
**Agricultural Development and Food
Security in Sub-Saharan Africa
Building a Case for More Support**

**Malawi Country Study
Detailed Findings**

For
Agriculture Policy Analysis Unit (SAFP), Harare

A.J.E. Charman
July 2004

Contents

Contents	2
Abbreviations	5
Executive Summary	7
Section One: Introduction	13
Background	13
Research Objectives	16
Methodology	16
Section Two: The Food Security Situation	19
2.1 Food Availability	19
2.2 Domestic Agricultural Production	21
Maize	22
Rice	23
Millet & Sorghum	24
Grain legumes and groundnuts	25
Cassava and Sweet Potato	26
2.3 Food Aid / Commercial Imports	27
Imports	27
Food Aid	30
Access to foreign exchange	31
2.4 Food Insecurity and Vulnerability	32
Regional dimension	32
Household Access	32
Nutrition status	33
Coping mechanisms	33
Vulnerability	34
Market Access	35
2.5 National Food Security and Poverty Alleviation Strategies	36
Summary and Synthesis	37
Section Three: Agriculture Support: Magnitude, Evolution and Trends	39
3.1 Overview of the Macro-economy	39
3.2 Importance and Performance of the Agriculture Sector	39
Economy Structure	41
Employment	41
Structural Reforms	42
3.3 Major Constraints to Agricultural Development	43
3.4 Key Opportunities for Agricultural development	45
3.4 Public Expenditure and Support to Agriculture	46
3.5 Investment Programmes for smallholders	51
Development programs	51
Public Sector Credit Subsidisation (APIP)	53
3.6 Private Sector / Farmer Partnership	54
Summary and Synthesis	56
Section Four: The Impact of Food Import/Aid	58
4.1 The magnitude of Food Aid	58
4.2 Food Aid / Food Import Impact at Household Level	60
Impact on nutrition	60
Problems of Targeting and Timing	61
Impact on incentives	62

4.3	Impact of Food Aid / Import on Supply and Prices	63
	Food Supply	64
	Prices.....	65
4.4	Port Charges and Transportation Costs of Imported Food	69
4.5	Macroeconomic and Other implications of Food Aid and Import	70
	Summary and Synthesis	72
Section Five: Options for a Sustainable Exit		75
5.1	Improve Competitiveness in the External Markets	75
	Trade Strategy	76
5.2	Foster an Enabling Environment	81
	Address Macro-Economic Instability	81
	Invest in irrigation and other infrastructure	82
	Enhance Human Resource Development.....	83
	Improve Regulatory Framework.....	84
	Introduce Land Reform and Enhance tenure security	84
2.3	Increase Support for Smallholder Agriculture	85
	The Case for Direct Subsidisation	85
	Returns on Investment.....	87
	Macro-economic gains	88
	Avoiding Dependency	89
	Summary and Synthesis	91
Conclusions and Recommendations		93
References		98

List of Tables

Table 1: Annual Change in Daily Calorie Supply Per Capita	19
Table 2: Dietary Supply Trends: 1990-2009.....	27
Table 3: Major Food Imports, 1990-2001 ('000 Mt)	27
Table 4: Informal Cross Border Maize Trade Situation Analysis, 2002-2003.....	30
Table 5: Household Food Security Profile	32
Table 6: Poverty Distribution, c. 2003	33
Table 7: MPSRP: Safety-net Conceptual Framework.....	37
Table 8: Annual Percent Share of Domestic Exports (value).....	41
Table 9: Structural and Policy Reforms: 1981-2003.....	42
Table 10: TIP Performance	52
Table 11: WFP Development Operations Expenditure: 1989-2002.....	58
Table 12: WFP Emergency Operations Expenditure: 1989-2002.....	59
Table 13: 2002-2003 Estimated Maize Imports.....	65
Table 14: Port, transportation and other Costs	69
Table 15: Proposed Fertiliser Subsidy Scenarios	79
Table 16: Farmer Investment Packages	85
Table 17: Proposed Investment Costs US\$.....	86
Table 18: Farming System Returns.....	87
Table 19: Public Sector Support for Smallholder Farmers	88
Table 20: Macro-economic benefits.....	89

List of Figures

Figure 1: Daily Per Capita Calorie Supply: Cereals.....	19
Figure 2: Daily Calorie Per Capita Supply: Vegetable Products, Comparative Analysis	20
Figure 3: Daily Calorie Per Capita Supply: Animal Products, Comparative Analysis	20
Figure 4: Maize Production, 1987-2003	23
Figure 5: Aggregate Cereal Yield Level	24
Figure 6: Area under Cereal Crops	24
Figure 7: Grain Legume Production 1987-2003	25
Figure 8: Cassava and Sweet Potato Production 1987-2003.....	26
Figure 9: Maize and Wheat Imports.....	28
Figure 10: Maize Imports: 1994-2002	29
Figure 11: Donor Food Aid, Volumes 1987-2002	31
Figure 12: Annual Growth in the Agriculture Sector, 1987-2003.....	40
Figure 13: Government Expenditure 1987-2003 (US\$ Equivalent).....	47
Figure 14: Comparative Revenue Expenditure: Health, Education, and Agriculture 1987-2003	48
Figure 15: Agriculture Recurrent and Development Expenditure.....	49
Figure 16: Recurrent Agriculture Expenditure by Sectors, 1987-2003.....	50
Figure 17: Agriculture Recurrent Expenditure on ADDs.....	50
Figure 18: Comparative analysis of cereal aid, imports and production.	64
Figure 19: Monthly Retail Market Maize Prices, 1994-1995.....	65
Figure 20: Monthly Maize Market Retail Prices, 1997-1998.....	67
Figure 21: Monthly Retail Maize Market Prices, 2002-2003.....	67
Figure 22: The Net Foreign Exchange Contribution of Agriculture	70
Figure 23: Cereal Imports vs Fertilizer Imports.....	72

Abbreviations

AoA		Agreement on Agriculture
ADD		Agricultural Development Division
ADF		African Development Fund (African Development Bank)
ADLSAP		Agricultural Development and Livestock Strategy Action Plan
ADMARC		Agricultural Development and Marketing Corporation
AGOA		African Growth and Opportunity Act
APIP		Agricultural Productivity Investment Programme
CBOs		Community based organisations
C-SAFE		Consortium of Southern Africa Food Emergency
CSB		Corn Soya Blend
DANIDA		Danish International Development Authority
DEVPOL		Statement of Development Policies, 1987-1996
DFI		Development Finance Institutions
DfID		Department for International Development
DoPMA		Department of Poverty and Disaster Management Affairs
ECC		European Economic Community
EBA		Everything But Arms
EDF		European Development Fund
EPA's		Extension Planning Areas
EU		European Union
FAO		Food and Agriculture Organisation
GM		Genetically Modified
GoM		Government of Malawi
GDP		Gross Domestic Product
GTZ		German Technical Assistance
JEFAP		
JICA		Japan International cooperation Agency
HS		Harmonised commodity description and coding system
IDA		International Development Association (World Bank)
IFAD		International Fund for Agriculture Development
IRDP		Integrated Rural Development Projects
LDC		Least Developed Country
LLTC		Limbe Leaf Tobacco Company
MASIP		Malawi Agricultural Sector Investment Programme
MCWI		Malawi Core Welfare Indicators Questionnaire Survey
MK		Malawian Kwacha
MPRS		Malawi Poverty Reduction Strategy
MOAI		Ministry of Agriculture and Irrigation (now MOAIFS)
MOAIFS		Ministry of Agriculture, Irrigation and Food Security
MOF		Ministry of Finance
MK		Malawi Kwacha
MRFC		Malawi Rural Finance Corporation
MT		Metric tons
NFRA		National Food Reserve Agency
NFIDC		Net Food Importing Developing Countries
NGO		Non-governmental organisation
NRDP		National Rural Development Programme
NSO		National Statistical Office
NTB		Non-tariff barriers
OPV		Open Pollinated Varieties

RDP		Rural Development Project
ROs		Religious organisations
SACA		Smallholders Agricultural Credit Administration
SACU		South African Customs Union
SADC		Southern African Development Community
SADCC		Southern African Development Co-ordinating Community
SFFRFM		Smallholder Farmer Fertiliser Revolving Fund of Malawi
SGR		Strategic Grain Reserve
SMME		Small Medium and Micro-Enterprises
SP		Starter Pack (scheme)
SPS		Sanitary and Phytosanitary
T&V		Training and Visit
TBT		Technical Barriers to Trade
TIP		Targeted Inputs Programme
USAID		United States Agency for International Development
VAC		Vulnerability Assessment Committee
VAM		Vulnerability Assessment Mapping
WFP		World Food Programme
WTO		World Trade Organisation

Executive Summary

In the period 1987-2003 the Malawi food system weakened. Domestic food production collapsed nationally in 1992, 1994, and 2001, while serious local shortages occurred in 1995, and 1997. Crop failures have necessitated substantial commercial grain imports. Food aid has also been justified to provide free access to food for the poorest households. From 1990-2003, commercial cereal imports totalled 3,805,890 Mt, equivalent to 317,158 Mt annually (roughly 20% of average production). Over the same time frame, total donor food aid (cereals) amounted to 1,413,850 Mt, while non-cereal aid measured 122,230 Mt. The trend shows a growing reliance on food importation and aid.

In light of this trend, the main objectives of the study are:

- I. Describe and analyse the food security situation of Malawi.
- II. Analyse the trends of support to the food and agriculture sector.
- III. Assess the impact of dependency of food aid / import on long term food security and agricultural development.
- IV. Explore policy / exit options for the country to feed itself on a sustainable basis.

The intention is to highlight financial, technical, institutional, and legislative means through which public and private support can be increased to bring about an improvement in smallholder agriculture and rural livelihoods. The rationale of the study is to review the case and to justify the need for more support to agriculture in Malawi. The research is located, implicitly, in the conviction that alternative support and policy interventions can be designed to positively improve food security. The research, furthermore, amplifies the concern that economic liberalisation and structural adjustment alone are inadequate to meet the requirements for a sustainable development exit.

Section 2: Food Supply

The adoption of structural adjustment reforms from the mid 1980s weakened the government's capacity to support local production. But despite the investment constraints, since 1990 per capita availability of food has shown evidence of a slight improvement, rising from 1,933.4 calories / per capita per day in 1990 to 2,167.9 calories / per capita per day in 2001. This change, although highly variable, is attributable to an increase in availability of vegetable products through domestic production (notably root and tuber crops) and maize available through food aid and imports.

The increased domestic production has assured an annual maize equivalent of Mt 2,697,042, equal to 224.42 kg/per person annually. At the level of production attained over the previous 5 seasons, this would provide 2,121.23 K.cals per person per day or 93.827% of the recommended daily calorie requirement. The fundamental food and nutrition problem in Malawi in reliable rainfall seasons, is therefore less a supply question, than a problem of uneven and unequal accessibility.

Malawi remains with a significant structural production deficit in the daily calorie per capita supply of wheat, vegetable oils, meat, animal fats and milk. It is reliant on imports to supply these foods. Imports of wheat have risen steadily in volume and value over the period. The main factor inhibiting increased imports is the weak domestic demand and poorly developed markets due to low economic growth and slow private sector investment.

The trend of food aid to Malawi shows a substantial increase in volume over the 1970s and early 1980s. Since the early 1990s, food aid has intensified and diversified to encompass welfare transfer programmes and supplementary feeding for the core poor.

Smallholder production has been cyclically subject to drought impact. Production was reduced in 1991/92, 1993/94, 1994/95, 1996/7 and 1997/8. But despite these reversals, crop estimates over the study period show positive trends for maize, rice, millet and sorghum, grain legumes, and groundnut production. The trend suggests that, given stable agro-environmental conditions and investment in input requirements, a further positive improvement (3.5%) in household Kcal/caput will result over the next few years. In this scenario, by 2005 Malawi will have attained the recommended average calorie requirements (2267 Kcal/caput). Our analysis shows that the composition of cereals and starch roots in total requirements will undergo important changes: cereals will decrease to 55% of daily requirements by 2009, whereas starchy roots and tubers will rise to 19% of daily recommended requirements by 2009.

Food insecurity is unevenly distributed across Malawi. There are notable variations between urban and rural populations and between the three regions. The distribution reflects resource endowment (or entitlements) and human demography. Poverty distribution is correlated to household size and land holding.

The government food security policy is undergoing change. The Malawi Poverty Reduction Strategy provides a suitable policy framework for integrating wealth transfers into the development process. It recognises that sections of the population, the chronic poor, who comprise roughly one third of the population, need direct welfare assistance. This demands the provision of 'moderate support to the transient poor and substantial transfers to the chronically poor'. The government also acknowledges the need to embrace multi-sectoral interventions, which encompass macro-economic measures, human capital formation, and social and political empowerment.

Section 3: Expenditure and Investment

Agriculture is the mainstay of the Malawi economy. Over the past two decades, it has contributed annually about 36% of the GDP. Since 1988, growth has fluctuated, reaching 7.75% in 1991, but achieved negative results in 1992 (-7.55%) and 1994 (-11.6%), both major drought years. GDP growth has gone into decline since 1995.

The overall trend in the agricultural sector shows a decline in annual growth. The government's remedial action in 1998 to provide subsidised inputs (through the Starter Pack and APIP), successfully boosted growth by nearly 20%. But the subsequent decline in input distribution by these programmes, coupled with drought, reduced growth to -5% in 2001. The downward trend is also reflected in the estate sector, which was more profoundly affected by decreased margins, global price fluctuations, and reduced support to para-statal corporations.

The agricultural sector (encompassing farming, fishing, and forestry activities) provides more than 80% of employment opportunities. The 1998 population census, found that 78.6% of the economically active population were engaged as smallholder farmers.

Government expenditure on the overall revenue (recurrent) account has declined in relative and absolute terms in the period 1986/87-2002/03. The decline is attributable to reduced budget resources as a consequence of poor macro-economic performance, structural adjustment reforms and currency depreciation. Since 1994, the government has prioritised expenditure on human capital formation over general agricultural services.

The reduction of public sector expenditure in agriculture has fallen hardest on general services, especially affecting sectors providing direct and supportive services to farmers: research, extension and communication, training facilities, veterinary services, and specialist vocational services in cropping (irrigation). Funding for the Natural Resources College (NRC), a training institution for front line technical and specialist agricultural officers, was decreased dramatically from \$962,254 in 1990/91 to less than \$250,000 in the late 1990s.

Over the course of period under review, funding to the ADDs rose from \$6 million in 1987/88 to \$10 million in 1992/93, but thereafter fell sharply in 1993/94. During the mid nineties, expenditure ranged between \$5.5 million and \$6.5 million. The net decline in expenditure allocation to the ADDs has hindered operations, especially in four areas: planning and monitoring, training and skills development, on-site extension service provision, and communication.

The structural adjustment programmes did not result in increased private sector investment in agriculture, whilst government had not the means to implement safety-net programmes for those social sectors left out. Opportunities for private sector investment only became available in the mid-late 1990s, with the repeal of the Special Crops Act and other legislation allowing competitive input distribution. By the late 1990s, the necessity for safety-net programmes as part of the agricultural development agenda became apparent to the donor community. The MPRSP gives full recognition to the requirement for safety-nets to serve the nutritional and off-farm income needs of targeted poor and food insecure groups.

The study provides three contemporary examples of investment in the smallholder sector to achieve productivity enhancement: I) Starter Pack/TIP, II) APIP and III) Limbe Leaf / Kasungu Tobacco Farmers Trust. Although the modalities of support and target group differed in each case, these cases highlight the potential return from increased direct investment in input provision.

Section 4: Food Import / Aid Impact

Malawi has required substantial food aid and grain imports during times of humanitarian crisis. The WFP has been the leading international partner in providing food support for the transitory and chronic poor. Within this framework, the provision of food aid was intensified and diversified from the mid 1980s, in response to three factors: **first** the Mozambique refugee crisis, **second**, the need for increased supplementary and therapeutic feeding to targeted vulnerable groups and **third**, to strengthen disaster relief operations given the cyclical occurrence of drought and annual floods.. The total cost of support between 1987 and 2001 for drought relief and targeted safety nets was US\$ 174,612,000, with the food component amounting to US\$ 73,733,000.

The government has been the largest cereal importer. Its imports have correlated with domestic production shortfall, principally in maize. The government has explicitly subsidised the costs of maize imports and passed on the saving to consumers via the ADMARC

distribution network. While this strategy ensured an effective distribution of food and cushioned the consumer against price hikes, the liberalisation of markets and commercialisation of ADMARC has allowed the private sector to operate more efficient and effectively, resulting in both lower prices for consumers and improved market arbitration between sub-regional and domestic markets

Food aid and imports have had positive and negative impacts on nutrition, farmer strategies and household coping strategies, markets, and on government policies. The evidence does not support a clear case of farmer dependency. Given the resource constrained nature of the smallholder farmers, the benefits from acquiring food (dependency incentive) may out-weight labour investment in production, especially during certain periods of the year. The effectiveness of the food aid distribution process has been hindered by biased targeting, whilst the idea of stratified food distribution runs contrary to Malawi cultural norms and values.

During the most recent food crisis, there emerged strong evidence that food aid / imports had had a harmful effect on the Malawi economy. The economy suffered from the government's requirement to borrow on the domestic money market to purchase maize and subsidize the consumer price. While most food aid has been provided as grants, government acceptance thereof can have hidden cost implications, such as the cost of milling GM maize.

In the 2002/3 scenario, the combined government, donors, civil society organisations effort resulted in the importation of 788,538 Mt, a volume equal to 40% of average production over the past five seasons (2,105,178.20 Mt) or double the marketable surplus at this production level. The estimated cost of these imports was **MK 15,559,230,505.71** (roughly **US\$ 201.88 million**), a figure comparable to the 2002 tobacco export value (MK 17,893 million) (GoM/NSO, 2003c).

The impact of food aid / imports on domestic markets is uncertain.

There have been limited financial gains for government; most notably, donor budget and direct support for the management of the Strategic Grain Reserve.

Section Five: Sustainable Exits

Endorsing donor, business and civil society calls for macro-economic discipline and democratic governance, the study proposes a three pronged approach towards building a sustainable exist. The three components are: i) improved regional and global market access, allied with protection of vulnerable food security crops, ii) increased government support through subsidisation of inputs (as part of a broad based credit scheme), market access, and price support mechanisms, and iii) increased government expenditure on general agricultural services (green box support).

The study advocates universal input support to all smallholder farmers, though differentiating between three socio-economic tiers: food insecure, food secure, and emerging small commercial. A universal approach will substantially mitigate the problems inherent in targeting. While the food insecure category should be provided with free inputs, the input packaged should be limited and low geared to ensure that only the poorest sectors will subscribe. The food secure and emerging small commercial groups should be afforded access to a credit based input package to enable them to invest substantially in surplus food and cash crop production. Subsidisation should be progressively reduced to ensure a sustainable exit.

The investment benefits of the loan packages will underwrite the targeting processes, ensuring that households with sufficient land and human resources opt to improve their wellbeing through productive investment.

The above strategy will differ fundamentally from the earlier experience of inputs subsidisation. Unlike the former approach, the emphasis here falls on the transformation of smallholder farming systems through increasing maize productivity as a means to release land for allocation to diverse food crops (roots, tubers and legumes) and cash crops. Once household food security is attained, the strategy should then broaden to promoting livestock husbandry and investment in irrigation and farm mechanisation.

The initial public sector investment requirement is US \$105, 548, 538 (less the MPRS Pillar 3, free input component of US\$ 6.5 million). This figure **equals 45% of the current public sector annual debt repayment (interest and principal)**. It is envisaged that the public sector investment in the proposed agricultural strategy can be reduced in year five to US \$ 66 million if the macro-economic environment stabilises. The government should aim to secure part of the required funds for this investment programme from debt relief.

Public sector producer support must be allied with increased public sector investment in agricultural infrastructure (roads and irrigation) and market development. The public sector should also investment in human capital formation. The focus should fall on investing in skills development / training, primary and secondary education and health improvement (including strategies to mitigate the impact of HIV/AIDs). Also essential are strategies to reduce gender disparities. Measures to improve human capital and social equality should be enhanced and enlarged to encompass core and non-core poor populations in both urban and rural context. The long-term aim must be to provide greater access for the landless and near landless to off-farm income generating opportunities and skilled and semi-skilled employment in the niche crop sectors.

Recommendations

The government should seek to improve the workings of the various trade regimes (harmonisation) and strengthen producer support through direct and indirect mechanisms. The required level of support, our research suggests, must encompass the following commitments:

- I. Harmonisation (SPS and TBT): Sanitary and Phytosanitary Measures and Technical Barriers to Trade must be harmonised within regional and global trade agreements.
- II) Tariff Increases: Applied tariffs on sectors with strategic importance for smallholder agriculture development should be raised to off-set the high domestic production costs and development of an agro-industrial support service.
- III) Credit subsidisation: Credit subsidisation is required in two areas: first, subsidisation of farmer finance to procure inputs, second, subsidisation of credit for investment in import procurement (fertilisers, seeds, chemicals, and agricultural implements). The main aim of credit subsidisation should be to reduce the costs of finance through two modalities: one, reducing the high interest rate burden; two, reducing the risk premium on investment in the agricultural sector.

Farmer Finance: Credit subsidisation should be afforded to farmers accessing loans from micro-finance service providers (such as MRFC); the financial assistance should be built into the loan package and should, ideally, comprise the difference between the inflation rate (currently 10%) and the commercial interest rate (currently 45%).

Import Finance: The study endorses the concept of creating an agricultural input fund. The fund should provide partial credit guarantee to domestic agri-business lenders, with the aim of enabling small-medium size operators to expand business in inputs supply, credit, and produce marketing.

IV) Investment subsidies: The study endorses subsidisation to enable investors to access guarantees for Letters of Credit to procure necessary technologies for meat / dairy production, livestock feed manufacture, vegetable oil extraction, starch production, and grain milling.

V) Export subsidies: Export subsidisation should including: i) marketing promotion, ii) technical support to reduce the cost of compliance with country SPS and TBT measures, and iii) subsidisation on international transport and freight to reduce non-tariff barriers (insurance, levies, taxes etc.).

VI) Price support: The government should maintain the use of price support mechanisms to stabilise the market of strategic crops, especially maize. Tariffs should be seen as a more preferable tool to non-trade barriers these can be easily reduced to allow the rapid and effective importation of food in times of crisis.

There is sufficient strategic space in Malawi's agriculture tariff structure under the terms of WTO disciplines for maintaining (and even modestly increasing) tariffs on key food crop lines. As a LDC, Malawi is presently exempt from reductions in domestic support, which can be maintained and should be enhanced as part of the country's development efforts. While the study endorses the case for further direct domestic support, the extent of subsidisation and cost / benefit of public sector investment in strengthening the liberalised market (through policy reform, MIS, human capital, and financial services) needs to be carefully determined.

Section One: Introduction

Background

Food security was central to the Malawi government's agricultural development policy in the 1970s and early 1980s. National food self-sufficiency was directed towards ensuring a surplus of maize for sale to ADMARC, the monopoly para-statal marketing agency established in 1971. Whilst the food security system functioned well in 'normal' agricultural seasons, it was vulnerable to crop fluctuations and poor accessibility, especially for the poor. Imports were annually required to meet production shortfalls. Yet on the balance of 'good' seasons, Malawi earned a reputation for having achieved food self-sufficiency. But with the adoption of structural adjustment reforms, its food security achievement declined with the country becoming increasingly reliant on external food aid.

In 2002 Malawi experienced a severe food crisis that affected more than 3 million rural households.¹ The crisis highlighted the fragility of smallholder farming systems and depth of poverty. The 1998 Integrated Household Survey, from which the country's poverty reduction strategy would be delineated, identified 65.3% of the population as having below minimum consumption levels and thus poor. Within this group 28% were classified as ultra-poor. Whilst poverty was a subliminal factor in the 2001-2002 food crisis, the immediate or direct 'causes' have been much debated. The government and civil society hold different interpretations, neither side desiring to accept institutional or organisational responsibility. Within the broad scope of causality, a common set of factors have emerged:

- The stagnation of macro-economic performance in all sectors and currency depreciation.
- The substantial decline in government expenditure in agriculture development and service provision.
- Impact of structural reforms in dismantling smallholder market systems and removal of subsidies.
- The inefficiency and ineffectiveness of the management and operation of the Strategic Grain Reserve (SGR).
- The deteriorating household resilience to drought and market fluctuations as a consequence of entitlement loss through illness (HIV/AIDs), debt, and social dependency.
- Soil fertility decline and unsustainable loss of natural resource endowments.
- Socio-cultural consumption patterns (maize dependency).

As the full extend of the crisis began to emerge, criticisms were directed at the management of the Strategic Grain Reserve (SGR). The SGR was established in 1981 to manage government maize food imports and to maintain a maize buffer stock sufficient to supply 3 months of national grain needs. In 2000, at a time that the country seemed maize self-sufficient after two surplus harvests, the government heeded donor advice to liquidate a

¹ The crisis was (initially) billed as the worst 'famine ... in living memory, 'certainly worse than the drought of 1991/92, and worse than the Nyasaland famine of 1949' (S. Devereux, 2002). Both the 1949 and 1991/92 crises affected greater numbers with worse consequences. The above author drops this speculative comparison in C. Stevens, S. Devereux, and J. Kennan (2002).

sizeable portion of stocks (105, 000 Mt) and thus improve the financial status of the National Food Reserve Agency.² Maize stocks were thereafter reduced from 165,000 Mt to nil.

The depletion of the national food reserve amplified civil society panic as the scale of the food shortage became measurable, initially quantitatively, in rising maize market prices, and qualitatively, in emerging acute nutrition deficiencies and household coping measures. The private sector was seemingly slow in response to the price signals and household food demand, though the actual depth and scale of the market response (at macro, mezzo, and micro levels) would not be clearly understood until after the crisis.

The FAO/WFP Crop and Food Supply Assessment Mission (CFSAM), which toured the country in April/May 2002, estimated that government imports notwithstanding, 3,188,000 persons (28% of the population) was in need of food aid, with a requirement for April 2002 to March 2003 of 208,000 Mt (WFP, 2002). The donor crisis assessment tended to weigh on the conservative side. NGOs tended to focus on the worst case scenario. The SC-UK Household Economy Assessment (April-May 2002), for example, estimated a best case requirement of 380,000 Mt for 2.1 million people and worst case requirement of 580,000 Mt for 3.2 million people.

The WFP instituted an emergency operation programme (Regional EMOP 12000, 'Southern Africa Crisis Response'). The programme commenced in July 2002 and was extended to June 2003, distributing 229,246 Mt of food aid (including 184,317.95 Mt of maize) to 23,234,408 beneficiaries (WFP Malawi, 2003). Other donors, including USAID and GTZ, simultaneously supported parallel response programmes, providing additional food aid. Religious organisations, including numerous Church groups and the Muslim Relief Association, created independent pipelines for importing food aid to target specific groups. The collective humanitarian response was co-ordinated through the Joint Emergency Food Aid Programme (JEFAP), comprising government, donors, UN agencies and NGOs.

The JEFAP succeeded in the logistical and operational objectives of delivering food aid to targeted beneficiaries in the period between the 2002 and 2003 harvest. At the conclusion of the programme, the case for sustained food aid assistance was advocated. The WFP argued the necessity for continued assistance to 676,600 people, through four modalities: i) school feeding, ii) assistance to malnourished groups, iii) food for work (FFW) and food for training (FFT), and iv) food for people living with HIV/AIDS and the chronically ill. The case for continued food aid support to vulnerable groups is strongly advanced within international NGO circles and civil society groups.

As the food crisis abated and 2002/03 production figures confirming a return to normal maize crop yields, doubts began to surface as to the sale of the true emergency, while the scope of human response has revealed both farming system resilience and market sensitivity. Policy makers (and advisors) now acknowledge that the crisis was evidently less a consequence of national food shortage, than disparity and inaccessibility of income. The SADC FANR Vulnerability Assessment Committee reported in February 2003 that it had learned through its 'household questionnaire and its exploration of food access issues that the current crisis and high levels of vulnerability is an access crisis' (SADC/FANR/VAC, 2003: 18). Yet not all

² The recommendation to reduce SGR volume was first presented RESAL (2000). But most of the criticism focused on the IMF. The RESAL report recommended a progressive reduction from 60,000 Mt to 30,000 Mt once 'the private sector gains confidence in the government's non-intervention policy and as their capacity to arrange for needed imports strengthens'.

poor families suffered from starvation or malnutrition. Farm families with diversified cropping systems (maize, root and tuber crops, legumes, horticulture and cash crops), including farm families with less than 0.7 ha land holdings, were able to cope throughout successfully. Furthermore, evidence suggests that households with off-farm income from wages or small enterprises were able to access food at local markets.

The private sector response, which included small traders (vendors) and medium size enterprises, was more efficient and effective than had been predicted. After the 2003 harvest, the market faced a glut of maize and prices were to fall. In a recent study of informal trade and its impact on the Malawian maize market during the crisis, an important observation has been advanced:

“Governments can be reluctant to admit there is a [food] crisis, but once a crisis is acknowledged they often want to get as much aid or other concession [such as relaxation of loan conditions] out of it as possible. NGOs are often the first to flag up an impending crisis, and often receive enormous additional funds to respond to a crisis and therefore can be reluctant to admit the crisis is not as great as originally predicted.” (Whiteside, M, 2003:25).

In the post-crisis Malawi, field workers on livelihoods improvement projects have begun to talk of the negative impact that food aid has had on their endeavours. Some have gone so far as to claim that the advancement to self-sustaining poverty solutions has been ‘set ... back three or four years’ (Orr, A. and S. Orr, 2003:24).

At the macro-economy level, the crisis bore an immense cost on the Malawi economy. Commercial maize imports in 2002 amounted \$76,952,730.88; the government alone spent \$67,374,000.00 on importing maize, a sum more than double (\$64,872,946) the recurrent and development expenditure combined on agriculture in 2002/03. The food bill for the WFP Emergency Operation was \$85,694,876.64 (WFP Malawi, 2003). It is reasonable to surmise that the total food costs to solve the crisis (both imports and aid) were in excess of US 200 million, a figure which exceeded the Malawi debt re-servicing bill.³ In order to meet its import bill, the government was forced to dramatically increase borrowing on the domestic market and from international institutions. As a result of the debt incurred, the government had to revise its expenditure on debt interest payments upwards by 64% during the 2003-2004 financial year.

Since the 2002 crisis both the scope of food aid interventions and number of service providers has broadened. Whilst most practitioners recognise the need for sustainable solutions, the case for free food provision has been strengthened since the disaster experience. The scale of the AIDs/HIV pandemic in Malawi is used as a justification for prolonged intervention (FFSSA, 2003). Farmers can anticipate further support annually, although target distributions may leave them excluded from benefit, either fairly or unjustly.

Malawi has come to rely on food aid and imports to compensate for increasing structural production deficits. Regional and global trade agreements (SADC, COMESA, WTO) have liberalised access to Malawi markets and allowed cheaper imports to enter supermarket shelves and grains to flood farm gate markets. There is evidence that imports have improved food accessibility, especially during period of production shortfall. But the overall impact has been less positive. Imports have under-cut local prices and upset distribution services, causing

³ This figure included informal / unrecorded imports; detailed figures are analysed in section four below.

national production in vulnerable sectors to decline. **The net effect has been a deepening reliance on importing foods that the Malawi once produced.**

Research Objectives

The main objectives of the study are:

- V. Describe and analyse the food security situation of Malawi.
- VI. Analyse the trends of support to the food and agriculture sector.
- VII. Assess the impact of dependency of food aid / import on long term food security and agricultural development.
- VIII. Explore policy / exit options for the country to feed itself on a sustainable basis.

The intention is to highlight financial, technical, institutional, and legislative means through which support can be increased to bring about an improvement in smallholder agriculture and rural livelihoods. The rationale of the study is to review the case and to justify the need for more support to agriculture in Malawi. The research is located, implicitly, in the conviction that alternative support and policy interventions can be designed to positively improve food security.

In this investigation, the paper researches three principal questions:

1. Why has Malawi reduced support and efforts to promote sustainable food security and agricultural development? And what are the policy (and other) constraints restricting these efforts from happening?
2. What are the impacts of dependency on food aid and imports on long term food security and agriculture sector development? And what is the opportunity cost of this dependence?
3. What exit options exist to ensure sustainable food security and agricultural development in Malawi? What are the costs and benefits, policy implications, and political ramifications of these options? And what would be their implications on WTO and other trade agreements?

Methodology

The research relies primarily on secondary data. The subject of food security and agriculture development in Malawi has been extensively researched from a range of perspectives, including academic institutions, UN agencies and donors, international policy institutions and civil society organisations. The scope of this literature has been reviewed and summarised by O&M Development Consulting (2002) and White, P. and J. Appleton (1999). But there is no analysis which synthesises the findings on agricultural development trends and assessment of Malawi dependency on food import / food aid. Studies have focused mainly on the positive impact of food aid at national, regional, district, and household level; there are few works which directly tackle the negative and dependency aspects.

The main data sources consulted were: i) government publications and annual records, ii) unpublished government data covering agriculture, trade (HS records of imports and exports), iii) FAO statistical database, iv) the FEWSNET data base on crop estimates (production, hectare, and yield) and market monitoring intelligence reports v) published articles, vi) unpublished reports, project documents and official manuscripts, and vii) documents published on the internet. Interviews were conducted with key person informants in government, donor / UN agencies, NGOs, and research institutions.

The analytical approach of this study was to synthesize and harmonise the main findings in the literature with original analysis of existing data-sets (various GoM / NSO / MoCI data bases, UN MASEDA 1, FAOSTATS, and FEWSNET) and independent data compilations undertaken for this research. Data on public sector expenditure was extracted from GoM Annual Estimates of Expenditure and the Annual Appropriation Accounts. Data on livestock numbers was obtained from the DAHI. WFP Malawi provided statistical information and crude data on previous food aid distribution programmes.

The analysis triangulated the main data records against independent sources. These sources, including project monitoring and evaluation reports, media briefings, the TIP / SP evaluation archive, audit reports (NFRA), and civil society reports and documents accessible via the internet. The aim in this process was to verify the authenticity and validity of the data value. The accuracy of the data on agricultural production, for example, is questionable, as was learned in 2002 when the official crop estimates reported a significantly larger cassava and sweet potato crop than actually seemed to exist. Similarly, there are great disparities in the validity of data on population size (including household numbers), household income / expenditure, land distribution, food security and nutritional status, trade (especially informal exports / imports) and food aid volume (especially the quantity acquired through non-JEFAP pipelines).

The various data sets were studied to identify the main distributional trends for the period 1987-2003. This period was chosen to allow for longitudinal analysis of the major changes in food security and agricultural development since the beginning of the structural macro-economic reforms. The trends in production (volume, yield, and value) and import (volume and value) were examined to assess the impact of different variables, affecting the three principal components of food security: availability, accessibility and stability. These three dimensions - availability, accessibility, and stability - are hallmarks of food security and provide a measure against which national performance can be assessed. Food security itself is commonly understood as the sustained fulfilment of human demand for safe, nutritious, and culturally acceptable food.⁴ This goal necessitates an adequate food supply (availability), adequate means (or entitlements) to access food (accessibility), and adequate capacity to withstand 'shocks' or temporary disruption to the food system (stability). It is now internationally accepted that the means of acquiring food, and the food itself, must be socially acceptable (i.e. peacefully) and environmentally safe (i.e. should pose no long term negative impact).

The study methodology was guided by an analytical framework which conceptualised the research problem in diagrammatic format (ANNEX 1, TORs). The framework sought to relate the research question (and data analysis) back to the choices and decisions made by rural farm households. These decisions would be informed by human potentials, limitations and preferences, but taking consideration of the agro-ecological possibilities and socio-economic environment. The framework provides a tool to model the potential impact of policies and agricultural development interventions on household decisions in shifting their orientation towards sustainable goals (food security).

⁴ The Committee on World Food Security, for instance, defines food security as 'physical and economic access to adequate food for all household members, without undue risk of losing such access' (cited in Thomson, A. and M. Metz, 1997).

Following this framework, the methodology traces the linkages between the micro (household), mezzo (district / regional), and macro (national) levels. The impact of food import / aid dependency has registered at all levels. In our analysis of this impact, the study considers the particular effect on different socio-economic strata, on production and markets, on the macro-economy, and the latent human and psychological influence.

The Term of Reference (TORs) is attached as ANNEX 1. Additional figures and tables are contained in ANNEX 2.

Section Two: The Food Security Situation

2.1 Food Availability

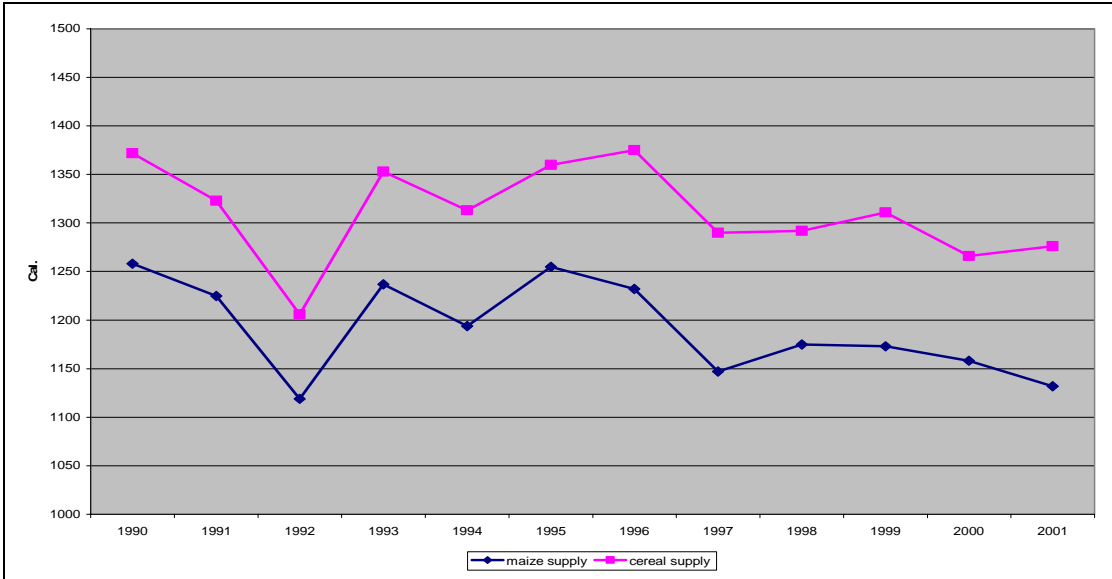
Since 1990, per capita availability of food has shown evidence of a slight improvement, though fluctuating, rising from 1,933.4 calories/per capita per day in 1990 to 2,167.9 calories/per capita per day in 2001 (FAOSTATS). Table 1 shows the annual percent change in daily calorie supply per capita. Most of the change is attributable to an increase in availability of vegetable products through production and import. The daily calorie per capita supply of animal products remained relatively stable: from 60 calories per capita per day in 1990 to 59 in 2000.

Table 1: Annual Change in Daily Calorie Supply Per Capita

1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
%	-0.4	-6.6	7.6	-1.6	4.8	4.9	-2.2	3.7	1.7	0.3	0.1

Despite the overall improvement, the trend in vegetable products shows reversals in 1992 and 1994 as a consequence of drought. Furthermore, **the supply of cereals and maize in particular provides no evidence of improvement, but rather illustrates a case of stagnation and downturn since the early 1990s**. The trend is shown in Figure 1. In the early 1990s (excluding 1992), daily per capita supply of maize ranged between 1194 (1994) and 1258 (1991), yet from 1997 the supply decreased to between 1150 and 1175 calories per capita per day. Maize comprises the bulk of cereal nutrition and hence its trend is reflected in the overall cereal supply trend which similarly shows reversal from 1997.

Figure 1: Daily Per Capita Calorie Supply: Cereals

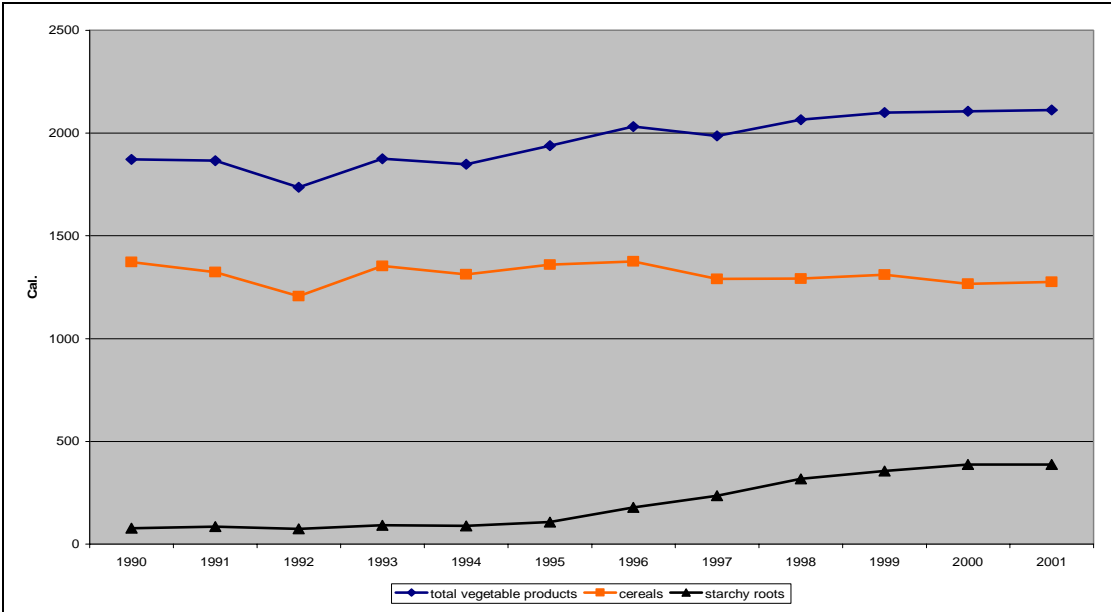


Source: FAOSTATS

The most significant contribution to the marginal increase in calorie availability derives from root and tuber crops. Whereas in 1990, root and tuber crops contributed 78 calories per capita per day, by 2001 their contribution had risen to 388 cal/cap/ daily. The trend is shown in Figure 2. In an apparent response to the severe drought in 1992, smallholder farmers diversified into root and tuber crops (and grain pulses), with production steadily increasing. The contribution of cassava to daily calorie intake has increased exponentially since 1995.

Whereas cereal imports have increased over the 1990-2001 period, the increase in root and tuber supply was entirely based on national (Malawi) production.

Figure 2: Daily Calorie Per Capita Supply: Vegetable Products, Comparative Analysis



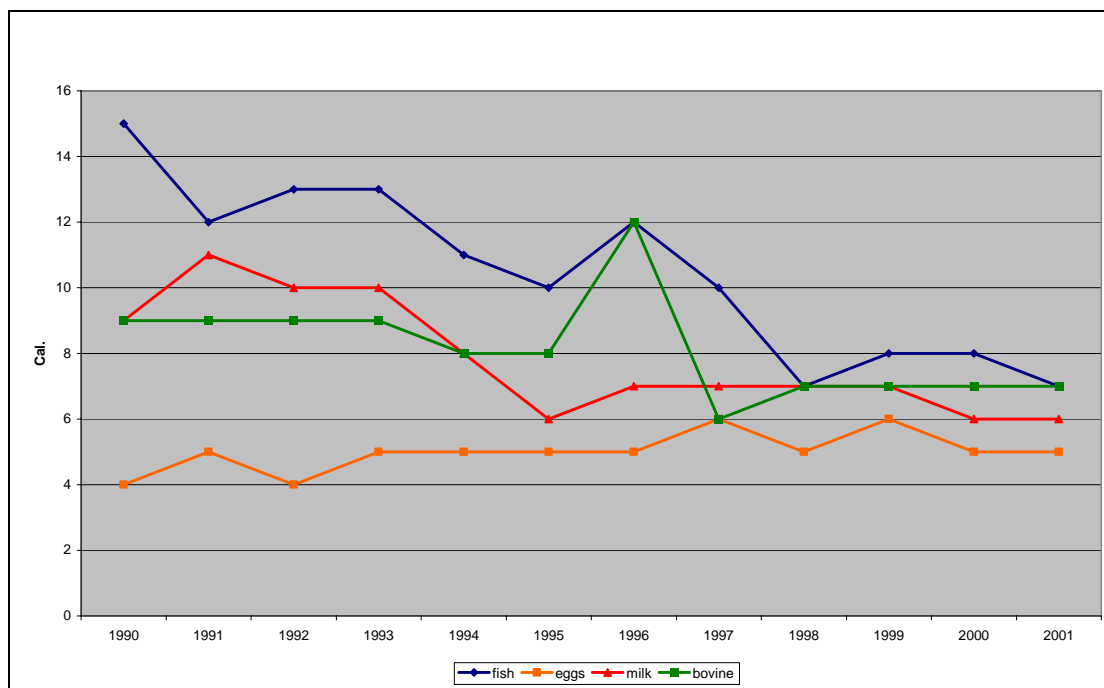
Source: FAOSTATS

Along with cereals, the daily per capita calorie supply of pulses (beans, peas, other grain legumes) has declined. The dietary contribution of vegetables has remained fairly constant (an average of 13.75 cal/cap/daily), while the availability of vegetable oils has fluctuated, but shown no clear trend. The contribution of oilcrops (soya beans, groundnuts, and sunflower) declined during the mid 1990s, but more than doubled after 1999 mainly as a result of increased production.

The supply of animal products has remained roughly constant, although the availability of bovine meat, milk, and fish has declined. The relative trends are shown in Figure 3. Fish supply has fallen from 15 cal/cap/day in 1990 to below 8 cal/cap since 1998, a decline which is attributable to both falling stocks in Lake Malawi and declining imports. The decrease in bovine meat from 9 cal/cap/day in 1990 to 7 cal/cap from 1998 can be explained by the stagnation in domestic production. The national cattle population fell from 838,471 head in 1987 to below 750,000 in the mid 1990s and only rose above this figure in 2002 (781,747) (GoM/DAHI). The supply of eggs and milk has become increasingly import-based; import volumes reflect regional prices and animal feed costs. These imports are discussed below.

The decline in bovine meat, dairy products, and fish has been significantly off-set through an increased supply of goat and pig meat. Since 1987, the national goat population has more than trebled, from 586,562 to 1,716,882 in 2002, while the pig population has shown positive growth, increasing from 88,476 to 104,450 over the corresponding period.

Figure 3: Daily Calorie Per Capita Supply: Animal Products, Comparative Analysis



Source: FAOSTATS

The Malawi Core Welfare Indicators (MCWI) study conducted in 2002 indicates that households overwhelmingly relied on maize as their staple food; indeed, maize availability is equated with household food security. The MCWI study showed slight variation to the pattern of household reliance on maize: the urban poor are more reliant on maize than the rural poor, while households in the Central and Southern regions are more singularly dependent (97%) than those of the Northern Region (82.9%).

The national reliance on maize presents a high food security risk. Households that predominantly grow maize, to the exclusion of other crops, are more vulnerable to crop failure and market shortages. Under favourable maize growing conditions, as happened in four out of five seasons between 1998/99 and 2002/2003, the average annual maize equivalent was Mt 2,697,042, equal to 224.42 kg per person annually and therefore providing 2,121.23 K.cals per person per day. The main staple food crops grown in the country thus provided Malawians with 93.827% of the recommended daily calorie intake.

2.2 Domestic Agricultural Production

Rain fed agricultural production is highly variable. **The maize crop, in particular, has been sensitive to rainfall volume and distribution, with droughts recorded in 1991/92, 1993/94, 1994/95, 1996/7 and 1997/8.** The annual Ministry of Agriculture crop statistics provide quantitative evidence of smallholder crop performance. The accuracy of the data is however questionable. The institutional pressure on programme managers (ADDs) to achieve measurable results had an inflationary effect on the estimates wherever a justifiable explanation for low crop performance could not be advanced.⁵ But despite the numerous

⁵ The responsibility for the crop estimates has been transferred from the MoAIFS to the National Statistical Office. Formerly, the crop estimate methodology was tedious and required close interaction between the extension officer and his/her farmers. As the resources for the estimates were decreased from the late 1990s, so the accuracy of the information declined correspondingly.

concerns with the data collection methodology, the annual crop estimates provide a fairly accurate picture of trends which can be qualitatively endorsed. The main trends, in terms of the food security situation, are:

- Maize production increase: from less than 1,500,000 Mt in late 1980s to above 2,000,000 Mt in the late 1990s. A corresponding improvement in maize yields from 1.1 Mt / ha in the late 1980s to 1.2 Mt /ha in the late 1990s. Yield levels tend to fluctuate and the evidence suggests that there is little or no sustained improvement in productivity.
- Rice production increase: a fairly constant increase from 32,311 Mt in 1987/1988 to 88,184 Mt in 2002/03. Average yields have increased from between 1250-1500 Mt / ha to between 1500-1750 Mt / ha over this time frame.
- Millet and Sorghum production doubled in the period 1987–2003. The area under sorghum increased from 30,000 ha to 60,000 ha.
- Grain legume (beans, peas, and soya) production grown exponentially: beans production rose from 28,000 Mt in 1987/1988 to 109,832 Mt in 2002/2003; pea production rose from 27,237 Mt in 1987/1988 to Mt 116,995 in 2002/2003, and soya bean production rose, with greater annual variation, from 13,660 Mt in 1992/93 to 40,800 Mt in 2002/03.
- Groundnut production increase: production stagnated in the early 1990s, but from the mid 1990s, rose exponentially, from 23,933 Mt in 1994/1995 to 190,112 Mt in 2002/2003.
- Root and tuber crop increase: cassava and sweet-potato hectare and output grew rapidly from the mid 1990s; both cassava and sweet-potato production has since trebled to 1,735,065 Mt and 1,535,137 Mt respectively.

In the period 1987-2003, smallholder production in all the major food crops (maize, rice, legumes, and roots and tubers) fell short of national target yields. Maize production was afforded the lions' share of extension advice. Increase in production thus correlates to area enlargement, fertiliser input uptake (hence yield improvement), price and rainfall. The data shows strong farmer responsiveness to opportunities and risk: variety diversification (maize), crop diversification (legumes, cassava, sweet potato), and drought aversion (sorghum and millet).

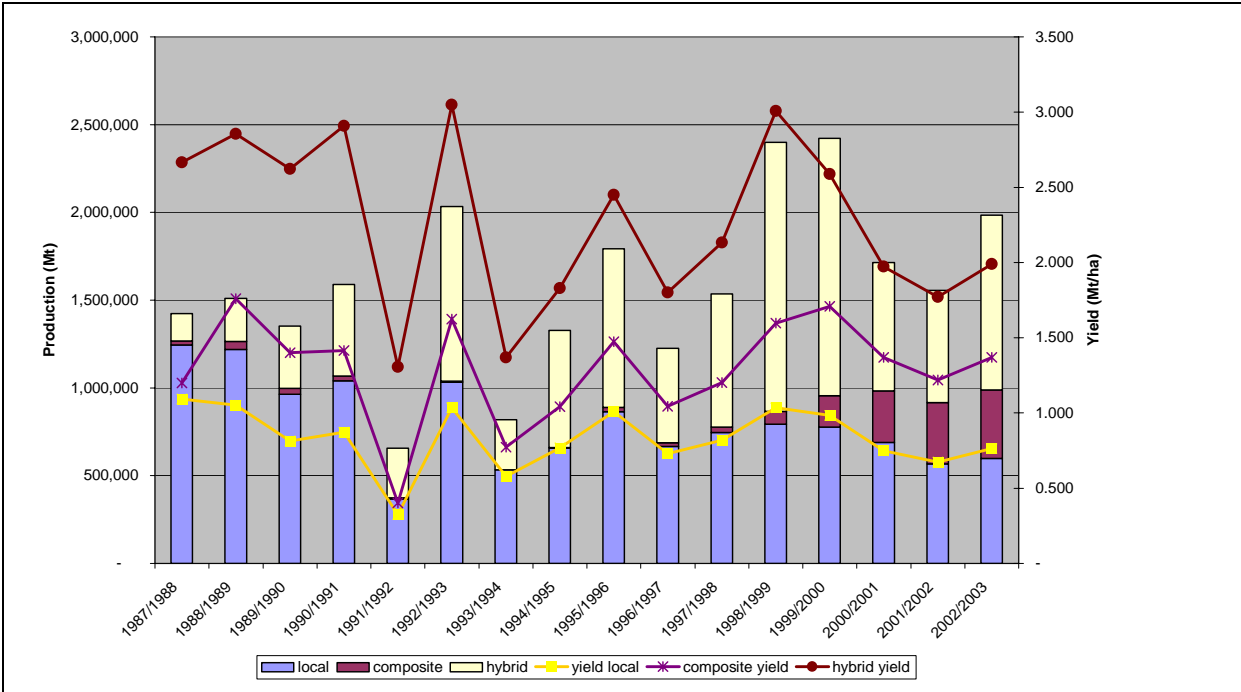
Crop performance in term of production, yield, and area for the main food staples in the period 1987/88 to 2002/03 are analysed below:

Maize

Production has fluctuated, largely due to yield variations. Yields declined significantly in 1991/92, 1993/94, and 1996/7 as a consequence of erratic and low rainfall. See Figure 8. Over the period 1987-2003, farmers have shifted from local varieties to hybrids and more recently open pollinated varieties (OPVs). Research suggests that farmers have substituted hybrid maize for local varieties during times of anticipated (or actual) price increase (EC Malawi, 2000). But the performance of hybrid maize has been highly uneven, which is primarily attributed to variation in rainfall. The influence of fertiliser uptake is an important variable in determining yield, though the quality of data does not permit conclusive arguments to be drawn. Many farmers first assess the rainfall situation before investing in hybrid seed and fertiliser. It is argued that the subsidisation of fertiliser and distribution to smallholder

farmers through the APIP, SP/TIP, and SG 2000 programmes were responsible for yield improvement in 1998/99 and 1999/00. These seasons also correlated with favourable rainfall.

Figure 4: Maize Production, 1987-2003



Source: MoAIFS Crop Estimates

The shift from hybrid / local varieties to OPVs, observable from 1999/00, owes to rising input prices and the successful demonstration of these varieties in government and civil society field programme. OPVs yields under these programmes have been more than double those of local varieties, whilst the technology affords an input cost saving on seeds.

Maize production is concentrated in the Central and Southern Regions, which ‘normally’ account for approximately 90% of the crop. A production shortfall in either of these regions has a strong impact on national self-sufficiency. The drought in 1992, for instance, affected production in the South more severely than in the Centre or North.

Rice

Rice production was erratic in the late 1980s and early 1990s, but has increased since 1995/6 season, more than doubling in volume. The growth in aggregate production correlates to area. The crop is principally grown in the lakeshore flood-plains, under rain-fed conditions and on irrigation schemes. The agro-ecological environment differs considerably from the central plains and production figures show that the rainfall impact is not comparable to the maize crop. While the 1999/2000 season witnessed a bumper maize crop, heavy rain in the lakeshore area caused flooding and extensive damage to the rice crop. Yields are low, and have only surpassed 2000 kg/ha once in the 1998/99 season. See ANNEX 2, Figure 7.

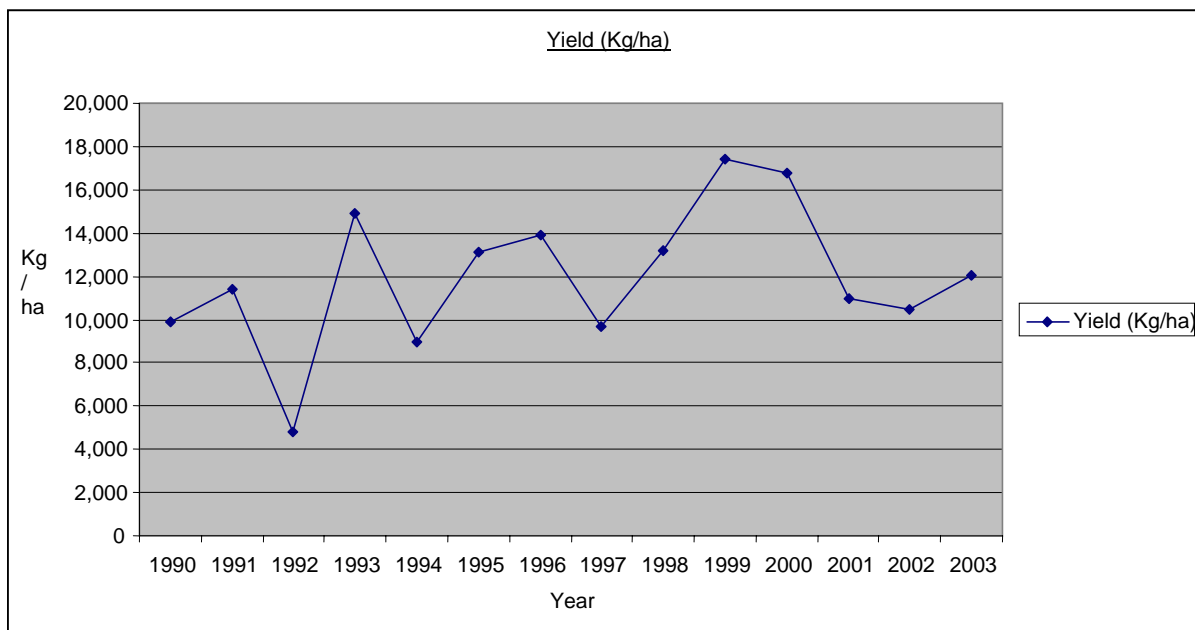
Millet & Sorghum

Millet and sorghum are ‘traditional’ grain cereal crops; especially valued for making beer. The former is still grown using the shifting cultivation approach, whilst the latter is grown in drought prone localities along the lakeshore and lower Shire Valley. The government has given little importance to these crops. Crop data for these cereals is certainly questionable. See ANNEX 2, Figure 8.

The mean yields in the period under review are 0.57 Mt/ha for sorghum and 0.54 Mt/ha for millet. Although low yielding in comparison to maize, production has been less vulnerable to input costs increases and poor rainfall distribution, thus enabling farmers to mitigate risks. Since 1992, possibly a consequence of the drought, the area of sorghum production has doubled, whilst millet similarly shows evidence of farmer response.

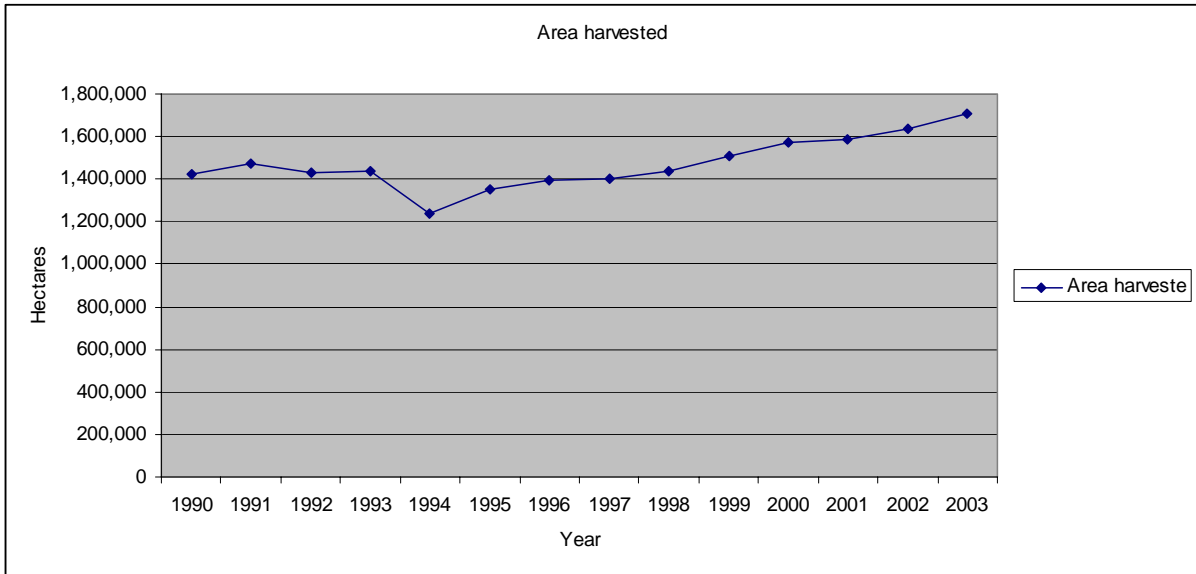
Overall, cereal yields have not shown a sustainable increase during the period 1990 to 2003 (Figure 5). Yields remained highly erratic and stayed below 1.2 tons per ha in eight out of thirteen years. Favourable weather in 1999 and 2000 and access to subsidised fertiliser inputs led to record yield levels of over 1.6 tons per ha, while the drought in 1992 reduced yield to less than 0.5 tons per ha, showing the enormous vulnerability of the country to weather-related shocks. Cereal production was increased through the expansion of area under cultivation (see Figure 6). However, land for further expansion under rain-fed conditions is limited while much once fertile land has become degraded through populating pressure

Figure 5: Aggregate Cereal Yield Level



Source: FOASTATS

Figure 6: Area under Cereal Crops

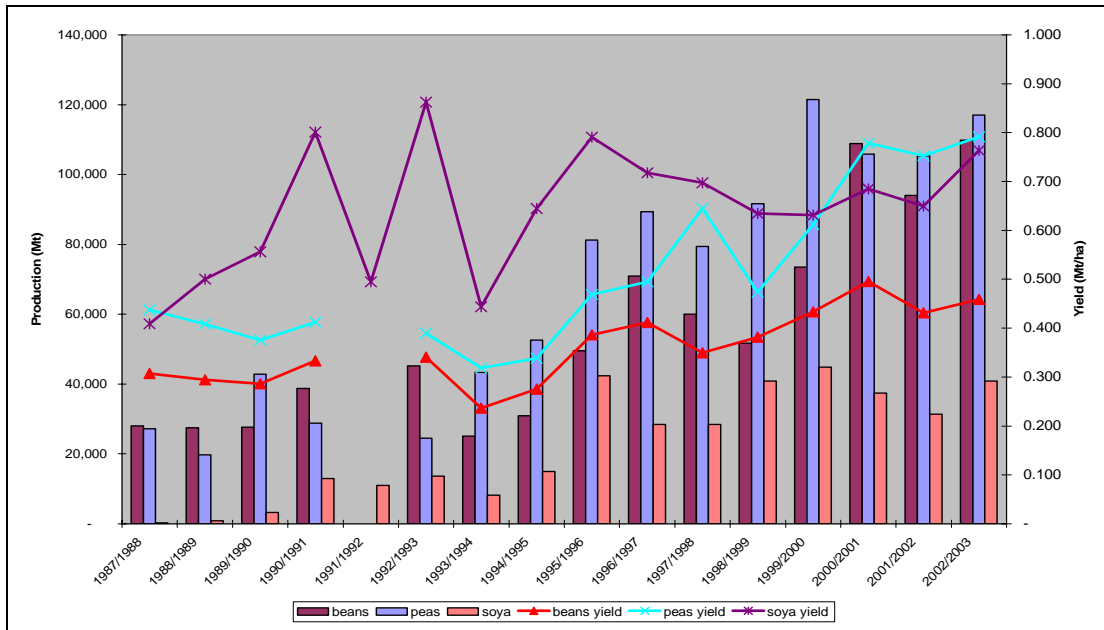


Source: FOASTATS

Grain legumes and groundnuts

Aggregate production of grain legumes (bean, peas, and soya) has shown a steady increase since the early 1990s. Groundnut production was stagnant in the early 1990s, but rapidly expanded from 1994/95. The data on legumes show less vulnerability to rainfall patterns than the maize crop. Production increase correlates to an expansion in area, although groundnuts yields have risen through the introduction of improved varieties (especially CG7 & JL25). Grain legume yields remained low (0.36 Mt/ha beans, 0.51 Mt/ha peas, and 0.64 Mt/ha soya bean), mainly as a consequence of their cultivation as an inter-crop with maize. Apart from the 1992 drought, beans and pea production and yield have been comparatively more resilient to rainfall trends than soya and maize. See ANNEX 2, Figure 9.

Figure 7: Grain Legume Production 1987-2003

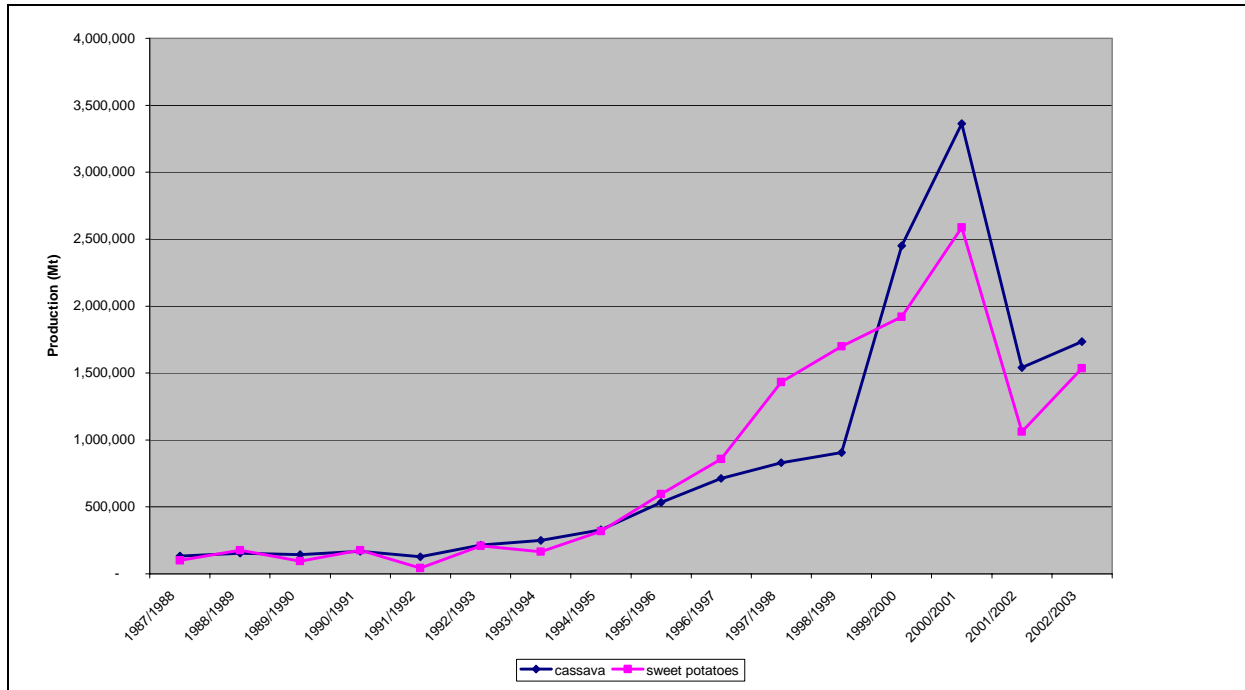


Source: MoAIFS crop estimates

Cassava and Sweet Potato

Cassava and sweet potato production has increased since 1994/1995. The data attributes the improvement to yield, though not area. The data was subject to criticism during the 2000/01 drought, when government, donors, and NGOs debated the scale of the required emergency support. As a consequence, figures for 2001/02 and 2002/03 were downsized. Yet even before this revision, yields (for both crops) were considerably below potential field trials, suggesting poor crop management (land preparation, fertilisation, and weeding).

Figure 8: Cassava and Sweet Potato Production 1987-2003



Source: MoAIFS crop estimates

During the 1985/86 season, the cassava crop was attacked by the cassava mealy bug (CMB), causing yields to plummet from an average of 12 Mt/ha to 3.5 Mt/ha (ICRA, 1988). An integrated pest-management approach, including biocontrol, was introduced to control infestation. By the early 1990s yield recovery had fully commenced. There are (approximately) 400 different varieties of cassava grown in Malawi and most farmers will cultivate a number of varieties, aiming to plant a range with different maturation cycles, yield levels, and taste ('sweet' vs. 'bitter'). Similarly, farmers cultivate a range of sweet potato, although the recommended variety 'Kenya' is susceptible to pest attack, especially in the dry season.

In general, the analysis shows that the composition of cereals and starch roots in total requirements undergoes reversal: cereals decrease from 71% of daily requirements in 1990 to 55% of daily requirements by 2009, whereas starchy roots and tubers will increase from 4% of daily requirements in 1990 to 19% by 2009. The proportional contribution of oilcrops (groundnuts) and meat (livestock) doubles over this timeframe, whilst the contribution of pluses decreases from 8% to 5% of daily requirements.

The data suggests that maize availability will stabilise and increase at a rate corresponding to population growth. The increase will, most likely, derive not from production as smallholder

will devote greater land resources to root and tuber production, but from cross-border trade with Mozambique / Zambia / Tanzania.

The supply of milk, eggs, animal fats and fish are subject to trade variation, with domestic production unlikely to increase. Growth in the supply of these foods may therefore follow an oscillating trend, with growth periods undone through supply reversals.

Table 2: Dietary Supply Trends: 1990-2009

	1990	1990	1994	1994	1998	1998	2001	2001	2005	2005	2009	2009
	Kcal/ Caput	%	Kcal/ Caput	%	Kcal/ Caput	%	Kcal/ Caput	%	Kcal/ Caput	%	Kcal/ Caput	%
veg. products	1873	97	1848	97	2065	97	2112	97	2189	98	2229	98
animals products	60	3	56	3	58	3	56	3	54	2	55	2
Total Kcal/Caput	1933		1904		2123		2168		2243		2282	
Cereals	1372	71	1313	69	1292	61	1276	59	1267	56	1263	55
starchy roots	78	4	89	5	318	15	388	18	420	19	437	19
Pluses	146	8	117	6	117	6	104	5	107	5	108	5
Oilcrops	17	1	13	1	13	1	54	2	56	3	57	3
vegetable oils	60	3	48	3	65	3	49	2	51	2	51	2
Meat	27	1	27	1	34	2	33	2	34	2	35	2
% ave. cal. requirement	85		84		94		96		101		101	
% change			-1		10		2		3.5		1.7	

Source: FAOSTATS (own calculations)

Notes: The analysis predicts that the % change will decrease by 50% between 2005 and 2009 as a result of internal constraints: land shortage, inputs, and technologies. Average necessary calorie requirements equal 2261 Kcal/caput.

2.3 Food Aid / Commercial Imports

Imports

Within the SADC region, the Malawi food balance compares closely with neighbouring Zambia, but contrasts less favourably with SADC countries in the daily calorie per capita supply of wheat, vegetable oils, meat, animal fats and milk (Charman, A. and J. Hodge, 2003). Malawi has a significant structural production deficit in these food categories, and it relies on imports. **The general trend in food imports, as summarised in Table 3, shows that imports increase sharply in years of bad weather.**

Table 3: Major Food Imports, 1990-2001 ('000 Mt)

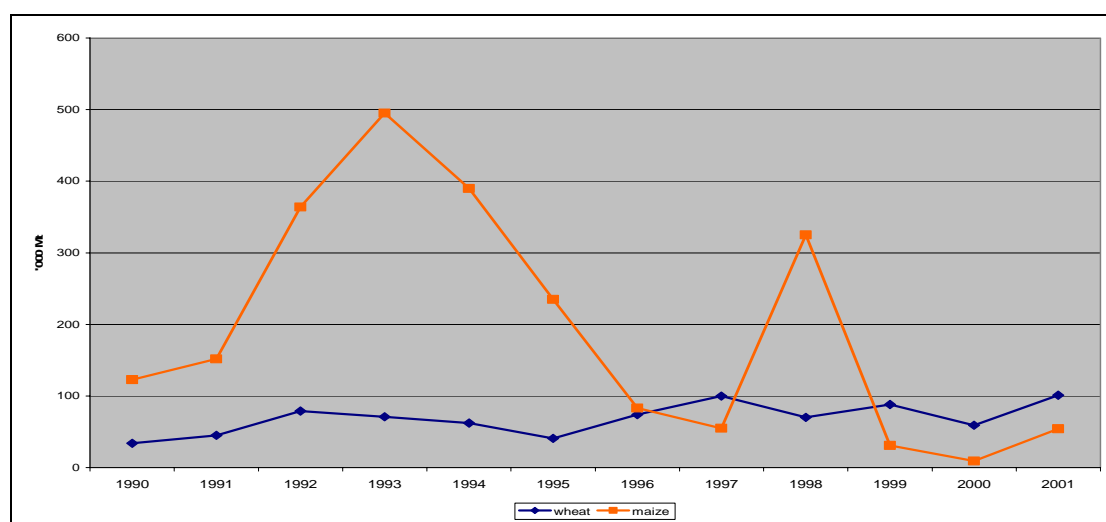
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
wheat	34	45	79	71	62	41	74	100	70	88	59	101
rice		1	4	4	4	2	1	1	1	1	4	4
maize	123	152	364	495	390	235	83	55	325	31	9	54
cereals	162	218	461	581	515	307	177	173	404	124	75	164
pluses			20	20	6	3	3	2	1	1		
oilcrops	8		2	2	1				3	3	6	8
vegetable oils	18	15	15	14	19	20	14	18	15	12	8	8
vegetables			4					1	1	1		
fruit	1	1	2	1	1	1	1	1	1	1		
meat			1					1	1	1		
milk	14	24	17	20	19	8	11	12	12		8	8

eggs					1	1	1	2	2			
fish	6	6	5	4	5	4	2	1	1		1	1

Source: FAOSTATS

Wheat imports have risen steadily in volume since 1990. But overall, **cereal imports reflect the country's consumption dependency on maize**. This is shown in Figure 4. Cereal imports have thus increased significantly when the country experiences a poor domestic maize harvest and decreased as production recovers. The country's reliance on imports of grain pulses, vegetable oil crops, milk, and fish to meet national food requirements has diminished since the mid 1990s. The reasons are complex and reflect changing regional / global trade as much as domestic production and consumption factors. The decline in pulse crop imports is probably due to no other reason than the massive increase in bean and pigeon-pea production. Oilcrop imports have, in contrast, increased over the same period, despite positive production increases in soya-bean and groundnuts and reflect growing urban demand.

Figure 9: Maize and Wheat Imports

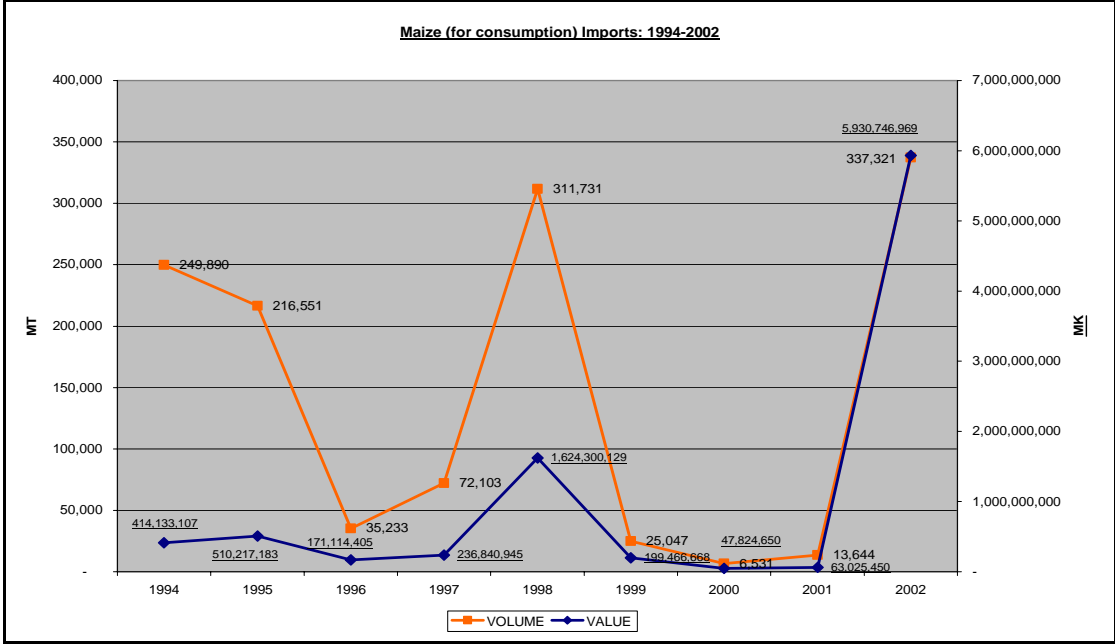


Source: FOASTATS

National maize production shortfall resulted in significant grain import and food aid deliveries in the period 1987-2003. The estimated maize shortfall was 800,000 Mt in 1992, 650,000 Mt in 1994, 300,000 Mt in 1997, and 580,000 Mt in 2002.

The private sector has had a role alongside government (ADMARC/NFRA) in importing maize. Accurate data on commercial imports (excluding official food aid) has been obtained for the period 1994-2002 (GoM / MoCI / NSO). The data shows that maize imports correlated to anticipated demand. **The Malawi maize market exhibits a notable seasonality in demand (and hence seasonality in shortage), with demand increasing between September and February, but decreasing after March / April (harvest)**. Historically, large import volumes have been ordered to meet the seasonal shortage, but often the required quantity only arrived when the supply situation had improved. This appears to have happened in 1998 (high supply vs. low demand) and conversely in 2001 (low supply vs. high demand) as can be observed in Figure 10.

Figure 10: Maize Imports: 1994-2002



Source: GoM/NSO/MCI

Since 1994, maize imports have risen above 200,000 Mt in 1994 (249,890 Mt), 1995 (216,551 Mt), 1998 (311,731 Mt), and 2002 (337,321 Mt). These imports reflect the national maize deficit of 1993-95, 1996/97, and 2001/02. The recovery of production in 1996/97, 1997/98, and 1998/99-1999/00 saw imports decline below 50,000 Mt, as evident in 1996 (35,233), 1999 (25,047), 2000 (6531) and 2001 (13,644).

In the above periods of scarcity, the majority of imports were government procurements, with the private sector responsible for approximately one third of the total import volume. In 2002, for example, of the 337,321 Mt imported, 234,500 Mt was bought by the government, with the private sector accounting for 102,821 Mt. The net contribution of ADMARC during the 1990s when the corporation was responsible for SGR management varied between 240,000 Mt (1992) and 120,000 Mt (1995). The data does not permit assessment of the comparative seasonality of private sector vs. government imports. However, it has been noted that government procurements tend to be delayed until either funds become available or demand is clarified. The cost of commercial maize imports in 2002 was MK 5,930,746,969, equivalent to approximately US \$77 million. See ANNEX 2, Figure 1.

Half the commercial imports (161,197 Mt) in 2002 were from Mozambique, with South African maize amounting to approximately one quarter of imports. The main sources of commercial maize in the decade under review were SADC members: Zambia, Zimbabwe, Mozambique, Tanzania and South Africa.

The official trade data covers only a portion of maize imports. In periods of high demand, maize has been unofficially imported from neighbouring states. After the cessation of the Mozambique civil war, cross border maize trade has developed into a thriving business. Since the mid 1990s, Mozambican maize traders have been selling upwards of 40,000 Mt through local markets in the Southern Region and even to formal agents (including ADMARC). A recent investigation of cross-border maize trade into Malawi identified significant volume from the Southern (Mozambican), Eastern (Zambian), and Northern (Tanzanian) flanks

(Whiteside, M, 2003). The total volume of unrecorded trade is potentially between 200,000-300,000 Mt, the vast bulk emanating from Mozambique, as detailed in Table 4.

Table 4: Informal Cross Border Maize Trade Situation Analysis, 2002-2003

	Normal surplus in immediate border zone	Best 'estimate' unrecorded seasonal maize trade	Price trigger (differential)
Tanzania	300,000 Mt	3-7000 Mt	US\$ 0.06 per kg
Zambia	50,000 Mt	10,000 Mt	
Mozambique	300,000-400,00 Mt	150,000-250,000 Mt	

Source: Adapted from Whiteside, M. 2003.

The unrecorded trade volume is believed to drop substantially when domestic production exceeds 2,400,000 Mt, such as 1998/99 and 99/00 when recorded imports fell below 30,000 Mt. However, due to the poor spatial integration of farm gate markets within Malawi, many Mozambican producers hold a comparative advantage over central region farmers in supplying the Southern Region markets.

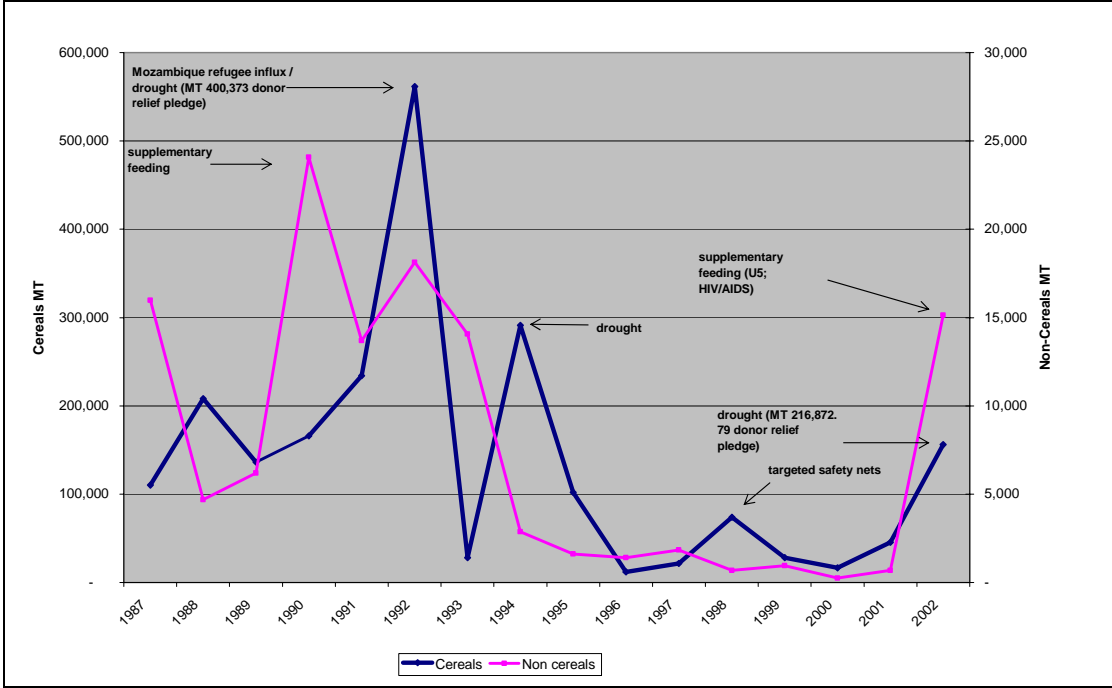
Eggs and milk form an important component of the urban diet. Malawi has a significant structural deficit in milk production, the shortage made-up through imports from South Africa / Zimbabwe (fresh) and Europe / Australasia (solid). Fresh milk imports have grown exponentially since 1994, from 83,076 kg to 2,868,976 kg in 2002. Egg imports have increased from 815,557 kg in 1994 to 3,509,479 kg in 2001, but fell to 1,221,360 kg in 2002. Despite the country's potential for fostering a poultry industry, Malawi imports have ranged between 39,000 kg in 1994 and 1,564,131 kg in 1999; though have fallen below 200 Mt since 2001. See ANNEX 2 - 6.

Malawi is structurally deficit in vegetable oils, producing relatively small quantities of groundnut, cotton seed, sunflower and palm oil. The main vegetable oil imports are soya bean, palm, and sunflower. Imports are sourced both regionally and globally, with significantly quantities obtained from Argentina, South Africa (soya), Malaysia, Indonesia (palm), and South Africa, Zimbabwe (sunflower). The volume of imports has oscillated in accordance with global price, with palm oil (mean of 6,312 Mt annually) and soya bean oil (mean of 7,547 Mt annually) contributing the bulk of supplies. See ANNEX 2, Figure 5. The value of imports for the five main vegetable oils was MK 842,838,047 in 2002.

Food Aid

The trend of cereal and non-cereal donations (food aid) to Malawi over the period 1987-2002 is described in Figure 11. Non-cereal food aid volume is closely correlated to the supplementary feeding requirements for the refugee population which fluctuated between 4,682 Mt in 1988 and 24,076 Mt in 1990, before falling below 2,000 Mt between 1994 and 2001 (WFP Malawi, 2004b and n.d.). Non-cereal aid volumes rose to 15,128 Mt in 2002, as a consequence of the increased emphasis, within civil society safety nets programmes, on targeted nutrition (under 5s and PLWA). The shift towards increased welfare transfers for the core poor was recognised and incorporated in the 2002 Poverty Reduction Strategy Paper (GoM, 2002).

Figure 11: Donor Food Aid, Volumes 1987-2002



Source: FAOSTATS and GOM / MoAI

Cereal food aid volume was determined in response to emergency relief and humanitarian requirements. The coincidence of the refugee crisis with drought in 1992/1993 resulted in the provision of 561,527 Mt of cereals, the highest recorded volume of food aid. The drought of 1994/95 attracted 291,112 Mt in 1994 and 102,099 Mt in 1995. From 1996 to 2000, the volume of donor cereal aid dropped below 30,000 Mt; this period correlates with the increased maize yields. Cereal food aid rose to 45,305 Mt in 2002 in response to drought and increased nutrition targeting requirements through direct transfers and food-for-work programmes as required by WFP and C-Safe NGO consortium.

Access to foreign exchange

Apart from maize, commercial food imports in the period 1994-2002 have been financed entirely by private traders, who fund their investments from independent sources and commercial loans. The Malawi financial service sector has expanded over this period and now comprises seven commercial and merchant banks. However, there are several obstacles to acquiring finance from domestic institutional sources, including high commercial interest rate (currently above 45%) and foreign exchange shortages and restrictions. Merchant banks offer letters of credit syndicated through international banks at the London Inter-Bank Offered Ratio, plus 3.5-4% (GoM/MoAI/MASIP, 2000). Small traders have great difficulty to acquire letters of credit. Moreover, collateral requirements are usually valued well in excess of loan requirements. These constraints reduce the number of importers to the large trading concerns, which in Malawi typically have business interests in agricultural input supply and transport.

2.4 Food Insecurity and Vulnerability

Regional dimension

Food insecurity is unevenly distributed across Malawi. There are notable variations between urban and rural populations and between the three regions. The distribution reflects farming systems and human demography. These differences are captured in the MCWI survey, summarised in Table 5. The survey characterised households according to the percentage of their food requirements produced or sourced elsewhere, distinguish into four classes. The MCWI survey found that there is little regional difference in the proportion of households who depended on their own production, although there is marked variation across the three regions in food security criteria. In the Northern Region, more households are absolutely food secure (11.6% of the total), and similarly fewer households are annually vulnerable to food shortage (5.3% of the total). Whereas in the Southern and Central regions, the proportion of households annually food insecure is 19.3% and 18.1% respectively. Significantly, the survey found less regional difference in occasional, or transitory, food insecurity; in all regions, 38.7% (N), 47.7% (C), and 50% (S) of farm families periodically fail to produce sufficient food for consumption.

Table 5: Household Food Security Profile

	own produce % of all HH	market / other sources % of all HH	% whose food sources last to Nov. / Dec. (planting)	% whose food sources last to Mar. / Apr. (harvest)	% who 'always' fail to satisfy food requirements from own production	% who 'often' fail to satisfy food requirements from own production
N. Region	87.1	12.9	88.4	11.6	5.3	38.7
C. Region	86.1	13.9	94	6	18.1	47.7
S. Region	84	16	93.2	6.8	19.3	50

Source: (GoM/NSO, 2003a)

Notes: data based on survey of 2001/02 harvest.

The latest population census was conducted in 1998. Since the previous census of 1987, the Malawi population had increased by 24% to 9,933,868 persons, growing annually at 2%. By 2002, the total population has thought to have increased to a figure in excess of 12 million. See ANNEX 2, Table 1.

The number of farm households varies according to the food security situation; in times of crisis, households tend to merge. It is nevertheless estimated that in the 2002/2003 season there were more than 2.7 million farm households producing crops independently.

Household Access

Household access to safe and nutritious food is constrained by low income, while stability is threatened by production variability, farming system obstacles (labour, land, inputs) and market price fluctuation. Poverty distribution is correlated to household size and land holding, which reflects income earning capacity. The extremely food insecure – household categorised as facing hunger / food shortages before December end – comprise roughly 32% of

smallholders and occupy average land holdings less than 0.55 ha. See Table 6. The food insecure category – households categorised as having insufficient food last from December to the next harvest – comprise 39% of smallholders; their average land holdings range between 0.55-1 ha. Food secure farmers comprise 29 % of the total, have land holdings greater than 1 ha and an annual income in excess of MK 20,076.

Table 6: Poverty Distribution, c. 2003

HH category	%	HH size	HH income (MK /annum)	HIV/AIDs impact on income	Ave. land (ha/HH)
Food Secure	29%	4.5	> MK 20,076	MK 6,825	> 1
Food Insecure	39%	5.2	MK 15,804	MK 5,373	0.55-1
Extremely Food Insecure	32%	5.4	< MK 11,532	MK 3,920	0.25-0.55

Sources: (Levy, S and C. Barahona, 2002) and (AAH, 2004).

Note: The HIV/AIDS impact assumes a high dependency ratio: orphans / ill to HH members. See the discussion on vulnerability below.

Since the late 1990s, rural incomes have stagnated and declined following the downturn in agricultural (food) production, reversing some of the distribution gains resulting from the macro-economic reforms. The rural consumer price index has, since 2000, steadily risen, thus further weakening the financial position of rural consumers.

Resource allocation within the household does not necessarily reflect individual needs, but status and power. Gender and age characterise status and determine an individual's influence over food allocation in Malawi. **Vulnerability to food insecurity is generally greatest in female headed households and tends to increase according to the number of non-economically active children that require feeding.**

Nutrition status

National demographic health surveys (DHS), conducted in 1992 and 2000, found extensive evidence of chronic and acute malnutrition in children (especially within the 0-59 month age group) and mothers. Half of children 0-59 months are stunted, while there has been no evidence of an improvement in nutritional status in the decade since 1992. About 1/4 of children are underweight, which reflects stunting, wasting or both. The incidence of low weight reaches its maximum during the child's second year (12-23 months) when supplementary feeding becomes necessary, but nutritional diversity is largely absent.⁶ Boys and girls are at equal risk of being underweight. There is significant demographic variation in global nutritional status: children in villages (rural) are 50% more likely to be stunted and 15% more likely to be wasted than their urban counterparts. Stunting of children 0-59 months is more prevalent in the Central region (55.5%) than the Southern (45.3%) or Northern (39%) regions.

Coping mechanisms

⁶ Grain and cereal based foods dominate infant feeding (GoM/NSO, 2000b, page 130).

During periods of food (maize) shortfall, households have to change their consumption patterns, either through enduring hardship and malnutrition or through seeking and realising alternative 'entitlements'. Households have adopted a wide range of strategies to acquire 'alternative commodity bundles' or, put more simply, cope with food insecurity. The strategies open to an individual or household are determined by the stock of their entitlements and these therefore differ widely. However, the most common strategies adopted by vulnerable groups during food shortages over the period 1987-2003 are consumption change, sale of labour (ganyu), sale of household assets, small and medium enterprise, and acquirement 'informal' loans, prostitution, and crop theft.

Households have learned to mitigate food security risks through a combination of agricultural and off-farm activities. The comparative weight of on-farm investment is determined by four factors: i) arable land size, ii) household labour availability and requirements, iii) input costs and iv) (crop) market opportunities. Off-farm income opportunities are constrained by finance costs and loan conditions, infrastructure accessibility and transport overheads, declining natural resources, and strong competition within the retail sector.

Vulnerability

Household vulnerability closely mirrors the demographic wealth distribution and poverty characteristics at national, regional, district, and village levels. However, vulnerability to food deficit can be either transitory or chronic. Transitory food insecurity occurs cyclically or seasonally and is not necessarily correlated to household entitlements position. Chronic food insecurity, in contrast, represents a permanent debility in food security status.

Over the past decade, cyclical food insecurity has been largely attributed to natural disasters (floods, hail, storms, and drought), pest infestation (mealy bug, larger grain borer), and human displacement (refugees). The major crises from 1992-2003 which affected farm families and resulted in cyclical food insecurity are detailed in ANNEX 2, Table 2. Severe and widespread drought occurred in 1992, 1994, and 2002, while the North was drought affected in 1997 and 2002. Flood damage has occurred annually, especially in the Southern lowlands and Central and Northern lakeshore. In the period 1997- 2003, an average of 76,000 farm families (approx. 340,000 persons) annually had their homes destroyed and suffered crop losses from heavy rain and floods. Other crises to result into a transitory crisis include crop damage from wildlife (elephants), pests (army worm, locusts), and storage loss (larger grain borer).

On the basis of the above data, **seasonal food deficit affects roughly 38-50% of rural households annually**, typically in the period between planting and harvest. **The number of food insecure households fluctuates annually, though it is estimated that between 5-20% of rural families are chronically affected.**

The HIV/AIDS pandemic has broadened and worsened the scale of seasonal food deficit. The prevalence of the disease in Malawi is still not clearly known. Levels of infection have risen from 6% of the total population in 1995 to 15% of the total population in 2001.⁷ Infections are highest among adults aged between 20-40 years, equally between men and women. Among 15-19 year olds, women account for the majority of infections. Prevalence is considerably

⁷ National Aids Commission Report (1996) and UNAIDS (2002). The 2001 Sentinel Surveillance Report (2001) gives a prevalence figure of 19.5%.

higher among the urban population (20-25%), although the gap between urban and rural may be narrowing. Sixty thousand deaths were attributed to AIDs in 2001, which left 420,000 children orphaned.

The disease has had a systemic impact, affecting all aspects of rural livelihoods (psychological, social, and economic). Studies have shown how the presence of HIV/AIDs within the family has worsened household vulnerability to food security shocks, causing it to engage earlier and more frequently in coping strategies (SADC/FANR/VAC, 2003c). The impact varies according to the household morbidity, mortality, and demographic profile. Important variables in determining the impact are whether or not the household has an active adult present or chronically ill person, whether or not the household head is chronically ill, the dependency ratio, and the number of orphaned children incorporated into the household.

The disease has affected both the ill and their caregivers. Children and elderly persons have struggled to make up the loss of labour; in some cases, however, the incorporation of orphaned children into a household can result in a net labour gain and agricultural benefit (Orr, A. and S. Orr, 2003). Using proxy indicators of HIV/AIDs prevalence in households, it is estimated that household with a high dependency ratio received 66% less income, 55% less income if no adults were economically active, 24% less income if an adult had recently died, and 49% less income if more than one adult required care and was unable to work (SADC/FANR/VAC). The possible worst case impact is shown in Table 10 above.

Market Access

ADMARC formerly ensured global access to food (maize) through the use of pan-territorial pricing and distribution. By providing inputs and outputs market, ADMARC had a 'positive and significant' effect on household income and welfare, especially in remote rural localities (World Bank, 2003b). A recent study found that per capita consumption was 20% higher for households living closer to ADMARC facilities (markets). In 1990 ADMARC operated 1,300 seasonal markets, however due to enforced commercialisation, these have been reduced to 441. Studies show that further ADMARC restructuring (including closure) will have a negative effect on household food security, though the impact is likely to vary geographically. Households located in areas where infrastructure is accessible have become less dependent on ADMARC. Similarly, where the private market infrastructure has been developed and is functional, households are not reliant on ADMARC and the corporation's marketing service can be obtained elsewhere more efficiently and more effectively (Mvula, P., E. Chirwa, and J. Kadzandira, 2003)

Market liberalisation has substantially opened access for private traders. Since the mid 1990s, the number of small scale traders or vendors has mushroomed and these individuals now provide an accessible, though not necessarily more favourable, market outlet. In the remote rural areas, vendors operate in concert with transport providers in circuit markets, thus overcoming poor inter-regional arbitrage, one of the most significant obstacles to trade. Small traders have not, however, the financial means or storage capacity to engage in inter-seasonal arbitrage and thus are committed to a continuous cycle of buying and selling (See Fafchamps, M, E. Gabre-Madhin, 2001).

Village markets are largely unregulated and much trade is undertaken through barter arrangements. Vendors exchange commodities (typically salt, sugar, vegetable oil and

household consumables) for grain (maize) on terms, while unequal, allow households to convert production-based entitlements (maize, beans etc.) into trade-based entitlements (food and welfare goods).

2.5 National Food Security and Poverty Alleviation Strategies

The government's food security strategies have historically had two objectives:

1. To promote maize production through input subsidies and agricultural services,
2. To stabilise markets and assure supply, through price control mechanisms and grain storage.

In 1990, the government formulated a Food Security and Nutrition Policy Statement as a supplement to the DEVPOL. The statement recognised the need to include welfare transfers and safety-net measures along side its mainstream agricultural development interventions. But the main impact of the policy formulation was the strengthening of information systems in monitoring production, household vulnerability status (chronic and transitory), and external influences on the national food system (O&M Development Consulting, 2002). The proposed agricultural development support for the most vulnerable was never fully carried out as a consequence of structural adjustment and the decreased availability of public sector funds on social expenditure from the early 1990s (the trends are analysed in Section Three).

Wealth transfer measures, nonetheless, fell into three categories, namely:

- Market-policies (price controls, price subsidies, minimum wages)
- Public and civil society sector safety-net programmes (nutrition supplements, free food distribution, free inputs, food or assets for work programmes)
- Public sector direct transfers, through Dept. of Social Welfare, Malawi Council for the Handicapped, and the Department of Disaster Preparedness, Relief, and Rehabilitation.

The success of past efforts was limited. Market policies proved to be inefficient and fiscally unsustainable, benefiting the non-poor, whilst missing the core poor. The safety-net programmes were 'fragmented, uncoordinated and were poorly targeted, suffering from both inclusion and exclusion errors' (GoM, 2002b). Direct public transfers were in any case small in size and narrowly focused.

The ADLSAP has been broadly incorporated into the Malawi Poverty Reduction Strategy (MPRS). The MPRS aims to provide an overarching strategy for multi-sector interventions towards the common aim of reducing poverty through socio-economic empowerment. The strategy is built upon four pillars: agriculture falls within the first pillar whose goals are pro-poor growth and the creation of an enabling policy environment.

The government aims to address some of the main structural impediments in agriculture through the MPRS. The strategy has prioritised objectives in the following order: i) expanded and strengthened access to inputs, ii) provision of research and extension services, iii) improved market access, iv) promotion of irrigation, v) encouragement for 'specific' crops, vi) livestock production, vii) reduction of land shortage and conservation, viii) promotion and expansion of farm mechanisation, ix) strengthen the sector institution and policy framework, and x) gender empowerment and HIV mitigation. The MPRS recognises that poverty reduction requires cross-cutting interventions to secure rural growth; these include, critically,

HIV/AIDs, domestic savings, human capital formation, democratisation, infrastructure improvement and environmental stability. Within the agricultural sector, the strategy earmarked the ten areas of intervention. The cost plan for the MPRS agriculture income sub-goal in 2002/3 was US\$ 23.3 million, rising to US\$ 31.49 million in 2003/04, and budgeting US\$ 29.8 million in 2004/05. The investment costs for free input distribution over the corresponding time-frame was US\$ 6.65 million, US\$ 8.89 million, and US\$ 11.65 million respectively.

The MPRS identifies food security as an impediment, on the one hand, to agricultural growth, and on the other, a precondition for human capital development. The MPRS strategies thus address not simply supply side (production support and market access), but also the human capital components of rural poverty (health, welfare support, and empowerment). The MPRS differentiated public support requirements according to disability (entitlement) and human capacity to work, as detailed in Table 7.

Table 7: MPSRP: Safety-net Conceptual Framework

Poverty status	Target group	Intervention requirements	Outcome
Chronically (core) poor. No capacity to generate income.	<ul style="list-style-type: none"> • Chronically ill • Elderly • Persons with critical disabilities 	Welfare transfers (food and assets)	Poverty alleviation
	<ul style="list-style-type: none"> • Malnourished Under – 5s • Vulnerable pregnant / lactating mothers 	Targeted nutrition	
	<ul style="list-style-type: none"> • Rural poor with labour • Urban Poor 	Public works (assets and or food)	
Transient (marginal) poor. Ability to move out of poverty.	<ul style="list-style-type: none"> • Rural poor with land 	Targeted inputs for productivity enhancement	Poverty reduction

Source: Adapted from (GoM, 2002b, page 65).

The MPSRP safety-net concept draws a clear distinction between requirements for the chronic and transient poor. The chronic poor were defined as ‘resource-constrained’ individuals whose number comprises 5-10% of the population. The transient poor occupy the other end of the scale and are defined as having the ‘ability’, though not necessarily the means, to move out of poverty; these poor comprise 30% of the population.

Summary and Synthesis

While there is evidence of an increasing reliance on imports / aid, this trend correlates with cyclical downturns in agriculture, principally during times of drought and inadequate rainfall distribution. Yet the causes of smallholder vulnerability are not simply climatic, but relate to government support and the impacts of economic liberalisation.

The adoption of structural adjustment reforms from the mid 1980s lessened the government’s capacity to support local production. Yet smallholder production nonetheless increased, although erratically and not sufficient to meet national requirements. Daily capita calorie supply of cereals, pluses and animal products has declined over the period 1987-2003, but the trend has been uneven and there have been signs of significant improvement in favourable production years and through crop diversification.

Malawi has structural deficits in wheat, vegetable oils, and dairy produce / meat sectors and has long relied on imports. The volume and value of food imports since 1994 has fluctuated widely, showing no clear trend, as a consequence of regional supply, global price factors, and shifts in domestic demand. The government has been the main grain (maize) importer. This has had major cost implications on the fiscal position and budget resources. The private sector has had wide autonomy in food importation. While structural adjustment provided greater opportunities for food importation, the government did not anticipate greater imports (and hence require a shift in policy) and has exercised control only on maize. Food imports have not brought measurable welfare benefits.

Under the present smallholder farming system orientation towards maize, there is strong likelihood of continued, cyclical, food shortages. Flood damage poses a high vulnerability risk in the lakeshore region. During drought seasons, the country will continue to rely on imports and food aid to assure national food self-sufficiency, although accessibility remains a major challenge. Recent production trends suggest that smallholders have sought to mitigate crop failure risks through diversifying cropping. If these trends continue, then there is the **possibility** that smallholder production will successfully meet national food requirements. **But the fundamental challenge will be to distribute the gain to the poor who have neither the land nor labour nor capital to undergo diversification.**

A significant proportion of the population (approximately one third) remains vulnerable to food insecurity, as a result of either chronic or transitory factors. While enhancement of the agricultural sector through investment may significantly reduce this number, it is likely that limited food aid will still be required for chronically vulnerable groups. The groups to be targeted are the chronically poor, and specifically encompassing under 5 children, expectant mothers and people living with HIV/AIDS.

An additional challenge will come from urbanisation. While demographic trends suggest that urban growth is retarding, rapid urbanisation will present new demands on the national food balance. Given the present orientation of the agricultural economy and weak agro-industrial sector, urban demands and changing food preferences from the middle classes are likely to result in greater national reliance on food importation to meet demands for wheat, meat, vegetable oils and dairy produce. The urban poor still depend primarily on maize (99.6%) as their main staple food (GoM/NSO, 2003a). Most urban poor obtain approximately 30% of their food requirements from own produce, while the bulk (more the 2/3) of these requirements are obtained from markets. The main sources of income for the urban poor are 'ganyu' labour (15%), wage labour (45%), sale of produce (6.7%), financial support from friends and relatives (3.2%) and other means (29%). In most years, apart from periods of universal drought, demand for maize, root and tuber crops, and other vegetable crops can most probably be met domestically, through transfers from surplus to deficit areas and the supply is sufficient to meet urban demand. The required imports of wheat, meat, vegetable oils and dairy produce are largely obtainable within the SADC region, which highlights the potential benefit of regional trade harmonisation.

Section Three: Agriculture Support: Magnitude, Evolution and Trends

3.1 Overview of the Macro-economy

In 1968/69 the government commenced Integrated Rural Development Projects (IRDP) in three locations, Lilongwe, Shire Valley, and Karonga. The IRDPs established infrastructure, initiated land improvement and conservation measures, provided extension services and gave farmers access to rural credit. The projects cost about US\$ 145 million. The need to extend these services more efficiently and effectively across the country was recognised and became the key principle of the National Rural Development Programme (NRDP) which succeeded the IRDPs in the mid 1970s. The NRDP was responsible for the creation of a national agricultural administrative structure. This structure comprised 8 Agricultural Development Divisions, 28 Rural Development Projects (ultimately 31) and 180 Extension Planning Areas (EPAs). The NRDP concept was to phase development through four stages, progressively intensifying. During its initial years, most of the interventions were location specific and the national objective of reaching all smallholders was not obtained.

By the early 1980s, funding constraints dictated revision to the NRDP approach, reducing its complexity and concentrating efforts on extension, training, research, land husbandry, animal husbandry and crop marketing. After 1983 no further extension to rural infrastructure was undertaken. The change in development orientation was linked to the government's decision to embark on a Structural Adjustment Programme (SAP). SAP loans were obtained in 1981, 1984 and 1986, while further funding was provided in 1988 under the IMF Enhanced Structural Adjustment facility. The structural adjustments introduced price decontrol, market liberalisation, and measures to increase administrative efficiency. For the decade (1981-1989), World Bank finance to the Malawi agricultural sector amounted to US\$ 179 million.

The NRDP did not achieve the envisaged impact, and the government saw the need to revise the agricultural development approach, in focus and scope. The new strategy was defined in the Statement of Development Policies (DEVPOL), covering the period 1987-1996. Significant structural reforms were implemented during this period, liberalising marketing and decontrolling prices, freeing interest rates, floating the Malawi Kwacha, and repealing prohibitive measures affecting smallholder farmer enterprise. This period also witnessed far reaching political reforms which resulted in the re-introduction of a multi-party political system.

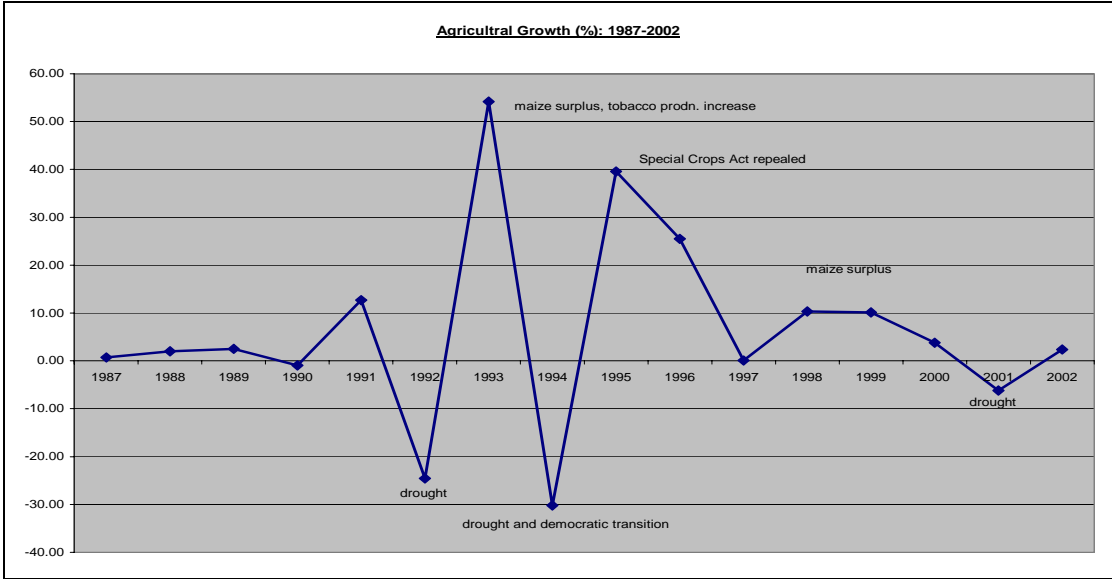
A new government emerged in 1994. In order to induce revival within the agricultural sector, the new government revised its development plan. The government strategy was set out in the 1995 Agricultural and Livestock Development Strategy and Action Plan (ALDSAP). Unlike previous policies, ALDSAP was targeted squarely at the smallholder sector, whilst the resource poor (and hence ultra poor) were afforded full inclusion. The basic ALDSAP framework (described below) remains central to the government's pro-poor economic growth strategy, as delineated in the Malawi Poverty Reduction Strategy (MPRS) (GoM, 2002).

3.2. Importance and Performance of the Agriculture Sector

Agriculture is the mainstay of the Malawi economy; it has contributed approximately 36% of the GDP over the past two decades. Growth in the agriculture sector and the economy as a consequence has fluctuated. Agricultural growth has suffered from external shocks since 1979, beginning with rising input costs (due to oil increases), falling tobacco prices, regional trade disruption, the Mozambican refugee influx, and drought (World Bank, 2000). The impact of these factors on the GDP was telling; from an average annual growth of 6.7% per annum prior to 1979, the economy slumped to 2.9% in 1988. After 1988, growth again fluctuated, reaching 7.75% in 1991, but then achieved negative results in 1992 (-7.55%) and 1994 (-11.6%), both major drought years. The correlation between negative macro-economic performance and drought was repeated in 2001, when the economy recorded a real growth of -4.1%. GDP growth went into steep decline after 1995. See ANNEX 2, Figure 10.

Figure 12 shows the annual growth rate in agriculture, forestry, and fisheries for the period 1987-2002. **The figure highlights the significant growth reversal during drought and political elections (1994). The trend also illuminates the positive impact of maize surplus and good performance in cash crops (tobacco, tea, sugar, cotton, and groundnuts) on agriculture sector growth.** The impressive maize crops in 1998/99 (2,399,260 Mt) and 1999 (2,423,252 Mt) (which correlated to the Starter Pack free inputs programme), allied with increased smallholder Burley tobacco, ensured a growth rate 10%. The trend is for the agricultural sector to swiftly recover after drought, as is evident in 1993 and 1995.

Figure 12: Annual Growth in the Agriculture Sector, 1987-2003



Source: (GoM/NSO, 2003)

Agriculture growth since 1994 has been both more extensive and stable than manufacturing and distribution sectors. The liberalisation reforms have proved comparatively beneficial to agriculture and distribution. The manufacturing sector, in contrast, had developed within an oligopolistic / monopolistic structure, focused on import substitution. The sector was (formerly) highly concentrated in the hands of large quasi public corporations, including Press Holdings, ADMARC, and the Malawi Development Corporation. See ANNEX 2, Figure 11.

Agricultural products dominate Malawi exports. Since 1994, agricultural products have accounted for roughly 90% of domestic exports, in value terms, as indicated in Table 8. The most significant agricultural export is tobacco which alone contributes between 60-67% of

domestic export value. Sugar and Tea are the second most valuable agricultural exports, providing a roughly equal contribution, though their individual share has fluctuated between 4.69-9.69% and 4.56-11.55% respectively. Sugar and tea are largely grown on commercial estates. Other agricultural exports are cotton, rice, coffee, pulses, flowers, edible nuts, spices, and natural rubber.

Table 8: Annual Percent Share of Domestic Exports (value)

	1994	1995	1996	1997	1998	1999	2000	2001	2002
<i>Agriculture</i>	89.59	90.87	88.35	88.43	89.30	88.19	88.17	83.08	86.23
<i>Tobacco</i>	62.66	68.49	63.36	67.07	65.35	65.95	62.89	61.43	60.70
<i>Tea</i>	9.69	6.17	4.69	8.13	7.91	9.45	9.41	8.59	8.72
<i>Sugar</i>	7.34	5.99	11.79	4.56	9.91	5.55	9.99	8.36	11.55

Economy Structure

The repeal of the Special Crops Act in 1995 allowed smallholders to grow ‘restricted’ crops, most importantly, Burley tobacco. The entry of smallholders doubled burley production from 20,659 Mt in 1994/95 to 49,786 Mt in 1995/96, and within a further two years pushed up production 81,181 Mt as shown. See ANNEX 2, Figure 12. The net income effect of burley production on smallholder households is not clear, though the scale of involvement suggests it was greater than the substitution effect. **While the smallholder sector advanced at the macro level, the estate sector went into sharp decline, suffering the effects of decontrol, loss of subsidisation, and agricultural policy re-orientation.** See ANNEX 2, Figure 13. Whereas smallholders benefited from new market opportunities and private sector services, rising input costs (especially seed, fertilisers, and chemicals) and the closure of remote ADMARC markets placed a constraint on growth.

The overall trend in the agricultural sectors shows a decline in annual growth. **The government’s remedial action in 1998 to provide subsidised inputs (through the Starter Pack and APIP), successfully boosted growth within the sector by nearly 20%.** But the subsequent decline in input distribution by these programmes, coupled with drought, reduced growth to -5% in 2001. The downward trend in estate sector growth is largely attributable to the declining fortunes of the large agro-industrial conglomerates, Press Trust (General Farming), MDC and ADMARC. The estate sector is also highly price sensitive to global price fluctuations (tea, tobacco, sugar) and was affected by declining domestic margins.

Employment

National demographic surveys show that the agricultural sector (encompassing farming, fishing, and forestry activities) continues to provide more than 80% of employment opportunities. The 1998 population census, for example, found that 78.6% of the economically active population, comprising 4.5 million persons (over 10 years), were engaged as smallholder farmers. Within the economically active population, 70.5% of the men and 87.4% of the women were recorded as annually engaged in farming.

The agricultural sector, furthermore, provides an important source of employment in the private sector. Medium scale enterprises provided employment o 123,733 persons in 1994, with agriculture accounting for 11.8% (14,561). In 1998, total employment had risen to 305,140 persons, with agriculture having increased its comparative position to 17.7%,

providing 54,036 jobs. There were 2,872 medium-scale enterprises in 1998 (World Bank, 2002). Although these figures are dated, the relative high growth in the sector against all others would suggest that agriculture has since retained its position as the second largest source of employment in medium-scale enterprises.

Structural Reforms

The structural adjustment reform process was built on the assumption that private sector investment in productive sectors (agriculture, manufacturing, construction, service and distribution) would increase corresponding to the rationalisation in government expenditure. While structural reforms have improved opportunities for investment, macro-economic constraints hinder investment.

Interest rates were liberalised in 1987, when lending rates were freed. Deposit interest rates were deregulated in 1988 and in May 2000 all interest rates were fully liberalised. The exchange rate system underwent liberalisation in 1994 with the Malawi Kwacha floated. Locally produced goods were exempt from surtax in 1992 in a measure designed to afford protection against cheaper imports. The government initiated the privatisation of state owned corporations in 1995 through the Privatisation Act. The intention was to improve efficiency, stimulate competition, and de-concentrate industrial ownership.

The main structural adjustment reforms that have had a direct bearing on the agricultural sector are described in Table 9.

Table 9: Structural and Policy Reforms: 1981-2003

<i>Period</i>	<i>Financial sector</i>	<i>Trade & Industry</i>	<i>Para-statal corporations</i>	<i>Agriculture sector</i>
1981-1986	Exchange and interest rates adjusted.	Tariffs, taxes rates and base adjusted; reduction in items subject to price control.	Divestiture of ADMARC's non-marketing assets. MDC and Press Holdings restructured.	Maize price adjusted.
1987-1993	Interest rates liberalised. SACA established to provide smallholder short-term loans.	Industrial licensing and export licensing reduced.	ADMARC restructured.	Smallholder price adjusted. Limited entry into burley tobacco. Private sector entry into fertiliser market (under licensing system).
1994 – 1998	Exchange rate floated. MRFC succeeds SACA as autonomous rural credit institution.	Tariffs, surtax rates and base adjusted. Deregulation of transport tariffs and imports. Tariff reduction.	Privatisation Act introduced; privatisation of railway, divestiture of agribusiness (AGRIMIL, OPTICHEM) underway. Privatisation of electricity and telecoms underway.	Maize price adjusted. Full deregulation of smallholder tobacco production. Intermediate Buyer system introduced. Liberalisation of inputs markets (including partial liberalisation of seed supply). Removal of price controls and subsidies on fertilisers. Land reform commission established.
1998	–	SADC free trade	Further divestiture of	Seed market liberalised.

<i>present</i>		agreement. Tariffs bound (under WTO disciplines)	ADMARC's non- marketing assets. SGR transferred to NFRA.	Maize price band abolished and price support ended.
----------------	--	--	---	---

3.3 Major Constraints to Agricultural Development

The DEVPOL and ALDSAP strategies were partly responsible for the improvement in food crop production in the period 1987-2002. But their impact was limited, constrained by unfavourable macro-economic conditions, declining and inadequate public sector investment in general agricultural services (especially extension, research, and technical services), private sector restraint and reluctance to invest in agriculture. In neither period did Malawi use fiscal or financial subsidies, state investment, or high tariff protection to promote agro-industrial growth and protect its industry from competitive imports. Under global competitive conditions, nascent investments in import substituting agro-industries, such as the private sector venture in sunflower production, would prove un-sustainable and collapse. See ANNEX 2, Figure 14.

Farming system impediments on investment have not improved. The main constraints include land pressure, soil fertility decline and land degradation, and deforestation, obstacles that have become more debilitating. Studies (see Whiteside, M. and S. Carr. 1997 and GoM / MOAI. 1999) identify constraints (and thus challenges) as:

- Small-land holdings: limited arable land (29-68% across ADDs), average smallholder household landholding less than 0.7ha. The smallholder sector is characterised by fragmented land holdings.
- Declining soil fertility through poor crop management practices and low nutrient application.
- The planting season is drought prone, while irrigated land comprises only 25,500 ha (0.6% of total arable land).
- Inadequate means to address pests and diseases, both in the fields and on stored crops.
- Crop production is labour intensive, with little farm mechanisation in the smallholder sector. Manual labour and hand hoe technologies account for 85% of farmer operations; 13% of smallholder farmers use draught animal power. Mechanised technologies are simply too expensive for smallholders.
- Low yielding crop varieties predominate.
- Customary land ownership. Land is issued by traditional authorities to household heads, who thus acquire use rights, but not ownership. Security of tenure is fragile.

Agriculture production in Malawi is labour intensive. Whilst the agricultural sector dominates the labour market, higher urban wages in industry / service / construction sectors and poor health (HIV/AIDs) may threaten its supply. Moreover, considerable labour is provided by children (34% of children within the age 10-14 are engaged in agriculture labour), which disrupts educational programmes and perpetuates the high rate of illiteracy and therefore low skills within the sector (GoM/MoAI/MASIP, 2000).

Research has shown that poor soil fertility, characterised by nitrogen deficiency, is the major obstacle to increased cereal production in Malawi. It is currently estimated that harvested crops remove about 160,000 Mt of nutrients per year, whereas only 70,000 Mt are replaced through mineral fertilisers. Organic manures are thought to supply between 15,000-20,000 Mt of nutrients annually (cited in EC Malawi, n.d.).

The literature is in broad agreement that one of the greatest obstacles to overcoming the above farming system constraints is access to finance to enable farmers to acquire inputs (GoM/MoAI/MASIP, 2002). Under the fertiliser subsidy removal programme, smallholder consumers had to meet the full costs by 1998. The government as part of the DEVPOL strategy aimed to extend access to seasonal credit from 16% of smallholder farmers to 25-33% over the development period through the Smallholders' Agricultural Credit Administration (SACA) service. SACA operated as a component of the ADDs and built a link between credit service and technical extension.

SACA achieved the immediate goal of increasing access to rural finance, providing loans to 25% of smallholder farmers by 1993. High loan repayments were initially achieved, although the system was oppressively implemented. In 1993, on the eve of the transition to a multi-party political system, loan recovery fell to 20%. SACA was then abolished. The farm credit club system was maintained by the Malawi Rural Finance Corporation (MRFC), which replaced SACA. The MRFC has succeeded in maintaining credit discipline. Its scope, however, has been sorely affected by devaluation which eroded the value of its loan portfolio. By 2000 less than 20% of smallholder had access to credit. The provision of credit through MRFC, was nonetheless largely responsible for the swift smallholder response and investment in burley tobacco production.

Since the mid 1990s, the main commercial institutions in Malawi have minimised their lending to the agriculture sector. These institutions now largely confine their lending to farmers with leasehold certificates (the estate sector), whose property stands as collateral. The institutions have taken this course of action in response to high default through falling profitability in tobacco and maize and wilful default in the smallholder sector. Under the prevailing high interest rates, commercial lending to the smallholder sector is not viable. Low cost micro-finance facilities for both agricultural and non-agricultural activities are available mainly through non-governmental institutions.

The provision of agricultural extension services and research has declined since the early nineties. Up until 1994, Malawi applied a version of the T&V extension system, which proved top-down (non-participative), costly, and ineffective. The Ministry has since adopted an pluralistic, demand-driven, participatory approach (GoM/MoAI, 2001). But extension service provision is still beset with problems of inadequate finance, insufficient transport facilities, low staff morale, inadequate knowledge on the new extension approach, weak linkages with research, programme overloading, and high levels of attrition and inefficiency in staff due to HIV/AIDs. The performance of the Research Department has similarly been hamstrung by inadequate funding, low staff morale and inefficiency, and weak linkages with farmers.

Government agriculture policy is inadequate to address these constraints. The Ministry has identified several areas in which policy needs strengthening (GoM/MoAI/MASIP, 2000). It has advised, inter alia, i) the development of an agricultural finance policy to guide investment and mobilise resources for the sector, ii) the formulation of an agricultural

marketing policy, which sets-out incentives for communities and private sector to expand marketing, iii) the development of an efficient and equitable land tenure and husbandry policy, iv) the revision of the penal code and allied security measures to counteract the increasing theft, and v) the improvement of inter-sectoral linkages within the Ministry and alignment of Ministerial roles and functions with the decentralisation process so as to ensure more efficient utilisation of scarce resources.

Markets and market infrastructure are considered inadequate and underdeveloped relative smallholder farmer requirements. Rural storage facilities are limited in number, while poor road conditions impose high costs on hauling produce to urban markets. The infrastructure of urban markets is outdated and unable to serve the growing demand, thus making these markets difficult to monitor, regulate and collect fees.

3.4 Key Opportunities for Agricultural development

Malawi's agro-ecological system can support the production of a wide diversity of food and cash crops. According to Jeffe (1997)⁸, Malawi has a comparative advantage in the production of tomato, paprika, coffee, cotton and groundnuts whose DRC values are 0.17, 0.23, 0.27, and 0.35, respectively. It has also a comparative advantage in the production of tobacco and various vegetable products. Food production is diversified with production of maize, rice, cassava, sweet potato, sorghum, millet, and grain legumes undertaken across the country in different farming systems. The potential for sustained diversification and accelerated growth is promising, provided an enabling environment is created for the producers and exports can compete in global markets.

Smallholders in Malawi have demonstrated their capacity to produce marketable surplus in grain, root and tuber, legume, vegetable oil and tobacco crops. Farmers have the expertise and farming experience in these crops to significantly raise output, **if** adequate inputs (supply side inducements) and marketing structures (demand side inducements) are available. However, the performance of smallholder production is below potential, given existing technology (predominantly hoe based) and input constraints. The absence of specialist knowledge does not, seemingly on the evidence of burley tobacco adoption, hinder the adoption of new crops or cropping systems. While low technology integration restricts labour productivity, smallholders have successfully adopted new crop systems (through inter-planting, relay crops, and rotations) and soil fertility improvement technologies (including fertiliser, compost/manure, and agro-forestry) to enhance farm output.

Malawi has potential to produce niche crops (including spices, tree nuts, cut flowers, and mushroom). These opportunities would need to be developed in partnership with the private sector to ensure effective post-harvest management and export promotion in regional and global markets. Farmer organisations can play an important role in public-private sector agricultural investment partnerships. Already partnerships between farmer organisations and private sector investors in the horticulture, tobacco, and sugar sectors has resulted in improved productivity and increased employment opportunities for the ultra poor and near landless farmers.

⁸ As quoted in Weldeghaber (Wodu) Kidane, Malawi: Agriculture Sector Brief, Policy Assistance Unit, FAO Sub-Regional Office for Eastern and Southern Africa, Harare, March 2001.

Malawi is highly dependent on rain-fed cultivation. Yet the country has vast water resources in its lakes, rivers, wet-lands and underground supplies. While about 200,000 ha of its arable resources are irrigable, only 25,550 ha are presently irrigated. The major limitation to expanding irrigation is the high investment costs; most suitable arable land exists above the drainage basin, thus requiring investment in pumping. Alternative solutions include the construction of small earth-dams, the protection of catchment areas to minimise siltation, and the promotion of low cost water lifting devices.

Malawi has extensive grasslands (818,620 ha) and forests resources (3,514,850 ha) which could be more effectively exploited for livestock and natural products (honey, mushrooms, insects and others) respectively.

Livestock is an important component of the smallholder sector, yet animals are not extensively integrated. Livestock numbers are low given the available land resources. The inability of smallholders to integrate livestock into their farming system and expand the sector poses a warning against substantial public financial and technical investment at this stage. The development of the Malawi livestock industry must be seen as a means towards a sustainable exit from high levels of government support, but only when food production has been increased. The first challenge is the improvement of animal nutrition. A major constraint is the high costs of imported animal feeds. The development of agro-industries with linkages to farmer organisations in the production of cereal crops, vegetable oil crops, and legumes could result in more cost effective feeds.

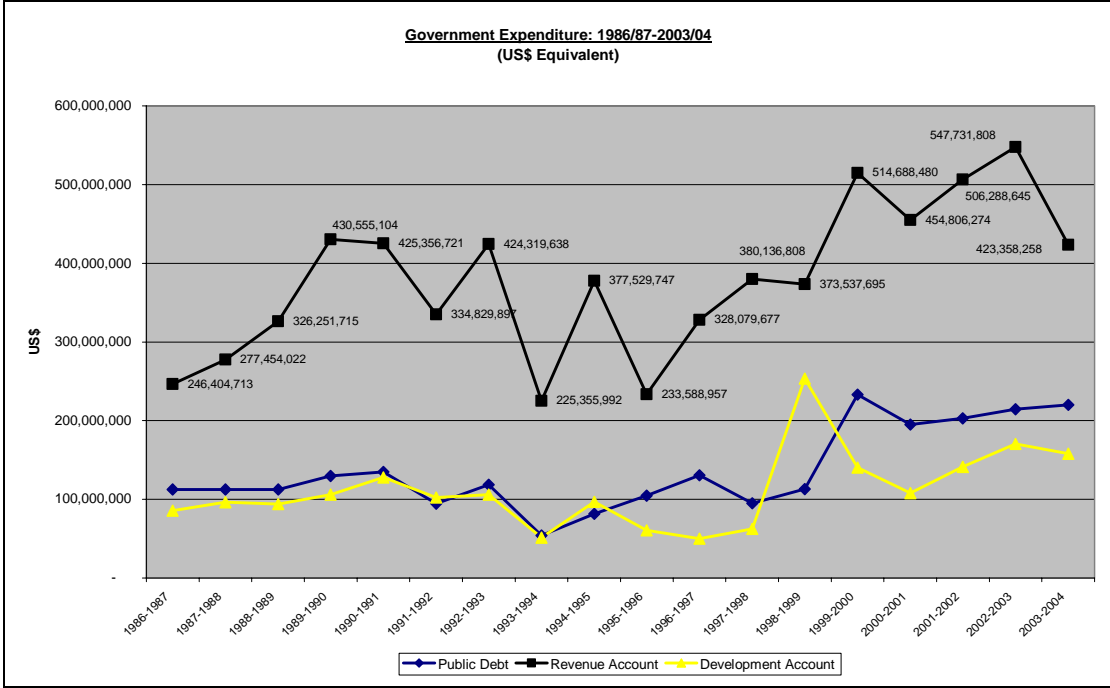
3.4 Public Expenditure and Support to Agriculture

Government expenditure on the overall Revenue (recurrent) Account⁹ has greatly fluctuated, in equivalent US\$ terms, over the period 1986/87-2002/03. The fluctuation is attributable to varying income, a factor of macro-economic performance, and currency depreciation. Over this period, the average exchange with the US dollar has fallen from MK 2.22 in 1987/88 to MK 77.07 in 2002/03. There were sharp depreciations in 1991, 1993, 1995, and yearly from 1998-2001. See ANNEX 2, Table 3.

Revenue account expenditure rose from \$246 million in 1986/87 to \$430 million in 1989/90, thereafter expenditure oscillated following a downward trend to \$373 million in 1998/99, rising sharply above \$500 in 1999/00, 2001/02, and 2002.03; for 2003/04 expenditure is estimated to fall to the equivalent 1998/99 level. The trend is illustrated in Figure 13.

⁹ Data refers to 'Actual Estimates' as given in the Auditor General's Appropriation Accounts and Ministry of Finance Annual Estimates of Income and Expenditure. The calculations and US \$ conversions are our own.

Figure 13: Government Expenditure 1987-2003 (US\$ Equivalent)

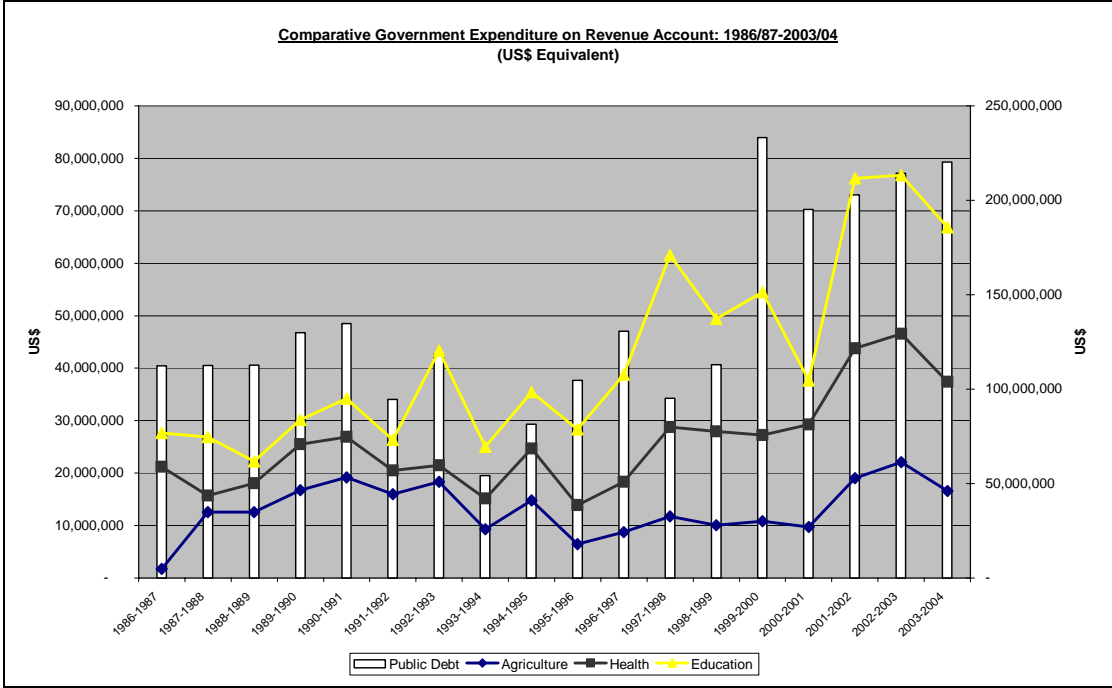


Source: GoM/MF

The development account, which comprises capital investment for programmes and projects, has varied less extensively. The account includes government investment (from revenue sources and domestic borrowing), programme loans (from international development funds and foreign governments), and development grants (from multi-lateral and bi-lateral donors). These resources have included budgetary support and counterpart funds. Expenditure on the development account roughly equated public debt repayment (interest and principal) in the DEVPOL period 1986/87-1993/94. **From 1995/96, expenditure on debt re-servicing has exceeded development account expenditure in all years, apart from 1988 when depreciation reduced government revenue.**

Within the overall (recurrent and development) expenditure framework for 1987/88-2002/03, agriculture has fared comparatively poorly. The proportionally allocation within the revenue account budget on education and the health sector has increased, noticeably since the point of democratic transition. Free primary education was a central electoral promise by the new government. The trend of decreasing investment in agriculture verses education and health sectors are illustrated in Figure 14. Health currently receives more than double the agriculture allocation, whilst education receives more than four fold this amount. Furthermore, the ratio of expenditure on agriculture to public debt re-servicing illuminates the under-investment in the sector: during the DEVPOL and early ALDSAP era, the ratio was approximately 1:10, since 1999/2000 it has widened to 1:20.

Figure 14: Comparative Revenue Expenditure: Health, Education, and Agriculture 1987-2003

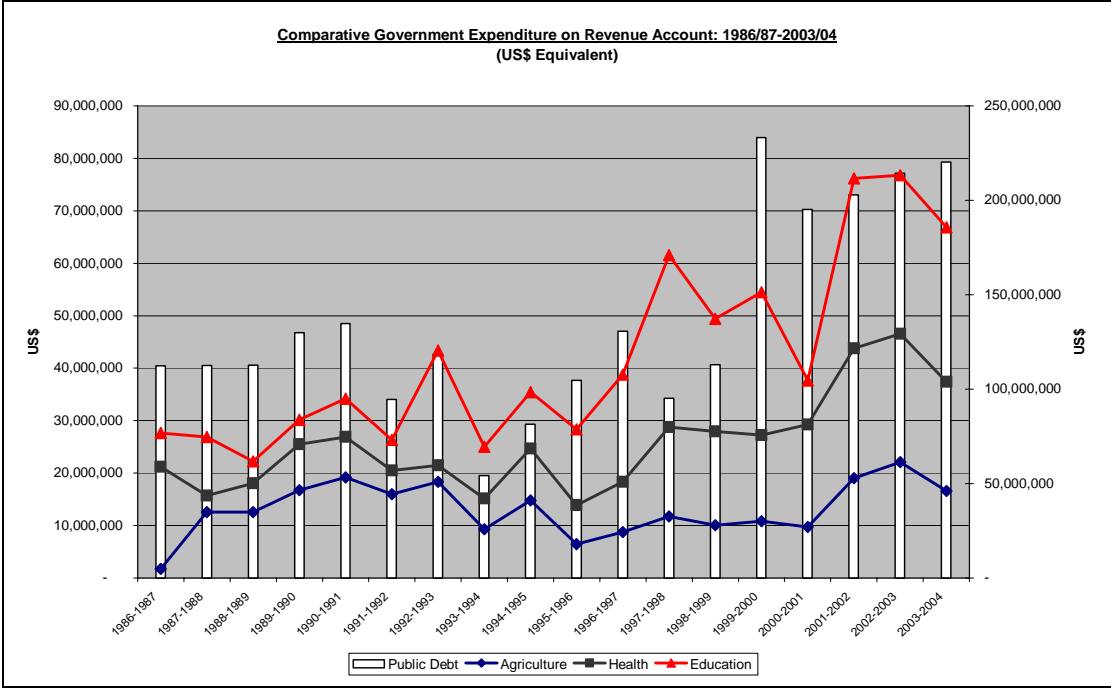


Source: GOM/MF

The recurrent and development accounts for the Ministry of Agriculture show a clear decline in expenditure, beginning in the mid 1990s. Financial support to agricultural parastatals (including ADMARC) was accounted separately; investment in the main corporations was reduced under structural adjustment, but most dramatically reduced in the late 1990s as part of the UDF government’s package of economic reforms. The trend in agricultural expenditure is illustrated in Figure 15. Before 2001/02, when the recurrent account size was dramatically increased to in excess of \$22 million, expenditure on the two accounts (recurrent and development) had fallen from the 1990/91 high expenditure of \$19 million and \$16 million respectively. Between 1989/90 and 1992/93, the development account amounted to approximately 80% the recurrent account size, but therefore fell to less than 50% of this value. Expenditure on the development account rose, proportionately, in 1998/99 as a consequence of the Kwacha depreciation and investment in safety-net programmes.

Investment in agriculture has declined in both relative and absolute terms. At no point in the ALDSAP and Malawi Poverty Reduction Strategy programmes has capital investment in agriculture development reached the levels sustained from 1989-1992 in the DEVPOL strategy. However, the MPRS has provided a framework for increased investment in the sector.

Figure 15: Agriculture Recurrent and Development Expenditure



Source: GoM:MF

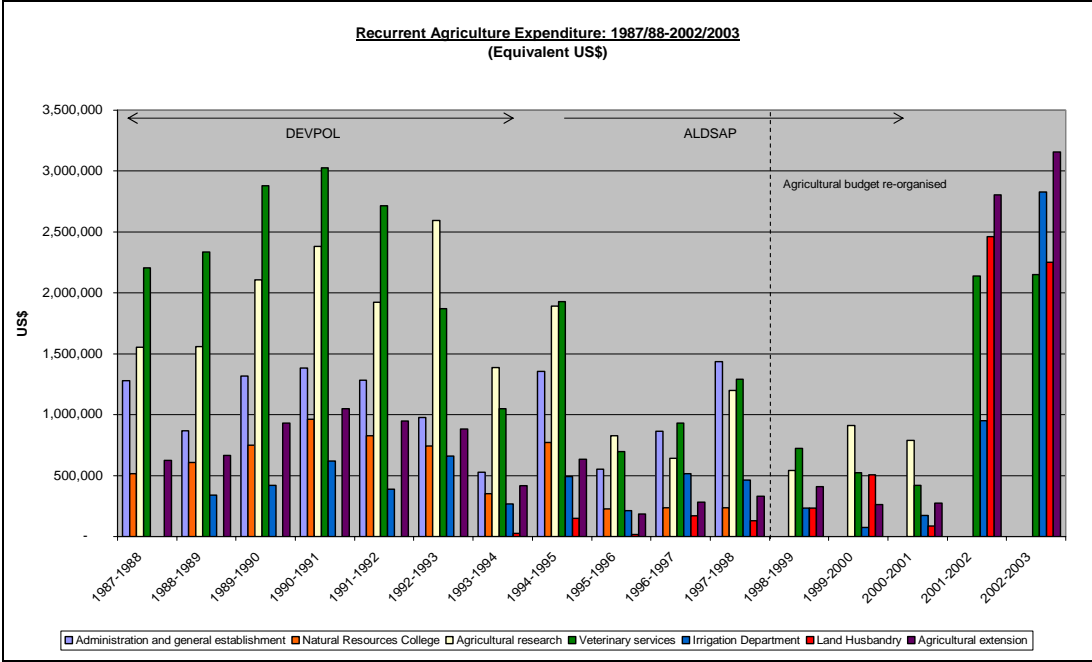
The Agriculture Ministry allocated recurrent expenditure to eight sectors (including departments) and the eight Agricultural Development Divisions (ADDs). After 1998, the Ministry budget was re-organised, amalgamating the eight sectors in four. The change in budget presentation complicates time-series analysis, especially as the allocation includes the new programme headings of ‘crop production’, ‘food security’, and ‘technology generation’ and development. Furthermore, from 2001 expenditure on ‘administration and general establishment’ incorporates a proportion of expenditure formerly allocated to the ADDs.

Agriculture expenditure on the eight sector categories, namely ‘Administration and General establishment’, ‘Natural Resources College’, ‘Agricultural Research’, ‘Agricultural Communication’, ‘Agricultural Services’, ‘Veterinary Services’, ‘Irrigation Department’ and ‘Land Husbandry’ went into steep decline between the DEVPOL and ALDSAP strategies, as illustrated in Figure 15. For specific details, in constant US\$ terms, see ANNEX 2, Table 4. The sectors hardest affected were those providing direct and supportive services to farmers: research, extension and communication, training facilities, veterinary services, and specialist vocational services in cropping (irrigation).

Revenue allocation during DEVPOL was weighted towards veterinary services and agricultural research and both livestock and research agendas were strongly supported in the development account. The central aims of these agendas respectively, were to improve and integrate livestock into the farming system, thus utilising non-arable land resources, and to develop ‘maize seed that is both high yielding and acceptable to the rural communities’ (GoM, 1987, page 23). Funding for the Natural Resources College (NRC), a training institution for front line technical and specialist agricultural officers, rose and fell proportionate to other sectors, notably agricultural extension, decreasing from \$962,254 in 1990/91 to less than \$250,000 in the late 1990s. (See Figure 16). The decrease in funding was to result in the virtual collapse of extension service provision within the ADD/RDP structures (Mbalule, J., A. Charman, and W. Ehret, 2003). (See Figure 17).

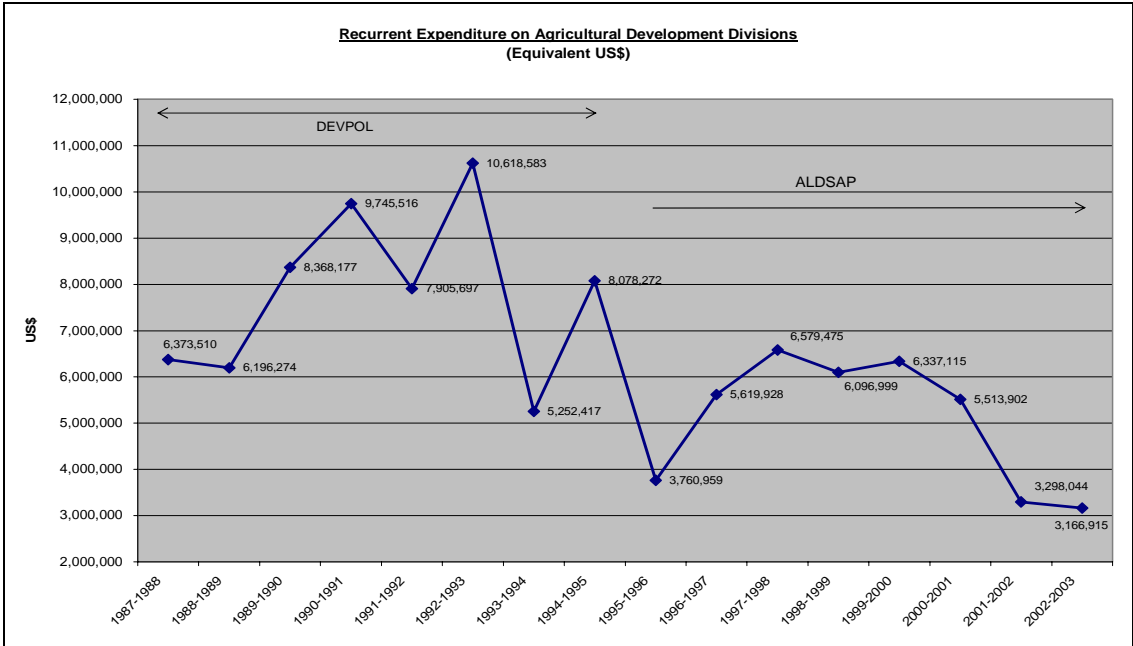
Administration and support services from Ministerial headquarters became the main beneficiaries within the recurrent allocation from 1997/98. Prior to this change, the ADDs and decentralised services received the greatest portion of the recurrent budget. The change reflects, firstly, the financial re-organisation of the budget and, secondly, the Ministerial focus on programme objectives.

Figure 16: Recurrent Agriculture Expenditure by Sectors, 1987-2003



Source: GoM/MF

Figure 17: Agriculture Recurrent Expenditure on ADDs



Source: GoM/MF

3.5 Investment Programmes for smallholders

Development programs

From the 1970s, agricultural policies were designed according to medium term plans, spread over 10 years, known as DEVPOL. These plans involved the collective input of the Ministry of Finance, Agriculture, and Department of Economic Planning. The approach was based on five year rolling investment programmes called Public Sector Investment Programmes.

A second DEVPOL was developed for the period 1987-1996. In this plan, the government set out a blue-print to revive agricultural growth through investment, extend services to smallholder growers and make the agricultural sector more resilient to external shocks. The new strategy built upon the foundations of the National Rural Development Programme, but taking into consideration the structural adjustment measures. Structural adjustment required the downscaling and ultimate removal of farm input subsidies, whilst liberalising input and output markets to allow the private sector a role alongside ADMARC.

The DEVPOL strategy was replaced in 1995 with the Agricultural and Livestock Development Strategy and Action Plan (ALDSAP) (GoM/MoALD, 1995). The ALDSAP was instituted by the new government to bring agricultural development in line with its commitment (mandated at the elections) to pro-poor development and poverty eradication. The Plan abandoned the farmer categorisation approach of DEVPOL and aimed to tailor services to farmer needs.

The DEVPOL and ALDSAP were financially and technically supported by the main financing agencies and donors. The World Bank provided the principle funds for institutional development and re-organisation, and farmer credit during the DEVPOL implementation period (1987-1994). World Bank lending to Malawi to date totals US\$ 2, 27 billion (with US\$ 2, 02 billion released) (World Bank, 2003). The major bilateral donors, however, have provided grants and sought to channel funding to the grassroots through location specific or sub-sector projects.

The major institutional development programmes were extended into the ALDSAP period (1995- present). Support for estate development during this period was to significantly diminish. Whereas livestock and fish production were extensively supported under the DEVPOL, the emphasis after 1995 shifted to crop production and soil fertility improvement and enhancement programmes. Smallholder cash cropping received support under the USAID ASAP, ADF Macademia Project, and German (GTZ) funded PoH. After 1998, with no evidence of significant reversal in rural poverty, the focus was narrowed, concentrating donor finances on resource poor farmers and income enhancement / productivity enhancement measures.

Programmes / project in support of DEVPOL generally targeted the middle smallholder group, focusing on building the institutional capacity to delivery technical services. Livestock improvement, irrigation development, aquaculture, extension, and research were afforded the highest priority. Under the ALDSAP agenda, the target group become widened to encompass resource poor farmers and marginalised groups (such as women). Priorities shifted, with

funding agents concerned to support the liberalisation process, both directly through marketing and farmer organisational support, and indirectly through instituting support measures to cushion the effects of market distortions and under-performance. Whereas for the middle farmers, programme / project support indirectly subsidised input and marketing costs, support for resource poor smallholders (initially) sought to de-link farmers' dependency on high cost inputs.

From 1998, subsidisation was extended to resource poor farmers through the Starter Pack (SP) and Target Inputs Programme (TIP). The intention was to provide the most vulnerable farm families with access to productivity enhancement technologies as a 'safety-net' strategy. The TIP/SP performance is assessed below.

The Targeted Inputs Programmes (TIPs) provided smallholder farmers with an inputs pack containing fertiliser, maize seed, and legume seed for 0.1ha. The TIP evolved from the 1998-1999 and 1999-2000 Starter Pack programmes, which provided a similar inputs packages universally, covering 2.86 million smallholder households. The main Starter Pack objective was to increase smallholder maize production, through the application of chemical fertilisers, but within a sustainable farming system. The TIP 1 (2000-01) reduced the number of beneficiaries to 1.43 million and replaced the hybrid seed with OPV seed resulting in reduced fertiliser application from 15kg to 10kg in order to enhance the sustainability objectives. The second TIP (2001-02) further reduced beneficiary numbers to 998,499 million households and maintained the emphasis on sustainable cropping. TIP used community poverty targeting to select the beneficiaries. The input packs were issued using a voucher system. The SP and TIP programmes were monitored systematically and the performance and impact evaluated to determine best practices.¹⁰

The SP and TIP programme and inputs costs were principally donor funded. The government contributed to the costs through grants from the World Bank and counterpart funds.

The output and investment gain of the TIP and SP is presented in Table 10. The achievements of SP and TIP are widely variable; while the SP programme achieved high on-farm production increases, farmer performance was not systematically monitored and the results reported may indicate the most favourable scenario and outcome. The TIP results were less impressive; households gained a net production improvement of 35kg over normal capacity and the national gain was 50,000 Mt.

Table 10: TIP Performance

	SP1	SP2	TIP1	TIP2
Beneficiaries	2,860,000	2,860,000	1,430,000	998,499
% of poorest strata	all	all	29.2%	22.8%
Starter pack output (2 kg seed)			140kg	129kg
Net production increase	175 kg	70-120 kg	35 kg	35 kg
National production gain	500, 500 Mt	200,200 – 343,200 Mt	50,050 Mt	50,050 Mt

The returns on investment varied between each programme. In SP2, each Kwacha invested in the inputs package (total cost MK 450) gave a return of 0.16-0.27 kg of maize respectively. Although these figures seem unimpressive, the same level of investment (MK 1,287 million)

¹⁰ The reports are contained in Free Inputs Programmes in Malawi. M&E Archive, 1999-2002 (September, 2002).

in maize importation would have purchased 175,747.64 Mt (C.I.F.), an amount significantly lower than the national production gain.¹¹ The input package costs were reduced in TIP1 and TIP2 and although net production decreased comparably with the SP programme, the returns were similar to those attained in SP2.

The authors of the main TIP evaluation report concluded that ‘a universal free inputs programme is an effective way of enhancing food security at both household and macro-level ... Thus, a universal Starter Pack is good value for money’ (Levy, S. and C. Barahona, 2002). In response to the difficulties in effectively targeting, they advocated a ‘near universal’ starter pack, covering 80% of rural households and only excluding the least poor farm families. However, at national level, the proportion of ‘deserving’ households would vary geographically, from 60% in the north, to 87% in the centre and 89% in the south.

In 1997 the Agriculture Ministry adopted an Agriculture and Irrigation Sector Investment Programme (MASIP). The MASIP objective was to streamline investment through a co-ordinate programme. The World Bank promoted this approach as a means to facilitate further rationalisation of public service provision (in accordance with agreed development goals and priorities) and to synchronise donor financing and co-ordination. Yet many bilateral donors have been reluctant to enter the SIP process and prefer to invest through country-to-country co-operation agreements.

The World Bank currently supports 12 capital investment projects through a commitment of \$265.2, with 17% (\$45.08 million) going to the agricultural sector. The most significant operation is the Emergency Drought Recovery Programme (approved 5 November 2002, total US\$ 50 million). Other current loans within the agricultural sector are the African Development Fund supported projects (US\$ 56.6 million), IFAD/Irish Trust Fund for irrigation development (US\$ 13.6 million), and the African Development Bank finance of smallholder sugarcane production (US\$ 12.336 million).

Public Sector Credit Subsidisation (APIP)

The Agricultural Productivity Investment Project (APIP) was a collaborative GOM/EU initiative to enhance smallholder access to fertiliser and inputs through credit subsidisation. APIP commenced in 1997 and was financed through counterpart funds from the 32.4 million Euros committed to the government under the European Commission’s three year food security programme. APIP had three main development objectives:

- To mitigate the social impact of economic liberalisation.
- To integrate smallholders into the emerging inputs (fertilisers) and produce markets.
- To foster a rural credit system fashioned to the needs of smallholder food producers.

APIP commended as a pilot project, supporting 150,000 capital – though not land – constrained smallholders through a loan package scheme comprising seed and fertiliser for 0.8 ha maize production. These loans were provided by implementing agencies, which included ADMARC. The agencies were under contract to issue fertiliser (from the Fertiliser Buffer Stock) and purchase and issue maize seed to selected beneficiaries. At the end of the harvest, the agencies were responsible for recollecting the outstanding loan (in cash and kind)

¹¹ Author’s own calculations using GoM/NSO/MoCI trade data.

and repaying APIP. The pilot phase was deemed a success and had contributed to an increase in national maize production of 108,000 Mt.

APIP was expanded nation wide from 1998/99 to 2000/01. For this phase, funding was initially allocated to be increased from MK 180 million to MK 646 million in 2000/01, at which point the procurement requirements accounted for 20% of the national seed and fertiliser market (APIP Audit Report). APIP was to target 200,000 credit worthy (i.e. not the poorest) smallholder farmers. In the 1998/99 agricultural season, APIP lent input packages to the value of MK 546,667,932 to 225,000 farmers (equal to MK 2500 per beneficiary). The inputs enabled 96,000 ha to be planted to maize, generating an incremental production of 116,000 tons or 14% of national output. The loan recovery rate was 70%.

While APIP achieved a major impact in increasing maize production, the approach was non-viable, especially in terms of the institutional and financial set-up. Project implementation was beset with weakness from the outset, notably:

- Loan rates were lower than commercial bank and micro-finance rates.
- High default rates were unintentionally permitted as 75% of the costs were covered by the project.
- High administration overheads (6-13% of the loan value) charged by the implementing agents.
- Resource poor farmers were included in the targeting.

In the 1999/2000 season, the loan package was diversified to contribute towards soil fertility improvement, and thus comprised open-pollinated maize, soya bean, and groundnut seed. After this season, APIP was fundamentally redesigned to tighten procedures and financial management control and create an opportunity for broader private sector participation. The new APIP required a public-private partnership for the establishment of an independent finance institution to manage and operate its revolving fund. But these plans never arose. The implementing agencies were unwilling to invest into such an institution, content with assuming limited responsibility for their risks.

Unable to secure high record of loan repayment, APIP was downsized. A credit voucher system was introduced to enable beneficiaries to acquire inputs from the most competitive outlet. Targeting became more directly focused on the 'better-off', with farmer organisations (and associations) given the role of implementing agents. Loan recovery rates have since improved, but the number of beneficiaries is now small and the costs of administration (especially the APIP management unit) are high and depend upon external financial and technical assistance.

3.6 Private Sector / Farmer Partnership

Limbe Leaf Tobacco Company (LLTC) is Malawi's oldest and leading tobacco buyer, purchasing slightly more than 50% of the country's crop. Since the mid 1990s, flue cured tobacco production has undergone steep decline, falling from 25.5 million kg in 1993 to 8.2 million kg in 2001. As part of Limbe Leaf's strategy to arrest the decline in production, LLTC entered a partnership agreement in 2001 with the Kasungu Tobacco Farmers Trust (KTFT). The Trust was established as a consequence of the privatisation of the Kasungu Flue Cured Tobacco Authority and thus acquired use of the smallholder flue cure tobacco schemes in Kasungu. These schemes comprised 1900 ha of arable land. Before the partnership, the Trust

had 584 active growers, producing an average yield of 860 kg / ha (Matemba, S. and A. Charman, 2003). But scope for improving the farmers' position was constrained by the difficulty of acquiring input loans from micro-finance institutions and finance for infrastructure repair and maintenance.

Limbe Leaf agreed a partnership venture with the Farmers Trust which provided inputs, a technical and financial management service, and funds for infrastructure improvement. The full financial package comprised:

- A ploughing service,
- Fertiliser (1 ha maize and 1 ha tobacco)
- Chemicals (for nursery and field)
- Seed (1 ha maize and 1 ha tobacco)
- Transport service
- Food and a monetary allowance (monthly maize ration for the farmer and 2 hired workers)
- Wood (curing)
- Packaging materials and consumables.

The loan value was approximately \$1000 per farmer, whilst the administration costs were about 1/3 this value. The loan distribution (and recovery) was organised on a club (20 groups) basis; the clubs were to be liable for full loan repayment. 900 beneficiaries were provided with loans.

The loan beneficiaries were each required to produce 1 ha of tobacco and 1 ha of maize. Maize inputs were provided to ensure the beneficiaries were food secure. In the first year the farmers' performance was impressive. **Despite the national drought, farmers attained average tobacco yields of 1300-1660 kg/ha (up from 860 kg/ha) and average maize yields estimated at 2500-4000 kg/ha.** 82% of growers made profits. After the loan deductions, the average individual net profit from tobacco per hectare was MK 84,000.00 (approximately US\$ 1080).

LLTC extended its financial support in 2002-2003 to 1800 farmers. But as competition to get onto the project was fierce (as consequence of the profitable returns), conflict between beneficiaries arose, resulting in land dispossession, theft, political interference, and the implosion of the Farmers Trust. At the end of the agricultural season, many farmers sold their tobacco illegally to middlemen. In contrast to year one, only 48% of beneficiaries made profits, while debts of US\$ 438,432 (or US\$ 274.04 per farmers) were not recovered. The high rate of default has threatened the continued support of LLTC. The 2002-2003 experience has highlighted the necessity for strengthening land tenure rights (to protect farmer interests) and re-considering the system of tobacco marketing given the inability of the relevant authorities to control illegal markets.

Throughout the period under review, private sector investment (both domestic and international) in the smallholder sector has been minimal. Government policy (marketing restrictions, land ownership) limited the opportunities available for investors, whilst macro-economic conditions heightened the investment risks. These constraints continue to hinder new investments (see Section Five). Since the mid 1990s, the main thrust of private sector investment has been in agricultural input supply (especially fertilisers). The domestic fertiliser, seed, and chemical markets are respectively worth approximately US \$80 million, US \$18-20, and US \$10 million annually. In the fertiliser market, which has attracted the

biggest investment, product sourcing is mainly undertaken by five main companies (including ADMARC), although there are about 1000 retail outlets across the country. (GoM/MoAI/MASIP, 2000).

Summary and Synthesis

Public support to the agriculture sector for smallholders has declined in absolute and relative terms in the period 1987-2003. The decrease in public expenditure and investment in agriculture over the period 1987-2003 owes to three main factors: **first**, the relative decline in government revenue as a consequence of the faltering performance of the national economy, **second**, structural adjustment constraints against increased investment on service sectors and restrictions on international borrowing, and **third**, the re-prioritisation of development towards investment in human capital formation. After 1994 the new government shifted the weight of service expenditure towards education in line with its political commitment to the electorate to provide free primary education. The structural adjustment process, however, did not – contrary to expectations, pave the way for sustain private sector investment in agriculture.

Government expenditure on the recurrent account for agriculture fell steeply after 1992. Within the framework of the MPRS, recurrent expenditure has risen since 2002 to provide for targeted inputs support and safety-net measures. The level of expenditure has varied significantly from year to year in relative terms. The variation owes partially to changing government priorities, with ministerial leadership seeking to stamp short-term agendas on the long-term programme focuses. As shown in the section, the study period analyses three main strategic programmes: DEVPOL, ALDSAP, and MPRSP.

Public expenditure on agricultural development (capital account) has been no more constant than the recurrent expenditure budget, reflecting the inconsistencies and changing focus behind donor support. In the period under investigation, donor investment has shifted from ‘technical solutions’ (irrigation, livestock, research and extension training) to facilitating environmental sustainability (soil and land husbandry conservation) and promoting human capital development. The shift in emphasis furthermore highlights the recognition that private sector investment in the smallholder agricultural sectors is limited (focused mainly on distribution) and unlikely to meet broad development requirements.

The structural adjustment programmes did not, initially, act in support the assumption that the decreased public expenditure on agriculture would be compensated by increased private sector investment, whilst safety-net programmes would cater for those social sectors left out. Opportunities for private sector investment only became available in the mid-late 1990s, with the repeal of the Special Crops Act and other legislation allowing competitive input distribution. Similarly, the necessity for safety-net programmes only became clearly apparent in the late 1990s when the inability of resource poor farmers to benefit from the agricultural reform process and the disincentives of removing price-support measures was recognised. Neither the DEVPOL nor ALDSAP explicitly articulated the need for long-term investment in safety-nets. The MPRSP gives full recognition to the requirement for safety-nets to serve the nutritional and off-farm income needs of targeted groups.

The study provides three contemporary examples of investment in the smallholder sector to achieve productivity enhancement: I) Starter Pack/TIP, II) APIP and III) Limbe Leaf / Kasungu Tobacco Farmers Trust. Although the modalities of support and target group

differed in each case, these cases highlight the potential return from increased direct investment in input provision.

Section Four: The Impact of Food Import/Aid

4.1 The magnitude of Food Aid

Food aid in Malawi has historically comprised three dimensions: one, support to refugees, two, support to transitory food insecure households, and three, nutritional support to mothers and under five children. These measures were seen as extra-developmental measures designed to provide a safety-net to chronically vulnerable individuals / households. Neither the DEVPOL nor ALDSAP identified a strategic role for food aid in the Malawi agricultural development process. The ALDSAP did acknowledge severe structural limitations on resource poor households to attain food self-sufficiency, but emphasised the need to implement appropriate and sustainable technology solutions. ALDSAP did not envisage a long term requirement for free food distribution.

The Malawi Poverty Reduction Strategy Paper (April 2002) identified the need to incorporate safety-nets into national development planning. While measures to improve economic growth and build human capital would (potentially) reduce poverty, the strategy acknowledges that ‘some sections of the population are not going to benefit and will need direct assistance’ through providing ‘moderate support to the transient poor and substantial transfers to the chronically poor’ (GoM, 2002b, page 64).

The World Food Programme (WFP) has been the lead partner in support of government food aid objectives (towards the transitory and chronic poor) and humanitarian crisis response (drought and refugees). WFP commenced its supportive role in 1968 (WFP Malawi, n.d.). Its focus was initially on assisting the government with multi-purpose development (including dairy industry support, forestry development, and resettlement) and supplementary feeding measures (including school feeding). In the decade following the initial WFP / GOM co-operation agreement, disaster (drought) relief support was provided only once, in 1979. **In the period 1968 to 1988, WFP total expenditure on food security safety-net measures amounted to \$32,975,000, of which amount, \$21,178,000 were food costs.**

In 1981, 11000 refugees escaping the Mozambique civil war entered Malawi. Small numbers continued to enter Malawi from 1982-1985, but in September 1986 the number rapidly increased, with more than 60,000 persons crossing the border to seek refuge. The WFP focus immediately diversified, providing food and shelter to the displaced Mozambicans. The refugee support programme continued until 1994/95 during which period expenditure on the operations cost \$330,337,000, with the food component costing \$159,154,000.

From the mid 1980s, WFP safety-net support for the transitory and chronic poor intensified. The WFP country programme (development operations) in this respect included supplementary feeding (1989-1992, 1992-1995, and 1995-1998), food-for-work (1998-1999), school feeding (1999-2000), assistance to malnourished groups (1999-2001), food-for-assets (2000-2002), and disaster mitigation and response support (2001-2002). Total expenditure on these programmes came to \$63,705,000, with the government contributing \$7.8 million, as detailed in Table 11.

Table 11: WFP Development Operations Expenditure: 1989-2002

Development Operations	Period	Food Cost	Other Costs	Total WFP costs	Govt. Costs	Non Food Items Costs	Total Costs
Supp. Feeding	1989-92	7,638,000	8,135,000	15,771,000			15,771,000
Supp. Feeding	1992-95	9,104,000	1,114,000	10,218,000	3,244,000	295,000	13,757,000
Supp. Feeding	1995-98	4,274,000	5,886,000	10,160,000	1,522,000	147,000	11,829,000
Food for work	1998-99	1,587,000	214,000	2,062,000	1,300,000	360,000	3,722,000
School Feeding	1999-00	1,555,000	45,000	2,762,000	500,000		2,762,000
Assist. To malnourished groups	1999-01	3,916,000	2,132,000	6,048,000	773,000		6,821,000
Food for assets	2000-02	2,790,000	555,000	4,848,000	62,000	284,000	5,752,000
Disaster mitigation and response	2001-02	2,521,000	424,000	2,945,000	441,000		3,291,000
Total (US\$)		33,385,000	18,505,000	54,814,000	7,842,000	1,086,000	63,705,000

Source: (WFP Malawi)

During the review timeframe (1987-2003), WFP support to disaster relief operations rose substantially. Whereas prior to 1986 WFP total expenditure on emergency relief was less than \$700,000, from the 1990s, annual expenditure rose above \$2 million, with substantial allocations provided to support transient drought victims in 1992/93 (\$114,631,000) and 1994/95 (\$28,797,000). WFP also intensified its support to the chronic poor in flood and drought situations through targeted safety-nets (principally maize and nutrition support). From 1998, the WFP adopted a Country Programme approach, which allowed for expanded support for safety-net measures and disaster responsiveness. Its expenditure allocations are detailed in Table 12.

Table 12: WFP Emergency Operations Expenditure: 1989-2002

Emergency Operations	Period	Food Cost	Other Costs	Total WFP costs	Govt. Costs	Total Costs
Drought victims (food)	1987-89			1,592,000		1,592,000
Drought victims (food)	1990-91	1,350,000	942,000	2,292,000		2,292,000
Drought victims (food)	1992-93	37,027,000	77,604,000	114,631,000		114,631,000
Drought victims (food)	1994-95	15,220,000	13,577,000	28,797,000		28,797,000
Drought victims (food)	1995-96	4,160,000	3,994,000	8,154,000		8,154,000
Flood victims (food)	1997	2,350,000		2,350,000		2,350,000
Targeted Safety Nets	1998	2,374,000	314,000	2,805,000		2,805,000
Targeted Safety Nets	1999	9,126,000	438,000	9,793,000	417,000	10,210,000
Flood victims (food)	2001	2,126,000	308,000	3,446,000	335,000	3,781,000
Total (US\$)		73,733,000	97,177,000	173,860,000	752,000	174,612,000

Source: (WFP Malawi)

Food aid provision was intensified and diversified from the mid 1980s. In the period 1987-2001, total donor food aid (cereals) amounted to 1,413,850 Mt, while non-cereal aid measured 122,230 Mt. **The distribution within this time frame correlates to drought (both national and local), the refugee crisis, and most recently, intensification of supplementary and therapeutic feeding programmes.** The latter, as we have explained, has been justified in term of the MPRS framework.

The 2001/2002 food crisis drew a wider response from a broader range of stakeholders than the droughts of 1992 and 1994. The breadth of response was attributable to the increased involvement of donor institutions and civil society organisations operational in the livelihoods sector. Many of these new stakeholders had entered Malawi in support of the democratic transition and in answer to the impact of structural adjustment and HIV/AIDs pandemic on the smallholder agriculture sector. The range of stakeholders embraced a diversity of methods, principles, and ideologically stances, yet all were generally oriented towards ‘pro-poor’ development. The crisis afforded an opportunity for uniting NGOs (ultimately giving

rise to an NGO consortium¹²) and strengthening their role in strategic planning and operational structures (Phiri, M.A.R., 2004).

The scale of the food crisis and diversity of donor and civil society stakeholders caused the government to establish a **Food Crisis Joint Task Force** (FCJTF) under the Ministry of Agriculture, Irrigation and Food Security. The Humanitarian Response (HR) Sub-Commitment, which fell under the FCJTF, was responsible for co-ordinating the Joint Emergency Food Aid Programme (JEFAP). (See Annex 3, note 5). The JEFAP programme commenced operations in July 2002. In the 12 month period to June 2003, the programme distributed **184,317.95** Mt of maize, **19,331.15** Mt pulses, **23,770.49** Mt of CSB, and **1,827.11** Mt of vegetable oil to **23,234,408** beneficiaries through the General Feeding Programme channel and **1,515,749** beneficiaries through the School Feeding Programme and Supplementary and Therapeutic Feeding channels (WFP Malawi, 2003b).

In parallel to JEFAP, several civil society organisations and donor programmes supported independent emergency relief operations. These established autonomous food aid pipelines, set-up in accordance with the conditions (including sourcing, targeting, distributional modalities) of the donor. The operation of these minor pipelines was narrowly focused, concentrating on specific client groups (religious bodies, church members, orphans) or geographic zones (project impact areas).

4.2 Food Aid / Food Import Impact at Household Level

The emergency response to the refugee influx from the mid 1980s and the drought / flood relief programmes in 1992, 1994, 1997 and 2002 can be regarded as having achieved their major objectives, in terms of reducing human suffering and poverty deprivation. But the full impact of food aid goes beyond the direct impact of increased food availability and encompasses indirect impacts, both positive and negative, arising in consequence. Food importation, similarly, has had a far greater impact than its effects on supply, influencing prices, consumption patterns, and macro-economic performance.

Impact on nutrition

Supplementary feeding programmes have tended to be limited in duration, lasting a few years and at best providing a scattered covering. Rations have neither been sufficiently large nor sufficiently diverse in composition to ensure a sustained improvement in beneficiary status. Programmes were mainly implemented through district health centres, which as a result of their location and distribution has discouraged the systematic involvement of persons living in remote and distant localities.

The demographic health survey (DHS) undertaken in 2000 found no evidence of comparative improvement in the status of under 5 malnutrition in the eight years since the 1992 survey. The nutritional and health status of expectant and nursing mothers similarly produced no evidence of improvement. However, nutritional status is strongly correlated with poverty and reflects inadequate entitlements, in terms resources (land), social and community services (health, education, water), and human capacity, notably declining health (Mtimuni, B. 2003).

¹² Initially 8 international NGOs formed the NGO Consortium, with CARE-Malawi elected as the representative NGO.

The distribution of CSB (Lukini Phala) may result in changing food preferences and increased household dependence on commercial and processed food. While the nutritional benefits are not doubted, the financial drain on household resources is particularly worrisome, especially given the limited finance available for investment in agriculture and SMME.

Problems of Targeting and Timing

Effective targeting to ensure that food aid reaches the most vulnerable persons has been a major limitation in previous safety-net interventions. The MPSRP advocated greater community participation (through empowerment processes) to overcome exclusion and inclusion errors. The concern was taken up in JEFAP. Its approach differentiated between the requirements at district, traditional authority, village, and household level, based on the Vulnerability Assessment Monitoring method. But despite the improved methodology, a post-operations assessment found that both inclusion and exclusion targeting errors were prevalent. In 'most villages', traditional leaders (and village headmen in particular) had undemocratically influenced the composition of the community committees (VRCs) and had used their power to dictate the inclusion of kinsmen and supporters on the beneficiary lists (Phiri, M.A.R. 2004, page 26). The manipulation of beneficiary lists denied support to the 'core' poor and the acutely vulnerable.

The Targeted Inputs Programme experienced similar difficulties in using community structures to differentiate between 'core' and 'non-core' beneficiaries. An evaluation of the TIP I and TIP II concluded that community targeting had 'failed' (Levy, S. and C. Barahona. 2002, page 12); the reasons were:

- Community resistance to singling out the poorest families because differentiation among the poor is considered to be culturally unacceptable.
- Village Task Forces (responsible for selection) favoured kinsmen, whilst their membership was unrepresentative and subject to the influence of village headmen.
- Preferential selection of elderly, widows/widowers, and families keeping orphans did not (necessarily) correlate with poverty.

The authors of the report recommend that the current 'community poverty targeting strategy is not appropriate' for targeted input distribution, citing three considerations: first, the undemocratic influence of village leaders and politicians, second, the unwillingness of communities to accept that scarce resources be targeted to the poorest rather than shared equally, and third, the narrow socio-economic division between the 'poor' and the 'poorest' (Levy, S. and C. Barahona, 2002, page 13).

It should be noted, furthermore, that the justification for stratified food distribution runs contrary to Malawi cultural norms and values. The JEFAP experience, for instance, was that communities ended up sharing individual food rations among family and neighbours. Sharing created a 'social bond' and became a means of reducing the political tension within communities over the beneficiary selection process. In situations where sharing did not occur, the food aid recipients were ridiculed or risked having their rations forcibly confiscated. Development workers have expressed a concern that the animosity around targeting may result in the withdrawal of non-beneficiaries from community initiatives.

Food aid distribution programmes have characteristically had high social and opportunity costs. JEFAP sought to minimise these costs through formulating a nation-wide plan of operations to co-ordinate distribution. While the JEFAP approach was fine tuned

conceptually, its implementation was subject to logistical bottlenecks, limitations in human skills and capacity, and the autonomy of the NGO partners in field activities. The rural feeder road network deteriorated in the rain season, causing numerous delays in the delivery to Final Distribution Points (Phiri, M.A.R., 2004). In the process of ration allocation, conflicts frequently arose over theft claims, the division of commodities (beans, CSB, cooking oil), and absenteeism and exclusion of the poor. For beneficiaries, the often long distances to the distribution points in food aid programmes, congestion, queues, and lengthily waiting times has born a negative opportunity cost, especially during the production and post-harvest period.

Concern has been raised that food distributions have had a negative impact on school attendance, with children recruited to assist their relatives transporting the rations home (Phiri, M.A.R., 2004). Some distribution points in the JEFAP programme, for example, were located at school sites (despite the WFP recommendations against these localities), which had a direct disruptive impact on learning.

Impact on incentives

Aid workers with food aid programmes in Malawi argue that there is no clear evidence to support the concern that food aid has negatively affected social commitment or capacity to self-help.¹³ There is not a strong evidence showing a dependency syndrome emerging from the JEFAP experience. Targeting was limited (5-24% of households), while the size of the ration was informally reduced to meet the 'social need' to share with non-recipients. The opportunity cost (in terms of time loss and labour / resource investment) within the food distribution process was probably a disincentive against dependency. The incentive to seek aid appears strongest when maize availability is low and market prices are comparatively high, which period correlates to the most intensive agricultural labour requirement.

A strong incentive in seasonal food aid dependency is the low labour-day returns on rain fed maize production under existing smallholder conditions. Smallholder land/labour investment returns show that in the context of high input costs (determining low yields) and low market prices (determining low margins), investment in surplus maize production equates to an inefficient use of land and labour. In these circumstances, the main incentive to grow maize is the household food demand. A study of labour day returns of smallholders in Rumphi district (under conditions typical of the Malawi maize-tobacco farming system) in 2001-2002, determined that the labour requirement for 0.1 ha of maize production was 17 hrs (local varieties) and 28 hrs (hybrid varieties) (Charman, A, 2002). Under prevailing prices and aggregate yields, the study found that the return on investment per day/ha was equal to MK 59.18 (local maize) and MK 41.45 (hybrid maize). In contrast, the returns on winter maize, as a result of comparative scarcity and price increase, were MK 270.30 (local) and MK 358.33 (hybrid). The value of the JEFAP ration, comparatively, equates to MK 200 per day, assuming that the opportunity cost of acquiring the ration was 8 hours or less. **This data clearly shows that household labour returns from food rations is approximately four times greater than the returns on maize production during the rain season, but negatively advantageous during the winter crop season.** Some farmers will therefore be tempted to wait for food aid, instead of investing their labour and other resources on more sustainable and productive activities.

¹³ Interviews with P. Hailey (UNICEF) and L. Castro (WFP).

Experience in Malawi and elsewhere have shown that households with severe cash requirements will sell a portion (or all) of their food rations (Thompson, A. and M. Metz, 1997). The ‘informal monetisation’ of food aid during the recent crisis was not widely observed; rations may have been exchanged within villages, but the maize only entered the market for milling. Food imports (in combination with food aid) exerted strong downward pressure on prices during this period, as will be discussed below. The price decrease had a double effect: on the one hand it lowered the value of the ration and hence reduced the effect on household income, yet on the other hand the price movement reduced the costs of food, thus benefiting households with disposable income.

Food-for-work (and assets for work) has been historically an important component of WFP operations, especially in the framework of reconstruction and rehabilitation, as was used in the 2002/03 crisis. **FFW programmes can have a labour disincentive effect on ganyu (hired labour) if beneficiaries withdraw labour from the market.** Ganyu is the major coping response among the ‘core poor’, although it receives low remuneration (and usually in kind, not cash), is physically onerous, and seen as degrading and a sign of impoverishment. Studies have found that the core poor rely more on hired labour than farming to meet their household food needs, with ganyu estimated to contribute between 50-65% of income (AAH, 2004) and (Dorward, A. and J. Kydd, 2003). Usually in times of food scarcity the poor enter the labour market in greater number, which in theory would force down the level of remuneration. While the argument that food scarcity results in lower remuneration has an attractive logic, the case has not been demonstratively or factually proven, though the theory is widely cited (FAO/WFP, 2003) to justify continued food aid assistance. More investigation of this labour dynamic is required. It is equally possible that a decline remuneration would result in increased domestic migration and migration to regional markets. This has not been witnessed.

Strong community pressure was brought on traditional leaders and district administrators after the 2002 food crisis emergency declaration to advocate for food aid and relief support within their jurisdiction. NGOs and donor programmes similarly pressurised their field programmes to incorporate food distribution within existing livelihoods programmes. In one case, the decision to implement food aid distribution was imposed from headquarters, causing the field director to consider that the present development approach had been set back ‘three or four years’ (Orr, A. and S. Orr, 2004, page 24).

The 2002-2003 food crisis presented religious organisations with an opportunity to proselytise through the supply of emergency food aid. Christian and Muslim organisations rallied to the support of their adherents, each seeking to prevent loss of support through counter food aid programmes.¹⁴

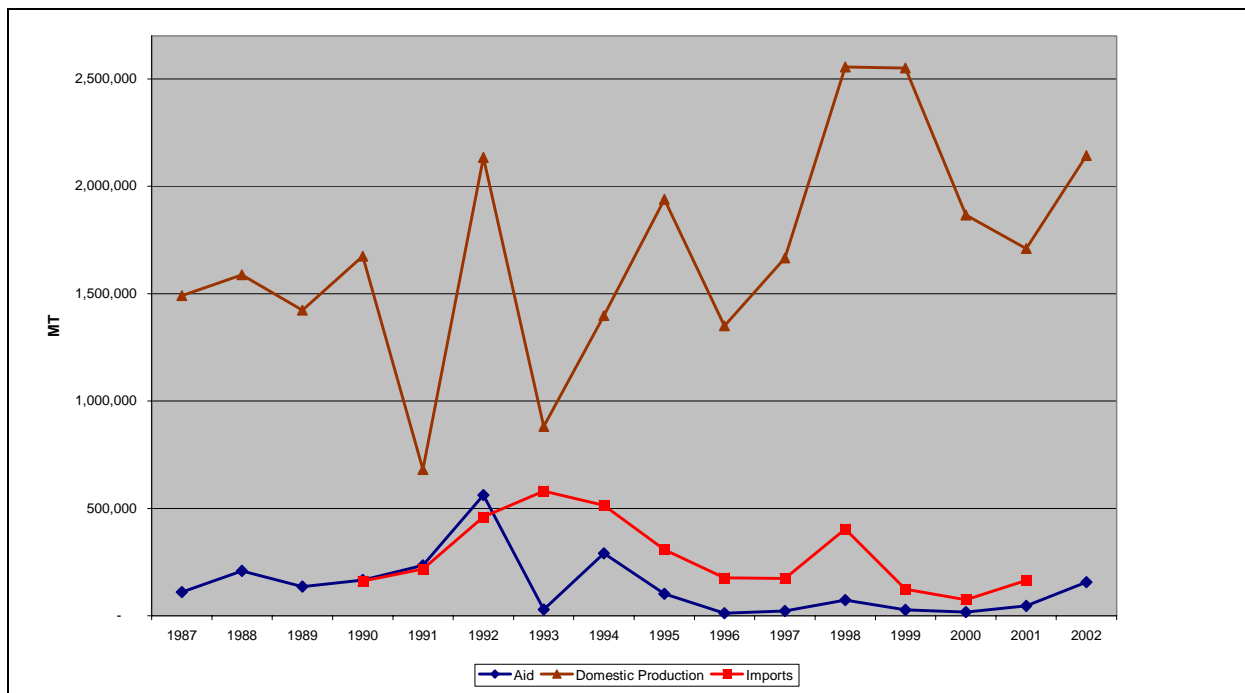
4.3 Impact of Food Aid / Import on Supply and Prices

¹⁴ World Relief and Churches newsletter reported: ‘In Nkhota Kota, where there is a fairly large percentage of Muslims, our distributions through the churches have had a deeper impact than just providing people with food for a few months. ... the generous, non-discriminating local believers really caused Muslims receiving food to stop and think about Christianity. Several of them came to the Christian faith ...’ (www.bgcworld.org/wrelief/update). Muslim organisations were swift in their response; see for example the Council of Muslim Theologians (www.jamiat.org.za/malawi).

Food Supply

In the period 1987-2002, cereal food supply has been derived principally from domestic production, which (as explained in Section 2) has fluctuated from the effects of drought and input supply. Food aid has been closely tied to humanitarian crisis response. Commercial cereal food imports (including government procurement) rose above 250,000 Mt in the period 1992-1994 and again in 1998, largely in support of the humanitarian need. Commercial imports again increased in the period 2002-2003 to supply emergency operations through both the SGR/NFRA and independent pipelines. The trend is indicated in Figure 18.

Figure 18: Comparative analysis of cereal aid, imports and production.



Source: FOASTATS (AID and Imports), MOAIFS Crop Estimates

Note: FOASTATS import data is slightly higher than the trade data of the MOCI; the latter, possibly, has excluded some government imports through ADMARC / SGR.

In the emergency operations for 2002/03, JEFAP maize was sourced through two pipelines; the SGR and WFP regional office. The government furthermore undertook substantial commercial maize imports by the National Food Reserve Agency. In 2002 total government (NFRA) commercial maize imports amounted to 232,000 Mt.

Total maize imports in the period from 2002 to the 2003 harvest equated to 40% of average maize production over the past five seasons (2,105,178.20 Mt) or double the marketable surplus at this production level. The estimated cost of these imports was MK 15,559,230,505.71 (roughly 201.88 million dollars), a figure comparable to the 2002 tobacco export value (MK 17,893 million) (GoM/NSO, 2003c).

In the period 2002-2003, total maize imports (including food aid) probably exceeded 700,00 Mt, as summarised in Table 13. It is thought that more than ¼ of this volume derived from Mozambique, Zambia, and Tanzania sources and was unrecorded, hence entering the market illegally.

Table 13: 2002-2003 Estimated Maize Imports

Inflow	Estimated Quantity (Mt)	Estimated Value C.I.F. (MK)
NFRA Commercial	235,000	4,131,748,850.00
Private Sector Commercial	102,321	1,798,998,613.11
SGR	27,000	603,458,100.00
Unrecorded	231,000	3,723,720,000.00
Mozambique	208,000	
Zambia	16,000	
Tanzania	7,000	
EMOP	184,317.95	5,057,116,848.71
Other pipelines	8,900	244,188,588.00
Total	788,538.95	15,559,230,505.71

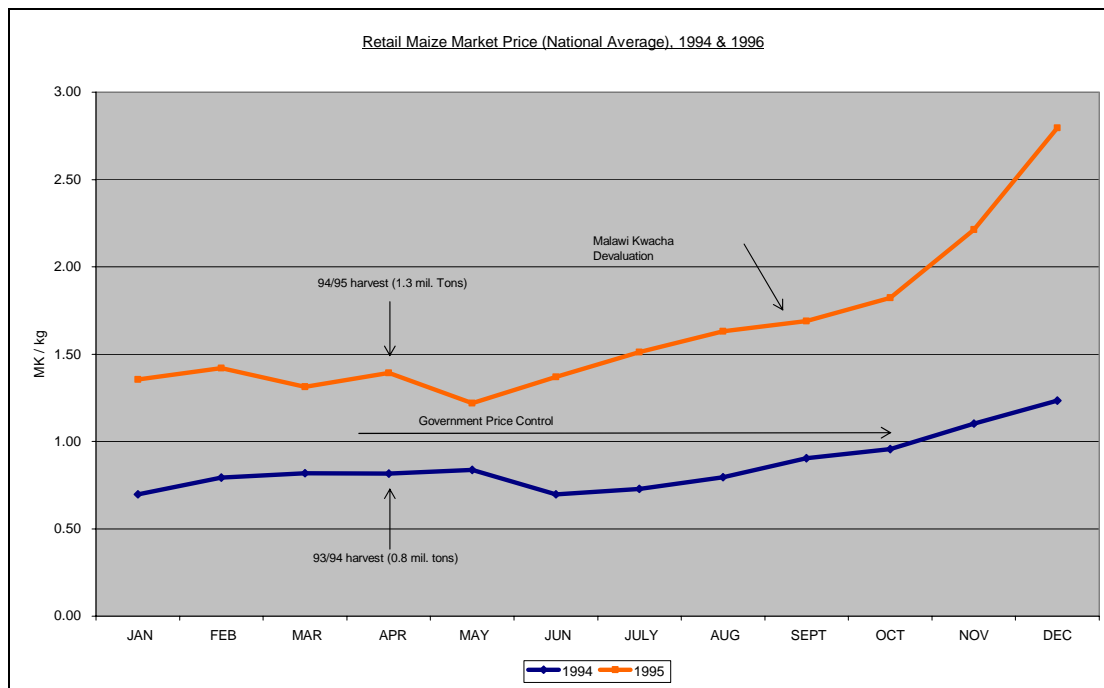
Sources: MoCI (commercial Maize); NFRA (SGR), M. Whiteside (2003) (Unrecorded), EMOP, Final Report (WFP), GTZ / BZDP Final Report (Other pipelines).

Notes: 1). C.I.F. values estimated on the average 2002 exchange rate of MK 77.07:1 US\$. 2) Commercial Imports are estimated on the average C.I.F. value of MK 17,581.91 per ton. 3) SGR imports calculated on the price of US\$ 290 per ton; 4) Unrecorded maize imports estimated on the basis of MK 4.6 (0.06US\$) per kg price differential between source and the average annual Malawi market price (FEWSNet data). 4) EMOP imports estimated on the price of US\$ 356 per ton. 5) Other pipeline import volume estimated on the basis i) German Government Assistance (2900 Mt), ii) Church / NGO support: World Relief (4000 households), SOS Children's Village (800 households), Presbyterian Disaster Assistance (7,500 households), Caritas Australia (not specified), Council of Muslim Theologians (not specified), and other minor efforts. The estimate is probably conservative, in consideration of the large number of organisation which pledged and canvassed for global public support. Regretfully many NGO's do not make accessible their performance reports.

Prices

The impact of food imports (and aid) on markets and hence on farmer opportunities has significantly varied, as can be illustrated in our analysis of national average monthly retail maize prices during three significant import periods (See Figures 19, 20, 21). The three periods, 1994-1995, 1997-1998, and 2002-2003, cover the major recent emergency operations to provide drought and flood relief. In each of these periods, the impact on markets was mitigated by a series of endogenous (maize production, government price manipulation, and market information) and exogenous (currency fluctuation, regional supply, and global price) factors. **These examples show suggest that no one impact (positive or negative) is discernable.**

Figure 19: Monthly Retail Market Maize Prices, 1994-1995

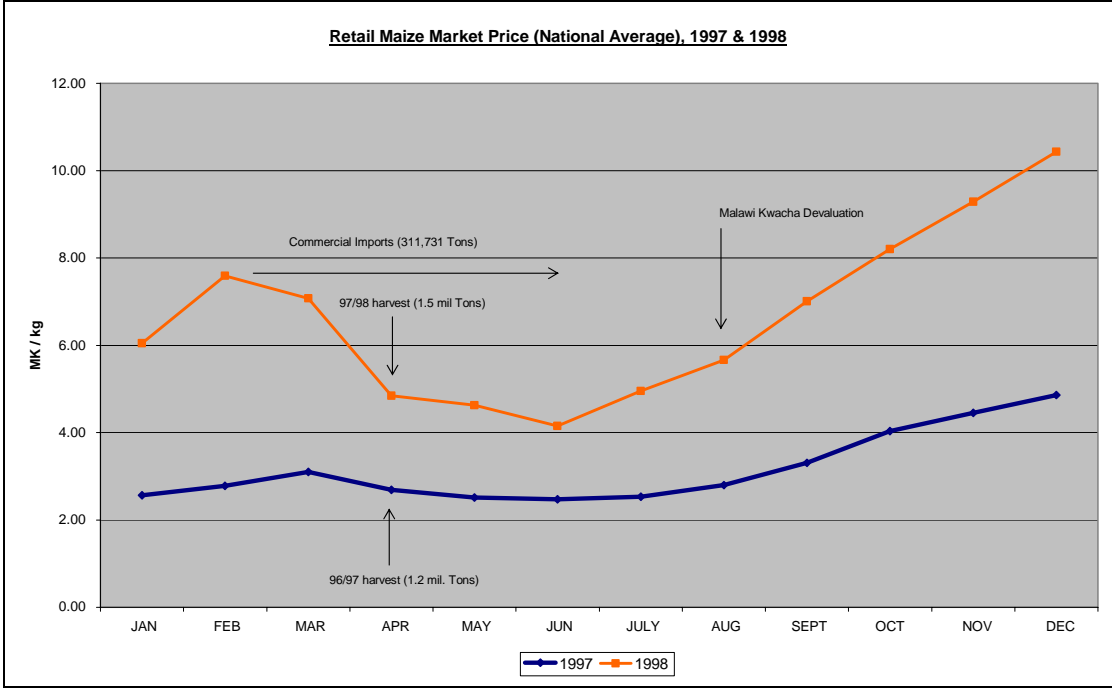


Source: FEWSNET data

In the 1994-1995 scenario, the government deliberately sought to stabilize retail maize prices in the build-up and aftermath of the multi-party elections and democratic transition. The 1993/94 maize harvest was 818,999 Mt, a figure substantially below national requirements and roughly 50% below expectations (1,5 million Mt). Yet the production shortage did not result in price increase at harvest. Instead, as a consequence of maize importation and market manipulation, prices fell between May and August 1994 and only began to signal the severity of the shortages in October. A second phase of importation (commercial and food aid) in early 1995 again stabilised prices until July, at which point Malawi Kwacha devaluation prompted a dramatic price increase. The 1994/95 harvest was Mt 1,327,829. **During this season (period), unrecorded maize imports from neighbouring countries were more tightly policed and the maize market was firmly under ADMARC control in terms of distribution (thus ensuring inter-country stock relocation) and storage.**

In the 1997-1998 scenario, food importation (and aid) arose in response to the poor 1996/97 maize harvest (due to drought and floods) which measured 1,226,478 Mt. The previous harvest (1995/96) of 1.79 million tons had enabled households to re-accumulate maize stocks. The price effect of the anticipated (and actual shortage) began to register in September 1997, prompting importation in 1998 of 311,73 Mt. **The high relative import volume in the 1997-1998 scenario in combination with the improved harvest in 1997/1998 (1,534,326 Mt) caused significantly price decrease between March and August 1998, dropping the maize price from 7.59 MK/kg to 4.15 MK/kg.** After August 1998 prices recovered and rose steeply in reaction to the Malawi Kwacha devaluation from 33.77:1 to 44.35:1 against the US\$. By this time, informal trade with neighbouring countries had become a thriving business, with maize imports alone estimated at US\$ 484,000 (Minde, I.J. and T.O. Nakhumwa, 1988). **Liberalisation had comparably strengthened the operations of private traders (RATES, 2003), while ADMARC's influence in the market had gone into reversal (and would further decline with the abolition of the price band).**

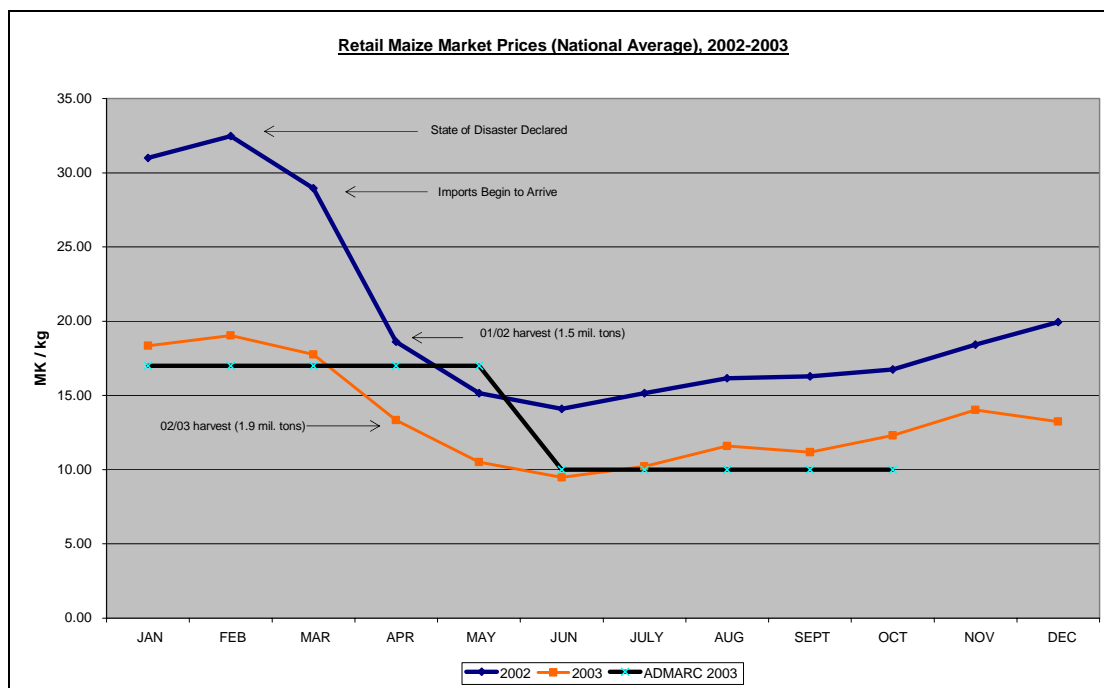
Figure 20: Monthly Maize Market Retail Prices, 1997-1998



Source: FEWSNET data

In contrast to two previous scenarios, **the period 2002-2003 provides evidence of far greater impact and consequence.** Maize prices rose dramatically in late 2001 and reached their high point in February 2002 (MK 32.48 per/kg), with the market reflecting an anticipated shortfall in the 2001-2002 harvest and ADMARC / private sector shortages. Local market prices were double the ADMARC price of MK 17 per/kg. The government, donors, civil society organisations, and private traders were all (independently) committed to import maize. Imports began to arrive from March 2002, causing maize prices to fall within close range of the ADMARC price, which was then undercut one month later.

Figure 21: Monthly Retail Maize Market Prices, 2002-2003



Source: FEWSNET data

The dramatic price decrease possibly reflected the market recognition that the 2001-2002 market did not fail, with domestic production estimated at 1,556,975 Mt, a figure not dissimilar to the 1997/78 harvest. The 2001/02 harvest was nonetheless spatially variable, as evident in significant price differentials at local markets and inter-regional stock movements. The donor and civil society response was premised on the understanding that local and cross-border markets were poorly integrated and that the private sector had neither the means (capital), capacity, or incentive to fulfil demand. **The high volume of commercial and unrecorded imports and the price competitiveness of local markets with ADMARC indicate that these assumptions were misguided.** Moreover, internal trade successfully integrated surplus and deficit areas more efficiently (in terms of supply) and effectively (in terms of demand) than the ADMARC network.

Despite heavy subsidisation, ADMARC was only able to sell 39,000 Mt of the 106,165 Mt supply by the NFRA by the end of March 2003. The ADMARC price was undercut from May to October 2002. Local market prices rose marginally in November and January, but fell further downward after February 2003 to MK 10 per kilogram in May 2003 and then remained below MK 15 per/kg. The NFRA responded to the accumulating maize surplus through exporting 45,914 Mt and through selling a further 44,706 Mt to the Strategic Grain Reserve.¹⁵ ADMARC had to reduce its maize price in June 2003 to MK 10 per kilogram, thus losing approximately MK 7.581 per kg against the C.I.F. price. Unlike the situation in 1994/5 and 1997/98, maize imports in 2002 and 2003 significantly depressed prices, with the 2003 average monthly prices approximately 30%-40% lower than the corresponding prices in 2002.¹⁶

¹⁵ FEWSNET reported (May-June 2003) that the government had approved the export of up to 100,000 Mt of maize (page 6).

¹⁶ L. Rubey (N.D.) argues (without presenting data) that the 2003 price decrease reflects a return to 'normal' prices (i.e. import parity) after the past few seasons of 'abnormal' prices (i.e. export parity). I would argue that the abnormality existed in 1998, 1999, and again from October 2001, as a result of market scarcity. The trend is less defined than he suggests.

The impact on farmer responses (in all three scenarios) can not be clearly distinguished from their reaction to supply and demand variables in other ‘normal’ seasons. However, **in each case, maize production registered an increase in the subsequent season.** This achievement may simply reflect improved climatic conditions and or input availability. **But it also confirms the argument that maize production in the smallholder sector is not determined by prices (as opposed to margins, which is important), as the bulk of smallholder production goes to self-consumption (70-80%)** (RATES, 2003, page 21). Lower prices (as happened in 2003) result in decreased margins and thus amount to a reduction on the returns of investment (inputs, labour, and land). **Low maize prices, we may conclude, provide a ‘dependency incentive’ among households to acquire free food (aid).**

4.4 Port Charges and Transportation Costs of Imported Food

Food imports are predominantly brought into Malawi by road, from ports in Mozambique, South Africa or Tanzania, or directly from the export country. The cost factors in importation as shown in Table 14 below:

Table 14: Port, transportation and other Costs

Cost Factor	Charge (Best Estimates)
Port Charges	US\$ 9 / ton upwards
Levies, tolls, permits and insurance on transit	Up to US\$ 10 / ton
Documentation (borders)	US\$ 0.6 per ton
Transport rate	US\$ 0.1-0.13 per ton / km
Storage	Up to US\$ 2.30 square meter

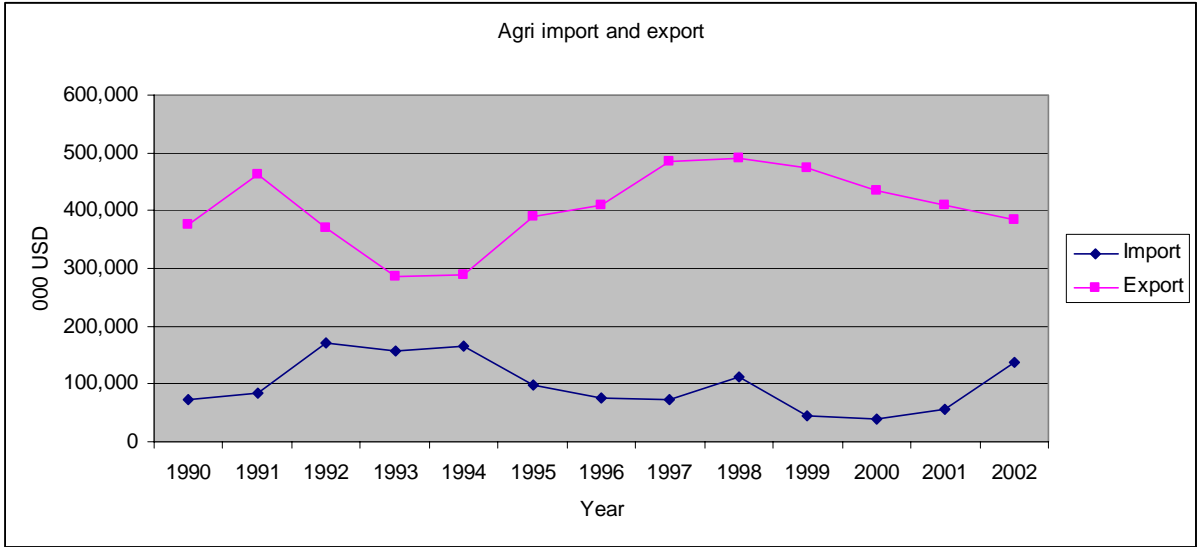
Port charges cost US \$9 / ton upwards. Levies, tolls, permits, and insurance to transit neighbouring territories can cost more than US \$10 per ton. The current transport rate for bulk consignments varies between US\$ 0.1-0.13 per ton / km. The cost of shipping grains from Johannesburg to Lilongwe, for example, would alone cost US\$ 205 per ton, while transport from Beira or Dar would cost half this amount. In addition, documentation, inspection, and custom clearance at the border would add a further cost of US\$ 0.60 per ton onto the import bill (UN/WFP, 2002). If the imports need to be stored, the importer may face charges of up to US\$ 2.30 / square meter when storage space is at a premium, which happened in 2002/2003. (Personal Communication, WFP Logistics, Lilongwe). Inward transport (including the fuel levy), local clearing charges, bank changes, and interest re-payment all add to high to importation costs. In the case of fertiliser inputs, it is estimated that the transaction costs of the importation process account for 58% of the final retail price (Westlake, M, 1999).

As the largest commercial importer, the high costs of importing maize were carried by the government, which effectively subsidised consumption. During the mid 1990s, ADMARC’s maize operations were estimated to have cost the government over K1 billion per year, a sum equivalent to 2% of the GDP (EC Malawi, 2000). The cost of the government subsidisation in the 2002-2003 food crises is examined in Section Four. The donor community has played an important role in providing funding for commercial government maize imports. This support has had the effect of delaying government imports as it waits to gauge the amount of donor financial assistance that may be made available. The commercial sector similarly watches the negotiations between government and donors before heavily investing in maize imports. The saving for the government through acquiring donor finance, however, justifies the delay.

4.5 Macroeconomic and Other implications of Food Aid and Import

Since 2000, the cost of agricultural imports (primary and processed cereals and livestock) has shown a rising trend in comparison with the declining revenue from agricultural exports (primary and processed crops and livestock) (See Figure 22). This trend indicates a return to the situation of the early 1990s when the agricultural sector began to stagnate. Food imports (maize and wheat) in particular are consuming a growing proportion of the foreign exchange generated by the agricultural sector. The net foreign exchange contribution of agriculture to the rest of the economy is further diminished by its dependence on imported fertilizer, machinery and chemicals.

 Figure 22: The Net Foreign Exchange Contribution of Agriculture



Source: FAOSTATS

The WFP EMOP 10200 food aid contributions included genetically modified (GM) yellow maize. The Office of Food for Peace (FFP /USAID) pledged 107,944.41 Mt of maize to the Malawi relief programme from USA stocks, which does not differentiate between GM and non-GM grains. The Malawi government was reluctant to accept GM maize, but concerned not to delay imports (and even more fearful of donor reaction) assented on the condition that GM maize donations be milled prior to distribution. Zambia, in contrast, chose to reject GM food aid. The Malawi government’s decision to accept GM maize was taken despite the status of the country’s bio-safety legislation and minimal scientific infrastructure (Mnyulwa, D. and J. Mngwagwa, 2003). Malawi has neither the capacity (expertise, facilities, and know-how) or resources (financial and technical) to monitor the effect of GM maize introduction, either directly through planting or downstream through livestock consumption. Throughout the region, governments expressed the concern that acceptance of GM food aid would be interpreted as an acceptance of GMO agricultural technology, which in turn would result in a loss of access to preferential European markets.

As part of its conditional acceptance of GM maize, the Malawi government was responsible for milling costs. Milling commenced in December 2002 and was completed in August 2003, with Mt 39,901.80 milled (WFP Malawi, 2003b, page 12). At an estimated milling costs of

US\$ 70 / Mt (including handling, warehousing, and bagging), the acceptance of GM maize most probably cost the government US\$ 2,779,126.¹⁷

The donor community has historically supported the government (financially and more recently with technical assistance) in maize imports, recognising the high costs of importation and unpredictability of regional and local markets. Experts have noted that the government has tended to wait until it knows how much donor support will become available before seeking alternative financing, as commercial borrowing can be prohibitive on the budget. But in consequence of the delay in waiting or commencing negotiation with donors, the process of domestic financing through commercial foreign borrowing becomes delayed, often resulting in too little finance, too late.

Apart from delays, government maize imports have historically attracted hefty subsidies. The intention has been to ensure the sale to consumers at prices below import parity. In 1997/98, the government imported 142,000 Mt, requiring the inclusion of MK 292 million in a supplementary budget to subsidise this cost. Similarly, in August 2001, the government directed the NFRA to replenish the SGR through importing 150,000 Mt of maize. Finance was secured from ABSA Bank, South Africa, for US\$33 million at 4% interest; the government acted as guarantor (Stevens, C. et. al, 2002). Increases in maize price on the South African grain futures exchange (SAFEX) and exchange rate fluctuations reduced the quantity it could purchase to 134,000 Mt, bought at an average price of US\$ 245 per ton. The maize was sold onto ADMARC at the heavily subsidised price of MK 14,000 per ton (approximately US\$ 180). **The government thus subsidised this transaction to the effect US\$ 8,442,000, a sum roughly equal to the 2001-2002 capital expenditure in the agriculture budget.**

The government borrowed heavily from domestic and foreign lenders during the 2002/03 crises to cover the escalating costs. Among its loans, the government borrowed US\$ 25 million from the IMF through its Compensating Financing Facility (IMF News Brief No 02/123).¹⁸ For the financial year 2003-2004, the government had to revise the interest payment on debts upwards by 64% as a result of heavy domestic borrowing from the bank and non-bank sectors to finance unplanned expenditures, including the purchase of maize (GoM, 2003). Most of the domestic borrowing was undertaken through the sale of treasury bills and advances. Interest payments on domestic debt rose to MK 8,039 billion (on a debt stock of approximately MK 50 billion), in contrast to interest repayments on foreign debt of MK 2,430 billion. Domestic borrowing rose from MK 21.7 billion in December 2002 to MK 45 billion by late February 2003.

In times of food crisis, the government, donors, and civil society are able to pull together and form an agreement for emergency relief. Close collaboration between these stakeholders occurred in 1992 and 2002. But while there is usually swift agreement on the need to take action, institutional differences often inhibit collaboration and co-ordination. In the 2002 crisis situation, significant differences arose between different stakeholders on issues (Learning Support Office Malawi, 2003) such as:

- Total food needs (tonnage, no of beneficiaries, and duration)

¹⁷ Milling costs derived from the UN/WFP Logistics Capacity Assessment (2002).

¹⁸ This facility is designed to help countries experiencing either a sudden drop in export earnings or an increase in the cost of food imports caused by fluctuating world prices. Interest is charged at the basic IMF rate (currently roughly 2%). The size of the potential loan is limited to 45% of the country's quota, which is set by the size of its capital subscription.

- Genetically modified maize
- Management of the Strategic Grain Reserve
- Agriculture and food security policy
- Targeting (approach and methodology).

Discussion and analysis of these issues focused criticism on government policy and approach. As a consequence, the government had to concede full autonomy in its management of the SGR, the delineation of food security policy, and its co-ordination of the emergency response. **Donors and international NGOs, including those organised as the C-SAFE consortium, gained increased influence in shaping policy and emergency response.**

Importers and exporters often have great difficulty in accessing government institutions and standards bureaus to gather the necessary documents and information on trade regimes. Trade is often delayed at borders, where through a combination of inefficiency, corruption, and bureaucratic uncertainty over the interpretation of complex trade rules, the free movement of trade is hindered. For many small traders, a more efficient solution is to move good across the border illegally through using back roads or bribing officials.

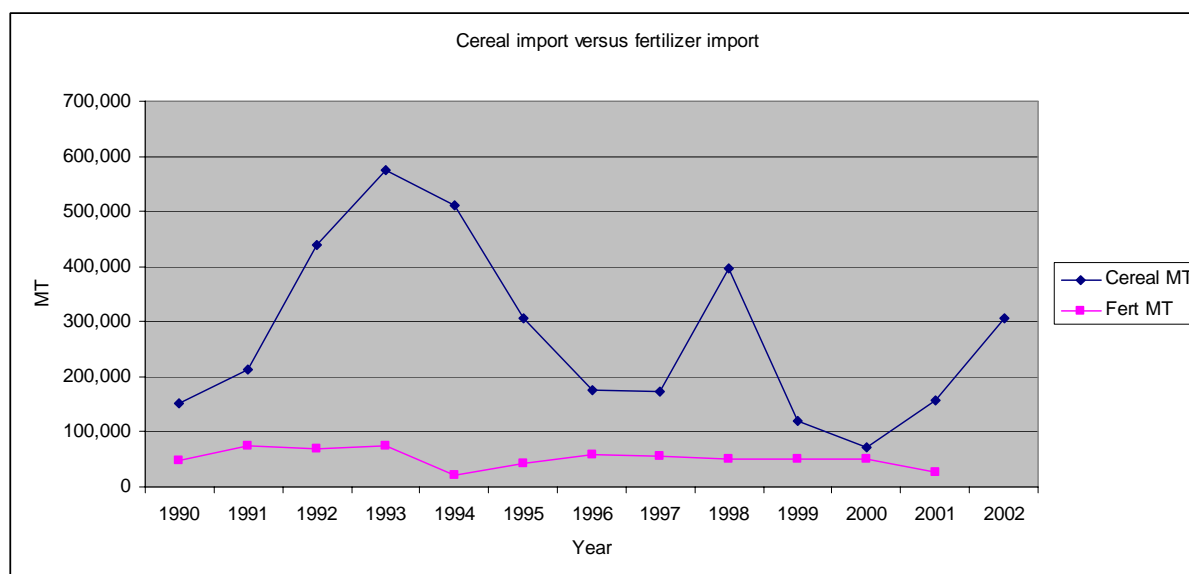
The open borders with Mozambique, Zambia and Tanzania allow significant informal (and unrecorded) cross-border trade. **The growth in informal trade has greatly improved the spatial integration of geographically proximate markets, especially in grains.** The large volumes of maize informally traded during the 2002-2003 contributed to both increased food availability and, by lowering market prices, made food more accessible. But informal trade can also result in a loss of benefit to Malawi, especially in revenue. As this trade has been difficult to monitor and regulate, it also presents the threat of facilitating an influx of low quality (cheap substitutes) and harmful products (agricultural chemicals, medicines etc.) and provides unfair competition to local industry.

Summary and Synthesis

Both food aid and cereal import volumes have risen during times of humanitarian crisis. The WFP has been the leading international partner in providing food support for the transitory and chronic poor. Within the framework of WFP support, the provision of food aid was intensified and diversified from the mid 1980s, in response to three factors: one the Mozambique refugee crisis, two, the need for increased supplementary and therapeutic feeding (children and mothers) and three, to strengthen disaster relief operations in flood and drought situations.

The government has been the largest (in terms of volume) cereal importer. Its food imports have correlated with domestic production shortfall, principally in maize. In the period under review, evidence shows a wide discrepancy between the volume of cereal imports and volume of fertiliser imports (See Figure 23). Yet one quintal of fertilizer has the potential to increase maize yields by four quintals. The conclusion is simple: had more fertiliser been imported relative to grain, Malawi could have potentially fulfilled its domestic grain requirements without the need to import. The multiplier effects of domestic production (in terms of output and employment) would have also been considerable.

Figure 23: Cereal Imports vs Fertilizer Imports



Source: FAOSTATS

The government has explicitly sought to subsidise the costs of maize imports through passing-on the saving to consumers via the ADMARC distribution network. While this strategy could once ensure an effective distribution of food and minimise price distortion, the liberalisation of markets has allowed the private sector to operate more efficient and effectively, resulting in both lower prices for consumers and improved market arbitration between sub-regional markets (Malawi, Zambia, Tanzania, and Mozambique). There is also evidence of improved arbitration within Malawi between regionally diverse market places.

Food imports and food aid successfully averted widespread starvation and death in the four major humanitarian crises during the period: 1992/93, 1994/95, 1997/1998, and 2002/03. Despite this record, the delivery of imports and aid has tended to be delayed, both due to logistical bottlenecks and the government's desire to secure donor support before commencing procurement. The effectiveness of the food aid distribution process has been hindered by poor targeting and distribution. The targeting of beneficiaries has been inherently biased, whilst the idea of stratified food distribution runs contrary to Malawi cultural norms and values.

There is evidence that food aid and imports have had a harmful effect on the Malawi economy. Port charges, inland transport and various other costs account for a significant proportion of the final retail price. While the impact is dependent on the volume at stake, in times of crisis such as 2002/03, the economy suffered from the government's heavy borrowing on the domestic money market (absorbing investment capital that could otherwise have gone to productive sectors) to purchase maize and subsidise the consumer price. While most food aid has been provided as grants, government acceptance thereof has had hidden cost implications. The cost of milling GM maize from the US provides a pertinent example. But also the food aid distribution process requires government involvement and resource commitment to co-ordination and monitoring structures.

There have been, nonetheless, limited financial gains for government. As a consequence of the recent crisis donors have agreed to fund both a financial reserve for the SGR and provide budget support. The current financial reserve has been set at 3 million Euros, funded by EU, USAID, and NFRA. Furthermore, the European Union has committed to providing annual financial support to the NFRA for managing the SGR; in 2002 and 2003 the cost estimate for

management and operational support was EUR 1,293,000. The foreseen level of support is 1 million EUR annually (EC Malawi, 2003).

Section Five: Options for a Sustainable Exit

Since the liberalisation of the agricultural sector in the mid 1990s, two major food crises have occurred, while safety-net measures have been required annually to provide food and income for the 'core poor'. The prognosis for sustainable improvement in food security is worrisome. Policy advisors have concluded that the country's development constraints are 'structural' and not transitory, while insufficient resources exist to fully implement existing development solutions. Within the debate on what should be done, experts argue that 'market based approaches do not work in Malawi today ... and they will not be effective without prior development of markets, with the broad based growth needed to support them' (Dorward, A. and J. Kydd, 2003, page 1).

Malawi's exit from food insecurity cannot be based on production enhancement strategies alone. The country will remain reliant on food importation to meet structural food deficits in key foods, including wheat, dairy produce, fish / meat and vegetable oils. Trade reform (both in policy and systems) must thus be included in the strategy to promote export and ensure strong private sector participation and enhanced sub-regional market integration.

This analysis supports the enhancement of smallholder agriculture along lines in which crop / livestock expertise and farming capacity already exists. We advocate the systematic enhancement of existing knowledge (which encompasses indigenous know-how) through improvement in cropping systems and the gradual integration of adaptable technologies. Support for smallholders should primarily focus on crops which have an assured and stable market, domestically, regionally, or globally: maize, rice, groundnuts, vegetable oils (sunflower), soya beans, pigeon peas, cassava, sweet-potato, and flue / burley tobacco and cotton.

5.1 Improve Competitiveness in the External Markets

Malawi has established bi-lateral, regional, and global trade agreements to improve market access and trade. Malawi has Least Developed Country status, providing her with rule concessions and preferential access to global markets. Bi-lateral trade agreements have been made with Botswana, South Africa and Zimbabwe. Malawi is a member of the Common Market for Eastern and Southern Africa (COMESA, the Southern African Development Community (SADC), and the World Trade Organisation (WTO). Malawi receives non-reciprocal preferences under the Generalised System of Preferences (GSP) and the US African Growth Opportunity Act (AGOA).

Malawi is a signatory to the Cotonou Agreement (formerly the Lome Convention) between the European Union and the African, Caribbean, and Pacific (ACP) countries and the European Union itself. Malawi receives a preferential quota for sugar export to the EU and US markets. Access to European markets was further liberalised with the 'Everything But Arms' (EBA) initiative, which was approved in February 2001 for 49 LDCs, including Malawi. Under the EBA, the EU has agreed to provide full market access on all LDC exports, bar sugar, bananas, and rice for which tariff and NTB reductions will be phased over a longer

period (REASAL, 1999.)¹⁹ The USA has similarly provided free access to its markets (except for textiles and apparel) under the AGOA (passed in 2000).

Malawi is more dependent for exports on access to global (especially EU and US) markets than SADC markets. Yet trade with SADC members is important, especially in the agricultural sector where Malawi has markets for grain, vegetables and fruit, sugar and sugar preparations, coffee/tea/spices, and tobacco. The value of Malawi agricultural exports to her SADC partners in 2001 was US\$ 36.674 million (See ANNEX 2, Table 30). **Opportunities for growth in intra-regional agricultural trade are limited by the close similarity in the agricultural structure of neighbouring countries.**

Malawi is reliant on its SADC / COMESA trading partners for the bulk of her food imports (except for dairy products and vegetable oils) and agricultural inputs (fertilisers, seed, and chemicals).

Trade Strategy

The government has undertaken no systematic analytical work to identify pro-poor trade policies which can secure agricultural growth and deliver sustainable benefit to Malawi farmers. It has been argued that trade policy has been determined under IMF/World Bank programmes and generally motivated by political (rather than economic) factors (Chigaru, J.R.M., 2003). Trade liberalisation offers Malawi an opportunity to compete preferentially in regional and global markets. But the reduction of tariff and non-tariff barriers alone is insufficient to overcome the constraints and impediments in the agricultural sector. Moreover, trade liberalisation can harm Malawian producers if cheaper agricultural imports have free access to Malawi markets.

The government should pursue measures to improve the workings of the various trade regimes (harmonisation) and strengthen producer support through direct and indirect mechanisms. The required level of government support, our research suggests, must encompass the following commitments:

1. Harmonisation (SPS and TBT): Sanitary and Phytosanitary Measures and Technical Barriers to Trade must be harmonised within regional and global trade agreements. The aim should be to minimise the present trade distorting practices undertaken through these measures by ensuring greater transparency and standardisation in the application of the rules. The government should develop technical skills on SPS and TBT international guidelines and invest in research and infrastructure facilities to enable full compliance with import / export requirements. Additional skills are required in the field of bio-technology and crop modification to monitor the potential hazards of trans-genetic mutation and the entry of GM grains (from food aid) in the food chain.

Tariffs

Under the AoA, developing countries were permitted to bind all tariffs at a ceiling rate, far exceeding applied tariffs. Malawi bound agricultural tariffs at 125%. This decision left

¹⁹ It must be noted that before the EBA, 99% of LDC imports (excluding sensitive products) faced no duties on entering the EU, either within the Contonou Agreement or Generalised System of Preferences.

substantial ‘water’ in the tariffs (i.e. difference between bound and applied rates), providing scope for further reductions in the course of negotiations before the level of actual (applied) rates was reached. The mean applied tariff rate on agricultural products is presently 20.9% and median applied rate is 10%.

The current round of negotiations may result in the reduction of applied tariffs. Three proposals for negotiation have emerged: the EU-USA, the G20 and the Chair of the Agriculture Committee. The EU-USA proposal contains a blended formula, comprising four tariff reduction modalities, but permitting lower requirements for developing countries. The G20 proposal weighs heavier on developed economies, calling for an average cut of [X]% with a minimum cut of [X]% for all lines, but with no percentage subject to Swiss formula and duty-free tariffs. The G20 position proposes no tariff reductions for LDCs.

Malawi would at present be little affected by the proposed modalities as a result of the ‘water’ in its tariffs. Average tariff cuts of 70%, however, would bite into existing tariffs, affecting at least 29.6% of strategic food crop lines (Charman, A. and J. Hodge, 2003). But this level of reduction is unlikely. Similarly, a maximum tariff of 30% would affect 29.6% of food crop lines, though this level of reduction is also unlikely. A high percentage of tariffs subject to both 0-5% and Swiss formula could have more serious consequences. But Malawi could strategically lessen the threat of Swiss formula cuts through reducing non important agricultural lines (no domestic substitutes) to zero binding, whilst reserving the highest tariffs lines (in non strategic foods) for average cuts. Malawi could negotiate the reduction of non-strategic tariff lines where there are currently no or little imports.

There is sufficient strategic space in Malawi’s agriculture tariff structure for maintaining (and even modestly increasing) tariffs on food security lines. An increase of 10% in the tariff on grain imports, for example, may impact on the current negotiating framework in two regards: one, it would reduce the number of 0-5% lines, and two, it would increase the maximum tariff to 50% (wheat flour). These impacts could be avoided through reducing the tariff on non-strategic foods and maintaining the tariff on wheat flour at 40%. High maximum tariffs should be reserved for those crops and food commodities requiring protection from export subsidisation (compensating tariffs) in the export country. An increase in tariffs would need to correlate with the status of non-trade barriers, as transport costs and poor harmonisation currently provide a relatively effective barrier for many low value / high bulk crops (such as maize).

The Cancun Ministerial text proposed there be no tariff reduction for least-developed countries. It is likely that the developed countries will not object to this undecided proposal. But in the interim, Malawi must seek to strengthen its negotiating capacity within the WTO forum, and not rely (as it has) simply on the consolidated African Union/ACP/LDC position.

2. Tariff Increases: Applied tariffs on sectors with strategic importance for smallholder agriculture development should be raised to off-set the high domestic production costs and development of an agro-industrial support service. The most vulnerable crops to free trade are: vegetable oil crops (sunflower, groundnuts, cotton seed, and palm oil), grain legumes (soya bean and pigeon pea), and fruit and vegetables. The high bulk/low value of maize ensures that transport costs provide a relatively effective barrier against cheaper imports from the South African and global markets. The main threat to the maize market comes from unofficial cross-border trade, which needs to be more effectively regulated. Unlike maize, whose market is already closely monitored and subject to price stabilisation, the markets for

rice, sorghum and millet would benefit from greater tariff protection, as price signals would stimulate increased smallholder production.

Emerging agro-industries in vegetable oil extraction would require substantial protection to make-up for the presently unfavourable level of support and services within the industrial sector.

Tariff barriers can also be used in strategic livestock sectors to stimulate production and shelter agro-industrial development. The government should consider increased tariffs on poultry, dairy products (especially milk), eggs, and animal feed imports.

Domestic Support

The AoA provided wide scope for developing countries to maintain domestic support (through subsidies and restricted market access). Under the Agreement, the advantaged countries (including Malawi) were those who registered low levels of Aggregate Measures of Support (AMS), whilst the *de minimis* level for developing countries was set at 10% of the value of production (sufficiently high to exempt much support). In SADC, for example, only South Africa had an AMS which exceeded the *de minimis* requirement. Article 6.2. of the AoA provided Special and Differential (S&D) provision for investment and input subsidies for resource poor farmers in developing countries.

All countries were permitted to continue Green Box support, covering non-trade distorting agricultural measures such as general services (extension, research, disease control, resource conservation, and marketing infrastructure), food stockholding, food aid, and direct payments to producers (insurance, structural adjustment, de-coupled income support, and disaster relief). At the present juncture of negotiations, WTO exemptions for domestic support reductions encompass the following public-funded measures:

- S&D - Investment subsidies and subsidies for inputs, land development, and irrigation
- Support to diversify from the growing of illicit drugs
- *De minimis* provisions (product specific support 5% DC and 10% LDC of value of production and non-product specific support 5% DC and 10% LDC of value of production).
- Green Box measures (general services)
- Blue Box measures (production limiting programmes)

In terms of the AoA, Article 15, LDC Members are exempt from all reduction commitments.

The level of Green Box support in Malawi, especially in general services, was progressively reduced after the mid 1990s. Malawi has provided notification to the WTO on its domestic agriculture support commitments for 1996, 1998, and 2000 (G/AG/N/MWI/2, 30 October 2002). For 1996 no domestic support was provided. From 1998, support was provided to resource-poor farmers through the Starter Pack Programme, whose declared value was US\$ 27,300,000 in 1998 and US\$ 7,600,000 in 2000. As this support fell within the parameters of Article 6.2, it was in any case exempt from reduction commitments.

Whilst the Uruguay Round set high *de minimis* levels for domestic support that developing countries should fall within, the current round may see these levels reduced. The negotiations have coalesced around two dominant positions; on the one hand, the EU-US proposal, which

seeks to extended reductions across all Members, targeting the most trade-distorting measures, while on the other hand, the G20 proposal which seeks to reduce domestic support more significantly in developed countries, whilst exempting *de minimis* reductions and enhancing S&D and Green Box measures for developing countries. The Cancun text largely expressed the objectives of the G20 proposal.

Malawi would be most affected by a reduction in the *de minimis* allocation and AMS to a level that would cut into planned subsidization or removal of Article 6.2 privileges that would result in existing support for resource poor farmers counting under the *de minimis*. However, the removal of Article 6.2 is not on the agenda.

3. Credit subsidisation: Credit subsidisation is required in two areas: first, subsidisation of farmer finance to procure inputs, second, subsidisation of credit for investment in import procurement (fertilisers, seeds, chemicals, and agricultural implements). The main aim of credit subsidisation should be to reduce the costs of finance through two modalities: one, reducing the high interest rate burden; two, reducing the risk premium on investment in the agricultural sector.

Farmer Finance: Credit subsidisation should be afforded to farmers accessing loans from mirco-finance service providers (such as MRFC); the financial assistance should be built into the loan package and should, ideally, comprise the difference between the inflation rate (currently 10%) and the commercial interest rate (currently 45%). The provision of credit subsidisation should be strictly confined to long standing and commercially viable financial institutions and must not repeat the mistakes of the APIP experience. The beneficiary target must be carefully identified so as to focus on smallholder farmers with surplus capacity in terms of physical and human resource capacity. Farmer credit subsidisation should also be extended to the estate sector (although the modalities of finance will significantly differ), but exclude large scale operations which can access the proposed import finance facility.

In light of the 2002/03 food crisis, the government has begun to contemplate taking a more interventionist stance on subsidy provision. Justifying the case against the high costs of food importation, the agricultural planning department has argued for the re-introduction of fertiliser subsidies. The Malawi fertiliser market currently trades 180,000 Mt (of which 70 Mt comprises nutrients). The advisors advocate a direct subsidy, as detailed in the two scenarios in Table 15:

Table 15: Proposed Fertiliser Subsidy Scenarios

	<i>Subsidy Cost</i>	<i>Effect</i>
Scenario 1	US \$20 million for 10 years	30 % price decline
Scenario 2	US \$40 million for 5 years	60% price decline

Source: (GoM/MoAIFS, 2004)

Both scenarios would cost US\$200 million. The case for subsidies argues that a generalised subsidy would increase the affordability of fertilisers and thus enable maize production to increase to 3,000 kg/ha, so ensuring national production of 4.5 million metric tons (or double domestic requirements). The modalities for providing the subsidy are not decided.

The case for subsidisation of seed and fertiliser warrants support. But the extent of subsidisation and cost / benefit of public sector investment in strengthening the liberalised market (through policy reform, MIS, human capital, and financial services) needs to be

carefully determined. **This study does not support the level of subsidisation proposed above.** The main object of input subsidisation, we argue, should be to level the disparity in regional prices as a result of higher transport costs and the small size of the Malawi market.

More importantly, subsidisation should not be seen as a panacea for low smallholder productivity. It should rather form one component in an integrated strategy of public sector support, which needs to include (*inter alia*) technology transfer and skills development, promotion of organic matter cropping systems and crop diversification, price stabilisation (grains), agro-industrial development support, infrastructure improvement, market protection, and strengthening access to micro-finance.

Import Finance: The study endorses the concept of creating an agricultural input fund, as conceptualised in the MASIF ‘An Action Plan For Developing Sustainable Agricultural Input Supply Systems in Malawi’. The fund should fulfil two objectives. First, it should provide agri-business with access to foreign exchange to enable importers to acquire a partial guarantee for Letters of Credit and thus lessen the risk premium on domestic lending. In the MASIP agricultural import fund concept, participating import / borrowers would provide 30% up-front payment. The proposed fund size was US\$ 15 million with the guarantee limited to US\$ 1 million per client. Second, it should provide a partial credit guarantee to domestic agri-business lenders, with the aim of enabling small-medium size operators to expand business in inputs supply, credit, and agriculture produce marketing. The proposed business promotion fund in the MASIP action plan size was MK100 million. Borrowers, in this case, were required to provide 25% of the investment up front.

4. Investment subsidies: The study endorses the subsidisation of loans from domestic financial development institutions for new and re-investments in agro-processing industries. The subsidisation should be provided through an agri-industrial fund, held in foreign currency. The objective is to enable investors to access guarantees for Letters of Credit to procure necessary technologies for meat / dairy production, livestock feed manufacture, vegetable oil extraction, starch production, and grain milling.

5. Export subsidies: Subsidies should be used to enable the export of non-commercial stocks of agricultural products at a price lower than the comparable domestic market price. Export subsidies should primarily target crops with high value / low bulk with global market demand, such as niche crops and cash crops. Export subsidisation of grain to regional markets is not supported. The modalities of export subsidisation should include: i) marketing promotion, ii) technical support to reduce the cost of compliance with country SPS and TBT measures, and iii) subsidisation on international transport and freight to reduce non-tariff barriers (insurance, levies, taxes etc.).

6. Price support: The government should maintain the use of price support mechanisms to stabilise the market of strategic crops, especially maize. These mechanisms include the Strategic Grain Reserve, licensing import requirements, and export ban. The commercialisation of ADMARC – resulting in a substantial downsizing of operations – has removed the option of implementing price protection mechanisms. The government should instead focus on markets and aim to protect farmer interests through controlling informal cross-border imports, increasing applied tariffs, and more closely monitoring food aid distribution. Tariffs should be seen as a more preferable tool than NTB as these can be easily reduced to allow the rapid and effective importation of food in times of crisis.

The modalities for government support must be clearly established for each commodity and sector. The main aim should be to achieve a balance between fostering domestic agricultural growth and ensuring the availability – through a combination of trade and production - of affordable, safe, and culturally acceptable food.

The government should furthermore strive to facilitate – through regional political structures – the further integration of regional input markets. The Malawian seed, chemical and fertiliser markets, for example, are too small to enable high-volume, low-cost importers to compete. If trade regulations were harmonised, importers would be able to freely operate across regional borders, allowing large economies of sale to dictate price reductions.

5.2 Foster an Enabling Environment

Address Macro-Economic Instability

The present macro-economic environment is not conducive for investment in agricultural growth. The economy, as previously discussed, is vulnerable to currency depreciation and inflation (as a consequence of government domestic and foreign borrowing). Domestic commercial borrowing is subject to high interest rates, whilst financial service providers are reluctant to lend all but seasonal loans to the agricultural sector. Agricultural endeavour (especially in the smallholder sectors) is vulnerable to drought / flooding, while domestic grain markets are unstable (and are affected by imports and aid) and export opportunities are constrained by high transport costs and trade barriers.

Government investment plans are hampered by sluggish growth in GDP and the narrow tax base of the formal economic sector. Measures implemented over the past few years to improve efficiency in tax collection and extend surtax to the wholesale and retail sectors have increased domestic revenues by 7.5%. Tax revenue now accounts for 86.47% of domestic resources. Similarly, non-tax revenue has been significantly increased by 53.2% through efficiency improvements and imposition of the road levy. (GoM, 2003). In 2003-2004, 39.95% of the budget is to be derived from foreign sources in the forms of Grants, HIPC debt relief, and Japanese debt relief. Donor funds provide the main revenue source for the development ; of the estimated development expenditure of K15.438 billion (US\$ 157.962 million) for this period, donors are expected to provide K12.332 billion (US\$ 126.184 million) (79.82%) from loans (7,397 billion) (US\$ 75.688 million) and grants (4,925 billion) (US\$ 50.393 million).

Government reliance on donor support is disadvantageous. Donors impose conditionalities on government action, define priorities, and reduce government autonomy in determining its development strategy and approach. Donors have historically maintained little dialogue with the private sector and provided limited support for public-private initiatives and business growth. The main thrust of donor support to the private sector has focused on small, medium, and micro-enterprise development.

The Government should create a stable macroeconomic and microeconomic environment that sets adequate incentives for investment. Appropriate fiscal, monetary, foreign exchange and trade policies and commitment to democratic rule are required to foster private sector

investment in the production, marketing and processing of agricultural inputs and delivery of other supporting services (such as rural finance, extension and research services).

The private sector has expressed the need - through sources such as 'A Growth Strategy for Malawi' (2003) - for creating a stable business environment. Their concerns focus on high inflation, poor management of exchange rates, the narrow tax bases, inefficient and costly public utilities, poor infrastructure, and the high debt burden.

The IMF/WB and donor community recognise that the Poverty Reduction Strategy offers the best current development trajectory and have called upon the government to show strong leadership and commitment in its implementation (IMF, 2003). The IMF/WB and major donors, however, emphasise the need to create an 'enabling environment' for investment. Their principal concerns focus on the indiscipline of the government in managing macro-economic stability, corruption and public sector performance, and political interference in democratic institutions. The lenders see the necessity for advancing the commercialisation of state corporations and further agricultural sector reforms (focusing on marketing). ADMARC's demise from its former role in supporting the smallholder sector now seems certain (World Bank, 2003b).

Invest in irrigation and other infrastructure

Agriculture in Malawi is highly susceptible to climatic variability, especially drought. The impact of drought has been worsened through soil fertility decline and environment degradation, especially deforestation. Malawi has the potential to limit the impact of drought through investment in irrigation infrastructure, subsidisation of machinery, and conservation of catchment areas.

Malawi is landlocked and therefore depends on rail and road networks to access the nearest ports in Mozambique, South Africa, and Tanzania. Its dependence on trans-country transport poses a major business disincentive to foreign investors; within the sub-region, Malawi has comparably higher transport costs. Her internal transport infrastructure is poorly developed, whilst existing facilities have not been well maintained. The road network is currently 16,135 km, comprising 2,853 km (18%) tarmac surfaces and 12,564 km (78%) unpaved (UW/WFP, 2002). The condition of the tarmac roads was greatly improved with the establishment of the National Road Authority, providing a semi-autonomous financial modality for investment in road construction and maintenance. But gravel roads are irregularly maintained and much of the national network becomes impassable for heavy freight during the height of the rain season.

The costs of road freight into Malawi are amplified by third country rules that limit the competitiveness of the domestic / international transport industry. These rules restrict international companies from competing for domestic distribution transport services. Transport bottlenecks arise annually during the period of fertiliser imports (September-November) and tobacco exports (August-December) schedule. During the peak fertiliser import period, the absence of backloads for the return journey to source destination further increases overall transport costs. Transportation costs into Malawi are also affected through a host of non-trade barriers applied in trans-shipment countries. These include complex documentation and protracted bureaucratic procedures, levies and taxes, phyto-sanitary control measures, and police extortion.

Air freight does not (presently) offer a viable solution to the condition of the road network and limited capacity of rail freight. Privatisation of Air Malawi and opening up air routes to competing carriers may result in more efficient and cost effective connection to niche regional and global markets.

Public utilities (electricity, water, and communications) are seen as unreliable, dominated by monopolistic and inefficient service providers, and comparatively expensive. Investment is constrained by the difficulty in acquiring the use of a fixed line telephone service, the cost of phone calls, erratic electricity supply which requires costly investment in power generation and protection equipment, and limited water distribution. Privatisation may achieve greater reliability and competitiveness, but both business and consumer interests will have to be protected, through amending the legal framework and strengthening watchdog organisations.

Agricultural markets and infrastructure are inadequate to serve the scale and diversity of smallholder production. The marketing structure reflects ADMARC's once dominant position as sole marketing agent. The main inadequacies are the limited number of storage facilities (refrigeration and warehousing), public transport linkages between town and village markets, and poor communications (proving market intelligence). Village markets tend to use non-standardised units of weight and measure. Measures must be taken to promote public and private investment in rural transport, communication and marketing facilities.

Enhance Human Resource Development

Skills, knowledge and information are necessary for smallholder farmers to absorb new technologies and tailor their cropping strategy and livestock investment to markets. Farmer training was previously undertaken through a transfer-of-technology approach. The public sector was the sole training provider. Training was provided in a top-down manner, with extension officers trained to teach farmers new technologies in a teacher-pupil mode of interaction. While a small group of 'better-off' smallholders benefited from the training and technology transfer programmes, the majority of farmers were sidelined. The approach did not take account of their farming systems and extension requirements; instead the Ministry prioritised costly and labour intensive innovations (such as hybrid maize and fertilisers). In 1995 the Ministry of Agriculture embarked on a change process to re-orientate service provision towards a participatory and pluralistic approach (Mbabule, J. et. al, 2003).

The decentralised / de-concentrated service approach is suitable for the development challenges in the smallholder sector. But the new approach cannot do without the services of the technical specialist. Agricultural officers with specialist vocational training in veterinary services, land husbandry, cropping, irrigation, post-harvest storage, and specialist crops (horticulture, tobacco, cotton) are still required. The public sector must re-invest in training institutions, such as the Natural Resources College, with the aim of achieving the level of output attained in the early – mid 1990s. The training objectives should have a dual focus: first, to produce new cadres for station out in the field, equipped with both technical and training / extension service knowledge, second, to provide re-training for field officers in new methods, approaches, and solutions. Improvement in the provision of basic education and health care in rural areas should also be a critical component of the program aimed at developing the human resource of the country. Special attention must be given to HIV/AIDS, which has become a major cause vulnerability in rural areas.

Improve Regulatory Framework

The private sector sees the present government role in supporting, monitoring, and regulating business as an obstacle to investment. It opposes, in particular, the public sector's regulatory approach and emphasis, pointing to the following:

- The burden of compliance and taxation falls on formal business.
- High cost of regulatory procedures (including the costs of corruption).
- Weak investment incentives (in global and regional comparison).
- Incentive bias towards new investments (limited support for re-investments).
- Inconsistency in pro-business policies and attitudes of government.
- Inefficient and ineffective commercial legal systems.
- Weak government services and poor productivity.

Public sector attitudes towards investors have been perceived as negative or ambivalent, offering little support. **Government procedures are slow, often hampered through incompetence and corruption, while many regulations have costly implications and incentive schemes (such as duty waivers) are variable to sudden change** (GoM/DoEPD, 2003). Although the rule of law prevails, courts are unnecessarily slow in dealing with commercial cases, while the outcome of litigation has been subject to political influence.

The Government should make effort to provide the right institutional infrastructure – property rights, transparent and accountable public administration, protection against crime, law and order, reliable judiciary, etc. – that encourages long-term investment. There should a system that allows debate over policies and implementation of government programs. Institutionalized links to stakeholder would ensure transparency and accountability.

Introduce Land Reform and Enhance tenure security

The downturn in the estate agriculture sector – especially in tobacco estates, partially as a result of liberalisation and reduced commercial lending – led to an economic crisis with many estates going bankrupt, while most had to reduce their output. With little new investment coming into the estate sector, the area of un-utilised land has increased steadily. The scale of under-utilised land is not precisely known; however, it was thought that approximately one third of the total cultivatable area of estates (996,127 ha) or 360,000 ha was under-utilised in the late 1990s and suitable for arable production (GoM/MoLHPPS, 1988).

The size of un-utilised estate land is small in context of national requirements. If this land is re-leased for redistribution to smallholders, its impact on national land imbalances (especially in the South) would be limited although it could alleviate local land pressures in adjacent communal areas. Despite government intentions to initiate a land reform programme, no distribution has occurred.²⁰ In recent years, the estate sector has witnessed a revival of investment in flue and burley production and the extent of un-utilised land has significantly diminished.

²⁰ The government has undertaken detailed consultations on land reform, including three studies: Estate Land Utilisation Study, Customary Land Utilisation Study and Public Land Utilisation Study.

The uncertainty of land tenure (under both leasehold and customary possession) affects investment in the agriculture sector negatively. Under customary tenure, land occupation is controlled by traditional leaders from whom occupants acquire use rights. The strength of these rights varies according to the status of the occupant (male / female; ethnically indigenous / non-ethnically indigenous), while rules governing inheritance and transference provide no long term security. The strengthening of customary land occupation rights is seen as a pre-condition for private sector investment in smallholder cash crop schemes. Serious and competent farmers require both protection from the influence of traditional leaders (and politicians) and an incentive for investment in the development of their homesteads (for pens, curing barns, irrigation and storage structures etc.). Land resource conservation provides a further justification for fundamental land tenure reform.

2.3 Increase Support for Smallholder Agriculture

The Case for Direct Subsidisation

The study advocates an input subsidisation investment approach to profoundly strengthen the Malawi Poverty Reduction Strategy, through focusing investment on increasing maize, root and tuber production, and legume production to increase national and household food availability and income from cash crops. This strategy and expenditure plan provides support to the three main farmer socio-economic categories: resource poor and food insecure smallholders, resource poor food secure smallholders, and emerging small commercial farmers. In accordance with the rural wealth profile, the resource poor category would include 70% of households (1,806,921), the secure category 25% of households (694,970), and the emerging small commercial category 5% of households (138,994). The investment inputs package should be tailored to the resource capacity of the three groups, as detailed in Table 16 below.

Table 16: Farmer Investment Packages

category	%	households	prodn. Per h/h (ha)	total land area	investment package
food insecure	70	1,806,921	0.5	903,460.7	0.2 ha maize (seed and fertiliser), 0.1 ha legume (seed), 0.2 ha root and tubers (revolving fund).
food secure	25	694,970	0.8	555,975.8	0.4 ha maize (seed and fertiliser), 0.2 ha legume (seed), 0.2 ha root and tubers (revolving fund).
emerging small commercial	5	138,994	2	277,988	1 ha maize (seed and fertiliser) 1 ha cash crop (seed and fertiliser)

The proposed investment packages have been modelled on the technical experiences and costs of the three case studies in section three, namely the Starter Pack (TIP), the APIP, and the LLTC / Kasungu Farmers. For each farmer category, the following modifications to these packages have been applied:

- Food insecure: an enhanced starter package, comprising seed and fertilisers for 0.2 ha OPV maize, seed for 0.1 ha legume food crop (soya / p-pea), and planting material for 0.2 ha root / tuber crops. The planting material will be supplied from village revolving

funds. Cost = \$25. This investment would supersede the free input distribution component of Pillar 3, MPRS.

- Food secure: an agricultural productivity improvement package, comprising seed and fertiliser for 0.4 ha hybrid maize, seed for 0.2 ha legume (sunflower / ground-nut) or traditional (tobacco / cotton) cash crop, and planting material for 0.2 ha root / tuber crop. Cost = \$65
- Emerging small commercial: a high value inputs package, comprising seed and fertiliser for 1 ha hybrid maize and seed, chemicals and fertiliser for 1 ha tobacco / cotton. Cost = \$350

The total inputs costs of the three packages are detailed in Table 17. In addition to inputs, the investment proposal includes increased government expenditure in the provision of general agricultural services. The range of services is to include: agricultural training, research, extension services and communications, support to the 8 ADD for field activities, land husbandry and irrigation services. It is proposed that the level of public expenditure on these services should be provided at the comparative level of the early 1990s before investment in agriculture went into decline. During this time, annual expenditure on agricultural services was roughly US\$ 12 per/ha. This figure would translate to an investment requirement for general agricultural services of **US\$ 20,849,093**, a figure additional to the MPRS cost requirements for agricultural services and administration (as indicated above).

Table 17: Proposed Investment Costs US\$

Category	input costs per h/h \$	total input costs	agric. service costs	credit service costs	loan interest costs	Govt. subsidy costs	DFI Total (recoverable)	Govt. Total (non-recoverable)
<i>food insecure</i>	25	45,173,034	10,841,528					56,014,562
<i>food secure</i>	65	45,173,034	6,671,710	4,517,303	4,969,033	17,391,618	54,659,371	24,063,328
<i>emerging small commercial</i>	350	48,647,883	3,335,855	14,594,365	6,324,224	22,134,787	69,566,472	25,470,641
Total		138,993,951	20,849,093	19,111,668	11,293,257	39,526,405	124,225,843	105,548,531

Notes: credit service costs = 10% food secure and 30% small commercial. These rates are modelled on current lending practices and reflect investment risks.

The investment would be funded partly from private sector sources (Development Financial Institutions - DFIs) and partly from public funds. DFI investments would be recoverable at commercial interest rates (presently 45%), whilst the public sector investment would be non-recoverable and constitute a production subsidy. The investment package for food insecure smallholders would be entirely funded by the public sector (with donor support) as a welfare grant. In contrast, the input packages for the food secure and emerging farmer categories would be funded by DFIs as commercial loans, with the public sector covering the cost of agricultural service provision and subsidisation of interests at 10%.

The total cost of the initial investment for DFIs equates to US\$ 124,225,843, while the Public Sector contribution amounts to US \$105,548,531. The annual public sector investment requirement would vary according to the macro-economic stability as this determines commercial lending rates and thus the subsidisation requirement. It is envisaged that the initial investment level in agricultural service costs and inputs for resource poor farmers

should be maintained for no less than five years. Measures to reduce dependency are addressed below.

Returns on Investment

The investment would deliver a substantial return in terms of improved food availability, accessibility, and stability. The investment ensures that farmers are able to access seed, chemical fertiliser and other inputs for food crop production at an affordable cost. The productivity enhancement value of fertiliser application on smallholder maize under rain-fed conditions has been clearly demonstrated under the Starter Pack and APIP programmes: annual production exceeded 2 million tons. The input packages are tailored to farmers’ resource entitlement and human capacity. At the base level, the package would enable a resource poor farm household to produce its main food requirements, comprising grain, root and tuber crops, and grain legumes.

Initially 70% of farm families would be eligible to receive the input package as a grant. But as farmer capacities increase and farming system transformation advances (initially through diversification), the number receiving grants should decline and the number eligible for the productivity investment package would rise correspondingly. The inter-mediate package enables farmers to produce a marketable surplus and invest in diverse cropping and livestock. The productivity gains from high maize yields will release land for further increasing production and simultaneously allow for crop rotation and fallow. The third investment packages provides for emerging small commercial farmers who have the land, human, and capital resources to intensify crop and cash crop production. The farming system investment returns are summarised in Table 18.

Table 18: Farming System Returns

Indicators	food insecure smallholder	food secure smallholders	emerging small commercial farmers
Crop and cropping system	Crop diversification: shift from maize mono-cropping, greater household nutritional diversity	Food and cash crop diversification: shift from maize / tobacco dependence	Yield and quality increase, through recommended input application.
Conservation	Integrated organic matter technologies and land husbandry conservation	Integrated organic matter technologies, and land husbandry conservation. Household woodlots.	Integrated organic matter technologies and land husbandry conservation. Fuel and forestry woodlots.
Maize Production	722,769 Mt	833,964 Mt	486,479 Mt
Cassava / S-potato Production	5,420,764 Mt	2,084,909 Mt	-
Legume Production	142,747 Mt	113,975 Mt	

The investment will return a maize output of 2,043,211 Mt, approximately the crop size of the 2002/03 harvest. However, this result will be achieved on roughly half the land area presently under maize, thus releasing 790,607 ha of arable land. This land will enable a substantial increase in root and cassava production. **Excluding the land incorporated for these crops, the investment releases 517,979 ha.** Cassava and sweet potato production will increase to 7,505,673 Mt, a more than three fold increase over current production estimates. Similarly grain legume (pigeon pea) production will exceed present output levels.

The investment in general agricultural services will enable farmers to adapt appropriate technology solutions and allow information to be more effectively disseminated. The extension service will allow programmes on land husbandry conservation to target all farmers. The participatory extension process will strengthen farmer organisation and transfer responsibility for implementing activities to community structures. Village seed / planting material revolving funds will be established to enable all farmers to acquire (at low cost) improved cassava and sweet potato varieties. The advantages of the listed crops and main requirements of public support are summarised in Table 19.

Table 19: Public Sector Support for Smallholder Farmers

	maize	rice	g-nuts	s-flower	soya	p-pea	cassava	s-potato	tobacco	cotton
Loan finance (inputs)	x	x		X					x	x
Extension support	x	x			x				x	
Crop, cropping system and IPM research				X			x	x		x
Technology subsidisation	x	x							x	x
Transport subsidisation	x	x		X	x	x			x	x
Price stability	x									
Market information	x		x				x	x		
Market protection	x	x		X	x				x	
Agro-processing support				X	x	x	x			x

The re- allocation of land, labour and finance in crop diversification will strengthen the farming system against external ‘shocks’. This will enable farmers to cope more successfully with rainfall deviation and minor droughts as evidence from southern Malawi confirmed in 2002/03 (Orr, A. and S. Orr, 2003).

Macro-economic gains

The initial public sector investment of US \$105, 548, 538 (less the MPRS Pillar 3, free input component of US\$ 6.5 million) **equals 45% of the current public sector annual debt repayment (interest and principal).** The latter commitment now costs the Malawi government more the US\$ 220 million. It is envisaged that the public sector investment in the proposed agricultural strategy can be reduced in year five to US \$ 66 million if the macro-economic environment improves and commercial lending rates decreases. The level of subsidy ideally should be progressively reduced. The government should aim to secure part of the required funds for this investment from debt relief.

The productivity return in crop production will reduce the present government requirement for maize import to nil. This will translate into significant saving in foreign exchange and reduce the necessity for emergency loans. The credit savings could amount to US\$ 30 million dollars, if Malawi were to experience a significant food deficit. The most significant savings will occur in investment re-direction, while the land resource made available through enhanced productivity would contribute massively to economic growth.

The attainment of household self-sufficient in basic food crops will allow for a redirection of agricultural investment capital (including donor and NGO funds and loans) into livestock and technology integration and nice export crops. This could amount to a re-deployment of between US\$ 17-25 million in development expenditure annually. Land released from maize and productively used in cash crops (cotton, tobacco, spices, legumes etc.) could potentially

generate more than US\$ 400 million annually. At household level, food self-sufficiency would translate into income savings for the poorest groups amounting to US\$ 49-81 million annually. The indicative macro-economic savings are summaries in Table 20.

Table 20: Macro-economic benefits

Indicative savings	best estimates (US \$)
Credit savings (borrowing)	up to 30,000,000
Import savings	15,500,000
Investment re-direction	17-25,000,000
Land released for cash cropping (517,979 ha)	< 400,000,000
Household savings (30% of household income among resource poor)	49,000,000-81,000,000

Notes:

Import savings are calculated on the basis of the 5 year average (1998-2002).

Investment re-direction is estimated on the basis of donor and grant projects currently implemented in the agricultural sector (Information Supplied by MoAIFS, Joint Task Force – Technical Secretariat).

The potential value of land re-invested in cash cropping has been estimated on the basis of a cash-crop return of US\$ 800 per ha.

Household saving are estimated on the basis of the monthly earnings of the poorest three groups in the Action Against Hunger Survey (January 2004). The proportion of household expenditure on food is a conservative figure.

Avoiding Dependency

An investment programme, such as the one illustrated above, should have a specific time frame and end objectives. Beneficiaries must clearly understand that the justification for subsidisation and market protection is to enable them to overcome preliminary constraints. The time frame should not exceed one decade. The level of state support should be progressively declined as farmers improve their farming systems and entitlements. Over the course of the investment programme, the form of government support must shift from direct support (subsidisation) to general agricultural services provision and market protection. Market protection may require a greater scale of intervention, as global markets liberalise and NTB become more harmonised, allowing neighbouring producers freer access to domestic markets. But these developments are far from certain.

In the short-term, the most important development goal in the investment is the transformation of the smallholder farming system towards a more crop diverse orientation. The high dependence on maize underscores the vulnerability of existing smallholder systems. The intensification of maize production on 0.2 ha will allow resource poor farmers to devote other portions of their land to root and tuber crops and grain legumes. Within the food insecure farmer category, as many as two thirds, might be able to rapidly improve their entitlement position (through, household savings from food security, for example) and expand production beyond 0.5 ha. These smallholders will need to be systematically assimilated within the food secure category and given access to the intermediary loan package.

Agricultural extension services will need to provide extensive support to farmer training in land husbandry and organic matter technologies. An improvement in skills and technology adoption / integration will result in gains in soil fertility and resource conservation. **But long-term farmer commitment to investment in land and farming will require fundamental land reform to strengthen tenure.** Smallholder should not, however,

be permitted to use land as a guarantor for securing finance as this may result in land dispossession.

The capacity of smallholders to meet their staple food requirements and to produce a marketable surplus provides the necessary agro-economic preconditions for investment in livestock. At household level, the food surplus can then be directed to feeding livestock, initially poultry and small ruminants. Cattle require a high investment in labour and veterinary care and thus present a more suitable option for small emerging commercial farmers. The smallholder sector would benefit from increases in domestic demand, especially from the rapidly expanded urban populations. The demand for meat, dairy, vegetable oil, fruit and vegetables, and refined grains has shown strong growth, despite the poor macro-economic performance over the past half-decade. **It is important that smallholder farmers are given free access to urban markets and not denied entry through legislative barriers (such as bi-laws prohibiting the sale of green maize), insecurity (theft and political conflict), and most importantly, cheap imports.** The government must recognise its role in promoting and restricting market access as a central component of a productivity enhancement exit strategy.

Traditionally, agricultural strategy has looked to long-term growth to come from an expansion in export crops (tobacco, sugar, tea / coffee, spices, and nuts). But apart from tobacco in the late 1990s, there has been limited progress in re-directing production from the estate sector to the smallholder sector. The case of burley tobacco suggest that rapid transformation can have negative results, including soil fertility decline, poor agricultural practices, child labour exploitation, and a divestment of resources away from food production. **These consequences must be avoided.** It is therefore unadvisable to encourage the smallholder sector to move too rapidly into these traditional export sectors. The government should rather endeavour to foster public-private partnerships with existing agri-business stakeholders to provide entry for smallholders with the appropriate capacity, as has begun to happen successfully in the sugar and tobacco sectors. These partnerships can ultimately allow the government to shift from a direct role (such as subsidisation or extension provision) to an indirect role as a facilitator and regulator.

The emphasis of the proposed investment strategy on raising on-farm productivity of land and labour provides an exit option from the existing 'poverty-trap'. Increasing population pressures will, otherwise, result in further land fragmentation and resource degradation. The attainment of household food security through the strategy outlined will release funds for investment in surplus production through mechanisation, livestock integration, and micro-irrigation.

Increased public sector investment in agricultural infrastructure, market development, and producer support (both direct and indirect) must be allied with investments in human capital formation. The MPRS identifies (Pillar 2) an appropriate approach for investing in skills development / training, primary and secondary education and health improvement (including strategies to mitigate the impact of HIV/AIDs). Also essential are strategies to reduce gender disparities and improve employment and investment opportunities for women. These issues are address in the MPRS, Pillar 5. Measures to improve human capital and social equality should be enhanced and enlarged to encompass core and non-core poor populations in both urban and rural context. The long-term focus must fall on facilitating greater access for the landless and near landless to off-farm income generating opportunities and skilled and semi-skilled employment in the niche crop sectors.

Capital expenditure on transport infrastructure is essential for improved market arbitrage, both domestically and regionally. The fundamental development requirements are addressed in the MPRS under Pillar 1, Goal 1.2. Within the MPRS strategic framework, the focus is on providing good rural roads (including bridges), water and sanitation, an expanded energy network, and access to telecommunications. The Department of Irrigation has formulated a National Irrigation Development Policy and Strategy (1995). The policy aims to address the main social, institutional, economic and technical barriers to diversifying and expanding irrigation service provision. The policy places emphasis on the need to ensure sound economic viability on investment and collaborative community management of public irrigation works.

Summary and Synthesis

Malawi has favourable agro-ecological conditions (including water availability) and the human capacity to largely supply all its food needs. In the 1970s and early 1980s, this goal was actively sought through government support. The support encompassed wide ranging general agricultural services, farmer subsidies, market access restrictions and price measures, allied with tight fiscal and budget control. The country nonetheless had food deficits in strategic foods, especially wheat, vegetable oils, and animal products (fish, dairy, and animal fats), which necessitated imports. Through domestic production and imports, the country was successfully able to ensure national food availability. Prior to the Mozambique refugee crisis in the mid 1980s, food aid was small in volume and strictly tied to disaster relief. But despite the apparent food security achievements, the stability of the food system was structural unstable and marginal socio-economic groups were vulnerable to transitory and cyclical periods of insecurity.

Since 1987, the country's reliance on both food aid and imports have increased, revealing the fragility of smallholder farming systems in times of drought and the apparent inability of the smallholder sector to develop beyond the maize-tobacco system. The government and donors are in agreement that the necessary strategy to bring about an exit from import/aid reliance and low agriculture productivity must include a strong safety-net component. The most vulnerable households will require both supplementary / therapeutic feeding support and off-farm employment (initially) in public works programmes. The requirement for long-term safety-nets is evidence that liberalisation / structural adjustment programme reforms have not succeeded in delivering benefits to the very poor, and especially, the rural poor.

Under Article 6.2. of the AoA that provided Special and Differential (S&D) provision for investment subsidies and subsidies for inputs, land development, and irrigation and permitted to bind all tariffs at a ceiling rate, far exceeding applied tariffs, Malawi has the option of applying various support and protection programs for its poor farmers. The need for increased government (and donor) support and investment in the agricultural sector is also justified by the cyclical reliance on food aid. What is now required is a shift from a 'food aid' strategy to an 'agricultural aid' approach. The success of this shift will impinge on firm macro-economic discipline and government commitment to democratic rule. High interest rates, currency fluctuation, poor service delivery in government and para-statal sectors, public sector corruption, and undemocratic practices threaten development prospects. Failure to impose discipline on management of the economy and public services will undermine effects to productively enhance agricultural development.

Apart from endorsing the calls for macro-economic discipline and democratic governance, the study proposes a three pronged approach towards building a sustainable exist. The three components are: i) improved regional and global market access, allied with protection of vulnerable food security crops, ii) increased government support through subsidisation of inputs (as part of a broad based credit scheme), market access, and price support mechanisms, and iii) increased government expenditure on general agricultural services (green box support).

The study advocates universal input support to all smallholder farmers, though differentiating between three socio-economic tiers: food insecure, food secure, and emerging small commercial. A universal approach (though involving different loan modalities) will substantially mitigate the problems inherent in targeting. While the food insecure category should be provided with free inputs, the input packaged should be limited and low geared to ensure that only the poorest sectors will subscribe. The food secure and emerging small commercial groups should be afforded access to a more extensive, though credit based, input package to enable them to invest substantially in surplus food and cash crop production. The investment benefits of the loan packages will underwrite the targeting processes, ensuring that households with sufficient land and human resources opt to improve their wellbeing through productive investment.

The above strategy will differ fundamentally from the earlier experience of inputs subsidisation. Unlike the former approach, the emphasis here falls on the transformation of smallholder farming systems through increasing maize productivity as a means to release land for allocation to diverse food crops (roots, tubers and legumes) and cash crops. Once household food security is attained, the strategy should then broaden to promoting livestock husbandry and investment in irrigation and farm mechanisation.

Conclusions and Recommendations

In the period 1987-2003, the Malawi food system was weakened. Domestic food production collapsed nationally in 1992, 1994, and 2001, while serious regional shortages occurred in 1993, 1995, and 1997. The scale of the collapse varied within this period, with the 1992 drought seemingly affecting a greater number of households, more severely than the later crises. The collapses have necessitated substantial commercial grain imports. Food aid has also been required to provide free access to food for the poorest households. From 1990-2003, commercial cereal imports totalled 3,805,890 Mt, equivalent to 317,158 Mt annually (roughly 20% of average production). Over the same time frame, total donor food aid (cereals) amounted to 1,413,850 Mt, while non-cereal aid measured 122,230 Mt. **The trend illuminates a growing reliance on food importation and aid.**

This study addresses three principle research questions. The study timeframe is 1987-2003.

1. Is there evidence of an increasing reliance on commercial imports and food aid to the extent that Malawi has become perpetually dependent?
2. Is there evidence of a declining level of support to agriculture and the food sector and why has agriculture not attracted sustained support despite its significance?
3. Why has Malawi come to rely on food imports and aid and what has been the impact at mezzo, macro, and micro levels?

Question 1:

The study found no evidence of perpetual dependence on commercial imports and food aid. While there is evidence of an increasing reliance on imports / aid, this trend correlates with cyclical downturns in agriculture, principally during times of drought and inadequate rainfall distribution. Yet the causes of smallholder vulnerability are not simply climatic, but relate to government support and the impacts of economic liberalisation.

The adoption of structural adjustment reforms from the mid 1980s lessened the government's capacity to support local production. Yet smallholder production nonetheless increased, although erratically and not sufficient to meet national requirements. Daily capita calorie supply of cereals, pluses and animal products has declined over the period 1987-2003, but the trend has been uneven and there have been signs of significant improvement in favourable production years and through crop diversification.

Malawi has structural deficits in wheat, vegetable oils, and dairy produce / meat sectors and has long relied on imports. The volume and value of food imports since 1994 has fluctuated widely, showing no clear trend, as a consequence of regional supply, global price factors, and shifts in domestic demand. The government has been the main grain (maize) importer. This has had major cost implications on the fiscal position and budget resources. The private sector has had wide autonomy in non-maize food importation. While structural adjustment provided greater opportunities for food importation, the government did not anticipate greater imports (and hence require a shift in policy) and has exercised control only on maize. Food imports have not brought measurable welfare benefits. Food importation has decreased the net contribution of the agricultural sector to national economic growth.

Under the present smallholder farming system orientation towards maize, there is strong likelihood of continued, cyclical, food shortages. Flood damage poses a high vulnerability risk in the lakeshore region. During drought seasons, the country will continue to rely on imports and food aid to assure national food self-sufficiency, although accessibility remains a major challenge. Recent production trends suggest that smallholders have sought to mitigate crop failure risks through diversifying cropping. If these trends continue, then there is the **possibility** that smallholder production will successfully meet national food requirements. **But the fundamental challenge will be to distribute the gain to the poor who have neither the land nor labour nor capital to undergo diversification.** A significant proportion of the population (approximately one third) remains vulnerable to food insecurity, as a result of either chronic or transitory factors.

Food aid is therefore required, in the long-term, to provide continuous assistance to specific targeted groups among the ultra poor, especially under 5 children, expectant mothers, and people living with HIV/AIDs.

An additional challenge will come from urbanisation. While demographic trends suggest that urban growth is retarding, rapid urbanisation will present new demands on the national food balance. The urban poor depend predominantly on market sources. Given the present status of the agricultural economy and weak agro-industrial sector, these demands are likely to result in greater national reliance on food importation to meet demands for wheat, meat, vegetable oils and dairy produce. Urban demands for maize can largely be fulfilled through more effective integration of domestic markets. Much of the required food imports are obtainable within the SADC region, highlighting the potential benefit of regional trade harmonisation.

Question 2:

The study provides evidence to confirm the hypothesis that public support to the agriculture sector has declined in absolute and relative terms. The decrease in expenditure and investment in agriculture over the period 1987-2003 owes to three main factors: **first**, the relative decline in government revenue as a consequence of the faltering performance of the national economy, **second**, structural adjustment constraints against increased investment on service sectors and restrictions on international borrowing, and **third**, the re-prioritisation of development towards investment in human capital formation. After 1994 the new government shifted the weight of service expenditure towards education in line with its political commitment to the electorate to provide free primary education. The structural adjustment process, however, did not – contrary to expectations, pave the way for sustained private sector investment in agriculture.

Government expenditure on the recurrent account for agriculture fell steeply after 1992. Within the framework of the MPRS, recurrent expenditure has risen since 2002 to provide for targeted inputs support and safety-net measures. The level of expenditure has varied significantly from year to year in relative terms. The variation owes partially to changing government priorities, with ministerial leadership seeking to stamp short-term agendas on long-term programme focuses. The study analyses three main strategic programmes: DEVPOL, ALDSAP, and MPRSP.

Public expenditure on agricultural development (capital account) has been no more constant than the recurrent expenditure budget, reflecting the inconsistencies and changing focus behind donor support. In the period under investigation, donor investment has shifted from

'technical solutions' (irrigation, livestock, research and extension training) to facilitating environmental sustainability (soil and land husbandry conservation) and promoting human capital development. The shift in emphasis furthermore highlights the recognition that private sector investment in the smallholder agricultural sectors is limited (focused mainly on distribution) and unlikely to meet broad development requirements.

The structural adjustment programmes did not result in increased private sector investment, whilst the government has not had the means to provide safety-net programmes for those social sectors left out. Opportunities for private sector investment really became available in the mid-late 1990s, with the repeal of the Special Crops Act and other legislation allowing competitive input distribution. By the late 1990s, the necessity for safety-net programmes as part of the agricultural development agenda became apparent to the donor community. The MPRSP gives full recognition to the requirement for safety-nets to serve the nutritional and off-farm income needs of targeted poor and food insecure groups.

The study provides three contemporary examples of investment in the smallholder sector to achieve productivity enhancement: I) Starter Pack/TIP, II) APIP and III) Limbe Leaf / Kasungu Tobacco Farmers Trust. Although the modalities of support and target group differed in each case, these cases highlight the potential return from increased direct investment in input provision and extension service delivery.

Question 3:

Malawi has required substantial food aid and grain imports during times of humanitarian crisis. The WFP has been the leading international partner in providing food support for the transitory and chronic poor. Within this framework, the provision of food aid was intensified and diversified from the mid 1980s, in response to three factors: **first** the Mozambique refugee crisis, **second**, the need for increased supplementary and therapeutic feeding to targeted vulnerable groups and **third**, to strengthen disaster relief operations given the cyclical occurrence of drought and annual floods.

The government has been the largest cereal importer. Its imports have correlated with domestic production shortfall, principally in maize. The government has explicitly subsidised the costs of maize imports and passed-on the saving to consumers via the ADMARC network. The liberalisation of markets has, however, allowed the private sector to operate more efficient and effectively, resulting in both lower prices for consumers and improved market arbitration between sub-regional markets (Malawi, Zambia, Tanzania, and Mozambique) and regionally diverse domestic markets.

Food imports and food aid successfully averted widespread starvation and death in the four major humanitarian crises during the period: 1992/93, 1994/95, 1997/1998, and 2002/03. Despite this record, the delivery of imports / aid has tended to be delayed, due to logistical bottlenecks and the government's desire to secure donor / financial support before commencing procurement. The effectiveness of the food aid distribution process has been hindered by biased targeting, whilst the idea of stratified food distribution runs contrary to Malawi cultural norms and values. There is no clear evidence of food aid dependency syndrome; however, given the low margins in maize production, the individual returns on acquiring food aid are favourable over current production incentives.

During the most recent food crisis, there emerged strong evidence that food aid / imports had had a harmful effect on the Malawi economy. While the impact is dependent on volume, in times of crisis such as 2002/03, the economy suffered from the government's requirement to borrow on the domestic money market (absorbing investment capital that could otherwise have gone to productive sectors) to purchase maize and subsidise the consumer price. While most food aid has been provided as grants, government acceptance thereof can have hidden cost implications. The cost of milling GM maize from the US provides a pertinent example. But also the food aid distribution process requires government involvement and resource commitment to co-ordination and monitoring structures.

In the 2002/3 scenario, the scale of the disaster was possibly less severe than the initial assessments. Nonetheless, the combined government, donors, civil society organisations response resulted in the importation of 788,538 Mt, a volume equal to 40% of average production over the past five seasons (2,105,178.20 Mt) or double the marketable surplus at this production level. The estimated cost of these imports was **MK 15,559,230,505.71** (roughly **US\$ 201.88 million**), a figure comparable to the 2002 tobacco export value (MK 17,893 million) (GoM/NSO, 2003c).

The impact of food aid / imports on domestic markets is uncertain. In three different scenarios, 1994/5, 1997/8, and 2002/3 the impact on price varied, with the private sector role increasing over the period, whilst the ADMARC role declined correspondingly. The capacity of the private sector to supply domestic food demands through importation has increased substantially during the period and successfully demonstrated its ability to integrate geographically proximate maize markets at a cost below government subsidisation.

There have been limited financial gains for government. As a consequence of the 2002/03 crisis donors have agreed to fund both a financial reserve for the SGR and provide budget support. The current financial reserve has been set at 3 million Euros, funded by EU, USAID, and NFRA. Furthermore, the European Union has committed to providing annual financial support to the NFRA for managing the SGR; in 2002 and 2003 the cost estimate for management and operational support was EUR 1,293,000. The foreseen level of support is 1 million EUR annually (EC Malawi, 2003).

Exit Options:

Endorsing donor, business and civil society calls for macro-economic discipline and democratic governance, the study proposes a three pronged approach towards building a sustainable exist. The three components are: i) improved regional and global market access, allied with protection of vulnerable food security crops, ii) increased government support through subsidisation of inputs (as part of a broad based credit scheme), market access, and price support mechanisms, and iii) increased government expenditure on general agricultural services (green box support).

There is sufficient strategic space in Malawi's agriculture tariff structure under the WTO disciplines for maintaining (and even modestly increasing) tariffs on food security lines. As a LDC, Malawi is presently exempt from reductions in domestic support, which can feasibly be maintained and enhanced as part of the country's development efforts. While the study supports the case for subsidisation, the extent of subsidisation and cost / benefit of public sector investment in strengthening the liberalised market (through policy reform, MIS, human capital, and financial services) needs to be carefully determined.

The study advocates universal input support to all smallholder farmers, though differentiating between three socio-economic tiers: food insecure, food secure, and emerging small commercial. A universal approach will substantially mitigate the problems inherent in targeting. While the food insecure category should be provided with free inputs, the input packaged should be limited and low geared to ensure that only the poorest sectors will subscribe. The food secure and emerging small commercial groups should be afforded access to a credit based input package to enable them to invest substantially in surplus food and cash crop production. The investment benefits of the loan packages will underwrite the targeting processes, ensuring that households with sufficient land and human resources opt to improve their wellbeing through productive investment. The level of public subsidisation should be progressively reduced.

The above strategy will differ fundamentally from the earlier experience of inputs subsidisation. Unlike the former approach, the emphasis here falls on the transformation of smallholder farming systems through increasing maize productivity as a means to release land for allocation to diverse food crops (roots, tubers and legumes) and cash crops. Once household food security is attained, the strategy should then broaden to promoting livestock husbandry and investment in irrigation and farm mechanisation. This strategy will provide a viable exit to the existing 'poverty-trap' (growing population vs decreasing land availability per capita).

The initial public sector investment requirement is US \$105, 548, 538 (less the MPRS Pillar 3, free input component of US\$ 6.5 million). This figure **equals 45% of the current public sector annual debt repayment (interest and principal)**. It is envisaged that the public sector investment in the proposed agricultural strategy can be reduced in year five to US \$ 66 million if the macro-economic environment stabilises. The government should aim to secure part of the required funds for this investment programme from debt relief.

Increased public sector investment in agricultural infrastructure, market development, and producer support (both direct and indirect) must be allied with investments in human capital formation. The focus should fall on investing in skills development / training, primary and secondary education and health improvement (including strategies to mitigate the impact of HIV/AIDs). Also essential are strategies to reduce gender disparities. Measures to improve human capital and social equality should be enhanced and enlarged to encompass core and non-core poor populations in both urban and rural context. The long-term aim must be to provide greater access for the landless and near landless to off-farm income generating opportunities and skilled and semi-skilled employment in the niche crop sectors.

References

- Action Against Hunger. 2004. Highlights: January 2004. (AAH Food Security Bulletin) (aah@globe.mw.net).
- Charman, A. 2002. Farming system analysis. (GTZ/MoAI/EU – Kulima Apip Concept Project. June).
- Charman, A. and J. Hodge. 2003. SADC Food Security Policy and the WTO. (SATRN research paper).
- Chigaru, J.R.M. 2003. Conceptual situation analysis: food and nutrition policy.
- Devereux, S. 2002. The Malawi famine of 2002. Causes, consequences, and policy lessons. (IDS, May).
- Dorward, A. and J. Kydd. 2003. Work in progress: analysis for food security, poverty reduction, and rural growth in Malawi. (CDPR, Imperial College. February).
- EC Food Security Network. 1999. WTO agreements: relevance and food security. (<http://europa.eu.int/comm/>)
- EC Malawi. 2000. NFRA Strategic review and operation plan: draft report. (ADE consultants. February).
- EC Malawi. (n.d.) Food security and nutrition policy. Macro-economic policies: situational analysis. (draft essay).
- EC Malawi. 2003. National Food Reserve Agency. EU food aid evaluation mission programme. (September).
- Economic Resources Limited / Ernst & Young. 2002. External Audit of NFRA. The management of national grain stocks.
- Fafchamps, M. and E. Gabre-Madhin. 2000. Agricultural markets in Benin and Malawi: operation and performance of traders. (IFPRI).
- FAO. 2003. A framework for support to the Malawi Poverty Reduction Strategy. (Malawi Pro-Poor Programme. MLW/02/011/A/01/99).
- FAO/WFP. 2003. Special Report. FAO/WFP crop and food supply assessment mission to Malawi (9 June) (www.fao.org/giews/).
- FAOSTAT database. 1990-1998. (<http://apps.fao.org/>)
- FEWSNET. 2003. Monthly food security report. (fewsmw@malawi.net). (mid-August to mid September).

FEWNET. 2003. Monthly food security report. (fewsmw@malawi.net (mid-December to mid January)).

FEWSNET. Agricultural data base (production and market prices). (fewsmw@malawi.net).

FFSSA. 2003. Forum for food security in southern Africa. Inception Report.

IFPRI. 2002. Fighting famine in southern Africa. Steps out of the crisis. (www.ifpri.org).

GoM. 1987. Statement of development policies. 1987-1996. (Office of the President and Cabinet and Dept. of Economic Planning and Development).

GoM. 1987b. Development Policies 1987-1996: Chapter 4 Agricultural and animal husbandry; Chapter 5 Forestry; Chapter 6 Fisheries. (Office of the President and Cabinet and Dept. of Economic Planning and Development).

GoM. 2002a. Malawi Poverty Reduction Strategy Paper. Final Draft. (April).

GoM. 2002b. Malawi Poverty Reduction Strategy Paper. Annexes. Final Draft. (April).

GoM. 2003. Financial statement for the financial year 2003/04. (Budget Document No. 3).

GoM / DoEPD. 2003. A growth strategy for Malawi. Part 1 overview and macro-environment strategy. (Draft for consultation).

GoM / DoPMA. 2004. National profile of disasters in Malawi.

GoM / DAHI. 2004. Livestock Population data. (agri.dahi@sndp.org.mw).

GoM / MoA. 1992. 1991/92 drought and a 1992/93 drought recovery programme. (October).

GoM / MoA. 1993. Malawi agricultural statistics. 1993 annual bulletin. (Planning Division).

GoM / MOAI. 1999. Review of Malawi agricultural policies and strategies. (November).

GoM / MOAI / MASIP. 2000. An action plan for developing sustainable agricultural input supply systems in Malawi. Volume I – Main Report. (August).

GoM / MoAI. 2001. Agriculture Extension in the New Millennium. Towards Pluralistic and Demand Driven Services in Malawi.

GoM / MoALD. 1995. The agricultural and livestock development strategy and action plan.

GoM / MoAIFS. 2003a. Summarised progress report and update for sub-committees within the joint task force on food security. (Planning Division. September)

GoM / MoAIFS. 2003b. Summarised progress report and update for sub-committees within the Joint Task Force on Food Security. (Planning Division. December).

GoM / MoAIFS. 2004. Re-introduction of input subsidies. (Planning Division).

- GoM / MoCI / NSO. 2003. Composite trade data base.
- GoM / MoLHPPS. 1998. Managing the Emerging Large Farm Crisis and Options for Land Resettlement, A Consultancy Report for The Commissioner for Lands. (August).
- GoM / NSO. 1995. Statistical yearbook 1995.
- GoM / NSO. 2000a. 1998 Malawi population and housing census. Report of final census results. (December).
- GoM / NSO. 2000b. National Demographic Health Survey.
- GoM / NSO. 2001. Statistical yearbook 2001.
- GoM / NSO. 2002. 1998 Malawi population and housing census. Analytical Report. (February).
- GoM/ NSO. 2003a. 2002 Malawi Core Welfare Indicator Questionnaire Survey. Report of survey results.
- GoM / NSO. 2003b. Quarterly Statistical Bulletin. (December).
- GoM / NSO. 2003c. Quarterly Statistical Bulletin. (September).
- GoM / NSO. 2004. Online statistical database. (www.nso.malawi.net/data_on_line).
- Harvey, P. 1998. Guidelines for the use of food-for-work and cash-for –work in food security programmes and emergency aid. (March).
- ICRA. 1988. Analysis of the cassava based farming system of the Nkhata Bay lowlands, Malawi. (Bulletin 28).
- IMF. 2002. IMF and World Bank issue a statement on the food situation in southern and eastern Africa. (News Brief No. 02/123, December).
- IMF. 2003. Malawi: Country assistance strategy. Chairman’s concluding remarks. Meeting of Executive Directors. (26158. June).
- JEFAP. 2002. Manual for the provision of general food distributions during emergency programmes in Malawi.
- Johnson, J.A. 1996. An analysis of the extent, causes and effects of food insecurity in Malawi with an approach towards improving food security. (GoM / UNDP / FAO, May).
- Kulima APIP. 2002. Final Report. (MoAI/EU/GTZ, June).
- Learning Support Office Malawi. 2003. Real time evaluation. Final report. (ee@mauraz.ch).

- Levy, S. and C. Barahona. 2002. 2001-02 Targeted Inputs Programme (TIP): main report of the evaluation programme. (Dfid Malawi / MoAIFS. August).
- Matemba, S. R. and A.J.E. Charman. Agricultural service provision by the private sector in Malawi. Case study of the partnership between Limbe Leaf Tobacco Company and the Kasungu Tobacco Farmers Trust, 2001/2002. (GTZ / AES. June).
- Mbablule, J.C., A. Charman, and W. Ehret. 2003. Agricultural service provision through farmer trainers in Malawi. The promotion of farmer to farmer extension: Two Cases. (GTZ/AES/DAES/MoAIFS).
- Minde. I.J. and T.O. Nakhumwa. 1998. Unrecorded cross-border trade between Malawi and neighbouring countries. (Technical Paper No. 90. Office of Sustainable Development Bureau for Africa).
- Mnyulwa, D. and J. Mugwagwa. 2003. Agricultural biotechnology in southern Africa: a regional synthesis. (Working Paper No. 1. FANRPAN/IFPRI regional policy dialogue on biotechnology, agriculture and food security. April).
- Mkandawire, T. 1997. Malawi agriculture, poverty and employment. (December) (www.cs.unh.edu).
- Mvula, P., E. Chirwa, and J. Kadzandira. 2003. 'Poverty and Social Impact Assessment in Malawi: Closure of ADMARC Markets' (World Bank, 2003b).
- NFRA. 2003. Open day report. (October).
- O&M Development Consulting. 2002. Malawi national food security policy: literature review. Draft final report (Government of Malawi).
- Orr, A. and S. Orr. 2003. Malawi's rural south revisited: household experiences. (DFID Malawi. December).
- Owusu, K. and F. Ng'ambi. 2002. Structural damage. The causes and consequences of Malawi's food crisis. (World Development Movement, October).
- Phiri, M.A.R. 2004. Assessment of the Malawi government strategy used to address the 2001-2002 food crisis: lessons learnt. First draft report. (EDRP. January).
- RATES. 2003. Maize market assessment and baseline study for Malawi. (RATES centre. September).
- RESAL. 1999a. The 'Everything but arms' initiative. What are its consequences for the RESAL countries? Technical note. (European Food Security Network / Solgral. June).
- RESAL. 1999b. APIP redesign. (MTLconsult.)
- RESAL. 2000. NFRA – can a strategic grain reserve be justified in Malawi? (RESAL / MTLconsult. April).

- Rubey, L. 2002. Malawi's food crisis. Causes and solutions. (Personal comments. lrubey@usaid.gov).
- SADC / FANR / VAC. 2003a. Regional emergency food security assessment report, December 2002. (January).
- SADC / FANR / VAC. 2003b. Malawi emergency food security assessment report. (February).
- SADC / FANR / VAC. 2003c. Towards identifying impacts of HIV/AIDs on food insecurity in southern Africa and implications for response. Findings from Malawi, Zambia, and Zimbabwe. (May).
- Save the Children. 2002. Malawi Food Crisis. An HEA vulnerability assessment. Final Report (April-May).
- Somanje, H. and G. Bicego. 2000. Chapter 10. Infant feeding, nutritional practises, and nutritional status among young children and women. (Demographic Health Survey, 2000).
- Stevens, C. R. Greenhill, J. Kennan, and S. Devereux. 1999. The WTO agreement on agriculture and food security. (DFID).
- Stevens, C. S. Devereux, and J. Kennan. 2002. The Malawi famine of 2002: more questions than answers. (IDS. July).
- Thompson, A. and M. Metz. 1997. Implications of economic policy for food security. A training manual. (FAO, training materials for agricultural planning, No. 40. Rome).
- UN / WFP. 2002. UN WFP Logistics capacity assessment.
- UNDP. 2001. Malawi: National Human Development Report. (December).
- Westlake, M. 1999. Malawi: structure of fertiliser and transport costs. (RESAL Technical Report No. 3. April).
- WFP. 2002. Southern Africa Crisis Response. Project Synopsis Report.
- WFP Malawi. 1998. 1998 Annual Report. (wfp.lilongwe@wfp.org).
- WFP Malawi. 2003a. WFP Malawi Annual Report, 2002. (March). (wfp.lilongwe@wfp.org).
- WFP Malawi. 2003b. Malawi: WFP emergency operation. July 2002-June 2003. Final Report. (wfp.Lilongwe@wfp.org).
- WFP Malawi. 2004a. Current WFP assistance. (notes).
- WFP Malawi. 2004b. History of WFP operations in Malawi. (notes).
- WFP Malawi. (n.d.). World Food Programme Assistance to Malawi 1965-2001.

White, P. and J. Appleton. 1999. Malawi: the role of in-kind transfers in a national safety nets programme. (RESAL / MTLconsult. Draft Technical Report. No. 4. April).

Whiteside, M. 2003. Enhancing the role of informal maize imports in Malawi food security. (DFID Malawi. December).

Whiteside, M. and S. Carr. 1997. Encouraging sustainable agriculture in Malawi (April).

World Bank. 1989. Malawi: food security report. (Report No. 8151-MAI. November).

World Bank. 2000. The impact of trade policy reforms on Malawi's manufacturing sector. (Report No. 20666-MAI. May).

World Bank. 2003a. The World Bank Group. Malawi. (November). (www.worldbank.org/afr/mw2.htm).

World Bank. 2003b. Reforming the Malawi Agricultural Development and Marketing Corporation (ADMARC). Synthesis report of the poverty and social impact analysis. (Report No. 27512. December).

WTO. 1995. Agreement on Agriculture.

WTO. 2000. Committee on Agriculture. Special Session. Decision on measure concerning the possible negative effects of the reform programme on least-developed and net-food importing developing countries. (G/AG/NG/S/4. 27 April).

WTO. 2001. Committee on Agriculture. Special Session. WTO Africa Group: joint proposal on the negotiations on agriculture. (G/AG/NG/W/142. 23 March).

WTO. 2002. Malawi Trade Policy Review.

WTO. 2003. Draft Cancun Ministerial Text. (Document No. JOB (03)/150/Rev. 1).