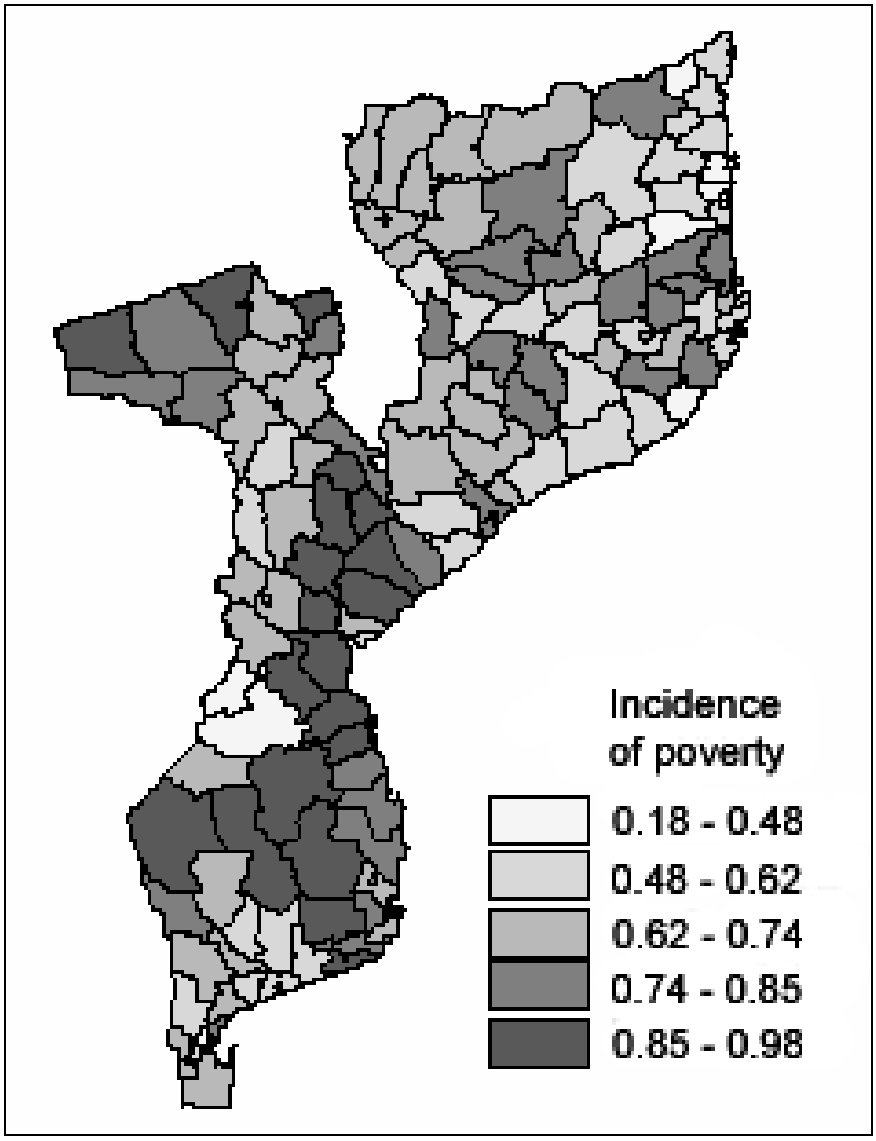
[19] Though World Bank (1999) states 15%, and MPF states 40% ('Memo on Mozambique's Agricultural Sector Policy and Strategies', p. 2, in World Bank 1999: Annex 11).

[20] Other studies are pertinent (Hanlon 2002;Norfolk et al. 2003;Norfolk & Liversage 2002;Norfolk, Nhantumbo, & Perira 2003).

[21] This figure depends on the method used – 'Fixed bundle' poverty measurements show rates at 63.2%.

Figure 9. Incidence of poverty, 1996, by percentage of households



Regionally, in 1996, poverty incidence was greatest in the southern and central provinces, see Figure 9 perhaps related to poorer land and fewer jobs, and the significant decline in remittance income seen in recent years

The greatest poverty reductions since 1996 have been seen in Sofala (52% decline), Zambézia (24%), Tete (23%), Manica (19%); Niassa (19%), and Nampula (16%) (National Directorate of Planning and Budget et al. 2004: iii, 40).[22] Poverty percentages seem to have increased around Maputo, and in Cabo Delgado. In absolute numbers, the greatest numbers of poor are in Nampula, Zambézia, and Inhambane Provinces, together accounting for around 4.8 million poor people.

Comparing population distribution and the 1996 poverty maps, shows concentrations are in central Manica and Sofala provinces, south-eastern

[22] Data Sources: SOFI 2003, IFPRI Mapping, MSU-MADER data, WB WDI, UN HDR, FAOSTAT

Inhambane, eastern Tete, Nampula, and northern Zambezia. However, poverty distributions appear to have changed significantly by 2003.

A third of Mozambique's 18.6 million or so people live in urban areas, and two thirds in rural areas. Vulnerable groups in urban areas are those without employment or those relying on casual labour, and those with few social support networks. In rural areas, children, elderly, those and those in remote, unfavourable agro-ecological zones are most vulnerable.

Poverty and vulnerability are higher in rural areas, see Table 6, and in the south-centre and north-west of the country (see Figure 9) (Simler et al. 2001). Poverty incidence has generally declined in urban areas, with the exception of Maputo. Compared to 1996, residents of Maputo spent more in 2003 on non-food items, but it is difficult to tell whether this is owing to increased expenses or greater income.

Table 6. Poverty and Food Security

	Poverty (2000/1)		Food Insecurity (1996)	
	Incidence (%)*	Number (Millions)	Incidence (%)**	Number (Millions)
Urban	51	3	67	3
Rural	64	8	64	8

Sources: *National Directorate (2004)[23]; **Garrett and Ruel (1999)

Rural coping strategies include gathering wild fruits, hunting, fishing, brewing alcoholic beverages, daily labour, selling charcoal and firewood, selling off livestock.

In urban areas, people cope by forming 'associations in order to use the low land for sweet potatoes production and horticulture. In addition the sale of chickens, brewing traditional beverages, sale of firewood and charcoal, casual labour, remittances coming from South Africa or internally (urban centre), gifts, and decreasing the numbers of meals from two to one a day..' (VAC 2003)

2.3.2 Cash Crop Production

Cash crops are an important source of income for some rural households, as well as creating jobs both for farm labourers and for those processing and marketing produce. Incomes from crop production increased in real terms by 27% between 1996 and 2002 (National Directorate et al 2004: iv). But this may represent a post-war recovery, rather than a sustained trend.

Interestingly, agro-industry investment has moved from cotton and tobacco (1985-1990) to include maize, cashew, and more recently sugar and some tea (Benfica, Tschirley, & Sambo 2002). It now represents more than half of rural investment, having increased several times over since the 1980s.

[23] Reductions listed are with flexible bundle approaches. The dramatic reductions in Sofala are partly attributable to the fact that the 1996 survey occurred after a flood and during peak maize prices.

Table 7. Provincial Cash Crop Production

Province	Crop
Maputo	maize, sugar, cashew
Nampula	maize, cotton, cashew
Sofala	maize
Zambézia	cotton, tea
Gaza/Inhambane	cashew
Cabo Delgado	cotton

Source: Benfica et al (2002)

Out of an economically active agricultural population of 7.5 million, 230,000 (3%) are **cotton** producers (FAOSTAT; Tschirley et al 2004).[24] Cotton is concentrated in the North: over half national production is from Nampula, and over 20% from Cabo Delgado (Ofiço & Tschirley 2003).

Cashews have good poverty reduction potential, since their labour demands are complementary to food production. About 40% of smallholders have cashew trees (Donovan and Bias 2003: 18), and, in northern Mozambique at least, cashew trees and income are reported to be owned separately by men and women (Pitcher 1996). Roughly 95% of cashews are grown by smallholders, with 80% of production coming from Nampula province.

Mozambique was once a leader in cashew processing and exports: production peaked in 1973 at 250,000 tonnes. But it declined during the war. Production has picked up somewhat since then, but has been countered by falling international prices for raw cashews. Roughly a million trees are reported to die each year from powdery mildew. Subsidised fungicides have reached only approximately 10% of households, often with poor extension (Kanji et al. 2004). Subsidised improved seedlings have also suffered from poor extension. The National Cashew Institute has only replanted 100,000 trees in the past four years.

Other rising export crops include **sugar, sunflower, sesame, ginger** and **paprika**. Sugar is said to not have great potential to alleviate poverty and food insecurity – Mozambican companies have so far appeared to prefer large growers with access to capital (Marini 2001). Other crops may have potential for contract schemes.

Fishing provides export revenue, important sources of protein, and livelihoods to those on the coast and in port cities (though job estimates couldn't be found). Prawns from the coastal Sofala Bank are Mozambique's most valuable export (going mostly to the EU), worth US$67 million in 2003.[25]

[24] "that part of the economically active population engaged in or seeking work in agriculture, hunting, fishing or forestry" (FAO).

[25] http://europa.eu.int/comm/food/fs/inspections/vi/reports/mozambic/vi_rep_moza_3332-2001_en.pdf; http://r0.unctad.org/trade_env/test1/meetings/standards/mozambique.doc; (2004) 'Too Many Boats Fishing For Prawns', *Agencia de Informacao de Mocambique* 27 August.

2.4 Food Utilisation

Worldwide, of all the underlying variables contributing to reduction in child malnutrition, good health environment and women's education have been estimated to account for a nearly 65% share (Runge et al, 2003). There are few studies on the links between, health, education and nutrition in Mozambique.

Available studies from IFPRI suggest that education is important. Handa et al. (2004) find that in rural areas, maternal literacy is strongly associated with less stunting. Garrett and Ruel (1999) attribute the stunting differences between rural and urban children under 2 years to differing levels of maternal education.

Looking at the very high levels of child mortality – Mozambique's wretched statistic of more than one in five children dead before their fifth birthday is only surpassed in parts of the Sahel and coastal West Africa, and strife-ridden Afghanistan and Somalia – it may well be that child malnutrition owes much to disease vectors and poor sanitation.

Micro-nutrient malnutrition is also common. Vitamin A deficiency and anaemia are common throughout the country, while iodine deficiency is most prevalent in the centre and the north. Vitamin C deficiencies are concentrated in the southern interior (Bias & Donovan 2003: 7-8).

2.5 Conclusions

Figure 10 below summarises the major factors affecting food security in Mozambique

According to the available data, adequate food is available within Mozambique, from domestic production which has expanded significantly since the ceasefire, and from imports, although there is a marked North-South divide, with production being concentrated in the North, while in the more sparsely populated South production is lower and more erratic, since the soils are poorer and climatic variability greater.

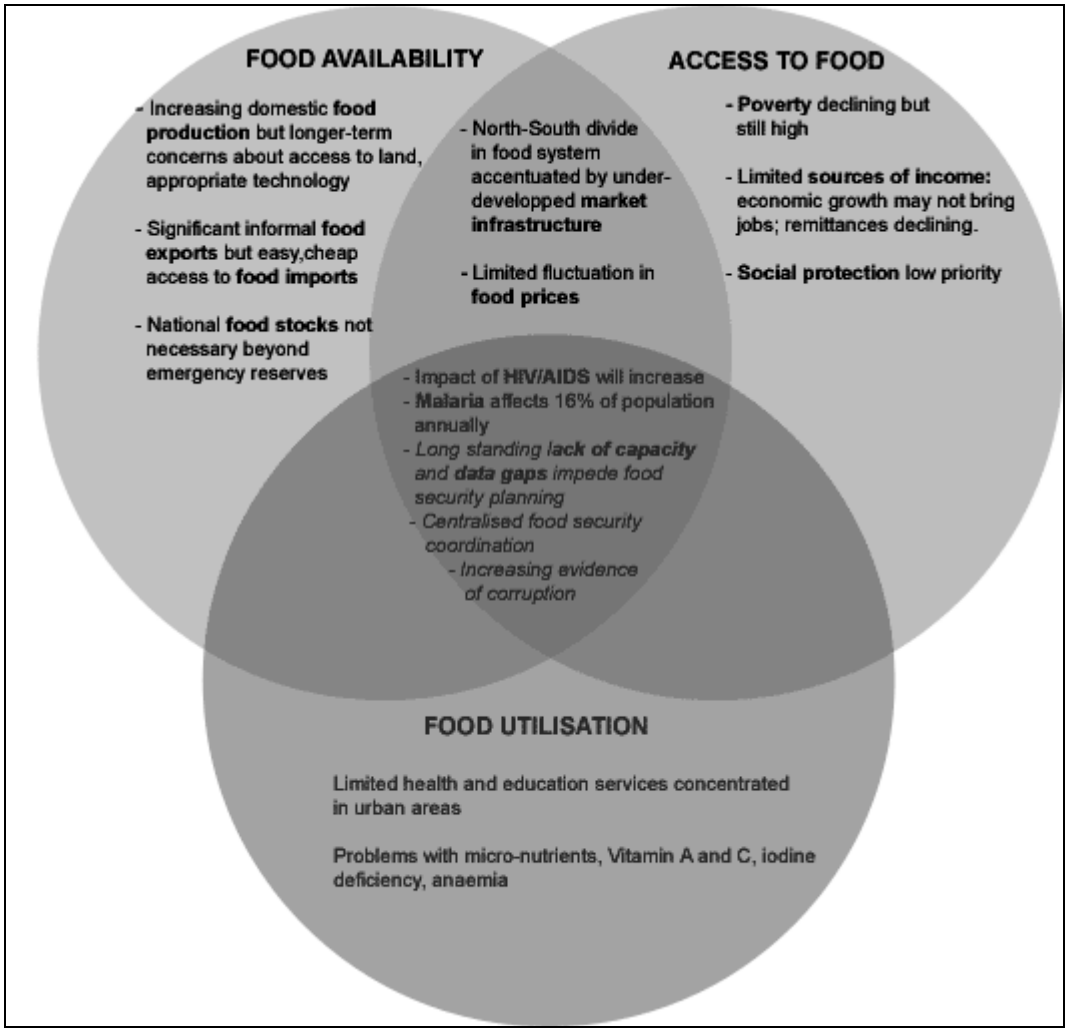
The incidence of stunting and wasting amongst under threes in Mozambique is not quite as high as in some other countries in Southern Africa, but is nonetheless of major concern. Relatively high levels of stunting in tandem with comparatively lower incidence of wasting suggest factors other than availability of food may be significant determinants of child stunting. These factors might include disease arising from poor health and sanitation. The incidence of malaria is notably high in Mozambique.

Inadequate access to food is nonetheless 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. The

significant decline in remittance income in recent years has contributed to this, particularly for households in parts of the South.

In the next Chapters, we examine the policies that have been in place in Mozambique to address these food security issues.

Figure 10 : key factors affecting food security in Mozambique



3 Existing Policies for Food Security in Mozambique

3.1 Policy-making in Mozambique

Immediately after Independence, the ruling party that had directed the war of liberation, FRELIMO, established a state that was centralised politically and economically; and in which the state was expected to play a key role in the economy. The first decade and a half of independent rule was, however, disrupted by a mass exodus of Portuguese settlers, and thereafter civil war fomented by the hostile governments in first the then Rhodesia and later South Africa.

Local chiefs were resented for being rural patrons used by the colonial administration, and, upon coming to power, the socialist FRELIMO government severely restricted their roles. However, the excesses of state socialism – particularly the neglect of smallholders in favour of state farming, forced villagisation, and condescending bans on certain 'customary' practices – turned many peasants against the state and towards the chiefs, despite their controversial history (Dinerman 2001; Harrison 2000).

It was not long before some substantial reforms took place. Economic reforms began in 1983, intensified from 1987 with structural adjustment, and subsequently have seen the implementation of a full-blown market economy in which the state plays only a guiding and regulatory role. Politically, the 1990s saw a cease-fire in 1992, followed by multi-party elections in 1994 and 1999.

Perhaps the one constant in policy-making has been the tendency for decision-making to be concentrated in Maputo, with few powers or capacity devolved to the regions. Centralisation may in part be caused by the limited capacity of the civil service and the need to make the maximum use of relatively scarce talent.

Corruption was low immediately after Independence owing to strong political commitments derived through the liberation struggle (O'Laughlin 1996). Since liberalisation, corruption has increased, mainly linked to weak capacity for state reform, opportunities for illicit gain through corrupt privatisation and under-regulation, and fragmented aid projects.

The elite of Mozambique, largely based in the main cities and above all Maputo, pursue their interests with little accountability to poor urban and rural citizens. Although this gives opportunities for corruption, there is a commitment to shared development and poverty reduction, and there are relatively good levels of targeting to the poor.

Formal western-style civil society remains weak – with shallow participation and tenuous accountability – though less because of kinship ties and more

because of the disruption of war and the pressures of international donors and NGOs (Negrão 2003).

3.2 Economic growth and poverty reduction policy

Mozambique is still recovering from the civil war that ended with the cease-fire of 1992. The post-war period is also marked by the liberalisation of the economy from the state-controlled model that was introduced after Independence in 1975.

Generally, economic growth strategy since structural adjustment in the 1980s has followed that set out by the international development community. Reconstruction was combined with liberalisation and privatisation throughout the 1990s.

The Poverty Reduction Strategy Paper (PRSP) is a key statement. Mozambique developed its interim PRSP – the Action Plan for the Reduction of Absolute Poverty (PARPA) – in 1999 based on a national 1996–97 survey, and a final PRSP was approved by the IMF and World Bank in September 2001. The PRSP's six priority areas are: education, health, agriculture and rural development, basic infrastructure, good governance, and macro-economic and financial management. The recent Joint Staff Assessment is generally favourable, though mentioning the need for strengthening monitoring, financial regulation, civil service reform, tax and expenditure, and labour market flexibility.

One point mentioned by NGOs and donors alike is the lack of participation in designing the PARPA, and in annual review (AFRODAD 2002; de Sousa 2002; IMF & World Bank 2003). A UNDP-funded Poverty Observatory may help; it brings together state and civil society to monitor PARPA implementation, though seems to have been occupied with a voluntary survey resulting in an Annual Poverty Report 2004 (Poverty Observatory 2004). However, some analysts question 'How much should a weak and not necessarily very representative NGO community, heavily dependent on external funding, be allowed to influence government policy?' (Falck, Landfald, & Rebelo 2003: 245)

3.3 Food security and nutrition policy

Mozambique produced a Food Security and Nutrition Strategy (ESAN) in 1998. ESAN is overseen by the Technical Secretariat for Food Security and Nutrition (SETSAN), a special unit within MADER expected to coordinate sector activities related to food security. SETSAN is said to be strong at a central level, but weaker regionally. ESAN is designed to improve food security via:

- increasing agricultural productivity

- road development
- information systems
- commercialisation
- nutrition education
- disease prevention and treatment

3.3.1 Food Production

Given the amount of arable land available in the country, Mozambique has the endowment to produce the food to feed its people. But it has, almost continuously since Independence, been a major net importer of staple foods. Failure to achieve potential production stems in large part from the lack of physical infrastructure in the rural areas, and the deficiencies of systems for input supply and marketing. The severe disruption of the civil war and the failures of the policies of central planning have left their mark.
Originating from a 1995 *Agricultural Policy and Strategy for Implementation*, the government's objectives include:[26]

i.) enabling environment for market-based agricultural development
   a. Ministerial capacity for agricultural policy
   b. Competition and transparency in markets

ii.) Road transport and communication infrastructure

iii.) Technologies
   a. Research & extension
   b. Irrigation
   c. Market information
   d. Farmers' associations
   e. Outsourcing service delivery

iv.) Regulation
   a. Land tenure
   b. Intellectual property rights and patents
   c. Information on agro-chemicals

v.) Good Governance
   a. Macroeconomic
   b. Civil service reform
   c. Rationalisation of expenditure
   d. Enforcement of environmental management practices

vi.) Micro and Rural Finance

The key programme for the sector is 'PROAGRI'. The first of three phases of PROAGRI, scheduled to run from July 1999 to June 2003, focused on

[26]Ministry of Planning and Finance, *Mozambique's Agricultural Sector Policy and Strategies*, in World Bank (1999).

institutional restructuring. The US$216 million programme is managed by Ministry of Agriculture (MADER) and has ten components: extension, research, production, animal husbandry, forestry and wildlife, land management, irrigation, micro-finance, rural communications, and institutional development. PROAGRI has made key steps of coordinating donors through budget support and deconcentrating implementation, but suffers from limited capacity to implement and the need for institutional reforms (Compton 2000; CTA 2002; IMF & World Bank 2003; World Bank 1999).

Under the national research and extension component of PROAGRI, agricultural research institutes are to be consolidated, and four agro-ecological zoned research institutes designed. Extension is to become pluralistic, utilising agents from the state, private and civil society.

To date, there has generally been a tendency to provide standard kits and packages of agricultural inputs, rather than tailored interventions (Selvester and Castro 2004: 10-11). It is estimated that nationally only 5–10% of seeds used are improved (Bias and Donovan 2003: 71). Possible priorities include drought tolerance, and resistance to maize streak virus and cassava brown streak virus (VAC 2003).

Aiming to develop agriculture, the Rural Action Plan (PRA) includes micro-finance, micro-projects, community-based natural resource management, rural communication, and support to local organisations.

As the banking sector was liberalised, financing for agriculture dried up. The government has several funds to remedy this, though they are under review, including the Support fund for Economic Rehabilitation (FARE), Agricultural Development Fund (FFA), Market Fund (FC) and Small Industry Development Fund (FFPI).

Government and donors have seen land as abundant and hence incidental to poverty alleviation and food security,[27] but others report conflict and inequalities in access (see Hanlon 2002.). A new Land Act was passed in 1997, with regulations in 1998 and 1999. It apparently involved civil society and NGO, and resulted in a new legal concept of ‘local community’ that has the right and obligation to participate in management. Three aims of the land law are improved tenure security in the family sector, increased investment by allowing private concessions, and investor-community partnerships.

Unfortunately, secure access to land for ordinary rural people is not addressed in the PARPA and PROAGRI planning documents. These tend to focus more on ensuring security for private concessions (Norfolk & Liversage 2002).[28]

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[27] E.g. “Land is not, therefore, a limiting factor for poor peasants, but rather their capacity (and therefore means of production) to work the land which they have, and achieve acceptable levels of productivity” (Republic of Mozambique 2001: 16).

[28] In contrast, see the case studies at:
http://www.oxfam.org.uk/what_we_do/issues/livelihoods/landrights/africa_south.htm

3.3.2 Food Trade

After Independence, the state attempted to control marketing. Maize trading in the North was dominated by the parastatal ICM and a few private large traders, such as V&M and Gani (de Vletter and Polana 2001). Prices were liberalised by 1998, but the collapse of the marketing parastatal left a vacuum filled only partly by some private traders and NGOs.

The food sector has also had to contend with organised food aid distribution.

An Agricultural Marketing Strategy was designed in 2001, emphasising market infrastructure and information, and rural fairs. Tested in Zambézia, it may also include storage and transport components. Most research has focused on marketing of maize, and less on cassava and other foods.

As far as public storage is concerned, government policy – unfulfilled so far – aims to store two months of food reserves (5-7,000 tons) for natural disasters (rather than price or supply stabilisation).

Transport appears to have improved substantially, although details are uncertain owing to lack of baseline data (Bruzelius et al. 2000). Nonetheless, the World Bank suggests that the percentage of good roads has increased from 10% to 56%, travel time declined by half, and vehicles increased from 13,000 to 200,000 (World Bank 2003: 5). There are few studies of the social and economic impacts and their relation to food security, though there are a few mentions of land grabs and HIV/AIDS.[29] There is little data on precisely which areas are most bottlenecked, and which have priority transport needs.

Financing of transport is also an issue, as fuel taxes have been argued to increase poverty, at least in the short-run, but provide funds for investment with potential to alleviate much more (Nicholson et al. 2003).

A Roads Policy was adopted in 1998. Key reforms aimed to decentralize and make autonomous the roads Directorate and Fund (which are or were under the Ministry of Public Works and Housing). Around 2001, a consultant drafted a PRODOC for the World Bank's Rural Travel and Transport Program, followed by seminars and workshops. A pilot district development fund for rural infrastructure was tested in Nampula, and is now being prepared nationally by the Ministries of Finance and State Administration.[30]

The roads project totalled roughly US$800 million, with donors covering particular regions, such as Zambézia (Britain) and Cabo Delgado (Norway). Road maintenance fell behind due to the floods. 'The more systemic problem', donors note, 'is that the road maintenance program is not yet based on periodic surveys for estimating costs, setting priorities, and scheduling

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[29] 'Feeder Roads Project (FRP), Mozambique, http://www.livelihoods.org/info/docs/Mozfin2.rtf, accessed 10/09/04.

[30] http://www.worldbank.org/afr/ssatp/Countries/Mozambique/RTTP/rttp_country%20report02_mozambique.pdf

maintenance' (IMF and World Bank 2003: 6). The project suffered from severely underestimated costs, and hence rehabilitated less than half its targeted 3,450 km of trunk roads, and regularly maintained less than one-fifth of its targeted 2,400 km roads. Labour-based rehabilitation of feeder roads, on the other hand, covered 6,100 km, well above the 3,250 km target (World Bank 2003).

3.4 Poverty and access to food

The 2001–2005 PARPA (interim PRSP document) aims for rapid, inclusive growth:

> 'The expansion of the agricultural sector must be on an inclusive basis, resting fundamentally on 'family sector' production, but also drawing on the 'commercial sector''(Republic of Mozambique 2001: 62).

The PARPA explicitly recognizes the importance of other sectors (transport, credit, education, health). It points to PROAGRI as the key agricultural strategy.

Strategic objectives in ESAN and PROAGRI identified by PARPA (p. 64) are:

1) raising productivity in the family and private sectors through labour-intensive technologies and sustainable natural resource management;

2) guarantee rights of access to land and reduce land registration bureaucracy;
3) promote output and input marketing; and,

4) reduce vulnerability and chronic food insecurity

3.4.1 Social Protection

Social protection measures include strategies to reduce and mitigate risks, and support coping (FFSSA 2004), by, for example, diversifying crop varieties and farming methods, stabilising food markets, accessing off-farm activities, food aid, etc.. However, in general social protection issues receive little attention in PARPA. It could be said that government no longer has sufficient resources for such social protection measures. However, social security and assistance constituted only 6.7% of the 2000 budget, slightly below agriculture's 7.2% (Fozzard 2002: 17). Education makes up 18.4% of the budget, and health 14.4%.

With respect to programmes to make transfers to the poor and deserving, the cash transfers of the Office for Assistance to the Vulnerable Population (GAPVU) are prominent:

> 'In this context, Mozambique's experience with a targeted cash transfer programme known as 'GAPVU' is instructive. GAPVU,

> which was implemented in the mid-1990s, transferred a small monthly amount of cash to registered 'destitutes' in urban areas: mainly people displaced or disabled by the civil war. Although the amount of income transferred was small, beneficiaries used it in a variety of ways to improve household food security. Apart from purchasing food directly, they also invested some transfer income in trading activities or in their backyard gardens.
> 'This provides further evidence for the power of cash transfers to enhance household food security in multiple ways, and also for the argument that social safety net transfers do have the potential to reduce chronic poverty (Devereux 2002a).
> 'On the other hand, the programme was undermined by corruption, both by administrators and claimants, the main reason being the low proportion of programme funds allocated to monitoring and supervision – an attempt to maximize transfers to beneficiaries which badly backfired. This experience does not invalidate the concept of targeted cash transfer programmes; instead it points to the importance of investing in sound administrative systems.' (Devereux 2003: 15)[31]

Several other apparently positive experiences have been noted with cash payments in rural areas to demobilized soldiers and flood relief victims (Hanlon 2004b).[32] These involved relatively low overheads. Though potentially promising, the exact patterns of spending (e.g. consumption vs. investment) and impacts on poverty and markets have yet to be studied.

Mucavele (2001: 7) has doubts about cash transfers, arguing:

> 'Any attempt to give the vulnerable populations money would have a very negative effect. If the money was to be given to those who needed food, there would be no guarantee that the money would be used to buy food or if this food would even be available on the market. If the head of the family was a man and was to be given money he might prioritise buying non-food products or as is the case in most instances, he would use the money to buy beer. There is no guarantee that other components of the collective family unit such as the children, the elderly or the handicapped would have access to the food. Hence, the alimentation programmes are still needed in Maputo. The advantages of giving direct food aid are comparatively more than those associated with giving the head of the household money.'[33]

In terms of in-kind food aid, the World Food Programme has a five-year, US$40 million Mozambique programme to distribute at least 21,800 tons per

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[31] See also Datt et al. (1997); Low et al. (1999).

[32] The payments contrast with distributed inputs to soldiers, which "were an expensive public relations exercise and did not attempt to suit the livelihood needs of the returning soldiers" (Selvester and Castro 2004: 11).

[33] Likewise, see also Arndt and Tarp (2001).

year to 350,000 people. It includes school feeding, food for development, and safety nets (World Food Programme 2001).

It should be noted, after O'Laughlin (1996) and Hanlon (2004b), that the relative merits of tightly targeting transfers and safety net programmes versus more general measures, including subsidies, need to be carefully scrutinised for their administrative costs, market disruptions, and actual impacts on the poor.

3.4.2 Food Subsidies

After Independence, Mozambique set up a system of food subsidies and rationing in urban areas, though this soon fell apart owing to war, inflation, failed state farms, and political disagreements, including internal conflicts among FRELIMO socialists, and with peasants (O'Laughlin 1996). Food subsidies in the late 1980s consisted of money transfers, currently managed under the Ministry of Social Action and directly reaching 38,000 urban and peri-urban beneficiaries in 1999 (though an estimated 70,000 in 1996, see Datt et al. 1997). This, however, compares with roughly three million food insecure people in urban areas alone.

3.4.3 Income diversification and employment

The **cotton** sector was liberalised in 1989. The current system is still based on contract farming by local monopsonies, in which private companies distribute inputs on credit and farmers are obliged to sell to them their output. Production increased during the 1990s, but new companies entering the sector offered 'pirate' purchases, allowing farmers to evade repaying inputs-on-credit, with repayment rates dropping as low as 60% in Nampula (Tschirley et al. 2004). These problems have been somewhat resolved for now by granting new entrants their own concessions. In 2000, there was some talk of further liberalisation, but this has subsequently died down.

The EU banned fishery imports in 1998 from Mozambique (and Uganda, Kenya, and Tanzania) on sanitary grounds, though the ban did not apply to prawns. Until recently, most **fishing** was done by foreign industrial ships, and while the government has moved somewhat to limit their numbers, illegal fishing (mostly Asian) continues, and the government has recently permitted EU vessels to fish off the coast in exchange for €4 million yearly.[34] There are concerns for the environmental effects of prawn fishing, with declining catches prompting license reductions.[35] The government is also pursuing fish farming,[36] from which the EU recently permitted imports.[37]

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[34] (1998) 'Companies Endorse Plan to Ban Foreign Prawn Vessels', *PanAfrican News Agency* 6 November; (2004) 'Fisheries Agreement with European Union' *Agencia de Informacao de Mocambique* 15 January; (2001) 'Seized Prawn Catch was Bound for South Africa' *PanAfrican News Agency* 4 May; (2003) 'Crews of Fishing Boats Lied About their Position' *Agencia de Informacao de Mocambique* 27 February.
[35] IRIN (2001) 'Mozambique Moves to Check Over-Fishing' *UN Integrated Regional Information Network* 20 March; (2003) 'Environmentalists Call for Prawn Boycott' *Agencia de Informacao de Mocambique* 20 February.
[36] (2002) 'Country Seeks Market for Farmed Prawns' *Agencia de Informacao de Mocambique* 25 June.
[37] (2003) 'EU Accepts Fish-Farmed Produce' *Agencia de Informacao de Mocambique* 20 January.

There has been a boom in **tourism**, notably with the Trans-Frontier Conservation Area in the south, but there are few studies and statistics on it.

The Integrated National Programme for Social Welfare, Employment and Youth aims to create jobs and alternative income activities.

3.5 Food Utilisation

During the civil war, the government was heavily involved in distributing food aid, the Ministry of Health had a prominent role, and nutrition was a key issue. Since then, co-ordination between various departments on food security has broken down, with responsibility shifted to the Ministry of Agriculture. Consequently, cross-sectoral co-ordination and social protection measures to address food insecurity seem to have suffered.

In health care, Mozambique made large strides after Independence, with mass vaccinations and rural clinics, but these were disrupted by war, and by the cutbacks during structural adjustment. Considerable progress was made in sector-wide donor co-ordination in the early 1990s (Brown 2000; Pavignani & Durão 1999). Since then, there have been over 400 individual projects, prompting some to argue that 'the deluge of NGOs and their expatriate workers over the last decade has fragmented the local health system, undermined local control of health programs, and contributed to growing local social inequality' (Pfeiffer 2003).

There has been little integration of health issues into other national strategies. PROAGRI, for instance, largely ignores health issues.

Programmes specifically directed to remedy malnutrition include, according to the PARPA, distributing Vitamin A capsules to young children, to run a milk, oil and sugar programme, promote iodised salt, and reduce cassava cyanide poisonings (Republic of Mozambique 2001: 52).

World Vision and Helen Keller International are working with MSU in Zambézia. Nation-wide trials of orange-fleshed, beta-carotene-rich sweet potatoes have been carried out by the national research institute in collaboration with a sub-regional root crop network. (Bias & Donovan 2003: 7-8).[38]

Local varieties of maize with higher levels of protein – known as Quality Protein Maize – are being developed (through conventional breeding against diseases, and in field trials), and marketed by some private traders (CIMMYT & Nippon Foundation 2003). But it is not clear how beneficial it is at the household level, nor how and whether market prices might rise higher for the improved maize.

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[38] 'Towards Sustainable Nutrition in Mozambique' *Fact Sheet,* http://www.aec.msu.edu/agecon/fs2/fact/tsnifact.pdf

3.6 Early Warning and Disaster Management

Mozambique is unusual amongst its neighbours in Southern Africa in having relatively well-developed disaster preparedness plans, operational at District level. Resulting from the civil war experience, these plans remain functional and are up-dated on a regular basis. Thus in 2001–03, Mozambique was able to identify its needs and direct international humanitarian response accordingly. Preparedness and early warning were emphasised from the 2000 floods. The influx of NGOs prompted efforts at coordination.

The former Department for Prevention and Combat of Natural Disasters (DPCCN), which managed war-displaced people and drought relief, has been replaced by the National Disaster Management Institute (INGC) which has produced an Action Plan for Disaster Management. INGC was tested with the floods, and needs regional strengthening. Focus has been on relief more than planning and prevention, which is to be promoted by a new coordinating Disaster Management Technical Committee.

More prominent in the recent food crisis has been the work of the Vulnerability Assessment Committee, co-ordinated by the Food Security and Nutrition Secretariat (SETSAN) of the Ministry of Agriculture and Rural Development. This has actively produced regular assessments of needs, mainly for use in programming donor relief schemes. Dependent on donor funds, and drawing largely on part-time inputs from members drawn from various departments and ministries, there are questions over the contuning role of the Committee.

4 Looking ahead: strengthening food security in Mozambique

It seems that the two major immediate challenges faced by Mozambique for assuring food security and adequate nutrition are:

- poverty reduction and increasing effective economic access to food – with different challenges in urban and rural areas, and between North and South of the country

- improving health and sanitation for better utilisation of available food – including with respect to HIV/AIDS and malaria.

Over the longer term, the low yields and under production in agriculture will also need to be addressed, although Mozambique has the advantage, compared to some of its neighbours, of being able to import food by land or sea at comparatively low cost.

These challenges are reviewed in turn, followed by a brief consideration of the implications for policy-making and implementation.

4.1 Access to food: reducing poverty

They key issue for most Mozambicans in getting access to food is income, be that in cash or in direct production. Food prices are a lesser consideration, since by and large they are modest to low in most parts of the country at most times, thanks to low-cost domestic production and the ready possibility of imports from South Africa and the world market.

4.1.1 Access to food in rural areas

A debate has broken out of the extent to which the incomes of the rural poor – who make up the vast bulk of the poor - come from farming and allied activities, or, alternatively, from wage labour. Cramer & Pontara (1998) point out that large-scale farms offer many jobs, albeit seasonal and casual, to villagers in the surrounding areas.[39] They argue that then that there may be

[39] Cramer and Pontara (1999: 717) comment on the lack of attention to labourers:

> These activities and the people who carry them out, however, tend to be 'invisible' in Mozambique. They are often excluded from 'statistically representative' surveys, as in the case of the recently completed UPM document … They certainly receive an extraordinarily low proportion of the attention that is constantly paid to the so-called 'smallholders' or 'family sector' in Mozambique, not only in the academic literature but also amongst government 'anti-poverty' units, NGOs, the mass media and the public. This 'invisibility' has adverse consequences for their survival: no attention is paid to the extremely low wages they receive and to the working conditions they face.

more jobs created by focusing agricultural strategy on commercial farms in promising locations, than by pursuing the broader-based promotion of smallholdings. This strategy would be complemented by (unspecified) measures to improve the wages and conditions of workers.
Tschirley & Benfica (2001) disagree. They report that only a small proportion, less than one quarter, of rural households had access to wage labour in 1998. Most of those households were the better-off, that had members with sufficient education to seek reasonably paid work. Rural labouring jobs were typically short-term, and ill-paid. They therefore recommend an accent on promoting smallholder farming, albeit with perhaps a focus on the higher potential areas (Tschirley 2002). They see linking farmers to agro-processing in contract farming as an attractive option.

Whether as labourers or contract farmers, **cash crops** offer good opportunities for enhanced earnings in most parts of rural Mozambique – the exceptions being the low-potential, drought-prone provinces of the south. Of the potential cash crops, **cotton** is an attractive option, even if prices offered to growers are low, apparently since the allocation of local monopsonies allows processors to keep prices low (Poulton et al. 2004). Making allocation of concessions more transparent, regular and competitive may be an option, although competitive tendering is severely limited by the need for bidders to have large fixed capital in the form of ginneries (Ofiço & Tschirley 2003).

On the other hand, there is little discussion of the intra-household dynamics of cotton production, and whether women, children or particularly food-insecure groups benefit from cotton income (cf. Waterhouse & Vifhuizen 2001). Tschirley and Weber (1994) found that households with more cash crops did ***not*** have greater food consumption. Rather, consumption was primarily correlated with land – affirming the 'key role of landholdings in household welfare' (168). This may partly be explained by conflict-disrupted markets at the time of the study: cash had little practical use.

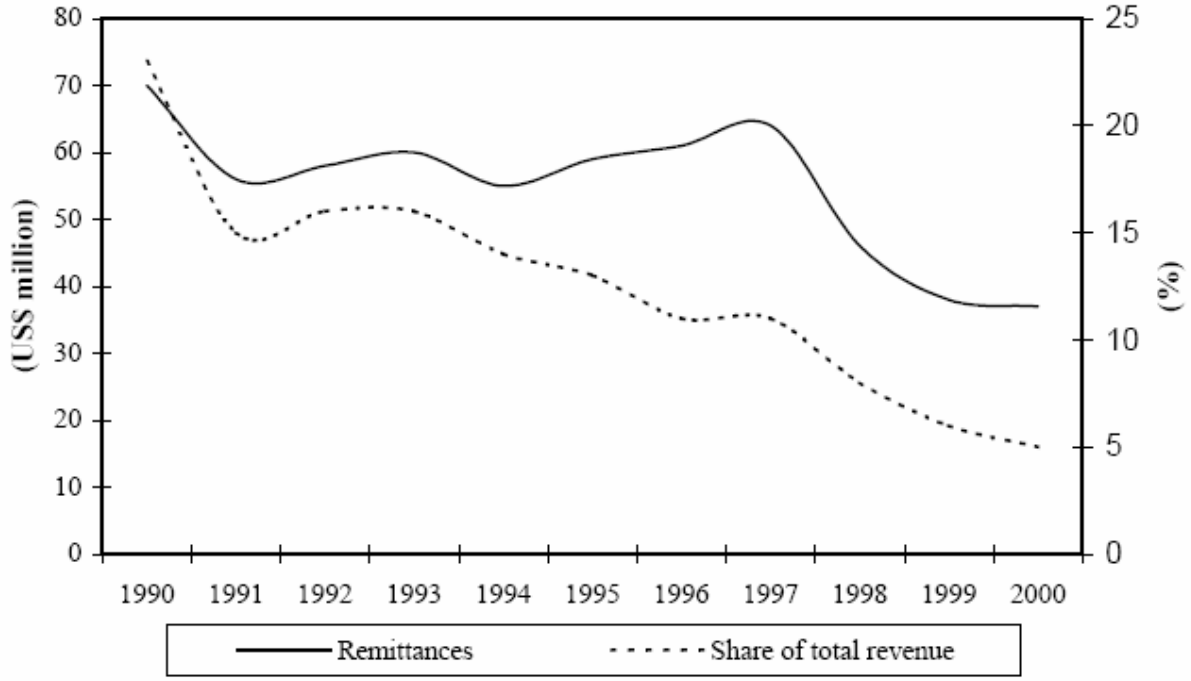
In the past, **cashew nuts** have been a major export from Mozambique. Controversy surrounds policy for rehabilitating and developing the industry. In 1995 the World Bank insisted on removing restrictions on the export of unprocessed cashew nuts, arguing that prices to growers would increase and that domestic processing was inefficient. Most large processors shut down, and roughly 8,000 jobs were lost (Hanlon 2000). Parliament debated reinstating a ban on exports of raw nuts (Mole & Weber 1999), but ended up raising export tax on raw nuts to 18%. This case again illustrates the debate over whether support to smallholder farming, or the creation of jobs in other parts of the agriculture and food chain, is more effective in reducing poverty.

Apart from the income effects of cash crops, some debate their direct impact on food security. MSU research in northern Mozambique has shown that cotton production is associated with higher maize yields and production, though evidence on precise causality in food consumption was not investigated (MAP/MSU Research Team 1997).

Although the bulk of rural occupations and income sources may be linked to farming, other activities exist. In the past **migration** to the mines and cities of South Africa has been important to communities in the south of Mozambique. Retrenchments in mining and tighter migration restrictions in South Africa may have reduced such opportunities (de Vletter 2000; Lubkemann 2004; Mather 2000).[40] Deportations of Mozambicans from South Africa steadily increased from 42,330 in 1990 to 146,285 in 1997, with Mozambicans generally making up about 80% of all migrants deported (Covane, Macaringe, & Crush 1998). Figure 11 suggests falling remittances from migrants, although presumably official data do not capture remittances from informal and illegal migrants.

An issue is thus whether efforts should be made to improve migration, wage-labour and foreign working conditions, as a key component of livelihoods in some districts; or whether the effects of lost labour on farm productivity are greater than remittances, so that migration should not be supported.

Figure 11: Migrant workers' remittances, by value in US$M, and as share of total revenue in foreign exchange (%)



Source: INE, various issues, Statistic Yearbook, as presented in Castel-Branco (2004: 6)

A related question is how well such off-farm activities allow vulnerable people to cope with shocks. People may gain income, in cash or food, from labouring on farms ('ganyu ganyu' or 'ganho ganho'). VAC research[41] suggests that

[40] Most Mozambican migrants to South Africa have been young, unmarried adults, going for short-term work in construction (men), farm work, car-repairs, and, for women, domestic and shop service. Figures are hard to come by on net migration, including illegal, so it is difficult to get a picture of the overall affect of retrenchment and restrictions. The substantial deportations do give some indication of the scale however.

[41] FEWSNET (2004) *Mozambique Food Security Update* 24 June, p. 3 , http://www.fews.net/centers/current/monthlies/report/?f=mz&m=1001180&l=en

people rely on informal work in times of stress, although apparently such opportunities and remuneration decline in difficult years (SIMA Research Team 2002: 2).

4.1.2 Access to food in urban areas

With the emphasis on agricultural growth, there has not been a great deal of attention to urban food security, although many urban dwellers are poor by any standards. Patterns of rural-urban migration in Mozambique might be expected to have been disrupted by Portuguese restrictions on mobility and urban settlement, as well as by the war, which scattered refugees in neighbouring countries and more secure urban areas. Nonetheless, even since the end of the war and the return of refugees, urban populations have continued to rise (Jenkins 2003).
For the urban working class and poor, food access depends in part on food prices, but above all on jobs and wages. Food prices in the main cities of Mozambique have been kept at reasonable levels over the last decade, thanks to a policy of liberal imports and the main cities being ports, making the landed cost of imported staples low. For example, even in the drought year of 1992 when supplies of maize in Southern Africa were devastated, the government used yellow maize food aid to ensure that staple food prices were maintained, even as the price of white maize rose two or three times Arlindo & Tshirley 2003).

Hence the key point for urban food security is income. Much of recent urban economic growth, unfortunately, has come from capital-intensive mega-projects that have created relatively few jobs. (Jenkins 2000; Knauder 2000). Urban unemployment, or employment in precarious and ill-paid informal occupations, and consequent poverty are challenges.

4.1.3 Public action to relieve poverty: the role of social protection

At the risk of over-simplification, Mozambique has chosen to reduce poverty through economic growth in a bid to create jobs and raise incomes. Public funds have been assigned first and foremost for investment in the physical infrastructure, education, and services necessary to stimulate private investment and growth. Policy-makers worry as well about the costs of administering social protection schemes, including accurate targeting of intended beneficiaries, and about the scope for leakage and corruption. A relatively low proportion of the government budget has thus been given to social protection.

The exceptions to this generalisation are the schemes set up to alleviate the consequences of flood, droughts and other natural disasters. These include cash transfers and public employment schemes.

This raises questions about the marginal social returns to alleviating distress, compared to the likely stimulus to the overall economy. What does happen to the very poor, and to their food security?

It also raises the question of the scope for social protection for the poor who are able to work, who might benefit from public works schemes that would in themselves be public investments – in roads, drainage, etc. – that can boost growth.

4.2 Health and sanitation

Despite the alarming indices of child mortality, health and sanitation programmes have attracted little attention in the recent emergencies. As Table 8 shows, of US$20 millions requested from donors, less than 10% of the health component, and just 18% of the water and sanitation elements were funded.

Table 8. Response to the Inter-Agency Consolidated Appeal, July 1003–June 2004
As at May 2004

Sector	Requirements (US$)	Contributions* (US$)	
Agriculture	6,813,638	3,863,112	57%
Coordination	4,086,855	---	0%
Education	929,000	331,748	36%
Health	6,355,947	593,995	9%
Protection	714,700	---	0%
Watsan	1,180,000	200,000	17%
Total	20,060,140	4,988,855	25%

Source: UN Resident Coordinator (2004)[42]

This is a pity since the child mortality statistics suggest serious health dimensions to the problems of child malnutrition. They also suggest high pay-offs to simple and basic actions in providing clean water and ensuring hygienic sanitation, and in primary health programmes – immunisation, anti-malaria activities such as bed nets.

4.3 Combating HIV/AIDS

Mozambique may have a relatively low HIV prevalence rate amongst adults by comparison with its neighbours South Africa, Swaziland, and Zimbabwe, but at an estimated 13% (2001), it is still high by international standards. The full impact of this on people's lives and the economy has yet to be seen.

Increasing attention is being given, and considerable external funds are available, to confronting the epidemic and its consequences. Key issues – apart from the medical and epidemiological questions of how best to stem the advance of the disease through, for example, public education and the use of anti-retroviral therapy – include

[42] As reported by OCHA as of 30 June 2004.

- the fate of orphan children, already estimated at 600,000 or more;
- the care of the sick; and
- impacts on the economy as labour and skills are lost, and capital diverted to pay for care and funerals.

The implications for food security are fundamental. HIV/AIDS threatens to undermine economic growth and poverty reduction efforts, directly reduce food production, and increase the demand for energy and nutrients by those living with the virus.

In looking at specific interactions with food production, the issue of labour loss has attracted attention. Mather et al. point to Blackden (2003), who argues that attention to labour saving technologies should compare returns from savings in agriculture to those from other activities (e.g. domestic chores).

Another option suggested by Mather is strengthening tenure security and developing rental markets, in the belief that labour-short households could obtain income by letting out their land.

Targeting those living with HIV/AIDS presents problems, both of identifying the group and of stigma and prejudices that may be attached to those served by specific HIV/AIDS programmes. This suggests programmes focused on the epidemic, other than those dealing with care of the clearly ill, may have to be universal.

4.4 Food production over the longer term

Mozambique has the natural resources to grow all the staple food necessary to feed the country, as well as to produce export crops. Realising this potential is another matter. There are particular challenges in the South, where soils are generally poorer and climatic variability greater than in the North.

As regards **location** of production, should food production efforts be focused on the prime locations, or should they be nationwide? If focussed, is there a way to link production from the abundant farm lands of the north of the country to the food-deficit south? Can food be produced by a broad base of smallholders, or should the bulk of supply come from larger, commercial farms? There are also questions about the technology used – intensive or extensive, and the crops to be promoted – maize, or a broader base of small grains and tubers?

4.4.1 Organisation of food supply chains

This will be a critical factor, particularly delivery of inputs, collection of harvests, and provision of working capital effectively and on terms that encourage investment and production.

Given relatively low population densities and very low-income levels, it is difficult to see how **input** promotion efforts can stimulate demand, and thereby encourage traders to make inputs available.

As far as working capital is concerned, most **farm credit** seems to be linked to export agriculture, although some women traders – and presumably other groups – have their own informal systems of rotating credit and savings (de Vletter and Polana 2001). The Banco Popular de Desenvolvimento previously operated branches in 68 of 128 districts, but has closed branches since being privatised (Hanlon 2004b).

Donors are wary of calls by some government officials for broad, possibly subsidised, rural credit programmes. It is not clear whether the current proliferation of small donor-financed credit projects throughout the country can transform itself into a more comprehensive pro-poor credit market, or whether, and what type of, state coordination is needed. Broad, but short-term programmes like Sasakawa Global 2000 have used government and NGO staff to distribute subsidised inputs and have tended not to enforce credit repayment. Consequently 'the idea of credit becomes confused with donations' (Bias and Donovan 2003: 93) and the development of rural credit markets is hindered (Howard and others 2000).

Contract farming may be a solution in some cases (Dorward et al. 1998). As Benfica et al. (2002: 4) note,

> 'On the one hand, due largely to information problems and to the failure of input and credit markets, spot markets are frequently unable to support high value crops in Mozambique. If smallholders are confined to low value crops, escaping poverty will be very difficult. On the other hand, plantation agriculture generates only one direct effect on poverty – wages – and tends to use capital intensive technologies. It will therefore almost always generate less poverty reduction than will reasonably successful CF [Contract Farming] schemes'.

But contract farming requires either local monopsonies, or some other, and not obvious, means of contract enforcement. The former carry the clear danger of being exploited to pay producers low prices, something that may have happened in the case of cotton.

Offering farmers **price incentives** to produce and market staple foods is almost certainly too expensive to contemplate. The danger would be that any such policy might be only too successful and government could find itself having to pay for large increases in staple foods. For the foreseeable future, farmers will probably get low prices, in effect, at the farm-gate; thereby putting a premium on keeping production costs low and increasing effective demand

Organising agricultural production will be simpler and cheaper if **transport** costs fall. Through several projects, Mozambique has improved roads, rails, and shipping. The PARPA mentions financing and other difficulties, but nevertheless proposes a third roads programme after 2001, costing US$1.2

billion over 10 years, to improve and maintain feeder roads and municipalities (Republic of Mozambique 2001: 57–58). It emphasizes focusing on districts and localities with the greatest potential, and improving North-South links.

Wider questions remain over whether it is necessary to improve links between the northern breadbaskets and the southern centres of consumption, either by rail, road, or sea (Mucavele 2000). Alternatively, surpluses could be exported to neighbouring countries, and supplies imported from South Africa at relatively low cost. Trade with neighbours in Southern Africa may prove superior if there is progress in integrating the Southern African Development Community and regional tariff and transport barriers decline.

4.4.2 Seasonality of production

Common recommendations to deal with the marked **seasonality** of agricultural production in Mozambique include improvements in storage and transport, and diversification of crops grown and livelihood activities (Bias and Donovan 2003).

Most farming in Mozambique depends on the rains. Droughts, cyclones from the Indian Ocean, and flooding in the river valleys that drain large areas of Southern Africa can all reduce or disrupt farm production. From the standpoint of food supplies, what should be done when domestic harvests are poor? One option is to store food. But **food storage** is costly. Mozambique's long coastline allows imports to be obtained quickly, and imports are almost certainly cheaper than the cost of storage.

Tickner (1999) thus argues that resources should be increased for risk assessment, early warning capacity, aid to local coping mechanisms, and a fund for emergency food – although this latter only after institutional strengthening for planning, response and delivery. Any reserve would conceivably only be needed for the interior central region, as supplies are usually sufficient in the North, and the South is closely linked to South Africa. Arndt et al. (2001) recommend fostering credit markets and improved distributed rural storage, rather than more formal and centralized storage.

In contrast to other parts of Southern Africa, it seems fairly clear that large-scale public stores are neither necessary nor desirable in Mozambique, thanks to the coastal location and the ready availability of imports at modest cost.

4.4.3 Other factors

Despite the relative abundance of **land**, conflicts, scarcity and insecurity exists. The government is trying to promote investment in agriculture through allocating concessions to businesses. Many concession lands saw forcible evictions during Portuguese rule, but had been resettled during the war. Mandatory consultations with rural communities are often cursory or ignored (Hanlon 2002). Implementation of the 1997 land law requires care to avoid small farmers losing their land to the well-connected and powerful.

All the usual problems exist with **input** supply: the national agricultural research institute (INIA) cannot provide adequate supplies of improved seed for multiplication (Bias and Donovan 2003: 59), the Ministry of Agriculture has distributed seed through disaster relief programmes but there have been problems with poor adaptation to local conditions and low germination rates (Chapman, White, & Nankam 1997). Parastatals and multinationals supply only limited farmers, and there have been quality problems. Demand has generally been low since the coming of peace and ending of emergency programmes.

A joint MADER-Sasakawa Global 2000 programme has widely distributed improved seed developed by the agricultural research system, as part of a package also containing fertiliser and planting recommendations [Howard et al 2001]. Other approaches build on local seed systems by supporting seed fairs (FAO 2004; Gaifami 1992)[43], largely in the south and centre, by MADER and NGOs, supported by the FAO, British and Swedish donors (VAC 2003). Bias and Donovan (2003: 34) mention the tied-aid KRII programme, in which Japan pays for the delivery of $9 million worth of inputs for sale to private sector actors. The programme has faced difficulties of cost, delays, and quality, and has been criticised for stifling the emergence of private input markets by its implicit subsidies.

As regards **crops**, much official attention has gone to maize (Howard & others 2000), although other crops such as cassava (Arndt & Tarp 2000;SIMA Research Team 2002) and sweet potato (Bias & Donovan 2003:) can help poverty reduction and food security. Both crops can withstand moisture stress, have flexible labour demands, and produce abundant calories for every hectare planted. Survey data shows that the poor consume and depend more than the non-poor on minor crops such as sweet potato, millet, sorghum and beans (Bias and Donovan 2003: 12).

There have been efforts to promote high-input farming packages in Nampula Province: but they are considered to be too standardised, excessively risky, and unprofitable due to high input costs and low farm-gate maize prices (Howard & others 2000).

4.5 Challenges for policy-making

Some issues of governance and policy-making need to be addressed to strengthen efforts to improve food security.

Corruption drains government revenue, as the loss of US$400 million to bank fraud illustrates (Hanlon 2004a; Harrison 1999; Stasavage 1999), as do reports of US$1.4 million missing from the GAPVU cash transfers, another US$1.4 million lost from the Scandinavian Emergency Seeds and Tools

[43] See also the papers at http://www.fao.org/sd/LINKS/resources/resources_left2.html#

Programme (PESU), pilfering of aid at the World Food Programme and the Red Cross, and theft from Department for the Prevention and Combat of Natural Calamities (Harrison 1999). At a lower level, corruption precludes both effective implementation of existing programs, and the democratic development of revised or new projects, programmes and policies

Implementation capacity in government can be a bottlenesck. PROAGRI's problems are symptomatic, reportedly lacking sufficient clear responsibilities, decentralisation, participation, human resources, monitoring and evaluation, and inter-sectoral coordination (Compton 2000; CTA 2002).

Decentralisation was effectively halted in 1996, and currently only municipal governments are elected. Local administrations have weak resources, representation, and decision-making authority (Alexander 1997; Braathen 2003; Braathen & Orre 2001; O'Laughlin 2000; Soiri 1998; West & Kloeck-Jenson 1999). FRELIMO has apparently been reluctant to decentralise government for fear of strengthening the RENAMO opposition. Before more resources are transferred to the local level, the transparency of local government finance needs to be improved (Fozzard 2002). In order to prevent elites from capturing local government, attempts to re-instate democratic decentralisation should include support to pro-poor monitoring by central government and local-level civil society.

5 Conclusions

Mozambique faces many of the challenges faced by other countries in the region in improving food security: principally in alleviating poverty and reducing the vulnerability of the majority of the population; and in improving health and sanitation.

It differs from its neighbours, however, in aspects of **food availability**. Unlike inland Southern Africa, harvest failures in Mozambique do not necessarily rapidly lead to increases in the price of maize and other staples. Thanks to most of the main centres of consumption being close to the coast, lost harvests can be replaced by imports at costs only a little above those of local production. In the case of Maputo, the largest single centre of consumption, there are two sources of relatively cheap imported food – the world market through the port itself, or South Africa. This probably makes Mozambican policy-makers less worried about domestic production than their counterparts further inland.

Mozambique has been prepared, in policies going back more than ten years, to operate a liberal trade regime for food. By and large it has been content to allow surpluses of food to move out of the north to Malawi and Zambia, while supplying areas with structural deficits, acute when harvests fail, in the south with imports from neighbours and the world market. And this policy has apparently been successful in making food available at relatively modest cost, while allowing some farmers in the north to earn cash from their surpluses.

As regards domestic production, it seems that in some parts of the country, in years when the maize harvest fails, the impact of this is to some extent mitigated by the availability of root crops, above all cassava. In the South, where soils are poorer and climatic variability greater, the current greater dependence on maize would appear to be increasing risk of poor harvests and making a case for greater promotion of crops, varieties and production systems that are well adapted to climatic variability. Although less imperative in the immediate future – because peace has produced some increase in yields and in overall terms land is not an immediate constraint – over the longer term it would appear relevant to encourage the uptake of productivity-enhancing technologies to combat current low yields, and to resolve the continuing problems with access to land in some areas. An essential part of the equation will be supporting effective demand for food.

With fewer problems in food availability, thus **food access and utilisation issues** take centre stage. Reducing poverty in what is still one of the world's poorest economies is being addressed by a strategy that aims to maximise economic growth. With the vast majority of the people living in the countryside with few other resources than land, agricultural strategy becomes a key plank of economic growth. Accelerating agricultural growth means breaking out of the trap of a domestic demand for staples that is low owing to poverty, with prices at the farm gate pushed even further down by the costs of distance in a

large country with poor roads, few railways and under-developed water transport.

Producing **cash crops** for export is one answer, but that means organising supply chains, and being able to compete on price and quality in the world market. It raises questions about the role of large firms active in processing and marketing, and in some cases in farming itself: how can they be given incentives to invest without them using any monopoly power to exploit their farmer-suppliers, or their workforce? How can they be encouraged to use technology that creates jobs, rather than soaks up scarce supplies of domestic capital? And there are geographical considerations as well: if resources, both public and private are concentrated on areas with higher potential, then how can the benefits be spread territorially, rather than creating privileged enclaves? Export crops, however, do have the additional merit that many of them require processing so that there are useful multipliers from jobs on farm to jobs off farm. And Mozambique arguably has a considerable advantage over inland Southern Africa in producing export crops, thanks to its coastal location where most farms are within 200 km of a port.

In both rural and urban areas, **remittances** have traditionally been an important component of income but are now in decline. Particularly in the South, where there is less potential for agriculture and much of the urban population is concentrated, finding alternative sources of income will become increasingly important. It does not yet appear clear that the recent high rates of economic growth – which in themselves may in part represent a peace dividend – will generate the **employment** necessary to achieve this.

To judge by the PARPA – and this has the backing of government and donors – **social protection** has been put on the back seat, at least for the time being, in the drive for growth. Understandable as this may be, the fate of the poor who are unable to work – the old, disabled and sick, and this includes the rising numbers living with HIV/AIDS – is unenviable. To some extent it may be that the lack of data on the detail of poverty in Mozambique makes policy-makers less sensitive to the issues arising. The contrast with neighbouring Malawi is quite strong, Malawi being an equally if not poorer economy, but one where the profile of social protection is much higher.

As in other countries, **lack of data** is a major constraint to effective planning in Mozambique in a number of areas. Aside from specific information required for disaster planning and response, wider trends in malnutrition at national level are not known with accuracy as there has been no Demographic Health Survey since 1997. Trends in domestic trade are difficult to identify with accuracy as informal trade constitutes a major part but is not monitored. More generally, it is agreed that there has not been adequate investigation of the potential links between health, education and nutrition. Little is known about the composition of rural livelihoods, particularly the role of wage labour. And poor people's views are still not effectively incorporated into poverty planning.

The **HIV/AIDS** crisis, although less severe in Mozambique at present than in some of its neighbours, is likely to bring the issues of the poor who cannot work to the fore. With external funds readily available to fight the epidemic and its consequences, actions to help that section of the poor living with HIV/AIDS will take a higher profile. And given the difficulties in targeting those who are sero-positive, programmes are likely to need to address a wider section of the poor.

In common with its neighbours, Mozambique faces a chronic problem of **health and sanitation** that appears to take a heavy toll on child nutrition. The response to the regional food crisis, and indeed much thinking about this, has not focused on the causes and consequences of malnutrition. Mozambique shares this characteristic. It seems thinking about nutrition and health, and about food supplies and economic growth is not well integrated. Hence there has, apparently, been little consideration about the relative pay-offs to investments in better water supply, expanded immunisation, malaria control, or micro-nutrient interventions, compared to the costs of shipping in food aid. Without more analysis, that will probably require more data, it is hard to know how serious this gap is.

Mozambique has experienced a radical transformation from a war-torn socialist and highly centralised state in the 1980s, to a peaceful liberalised economy today. The ceasefire has brought considerable dividends in terms of economic growth and agricultural production, and the economic transformation may bring longer term benefits. In the immediate future, however, it appears there are several important issues to resolve in the policy process: how to deal with the increase in corruption following the ceasefire and economic liberalisation; how to improve policy coordination for multi-sectoral concerns such as food security, following the end of the highly centralised and emergency orientated planning system; and how to strengthen the contribution of civil society to policy planning and monitoring, which remain weak in practice, despite nominal arrangements for consultation in for example PARPA and land allocation.

Annex 1 : Food security and vulnerability – key definitions
Defining food security

`Food security' exists when:

> 'all people at all times have physical, social and economic access to sufficient safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life.'[44]

Some propose that, in addition, the definition includes that people do not fear loss of food security (Maxwell 1996). In this sense, reliability becomes as important as overall level of food intake: dramatic fluctuations in any component of food security, either because of an unexpected shock or during particular periods of the year, can have significant impacts on overall food security status.

Food security may be seen to have three basic components:[45]

- **Food availability**: the sum of domestic production, imports (both commercial and food aid) and exports, and changes in national food stocks;

- **Food access**: people's entitlement[46] to food, namely the amount they can produce, purchase or obtain through transfers from kin, community or state;

- **Food utilisation**: effective preparation and consumption of food, and the biological capacity of individuals to absorb and utilise nutrients in the food that they eat, that in turn depends in large part on their health.

Institutions are important for food security because they influence people's ability to source food, for example through markets, government channels, and community networks.

The concept of food security can be applied at various levels: for individuals, households, nations and ultimately at global level. Food security is sometimes confused with concepts of food self-sufficiency, particularly at national level. To clarify, it is not necessary that a country produce all its own food to be food secure – think for example, of Finland, Kuwait or Singapore; countries where food insecurity barely exists, but which import much of their food. In similar vein, food availability at national level does not imply food security at individual level.

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[44] www.fao.org/WAICENT/FAOINFO/ECONOMIC/ESA/fs_en.htm

[45] www.ifad.org/gender/thematic/rural/rural_2.htm

[46] Entitlements are the basis of access to food: 'The mere presence of food in the economy, or in the market, does not entitle a person to consume it' (Dreze and Sen, 1989: 9).

A1.1 Types of food insecurity

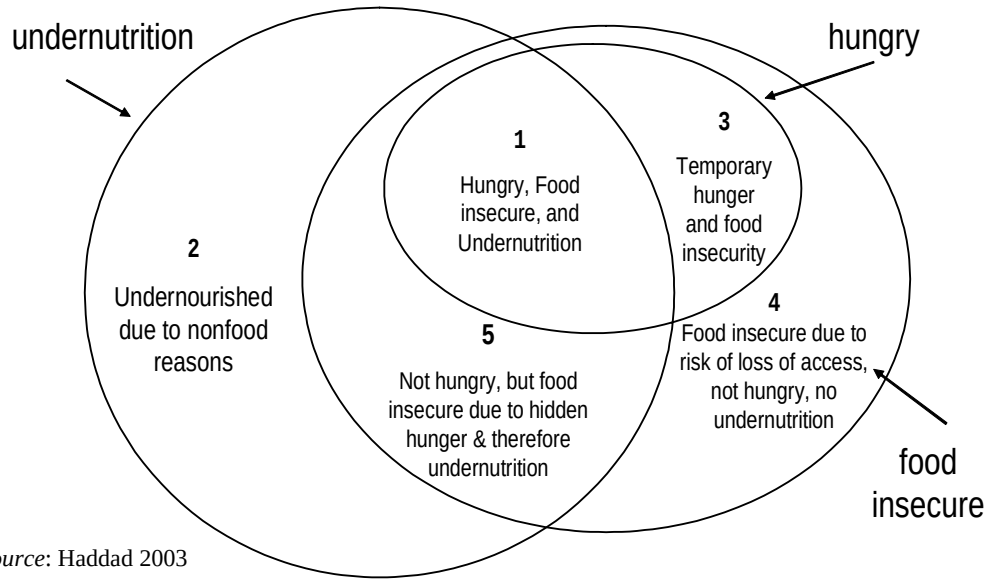
For those living in or close to poverty, food insecurity can often be seasonal. Typically in the period leading up to the harvest, some smallholder households run out of their basic food supplies and enter the food market, pushing up food prices and thus making access to sufficient food difficult for those living below the poverty line. Not for nothing, this period is often called the 'hungry season'.

Food insecurity can be a chronic, on-going condition, usually closely associated with the poverty of those affected – usually a minority of the population. But there can be more short-lived episodes of food insecurity in which much larger numbers of people become temporarily food insecure, in reaction to a shock to the food system. In the case of Southern Africa, the combination of harvest failures in 2001 and 2002 and the consequences of policies on storage, food trading and land redistribution, were shocks that plunged large numbers of people into food insecurity.

Large-scale temporary food insecurity is clearly of great concern in its own right; but what may be even more worrying is that people may have become more vulnerable to shocks than in the past, and thus at greater risk of falling into such temporary food insecurity. If so, it may take only small shocks in future to condemn many to hunger. When severe problems are experienced by large numbers of people, and especially if they have suffered an abrupt decline in food intake, only then may the situation may be described as 'famine'.

Concepts of hunger, food insecurity and undernutrition overlap, see Figure A1.1.

Figure A1.1. The overlapping concepts of hunger, food insecurity and undernutrition



Source: Haddad 2003

The five possible states identified are as follows (after Gillespie & Haddad 2004):

1. Hungry, food insecure and undernourished owing to inability to access the food or to use it well, usually owing to problems of health and sanitation;

2. Food intake sufficient, but undernourished due to a lack of non-food inputs such as clean water and sanitation;

3. Not undernourished, but food insecure and hungry;

4. Neither hungry nor undernourished, but food insecure since they run a significant risk of losing access to food; and,

5. Not hungry, but food insecure and undernourished — they get enough calories to stave off hunger, but not enough variety in their diet and so are likely to have micronutrient deficiencies 'hidden hunger.'

A1.2 Measuring food insecurity

Unfortunately, indicators for measuring food insecurity are not well developed. Food balance sheets based on crop estimates, plus data on exports, imports and stores, have historically formed the basis of assessing food security in many countries, but these are indicative only of likely food availability, not the other important components of access to food and effective utilisation of food. There is a well developed international protocol for assessing malnutrition through anthropometric measurements, described below, and this is the conventional route for identifying "emergencies" warranting international humanitarian response.

However, many food emergencies are 'slow-onset' and critical months have been lost by the time food insecurity is manifest in actual malnutrition. The essential difficulty is in identifying meaningful indicators of the *risk* component of food insecurity that can be used to measure the probabilities of food insecurity for different population groups. We return to this issue below, after setting out the various measures of malnutrition which still form the basis for much international debate on food insecurity.

There are two commonly used ways of assessing undernourishment.

- One is by inferring access to food by individuals, and then comparing this against a benchmark of typical minimum requirements for energy – defined by FAO as *on average* 2,100 kcal per person per day. To do this, FAO take a balance sheet of food available in a country, and then make judgments about the distribution of income so as to infer the average amount of food likely to be accessed by different fractions of

the population.[47] This is then compared to the benchmark, and the numbers estimated not to have enough food are expressed as a percentage of the population.

- The other is by directly observing nutrition status by measuring people ('anthropometry'). Most frequently surveys are made of children aged under five years, since they are most sensitive to malnutrition. Children are weighed, their height measured, and their age recorded.[48] From these three sets of information, three statistics are usually computed:
    - Weight for height ('wasting') is indicative of *acute* malnutrition;
    - Height for age ('stunting') is indicative of *chronic* malnutrition;
    - Weight for age is a combination of the two.

  All are measured against norms for the reference population as a whole: more than 2 Standard Deviations under the median is regarded as "moderate" malnutrition, and more than 3 Standard Deviations is classed as "severe". Demographic Health Surveys are generally considered to be the most accurate source of nationally comparable under-5's data[49].

The standard indicator used to identify emergencies – Global Acute Malnutrition (GAM) – measures weight for height (wasting). Levels of 10% of under-5's more than 2 Standard Deviations below the median weight for height within the reference population are generally considered to indicate levels of malnutrition in the population at large warranting universal supplementary feeding of children under five. Levels between 5% and 10% are considered to be of concern and warranting close monitoring of the population.[50]

To sum up, the quality of data used to measure malnutrition is often contested, but in any case malnutrition indicators are not necessarily accurate guides to levels of food insecurity within population groups. This distinction is highly important because, as we shall see in the next section, the risk of food insecurity – and the fear this induces – can be a major determinant of coping strategies, producing a downward spiral for affected households. The necessary public policy response is to attempt to address the underlying factors contributing to the risk of food insecurity.

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[47] The method depends heavily on the quality of the data on food supplies, and on the assumptions about the distribution of food. Although FAO take great pains to make their estimates, the results have been criticised as unreliable.

[48] When time is pressing, as in emergencies, a short cut is to measure the upper-arm circumference (MUAC) of children.

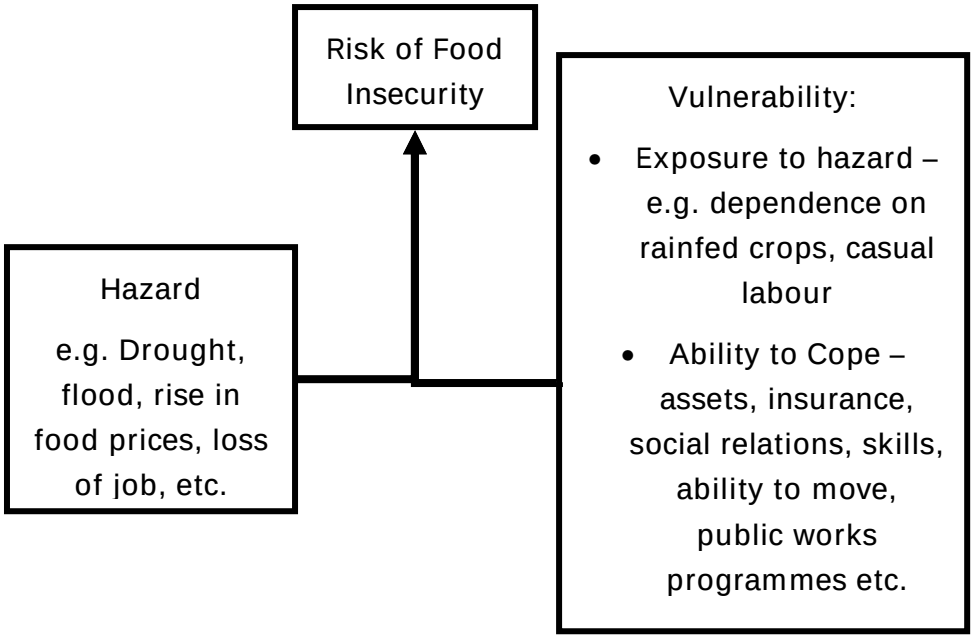
[49] http://www.measuredhs.com/

[50] This is not to ignore those children who are malnourished: when levels of GAM in the population are under the 10% trigger level, children identified as wasted are, ideally, referred for individual therapeutic feeding.

A1.3 Vulnerability and food insecurity

Vulnerability may be seen as a combination of the degree to which a person or household is exposed to a hazard, and the extent to which they can cope with the effects of the hazard. The combination of vulnerability and hazard produces the risk of a particular outcome, such as food insecurity. These relations can be captured in a diagram, as seen in Figure A1.2.

Figure A1.2. Risk of food insecurity, hazards and vulnerability



Hazards may be natural, political, economic or social/human in nature; they may be unpredictable shocks, or longer-term trends. The latter, including, for example, weak economic growth and failures in democratic consolidation, can be as damaging for food security as sudden natural disasters or conflict. Hazards that affect individuals, such as old age, illness or being orphaned, are additional threats to food security for affected individuals, over and above economy-wide hazards.

Box A1.1. Common food security hazards

	Natural	**Political**	**Economic**	**Social**
Trend	Land shortage Soil degradation	Weak governance	Market failure Inflation	Old age Childhood
Shock	Drought Flood Earthquake	Civil conflict	Devaluation Border controls	Motherhood Accidents Ill-health

NB HIV/AIDS and other pandemic diseases – as distinct from ill-health – are both trends and shocks, and there are political aspects, social aspects, economics aspects etc in terms of impact (see Slater, 2004)

For the chronically poor, the land, labour and capital they have at their disposal may be so inadequate that they are food insecure even in the

absence of a significant hazard. This appears to be the case for around 8 million individuals across the countries of Southern Africa year-in year-out (CARE SWARMU, 2003). For many other households, however, food insecurity can occur when they are unable to cope with a particular hazard or combination of hazards. It is this latter group that appeared to be expanding significantly during 2001-03, as a result of localised climatic events *in combination with* longer-term economic trends and the HIV/AIDS epidemic: in Southern Africa as a whole, by late 2002 doubling the number of food insecure people to 16 million.

The concern in Southern Africa is that more people are at risk of food insecurity than in the past. As Figure A1.2 suggest, this can arise in three ways, thus:

- Increased exposure to hazards, since some households find their range of livelihood options curtailed and are forced to depend on risky activities, such as rainfed cropping;

- Reduced ability to cope. A key element is possession of assets, such as savings or livestock. But if these have been already been liquidated to cope with a previous hazard, future coping will be undermined. Inability to move and find additional work in times of stress may similarly reduce coping capacity: those living with HIV/AIDS are often in this situation. Coping is also affected by social relations: some fear that HIV/AIDS may weaken community mechanisms to help the weak cope. This is particularly important for food security because, as we explained above, the ability to generate income or to source food through community transfers is very important, not just the ability to grow it. Coping is also a function of formal provision of social protection by government, such as public works schemes or cash transfers.

- Increased frequency or severity of hazards. Climate change may be a threat in this respect, but equally so might be increasingly unstable food markets in which the price of maize fluctuates violently.

A feedback loop could operate as well: households that have seen either their ability to cope reduced, or the hazards they face increased, may then try to limit their exposure by undertaking less risky activities – but at the expense of forgoing income opportunities that would allow them to rebuild their assets and thus cope better. For example, farmers in drylands might plant millet rather than take the risk, arising from drought, of growing cotton or maize for which there is the chance to earn cash from surpluses. In relation to food security, livelihood strategies, in combination with livelihood outcomes themselves (i.e. in terms of poverty reduction and food security), can set up **virtuous or vicious circles** of asset accumulation and social integration, which have a critical impact on households' ability to reduce, mitigate or cope with hazards threatening food security over the longer term.

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