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HOUSEHOLD FOOD SECURITY IN MALAWI

by

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Malawi is characterised in food security discourse as a paradigmatic case of incipient malthusian crisis in rural Africa. Malawians enjoy few employment alternatives to agriculture, economic liberalisation has created new patterns of opportunity for some but increased marginalisation for others, and the government's traditional policy commitment to national self-sufficiency in staple cereals is increasingly unsustainable in a context of rapid population growth, rising input costs and recurrent drought. Responses to this crisis have been pragmatic but short-termist. Malawi's 'green revolution' - hybrid maize promotion - is intended to maintain self-sufficiency indefinitely, but only delays the inevitable day when Malawi, failing an unprecedented structural transformation of the economy based on diversification away from agriculture, becomes permanently dependent on massive inflows of aid to bridge chronic food production deficits.

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LIST OF ABBREVIATIONS

AAM	ActionAid-Malawi
ADD	Agricultural Development District
ADMARC	Agricultural Development and Marketing Corporation
ASAP	Agricultural Sector Adjustment Programme
CPAR	Canadian Physicians for Aid and Relief
DfID	Department for International Development
EPA	Extension Planning Area
EU	European Union
FAO	Food and Agriculture Organisation
FFW	Food-For-Work
FSG	Food Studies Group
FSRP	Fertiliser Subsidy Removal Programme
GDP	Gross Domestic Product
GoM	Government of Malawi
GTZ	German Agency for Technical Cooperation
IFAD	International Fund for Agriculture Development
MASAF	Malawi Social Action Fund
MCP	Malawi Congress Party
MEPD	Ministry of Economic Planning and Development
MoALD	Ministry of Agriculture and Livestock Development
MRFC	Malawi Rural Finance Company
MT	Metric Tons
NGO	Non-Governmental Organisation
ODA	Overseas Development Administration
PRA	Participatory Rural Appraisal
PWP	Public Works Project
RaFSA	Rapid Food Security Assessment
SACA	Smallholder Agricultural Credit Association
SAL	Structural Adjustment Loan
SCF	Save the Children Fund
SGR	Strategic Grain Reserve
SIP	Supplementary Inputs Project
UDF	United Democratic Front
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
WFP	World Food Programme

SUMMARY

Rural Malawians face various categories of food insecurity, both short-term (transitory or seasonal) and long-term (chronic). An estimated 30% of the rural population live below the 'calorie needs line', while over 40% are unable to acquire a 'basic needs' basket of essential goods and services. Most of these households cultivate very small landholdings, many are female-centred with high dependency ratios, and the majority live in the densely populated south.

Three strands of the food security discourse in Malawi are identified in this paper. The *national self-sufficiency* approach emphasises raising food production through hybrid maize promotion, *market liberalisation* favours price incentives to encourage diversification into export crops, while a concern with *household food security* motivates targeted 'safety nets' for the poor. None of these approaches adequately addresses the critical issue of non-agricultural employment creation, so they do not offer sustainable solutions to the deepening livelihood crisis facing Malawi's smallholders.

National self-sufficiency in staple foods has been promoted since early colonial times, for strategic and economic imperatives. Malawi being landlocked and agriculturally based, logic dictates that foreign exchange spending on food imports be minimised. Rapid population growth (currently 3.3% per annum), encroachment of estates (which cover 9% of total land area, and 25% of the relatively fertile Central Region) onto customary land, and declining soil fertility (increasing cultivation of marginal land) mean that maintaining self-sufficiency requires intensification. In response, the Ministry of Agriculture has promoted hybrid maize adoption and fertiliser use to raise yields. Subsidies and credit for inputs, and even free distribution of seed and fertiliser, have encouraged a concentration on maize production by smallholders. However, subsidies are extremely expensive, free input distribution is fiscally unsustainable, and crop production is frequently undermined by agricultural droughts.

Supporters of *market liberalisation* argue that market forces will raise smallholder incomes by increased production of high-value crops such as tobacco, cotton and soybean. Increased wealth will trickle down to the rural poor through multiplier effects such as rising demand for labour, local spending and remittances. Critics argue that liberalisation accelerates processes of rural economic differentiation - higher input prices exclude the poor from taking advantage of higher output prices, while higher food prices threaten food security in production deficit households. Government has responded by retaining a food security function for the restructured parastatal (ADMARC). Some

donors are pressuring for full and rapid liberalisation, but the private sector remains weak and there is evidence that traders are either exploiting or neglecting smallholders in remote areas.

The *household food security* focus reflects a recognition that smallholders are highly stratified, and that the poorest are suffering as their landholdings shrink and their incomes are squeezed by market liberalisation. Recent surveys reveal that poor households in Malawi survive by diversifying their sources of food and income. This suggests that interventions should encourage crop diversification rather than monocropping either hybrid maize or an export crop, in conjunction with diversification outside agriculture (off-farm employment as an alternative to low paid agricultural labouring). Employment-creating ‘safety nets’ such as public works projects are one option in the short term, but they are limited in scale and duration. In the long run, sustainable household food security can be guaranteed only if additional livelihoods are found that provide adequate and reliable off-farm incomes for Malawi’s marginal smallholders.

HOUSEHOLD FOOD SECURITY IN MALAWI

1. INTRODUCTION

A fierce and urgent debate is underway in Malawi over the fundamental policy question of how to ensure that national food security is maintained and household food security guaranteed for all Malawians, not just now but in the medium to long-term future. The debate is fierce because it is ideological as much as pragmatic, and it is urgent because available evidence suggests that poverty and food insecurity are rising among the majority of smallholders who are increasingly unable to meet their subsistence needs though self-provisioning, due to constrained access to natural resources and agricultural inputs.

A recent review of the food security discourse in Malawi led to the identification of three broad positions held by the key players - Government, donors and NGOs.¹ Each position embodies a theory of the causes of food insecurity, and each suggests very different policy interventions. To summarise in one sentence: the *national self-sufficiency* approach concentrates on raising maize production for national food security; *market liberalisation* introduces price incentives to increase smallholder incomes through diversification into high-value crops; while a concern with *household food security* requires targeted resource transfers (of inputs, food and income) to the poor. Each approach is associated with its own champions. The Government of Malawi has long been (and still is) committed to national food self-sufficiency; major donors (especially the Americans) are pushing hard for full liberalisation of the agricultural sector; and local and international NGOs seem to be most directly concerned about the welfare of the 'poorest of the poor'.

Of course, this is a simplified representation of a complex debate, and positions are evolving all the time. The present Government of Malawi, for example, professes a commitment to market liberalisation² - but to some extent this position has been forced upon them, and an interventionist promotion of national self-sufficiency would probably continue to be the government's preferred position, if they had unlimited resources and a completely free hand. Similarly, USAID has lent its support to safety nets for household food security, but its dominant position is a radical 'Market-Oriented Approach to Food Security' (Brown *et al.* 1996).

¹ This categorisation, and the discussion which follows, was developed in Devereux (1996).

² See, for example, the Minister's Foreword to the Ministry of Agriculture and Livestock Development's 1995 strategy document: "For efficient resource allocation, Government will continue to rely on the market mechanism with minimum intervention" (MoALD 1995:i).

Also, although market liberalisation has been accepted as a fact of life by all the major stakeholders in Malawi, there are deep divisions in attitudes towards its implementation. Even within the donor community, two approaches can be delineated: the ‘American school’ (USAID, World Bank) and the ‘European school’ (EU, DfID, WFP). In the more radical ‘American’ view, all agricultural input and output markets should be fully liberalised as rapidly as possible. In the more cautious ‘European’ view, liberalisation should be slower and carefully phased, its impact should be closely monitored at each stage, and safety nets must be put in place to protect the poor, whose vulnerability might well intensify during the process.³

The following discussion elaborates and critiques each of the three strands of the discourse identified above, focusing on the impact of key policy reforms on the food security of Malawi’s poorest households, most of whom are located in the smallholder rural areas.

2. NATIONAL SELF-SUFFICIENCY

The evolving food security debate during the 1970s and 1980s led to a recognition that national food security does not require individual countries to achieve food production self-sufficiency. Depending on each country’s factor endowments, a more lucrative and perhaps even safer option might be to produce and export high-value crops or manufactured goods, and to purchase some proportion of national staple food requirements on world markets. Many African governments were suspicious of this view, however, fearing dependence on the international grain trade and aware that their most food insecure citizens are typically smallholder farmers who grow food for subsistence and who would be unable to access or afford food imported commercially at the national level. These governments retained a commitment to national self-sufficiency, and their food security policies - unless and until modified or reversed by structural adjustment programmes - were characterised by strongly interventionist support for both food producers and food consumers: input subsidies, panterritorial and panseasonal pricing, food price subsidies, control of grain marketing through parastatals, often backed by legislation against private traders. Malawi under Dr Banda was no exception to this pattern - on the contrary, it was archetypal.

³ A June 1996 Memorandum from ODA to USAID, commenting on the ‘Market-Oriented Approach to Food Security in Malawi’, epitomises this distinction between the ‘European’ and the ‘American’ approach. The Memorandum states: “As you know, there are a number of points in the report with which USAID and ODA are not in accord.we feel that even if we accept the premise of the market-based destination - *which of course broadly we do* - the paper does not set out a route for getting from where we are to where we *eventually* want to be” [emphases added].

2.1. The Case For National Self-Sufficiency in Malawi

The drive for self-sufficiency has been a feature of government food security policy in Malawi since the early colonial period. Writing of the 1930s, Msukwa (in Berry and Petty, 1992:2) observes that: “The implicit assumption of the Government appears to have been that increased food consumption would result from increased production leading thus to good nutrition. Government effort was therefore mostly directed at increased overall production of the staple, maize, and export crops such as tea and tobacco.”

As a landlocked country with most of its population engaged in smallholder agriculture, it might seem logical that Malawi should at least meet its food consumption requirements through domestic production. “Agriculture is the most important sector of the Malawian economy. In normal years it contributes more than one-third of GDP and over 90% of export earnings, employs almost half of those in paid employment and supports at least 85% of the population” (EIU 1996:17). The 1992 drought caused an estimated 7.9% fall in real GDP, through its effect on agricultural output - both food and export crops. Food deficits expose Malawi to high costs in foreign exchange of importing grain, and to the risks associated with dependence on world markets or aid donors. It is estimated that the costs of importing maize through Mozambique are almost three times the cost of producing maize locally. Transport costs were even higher during the 1980s war in Mozambique, when all imports and exports had to be routed through Dar-es-Salaam or Durban.

Perhaps not surprisingly, therefore, since independence in 1964, the Government of Malawi (GoM) has consistently equated national food security with maize production self-sufficiency. In most years Malawi can be described as self-sufficient at the national level. Discounting drought events, production of maize and other major food crops (millet, sorghum, rice, wheat, cassava, beans, groundnuts) has risen steadily over the past thirty years, though not fast enough to keep pace with population growth. A generally improving aggregate production has been accompanied by steadily falling per capita availability. While total food crop production rose by 28% from the early 1970s to the late 1980s, Table 1 reveals a decline of approximately 23% in per capita production over the same period. (Figures in parentheses give percentage change over the previous half decade.)

The government of Malawi did not spell out specific food security policies until it published a *Food Security and Nutrition Policy Statement* in 1990, as a ‘Supplement’ to the *Statement of Development Policies* of 1987. The 1990 document differentiates between two categories of food insecure smallholder households: those farming less than half a hectare (estimated at 41% of

smallholders), for whom “targeted income transfers” would be needed to protect household food security in the short term; and those farming between half a hectare and one hectare (estimated at 31% (World Bank 1996:37)), who are characterised as being potentially self-sufficient if their agricultural productivity is improved. It is at the latter category of ‘medium smallholders’ that the drive for hybrid maize adoption is being targeted, while the former category of ‘very small smallholders’ is effectively written off as needing transfers and safety nets simply to survive. However, the ‘medium smallholders’ are also the group who are being encouraged to grow export crops like tobacco and cotton, and yet the numbers of households moving from the ‘medium’ to ‘very small’ category is rising steadily, as the Malthusian logic of population growth grinds out its vicious cycle of subdivision towards ever smaller parcels of land.

Table 1. Total and Per Capita Food Production in Malawi, 1970-1990

Years	Average Annual Food Production (MT)	Kilograms per person per year	Kilocalories per person per day
1970-1974	1,269,611	270	2,653
1975-1979	1,406,072 (+11%)	253 (-6%)	2,482 (-6%)
1980-1984	1,429,844 (+2%)	220 (-13%)	2,184 (-12%)
1985-1989	1,630,376 (+14%)	211 (-4%)	2,040 (-6%)

Source: Calculated from UN/GoM 1993:108; IFAD 1993:8.

The UDF government, elected in 1994, is in the process of formulating a new development programme (‘2020 Vision’), and a revised *Food Security and Nutrition Policy* document was anticipated - but not finalised - by mid-1997. The most recent statement of the Government’s position on rural food security can be found in the 1995 *Development Strategy and Action Plan* of the Ministry of Agriculture and Livestock Development (MoALD). In his Foreword, the Minister notes that the overall objective of the strategy is “rural poverty reduction”. Under this overall goal, three subsidiary objectives are listed, the first being: “Improving food self-sufficiency and the nutritional status of the population” (GoM 1995a:1). Food security is never mentioned as a strategic objective in its own right. The document argues that food production in Malawi must grow at over 4% per annum, because of high population growth (3.3% p.a.), rapid urbanisation (6.7% p.a.), widespread malnutrition which cannot be redressed through food purchases because of poverty, and high costs of importing food. Since land is in short supply, food production increases must be

achieved primarily through productivity rises. This, it is argued, will improve both national food self-sufficiency and household food security.

Like most strategy documents, this document is strong on good intentions but weak on details. It is also internally contradictory. Smallholders are encouraged simultaneously to raise maize productivity through adoption of hybrid varieties, for national food self-sufficiency goals; to grow a more diversified range of food crops, including secondary crops such as cassava, for household food security in drought years; and to adopt tobacco as a cash crop in order to raise incomes and reduce rural poverty (GoM 1995a:2). There is little recognition of the trade-offs required, both within the Ministry's budget but especially within smallholder households, between these alternative strategies. For most smallholders facing binding land, labour and capital constraints it is simply not possible to grow hybrid maize, secondary food crops *and* export crops like tobacco or cotton.

Ultimately, despite repeated mentions of crop diversification, the Ministry of Agriculture's strategy document of 1995 perpetuates dependence on hybrid maize. The strategy fails to consider the impact of the collapsed credit scheme and escalating input prices on the uptake of hybrid seed and fertiliser, but these developments (discussed below) severely undermine the objective of achieving sustainable productivity increases in smallholder agriculture.

- ***Hybrid maize promotion***

If food security through self-sufficiency is an explicit objective at any level, from a farm household to a nation, only two responses are possible to population growth and food production deficits: extensive and intensive increases in food production.⁴ In Malawi, where the extensive margin of cultivation has effectively been reached in many rural areas, as is evident in rapidly dwindling farm sizes and the virtual elimination of fallowing, attention is increasingly turning to intensification, specifically by raising the productivity of smallholder food production through the promotion of hybrid maize varieties in conjunction with chemical fertiliser use. The implicit model driving this strategy to maintain self-sufficiency is the FAO-inspired 'input-output' approach, which treats agriculture as a kind of production line, where inputs introduced at one end (land, labour, seeds,

⁴ A more radical diagnosis would require accepting that self-sufficiency is either infeasible or non-optimal for Malawi, and focusing instead on strategies to earn income which can be used to purchase food from surplus producing households or countries elsewhere. Given the dearth of viable alternatives to agriculture, this option leads inevitably down the path of export cropping, which simply substitutes one form of land and labour utilisation (food crop production) for another more lucrative but equally risky activity - and one that is, arguably, equally unsustainable in the long run.

fertiliser, water) determine the amount of output harvested at the other end. In a context of limited land but steadily increasing demand for food, maintaining national self-sufficiency requires pumping yield-enhancing inputs into agriculture that will raise the productivity of the scarce resource - arable land.

There is a broad consensus within the 'national self-sufficiency' school of thought that, with rapid ongoing population growth, self-sufficiency can now be maintained only through widespread adoption of hybrid maize. "When Malawi's population was substantially smaller, good weather basically assured a good maize crop and national food security. With a population of over 10 million, food security now requires not only good weather but substantial quantities of fertilised hybrid maize" (Mann 1995:5). If significant hectares of high yielding hybrids were not planted, Malawi "would be in structural food deficit each year" (Henry 1996:4).

White maize is Malawi's staple food crop, accounting for three out of every four hectares of land planted by smallholders, up from 58% in 1980/81 and 70% in 1990/91 (UN/GoM 1993:107). In 1990, Malawi's per capita consumption of maize as food was the highest in the world (Smale 1995:820).⁵ Until the late 1980s, local varieties were predominant, accounting for over 90% of maize hectareage, with only 6% planted to hybrids - which were adopted mainly by the 25% of larger smallholders whose landholdings exceeded 1.5 hectares (Sahn and van Frausum 1994:420).

Hybrid maize offers superior yields over local and composite varieties. According to a Ministry of Agriculture survey, smallholder maize yields average 800-1,000 kg/ha for local varieties, 1,200-1,800 kg/ha for composites and 2,600-3,000 kg/ha for hybrids (GoM 1993:10). Smallholder adoption of hybrids was slow initially, but has accelerated in the last decade, with the development of semi-flint (rather than previously promoted dent) varieties which compare favourably with local maize in terms of their processing and on-farm storage characteristics, and which appear to offer higher yields under all scenarios, including low rainfall and lack of fertiliser. Even in the drought year of 1992, yields of hybrid maize were higher than local varieties, whether fertilisers were applied or not. Between 1988 and 1992, the proportion of smallholder maize area planted to hybrids rose from 7% to 24%, causing an exponential increase in the contribution of hybrids to total

⁵ This reflects a strong preference for white maize as the staple food by Malawians, as reflected in the local saying: "If you have not eaten *nsima* [maize porridge] today, you have not eaten." Unfortunately, this preference contributes to high levels of undernutrition among Malawi's children, because *nsima*'s low energy density (0.95 kcal/gm) makes it difficult for children to eat the bulk required for adequate nutrition, even when maize is plentiful (Cammack 1996:29).

smallholder maize output, from 11% to 50%. Over the period 1987 to 1993, average smallholder maize yields improved by 50%, prompting talk of Malawi's "delayed Green Revolution" (Smale 1995). In May 1996, the Ministry of Agriculture's National Crop Estimates forecast that 29% of maize hectareage was hybrid and that this would contribute 52% of the imminent maize harvest, as opposed to the 69% planted to local varieties, which would contribute only 47% (Earl and Moseley 1996:106).

On the other hand, this higher percentage contribution was made to a greatly reduced total in drought years. National maize production in 1992 was substantially lower than in non-drought years,⁶ so that as a national food security strategy the concentration on maize self-sufficiency has proved to be highly risky. Besides, it must be emphasised that these dramatic figures were not entirely demand driven, but reflected a concerted policy by government, with donor support, of promoting the development of hybrid maize varieties and increasing their accessibility to smallholders, through subsidised seed and fertiliser prices and the provision of agricultural credit tied to purchases of these inputs. As will be seen, while the rhetorical commitment to hybrid maize promotion remains, government capacity to deliver subsidised inputs to farmers has been severely eroded over the past decade, so that access to hybrid maize has been effectively denied to the poorest smallholders, who need it most.

- ***Smallholder credit programmes***

The Smallholder Agricultural Credit Association (SACA) was established within MoALD in 1988. Loans were made to small groups of smallholders who organised themselves into 'farmers clubs' and stood security for each other's loans. In the early 1990s SACA reached over 30% of Malawian smallholders. Despite this impressive coverage, it should be noted that data on the gender distribution of these loans provides clear evidence of discrimination against women. Although about 70% of Malawi's full-time smallholder farmers are female, only 30% of SACA loans in 1993 were made to women (IFAD 1993:7).

Initially, during the 1980s, recovery rates on loans were extraordinarily high, at well over 90%. But in the early 1990s SACA began to experience severe loan recovery problems, especially after the drought of 1991/92, when the collapse of maize production caused widespread defaults and precipitated the demise of SACA in 1994. But drought was not the only reason. SACA was also

⁶ At 657,000 MT, the 1992 maize harvest was less than half the 1991 output of 1,589,000 MT, and less than one-third the record harvest of 2,009,000 MT achieved in 1993 (see also Table 2 below).

heavily politicised, being closely associated with Dr Banda's Malawi Congress Party (MCP). Party officials were involved in selecting farmers' club members and in recovering loans - expropriation of assets being the most effective method used, in conjunction with peer pressure among group members, to keep repayment rates high. Rising defaults in the early 1990s reflected to some extent growing disillusion with the MCP as the political climate in Malawi started to change. Following the bumper 1992/93 agricultural season, when approximately 400,000 farmers from more than 15,000 farmers clubs received seasonal credit, only 13% of the loans disbursed were recovered (Msukwa *et al.* 1994). Default rates accelerated as Malawi moved towards multiparty democracy, when some opposition politicians promised to write off agricultural loans if elected.

In 1994, when the MCP government was replaced by the democratically elected UDF, SACA was converted into a private company, the Malawi Rural Finance Company (MRFC), which is managed on purely commercial lines, and currently provides credit to farmers through 15,000 farmers' clubs, reaching almost 35% of smallholders. However, the MRFC has more stringent eligibility criteria than SACA. Only smallholders who had never defaulted on SACA loans were deemed eligible to receive MRFC loans, which undoubtedly contributed to high recovery rates in the first season (Pearce *et al.* 1996:12), but also excluded the most financially insecure smallholders.

Recently, USAID and IFAD have each initiated smallholder credit programmes aimed at raising agricultural production. The USAID project explicitly targets 'better off' smallholders, on the grounds that these are the farmers who are most likely to produce surpluses. The IFAD project targets much poorer farmers, but a requirement for access to credit is that farmers must plant maize (for self-sufficiency), as well as soybeans and tobacco (to generate cash income to repay loans). This conditionality continues the long tradition in Malawi of using the provision of agricultural inputs to manipulate smallholders' cropping decisions.

- ***Fertiliser subsidies***

The Government of Malawi has consistently promoted fertiliser adoption for national food self-sufficiency objectives, and it steadfastly resisted World Bank pressure to abolish fertiliser subsidies during the 1980s - a decade in which, despite the subsidies, fertiliser prices to farmers more than quadrupled. Evidence suggests that access to yield-enhancing inputs has always been highly unequal within the smallholder subsector. The Ministry of Agriculture's Annual Survey of 1984/85 found that the 55% of farmers who cultivated under 1 hectare used less than 5% of all fertilisers sold to smallholders (World Bank 1995:14). As a result of this skewed access, and notwithstanding steadily rising fertiliser purchases by farmers throughout the 1980s, fertiliser use in Malawi is low,

at 20kg per hectare of arable land in 1991, compared to 48 kg/ha in Kenya, 61 kg/ha in Zimbabwe, and a phenomenal 278 kg/ha in China (Donovan 1995:9).

The implicit assumption underpinning fertiliser subsidies and the Supplementary Inputs Project (discussed below) is that smallholders face constraints which limit their access to yield-enhancing agricultural inputs, specifically, to hybrid maize seeds and fertilisers. The World Bank (1995:58) argues that it is essential to increase fertiliser use by smallholders, because “the land constraint makes agricultural intensification imperative”, but the Bank also argues against fertiliser subsidies: “such subsidisation could encourage ‘leakage’ of fertilisers to the estate subsector and neighbouring countries”. The phasing out of fertiliser subsidies, which was completed by 1995, was justified on the grounds that farmers would respond to market incentives such as higher producer prices for maize.⁷

On the other hand, recent surveys - for instance, by Save the Children Fund (Pearce *et al.* 1996) - suggest that the major constraint faced by smallholders in Malawi may be family labour, rather than seeds and fertilisers, or even access to land (see below). If this is true, then more creative solutions to household food insecurity are needed than simply providing agricultural inputs - such as providing viable off-farm incomes to raise and stabilise the returns to rural labour.

- ***Supplementary Inputs Project***

In 1992/93, 1994/95 and again in 1995/96, the Government of Malawi, with financial support from ODA (now DfID) and implementation support from ActionAid-Malawi, distributed free maize seed to smallholder farmers throughout Malawi. The Supplementary Inputs Project (‘SIP’) aimed to increase access to hybrid seed and fertilisers for smallholders. This was in recognition of the fact that average smallholder maize yields improved by 50% between 1987 and 1993 - excluding drought years - mainly due to increased adoption of hybrid maize, from 3% to 25% of total maize area planted. However, it was also recognised that low incomes excluded the majority of smallholders from adopting hybrid maize, because they could not afford to purchase seeds and fertilisers at a time when their incomes were contracting due to drought, and input subsidies were being rapidly phased out.

⁷ As a possible alternative to subsidies or free distribution of inputs, targeted grants of fertilisers and seeds could be given to smallholders farming, say, less than 1 hectare, in the form of vouchers, so as not to undermine private traders. Targeting costs could be reduced through a self-selecting procedure such as fertiliser-for-work, or ‘fertiliser-for-training’ - attending agricultural extension sessions - though this proposal could be accused of perpetuating conditionality and paternalism in agricultural policy interventions.

The first SIP was designed primarily as a post-drought recovery intervention, and focused on household food security objectives. In 1992/93, following the drought which halved the national harvest, 12,500 MT of local maize seed was distributed in 10kg packs to 1.3 million smallholders in drought-affected areas. Most beneficiaries were located in the Southern Region (723,000 households), followed by the Central Region (409,000) and the North (128,000) (Malindi 1996:6). This was in addition to 400 MT of maize distributed as emergency food aid. Even though no hybrid maize seeds or fertilisers were distributed, it is estimated that this intervention contributed 290,000 MT towards the record harvest of over 2 million MT in 1993, and that its impact was especially beneficial on poorer households for whom access to seeds after the drought was problematic (Henry 1996:14).

The second Supplementary Inputs Project, in 1994/95, was as much a response to the collapsed smallholder credit scheme and rising input prices as to the 1993/94 drought, which was less severe than in 1991/92. This time the intervention followed a mixed strategy, aimed at promoting both national and household food security objectives, by making hybrid seed and fertilisers accessible to smallholders who were excluded by poverty from planting hybrid maize. Accordingly, 5kg of hybrid seed plus fertiliser was distributed to 800,000 farmers in drought-affected areas, mainly in southern Malawi, and a further 160,000 farmers received a similar package of inputs in high potential areas of central and northern Malawi (Henry and Mkamanga 1995). This intervention contributed an estimated 225,000 MT to the harvest in 1995 (GoM 1995b:8). Limited amounts of sorghum seed, cassava and sweet potato cuttings were also distributed in the drier southern districts, these crops being more drought-tolerant than maize.

In 1995/96 an almost identical strategy was adopted, with the same mixed objectives, but without drought as a trigger. Instead, the intervention was justified as a response to the high input prices associated with the Fertiliser Subsidy Removal Programme (FSRP), which threatened to reduce hybrid maize planting to such an extent that national self-sufficiency would be unattainable even with good rains. A total of 460,000 farmers in marginal areas and 200,000 farmers in higher yield areas received hybrid seed and fertiliser. The project raised total maize hectareage planted to hybrid by one-third, and its incremental impact on Malawi's 1996 maize harvest of 1.6 million MT is estimated at 10%, or 160,000 MT (Henry 1996:21).

The second and third Supplementary Inputs Projects differed slightly from the first SIP, because they followed the 'mixed strategy' described above, reflecting the very different priorities of

government and donors. Given the government's overarching concern with national food self-sufficiency, the logical target for yield-enhancing inputs is farmers in high-yielding agricultural areas. But poverty and food insecurity in Malawi are concentrated in agriculturally marginal areas, in the Southern Region and along the shores of Lake Malawi. Donors and NGOs argued for targeting free inputs on these chronically food deficit areas as a household food security measure, even though these one-off interventions address only transitory food insecurity at the household level and do little for chronic food insecurity (unless they are repeated every year) or for national self-sufficiency in the long run.

The productivity impact of the SIPs was less than 100% to the extent that the inputs were diverted to other uses. Because of the nature of food insecurity in Malawi, poor households ran out of food long before inputs were distributed, so some smallholders sold fertilisers and consumed seeds instead of planting them. Estimated leakages to estates of fertilisers targeted at smallholders during the 1980s ranged from 30% to 50% (Sahn and van Frausum 1994:429), and it is known that some of the fertilisers given out under the SIP was sold to estates. For better-off farmers who used their free inputs as intended, the SIP raised their productivity and improved their future food security, but for marginal farmers who faced seasonal food and cash crises, the annual consumption gap provided an incentive to consume or monetise inputs, rather than invest them in the next year's harvest. Either way, the distribution of seeds and fertilisers certainly contributed to reducing food production gaps in beneficiary households, at least in the short term.

Although the free distribution of hybrid seed and fertilisers to drought-affected deficit smallholders provided a one-off boost to maize production and contributed to good harvests in both 1995 and 1996, the fact that these inputs need to be purchased every year means that there is little sustainable impact on food security in those households which are unable to purchase inputs unless they are at least heavily subsidised. It has therefore been argued that the Supplementary Inputs Project, if repeated in future years, should focus instead on national food security objectives by targeting high yielding areas and farmers, and make no attempt at achieving household food security goals in marginal areas as well (Henry 1996). After all, producing maize surpluses keeps the Strategic Grain Reserve well stocked, eliminates the need to import food and keeps maize prices down to affordable levels for poor consumers. Household food security in marginal agricultural areas should be supported by mechanisms and interventions that focus on raising cash incomes rather than maize production.

It is an intriguing paradox that, although the major donors are opposed to ‘market distorting’ interventions such as input or food price subsidies, they supported the free distribution of inputs under all three SIPs, on the basis that these were drought rehabilitation measures (ODA and the EU’s view), which could also be characterised as a ‘safety net’ support to poor smallholders (the World Bank and USAID position). At the macroeconomic level, the donors also recognised that the structural adjustment programme would be derailed if the Government of Malawi was forced to divert scarce foreign exchange reserves to importing food. From this perspective, the donors could justifiably be accused of opportunism - implicitly devolving responsibility onto NGOs like ActionAid and Save the Children Fund for vital welfarist functions, following a livelihoods crisis which the donors may have been partly responsible for creating - and in fact there is an ongoing debate within these NGOs about the extent to which they are simply ‘applying plasters’ to the deep economic and social wounds which structural adjustment is inflicting on Malawi’s rural poor.

2.2. The Case Against National Food Self-Sufficiency in Malawi

There are two important reasons for arguing that the emphasis on national food self-sufficiency is becoming increasingly difficult to justify and achieve in Malawi. These two arguments can be expressed in the form of propositions. The first is that national food self-sufficiency does not guarantee household food security, and the second is that self-sufficiency may be unsustainable in the long run because of population growth and natural resource constraints.

- ***National food self-sufficiency does not guarantee household food security***

In terms of agricultural policy, *national food security* can best be stimulated by targeting inputs on more productive farmers living in more fertile areas, since this maximises national output, yields per unit of land and marketed surpluses. By contrast, *household food security* is best enhanced by targeting inputs on the poorest farmers living in the most marginal areas, since this should promote the achievement of self-sufficiency at household level in chronically food deficit households. This policy dilemma has recently generated a growing literature on the debate over “high potential *versus* low potential areas” (Maxwell 1996), which is sometimes characterised - simplistically - as a trade-off between efficiency and equity objectives.

Almost half of Malawi’s maize harvest is produced by just two of the country’s eight Agricultural Development Districts - Kasungu and Lilongwe ADDs - both in Central Region (GoM 1995b:3). However, the majority of Malawi’s food insecure citizens and two-thirds of households classified as poor live in the densely populated Southern Region. A focus on national self-sufficiency would imply neglecting these marginal households and targeting yield-enhancing inputs on the Central

Region, in the interests of maximising the productivity impact of agricultural programmes and minimising the national food import requirement.⁸

Table 2. *National Food Production and Consumption Requirements in Malawi, 1987-1995*

Agricultural Year	Total Food Production (MT)	Total Food Energy Requirements (MT)	Total Food Energy Surplus or Deficit (MT)
1987/88	1,788,392	1,831,465	- 43,073
1988/89	1,906,341	1,887,021	+ 19,320
1989/90	1,686,903	1,949,293	- 262,390
1990/91	2,033,838	2,013,619	+ 20,219
1991/92	878,705	2,085,451	- 1,206,746
1992/93	2,563,361	2,100,019	+ 463,341
1993/94	1,290,258	2,169,320	- 879,062
1994/95	1,882,374	2,240,910	- 358,536

Source: Compiled from Johnson 1996, Tables 11-14, pp.40-42.

- Notes:
1. All figures have been converted into maize equivalent metric tons (MT).
 2. 'Total food production' includes cereals (maize, rice, sorghum, millet, wheat), tubers (potatoes, cassava) and pulses (groundnuts, beans).
 3. 'Total food energy requirements' are based on a per capita consumption requirement of 220 maize equivalent kilograms of food per annum.
 4. 'Total food energy surplus or deficit' is simply the aggregate difference between production and requirements.

Whichever strategy is preferred - and there are persuasive arguments on both sides - Malawi remains vulnerable to rainfall variability. During the 1990s, food production has been characterised by great volatility around a generally rising trend (see Table 2). Record harvests in 1991, 1993 and

⁸ Maxwell (1996) argues for a combination of strategies, rather than exclusive adoption of one or the other. The reduction of chronic household food insecurity should be prioritised by policymakers, but some resources should also be directed at high potential areas - a strategy which is described as "walking on two legs but with one leg longer than the other".

1996 (over 2 million metric tons in each year) have been punctuated by devastating droughts in 1992 and 1994, and inadequate harvests in 1990 and 1995.

In only three of the eight years from 1988 to 1995 was Malawi self-sufficient in major food crops. In two of the five deficit years - the agricultural drought events of 1991/92 and 1993/94 - the 'food gap' was very large indeed. In 1991/92 production met only 42% of national consumption needs.

Because Malawi relies on rainfed agriculture for both food security and export income, droughts constitute a double shock on national entitlements to food - increasing the need for costly food imports while simultaneously reducing the foreign exchange earnings available to purchase this food commercially.⁹ In 1994, for instance, when maize production fell by 48% from its record 1993 level, tobacco output (which accounts for 70% of agricultural exports) fell by 28%.¹⁰

Table 2 presents a summary of national food production in Malawi, year by year. Every harvest is treated separately, as though there is no carry-over from a bad season to the next harvest. But this 'food gap' approach suffers from short-termism. After the 1991/92 drought, 1992/93 yielded a bumper harvest of over two million metric tons - but sales of produce were much lower than expected. The explanation has two parts, both related to household coping strategies. Firstly, households which rationed consumption and went hungry during 1992 started consuming green maize early in 1993 - and consuming more than usual, partly to compensate for earlier reduced food intake and partly because more green maize needs to be cooked than matured maize to produce an equivalent amount of food - so that the actual harvest in May-June 1993 was lower than total production figures suggest.¹¹ Secondly, households incurred debts during the drought period (for food purchases, farming expenses, malnourished children falling ill and needing treatment) which they could not afford, so paid on credit against sales of maize after the harvest, or even pledged this crop to their debtors (Pearce *et al.* 1996). The 1996 maize harvest was also estimated at over two million metric tons, which is more than adequate for national self-sufficiency. Nonetheless, severe

⁹ Note also that devaluation under structural adjustment has raised the foreign exchange costs of importing food (and fuel for transporting food) dramatically. The Kwacha/US Dollar exchange rate depreciated from 0.81 in 1980 to 4.2 in 1995 (Donovan 1995:39).

¹⁰ Malawi's main agricultural exports (by value) in 1994 were: tobacco 70.1%; tea 7.5%; sugar 7.4%; coffee 4.1%; cotton 0.5% (EIU 1996:17).

¹¹ Consumption of premature or green maize can start as early as December. It has the positive effect of shifting the 'hungry season' back by two or three months but the negative consequence of causing granary stocks to be depleted earlier the following year (Pearce *et al.* 1996:60). On the other hand, Peters (1996a:4) cautions that virtually all farming households sample their 'green maize' even in good years, so that this behaviour is not necessarily a clear indicator of food stress.

food insecurity undoubtedly affected those households where some of the crop had either been eaten before the harvest, pledged to creditors or sold to pay debts incurred because of the inadequate harvests of 1994 and 1995.

The erratic maize production recorded in Table 2 is explained almost entirely by rainfall variability, which “remains the largest single factor behind the variability of yields in most countries of the world” (Gommes and Petrassi 1994:5). The negative impacts on agriculture of repeated droughts in the 1990s have been cumulative in several respects. Secondary food crops such as cassava, sweet potato and sorghum are important alternatives to the staple, maize, but drought has affected even these more resistant crops, so the availability of sorghum seed and cassava and sweet potato cuttings - which are less widely marketed than maize seed - has also been adversely affected (Peters 1995a:4). Many *dimba* gardens, which are a vital source of both food and income from marketed crops such as tomatoes and sugar cane, have dried up.¹² Although the distribution of free hybrid seed boosts adoption in the short term - and hybrid maize is both higher yielding and earlier maturing than local varieties, making it a relatively good drought crop - cash constraints exacerbated by rapidly rising input prices mean that farmers are forced into ‘recycling’ hybrid seed, which leads to rapid reductions in yields (Peters 1995a:5).

The effects of drought on agriculture can not be mitigated, except perhaps through large-scale irrigation. Smallholder irrigation schemes are presently under consideration, but are unlikely to have much impact for several years. Another option is to switch production towards more appropriate crops such as sorghum, millet and cassava. However, agricultural production in Malawi has become more concentrated than ever during the 1990s, due to the promotion of hybrid maize at the expense of alternative food crops, which despite being better suited to Malawi’s drier, drought-prone areas have received virtually no credit, research or extension support from the Ministry of Agriculture.¹³ The objective of household food security strategies should be to increase the range of options available to poor people to access food. Any strategy which reduces choice also increases risk. Interventions such as the delivery of hybrid maize seeds plus fertiliser - whether for free (through Supplementary Inputs Projects), tied to loans (as in the collapsed Smallholder Agricultural Credit Programme), or in return for labour (‘inputs-for-work’), by definition increases the

¹² Around 25% of Malawian households have *dimba* (wetland) gardens, where rice, sugarcane, cotton, cassava, beans, fruits and other vegetables are grown in addition to maize, contributing significantly to both household diets and income (MEPD *et al.* 1996:3).

¹³ Production of secondary food crops (cassava, sweet potato) is mostly being promoted through seed multiplication projects by NGOs such as ActionAid-Malawi.

dependence of rural households on agriculturally-based livelihoods in general and on hybrid maize in particular, with all the obvious risks that this entails.

- ***Self-sufficiency may be unsustainable in the long run***

Although Malawi has been self-sufficient in food production in most non-drought years since independence, inexorable population pressure and recurrent droughts may reverse this situation and leave Malawi as a chronically food deficit country dependent on imports in the not too distant future. Twice in the 1990s Malawi has been threatened with drought-induced famine, and the long term projections for per capita food production are pessimistic as land constraints intensify.

Optimistic observers argue that Malawi could maintain self-sufficiency almost indefinitely if smallholders continue to shift away from local maize and towards hybrid varieties. Since hybrid yields are approximately three times those of local varieties, the population could theoretically treble before unbridgeable maize scarcities develop (House and Zimalirana 1992:151). But this requires a favourable policy environment - one which supports rather than undermines access to essential inputs by the poorest farmers - and a population growth which is neutral in terms of its impact on landholdings and cropping patterns. In Malawi, both assumptions are questionable.

It is a commonly repeated truism that “Malawi is one of the most densely populated countries in Africa” (EIU 1996:10). Since independence in 1964, the population has risen from 4 million to 10 million. At the current growth rate of 3.3% per annum - one of the highest in the world - the population will double again, to 20 million, in the next 20 years. Malawi experienced negative real growth in agriculture during the 1980s, as population growth exceeded the growth of agricultural GDP. By 1988, 56% of rural households farmed less than 1 hectare of land, and almost 80% farmed under 1.5 hectares (GoM 1995a:4). Population pressure is greatest in the Central and Southern regions, which already have average population densities of 260/km². Fallowing and rotation of fields has disappeared in many places, cultivation has expanded into marginal, low-yielding land, and limited availability of grazing means that livestock herds - an important source of income and food security throughout rural Africa - are small. Only 37% of rural Malawian households own any livestock at all (MEPD *et al.* 1996:3). Consumption of animal protein in Malawi, at 6.3 kg per capita per annum, is half the average African’s annual consumption of 12.5 kg (GoM 1995b:16).

Malawi’s rapid rural population growth is having adverse consequences on the environment as well as on household food security, and there are obvious interactions between the two. Agricultural liberalisation also has environmentally damaging side-effects. Tobacco curing, for instance, is

extremely wood-intensive, and the increased demand for fuelwood stimulated by the extension of burley tobacco production to the smallholder subsector is believed to be causing accelerated deforestation. In response to these environmental pressures, World Vision has implemented a land rehabilitation project in Chikwawa District, with support from WFP. The project aims “to enhance food security and arrest the degradation of land resources at the village level” (FSG 1994:15). Several other agencies, including CPAR, a Canadian NGO, are involved in soil and water conservation projects in rural areas.

Related to these consequences of rapid rural population growth is the encroachment of estates onto customary land. The estate subsector in Malawi expanded dramatically during the 1970s and 1980s. In 1970 there were just 229 estates in Malawi. By 1979 this had risen to about 1,200 estates, covering about 300,000 hectares. In the 1980s, 13,000 new estates were established, covering more than 500,000 hectares. By 1990, when the transfer of land from customary tenure to leasehold was partially stopped by legislation, estates covered 843,000 hectares: 9% of Malawi’s total land area, but more than 25% in the relatively fertile Central Region. The supply of land available to smallholders nationwide fell from 8.2 million hectares in 1964 to 6.7 million hectares by 1994.

Many new estates are small and were established by smallholders, to secure access to credit and to burley tobacco quotas. Registering leaseholds also provided security of tenure - registration was a defensive response to registration by other families in the area. The average estate size fell from 345 ha in 1970 to 207 ha in 1979, to 53 ha in 1989. This suggests “a more varied continuum of agricultural enterprises” than simple “dualism” in Malawi (Mkandawire *et al.* 1990:x). These figures were recently updated by a series of reports which were produced out of Malawi’s ODA-sponsored ‘Estate Land Utilisation Study’ (ELUS) in early 1997.¹⁴ The study found that approximately one million of Malawi’s nine million hectares of land (11%) was registered to some 28,000 estates. Of the remaining 7.6 million hectares, 1.6 million was public land and 7.4 million (82%) was under customary tenure (Gossage 1997:4). Although estates in Malawi were historically large - the average estate in Southern Region still exceeds 100 hectares - two-thirds of estates now fall in the 10-20 hectare range, following the recent rush to register customary land for leasehold by smallholder families or farmer groups.

¹⁴ Three related sets of studies were commissioned by Malawi’s Land Commission in 1996 - ELUS, CLUS, and PLUS - charged with examining land utilisation in the estate sector, the customary sector and public lands sector respectively. By mid-1997, only ELUS had completed its work.

Estate lands are seriously underutilised. Mkandawire *et al.* (1990) found that cropping intensities averaged 23% on large estates (100+ ha), 38% on medium-sized estates (30-100 ha), and 50% on small estates (< 30 ha). On the smaller estates, food crops (hybrid maize, groundnuts, beans, fruit and vegetables) covered as much land in 1990 as tobacco, and were cultivated both to feed the workers and for sale. The recent ELUS study found an inverse relationship between crop rotation intensity - a measure of land utilisation - and estate size, suggesting that small estates make more intensive use of land than large estates, which also tend to have more underutilised land than small estates and the customary subsector. Almost half of estate land in the north, and one third in the south, was classified as underutilised (Gossage 1997).

Steele (1997) found a 'U-shaped' relationship between estate size and various measures of productivity and profitability, with small estates (under 40 hectares) and large estates (over 500 hectares) performing markedly better than intermediate estates (40-100 and 100-500 hectares). The explanation reflects the growing differentiation within the estate sector observed during the 1980s and 1990s. Smallholder estates apply family labour intensively while the large colonial tobacco, tea and sugar plantations are both capital- and labour-intensive, but both these categories maximise productivity within their respective resource constraints, because they depend on the estate as their dominant or primary economic activity. By contrast, the majority of intermediate estates have been established by non-resident owners (mainly politicians and civil servants), who hire estate managers and supervisors but see the estate only as a secondary source of income, so that maximisation of output or profitability is not an overriding consideration. The implications of this finding are not drawn by Steele, but are politically controversial: smallholder estates should logically be promoted as a vehicle for poverty reduction, and large estates should be protected because they generate vital foreign exchange through tobacco, tea and sugar exports. It is the intermediate estates which contribute least to either the economic or equity objectives of Malawi's agricultural policy, so if redistribution of land is to be adopted as a response to a perceived 'land hunger' among smallholders, it is the intermediate estates which should be targeted first.

Excluded households are fighting back - there is evidence of encroachment onto estates by smallholders desperate for farming land. "The common incidence of encroachment is a reflection of the growing scarcity of land and other resources within the smallholder customary sector and is a manifestation of an apparent growth in tension in some areas between estates and surrounding communities" (Mkandawire *et al.* 1990:xiii). In the ELUS survey, as many as 18% of estates reported encroachment onto their land by outsiders, though only 3.3% of total estate area was estimated to be affected (Gossage 1997:19). Encroachment was most evident in the densely

populated Southern Region, where 26% of estates and 8% of land area was affected. Even though the spread of the estates has now been curbed, conflicts between smallholders and estate owners can be expected to increase in future. Women's access to land, already limited to female-headed households (32%) in the customary sector, is far worse in the estate sector, where only 2.7% of registered owners are female (Bosworth 1996:3).

Against this accumulation of evidence in support of the dominant discourse of malthusian crisis in rural Malawi, there are isolated hints that this alarmism might be exaggerated or premature. The ELUS study, for instance, found at least one significant fact which challenges the tendency to blame the estates for Malawi's heavy pressure on land. Bosworth (1996:4) estimates that as much as 1.5 million hectares of customary plus estate land remains unutilised and available for cultivation, but of this only 300,000 hectares is on estates while 1.2 million hectares is in the customary sector. Unpublished fieldwork in a densely populated district around southern Lake Malawi found that smallholder patterns of land utilisation are patchy and highly localised. In one village there is virtually no uncultivated land left and natural boundaries constrain further agricultural extensification, but another village just 10-12 kilometers away is located in a lush forest area with unlimited potential for expansion in the medium term.¹⁵

Notwithstanding these qualifications, it remains uncontested that the main consequence of inexorable population growth and the expansion of the estates has been intensifying pressure on resources in Malawi's smallholder areas. In the colonial period, before land shortages developed, the average rural household farmed 3-4 acres, under a system of shifting cultivation to maintain soil fertility (Berry and Petty 1992:70). But the average area of cultivated land per household has halved since the 1960s, from 1.5 hectares in 1968 to 0.75 hectares in 1994. Already, the poorest smallholders farming tiny plots of marginal land could not achieve household self-sufficiency even if they planted fertilised hybrid maize. Anecdotal evidence suggests that a rural class of 'near-landless' people is emerging in densely populated rural areas. For all these households, additional cash income, plus reliable access to food through the market at reasonable prices, are essential for achieving food security. Other possible solutions to the land problem in Malawi include releasing more land to smallholders, and raising the productivity of smallholder cultivation. Specific policy options might include:

¹⁵ Personal communication, Paolo Craviolatti, University of Sussex, October 1996.

- *Land redistribution:* returning unutilised or under-utilised estate land to smallholders, or releasing some public land for smallholder cultivation.
- *Inducing or coercing estates to grow maize:* ‘inducements’ through higher prices to make maize commercially attractive; ‘coercion’ through legislation forcing estate owners to plant a certain percentage (say, 25%) of their land to maize.
- *Improved agronomic practices:* yields of hybrid maize average less than 3,000 kg/ha, well below the potential of 4,000 kg/ha. Agricultural extension officers should provide advice to smallholders in terms of farming practises that will improve yields.

However successful technological interventions may be in the short term, the limits to food production in Malawi will eventually be reached, so all these efforts to release more land and to achieve greater productivity can only delay the inevitable. At some point - sooner rather than later - a structural transformation of the economy which enables many more people to earn their living outside agriculture is essential, if sustainable livelihoods are to be guaranteed to future generations.

3. AGRICULTURAL LIBERALISATION

The debate over the role of the state in agricultural marketing in Africa has evolved since the early days of structural adjustment - when the argument polarised around a dichotomous ‘state *versus* market’ choice between parastatals and private traders - towards the current broad consensus that the issue is no longer which alternative to adopt, but how to negotiate an appropriate role for each set of institutions in such a way that economic efficiency is maximised without prejudicing equity and welfare objectives. It is now widely accepted that parastatals generally cannot operate in an economically efficient manner, while the free market cannot guarantee food security for all citizens in contexts where infrastructure is weak and agricultural production is prone to fluctuations due to drought, conflict and other shocks. Accordingly, a compromise position is being negotiated in many countries, including Malawi, whereby the commercial functions of parastatal marketing agencies are being handed over to the private sector, but the parastatal retains vital national and household food security functions, such as managing a strategic grain reserve and defending floor prices for producers and ceiling prices for consumers, through limited interventions in the market that do not undermine the activities of private traders.

Instead of rehearsing in detail the long and well-reported history of agricultural policy and structural adjustment programmes in Malawi, the following selectively summarises key elements in

terms of their food security implications for both the national economy and poor or vulnerable households.

During the 1960s and 1970s, the Government of Malawi's economic strategy centred on raising export crop revenues, especially tobacco from the estate subsector. To support this strategy, smallholders were required to provide maize, to feed Malawi's population, and labour, to work on the estates. The parastatal ADMARC (the Agricultural Development and Marketing Corporation) extracted large surpluses from the smallholder subsector in this period, by paying smallholders well below export parity prices for their tobacco, cotton and groundnuts. Much of this surplus was invested in the estates (Harrigan 1991:205). State control over agriculture was reinforced by legislation which, *inter alia*, barred smallholders from growing burley and flue-cured tobacco varieties, and banned Asian traders from operating in rural areas. These policies undermined smallholder agriculture to such an extent that, by the early 1980s, they had become self-defeating and dysfunctional. "The decline of the smallholder sector was such that ADMARC could no longer extract a surplus, land and cheap labour could not be continually annexed and food self-sufficiency, either nationally (marketed) or individually (subsistence) could no longer be achieved" (Harrigan 1991:216).

Three structural adjustment loans were made to Malawi during the 1980s, the first as early as 1981. These were accompanied by a raft of agricultural reforms, essentially designed by the World Bank, most of which have now been partially or fully implemented. However, Malawi's experience of structural adjustment during the 1980s was disappointing, in agriculture and in most other sectors. This poor performance was attributed by some observers - not least the World Bank - to slow and reluctant implementation. Largely because of the central economic and strategic functions of agriculture in the national political economy, the Government of Malawi has been reluctant to cede control of agriculture to the private sector - even today, agriculture still remains partly in the hands of the state - and it delayed key components of the liberalisation programme for as long as it could.¹⁶ For example, in 1983 it undertook to abolish fertiliser subsidies by 1988, under the second structural adjustment loan (SAL II), but as fertiliser import prices continued to rise - sharply after transport routes through Mozambique were closed in 1987 - the Government, fearing the impact on

¹⁶ Malawi's cautiousness contrasts sharply with neighbouring Zambia, which is more urbanised (42% versus 11% in 1991) and less dependent on agriculture for employment and export earnings, and where a radical programme of agricultural liberalisation was implemented extremely rapidly in 1993/94. A contrast of Malawi's cautious phasing with Zambia's 'short, sharp shock' approach would make an illuminating case study.

maize production, reneged on this commitment and did not complete the Fertiliser Subsidy Removal Programme until 1995 (N'gon'gola 1996:14).

This example reflects a broader struggle over policy direction, regarding both means and ends, between the Government of Malawi and the major donors, with the Government prioritising the objective of food self-sufficiency and the World Bank promoting increases in agricultural export revenue, in a context of steadily declining government capacity to provide material support to farmers (Harrigan 1991:202). The discussion below attempts to assess whether the livelihood crisis facing Malawian smallholders in the late 1990s is due to deficiencies in the remedies proposed under agricultural liberalisation (failures of analysis) or to problems in implementation (failures of policy). As always in such matters, the counterfactual question is intractable, so the discussion is necessarily limited to actual policy outcomes.

3.1. The Case For Market Liberalisation in Malawi

A recent USAID document (Brown, Reutlinger and Thomson, 1996) provides the clearest exposition yet of 'A Market Oriented Approach' to food security in Malawi, which is contrasted with a "traditional 'food gap' analysis". In their introduction the authors assert that "there is a general acceptance of a market-oriented approach to development", and the case for free markets is presented in strongly ideological terms. Markets are said to be "the most efficient way of allocating resources"; market oriented economies have had "the strongest economic growth" and have provided "the greatest well being to their people"; and "markets are the economic equivalent to liberal political democracy, a force that is also gaining widespread acceptance".

The 'market-oriented approach' sees the causes of food insecurity in Malawi in terms of excessive state intervention in the agricultural sector in the past, especially controls on production and trade, distortions in input and output markets, and consequent dampening effects on producer incentives. Market liberalisation in Malawi's agricultural sector has meant the removal of subsidies for inputs such as fertilisers and seeds, a reduced role for ADMARC in the marketing of agricultural produce and the promotion of private traders (who have been permitted to buy and sell most crops since 1987), the removal of constraints or restrictions on farmers' cropping decisions (smallholders are now permitted to grow burley tobacco in open competition with estates), and the privatisation of agricultural credit for smallholders (government-run SACA has become MRFC, a private company). Price controls have been removed for all crops except maize, where a price banding system is in operation. The Strategic Grain Reserve remains in place, at least for the present.

Advocates of agricultural liberalisation in Malawi argue that smallholders were hindered more than they were helped by previous interventionist policies, even when those interventions were intended to enhance household food security. They argue that the official promotion of hybrid maize resulted in a dangerous dependence on maize and reduced crop diversity. Restrictions on smallholders growing tobacco may have ensured more maize production and contributed to national food security, but only at the expense of reducing agricultural incomes and threatening household food security in cases where the farmer was a deficit maize producer.

Accordingly, a general shift in support of crop diversification has become a key feature of agriculture sector policy in the 1990s. Crop diversification in Malawi has two distinct meanings: the promotion of a wider range of food crops, to reduce household dependence on drought-prone maize; and the promotion of export crops, to generate income for food purchases. While both are encouraged, the second is being more vigorously pursued as a means of achieving sustainable household food security, the argument being that using cash income to purchase food can be just as viable a strategy for poor smallholders as raising food production directly, and that improved incentives to farmers will promote employment as well as incomes: “agricultural intensification and diversification within the smallholder subsector are critical in increasing employment and income-generating opportunities” (World Bank 1995:15).

The World Bank and USAID believe that smallholders will respond to price incentives by specialising in high-value crops such as tobacco or cotton. Incomes will be higher in rural areas than before, and this in itself will stimulate trade and generate ‘multiplier effects’ in the form of increased demand for commodities (including food), labour and other services. This income will ‘trickle down’ in the form of transfers to poorer relatives, so that even those who do not participate directly in the liberalised rural economy will ultimately also benefit. The World Bank has put substantial sums of money behind this argument, funding the Agricultural Sector Adjustment Programme (ASAP) since 1990, and contributing \$45.8m to an agricultural services project in 1993 (EIU 1996:19), which itself may partly explain this historic U-turn in government policy.

It is certainly the case that one of the most significant developments in smallholder agriculture during the 1990s has been their adoption of burley tobacco. In 1990, legislation preventing smallholders producing burley tobacco, which had been introduced in 1972 to protect the commercial estates and encourage smallholders to concentrate on maize, was repealed. The supply response was immediate and dramatic. Malawi’s production of burley tobacco “has trebled over the past decade” (EIU 1996:20), this acceleration coming mainly from the smallholder subsector. These

shifts in cropping patterns can be seen as the product of two severe drought years in quick succession (1992 and 1994), a reorientation of state policy towards crop diversification and away from explicit support to maize production (especially the ending of smallholder's preferential access to credit in 1994 and the removal of fertiliser subsidies in 1995), and the generally liberalised agricultural environment (which included the ending of ADMARC's monopoly on agricultural marketing as well as the lifting of restrictions on smallholder production choices).

A recent World Bank study (1995:6) claims that structural adjustment in Malawi has produced a positive "overall supply response" in agriculture, by the following mechanisms:

- "exchange rate realignments have maintained the profitability of agricultural exports"
- a significant supply response to price incentives, as demonstrated by smallholders entering into burley tobacco production
- the "removal of import restrictions [caused] a substantial increase in the use of fertiliser in the agricultural sector *despite the increase in their price relative to produce*"
- "the rationalisation of input prices, such as reduced subsidies to fertilisers, that occurred under these policy reforms should have increased the efficiency in the utilisation of inputs *even while raising the costs of production*" [emphases added].

3.2. The Case Against Market Liberalisation in Malawi

Three arguments can be levelled against the liberalisation of agriculture in Malawi, particularly in terms of the manner and pace of its implementation. Again, these critiques can be expressed in the form of propositions: first, that the private sector is weak and undeveloped, so the removal of the parastatal from agricultural marketing will lead to exploitation or neglect of smallholders; second, that rising input and output prices have accelerated processes of rural stratification; and third, that price variability for agricultural produce (both food and export crops) threatens household food security.

- ***The private sector is weak and undeveloped, and will exploit or neglect smallholders***

Three justifications have been advanced for state intervention in agricultural marketing: to compensate for market failure, to promote market development and to support income distribution objectives (Smith 1995:562). Parastatal marketing agencies are supposed to ensure that all smallholders enjoy access to markets and are offered fair prices for their produce. In Malawi,

ADMARC set up marketing depots in even the remotest communities, and pan-territorial and pan-seasonal pricing were introduced. These policies compensated for market failures and achieved income distribution and national food security objectives for several years and to varying degrees, but at the cost of severe economic inefficiencies and the virtual elimination of private traders from the agricultural sector. Nonetheless, the case for closing down ADMARC and supporting the re-emerging private sector in agricultural marketing is far from straightforward.

Since the late 1980s, ADMARC has been restructured along commercial lines, and its dominance in agricultural marketing has been steadily declining. Nonetheless, its role in the process of agricultural liberalisation remains both powerful and unresolved. The government and several donors and NGOs argue that ADMARC must continue to play a 'safety net' role as buyer and seller of last resort, at least until private traders are ready to take over these functions. This argument reflects a broader concern that the pace of reform is too fast and that the private sector is not sufficiently developed for full market liberalisation. USAID, on the other hand, believes that the development of private trade is constrained by the presence of ADMARC in the market, so that its abolition or privatisation is an urgent priority. USAID argues that ADMARC has little impact on the rural poor anyway, because of their low cash incomes and limited participation in the market - though this assertion is contested. A recent USAID report concludes that "maintenance of the current ADMARC structure is a very costly way to implement a safety net programme, and is likely to have little direct effect on the very poorest" (Brown *et al.* 1996:77).

The pressures on ADMARC to cover its operating costs (to be self-financing) while at the same time to retain its food security mandate have produced predictable contradictions between its commercial and its 'developmental' functions (World Bank 1995:69). Several unprofitable depots have been closed, for instance, because they are too costly to maintain (a process which might be described as 'adverse de-selection'), yet these depots are located in precisely those remote communities which are vulnerable to either neglect or exploitation by private traders - and which ADMARC should surely, therefore, continue to serve. "As part of the restructuring of ADMARC, several of its centers were closed but traders failed to move into these areas, leaving large gaps in the trading network.in *no* rural areas are there sufficient traders storing maize in the deficit season to replace ADMARC as guarantor of rural food supplies" (Peters 1996c:21 and 1995b:5). Attempts to facilitate the entry of private traders to markets which ADMARC itself has abandoned as uneconomic have, predictably, failed. "ADMARC attempted to implement a commission agent system for markets that are not financially viable, but despite attractive offers to sell or rent

warehouses, they found little interest among private traders, and the program was discontinued” (N’gon’gola 1996:18).

The sluggish response of the private sector to the liberalising environment in Malawi can be attributed to rural poverty, capital constraints and political uncertainty. Shortage of capital is perhaps the main barrier confronting private traders entering the market as ADMARC slowly withdraws. Traders need start-up capital to invest in transport and storage facilities, as well as working capital for purchasing crops, paying employees and costs of fuel for moving crops from farmgate to markets. Also, in contrast to a nationwide marketing agency with government support behind it, individual traders enjoy neither the economies of scale nor the ability to cross-subsidise loss-making outlets, crops or years with profits derived elsewhere. Besides, the *capacity* to invest must be accompanied by a *willingness* to do so. Before traders are willing to invest heavily in vehicles and warehouses they must be confident that the policy environment in which they are operating is conducive and will remain favourable to their enterprise. During the early 1990s the policy environment and the political situation in Malawi were turbulent and unpredictable, which compounded the reluctance of traders to invest heavily in agricultural marketing, even if they could find the means to do so.

More recently, ADMARC’s continuing attempts at counter-seasonal price stabilisation through manipulating the Strategic Grain Reserve (SGR) have either discouraged traders from entering the market, or encouraged them to take advantage of the market distortions which result. The SGR is not simply an emergency stock of grain held against drought-induced food supply shocks, but has an active price stabilising role. ADMARC has been contracted to manage the SGR cost-effectively, but with explicit household food security objectives: to boost smallholder incomes by supporting producer prices for marketed maize (the floor price), and to promote maize consumption in poor households by holding consumer prices down (the ceiling price). The ‘price band’ was set at K1.25-K2.50 in the 1994/95 season, and K1.53-K2.50 in the 1995/96 season. But its effectiveness as a food security intervention is undermined by traders who purchase maize very early, at well below the floor price - when poor smallholders are desperate to sell at any price - and sell it back to ADMARC or to consumers at inflated scarcity prices later in the year (GoM 1995b:12).

A 1995 survey of grain traders in southern Malawi highlighted the dangers to household food security of ADMARC’s partial withdrawal from the market, but was also sympathetic to the real difficulties faced by traders. At times of year and in those rural areas where ADMARC is no longer operational, private traders are price setters, and the survey found that they typically undercut the

official floor price for purchasing maize from producers by up to 30%. Conversely, traders sell maize back to consumers in the deficit season at prices which are 10%-50% higher than ADMARC ceiling prices (Peters 1995b:2). In other words, the spread of prices offered by private traders is much wider than the floor/ceiling 'price band' adopted by ADMARC, which is to the advantage of traders but to the detriment of both producers and consumers. For their part, traders complain of lack of working capital (either cash or credit), and related shortages of storage facilities and transport. They also feel constrained by ADMARC's continuing presence in the market, which inhibits their ability to expand the scale of their operations, and by the price banding system, which offers them an "insufficient profit margin between prevailing buying and selling prices of maize" (Peters 1995b:2).

These last two points might seem to provide support for the 'American' view that market liberalisation should be rapid, complete and unambiguous, if the private sector is to step into the breach left by the grain parastatal when it withdraws. I would argue instead that the current confusion in agricultural marketing in Malawi has been caused by a failure to separate adequately the two objectives of *promoting market efficiency* through commercialisation, while simultaneously *protecting household food security*. The first objective can be left to the private sector while the second should be assigned to ADMARC, at least until the private sector demonstrates that it is sufficiently developed and competitive to address both sets of needs with only minimal regulation. If this demarcation of responsibilities had been clearly drawn and communicated to all stakeholders at the start of the liberalisation process, the roles and activities of ADMARC and the private sector would now be complementary to each other, instead of which they are competing for the same territory in a manner which is damaging to them both - and to their clients, the food producers and consumers of Malawi.

Of course it is a moot point whether the private sector could ever fill the gap left by ADMARC without a major accompanying structural transformation of Malawi's rural economy. One of the major failings of market liberalisation in much of Africa has been its naïve assumption that active suppression in the past of the private sector by the state constitutes sufficient evidence of an inherently competitive and efficient free market economy waiting to be unleashed once the 'bureaucratic leviathan' of the public sector is removed. In reality, rural economies in Africa are characterised by extreme poverty, exacerbated by agricultural seasonality and inaccessibility, leading to high transactions costs for both private economic activities and the delivery of public services. In such unfavourable circumstances, the most likely outcome from market liberalisation is not perfect competition, but neglect of poor and vulnerable areas by traders who see no profit to be

made, or exploitation by a few monopolistic or cartelised opportunists. Malawi's experience appears to confirm the concern of structural adjustment's critics that the naïve liberalisation model simply ignores the asymmetric capacities and objectives of the private and public sectors.¹⁷

• ***Rising input and output prices have accelerated processes of rural stratification***

Who are the winners and losers from the positive "overall supply response" in Malawian agriculture? Which farmers are best placed to take advantage of the increased profitability of export crops? Which farmers are using more fertiliser than before, and which have been excluded from productivity-enhancing inputs by the phasing out of subsidies?

Agricultural liberalisation means higher prices for both inputs and outputs, with ambiguous consequences for farmers. The complete removal of the government's fertiliser subsidy by 1995 (under the FSRP), together with the devaluation of the Malawi Kwacha (which was floated in October 1994) and the subsequent inflation caused fertiliser prices to sky-rocket. The nominal price of a 50kg bag of urea more than quadrupled in two years, from K64 in 1993/94 to K296 in 1995/96 (Pearce *et al.* 1996:5). Fertiliser use, already heavily skewed towards the larger smallholder farmers and the estates, has become more so as input prices rise. These stratifying effects of agricultural liberalisation are recognised and acknowledged even by its strongest proponents: "only the 35% of wealthiest smallholders have benefited from increased supplies of credit, fertiliser and hybrid maize seed" (World Bank 1995:42). USAID concedes that: "Overall, families who have access to purchased inputs, and hence can plant tobacco and hybrid maize have done well out of liberalisation. Households which are maize deficit, and have no resources to invest in improved maize varieties have lost out. they are fated to a life of increased marginalisation" (Brown *et al.* 1996:67).

According to the Ministry of Agriculture's 1988 survey of agriculture, only 15% of smallholders in Malawi farmed enough land to produce a surplus, a further 22% had enough land to produce only for their own food requirements, while the remaining 63% were food deficit households. The World Bank (1995:14) argues that households which produce surpluses "could produce larger and more diversified surpluses and become prosperous small commercial farmers, if appropriate

¹⁷ In fact, comparative evidence from several African countries reveals a spectrum of relative success or failure, depending to specific contexts and circumstances. "Market liberalisation in some instances (Tanzania and Zimbabwe) has enhanced movement of grain and therefore food security. In other cases (Malawi, Ethiopia, Kenya, Uganda and Zambia), the collapse of, or deregulation of grain parastatals has left a vacuum which the private sector cannot fill easily given the unattractiveness of undertaking grain trade in remote areas with a poor infrastructure" (Rukuni and Anandajayasekeram 1996:9).

policies and supporting actions were implemented". Indeed, it is clear that this group are the main beneficiaries of market liberalisation policies. Surplus farmers should gain on balance from the rise in input and output prices, since they will recover their higher investment in inputs from higher prices for surpluses sold. However, this is dependent on favourable weather and markets. In bad rainfall years, farmers might not produce marketable surpluses and so might not recover their investment. It follows that, as a general rule, only wealthier farmers and those with diversified income sources would be willing and able to take this risk. In good years, or when many farmers have switched to a lucrative crop because of good prices earned the previous year, the market for that crop will be flooded and prices could collapse - as seems to have happened to tobacco, cotton and soybean in Malawi in 1996 (see below).

Broadly speaking, households cultivating larger plots (>0.5 hectare) have gained through increased maize yields, using hybrid seed and fertilisers, and diversification into lucrative tobacco production. However, households cultivating small plots (<0.5 hectare) have generally not increased either production or yields, since they face restricted access to inputs and have little or no land available for crop diversification. Zeller *et al.* (1996) found that tobacco-growing households held more land per capita (0.52 ha) than local maize growers (0.38 ha). Landholding being an accepted proxy for poverty in rural Malawi,¹⁸ the authors conclude that larger landholdings are associated with higher risk-bearing capacity. They also argue that the major constraint to tobacco and hybrid maize adoption is not access to land but access to capital, and they conclude that the best mechanism for promoting crop diversification among smallholders is improved access to credit (Zeller *et al.* 1996:182).

From this evidence it seems reasonable to conclude that the liberalisation of tobacco production is not the solution to poverty and food insecurity in rural Malawi. Larger farmers are benefiting disproportionately - they cultivate more tobacco and are more likely to join 'burley clubs' to gain access to tobacco auctions where they can earn world market prices (Peters 1996c:12). Conversely, smaller farmers tend to produce tiny quantities of burley for sale to local traders at lower prices. As a consequence economic stratification within rural communities is almost certainly accelerating. It might even be hypothesised that the current policy of promoting crop diversification could be detrimental to food security in the poorest households, because it encourages them to invest in more expensive agricultural technologies and to adopt potentially riskier cropping patterns for uncertain rewards. Although monocropping is a risky strategy, diversification *within agriculture* has its own

dangers. Adding market dependence to climatic vulnerability need not increase household food insecurity, but it can do if yields or prices are more variable for marketed crops.

Another reservation is that tobacco production is dominated by men, so that the implications of higher household incomes on intra-household consumption and food security are unclear. If the incremental income earned from tobacco is largely diverted to non-food expenditures, or if school attendance is adversely affected by children having to work the tobacco plots, then a paradoxical situation could arise whereby increased income at the household level translates into no gains or even negative consequences for the majority of household members.

Possibly the only empirical evidence available to date on the distribution of gains and losses from market liberalisation in rural Malawi is provided by Peters' longitudinal study of 200 households in the Shire highlands. In a comparison of inflation-adjusted real incomes 'before' (1987) and 'after' (1991) agricultural liberalisation in Malawi, Peters (1996c:39) found that an aggregate increase in per capita incomes of 26% for the sample as a whole disguised major gains for the top income quartile of households (+56%), but significant losses for the bottom (-16%) and second to bottom (-10%) quartiles. Although based on one small sample, this evidence directly contradicts the view taken by apologists for market liberalisation - that liberalisation in Africa has left the rural poor no worse off, and in most cases better off, than before.¹⁹

- ***Price variability for agricultural produce threatens household food security***

The Government of Malawi's commitment to market liberalisation is tempered by a concern that the food security status of its vulnerable citizens will not be guaranteed - and may well be undermined - by the unleashing of market forces in the agricultural sector. For this reason, the Government has insisted on maintaining some control over maize prices ('price banding' for producer and consumer prices), and the Strategic Grain Reserve remains. Under free market conditions farmers inevitably face variable and unpredictable prices for the crops they grow for sale, and consumers - including deficit food producers - are exposed to seasonal price rises for basic food commodities. Despite ADMARC's control over grain marketing in Malawi, significant price seasonality was evident during the 1991/92 drought. Monitoring of 24 village markets found that maize prices quadrupled in just three months - July to September - after the failed 1992 harvest, from 62 tambala to 245 tambala per kilogram (UNICEF-Malawi 1992:7).

¹⁸ 'Landholding' is defined either in terms of ownership (where the household possesses a legal title to the land) or in terms of usufruct rights (which are issued under customary law).

¹⁹ See, for example, the selection of country case studies presented in Sahn, 1996.

A key feature of grain market liberalisation in Malawi has been a general increase in maize prices, with ambivalent effects on the food security status of smallholders, particularly the majority who are both producers and purchasers of food. Rising prices have eroded the purchasing power of net purchasers of maize. As Peters (1995b:2) points out, higher purchase prices by ADMARC and private traders at harvest time also means higher prices for purchases by deficit households later in the year, because price seasonality has not been smoothed. Recognising this fact, Peters argues, farmers are more reluctant than ever to sell maize after harvest, despite the higher prices now being offered. An equally plausible scenario, however, is that 'distress sales' of maize to meet pressing cash needs are continuing among the poorest smallholders, but that higher buy-back prices some months later (when their granaries are depleted) leaves them less able to feed their households adequately than before. Peters herself finds evidence of a 'U-curve' in terms of the proportion of households selling maize by income decile, suggesting that "the very poorest sell more food than they would like because they have few other options to earn cash" (Peters 1996b:2). They participate in the market on more unfavourable terms than wealthier households, being forced to sell when prices are lowest and buy when prices are highest, usually in small quantities which cost more than bulk purchases. Female-headed households are particularly severely affected, since they have less labour available for off-farm income earning activities.

The situation for export crops is even more uncertain. Changing relative prices have favoured food crops one year and export crops the next, and led to substantial swings in smallholder cropping patterns, both between food and export crops and between different export crops. "In the context of land and technology constraints and monopoly markets this has, in turn, led to substitutions between crops, rather than an aggregate increase in supply and/or incomes" (World Bank 1995:66).

Cropping decisions depend on the relative returns to different crops, which in turn depend on the costs of their respective inputs, the price paid to producers for the crops, and the cost of buying food instead of growing it. A survey during 1995 compared local maize, hybrid maize and tobacco production by 404 smallholder households in five districts of Malawi (Zeller *et al.* 1996). This study found that local maize was grown by the majority of households, despite offering lower yields and returns than either hybrid maize or tobacco. The authors speculate that the reasons for many farmers persisting with local maize include the higher capital intensity and labour requirements of hybrid maize and (especially) tobacco. The direct costs of producing these crops are higher because of the investment they require in terms of labour time, fertilisers, facilities to bale and cure tobacco, and so on. But another factor is the variation in yields and returns across

different crops. Local maize yields lower but more stable returns than hybrid maize or tobacco. Poorer households have a lower capacity to bear risk, so in their food security strategies they tend to prefer low return, low-risk crops to higher-yielding crops which might be prone to instability in either yield or prices.²⁰ Since gross returns are a multiple of output and selling price, income instability can be caused by variability of either factor - and even an increase in production can have detrimental consequences.

As smallholders in Malawi turn increasingly to export crops like burley tobacco, cotton, soya and sunflower, “the market prices for these commodities has crashed as more people produce the commodities for cash. The cash which the smallholder was depending on is now not available, and the result is greater food insecurity, not less” (Henry 1996:4). In 1996, for instance, Malawi’s smallholder cotton farmers were devastated when ADMARC offered to buy their crop at K4.50 per kilogram, having announced earlier in the season that it would pay K7.70. In response ADMARC blamed “prevailing market forces” - the collapse of Malawi’s textile industry and falling international cotton prices.²¹

Following the excellent auction prices paid for burley tobacco in 1995, Peters (1995b:4) astutely predicted that: “So many smallholder farmers were impressed with the burley prices received that it is very likely that there will be a considerable increase in numbers growing next season..... the amount of tobacco for sale might attract the new buyers to return or, alternatively, so many will be trying to sell that the price offered will fall.” In the event, a combination of over-supply of burley on the market and poor quality of produce - due to pests, disease outbreaks and heavy rains which resulted in mouldy leaves - led to low prices being offered on auction floors and by traders in 1996. “Tobacco sales at Limbe Auction Floors came to a halt yesterday morning when farmers cried foul at the “low prices” offered at the floors. Management of the Auction Floors says the prices are low because the tobacco is poor quality. Yatima, a tobacco farmer in Mangochi, lamented that the price was so low it could not offset the high cost of farm inputs and transport expenses to the Auction Floors.”²² The outlook for world market prices of tobacco is described as “unfavourable” by the World Bank (1995:9) for at least the next few years, which would negate the economic value of any overall supply increase and threatens to undermine, not enhance, smallholder incomes.

²⁰ This was the basis of the argument against cash cropping in the 1970s, which asserted that food insecurity increases the more markets a household has to go through to acquire food. Food production is subject only to climatic uncertainty, but cash crops are subject to both climatic and market uncertainties.

²¹ ‘Cotton farmers embittered over prices’ (*Malawi News*, Lilongwe, 8-14 June 1996:1).

²² ‘Price uproar hits tobacco: Farmers protest “no returns”’ (*The Nation*, Lilongwe, 26 April 1996:1).

More generally, Malawi's complex experience of agricultural liberalisation has highlighted some fundamental concerns about both the substance and process of reform during the 1980s and 1990s. Despite producing many positive impacts, the policies promoted by the World Bank and implemented by government (with varying degrees of enthusiasm or reluctance) have often proved to be internally contradictory and in conflict with their own objectives. For example, the Bank's insistence on the removal of input subsidies contradicted its support for smallholder adoption of fertiliser-responsive hybrid maize varieties. Related to this, the Bank also aimed to promote smallholder production of high-value export crops through raising farmgate prices towards export parity (which was virtually achieved by 1988), which again clashed with its enthusiasm for hybrid maize and with the government's national food self-sufficiency goals (Harrigan 1991:223).

Crucially, the Bank failed even to recognise the potential conflict between food crop and export crop production by smallholders, instead advocating policies that were intended to promote both objectives simultaneously (Kydd and Hewitt 1986:357). Malawi's smallholders have a reputation for being highly responsive to price incentives, but the Bank's belief that pricing policy reform in itself would produce an aggregate increase in smallholder production was misguided. The constraints facing smallholders (notably land scarcity) were already becoming so severe by the 1980s that changes in relative prices simply encouraged smallholders to switch out of maize production to grow export crops instead, with negative consequences for food production and ambiguous consequences for national and household food security.²³ For the poorest smallholders, though, the overall impact of these market liberalisation measures was certainly negative, because of "a tendency on the part of the Bank to regard input and output price instruments as symmetrical in impact with the belief that higher producer prices would compensate for higher input prices. Although such symmetry applied to those farmers able to produce for the market, subsistence producers derived no benefit from higher producer prices yet faced increasing input prices" (Harrigan 1991:228).

The irreconcilability of these two strategies, especially in a context of dwindling landholdings per household, is apparently not recognised even today, judging by recent World Bank and USAID documents on agriculture in Malawi. Diversification within the smallholder subsector remains the

²³ For instance, "sharp producer price increases in the early 1980s generated a large increase in marketed surplus, prompting a reversal of price policy. The extent to which farmers then switched out of maize was excessive and necessitated maize imports. Since 1988 the maize producer price has been increased dramatically. This led to a recovery in ADMARC purchases and a re-stocking of the country's 180,000-ton strategic grain reserve" (EIU 1996:19).

key strategic objective. Smallholders are expected to feed themselves and produce marketed surpluses for national food security by growing hybrid maize, and these same households are encouraged to generate cash income for themselves and foreign exchange revenue for Malawi by growing tobacco or cotton for cash - all this, presumably, on half a hectare of land per family of six.

4. HOUSEHOLD FOOD SECURITY

Concern about rural poverty and household food insecurity in Malawi has risen during the 1990s, as social and economic indicators of wellbeing and development continue to deteriorate and no obvious solutions emerge. This section reviews some of these indicators and processes, before assessing a number of interventions that have been implemented or proposed to address the food security problems of Malawi's rural poor.

4.1. Characteristics of Household Food Insecurity in Malawi

Malnutrition and child mortality rates in Malawi are among the worst in Africa and the highest in the world. Infant mortality stood at 150 per 1,000 live births in 1991, 56% of rural children were stunted in 1993, and one child in four dies before reaching the age of five (House and Zimalirana 1992:145; Sahn and van Frausum 1994:413). Not all of this is directly attributed to household food insecurity - other determinants of poor nutrition and health outcomes include poor sanitation conditions and biases in intra-household food distribution and health-seeking behaviour - but a good deal of undernutrition and ill-health in Malawi can be explained by diets which are inadequate in terms of both quantity and quality (GoM 1995b).

Underlying most of these tragic statistics is poverty. Approximately 30% of the rural population fell below the 'calorie needs line' in 1992 - their annual income (including the imputed value of food production) was insufficient to purchase 200 kg of maize - and 43% fell below the 'basic needs line' - they were unable to buy a minimum basket of goods such as adequate clothing (World Bank 1996:24). An alternative recent estimate categorises 40-50% of Malawians as food insecure and asserts that over 60% have incomes below the poverty line (Zeller *et al.* 1996:169).

At the individual or household level, food insecurity is the inability to acquire - through production, purchase plus transfers - sufficient food for a healthy, active life. Key determinants of household food insecurity in rural Malawi relate to constraints on household food production and the limited availability of off-farm income-earning opportunities. Put simply, the rural poor in Malawi are unable either to grow or to purchase enough food. Even though the livelihood portfolio of a

'typical' rural household is more diversified than was previously thought (as seen below), the combined food and income generated by these various economic activities falls consistently below minimum consumption requirements.

The Government's *Food Security and Nutrition Policy Statement* (1990) identified four categories of food insecure households in Malawi:

- “*Very Small Smallholders* with less than 0.5 of a hectare” - for whom “targeted income transfers” would be needed to protect their food security in the short term;
- “*Medium Smallholders* with between 0.5 - 1.0 of a hectare” - who have the potential to achieve self-sufficiency if their agricultural productivity is improved;
- “*Estate Wage Employees*” and “*Estate Tenants*” - who suffer respectively from very low wages and unfavourable contractual arrangements with their employers;
- “*Low Income Urban Dwellers*” - who constitute a small but growing category of poor and food insecure households in Malawi.

This discussion focuses on the first two of these four categories. Currently, poverty in Malawi remains concentrated in smallholder agriculture, which employs eight times as many people as the estates - though there are strong linkages between the two sectors (many smallholders supplement their income by working on the estates, and the historic distinction between estate and smallholder agriculture is becoming increasingly “scrambled” (Peters 1996a:9), as discussed above). Urban poverty is minimal, comprising only 1% of the total poor, partly because of Malawi's low rate of urbanisation - just 12%, but rising - and an unusually small informal sector (Sahn and van Frausum 1994). Employment data for Malawi are scarce and dated. In 1983 only 14% of workers were formally employed, and although the formal sector created 10,000 jobs each year during the 1980s, almost 150,000 job-seekers entered the market each year during the 1990s. In 1992 it was estimated that one million Malawians were employed in informal sector businesses, though this does not include petty economic activities such as food processing, beer brewing and other minor income sources which contribute significantly to the meagre livelihoods of Malawi's rural poor (Cammack 1996:37).

Due mainly to limited off-farm employment opportunities, poverty and area of land cultivated are closely correlated in Malawi. Three in four smallholder households (74%) who farm less than half a hectare of land fall below the 40th income percentile, as do 95% of households cultivating less

than one hectare. By contrast, only one household in five (21%) cultivating between half and one hectare, and one household in twenty (5%) farming more than one hectare subsist in poverty, by this criterion (World Bank 1996:37). Table 3 illustrates how the unequal distribution of land among Malawi's smallholders translates directly into their relative ability to meet subsistence food requirements from own production.

Table 3. Average Annual Maize Production by Landholding Category

Farm size (hectares)	Households (percent) ²⁴	HH size (AEs)	Maize required	Maize production	Percent of requirement	Deficit or Surplus
< 0.5	26%	3.9	836 kg	265 kg	32%	- 571 kg
0.5 < 1.0	30%	4.4	946 kg	618 kg	65%	- 328 kg
1.0 < 1.5	20%	4.8	1034 kg	1006 kg	97%	- 28 kg
1.5 < 2.0	11%	5.2	1144 kg	934 kg	82%	- 210 kg
> 2.0	13%	6.5	1430 kg	2247 kg	157%	+817 kg

Source: IFAD 1993:50

The data presented in Table 3 suggest that the concept of 'subsistence farmers' in Malawi is a *non sequitur*. Over 85% of smallholder households are deficit producers of maize (although IFAD have chosen a rather generous definition of 'maize requirements'). Only one in five smallholders - those cultivating between 1.0 and 1.5 hectares - produce roughly what they need in an 'average' year. Those farming less than one hectare face severe and recurrent production deficits, while only those whose landholdings exceed two hectares are producing sizeable surpluses for sale.²⁵ This evidence indicates that landholding is a fairly reliable proxy for poverty and food insecurity in Malawi, and could be used as a targeting criterion with relatively limited leakages to the non-poor.

²⁴ Another source has the distribution of landholding more skewed to the left than IFAD data suggest: 41% of smallholders farm less than 0.5 ha; 31% farm 0.5-1.0 ha; and 27% (instead of IFAD's 44%) farm more than 1 ha (World Bank 1996:37).

²⁵ The category of households farming 1.5-2.0 hectares is a curious anomaly in an otherwise linear sequence. Perhaps this group, lacking land to produce marketable surpluses but enjoying access to lucrative formal or informal employment opportunities, chooses to invest more in off-farm economic activities than in agriculture - which is analogous to the 'U-curve' recorded above for productivity of estates.

The problematic relationship between landholding and household food security in Malawi can be clarified by considering the ‘malthusian equation’ of food production and land potential. One hectare planted to hybrid maize will yield 2,500 kg under fair conditions, or 1,500 kg ‘surplus’ after input costs (mainly fertiliser and seeds) are factored out. If nutritional needs average 200 kg per adult per year, this means that one hectare can feed 7.5 adult equivalents, so each adult equivalent needs 0.13 hectares of cultivable land. Yields of local maize varieties are much lower, though, at 800-1,000 kg, so a typical half hectare plot can only produce enough food for 2.5 adult equivalents - but average family sizes are larger than this, while farm sizes for the poor are smaller. The mean farm size in 1993 was 0.8 ha per household, but just 0.4 ha for the poorest 20%. “Even under ideal conditions, the land that the smallholders in the lower three income deciles can cultivate is not sufficient to provide sufficient food for the household” (World Bank 1996:43).

Limited access to land, restricted access to yield-enhancing inputs, and shortages of household labour, particularly in female-headed households, combine to ensure chronic production deficits and a lengthy annual ‘hungry season’ in poor households even in good rainfall years. A 1990 survey of on-farm granary stocks found that 70-85% of smallholder households had completely depleted their granaries by December, leaving them market dependent for 4-5 months until the next harvest in April or May. In some districts, such as the Shire Valley in southern Malawi, the self-sufficiency ratio is as low as 23% for the poorest 20% of smallholders, meaning that three-quarters of the food they need must be purchased. Most of these households are too poor to purchase sufficient food to maintain adequate nutrition levels. Off-farm employment makes up some of this deficit, but not all, and pre-harvest rationing of food consumption is common. Rural households eating one, two and three meals daily in the 1990 survey were 13%, 55% and 32% respectively (Johnson 1996:7).

Naturally, these figures vary greatly from year to year and across districts, depending on harvests, so statements of the kind that “only one-third of the smallholder farmers are self-sufficient in maize” (Johnson 1996:8) are misleading generalisations. Peters’ longitudinal survey of over 100 smallholder households in Zomba, southern Malawi, highlights the inter-annual variability in food security status (Table 4). By December 1995, over half the households surveyed (52%) had run out of food. In December 1997, by contrast, only one household in five (21%) was projected to be in this position. While 1997 is a year of good rainfall, the rainy season was disappointing in both 1995 and 1996, and 1995 was also a recovery year following the 1994 drought.

Table 4. Zomba households running out of own maize

Month	1995	1996	1997
June	2 %	3 %	0 %
July	6 %	6 %	0 %
August	9 %	10 %	0 %
September	14 %	15 %	0 %
October	23 %	20 %	8 %
November	36 %	28 %	14 %
December	52 %	39 %	21 %
January	69 %	49 %	34 %
February	85 %	67 %	40 %
March	90 %	76 %	54 %
April	95 %	96 %	57 %
May	100 %	99 %	100 %

Source: Peters (1996a:8). Figures for 1997 are projections.

The distribution of poverty and food insecurity in Malawi is geographically concentrated. The Southern Region occupies one-third of Malawi's total land area, but contains half the population and is home to two-thirds of the country's poor. Once again, access to land emerges as a critical factor. Farm sizes average 1.4 ha in Central Region but only 0.9 ha in the south. Malthusian logic predicts that this situation can only deteriorate in years to come. Population densities in terms of arable land - given that 45% of Malawi's land is either marginal or already unsuitable for agriculture - will average 229 nationwide by the year 2000, ranging from 96 in the north to 640 in the south (House and Zimalirana 1992:144).

Demographic biases are also evident. Food insecurity is more prevalent and more severe in female-centred households²⁶ in rural Malawi than in households where the head is a resident male. One in four Malawian households is female-centred, but this figure rises to one in three in the Southern

²⁶ This term is used to cover both *de jure* and *de facto* female-headed households, the former referring to households headed by a woman without a male partner (i.e. she is single, divorced or widowed), the latter describing households nominally headed by men who are absent for substantial periods of time, leaving women in effective control.

Region, where rural poverty is most prevalent and where 60% of female-headed households are poor. (Nationwide, half of all female-headed households, and one-third of male-headed households, are classified as poor.) Female headship and farm size are negatively correlated: 42% of holdings under 0.5 ha are cultivated by households headed by women (IFAD 1993:3). This tendency is exacerbated because small landholdings act as “a major push factor behind male migration” (Green with Baden 1994:20), leaving *de facto* female-headed households behind to cultivate tiny plots.

Unlike male-headed households, many of whom have more than one wife, two thirds of female household heads are unmarried. Nonetheless, they tend to have high dependency ratios, averaging 1.43 children per adult as against 0.96 in male-centred households (Cammack 1996:13).²⁷ It is not surprisingly, therefore, that female-centred households suffer from severe scarcities of labour for both farming and off-farm income generating activities. A 1986 survey found that rural women work for 12 hours per day during the farming season - six hours on the farm and six hours on household chores such as water and firewood collection (which is increasingly time-consuming as population pressure and tobacco curing accelerates deforestation), child care and food preparation - while men work, on average, 5 hours a day - three hours farming and two hours on household chores. Women dominate agricultural production: “70 percent of Malawi’s full-time farmers are women” (Green with Baden 1994:3). Despite these excessive pressures on their time, women from female-centred households do more *ganyu* (defined here as paid agricultural labour) than women in male-centred households, and women generally work longer *ganyu* hours than men. However, they are typically given the most tedious and worst paid tasks, and consequently earn almost 40% less than men per day (Cammack 1996:23).

These households are caught in a poverty trap which is familiar throughout rural Africa: being forced into dependence on agricultural labour on larger farms and estates during the farming season, which reduces their own food production, they effectively sacrifice longer term household food security to meet short term consumption imperatives. The problem arises because of inflexibilities in rural labour markets. At the household level, labour constraints are largely seasonal in nature. Peak labour requirements on farm occur in December and January, when labour productivity is lowest due to enforced rationing of food consumption and the debilitating effects of malaria (Cromwell 1992). But this period also coincides with peak availability of *ganyu* employment; thus *ganyu* competes directly with household food production.

²⁷ Dependency ratios and poverty are similarly correlated, exceeding one dependent per potentially productive adult member for households below the 40th percentile (1.36 for households below the 20th) and dropping to 0.92 for households above the 40th percentile (World Bank 1996:30).

Table 5 profiles four categories of households in rural Malawi, based on the results of participatory wealth ranking undertaken in two communities. Four characteristics of these households are described: landholding, asset ownership, income sources, and food production self sufficiency. The table clearly reveals the ‘poverty ratchet’ nature of life in rural Malawi. The poorest households are those who farm the least land, and they are also likely to have no livestock and to go hungry for several months each year. Except for a small minority (less than 10% in these communities), rural households are unable to engage in lucrative off-farm activities to compensate for their inadequate harvests, and it is this - rather than small landholdings and market dependence for food *per se* - which is the root cause of their chronic food insecurity.

Table 5. *Wealth Ranking in Rural Malawi*

Wealth Category	Characteristics
1. Well off <i>(Wopeza bwino)</i> Households = 3%	<ul style="list-style-type: none"> • Farm more than 2 hectares of land • Own cattle and other assets, such as bicycles • Grow tobacco and have regular off-farm incomes • Survive on own food production throughout the year
2. Fairly well off <i>(Wopeza bwino pang'ono)</i> Households = 6%	<ul style="list-style-type: none"> • Farm approximately 1.5 hectares of land • Own goats, pigs and chickens, but no cattle • Have some regular source of income • Can afford to buy food when stocks run out
3. Fair <i>(Wopezako)</i> Households = 28%	<ul style="list-style-type: none"> • Farm less than 0.75 hectares, but have <i>dimba</i> gardens • Own very few or no livestock • Petty income activities such as selling firewood • Market dependent for food for part of each year
4. Poor / Worst off <i>(Wosauka / Wosowa)</i> Households = 63%	<ul style="list-style-type: none"> • Farm less than 0.2 hectares of land, no <i>dimba</i> garden • Own no livestock, except perhaps some poultry • No regular source of income; dependent on <i>ganyu</i> • Labour constrained - often female-headed households • Market dependent most of the year, with rationing

Source: Adapted from Chewele *et al.* 1995 (combined for Mwenda and Msampha areas)

The bulk of income in poor smallholder households comes from the farm, and although a significant proportion of income - around 30% - comes from off-farm activities, these sources are not lucrative enough to lift land-constrained households out of poverty. For the poorest households (below the 40th percentile), survey data reveal that 68% of income (including subsistence

production) comes from farming, 10% from paid agricultural employment (*ganyu*), 4% from beer brewing, 3% from professional work, 2% each from fishing, basket weaving and brick making, and the balance from unspecified sources, including remittances (World Bank 1996:44). The importance of off-farm income sources, with the exception of professional work, is inversely correlated with poverty, meaning that the poorest households depend most heavily on petty income generating activities such as beer brewing and basket weaving.²⁸

One reason why female-centred households tend to be poorer than male-headed households is that they have less labour available for farming, another is that women have less time available for off-farm economic activities, and a third is gendered discrimination in wages paid by employers. For example, during the 1992 drought, “single-parent families [left] their land to work in the tea estates around Mount Mulanje, even though the women and children earned wages as low as 50% of the male wage for casual work during the tea harvest” (Harrison 1995:130).

A Rapid Food Security Assessment (‘RaFSA’) conducted in 1995 with over 20,000 households generated a profile of an “average rural Malawian household” (MEPD *et al.* 1996:15). The RaFSA methodology divides livelihood strategies into three clusters: ‘Self-Sufficiency Methods’, ‘Income Generating Activities’ and ‘Coping Strategies’. Within and between these clusters, strategies are ranked in terms of both order of adoption and value of contribution.

Conspicuously missing from this list (though possibly subsumed under ‘selling other produce’) is sale of export crops. Anecdotal evidence exists from other sources of ‘illicit’ activities such as stealing (of *dimba* crops and livestock) and prostitution in both rural and urban areas (Pearce *et al.* 1996:36). Although it must be emphasised that Table 6 presents a composite picture rather than depicting an ‘average rural Malawian household’, it is clear that livelihoods are secured through the pursuit of an extraordinarily diverse range of activities, debunking the popular wisdom that rural Malawians subsist exclusively on maize production and *ganyu*. While these activities are the two biggest single contributors to household food security, the cash income earned from *ganyu* is supplemented by a range of petty trading and other activities, while a variety of coping strategies (including rationing of consumption) are also routinely adopted.

²⁸ This finding is in line with evidence on rural livelihoods throughout sub-Saharan Africa. In a recent review of 33 surveys from 18 countries, Reardon (1997) found that, on average, 45% of household income derived from non-farm rural labour market sources, even in ‘subsistence’ farming communities, the range being from 22% to 93%.

Table 6. *Livelihood Strategies in Rural Malawian Households*

Livelihood Strategies	'Survival Days' per Month	% Value of Contribution
<i>Self-Sufficiency Methods:</i>	7.8	26%
Consumption of own harvest	6.9	23%
Consumption of fish caught by household	0.6	2%
Consumption of own livestock	0.3	1%
<i>Income-Generating Activities:</i>	13.2	44%
<i>Ganyu</i> / Estate work	6.3	21%
Selling firewood	1.5	5%
Other business ventures	1.5	5%
Selling locally brewed beer	0.9	3%
Selling vegetables	0.6	2%
Selling fish	0.6	2%
Selling livestock	0.6	2%
Selling handicrafts/pottery	0.3	1%
Selling other produce	0.3	1%
Selling corn cakes	0.3	1%
Food-for-work	0.3	1%
<i>Coping Strategies:</i>	9.0	30%
Reduced number of meals	2.1	7%
Consumption of premature harvest	1.8	6%
Meal sharing with relatives/neighbours	1.2	4%
Free food from government, church, donors	1.2	4%
Consumption of wild foods	1.2	4%
Loans of money or food	0.9	3%
Selling possessions to buy food	0.3	1%
Consumption of seed	0.3	1%

Source: Compiled from MEPD *et al.* 1996:15

This finding is confirmed by another in-depth household survey undertaken by Save the Children Fund in Salima and Mchinji Districts, which concluded that “*ganyu*, commonly quoted as the most important ‘survival’ strategy, does not appear to make as high a contribution to household food security as one would expect” (Pearce *et al.* 1996:43). The methodological lesson seems to be that the more detailed and disaggregated the information collected on household income sources, the more *ganyu* emerges as just one - albeit the most important - of a surprisingly large number of income-earning strategies.

The limitation of these essentially static descriptions of the characteristics of poor households is their failure to capture the dynamic nature of poverty in contemporary Malawi. Population growth is one important process, but even more immediate is the rapidly evolving policy environment associated with structural adjustment reforms, which has created new patterns of opportunity and

marginalisation in rural areas. The frequently damaging impact of these processes on the poor and food insecure has motivated the introduction of 'social safety nets', which are discussed below.

4.2. Household Food Security Interventions in Malawi

There are a large number of chronically food insecure households in Malawi who are becoming, if anything, worse off under market liberalisation than before. As seen above, these vulnerable households are identifiable geographically, demographically and economically. However, there are no programmes designed specifically to improve the food security status of these households on a sustainable basis, only 'social safety nets' to assist them through the transition to a fully liberalised agricultural sector. The ongoing debate about 'safety nets' in Malawi has been characterised by a policy shift towards public works programmes, and a corresponding reaction against conventional modes of food aid delivery.

- ***Food aid***

Food aid has played a major role in food security in Malawi over the years, both for emergency programmes (droughts, Mozambican refugees) and for development purposes. The 1992 drought relief programme delivered 200,000 MT of maize plus other commodities to drought-affected Malawians, at a total cost of over \$100 million. Apart from emergency programmes, however, there is some debate over the role of non-emergency food aid as either a short-term consumption supplement or a long-term development tool in Malawi.

A number of supplementary feeding programmes have been implemented in Malawi by NGOs and donors, including local church groups, UNICEF and - especially - the World Food Programme. Supplementary feeding programmes have targeted 'vulnerable groups' such as pregnant women, infants and destitutes, including beggars and street children. Supplementary feeding is currently delivered to 150,000 beneficiaries, through Nutrition Rehabilitation Units, Mother and Child Health Centres and Community-Based Supplementary Feeding (Brown *et al.* 1996:78). Although their humanitarian value is clear, these programmes have been relatively small in scale and limited in impact. As seen above, widespread chronic and seasonal undernutrition persist, and household food insecurity is rising.

A critical evaluation of WFP's impact in Malawi concluded that WFP's supplementary feeding programme had achieved little in over twenty years, either to reduce levels of undernutrition or to address the underlying causes of food insecurity (FSG 1994). As a result of this discouraging

finding, WFP resolved to phase out supplementary feeding and related interventions by 1998, and to replace these programmes with developmental uses of food aid. As a food security strategy, direct consumption support in the form of free food handouts will not be implemented in future, but will instead be restricted to food crises such as drought. Several principles for WFP involvement in developmental food aid in Malawi for the 1995-2000 period are listed in the *Country Strategy Outline* prepared in 1994. Three of these principles are:

- Food aid should be used in ways which are “developmentally beneficial to the community”.
- Food-for-work should augment rather than replace existing rural employment opportunities such as *ganyu*, but should be implemented in areas of large-scale unemployment.
- Food aid should be used “in a way which is not disruptive: food is purchased in-country, except in times of national shortage, it is provided through existing market institutions (ADMARC or local traders), it is provided as a wage payment for work done on projects identified according to village priorities” (FSG 1994:12-15).

In support of these principles, WFP has experimented since 1994 with different approaches to its food aid programming in Malawi. One such initiative was an agricultural development project which delivered free maize meal for consumption, plus credit for farming inputs such as seeds and fertilisers. This project had food security rather than food consumption as its primary objective, and it signified a major shift in WFP-Malawi’s thinking about how to address the problem of chronic food insecurity. It was targeted at female-headed households in rural areas, and was intended to provide support for three years. However, it was slow to get started, it reached relatively few households and the credit component suffered from high default rates.

More recently, WFP-Malawi has come round to the view that a more effective delivery mechanism might be to tie food aid to rural employment creation, through the delivery of food to public works projects, and WFP is currently supporting the Malawi Social Action Fund in precisely this way (as discussed below). In an attempt to maximise the impact of its food aid programme, WFP has also moved away from its historic practice of assisting vulnerable groups in all 24 districts of Malawi, focusing instead on 13 ‘most vulnerable’ districts in 1996, which were reduced to eight districts in 1997 and will be further restricted to just six ‘chronically food deficit’ districts by 1998. Once these districts are selected, WFP is committed to working with local communities for up to 10 years, in an effort to achieve sustained improvements in household food security. Criteria for

targeting districts include food production levels, population density, health coverage, malnutrition and infant mortality rates, and presence or absence of other donors and NGOs (GoM 1995b:18).

- *Safety nets*

All agencies involved in food security in Malawi agree that the chronically food insecure need some form of targeted support to assist them through the 'transition period' to a free market economy. Even the strongest supporters of rapid market liberalisation (USAID, the World Bank) are in favour of 'social safety net' interventions such as rural public works and credit programmes for the poorest smallholders, and have made finances available to demonstrate this commitment.

Safety nets for poverty alleviation are extremely costly to implement. "At present there is no nationwide state safety net. It is unlikely that resources could be found to fund a safety net program which could ensure food security for the large proportion of the Malawi population who are at risk" (Brown *et al.* 1996:78). It follows that food security for all Malawians requires a cluster of cost-effective programmes which are well targeted on specific vulnerable groups. However, targeting raises its own problems. Most NGOs claim that their target group is 'the poorest of the poor', but they concede that it is virtually impossible to target these households, and they are therefore forced to accept a blanket geographical coverage of projects, typically at district or agricultural extension planning area ('EPA') level.²⁹ Perhaps for this reason, public works programmes have become, almost by default, the key component of all 'safety nets' proposals. Because they are self-targeting - provided the wage is set at a level low enough to discourage the relatively wealthy from participating - public works removes the problem of identification of the needy (and exclusion of the 'non-needy') from project administration.

The Malawi Social Action Fund (MASAF) was set up in July 1995, as a major component of the Poverty Alleviation Programme which was launched by the newly elected UDF government in August 1994. The World Bank is providing \$56 million to MASAF over five years. Of its four elements - which include investment in village-level infrastructure, community empowerment and poverty monitoring activities - the Public Works Project (PWP), with a budget of \$20 million, has the most direct relevance to household food security. "The principle aim of the PWP is to finance a safety net operation in poor and food deficient areas through labour-intensive public works, such as

²⁹ Recent experience - with the Supplementary Inputs Project and other interventions - suggests that targeting below the EPA level is politically and logistically unfeasible in Malawi. In a context of extreme and widespread poverty, it is both extremely difficult and politically divisive to selectively identify some community members as beneficiaries and to exclude others.

roads, bridges, small-scale irrigation schemes.... The works undertaken under this program will generate significant employment opportunities at the rural minimum wage so as to operate a safety net for those who have no alternative income-earning opportunity” (MASAF 1996:15).

The Public Works Project was piloted in 1996 and expected to move to full implementation during 1997. The PWP operates only in food deficit rural areas of Malawi, and it explicitly targets women for employment, “since female-headed households make up a disproportionate share of the poorest” (MASAF 1996:16). Similarly, WFP-Malawi is “positively discriminating in favour of projects that have a large proportion of women working in or benefiting from them” (Cammack 1996:50). About 60% of participants on WFP-Malawi’s food-for-work projects in 1996 were women. In view of the heavy pressures on women’s time in rural Malawi (as noted above), questions should surely be raised as to whether the labour requirement on public works projects is acceptable or whether it constitutes an excessive additional burden on women who are already overworked. A related negative feature of the labour requirement is that it excludes all vulnerable groups who are unable to work, whether through age (being either too young or too old), illness or disability, pregnancy, domestic commitments such as child care, or cultural constraints on women working outside the home. The implicit assumption that public works food or income will ‘trickle down’, through intra-household redistribution, to all those who cannot participate directly is deeply questionable, and for this reason public works should not be seen as a comprehensive rural safety net in its own right.

An innovative proposal on MASAF’s Public Works Projects is that wages be paid in either cash or food, according to preferences expressed by participants on each project. If payment is requested in the form of cash wages, this would be financed with World Bank money; if in food, this would be provided by WFP. This allows the method of payment to vary both spatially and temporally, according to demand. Projects located near the Mozambique border (where food can be purchased cheaply all year round) and in food surplus areas are expected to request payment in cash, while those located in remote areas far from markets and major roads are likely to favour food, as market supplies are uncertain and maize prices can be high. Modes of payment can also vary seasonally: after the harvest when food is plentiful, cash for non-food purchases will generally be preferred, but

in the dry season and the months preceding the harvest, when food is scarce and expensive, food (or coupons for a fixed quantity of food) are more likely to be requested.³⁰

Despite these positive developments, a number of fundamental questions remain unresolved. It is not yet clear what coverage of food insecure households public works projects will actually achieve. Even if significant numbers are reached, substantially more will certainly be excluded. A related question concerns how long safety net programmes are likely to be needed, which requires a judgement about how long the ‘transition period’ is expected to last. Some observers doubt that a time will ever be reached when safety nets could be ‘safely’ removed. Finally, it might be argued that safety nets are a rather defeatist option, and that if there is any danger of their becoming institutionalised as a *de facto* rural social welfare programme, then this is inferior to alternative interventions that might be implemented to generate sustainable off-farm incomes.

- *Alternative incomes*

Smallholders in Malawi are increasingly unable to meet their subsistence needs through domestic maize production, but their growing dependence on the market for staple food implies rising household food insecurity, since it has not been matched by rising incomes. Sahn and Arulpragasam (1991) found that real wages and off-farm employment opportunities were stagnating in rural areas, and more recent evidence on the income effects of policy reforms during the 1990s is inconclusive. Although the government and major donors remain focused on agriculture as the dominant source of livelihood security and prosperity in rural Malawi, NGOs and others see the future survival of Malawi’s poor and food insecure as lying with enhanced off-farm income-earning opportunities. “The general view among NGOs, if not among donors, is that food security for the poorest is linked more to the diversification of their income base than to the increased production of staple food on an ever decreasing agricultural base” (Henry 1996:9).

Recently, as discussed above, several qualitative surveys have established that off-farm income sources in Malawi are more diverse than was previously thought. Many income-generating activities are practised in rural areas apart from *ganyu*. Though few of these activities can be

³⁰ These innovations could represent a breakthrough in the design of food- and cash-for-work projects. Much of the literature on public works or ‘employment-based safety nets’ has debated the respective merits of paying project participants in food or in cash. The obvious and fairest solution - simply asking participants what *they* prefer - has either not occurred to project planners or has been dismissed as impractical. Typically, payment in food is the only option on WFP projects, and collaboration between WFP and the World Bank in this regard is extremely unusual.

described as lucrative, they do generate amounts of cash that are significant in food security terms, especially for the poorest households which are most likely to adopt them. Also, most alternatives to *ganyu* are less likely to be seasonal and directly competitive with farm labour requirements.

Nonetheless, there is a growing recognition that more lucrative off-farm income sources must be found and supported in rural areas. A number of micro-enterprise projects are operational in rural areas, often under NGO auspices. Rural credit schemes are being run by Malawi Rural Finance Corporation (600 women's groups of 20-25 members each by mid-1996, for off-farm income-generating activities) and by GTZ ('Promotion of Micro-Enterprises for Rural Women'). However, these project interventions tend to have limited impact, since they reach only participants and their families. (A similar critique can be levelled at MASAF's Public Works Project.) In the long run, household food security in Malawi will be achieved not through micro-projects or even by a more diversified agriculture, but through the development of a vibrant and fully diversified economy, one which offers a variety of employment opportunities in both rural and urban areas.

5. IMPLICATIONS FOR FURTHER RESEARCH

Notwithstanding the accumulating body of literature on national and household food security issues in Malawi, significant gaps remain in published knowledge concerning critical aspects of food security, especially at the smallholder household and intra-household levels. Many assertions are circulated as facts about agriculture and food security in Malawi which, more often than not, are not grounded in hard empirical evidence. These include generalisations about the importance of off-farm labour ("*ganyu* is the primary coping strategy for food deficit households"), land scarcity ("shortage of land is the major constraint on smallholder production"), and the impact of structural adjustment on the rural poor ("the poorest of the poor live in a barter economy, so they are hardly affected at all by market liberalisation").³¹ Assertions such as these have profound implications for the conceptualisation of household food insecurity in Malawi, and hence for food security planning and interventions. It is therefore vital that these assumptions and beliefs are rigorously tested and verified or rejected. Specific research is needed into the issues identified below. The information derived from such research, including monitoring the impact of market liberalisation on the food insecure, could decisively influence thinking and policy on food security in Malawi.

³¹ Variants on these statements were made to the author in conversations with government, donors and NGOs in Lilongwe in June 1996.

- *Ganyu*

The debate about rural labour markets in Malawi is confusing. One view is that there is excess demand for agricultural labour on wealthier farms and estates, suggesting that *ganyu* is always available for those who want it. Even in difficult years, *ganyu* “seems to have an amazing capacity to expand” (Earl and Moseley 1996:7). If this is true, then the rural labour market provides a flexible safety net for those households who need cash or food urgently, because of drought or seasonal hunger. The counter-argument is that this view is simplistic, for a number of reasons. Firstly, if there is excess demand for labour, why don't wage rates (which are generally below the rural minimum wage) rise to equilibrate demand and supply? One suggestion is that *ganyu* is offered as a form of ‘welfare’ or patronage by large farmers to their poorer neighbours, rather than being purely market determined (Pearce *et al.* 1996:27). It seems more plausible that, because of the lack of alternative employment opportunities, either in rural or urban areas, the supply of *ganyu* labour typically exceeds demand, despite the low wages it offers. Secondly, rural labour markets are highly fragmented, both spatially and temporally - in some villages, people have to walk 15-20 kilometres to the nearest estate, which is a considerable disincentive; and employment opportunities are highly seasonal, peaking in October to January. Thirdly, agricultural labouring constitutes a poverty trap, since it competes with labour needs for smallholder farm production. This last argument is supported by recent evidence suggesting that smallholder households already face severe labour constraints in farming their own fields (Pearce *et al.* 1996).

Given this confusion over the role of *ganyu* in either alleviating or exacerbating poverty and food insecurity in poor households, field research on *ganyu* in Malawi seems to be urgently needed. Fieldwork would focus on the availability of *ganyu* (by season, gender, geographical area and in drought years), remuneration (cash, food and other payments, gender differentials), conditions of employment (hours worked, benefits, distance, travel costs), and household food security impact (the popular assertion that *ganyu* diverts household labour from subsistence farming is unproven - if one adult goes for *ganyu* while the others farm their own land, *ganyu* income might be additional, not competitive). Specific research questions would include:

- Which forms of *ganyu* are available all year round, and which are concentrated only in seasons which compete with household food production?
- How effective is *ganyu* in bridging food consumption deficits in poor households?
- Is the demand for *ganyu* expandable (even in drought years), or is it strictly limited?

- How are opportunities and wage rates for *ganyu* evolving in response to market liberalisation?

- ***Intra-household food security issues***³²

An increasing amount of information is becoming available on rural Malawian households - their agricultural and non-agricultural activities, their sources of food and coping mechanisms during droughts. Much less is known about what happens *within* the household in relation to food security, in terms of the gendered division of domestic duties and economically productive activities, pooling of individual incomes, asset ownership and inheritance practices across genders and generations. Specific research questions to investigate include the following:

- For which specific aspects of food production, provision, processing and preparation are men and women individually or jointly responsible?
- Which categories of income are open only to men and only to women, and which are accessible to both men and women (e.g. cash cropping, *ganyu*, *dimba*, trading)?
- Is cash or food income earned by individual household members owned and controlled by the individual, or is it generally pooled and shared?
- Are specific assets owned exclusively by male or female household members, and to whom are assets transferred on the death of the owner (e.g. does livestock owned or land farmed by a male household head pass to his widow, his sons or his brothers)?
- Are agricultural inputs and other resources transferred to 'households' used for the benefit of the entire household or by individual members, and does it make any difference which household member receives and controls these resources?

- ***Other research issues***

There are many other topics which are highly relevant to household food security in Malawi about which little detailed information is available, which might be responsible for unfounded assertions and poor programming decisions. These topics include: crop production and consumption diversity, secondary incomes and the 'barter economy', seasonality, and land availability:

³² The Nyasaland Nutrition Survey of 1938-39, the results of which were first published more than fifty years later (Berry and Petty, 1992), provides a wide-ranging source of information about food production and consumption issues in the colonial period, at both the household and intra-household levels. This survey could provide a methodological model for research on similar issues today.

- Diversity of crop production (intercropping, *dimba*) and secondary food sources (spinach plants, fruits, roots and tubers, minor pulses);
- Food security uses of secondary food crops such as pulses, tubers and fruits (are they consumed, sold, or bartered for grain?);
- Nature and value of secondary income activities (beer brewing, cooked food, etc.);
- Scale and significance of the ‘barter economy’ among the poorest of the poor;
- Seasonality (incomes, sources of food, migration patterns, market prices).
- The ‘land debate’ - is land the binding constraint on smallholder production, or are labour and other inputs more critical? (Is there really a ‘Malthusian crisis’ in rural Malawi?)

- ***Monitoring the impact of market liberalisation***

A major applied research question in Malawi concerns the impact of ongoing agricultural policy changes on the food security status of poor, marginal households. The evidence reviewed above suggests that some groups are becoming better off while others are worse off than before - there are winners and losers from every process of change. An appropriate and important role for researchers might be to identify the ‘losers’ in the market liberalisation process, and for NGOs to undertake an advocacy role on behalf of these people throughout the duration of the ‘transitional period’. NGOs might also monitor the impact of liberalisation on vulnerable households in their own geographical activity areas, to determine whether, when and how local incomes and food security status start to improve. Results of this informal monitoring could be disseminated verbally through Malawi’s Food Security Network.³³ Alternatively, a more formal monitoring system could be established, with regular (monthly or quarterly) questionnaires administered to a sample of vulnerable households on issues relating to food security and market liberalisation, the results being published in a Bulletin and circulated among government, donors and NGOs.

6. CONCLUSION

As the preceding discussion has shown, major policy processes have been set in motion in rural Malawi which affect livelihoods profoundly, but the impacts of these policy changes are differentiated between and within rural households, and are strongly contested among observers and stakeholders. Supporters of agricultural reform argue that liberalisation is having beneficial effects on the agricultural sector in Malawi as a whole, through enhanced price incentives to producers and

³³ The Food Security Network is a consortium of individuals representing relevant government ministries, donors and NGOs, who meet regularly in Lilongwe to discuss food security policy and related issues.

traders, and that this will ultimately impact favourably on even the poorest smallholders - either directly, as many of them now enjoy higher incomes through growing tobacco and other crops for sale, or indirectly, since wealthier farmers have increased their demand for labour and are spending more money in rural areas.

Critics argue that households which are not producing food surpluses or export crops will not benefit from higher output prices and can only suffer from higher input prices. Deficit farmers also face higher prices for the food that they must purchase for several months each year. Moreover, all farmers face a more uncertain and riskier policy environment. Prices for export crops fluctuate from one year to the next, food price banding is a relatively ineffective and probably temporary intervention, and the future role of ADMARC *vis-à-vis* private traders remains unclear. These observers doubt that ongoing processes of agricultural reform will end with improved livelihoods for the poorest Malawians. They argue that poverty and household food insecurity can never be reduced by market liberalisation policies which result in price rises that further restrict the access of the rural poor to inputs and food, and do not address the many other constraints they face.

The possibility that the poorest Malawians may be worse off following economic reforms than before meets with two responses from supporters of market liberalisation. The first argument is that the 'poorest of the poor' live mainly in a barter economy, so that changes in prices of agricultural inputs or food have very little effect on them anyway. The second is to concede that some people will become worse off as a consequence of market liberalisation - but only in the short run, for a 'transitional period'. These groups of people should be assisted through the transition with safety nets such as public works projects, which will transfer resources to them in the form of cash or food, and protect their food consumption levels.

A real concern, though, given the rather modest ambitions of these interventions, is that they could allow the government and donors to adopt a permanently 'welfarist' attitude towards the poorest of the poor. As with other 'transitional' interventions of this nature, once safety net programmes are in place they will almost certainly need to become permanent, given the reality in Malawi of recurrent droughts, inexorable population growth and land scarcity, and limited nonagricultural employment opportunities. Given this context - which is independent of the adjustment policies which safety nets are designed to redress - the danger is that mass poverty and accelerating impoverishment will become accepted as a fact of life, not something to be challenged and eradicated through public policy. The long run social cost of this acceptance is the development of a Malawian underclass to

whom the benefits of economic reform trickle down, if at all, only in the form of charity from donors and the state.

Whatever their other differences, there is general agreement among policy-makers and agencies that Malawi should continue to pursue the goal of self-sufficiency in maize for as long as possible. If this approach to national food security is supported, a focus on high potential agricultural areas is suggested, rather than on drought-prone and marginal areas. But if the primary concern is to protect and enhance household food security, this suggests a focus on chronically food insecure areas. In either case, given the limited range and value of non-agricultural incomes, increases in food production are obviously important. Maxwell's 'walking on two legs, but with one leg longer than the other' strategy might be most appropriate: promoting productivity increases in high potential areas (by distributing hybrid maize seed and fertiliser for free, subsidised or on credit); while simultaneously promoting drought-tolerant food crops (sorghum, cassava) in marginal areas. The dual objectives are to *raise* food production in relatively food secure (high potential) areas and to *stabilise* food production in food insecure (drought-prone) areas.

However, this paper has also attempted to demonstrate that intensification and diversification within agriculture are not adequate in the longer term. Deepening resource constraints (especially, but not only, land), the limits to technological innovation, weak markets, recurrent droughts and covariate risks (between food and export crop production) together mean that agriculture cannot continue to provide livelihoods indefinitely to over 80% of Malawi's rapidly growing population. Alternative income-generating opportunities urgently need to be found if sustainable reductions in rural poverty and food insecurity are to be achieved. Unfortunately, how, when and even whether this will be achieved is currently a source of pessimism rather than hope.

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