

# Seasonality and Social Protection in Africa

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## Introduction

This Working Paper draws on nearly twenty years of research in several African countries, on the inter-related themes of food insecurity, seasonality, coping strategies, famine, formal and informal safety nets, and social protection. The paper has three objectives:

- to document and synthesise evidence on the nature and consequences of seasonality across rural Africa, highlighting the similarities and convergences across contexts;
- to explore the various policy interventions that have been implemented in response to seasonality, with particular reference to the emerging social protection agenda;
- to argue that current approaches to social protection are misconceived and inadequate for addressing the seasonal dimensions of rural vulnerability.

## Seasonality and 'coping' in four African countries

### Seasonality

Seasonality is an under-reported food and health crisis that impoverishes and kills Africans every year; only its severity and duration vary across households and over time. In rain-fed farming systems, where smallholders depend on a single rainy season for most of their staple food needs, the annual 'hungry season' or *soudure* can last from a few weeks to several months, depending on the extent of food production self-sufficiency achieved in a given year. The rhythm of rural life in much of Africa is entirely dictated by this inflexible seasonal calendar, but the relative success or failure of this way of life is determined by the unpredictable behaviour of the weather. The mechanism is straightforward, repetitive as the calendar, and relentless. Smallholders prepare their plots while waiting for the rains to start, then they plant their seeds, then they pray that the rains will be adequate and well distributed through the growing season, during which they weed and tend their fields while watching the skies. If the rains are well behaved, their harvest will be good – ideally, enough grain to fill the granary for the coming year – but if the rains are low or erratic, harvests will be poor and the subsequent hungry season will be long and hard – granaries will be depleted sooner and food prices will start rising earlier and more sharply.

Communities most vulnerable to seasonality are rural and derive their livelihoods predominantly from farming. They live off land which they typically do not own but have usufruct rights allocated by their community or the state. They cultivate food and other crops for subsistence and income. Their farming is 'subsistence-oriented' but they are not 'subsistence' farmers, both because they rely on diversified sources of income and because they do not achieve self-sufficiency in most years. They practise low-input, low-output agriculture – their farming is dominated by the hoe or the plough rather than the tractor and the combine harvester, and their yields are low (typically one-third or less of the potential yield of their plots). Unpaid family labour dominates rather than hired labour. The level of commercialisation, as proxied by the proportion of crop production that is marketed, is low. Their

vulnerability derives from a number of sources, including:

- their dependence on a single unreliable source of food and income – rain-fed agriculture – in a context where rainfall, the most important input, is erratic and unpredictable;
- the weakness of rural markets for food, assets and employment;
- inadequate roads, transport systems, telecommunications and other rural infrastructure;
- all of these are exacerbated by widespread poverty from household to national levels, and seasonality is a mechanism that perpetuates poverty and retards efforts to escape from it.

Supply and price seasonality in grain and labour markets was well documented by the early 1980s (Seaman and Holt 1980; Chambers, et al. 1981). Grain prices in uni-modal rainfall systems with weak local markets are often extremely variable, reflecting the fact that the single farming season results in a highly skewed availability of locally produced grain in local markets at different times of year. This price variability is far from random. Agricultural production seasonality results in food price seasonality of a predictable kind. Grain prices are lowest immediately after the main annual harvest, when supplies are high and demand is low. When the rainy season begins some months later, prices of staple foods start to rise, peaking a month or so before the next harvest is due, then fall sharply as the new produce arrives in the market. In summary, grain prices are lowest around harvest time each year, and rise steadily through the dry season until the next harvest comes in.

Seasonality also creates a tension within self-provisioning households between what Pierre Spitz (1980) labelled the "forces of retention" (the need to retain food for subsistence consumption) and the "forces of extraction" (the need to dispose of food production to meet non-food needs), which explains why deficit food producers with inadequate alternative sources of cash are forced into the seemingly irrational behaviour of selling some of their food production at harvest time for low prices, only to buy food back for consumption purposes later in the season, when prices are high. As we shall see, this tension also operates across households; as a stratifying mechanism that increases income inequalities.

The adverse consequences of seasonality on the well-being of rural people living in the tropics have also been well understood for decades (Chambers, et al. 1981; Gill 1991; Ulijaszek and Strickland 1993). Agricultural seasonality arises from the production of only one (sometimes two) harvests each year, which has two implications for rural livelihoods: (1) annual household income depends crucially on the size of the harvest, and a single failed harvest can destitute a poor family with limited savings and assets; (2) families with undiversified livelihoods must survive from one harvest to the next on produce harvested only once or twice each year. A further complicating factor is seasonality in health and nutrition: many killer diseases are concentrated in the rainy season (e.g. water-borne diseases), when hunger and under-nutrition have already compromised the body's immune system.

The causal linkages between seasonality and hunger were observed in northern Ghana by a British Provincial Commissioner as long ago as 1911. "No-one who has been stationed in FRA-FRA at the end of the dry season can fail to be struck with the food difficulty. At the end of every dry season there is a FOOD-SHORTAGE. ... There is said to have been a famine in FRA-FRA fifteen or sixteen years ago, when children were sold for a calabash of corn or a goat" (Webster 1911: 5). In the late 1980s, when I conducted fieldwork in nearby Bawku district, the correlation between rainfall, food prices and malnutrition remained just as evident. The main rainy season in northern Ghana is June through August (Figure 1a), which is also the hungry season when grain prices peak in local markets (Figure 1b) and under-nutrition rates follow (Figure 1c). Millet prices can be seen rising steadily from January through July, then collapsing as early harvesting starts. Child malnutrition rates in 1988 started rising in April, as if tracking food prices with a time-lag, and fell back slightly but remained high from August onwards – clearly, rises in malnutrition take longer to reverse than do rises in food prices.

These adverse consequences of agricultural seasonality have not been consigned to history. In Malawi, for instance, the causal linkages between food prices and hunger persist. Maize prices and child malnutrition rates are both low during the post-harvest months (May through October), but then start rising together, peaking during the annual hungry season (January – February) before falling around the new harvest (March – April). Figure 2 illustrates this relationship, with admissions to one Nutrition Rehabilitation Unit (NRU) in central Malawi as a proxy for child malnutrition. Between October 2004 and January 2005, maize prices doubled (from 20 Malawi Kwacha for a kilogram of maize to MK42/kg), but admissions for severe acute malnutrition increased by a factor

of 7 (from 9 to 70 children), falling back when maize prices started coming down around harvest time.

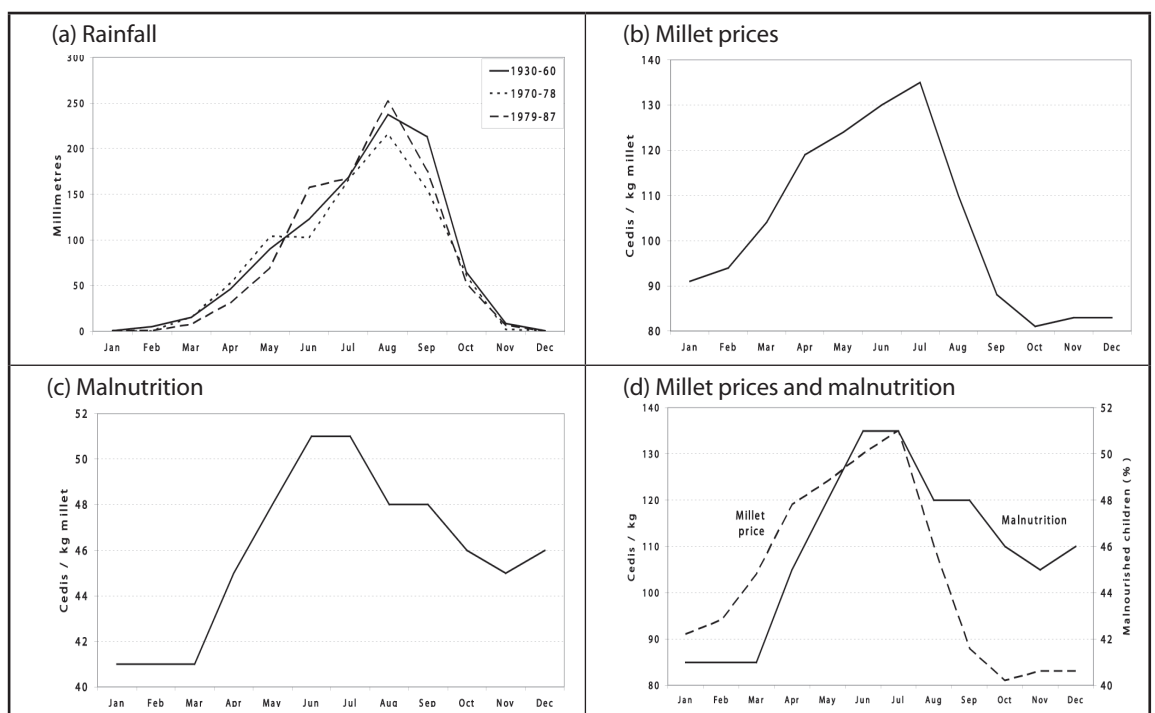
Seasonality is also gendered. A survey of farming households in four highland regions of Ethiopia found that 86% reported suffering a food shortage during 2005/6, but this prevalence was higher among female-headed (97%) than male-headed (81%) households (Devereux, et al., 2006b: 19). Disaggregating this indicator by month reveals that food insecurity is experienced most intensely during the mid-year months of June through August – the peak months of the main rainy season – and is least severe around the turn of the year, following the main annual harvest in October-November. Figure 3 also illustrates that female-headed households consistently reported higher levels of food shortage, peaking at 68% in July against 57% of male-headed households.

### 'Coping'

"Africans do not starve, they 'cope'" (Seaman, 1993: 27) How smallholders respond to seasonality is best understood through the literature on famine 'coping strategies'. Self-provisioning farmers live each year on a knife-edge between survival and disaster. If the rains are good then the harvest is likely to be good, grain supplies in local markets will be adequate throughout the year and prices will remain at affordable levels, though they will inevitably rise during the hungry season. The family may not need to buy food at all, if the grain stored in the granary is adequate to feed them through to the next harvest. If some additional food is needed, assets such as livestock (preferably off-take rather than breeding stock) can be sold at reasonable prices to finance the purchase of adequate quantities of grain.

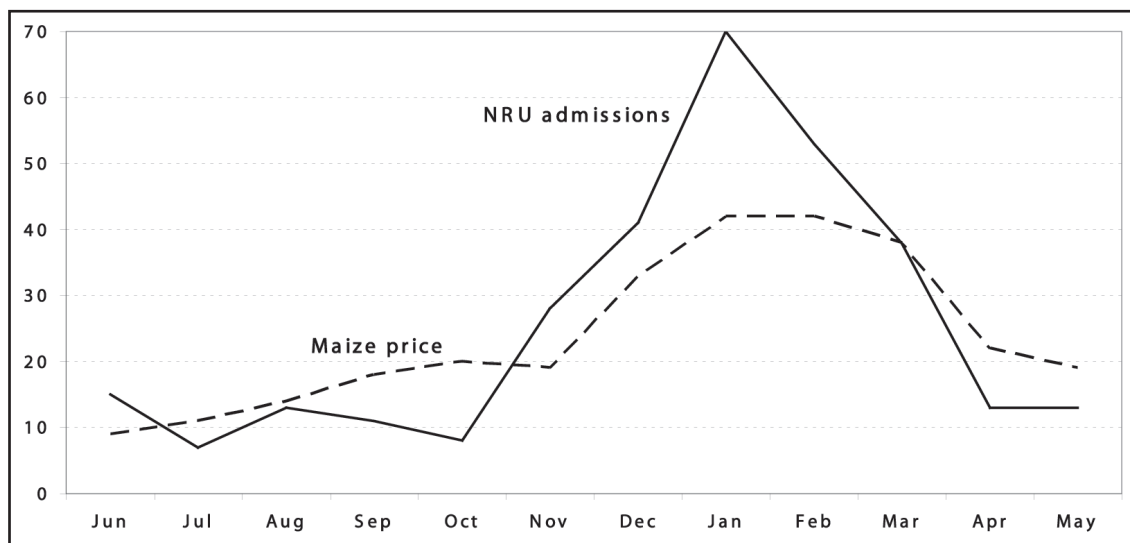
On the other hand, if the rains are inadequate in volume or distribution, the family's harvest will be poor and grain production throughout the area will probably be below average. Grain supplies in local markets will

Figure 1. Rainfall, grain prices and malnutrition in northern Ghana, 1988



Source: Devereux (1992)

Figure 2. Maize prices and NRU admissions in central Malawi, 2004/05



Source: Devereux, et al. (2006a: 62)

be scarce during the hungry season, when prices will rise to unusually high levels, reflecting this general shortfall, peaking just when the family runs out of stored food and becomes market-dependent for grain. But their effective demand for food will be curtailed by falls in asset prices, including wage rates, induced by excess market supplies of livestock, labour and other assets. This terms of trade decline between asset values and food prices has been labelled a 'price scissors movement' by Jeremy Swift (Swift and Hamilton, 2001: 73) and as 'exchange entitlement decline' by Amartya Sen (1981).

An example comes from fieldwork in northern Ghana, where the terms of trade between grain and livestock varied by a factor of over two in both directions, doubling and halving every few months. In January 1988, when livestock prices were at their annual peak and grain prices were just starting to rise, the exchange rate favoured livestock: an adult goat could be exchanged for 50kg of millet. By July, grain prices were peaking, livestock prices had collapsed and one goat could be sold for just 22kg

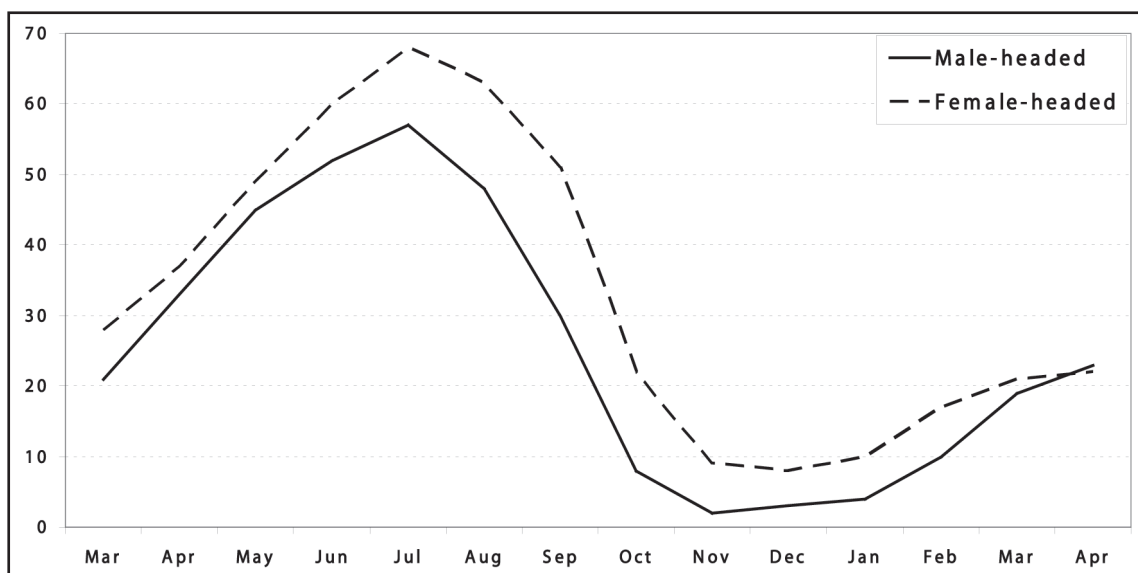
of millet. After the harvest in November, millet prices were lowest and goats had appreciated by 40%, so a goat was once again worth 52kg of millet (see Figure 4).

Failures of production force self-provisioning smallholders into adopting various coping strategies, which can be categorised under four headings:

- rationing consumption, by reducing portions or skipping meals, to protect household assets and future viability;
- diversifying diets, by consuming unusual foods, especially cheaper or 'inferior' foods;
- acquiring food or cash, through selling livestock or assets, finding casual employment, borrowing, and other income-generating activities;
- reducing expenses, by cutting spending on non-food items, withdrawing children from school, postponing ceremonies such as funerals, and so on.

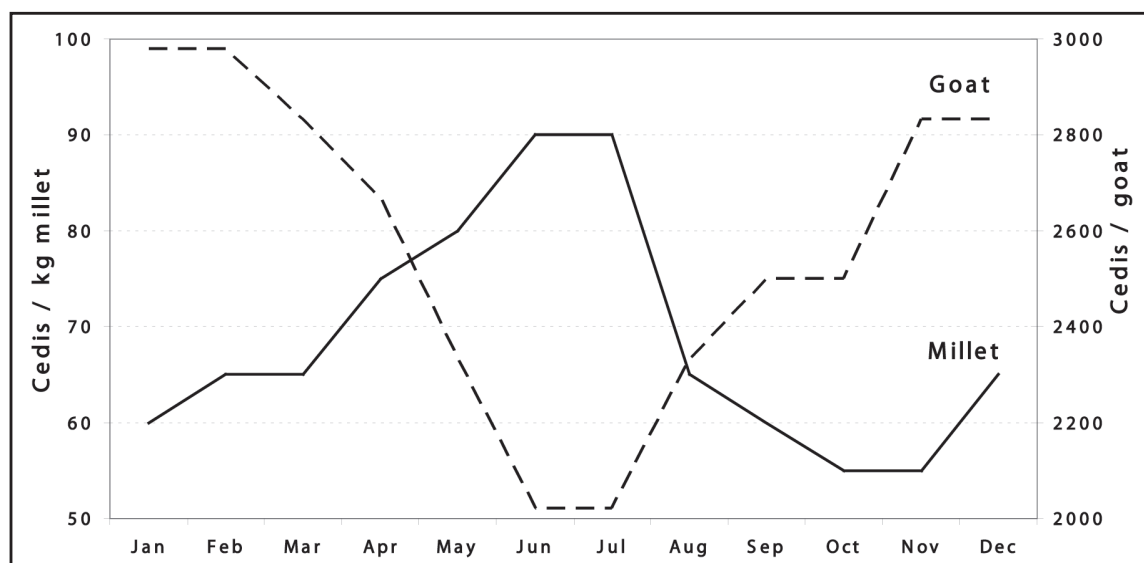
Within each category, there are qualitative and quantitative distinctions in the type and severity of strategy

Figure 3. Self-reported food shortages in rural Ethiopia by month, 2005/06 [N=960]



Source: Devereux, et al. (2006b: 66)

Figure 4. Grain / livestock terms of trade in northern Ghana, 1988



Source: Devereux (1992)

adopted (e.g. a loan can be taken interest-free from a friend, or at extortionate rates from a moneylender). Typically, all the strategies commonly adopted during a hungry season are also resorted to during a famine. At the community or regional level, the difference between seasonal hunger and famine is clear. A famine is a period of food deficit so prolonged and widespread that virtually all households, even the relatively wealthy, exhaust conventional 'coping strategies' and resort to 'survival strategies' which, if they fail, will be followed by severe acute malnutrition and death (elevated levels of excess mortality). By contrast, a predictable annual hungry season is something that households expect, plan for (by developing various insurance mechanisms) and, by and large, 'cope with', by adopting a variety of adaptive responses and coping mechanisms. These might include selling off surplus animals, mild rationing, and seasonal migration. But within the community, the behaviour of poor households during a hungry season might be reminiscent of distress behaviour observed during a famine. Poverty and market failure might restrict their ability to cope with food deficits to such an extent that they face real, severe hunger, not just mild rationing, and they might even migrate out of the area after selling off most of their physical assets at distress prices. In terms of its impact on such individuals and households, this behaviour is indistinguishable from responses to famine.

In other words, within rural communities, the distinction between a 'hungry season' and a 'famine' is determined by each household's economic circumstances as much as by exogenous conditions (climatic, agricultural or market). Two smallholder households affected by a comparable food deficit, or two neighbouring households facing different levels of food deficit, will be at different stages on the coping strategies continuum, depending on their respective resources. A slightly severe hungry season might be sufficient to destitute a poor household, while a district-wide famine, far from threatening the survival of a wealthy family, may provide opportunities for further wealth accumulation. Michael Watts reached a similar conclusion, arguing from fieldwork in

northern Nigeria that coping sequences reflect increasing 'commitment' and 'irreversibility'. Only the poorest class of households in Watts' survey resorted to desperation measures during a food shortage in 1973/74 – such as selling farmland, or migrating. A few rich households bought grain and sold livestock; but none sold labour (adopted by 94% of the poor), or assets (51% of the poor) (Watts 1983: 440). This fact – that the poor adopt responses to food deficits which differ qualitatively and not just quantitatively from those adopted by the rich – has important theoretical and policy implications.

### Seasonal food crises

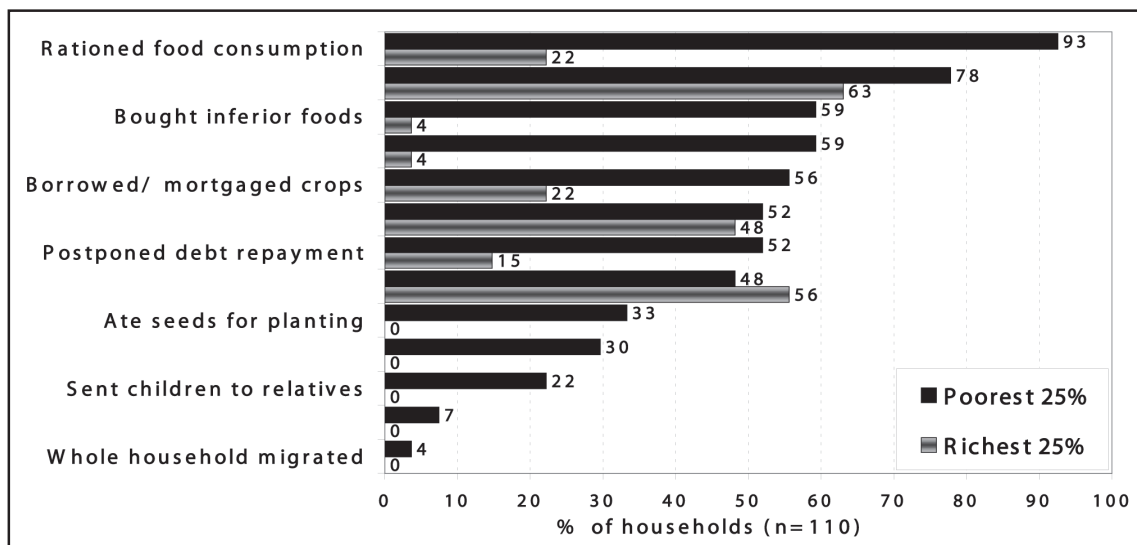
The empirical evidence on seasonality and coping strategies presented in this section comes from fieldwork conducted or managed by the author in four countries – Ethiopia, Ghana, Malawi and Namibia – between 1988 and 2007. These studies included:

- Ghana 1988/09: doctoral fieldwork on household responses to a seasonal food crisis in a millet-farming district;
- Namibia 1992/03: a national survey that enumerated responses to the regional (southern African) drought by farmers and pastoralists;
- Malawi 1999–2007: a survey of household responses to an exchange rate devaluation in 1999; a survey of rural household efforts to survive the famine of 2001/02; and evaluations of seasonal cash transfer programmes in 2006 and 2007;
- Ethiopia 2006: an assessment of how farming families in four highland regions survived the hungry season.

All four countries share common socio-economic and agro-ecological characteristics. This does not imply homogeneity across these contexts – there are profound differences between them – but nor does it make these case studies unique or atypical. Millions of rural African families remain exposed to the lethal vulnerabilities associated with seasonality that are discussed here – which in itself is an indictment of the failure of decades



Figure 5. Household responses to food deficit in northern Ghana, 1988/09



Source: Devereux (1992); n=110

of agricultural policies and rural development projects and programmes throughout Africa.

### Ghana

Historically, seasonal food crises in northern Ghana were triggered by harvest failures following drought, flooding, locusts or armyworms. The worst famine of the twentieth century in this region occurred in 1946, and was triggered by heavy rains shortly after planting time, which resulted in a failed harvest and an extremely severe hungry season some months later. The Department of Agriculture recorded typical indicators of seasonal food crisis, including high food prices, distress sales of assets and a slump in asset prices. Local people migrated to southern Ghana and north, to Burkina Faso, in search of work or to barter their animals and other assets for food.

The next year of severe hunger in northern Ghana was 1983, following a drought early in the 1982 farming season. Five years later, in 1988, a combination of drought and armyworm resulted in 67% of households in the worst affected district (Bawku) harvesting no millet or sorghum at all. The immediate impact on crop harvests and local food supplies was exacerbated by rapidly rising food prices in local markets some months later (as shown in Figure 1b) – a classic indicator of seasonal food crisis.

Poorer households, buying grain in small quantities late in the agricultural year, bore the brunt of these price rises in early 1989. Wealthier households with the capital and acumen bought bags of grain in bulk at lower average prices in the immediate post-harvest period, and stored them for later consumption or sale, in expectation of abnormal price rises. When they sold these bags they made large profits – a clear case of wealthy households exploiting the market dependence of poorer households in a situation of imperfect markets, and a classic illustration of the polarising impact of seasonality within affected communities, with resource transfers flowing from the poor to the rich.

Figure 5 displays the adoption rates for several coping strategies deployed by 110 households that were interviewed several times during the 12 months between the

1988 and 1989 harvests, disaggregated by richest and poorest wealth quartile. The overall sequence displays adherence to the principles of sequencing by their ‘irreversibility’ and ‘level of commitment’, as identified by Watts (1983). Strategies that do the least damage are adopted first, while strategies that have potentially devastating consequences for household livelihoods and future viability are deferred to last, after all other options have been exhausted.

Seasonality affects poorer households more severely than richer households, and seasonality is polarising at the community level. When coping strategies are aggregated into categories, it becomes clear that the rich adopted fewer strategies than the poor. From a total of 18 responses recorded in the northern Ghana sample, households in the poorest quartile adopted 14, while those in the richest quartile deployed 9. This does not imply that the rich had fewer options (on the contrary), but rather that:

Their strategies were more effective, or lucrative. A rich household might sell one cow to buy the millet his family needs. A poor farmer, not owning any cows, might have to sell several goats and fowls, go for casual labour, take on a high-interest loan, and mortgage her next groundnut crop to raise the same amount of cash for the same food needs.

The rich did not need to resort to some of the desperate measures that the poor adopted. The ranking of responses reflects increasing distress. Far fewer rich households than poor rationed food consumption, borrowed, mortgaged crops, or postponed debt payments, and no rich household migrated, ate seeds it had reserved for planting, or postponed a funeral.

So the rich generally have more options than the poor, but need to use fewer in practice. The wider diversity of their potential sources of food gives them greater flexibility and efficiency in achieving consumption security and avoiding both seasonal hunger and impoverishment.

The converse of impoverishment is accumulation, and food crises, far from being a ‘Malthusian leveller’, can accentuate inequality within affected communities. Food

crises polarise communities by forcing poor households to reduce their productive base, by transferring their productive assets to wealthy households at undervalued prices. In Michael Watts' Nigerian study, while poorer households were buying grain, borrowing cash, and selling their labour and land, many wealthier households were selling grain, lending cash, hiring labour and buying land. In northern Ghana in 1989, it was local wealthy households who bought up the land rights and other assets that the poor were reluctantly selling for grain. Some wealthy farmer-traders even put up iron roofing on their houses, oblivious to the hunger in neighbouring compounds. Watts (1983: 441) concluded that it would be incorrect to regard communities as moving en masse through cycles of accumulation and asset disposal from year to year: "rather, during a subsistence crisis epicycles of accumulation and decapitalization can occur simultaneously within a single community, intensifying extant patterns of differentiation and immiseration".

### Namibia

The rainy season in northern Namibia, which is also the crop farming season, runs from October to April. In 1992, southern Africa suffered a disastrous rainy season that triggered a major seasonal food crisis throughout the region. The cereals harvest in Namibia collapsed by 71%, from 114,000 tonnes in 1991 to 33,100 tonnes in 1992 (EWFU 1992).

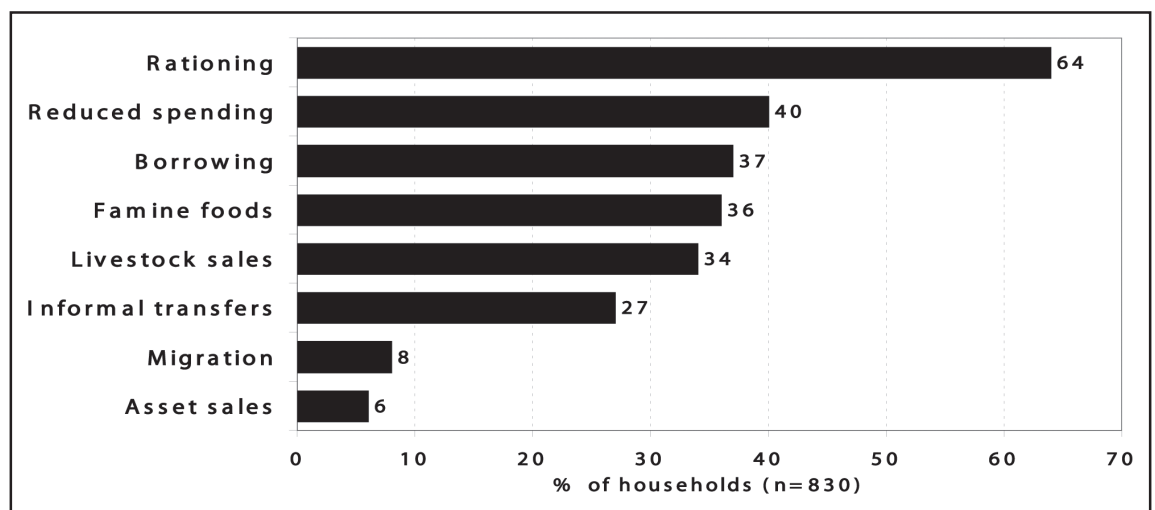
Livestock owners suffered a double decline in their ability to access food through livestock sales. Firstly, animals died in large numbers, reducing their asset-holdings. Income from livestock sales was further reduced by a dramatic 'exchange entitlement decline', as livestock prices collapsed due to the excess supply and deteriorating quality of animals brought to market. In the drought year of 1992, sales of cattle in eastern Namibia were close to 50% higher than in 1991, while sales of sheep and goats in southern Namibia were 27% higher (NDTF, 1992: 10). A small survey of livestock owners in eastern Namibia in 1992 found that household entitlements to food derived from goats and sheep fell by 53% due to small-stock deaths alone, and by a further 21% due to livestock price declines and maize price rises. The

total loss in terms of household entitlement to food derived from livestock averaged 69%, or more than two-thirds (Devereux and Naeraa 1996).

The Government of Namibia launched a major Drought Relief Programme, which included a public works programme and free food aid distribution. Important government interventions for livestock owners were fodder and lick subsidies, which were introduced under the Drought Relief Programme with the intention of containing livestock mortality and maintaining herds at viable levels. Fully 60% of the value of all drought relief transfers during 1992/93 was in the form of fodder subsidies (Devereux, et al., 1993). This policy, which was accompanied by a borehole drilling programme, was criticised by environmentalists for contributing to overgrazing and desertification of already marginal land. Household incomes were also supported by a livestock marketing subsidy, which apparently contradicted the fodder and lick subsidies by encouraging de-stocking. On the other hand, the combination of fodder subsidies for livestock plus food aid for drought-affected people was entirely consistent with the colonial administration's standard response to droughts in 'communal areas' of Namibia in the 1970s and 1980s.

In any event, excess mortality was averted in Namibia in 1992, thanks to effective government intervention under the Drought Relief Programme, the existing system of social welfare transfers (especially the social pension), and the deployment of 'coping' and survival strategies by drought-affected individuals and households (Figure 6). The effectiveness of the humanitarian response and the predictability of social transfers as a guaranteed source of income throughout the crisis period probably explains why the proportion of households adopting strategies such as rationing was lower than in food crises discussed elsewhere in this paper. However, the sequence of adoption (as proxied by their prevalence) is familiar: austerity measures (consumption rationing and cutbacks in spending) are preferred to measures that incur higher economic and social costs (borrowing, selling livestock, requesting assistance – 'informal transfers' – from relatives and friends), which in turn precede strategies that could have permanently damaging consequences for

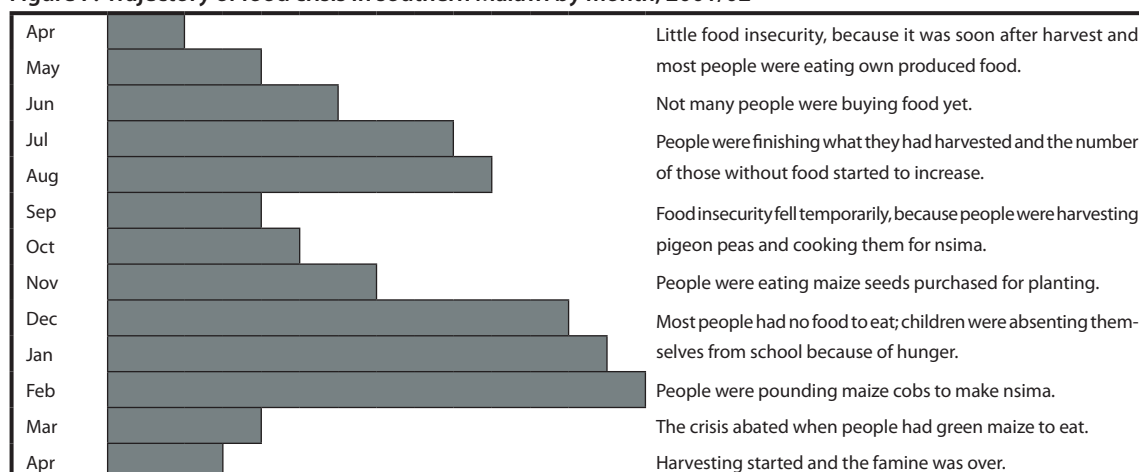
Figure 6. Coping mechanisms by smallholders in communal areas of Namibia, 1992



Source: Devereux, et al. (1993: 40)



Figure 7. Trajectory of food crisis in southern Malawi by month, 2001/02



Source: Devereux et al. (2003)

household viability and well-being (partial or whole household migration, selling key productive assets).

### Malawi

Evidence on seasonality in rural Malawi comes from a 'normal' year (1999), a 'famine' year (2001/02) and a 'food crisis' year (2005/06). In one participatory exercise, 99 focus groups were asked to illustrate the trajectory of the food crisis of 2001/02, by allocating 100 stones to the 12 months between April 2001 and April 2002, indicating the severity of the crisis from month to month. Figure 7 presents the results from one typical focus group in southern Malawi. This community identified a 'false start' to the famine, as an initial period of rising food insecurity in July and August 2001, due to consumption of the inadequate maize harvest, was temporarily alleviated by a harvest of pigeon peas in September which substituted for maize porridge ('nsima', the staple diet). By December and January the food crisis was peaking and more damaging 'coping strategies' were adopted, including withdrawal of children from school and consumption of inferior foods. The arrival of 'green maize' in the fields in March provided the first relief from hunger for several months, and the famine was effectively over when a reasonable harvest was secured in April 2002.

This pattern of steadily increasing food stress between harvests is not unusual, even if Figure 7 illustrates a famine year rather than 'normal' seasonality. In fact, Figure 7 is a very recognisable representation of seasonal food insecurity in rain-fed agriculture systems. Only the intensity of the annual 'hungry season', and the range and severity of coping strategies adopted in an effort to survive it, vary between 'normal' years and 'crisis' years.

Table 1 summarises 'coping strategies' recorded in southern Malawi three years before the 2002 famine, during a relatively 'normal' hungry season. Table 1 reveals that one of the most important seasonal coping strategies in rural Malawi is casual labour, known as 'ganyu'. The income earned by, for instance, weeding other people's fields helps to fill the 'hunger gap' before the next harvest with food or cash to buy food. But ganyu has some disadvantages. Firstly, working on other farmers' land – 'field ganyu', the most common category – competes directly with own-farm production of food and non-food crops. Seasonality in rain-fed agriculture imposes inflexible demands in terms of the application

of labour inputs at specific dates in the cropping calendar. Food deficit smallholders must allocate their (often scarce) labour resources between earning food for today

Table 1. Household responses to food deficit in rural southern Malawi, 1999 (% of households; n=104)

Coping behaviour	Percentage
Dietary adjustments	
Shifted to cheap 'relish' (eg vegetables instead of meat)	93.3
Ate smaller portions to make food last longer	91.3
Reduced number of meals per day	91.3
Ate 'inferior' foods (eg cassava instead of maize)	89.4
Expenditure reduction	
Bought less firewood or paraffin	82.7
Bought less fertiliser	32.7
Took children out of school	0
Cash generation	
Went for more ganyu to earn cash or food	58.7
Used income from business to buy food	39.4
Sold livestock or poultry to buy food	15.4
Sold tobacco or vegetable crops to buy maize	12.0
Borrowed money to buy food	6.7
Sold household assets to buy food	5.8
Rented out land to get cash for food	3.8
Used savings to buy food	0
Informal transfers	
Received help from relatives or friends	39.4
Sent household members to stay with other relatives	12.0
Asked for help but was refused	30.8

Source: Devereux (1999:40). Survey data, Zomba District, February 1999

by working on a neighbour's farm or growing food for tomorrow by weeding and tending their own fields. The former strategy inevitably leads to lower yields and further dependence on ganyu the following year. Secondly, ganyu is also stratifying and polarising, since it redistributes labour from poorer to richer households on unfavourable terms, thereby entrenching food insecurity in the former households while facilitating wealth accumulation in the latter. Thirdly, ganyu represents a failure of rural labour markets, since the demand for casual labour coincides with peak labour requirements on-farm, but is lowest during the post-harvest months when under-employment is highest. Other sources of employment that offered more generous rewards or were available at other times of year would compete less directly with own-farm production.

Figure 8 summarises the coping strategies that were reportedly adopted by Malawians during the 2001/02 famine. Two indications that hunger in this year was worse than in 1999 are: (1) the higher levels of adoption recorded (eg households in 84% of communities sold or bartered assets in 2001/02, but only 6% of households sold assets for food in 1999); (2) some 'extreme' survival strategies are recorded in 2001/02 (e.g. 'immoral behaviours' – meaning stealing or transactional sex – begging and scavenging) that were not mentioned in 1999.

Households that sold or exchanged some of their assets for food were asked about the value (cash or cash equivalent) at which they sold or exchanged these assets, and for how much they could have sold the same assets in the year before the famine. For instance, one household reported selling a bicycle that would normally cost MK 800, for just MK 150. These responses were used to estimate the amount of money that each household lost (or gained) by liquidating their assets during the food crisis period. The findings indicated that an average loss of 53% in asset values was incurred, across the country and across all assets disposed of as "distress sales" – in effect, most of these assets were sold for half-price. This finding illustrates how the lack of integration of commodity markets over time and space can also act as an impoverishing mechanism during hungry seasons and famines.

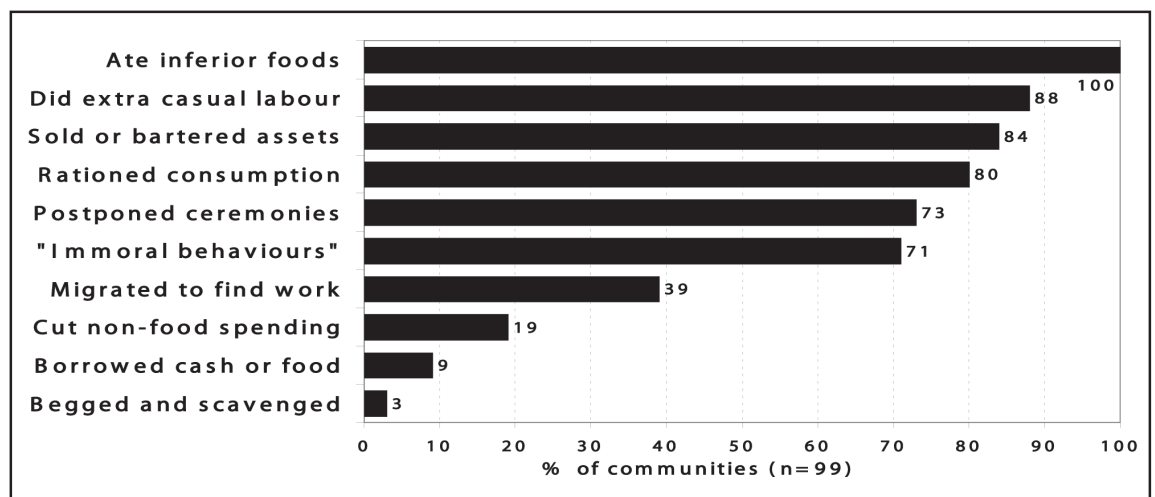
Since the failure of the government and humanitarian actors to prevent a seasonal food crisis in 2001/02, seasonality has become recognised in planning humanitarian interventions in Malawi. Table 2 shows the Malawi Vulnerability Assessment Committee (MVAC) projection of numbers of food insecure Malawians, and their 'missing food entitlements', during the 2005/06 agricultural year, following a poor harvest in April 2005. The key feature of Table 2 is the steady increase in the proportion of the population declared to be 'at risk' and in need of emergency assistance from season to season, starting from 13.8% immediately after the harvest and peaking at almost half the population (5.5 million or 48%) during the 'hungry season' in early 2006 (see also Figure 9).

### Ethiopia

Seasonality is pronounced in highland Ethiopia, although exact timings vary across regions. In famine-prone Wollo, the main rains fall in July and August each year, but land preparation begins in April or May and farming activities – planting, weeding, harvesting – continue until November. The post-harvest months are a time of under-employment on the farm, so men and whole families often migrate for work elsewhere, mainly between February and June, when the new farming season begins in earnest. The 'hungry season' can last for 4-6 months in a bad year, but usually peaks between July and September. Confirming the relationship between seasonality in hunger and health, malaria occurs in June and again in September/October (Kelkilachew Ali and Million Tafesse, 1996).

The direct relationship between seasonality and rural poverty in Ethiopia was quantified in a panel survey of 1,403 households undertaken three times in 1994 and 1995. In the pre-harvest hungry season of 1994, the poverty headcount in this sample was measured at 34%, but it fell to 27% around harvest time and returned to 35% in the 1995 pre-harvest round (Dercon and Krishnan 1998). This sensitivity of the aggregate incidence of poverty to the time of year that the survey was conducted – let alone to harvest variability between years – reveals how problematic is any static measure of income or consumption poverty in any community dominated by seasonality.

Figure 8. Strategies employed by people to overcome the 2001/02 famine in Malawi

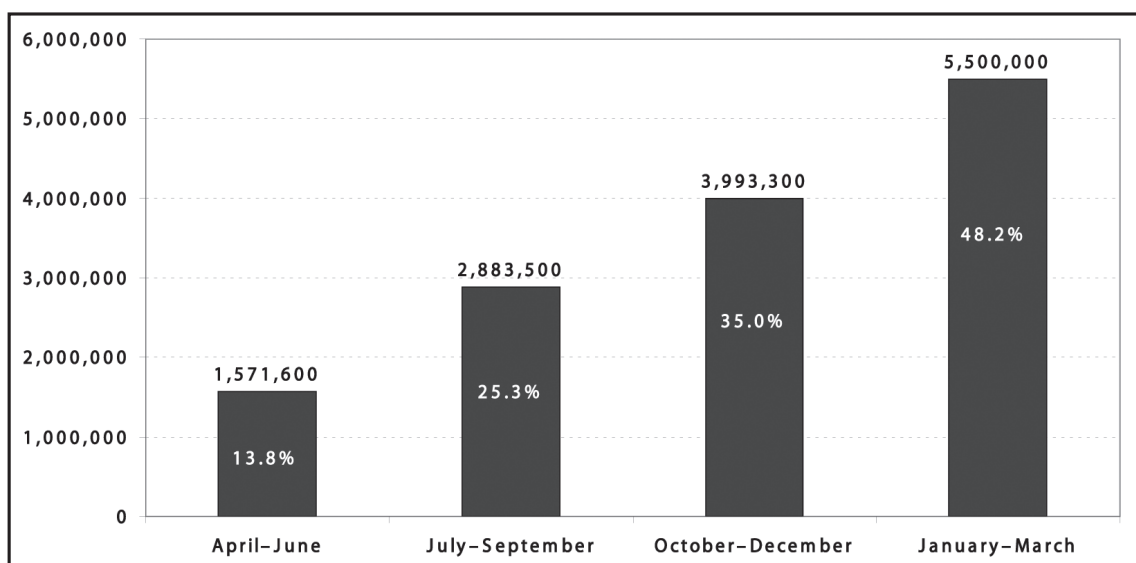


Source: Devereux et al. (2003: 52)

**Table 2. Seasonal progression of 'missing food entitlements,' in Malawi, 2005/06**

Season	Population affected	% of national population	Missing food entitlement (MT)
April–June	1,571,600	13.8%	21,100
July–September	2,883,500	25.3%	46,400
October–December	3,993,300	35.0%	76,000
January–March	5,500,000	48.2%	335,400

**Source:** Malawi Vulnerability Assessment Committee (2005: 20)

**Figure 9. Seasonality in population with 'missing food entitlements,' Malawi, 2005/06**

More recently, a survey of 960 Productive Safety Net Programme (PSNP) beneficiaries in the four main highland regions asked respondents what 'coping strategies' they had adopted during the 2005/06 hungry season (see Figure 10). The ranking of strategies adopted follows a pattern that is familiar from the other surveys on household responses to drought and seasonality reported above. The most widely adopted strategies are those that have little cost to the household and are easily reversible, such as rationing food consumption – smaller portions, or cutting back temporarily from three meals to two meals per day. These are by far the most commonly reported strategies in our survey, being adopted by almost three-quarters of the sample, and more by PSNP beneficiaries than by non-beneficiary households. Although this indicator of hunger was higher in PSNP beneficiary households than in a control group of non-beneficiary households, suggesting accurate targeting, this also suggests that the PSNP provided only partial protection against hunger and rationing in 2005 – the transfers were either too small or too unpredictable.

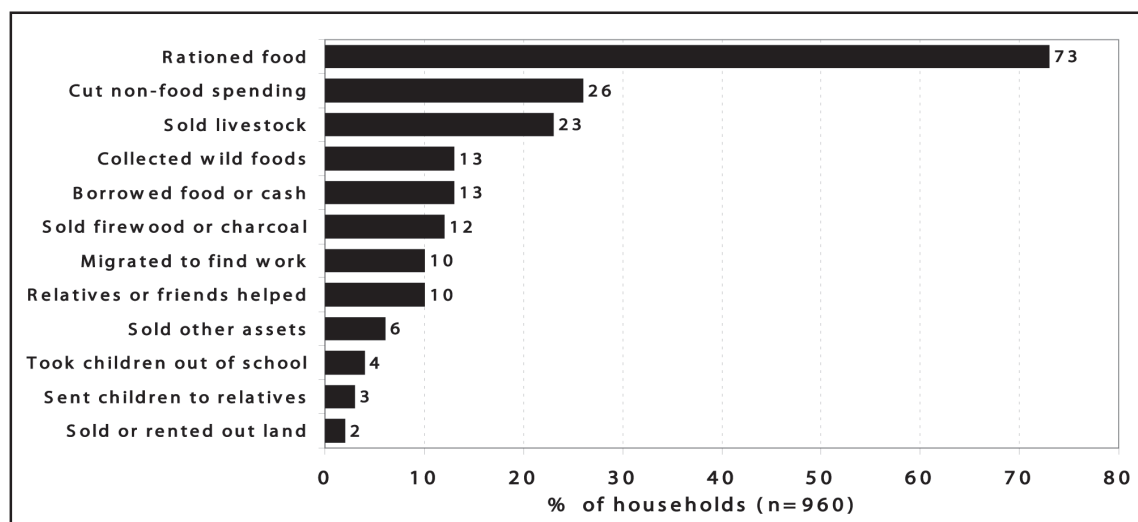
Conversely, strategies that involve high cost to the household – in terms of asset stripping, or lost future income, or loss of social status – tend to be adopted last, only after other responses to hunger have been exhausted. A classic case in point is selling land, which requires the farming household to give up its most basic and indispensable productive resource. In our survey, a small number of households were forced into selling or renting out farmland to survive the 2005/06 hungry

season; 18 of these 20 households were PSNP beneficiaries. Clearly, the PSNP did not entirely protect household assets against forced disposal or 'distress sales', presumably because the size of the cash or food transfers was not adequate for these households to cover their food consumption deficits. It is important to emphasise that this was not a famine or food crisis year – these households were categorised as 'chronically food insecure' and were removed from the annual emergency appeal process – but a fairly typical 'hungry season' in rural Ethiopia.

### Discussion

The sequencing of coping strategies reported here, from 6 studies in 4 countries over 18 years, displays a remarkable continuity that is consistent with other empirical studies and with general principles identified in the literature. Self-provisioning households facing production deficits will typically adjust consumption first (rationing, inferior foods), then reduce non-essential spending and raise income to buy food (income-earning activities, livestock and asset sales), then adjust household composition (migration, sending children to stay with relatives), then incur social costs (postpone ceremonies, borrow or beg from neighbours, offer sex for food or cash), and finally resort to desperation measures that compromise future viability (selling ploughs or land). The key principle underlying this sequencing is the protection of future household viability – economic as well as social.

Figure 10. Coping strategies in Ethiopia, 2005/06



Source: Devereux et al. (2006b: 20)

## Social protection in Africa

The rapidly evolving social protection agenda is surprisingly reticent on the subject of seasonality. 'Surprisingly' because, in the past, various policies and institutions were put in place specifically to address seasonality, while contemporary social protection policies are grounded in an analysis of vulnerability that is often nuanced and linked to appropriate interventions. Proponents of social protection highlight demographic risks such as ageing, and health risks such as HIV and AIDS, and they advocate for 'predictable transfers' to reduce these vulnerabilities, yet they seem less engaged with economic or livelihood risks such as agricultural seasonality.

One explanation might be that social protection has emerged out of three distinct but overlapping policy discourses, but it sits uncomfortably in relation to all three. The first discourse is welfarist. Social protection has been described as "social welfare for countries that can't afford social welfare". A minimum suite of social protection interventions would arguably include social pensions for older people, child support grants for young children in poor families, and disability grants for people with disabilities. These commonly agreed 'vulnerable groups' share a crucial characteristic: they are labour-constrained and do not engage fully, if at all, in economic activity. Agricultural seasonality affects farmers who are physically active and fully engaged in economic activity, so perhaps they are not regarded as a priority category for social protection support.

The second discourse is humanitarian. When harvests fail and poor farmers with few assets face life-threatening food deficits, humanitarian relief is mobilised to cover the consumption gap until the next adequate harvest. But these emergency 'safety net' interventions are short-term responses to transitory food insecurity. Social protection focuses instead on providing long-term support in response to chronic poverty and chronic food insecurity. The distinction between social protection and humanitarian relief is drawn quite sharply in some classifications, though others see all forms of social transfers as falling under the social protection umbrella.

The third discourse relates to governance. Until the 1980s, African governments administered a range of policies and institutions to deal with seasonality, including fertiliser and food price subsidies and grain reserve management. But agricultural parastatals and grain reserves were judged as inefficient or corrupt, and price subsidies were declared unaffordable and undermining of incentives for farmers and traders. Accordingly, the activities of parastatals were scaled down, strategic grain reserves were abolished or 'commercialised' (run on a cost-recovery basis), and input and output subsidies were phased out across Africa. As a result, poor market-dependent smallholders were once again exposed to the full consequences of high fertiliser prices and food price seasonality, and governments had no policies or mechanisms for addressing this, because the nature of the problem is not recognised and the only available solutions are 'projectised'. A social protection agenda that is dominated by social transfers does not address the structural vulnerabilities against which smallholders have very real needs for protection.

The evolution of social protection interventions with respect to agriculture can be summarised in three phases:

- social protection pre-liberalisation: "parastatals and subsidies"
- social protection post-liberalisation: "safety nets with holes"
- the new social protection agenda: "cash transfers, cash transfers and cash transfers"

We have shown how agricultural seasonality has ramifications for production, consumption, health and livelihoods, and we have explored how affected households respond to these (mostly negative) impacts in Ghana, Namibia, Malawi and Ethiopia. This section examines formal responses to seasonality in Africa by governments, donors and NGOs. The discussion is organised around three dimensions of seasonality: agricultural production, rural labour markets, and food and asset markets.



## Social protection responses to seasonality in agricultural production

Poor rural Africans suffer seasonal hunger, impoverishing 'coping strategies', high levels of undernutrition and high infant and child mortality rates, all of which represent a failure of coping. There are two ways for public interventions to address the 'food gap' in these households: either increase food production or returns to crop sales and off-farm activities, or bridge consumption deficits with food or cash transfers. The former strategy is self-evidently preferable to the latter. For poor people who are economically active, social transfers should be implemented only after all productivity-enhancing anti-poverty interventions have been exhausted. Chronic poverty and food insecurity caused by low productivity are best addressed by interventions to raise returns to labour pre-emptively – 'productivity-enhancing safety nets' (Devereux 1999) – not by handouts of food or cash after harvests prove to be inadequate.

### Ghana: from export bans to 'Global 2000'

The British colonial administration of the Gold Coast frequently banned exports of cereals from the Northern Territories during the 1930s and 1940s, arguing that local farmers myopically sold too much of their produce after harvest and were caught short later in the dry season. During the 1946 minor famine, a standard famine relief intervention was launched, with the administration purchasing food from surplus regions in southern Ghana and selling it at cost in the north, and banning exports of grain out of the affected districts.

Rains were very deficient during the first half of the year and excessive in August and September. Cereals had to be replanted in most areas. ... A bad harvest in 1945, followed by the delayed harvest this year, produced famine conditions ... The Government purchased 150 tons of maize in Ashanti and sold it at cost in the worst affected districts. Private enterprise imported over 4,600 tons of maize from Ashanti and the Colony. ... Prices reached unprecedented levels ... Live-stock prices slumped following a glut on the market. (Department of Agriculture 1947: 9).

There is no doubt that the ban on exports of grain from the Northern Territories was of assistance to the natives of North Mamprusi in keeping prices down; the control acted in the same way as a famine reserve scheme, but without the risks entailed in centralised storage. (Mamprusi District Administration 1947: 8).

This attempt to reduce hunger by indirectly controlling price rises, while at the same time relying on private enterprise to provide needed grain, seems misguided. Even if effective, this would surely only have deterred traders who might otherwise have brought more supplies of cereals into the area in response to high prices. In 1948, once again, parts of the Northern Territories suffered heavy rains soon after planting time, followed by a premature end to the rains, with adverse consequences for cereals harvests. The Annual Report of the Department

of Agriculture for the 1948-49 season refers to its usual policy of banning cereals exports.

The precarious level of production and inadequate reserves of the Northern Territories farmers have again been apparent this year when badly distributed rainfall has resulted in food shortage. There was adequate rainfall for planting, but a drought in June checked growth and rainfall ceased altogether in September. Yields of guinea corn, millet and rice were all affected. The ban on export of grain southward was re-imposed in February, 1949. (Department of Agriculture 1949: 6).

The main formal response to post-independence seasonal food crises in Ghana, for instance in 1983 and 1988, has been emergency food aid, targeted at designated 'vulnerable groups'. In the 1980s, attention also turned to supporting food production. 'Sasakawa Global 2000' was started by a wealthy Japanese philanthropist, with the objective of supporting poor self-provisioning farmers to achieve food production self-sufficiency. Global 2000 provided small farmers with inputs on a revolving loan basis – fertilisers and seeds were distributed at planting time, in return for which participating farmers repaid some produce after harvest. The project came to northern Ghana in 1985. At first, as is typical with untested initiatives, people were wary but by 1989, 10,000 farmers in Upper East Region were participating in Global 2000, and most farmers in the region would have registered if the project's resources could have accommodated them.

The popularity of Global 2000 in the Upper East Region can be explained in terms of two factors identified in the project's 1988 Regional Annual Report – the acute shortage of land, which meant that food production could be increased only by intensification (Global 2000 disseminated high-yielding varieties of sorghum and maize), and the cash constraints that farmers face because the farming season coincides with the 'hungry season'.

In the Upper East Region, expansion of arable land to increase food production is next to nil. The only alternative is to increase yield per unit land area per farmer. This has been quite successful with the comparatively few farmers who have benefited from the programme. .... At planting time, usually referred to as 'hunger' season, the urgent need to purchase grain to feed the family conflicts with the cash for production i.e. purchase of inputs and hiring of labour. (Sasakawa Global 2000, 1989: 4).

The use of chemical fertilisers and improved seeds raised crop yields by 3 times or more. In 1987 the average sorghum yield in Global 2000 fields was 1.8 tons per hectare, while that of adjacent non-Global 2000 plots was estimated at about 0.5 tons. Higher yields plus the threat of exclusion from further inputs provided strong incentives to repay, and the loan recovery rate for the Upper East Region stood at an impressive 87% in 1988.

Although Global 2000 could be conceptualised as a 'productivity-enhancing safety net' that promoted household food security and reduced the seasonal hunger gap, there were at least two reasons for scepticism in the context of northern Ghana. Firstly, the

imperative to recover in-kind repayments to finance the revolving fund led to a tendency to register better off, more productive farmers (in one district, extension officers lost some salary for every bag of produce they failed to collect) so the project had limited outreach to the poor. Secondly, when Global 2000 doubled the repayment requirement from one 100kg bag of produce to two in 1989, because of higher fertiliser costs, many smaller farmers immediately dropped out, fearing that handing over two bags would leave them with too little millet and sorghum to feed their families.

#### **Namibia: the 'Swiss cheese' solution**

In semi-arid areas of Namibia during the drought of the early 1990s, a combination of fodder aid and a borehole drilling programme was initiated in an attempt to protect livestock – the main source of entitlement to food for both pastoralists and farmers with deficient harvests – against excess mortality. Though well-intentioned, this intervention was criticised by many as misguided. Environmentalists complained that drilling too many boreholes in moisture-stressed areas was over-exploiting the groundwater reserves, degrading the land around the boreholes and “turning Namibia into a Swiss cheese”. Proponents of a ‘disequilibrium dynamics’ view of pastoralism – which argues that livestock herds adjust to erratic weather by reproducing, collapsing and rebuilding in regular cycles – would assert that interfering with this natural adaptation process by delivering fodder aid and boreholes is inappropriate and unsustainable.

Other approaches to social protection in such contexts that are more effective than either ‘fodder aid plus boreholes’ or emergency food aid could include: livestock de-stocking and re-stocking programmes, rangeland soil and water conservation measures and drought risk management.

#### **Malawi: from 'Starter Packs' to 'Targeted Inputs'**

Seasonal food security in rural Malawi deteriorated after the structural adjustment reforms of the 1980s, which included a ‘Fertiliser Subsidy Removal Programme’, the scaling down of the social marketing functions of ADMARC (the Agricultural Development and Marketing Corporation) and repeated currency devaluations, all of which undermined smallholder access to fertiliser and other essential farm inputs. As productivity declined and seasonal hunger intensified, the government and donors turned their attention to efforts to restore access to inputs. Instead of revolving loans (the ‘Global 2000’ model) or subsidies (which were politically unacceptable among the donors in the 1990s, though a U-turn has recently been seen on this issue in Malawi and elsewhere), the donors opted to support the free distribution of agricultural inputs.

Free seeds and fertilisers have been given to farmers in Malawi almost every year since 1992, firstly as a rehabilitation intervention following the 1992 southern African drought, but later as a response to rapid fertiliser price inflation in the mid-1990s. In 1998 the Government of Malawi launched the ‘Starter Pack’ programme, which gave all 2.8 million farmers a package with enough fertiliser, maize and legume seeds to plant 0.1 hectares. The rationale for this initiative was that subsidising food

production is more cost-effective and sustainable than subsidising food consumption with food aid or unconditional cash transfers. Starter Packs added 100-150 kg of maize to each farmer’s harvest, and up to 400,000 tonnes to the national harvest (Levy 2005). At a time when the national maize deficit often exceeded 500,000 tonnes per annum, the Starter Pack substantially narrowed the annual food gap, reducing commercial import requirements and appeals for emergency aid.

After 2000 the universal Starter Pack programme was scaled down by two-thirds, becoming the Targeted Inputs Programme (TIP) that was delivered to about one million poor smallholders. In 2001, the TIP added only 3-4% to smallholder maize production, whereas the universal Starter Pack had added 16% in 1999. Many critics blamed the scaling down of the Starter Pack for exacerbating the food crisis of 2001/02, though it remains unclear whether the Starter Pack would have protected the national harvest against the weather shocks of the 2001 agricultural season.

Other observers argue that the significance of the Starter Pack was more in terms of its impacts on food prices, and hence on access to food, than on food production. As noted above, the price of maize is a crucial determinant of food (in)security in Malawi, and Levy (2005) argues that the Starter Pack contributed to keeping maize prices relatively low, by reducing the market demand for maize from smallholders in the hungry season months, after their granaries are depleted. In 2001/02, however, the reduced food availability following weather shocks and the scaled down Targeted Inputs Programme precipitated sharp rises in maize prices – from MK 10/kg in October 2001 to MK 44/kg five months later – and it was this that triggered the food crisis in early 2002.

#### **Social protection responses to seasonality in rural labour markets**

It is a curious paradox that employment creation programmes have a good name, but public works programmes do not. Public works can be introduced either as an emergency relief measure (as in Namibia in 1992) or as a means of regularly transferring food or cash to poor farmers, through the regular self-targeted instrument of seasonal labour-based employment projects. There have been many shifts in thinking and implementation of public works, not least in the form of payment – from food-for-work to cash-for-work and even inputs-for-work – but the basic principle has remained the same. In rural Africa and Asia, public works programmes are initiated in response to the twin crises of under-production and seasonal under-employment.

As an ‘employment-based safety net’, public works offer farmers an additional source of food or income for consumption smoothing purposes when their harvests are inadequate. The best known employment-based safety net is Maharashtra’s Employment Guarantee Scheme, which was recently expanded to all of rural India, under the National Rural Employment Guarantee Act of 2005, which gives every rural household the right to 100 days of employment at the local average agricultural wage. A key principle is the guarantee of employment, which assures any household affected by a livelihood shock, such as drought, of access to an alternative source



of income. This has the immediate effect of smoothing food consumption through the period of shortage, and the long run effect of increasing moderate risk-taking behaviour by farmers. The counter-cyclical benefits are highly significant – one study found that income variability halved in villages where EGS employment was available compared to non-EGS villages (Ravallion 1990).

### **Namibia**

When the southern African drought struck Namibia in 1991, policy-makers debated responding with cash transfers and cash-for-work, acknowledging the success of the monthly social pension in ensuring access to food and other essentials for Namibia's older citizens. The logic was that cash-based social pensions had attracted traders to even the remotest Namibian communities, so delivering emergency drought relief in the form of cash should be equally effective. In the end, however, fearing a public backlash if cases of starvation occurred that were attributed to lack of access to food, the government imported food and appealed for humanitarian food aid.

Food-for-work was initiated as one of two food transfer components of the national Drought Relief Programme, the other being a Vulnerable Groups Feeding programme (free food distribution to children under-five, pregnant and lactating women, people with disabilities, in drought-affected areas). Food-for-work projects fell into two categories. Two-thirds were large-scale public works, employing 71 people each on average and creating social and physical infrastructure (water pipelines, teachers' houses). The remaining one-third were income-generating activities, each employing just 22 people on average (vegetable gardens, brick-making), but most collapsed once food deliveries were terminated, usually after six months. This unsustainability suggests that food aid was the primary motivation for participants. Participation by women exceeded 50%, and surveys suggested that their self-confidence and skills had been enhanced.

In terms of coverage, food-for-work was less successful than the Vulnerable Groups feeding programme, which reached 220,000 of its 250,000 targeted beneficiaries (88% coverage), while only 27,000 out of 375,000 able-bodied adults targeted for food-for-work actually participated (7% coverage) (Devereux 2001). Two underlying problems explain this poor performance: a failure to appreciate that food-for-work involves a complex employment creation programme, not simply a food distribution programme, and the mistaken belief that food-for-work could be used to pursue multiple goals – not only immediate drought relief, also sustainable long-term income generation in poor rural communities. Namibia being a large country with a dispersed population and a well developed existing infrastructure meant that rural communities were too small to mobilise for large-scale employment; there were limited opportunities for labour-intensive public works such as roads, there were limited markets for products of food-for-work income-generating activities.

### **Malawi**

In Malawi, public works has been used since the mid-1990s for a variety of purposes, including to deliver food aid

during emergencies, to generate seasonal employment during the annual 'hungry season', to build or rehabilitate community assets and physical infrastructure, to provide income to women, and most recently to facilitate access to fertiliser and seeds through inputs-for-work. Well designed and implemented public works programmes have the potential simultaneously to smooth consumption and raise household incomes, thereby achieving both livelihood protection and livelihood promotion outcomes. One of the main debates about social protection in Malawi has focused on appropriate payment modalities. This started with the familiar discussion around 'cash versus food', which debated the limitations of food-for-work (eg the potential dependency and disincentive effects) and the risks of cash-for-work (especially of fuelling price inflation in fragmented food markets), but it has since broadened to consider the merits of transferring fertiliser and seeds through employment-based programmes (i.e. inputs for work).

When public works participants were asked to articulate their preferences (which isn't done nearly enough in the design of social protection interventions) they expressed views which reflected the centrality of seasonality in their livelihoods. "At various times of year, people are interested in receiving different forms of payment. Before harvest participants want maize and after harvest they are interested in other items, especially seeds and fertiliser" (Dil 1996: xv). Another survey asked cash-for-work participants on the Malawi Social Action Fund (MASAF) what form of payment they would prefer, by season. The majority expressed a preference for payment in cash around harvest time, in agricultural inputs around planting time, and in food during the hungry season (Zgovu et al. 1998). 'Inputs-for-work' was therefore identified as an innovative way of achieving improvements in agricultural productivity, reversing the declining yields which are a major cause of deepening food insecurity and rising seasonal hunger in smallholder Malawian households. Subsequently, the concept was piloted and a large inputs-for-work programme was initiated and evaluated positively. The idea of a seasonally differentiated payment schedule for rural public works projects, which would include options for participants to receive payment in the form of cash, food, or agricultural inputs at the relevant time of year, has not yet been piloted in Malawi, perhaps because this model is too administratively complex.

### **Ethiopia**

Every year millions of Ethiopians face an archetypical seasonal food crisis: subsistence-oriented smallholders in uni-modal rain-fed agriculture fail to produce a full 12 months of food, and face a pre-harvest hungry season characterised by high food prices and limited, low-paid off-farm employment opportunities. For the worst affected households, a 'hidden famine' occurs every year, which is addressed by an annual food aid appeal for at least 4 million rural Ethiopians. The Productive Safety Net Programme (PSNP) was launched in 2005. It was conceptualised in response to a perception that the annual emergency food aid appeal was mis-classifying millions of smallholders as 'transitorily food insecure' when in fact they were 'chronically food insecure'. The

concept of the PSNP was innovative: take these chronically food insecure people off the annual appeal process, give them predictable social transfers to cover the 4-6 months 'hunger gap' every year, give these transfers in cash rather than food, complement these social transfers with 'household extension packages' to promote livelihoods, and after 3-5 years these people should 'graduate' not just from the PSNP but also from emergency relief. Key features of the PSNP design and implementation include:

- **Labour requirement:** The PSNP is essentially a labour-based programme; at least 85% of beneficiaries receive PSNP transfers through the Public Works component; only 10-15% of registered beneficiaries are eligible for Direct Support because they lack labour capacity and have no-one to work on their behalf. The Government of Ethiopia is determined to avoid dependency and believes that social welfare is unaffordable. The work requirement is not just a self-targeting mechanism, it targets the PSNP on the economically active, those who have potential to 'graduate' into self-sufficiency and independence from external assistance.
- **Cash not food:** The government believes that Ethiopia's dependence on food aid undermines producer incentives and the emergence of integrated markets in rural areas. Conversely, the evidence from cash transfer programmes suggests that 'cash aid' can stimulate investment in production and provide incentives to traders. The dependency effects of food aid have been challenged by recent empirical studies, but an assessment of the use of PSNP cash transfers found that they were indeed used for a wide range of consumption and investment purposes.
- **Predictability:** Available evidence suggests that predictability of transfers is key to achieving sustainable impacts. One-off transfers (such as a bag of food aid) are treated as windfalls and often entirely consumed, but repeated transfers offer more opportunity for investment, asset accumulation and savings, and can facilitate access to credit. This was confirmed in studies of social pensions in South Africa and Namibia, and predictable cash transfers in Zambia.
- **Graduation:** As noted, minimising and reversing dependency is a central preoccupation of the Government of Ethiopia, and for this reason the PSNP is time-bound, and social transfers delivered through Public Works and Gratuitous Relief are complemented with extension packages that aim to raise household incomes as well as protect their livelihoods.

To date, the PSNP has under-delivered: implementation has not matched conceptualisation. Firstly, in its efforts to speed up graduation and spread the benefits more widely, the government pressed for evidence of graduation from initial monitoring and evaluation surveys, and unwisely rotated beneficiaries out of the programme after only one or two years, thereby expanding the coverage but reducing the impact. Secondly, delivery problems, including delayed and erratic payment have undermined the intended predictability, again reducing the potential longer-term impacts. Finally, the ambition to move from food aid towards cash transfers was undermined by a shift by 1.8 million beneficiaries away from cash and back to food, probably a

consequence of the rising food prices which meant that the real value of the (fixed) cash transfer is steadily declining.

### Social protection responses to seasonality in food and asset markets

Numerous interventions and instruments are available to policy-makers concerned to mitigate the effects of food price inflation following a disruption to food supplies, or to protect consumers against regular food price seasonality. These include 'open market operations' such as buffer stock management, and pricing policies such as food price subsidies or legislated price banding. Many governments have used parastatal marketing agencies to intervene in weak markets – buying grain after harvest when prices are low and supplies are high, storing for 6-8 months until prices start rising and market supplies are dwindling, then releasing this onto local markets at cost, to boost supplies and dampen prices. Examples come from Ghana and Malawi.

#### Ghana

The Ghana Food Distribution Corporation (GFDC) was a government parastatal with an explicit seasonal food security mandate: to protect poor people from profiteering food traders during the hungry season. The GFDC used to buy grain after harvest at low prices and sell it later at prices well below the prices prevailing in local markets in the dry season. A mark-up of 32% was added over the purchase price, to cover costs of storage and distribution (transport).

Due to the inconsistency in the rainfall pattern coupled with the devastating effect of the army-worm on some of our crops this year, the Bawku Traditional Area is again likely to experience severe hunger. I therefore wish to seize this opportunity in appealing to the Honourable PNDC Regional Secretary to use his good offices in letting the Ghana Food Distribution Corporation to send sufficient stock of foodstuff to their depot in Bawku to sell at moderate prices to us in the lean season. (Paramount Chief Azoka, 1988).

In the 1988/89 season, the GFDC bought 46,000 bags of paddy rice in the Northern Region (the major rice-producing region in Ghana) and 1,000 mini-bags of late millet and sorghum. GFDC trucks toured the north throughout the dry season, selling this rice, millet and sorghum directly to traders and to the public. The price of GFDC rice was C6,700 per bag throughout 1989, while the price of a bag of rice in Pusiga market started at C5,000 in October 1988 and rose to C7,600 or C8,000 in July 1989. The price of rice did not rise as high during 1989 as expected. A GFDC official predicted in March that local prices would rise to C9,000 or C10,000 per bag in June or July, just before the early millet harvest. Then, he said, "women will be queuing up to buy", because the GFDC price would remain fixed at C6,700 per bag. The rather small rice price rise in 1989 might have been a tribute, at least to some extent, to GFDC activities (Devereux 1992).

## Malawi

Malawi has operated a Strategic Grain Reserve (SGR) for decades. In early 2001 the SGR was fully stocked with maize that was rotting following two bumper harvests. The IMF advised the Government of Malawi to sell off this stock (preferably by exporting it to avoid disincentive effects on local producers) and to replenish it to a lower level – reducing the SGR from 180,000 tonnes to 60,000 tonnes. Unfortunately, because the harvest was poor in 2001, the parastatal marketing agency (ADMARC) was unable to purchase maize locally, and the national grain reserve was depleted precisely when it was most needed. If the SGR had been properly managed as intended, it could have prevented the unprecedented maize price rises that were blamed for magnifying the food crisis in 2001/02.

Another mechanism for controlling food prices is through legislated floor and ceiling prices, or by implementing food price subsidies. Until the 1980s, many African governments implemented pan-seasonal and pan-territorial pricing policies – farmers received the same payment for their produce from marketing parastatals wherever they lived in the country, and consumers paid the same price for food at all times of year. These policies protected farmers from isolated regions against high transport costs (taking their produce to market), and protected consumers against the price seasonality that is characteristic of tropical countries with one or two harvests each year. Typically these policies required heavy subsidies to be paid by governments, but by the 1980s these subsidies were considered to be unaffordable, and were phased out under agricultural sector reform processes that aimed to remove the interventionist state and stimulate private traders to fulfil the roles that had been monopolised by marketing parastatals.

In Malawi the abolition of producer and consumer price subsidies was achieved over a period of time by gradually expanding the 'price band' between a floor price (below which food would not be purchased from farmers) and a ceiling price (above which consumers would not have to pay for food). Since these are often the same people – deficit producers are forced to sell some of their produce at low post-harvest prices to meet non-food expenses, and buy food back in the hungry-season at high pre-harvest prices – the abolition of subsidies reintroduced this source of household food insecurity, which was magnified in years when weather shocks reduced harvests, lengthening the hungry season and raising food prices to unaffordable levels. While parastatal operations might have been inefficient and price subsidies might have been unsustainable, the removal of these pillars of food security in Malawi exposed the rural poor to the most severe consequences of predictable seasonality and unpredictable weather shocks. More than a decade after the phasing out of price subsidies, traders have yet to fill the gap left by ADMARC in grain marketing, and deficit farmers and consumers are more food insecure than ever before.

Responses to recent seasonal food crises in Malawi have been dominated by food aid and, most recently, 'emergency cash transfers'. In 2005/06 and again in 2006/07, the international NGO Concern Worldwide

delivered cash transfers in response to localised crop failures in central Malawi. Unusually, recognising that the effectiveness of cash transfers would be compromised by rising food prices, the value of the cash transfer was adjusted each month to reflect food price movements in local markets, in order to maintain constant purchasing power in terms of food. In effect, Concern underwrote the price risk facing market-dependent consumers, which are normally borne by the poor and are a major determinant of seasonal hunger and under-nutrition. The cash transfers did achieve their intended consumption smoothing effect. Baseline and monitoring surveys found that meals per day stabilised in beneficiary households but fell steadily throughout the hungry season in non-beneficiary households. The cash transfers also enabled beneficiaries to meet a wide range of non-food needs, including groceries, costs of milling maize, health and education services, debt repayment, investment in farming or small enterprises – even asset accumulation (eg purchasing small stock) rather than 'distress sales' of assets for food.

Both these interventions were implemented for only 4-5 months, from December through April, which is the annual 'hungry season', but this model has potential application as a seasonal social protection mechanism even in non-crisis 'normal' years. The scale of the intervention would vary according to the severity of the season and the numbers of vulnerable households affected. Perhaps the crucial innovation is index-linking the transfer level to local market prices for maize, which protects rural households against high food prices during abnormally severe 'hungry seasons'. The case for delivering this social assistance in cash rather than food is that cash should contribute over time to stabilising supplies and integrating markets – ultimately bringing food prices down – unlike food aid which discourages food producers and traders.

The need to address food price seasonality was recognised by Malawi's Famine Early Warning System, which reported in December 2005 that: "In normal years, farmers sell maize at harvest time when the price is low and buy back during the lean period when prices are high. In general, the price differential is about 50 to 100%. However, this year farmers sold maize at around MK 10/kg and are buying it at about MK 30/kg, or three times the price" (FEWSNET 2005: 2). A similar argument was made following the famine of 2001/02, when a moderate food production shortfall was magnified by abnormally large maize price rises which followed. According to John Seaman, an expert witness to the UK Parliamentary Inquiry into 'The Humanitarian Crisis in Southern Africa', this unprecedented rise in maize prices was the main trigger factor: "if you had stabilized the price of maize in 2001 in Malawi no crisis would have occurred" (IDC 2003: EV67). Questions that logically arise are: (1) Are cash transfers the optimal response to food price rises? (2) Is there not a risk that providing cash transfers will only fuel price inflation? (3) Should social protection interventions address symptoms (i.e. high food prices) or causes (i.e. market failures)?

## Conclusion

The argument of this paper is that the emerging social protection policy agenda needs to engage more directly with agricultural seasonality if it is to address this fundamental source of risk and vulnerability facing millions of Africans every year. More provocatively, this paper argues that the current focus and menu of the social protection agenda is neither addressing this issue nor offering the most appropriate set of instruments. Why is seasonal hunger allowed to persist? Where does the burden of responsibility lie for ameliorating seasonality? How can innovative new thinking on social protection be focused on tackling this vicious source of vulnerability? This paper concludes with a suggestion that (at least) five shifts in thinking and practice are needed.

### **Shift #1: From projectised handouts to institutionalised interventionism**

Food aid or cash transfers compensate farmers for production and market failures, but this only addresses the symptoms of the problem (hunger, high food prices) rather than the causes. Before agricultural liberalisation declared parastatals and subsidies fiscally and politically unsustainable, governments habitually intervened in commodity markets to correct for market failures, through grain reserve management, fertiliser price subsidies, food price banding, and so on. Now that the World Bank has recognised that African governments do, after all, have a valid role to play in economic management and the achievement of social goods such as food security, the policy space is opening up to explore appropriate state-led interventionism, especially in contexts where markets are weak and livelihood risks are high. Even fertiliser subsidies are back on the agenda. But does this go far enough?

### **Shift #2: From predictable in theory to predictable in practice**

We have recently witnessed a profound shift in policy thinking and practice, from treating every hungry season as an emergency requiring the mobilisation of public resources very year, to a recognition that predictable crises require predictable responses, and “multi-annual resources” are being mobilised for this purpose. Some interventions already recognise and practice this principle – social pensions in southern African countries, and pilot social cash transfer schemes that deliver cash monthly to beneficiaries. But these are welfare programmes targeted at older people, children, people with disabilities, and people affected by HIV and AIDS. Farmers who are guaranteed to face a hungry season every year are not guaranteed to receive social assistance during these difficult months (though their chances improve if an emergency is declared). Even innovative interventions that are targeted at smallholders, such as Ethiopia’s Productive Safety Net Programme, offer predictable seasonal transfers on paper, but not in implementation.

### **Shift #3: From ‘cash versus food’ to ‘cash + food’ to ‘cash+’**

The ‘cash versus food’ debate has become unnecessarily polarised and ideologised, a discourse that masquerades as a theoretical analysis of the merits of alternative social transfers, but is in reality a public display of the prejudices and vested interests of governments and donor agencies. Recent emergency interventions in Malawi have demonstrated the merits of delivering food aid, ‘cash aid’, or a combination of food and cash, depending on the national food supply situation and the responsiveness of traders and markets. There is also a significant gender dimension that is in danger of being overlooked: when men and women are asked about their preferences for alternative social transfers, men invariably choose cash but women very often choose food.

Cash transfers are dizzyingly fashionable, and huge claims are being made for their impacts not only as a social protection mechanism but for reducing poverty, building markets, and generating economic growth. Cash transfers are great, but they should not be promoted to the neglect of basic public investments in agriculture, markets, infrastructure and social services. A radical critic might even assert that cash transfers are a fig-leaf to conceal decades of neglect of investment in African agriculture and African farmers, in roads, in education and health services. In a global capitalist world, smallholder agriculture has a designated role as an exploited producer of primary commodities for wealthy national and global elites. Welfarist interventions such as cash transfers do little more than sustain poor farmers in their impoverished and marginalised state, and have the added bonus of buying off resistance and quelling unrest – enlightened self-interest by those holding economic and political power. Less radically, a pragmatist might advocate for a “cash +” rather than a “cash only” strategy. Social transfers must be complemented by policies that promote and diversify rural livelihoods at the local level, and by activism on behalf of smallholders to redress the gross inequalities and injustices in international trade regimes at the global level.

### **Shift #4: From reactive handouts to pre-emptive insurance**

Instead of waiting for harvests and markets to fail and then delivering food or cash transfers to affected households, innovative mechanisms are needed to provide effective insurance against the annual hungry season or occasional seasonal food crises. Examples include: (1) guaranteed employment schemes, along the lines of the National Rural Employment Guarantee Programme in India; (2) weather-based insurance, which pays out participating farmers according to rainfall deviations and has been piloted in Africa, south Asia and Latin America; (3) futures markets, which governments can use (as Malawi used the South African commodity exchange in 2005) to ensure access to adequate grain supplies at all times, at reasonable prices.

### **Shift #5: From discretionary welfarism to guaranteed entitlements and enforceable claims**

Consider Ethiopia’s EGS and India’s EGS. Both are public works programmes, both operate in rural areas where



livelihoods are dominated by self-provisioning small-holders, both address seasonal crises of under-production and under-employment. But Ethiopia's EGS was ineffectual in tackling the impoverishing effects of seasonality in production, employment and food prices. Conversely, India's EGS is credited with stabilising household consumption across seasons, encouraging moderate risk-taking by farmers and exerting upward pressure on rural wage rates – all pro-poor outcomes that enhance food security and reduce vulnerability to seasonal hunger.

So what's the difference between Ethiopia's Employment Generation Scheme and Maharashtra's Employment Guarantee Scheme? The secret lies in the words 'Generation' and 'Guarantee'. The Ethiopian programme was triggered by annual emergency appeals, and access to public works employment was contingent on donor responsiveness and government discretion about eligibility. The Maharashtra programme bestowed a right to employment that every citizen could claim if and when they need it. If employment is not provided within a specified time and distance from the applicant's home, the state is legally obliged to deliver the food or cash unconditionally.

The difference between a discretionary intervention and an entitlement that citizens can claim from the state is not trivial; it is fundamental. It is the difference between life and death.

## References

- Chambers, R., Longhurst, R. and Pacey, A. (editors) (1981) *Seasonal Dimensions to Rural Poverty*. London: Frances Pinter
- Department of Agriculture (1947) *Report on the Department of Agriculture for the Year 1946-47*, Accra: National Archives of Ghana (ADM 5/1/123)
- Department of Agriculture (1949) *Report on the Department of Agriculture for the Year 1948-49*, Accra: National Archives of Ghana (ADM 5/1/125)
- Dercon, S. and Krishnan, P. (1998) *Changes in Poverty in Rural Ethiopia 1989-1995: Measurement, Robustness Tests and Decomposition*, Working Paper Series, 98-7. Oxford: Centre for the Study of African Economies (CSAE)
- Devereux, S. (1992) *Household Responses to Food Insecurity in Northeastern Ghana*. Doctoral Dissertation in Economics. Oxford: University of Oxford
- Devereux, S. (1993) *Goats before Ploughs: Dilemmas of Household Response Sequencing During Food Shortages*, *IDS Bulletin*, 24(4): 52-59
- Devereux, S. (1999) "Making Less Last Longer": Informal safety nets in Malawi. *IDS Discussion Paper 373*. Brighton: Institute of Development Studies, University of Sussex
- Devereux, S. (2001) *Transfers and Safety Nets*, Chapter Three in S. Devereux and S. Maxwell (editors), *Food Security in Sub-Saharan Africa*. London: ITDG Publishing
- Devereux, S. and Næraa, T. (1996) *Drought and Survival in Rural Namibia*, *Journal of Southern African Studies*, 22(3): 421-440
- Devereux, S., Chilowa, W., Kadzandira, J., Mvula, P. and Tsoka, M. (2003) *A research report on the impacts, coping behaviours and formal responses to the food crisis in Malawi of 2001/02*. Brighton, UK and Zomba, Malawi: Institute of Development Studies, University of Sussex and Center for Social Research, University of Malawi
- Devereux, S., Rimmer, M., LeBeau, D. and Pendleton, W. (1993) *The 1992/3 Drought in Namibia: An evaluation of its socioeconomic impact on affected households*, *SSD Research Report 7*. Windhoek, Namibia: Gamsberg Macmillan
- Devereux, S., Mvula, P. and C. Solomon (2006a) *After the FACT: An Evaluation of Concern Worldwide's Food and Cash Transfers Project in Three Districts of Malawi, 2006*, External evaluation report. Brighton: Institute of Development Studies, University of Sussex
- Devereux, S., Sabates-Wheeler, R., Mulugeta Tefera and Hailemichael Taye (2006b) *Ethiopia's Productive Safety Net Programme (PSNP): Trends in PSNP Transfers Within Targeted Households*. Report commissioned by DFID Ethiopia. Brighton and Addis Ababa: Institute of Development Studies and Indak International
- Dil, L., 1996. *Rural Appraisal: Primary Schools, Vulnerable Group Feeding, and Food for Work as Channels of Maize Distribution*. World Food Program, Lilongwe. Early Warning and Food Information Unit (EWFIU) (1992) *Special Food Security Update*. Windhoek: Ministry of Agriculture, Water and Rural Development
- Early Warning and Food Information Unit (EWFIU) (1992) *Special Food Security Update*. Windhoek: Ministry of Agriculture, Water and Rural Development
- Gill, G. (1991) *Seasonality and Agriculture in the Developing World*. Cambridge: Cambridge University Press
- International Development Committee (IDC) (2003) *The humanitarian crisis in Southern Africa, Third Report of Session 2002-03*. London: House of Commons
- Kelkilachew Ali and Million Tafesse (1996) *Ethiopian Village Studies: Shumsheha, Lasta, Wollo*. Addis Ababa: Department of Sociology, Addis Ababa University, and Oxford: Centre for the Study of African Economies (CSAE)
- Levy, S. (editor) (2005) *Starter Packs: A strategy to fight hunger in developing countries? Lessons from the Malawi Experience 1998-2003*. Wallingford: CABI Publishing
- Malawi Vulnerability Assessment Committee (MVAC) (2005) *Malawi Food Security Monitoring Report: June 2005*. Lilongwe: MVAC
- Mamprusi District Administration (1947) *Mamprusi District Annual Report*. Tamale: National Archives of Ghana (RAT 520)
- National Drought Task Force (NDTF) (1992b) *Monthly Report of the National Drought Task Force, September–October 1992*. Windhoek: Government of the Republic of Namibia
- Paramount Chief Asigri Abugrago Azoka II (1988) *Welcome Address by the Bawku-Naba on the Occasion of the Annual Saman-Piig Festival*. Bawku, Upper East Region: 10 December



- Sasakawa Global 2000 (1989) Annual Report, Upper East Region: 1988. Bolgatanga, Ghana
- Seaman, J. (1993) Famine mortality in Africa, IDS Bulletin, 24(4): 27-32
- Seaman, J. and Holt, J. (1980) Markets and Famines in the Third World, Disasters, 4(3)
- Sen, A. (1981) Poverty and Famines: An Essay on Entitlement and Deprivation. Oxford: Clarendon Press
- Spitz, P. (1980) Drought and Self-Provisioning, Working Paper: Food Systems and Society. Geneva: United Nations Research Institute for Social Development (UNRISD)
- Swift, J. and Hamilton, K. (2001) Household Food and Livelihood Security, Chapter Three in S. Devereux and S. Maxwell (editors), Food Security in Sub-Saharan Africa. London: ITDG Publishing
- Ulijaszek, S. and Strickland, S. (editors) (1993) Seasonality and Human Ecology. Cambridge: Cambridge University Press
- Watts, M. (1983) Silent Violence: Food, Famine and Peasantry in Northern Nigeria. Berkeley: University of California Press
- Webster, H. (1911) Food Supply in Fra-Fra. Accra: National Archives of Ghana (ADM 56/1/128)
- Zgovu, E; Mvula, P, Kunkwenza, E and Potani, M. (1998) „A review and evaluation of MASAF safety net programme and assessment of its impact: final report (Zomba: Wadonda Consult)

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