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What is RHVP?
The Regional Hunger and Vulnerability Programme (RHVP) supports improvements in policy and programme approaches to hunger and vulnerability in southern Africa with particular emphasis on the role of social protection.

The Frontiers of Social Protection studies
The Frontiers of Social Protection (FoSP) studies aim to ensure that the knowledge from policy analysis on hunger and vulnerability that RHVP provides to policy makers remains relevant and reflects advances on a number of key social protection frontiers. The studies build on the research activities of RHVP's first phase (2005-08), in particular the Regional Evidence Building Agenda (REBA), which involved 20 commissioned case studies of social protection programmes in southern Africa and a series of cross-cutting thematic analyses (these are available at www.wahenga.net).

Like the REBA, the FoSP work is demand-led, focusing on a number of 'hot topics' prioritised by stakeholders across the region and incorporating new evidence that is continually emerging on the practicalities and impacts of delivering large scale social protection. The FoSP studies have been designed and implemented by a core team of international researchers including Frank Ellis (International Development at the University of East Anglia), Stephen Devereux (IDS, University of Sussex) and Katharine Vincent (RHVP), under the overall coordination of Philip White (International Development at the University of East Anglia) and in collaboration with individual researchers and research institutions in Africa and elsewhere.

The Frontiers of Social Protection briefs
This series of briefs has been prepared by Philip White, Frank Ellis, Stephen Devereux and Katharine Vincent. The briefs aim to summarise the main findings of the respective FoSP studies in a concise and accessible format that will be appreciated by policy makers and practitioners concerned with hunger, vulnerability and social protection in the Southern African Development Community (SADC) countries, and that will support RHVP's policy dialogue activities and other dissemination events.

Seasonality and social protection in Africa

Summary and policy lessons

(1) Seasonality describes predictable weather cycles within the year. In rural areas with a single rainy season, seasonality affects lives and livelihoods through its impacts on food production and local markets, as well as on nutrition and health. Many of these impacts are negative, as exemplified by the annual "hungry season", when food is scarce and prices are high. Social protection has an obvious and important role in terms of mitigating "adverse seasonality".

(2) Governments in Africa recognised the adverse consequences of seasonality on household food security decades ago, and responded by intervening in food production (subsidising farm inputs) and marketing (stabilising food prices through pan-seasonal pricing policies and open-market operations). Strategic grain reserves were maintained by parastatal marketing agencies, as an insurance against seasonal food crises.

(3) In the 1980s and 1990s these "seasonal safety nets" were abolished under agricultural liberalisation reforms, on the grounds that they were expensive, inefficient and undermined private sector development. Farmers and consumers were left unprotected against "adverse seasonality", which was compounded by new vulnerability factors, notably climate change and HIV and AIDS.

(4) Since about 2000, the "new social protection agenda" has been dominated by transfers of food and – increasingly – cash to poor and vulnerable people. These interventions are often designed and financed by donors and NGOs rather than by governments, they target individuals or households rather than structural problems such as seasonality, and they typically support consumption rather than production.

(5) A review of 20 social protection programmes in southern Africa finds that only two of these, both in Malawi, addressed seasonality directly – seasonal public works programmes, and an emergency cash transfer project that was implemented during a severe hungry

season. Most of the remaining 18 interventions transferred cash, food, vouchers or assets that could assist households through the hungry season, but were not specifically designed to do this.

(6) Although cash transfers support local commodity markets by boosting effective demand, they do not directly address problems caused by weak markets or market failures. Cash transfers are particularly ineffective against food price inflation or seasonal price spikes, which occur when farmers' granaries are depleted, food supplies are scarce, and market access to food is most needed.

(7) Several social protection responses to high food prices or seasonal price spikes have been implemented in Africa in recent years. These include: (1) index-linking cash transfers against food prices; (2) extending the duration of seasonal cash transfer or food aid programmes in bad years; (3) delivering food assistance or "cash + food" packages rather than cash transfers; (4) transferring commodity-denominated food vouchers.

(8) These efforts to make social protection more sensitive to seasonality are necessary but not sufficient. Market-based instruments to smooth or hedge against seasonal price fluctuations include weather-indexed crop insurance, and warehouse receipt systems. Governments should intervene to strengthen markets and should explore innovative "seasonal safety nets" such as commodity exchanges, futures markets, and employment guarantee schemes.

1. Seasonality in rural Africa

Many problems of hunger and food insecurity in Africa are seasonal, in the sense that the worst effects are concentrated at certain times of year. This Brief first describes the seasonal patterns of livelihoods and food insecurity in rural sub-Saharan Africa. It then reviews policy interventions that were adopted in the past to address seasonal hunger – "seasonal safety nets" – and contrasts these with more recent "social protection" approaches.

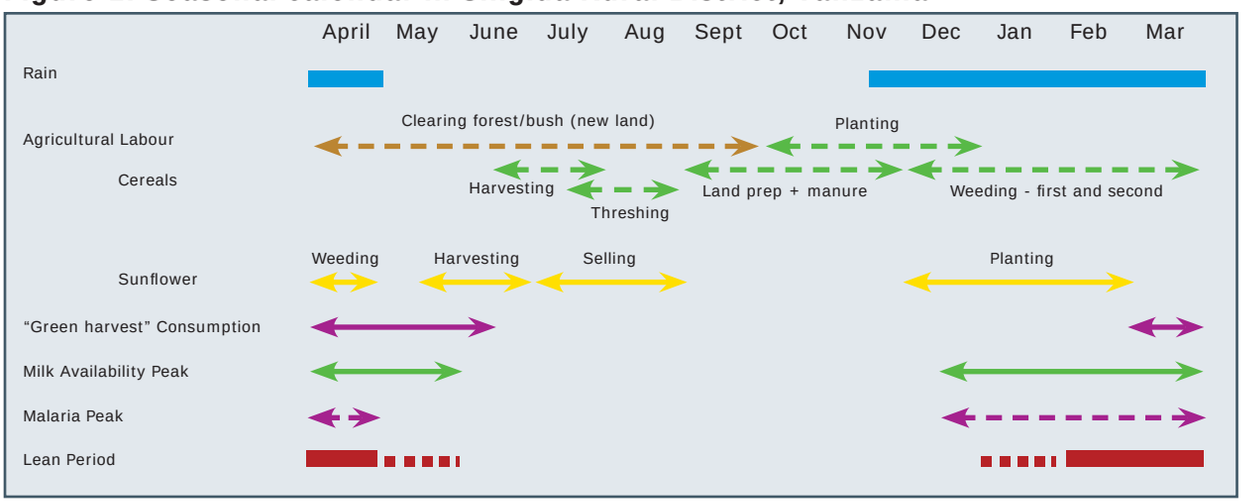
1.1 What is seasonality?

Seasonality can be defined most simply as predictable intra-annual variability in the weather (rainfall and temperature). Although everyone across the world is aware of the seasons, in rural areas of tropical and sub-tropical countries seasonality has profound effects on most aspects of lives and livelihoods, including crop production and food security, markets and local economies, nutrition and health.

Crop production: In unimodal climate systems (one rainy season), the year divides into a farming season and a non-farming season. Most agricultural work is concentrated in 4-5 months, starting with planting and ending with the harvest, in a rhythm that is entirely dictated by the rains. The volume and distribution of rainfall largely determines yields. A farmer who is self-sufficient in a year of good rainfall could face hunger and destitution in a year of "meteorological drought" (abnormally low total precipitation) or "agricultural drought" (a break in the rains severe enough to wither crops in the field, even if total precipitation is "normal" or above average).

Food security: Smallholder households meet their family's food requirements firstly through their own production, secondly through market purchases, and thirdly (if needed) through assistance from private or public sources. This tends to be sequential: farming families first eat from their granaries, then purchase food from the market (using cash generated from secondary livelihood activities such as trading, or selling assets), then they look for casual work (often on neighbouring farms) for food or cash to buy food, and finally – if these sources are not sufficient to get them through to the next harvest – they ask for help from relatives, borrow from friends and neighbours, or (if available) they receive assistance from the government or donor agencies (free food or cash transfers, or public works employment). African smallholders tend to strive for self-sufficiency, because growing food is perceived as the most reliable way to achieve food security – market purchases are compromised by poverty and high food prices, casual work might be difficult to find, social assistance might not be provided. Figure 1 illustrates a typical seasonal calendar, for farmers in central Tanzania, where the main farming season (planting and weeding) runs from October to March, coinciding with the rains, while the annual "hungry season" (and consumption of unripe crops, a seasonal "coping strategy")

Figure 1. Seasonal calendar in Singida Rural District, Tanzania

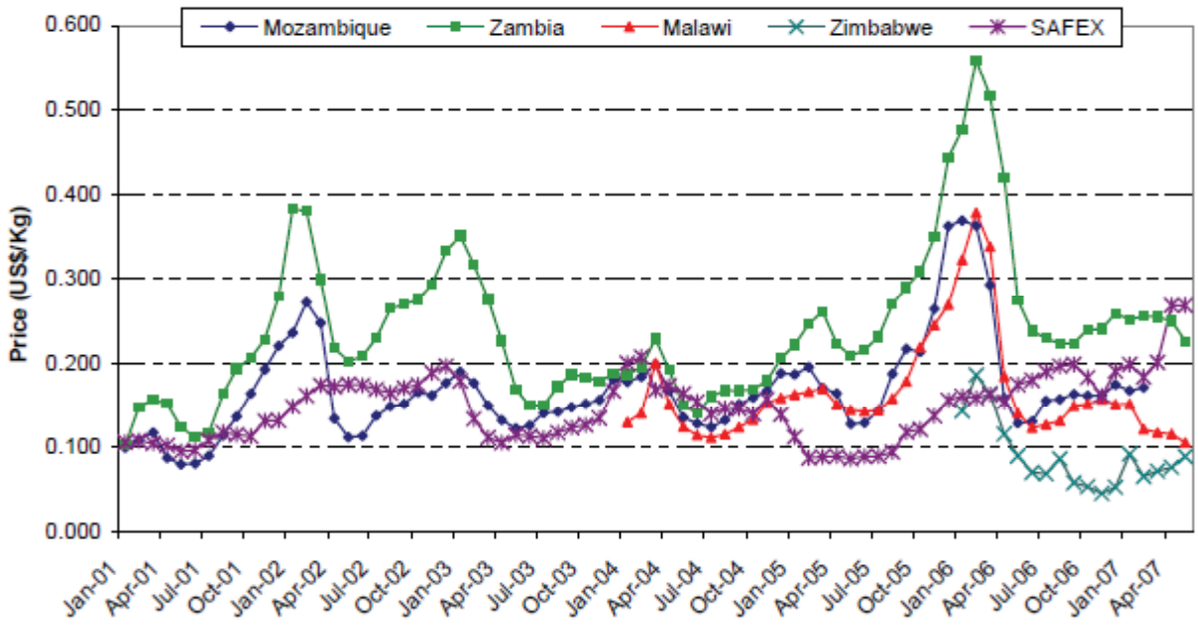


Source: Chastre and Kindness 2006: 3

peaks in the months leading up to the cereals harvest in June.

Markets and local economies: Food prices in African markets follow cycles of food availability and demand, both of which are markedly seasonal. In general, prices are lowest after the main annual harvest, when supplies are plentiful and demand is lowest – more sellers than buyers. In the following months, food prices start to rise as on-farm stocks dwindle and smallholder families turn to the market for their consumption needs. Prices peak just before the next harvest comes in, boosting market supplies, depressing demand and pushing prices down again. In southern Africa, the annual hungry season occurs between December and March, with relief coming in the form of the harvest in April-May. Every year, food prices are lowest around mid-year and rise steadily until early the following year. Figure 2 illustrates this price seasonality for four countries in the region, and shows how the magnitude of price seasonality varies between years of good and bad harvests – there were sharp price spikes in early 2002 and early

Figure 2. Average monthly price of maize in southern Africa, 2001–2007 (US$/kg)



Source: Dradri 2007: 16

2006, both of which were years of food crisis in southern Africa.

Nutrition and health: In much of rural Africa, poverty is so severe that people cannot meet their subsistence food requirements, especially during the annual hungry season (or *soudure* in francophone countries) when granaries are empty and food prices are high. The consequences can be measured in terms of nutritional outcomes. Figure 3 illustrates the direct (but lagged) correlation between food prices and malnutrition in Madagascar – after the harvest in May-June, (a) rice prices rise between August and December, and (b) the prevalence of underweight children follows, peaking between January and March. The hungry season is also a season of illness. Figure 1 (above) shows how malaria in Tanzania peaks during the rains and the "lean period". The synergy between lack of food and illness contributes to high rates of malnutrition and child mortality at this time of year. In Madagascar, "child mortality may as much as triple during the lean season" due to the "interaction between malnutrition and disease", especially diarrhoea (Dostie *et al.* 2002: 499).

1.2 Why does "adverse seasonality" matter?

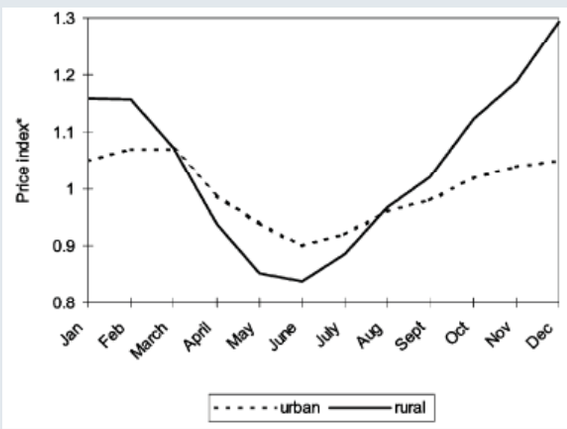
The term "adverse seasonality" is used here to describe two features of rural livelihoods in Africa: (1) the damaging consequences of normal seasonality on people's livelihoods and well-being; (2) the damaging consequences of increasingly unpredictable seasonality on people's livelihoods and well-being.

As seen above, "normal" seasonality has severe negative impacts on well-being. Seasonality in food availability (one harvest a year) and access to food (price spikes) drives seasonal hunger, while seasonal patterns in disease vectors generate spikes in illness and mortality. Seasonality also impoverishes families and sets up irreversible poverty ratchets, because it forces poor people to adopt damaging "coping strategies" that undermine their productive potential. For poor households in rural Africa, a harvest failure makes the next hungry season longer and more severe, so strategies that are usually adopted in response to "normal" seasonality will be adopted more severely (e.g. more stringent rationing of food) or by more households, during a "seasonal food crisis".

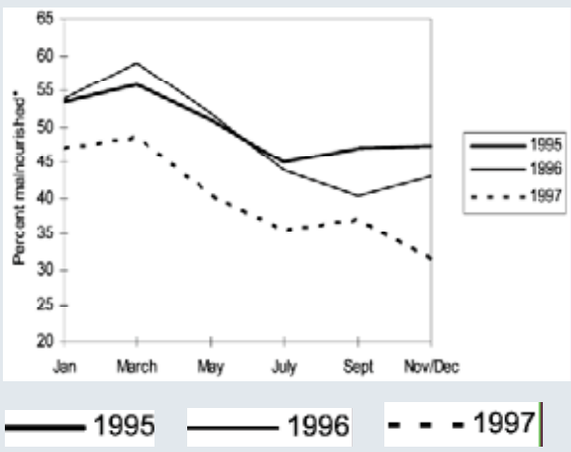
Figure 4 graphs the percentage of households surveyed in Lesotho that adopted a range of responses to a drought in 2008. The most common

Figure 3. Seasonality of food prices and malnutrition in Madagascar

(a) Seasonality of rice prices in urban and rural Antananarivo province, Madagascar



(b) Seasonality of malnutrition in children under 5 in urban Antananarivo, Madagascar



Source: Dostie *et al.* 2002: 497, 499

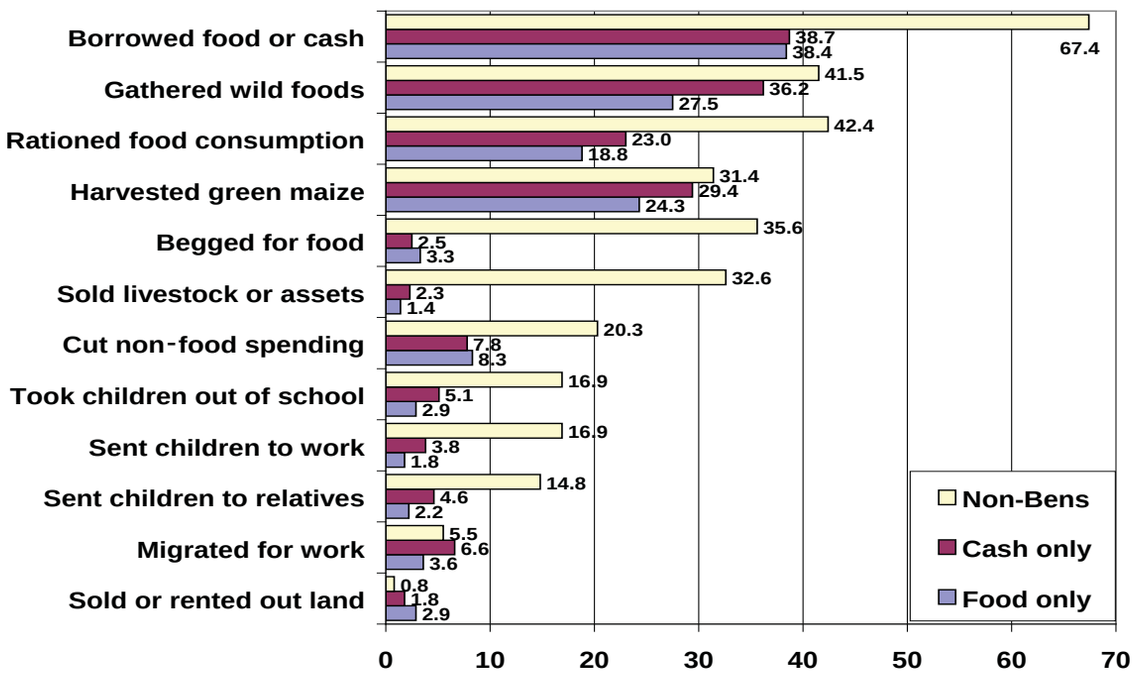
Notes: (a) Detrended prices compared to their 12-month centred moving average
(b) Weight-for-age >2 standard deviations below the median of this age group

strategies included borrowing food or cash, rationing household food consumption, gathering wild foods, harvesting green (unripe) maize, "begging" relatives or friends for food, and selling livestock or other assets for cash to buy food. More drastic strategies (adopted by fewer households) included taking children out of school and sending them to work or to relatives, and selling or renting out farmland – with potentially damaging consequences for household food security in future years.

Figure 4 also demonstrates how effective and well timed social protection interventions can protect wellbeing during episodes of seasonal hunger or food crisis. In Lesotho in 2008, households that received cash or food transfers were much less likely than non-beneficiaries to borrow food or cash, or ration consumption. They were almost as likely to gather wild foods and harvest green maize, since these are universal responses to food insecurity that have low economic, nutritional and social costs. But almost no recipients of cash or food transfers "begged" for food (in fact, they were more likely to donate to non-beneficiaries), or sold livestock and other assets for food (so the intervention served to protect productive assets). Very few recipients withdrew their children from school and sent them to work or to relatives. But more recipients of cash transfers migrated in search of work than either food recipients or non-beneficiaries – this is consistent with findings from other cash transfer programmes, which reveal that some of this cash is often used to pay for transport and other costs associated with job-seeking.

A second source of "adverse seasonality" is unpredictability. Evidence is accumulating that climate change is making the seasons more unpredictable, exacerbating the problems associated with "normal" seasonality. Farmers across the world are reporting that rains and temperatures are becoming increasingly erratic, with serious implications for food crop production. It is easy to dismiss the recollections of elderly farmers as inaccurate memories of an idealised past, and few studies have cross-checked this "subjective" evidence against climate data. However, a recent compilation of qualitative and quantitative data from several countries finds that farmers' perceptions are broadly supported by meteorological trends (see Box 1).

Figure 4. Seasonal "coping strategies" adopted in Lesotho, 2008 (% of households)



Source: Devereux and Mhlanga (2008: 36)

Note: "Non-bens" = households that did not receive drought relief
"Cash only" = households that received drought relief in the form of cash transfers
"Food only" = households that received drought relief in the form of food aid

Box 1. Farmer perceptions and meteorological evidence of climate change in Malawi

- *"Originally there were very distinct seasons and we were very sure when things would happen. Now the seasons are not distinct, especially the hot and cold seasons … Now it's only cold for a few days."* (70-year-old farmer from Balaka, southern Malawi)
- *"The rains no longer have a particular pattern. Sometimes they come early when people have not prepared, sometimes they end too soon and the maize wilts, sometimes we experience very, very heavy rains that last up to 4 days which washes away all the nutrients."* (86-year-old farmer from Balaka, southern Malawi)

- Mean annual temperatures increased by 0.9ºC in Malawi between 1960 and 2006.
- The average occurrence of extreme hot days in Malawi increased by 8.2 days/decade between 1961 and 2000.
- The maximum dry spell duration (corresponding to length of dry season) has increased.
- Rainfall intensity is increasing over southern Africa (a significant increase in maximum annual 5-day and 1-day rainfall).
- General circulation models project that the proportion of annual rainfall that falls in heavy events will increase under higher emissions scenarios in the main rainy season in Malawi.

Source: Jennings and Magrath, 2009

2. Responses to adverse seasonality

Two generations of policy responses to "adverse seasonality" can be identified in Africa. "Seasonal safety nets" were common until the 1980s, while social protection has dominated the policy agenda since 2000. Both sets of responses are discussed below.

2.1 "Seasonal safety nets"

Colonial and post-independence governments in Africa were well aware of seasonality, and they implemented a range of interventions to counteract its adverse effects. Three classic examples are: farm input subsidies for producers (addressing food production), strategic grain reserves (intervening in food marketing), and food price subsidies for consumers (which directly addressed food consumption).

Farm input subsidies can take many forms, including subsidised input credit, sale of fertiliser and seed at below market prices, free distribution of inputs, inputs-for-work programmes, and input trade fairs. These interventions are counter-seasonal because they reduce the duration and intensity of the hungry season, in two ways. First, increasing food production shortens the annual food gap – the number of months that self-provisioning smallholders face empty granaries and depend on the market for their consumption needs. Second, increasing food production boosts market supplies and dampens seasonal food price spikes – this was the dominant positive food security effect of free fertiliser and seed distribution in Malawi in the late 1990s.

The purpose of ***grain reserve management*** is "inter-temporal smoothing" or stabilisation of food supplies and prices throughout the year. A national agricultural marketing agency (e.g. the Ghana Food Distribution Corporation) would purchase food in bulk in local markets (or directly from farmers) after the harvest, when prices are low. This food was stored until 6-8 months later, when stocks on farms and in local markets are low and prices are rising. Sometimes stock releases would be triggered by market prices rising above a certain level, say, 40% above the post-harvest price, and the purpose of the intervention was to prevent prices rising any higher. The agency would release its food stocks onto the market at a price just high enough to cover purchase plus storage costs, which was usually lower than the "scarcity

prices" prevailing during the hungry season. The effect was to boost supplies and dampen price rises, keeping food accessible and affordable for the poor even during the hungry season.

Food price subsidies took several forms in the 1960s and 1970s. Legislated 'pan-territorial' and 'pan-seasonal' pricing meant that staple foods had to be sold at the same gazetted price throughout the country and throughout the year. This protected poor consumers against unaffordable prices – but also discouraged traders from servicing deep rural areas and from storing produce purchased after the harvest to profit from higher prices later in the agricultural year (even though this is a legitimate function of traders that smoothes food supplies and prices). Parastatal marketing agencies often had to intervene to defend these price ceilings, through "open market operations" such as importing food and selling it below cost.

These (and other) "seasonal safety nets" shared several characteristics.

1. They were largely designed, implemented and financed by national governments.
2. They took seasonality explicitly into account.
3. They supported food production as well as food consumption.
4. They operated at the level of systems and structures, rather than targeted individuals.

Although these counter-seasonal policy interventions were popular with African governments and farmers, they were increasingly disliked by influential donors and international financial institutions, which saw them as interfering excessively in markets, incurring high leakages to the non-poor, and (especially if parastatals were involved) being inefficient and expensive sources of political patronage and corruption. This explains why parastatals and subsidies fell out of favour in the 1980s, and by the mid-1990s had largely disappeared from Africa.

Unfortunately, the abolition or scaling down of counter-seasonal food security programmes, in the presence of widespread chronic poverty and weak or missing markets, exposed poor and vulnerable people to the "adverse seasonality" that they had previously been protected against. The predictable consequence in many countries was rising food insecurity and hunger. Madagascar provides a case in point: "Seasonal price variation in most basic food commodities appears to have increased since the liberalisation of agricultural markets at the beginning of the 1980s, due to the impacts of deregulation" (Dostie *et al.* 2002: 498). Garenne (2007) goes further, and identifies the introduction of structural adjustment policies as an underlying cause of the Madagascar famine of 1985-86, which followed the lifting of government price controls and "a massive increase in the price of rice". A normal seasonal price spread of roughly 15% became a price spike of 300% just before the 1986 harvest, and an estimated 7,600 people died in Antananarivo city.

Interestingly, some of these policy measures have made a comeback in the 2000s, but often in forms that are more aligned with the evolving social protection agenda (discussed below). In some countries, general farm input price subsidies have been superseded by targeted subsidies and input vouchers. Physical grain reserves are out of favour, but have been followed by experiments with futures markets, and weather-indexed crop insurance pilot projects – though these innovations have yet to be widely adopted at scale. General food price subsidies have been replaced by targeted cash transfers that are often based on the cost of a basic food basket, though failure to adjust payment levels seasonally or for price inflation causes problems that are discussed later in this Brief.

2.2 Seasonality and the "new social protection agenda"

Since the 1980s, the drivers of poverty and food insecurity in Africa have changed. Stagnant or worsening human development indicators in many countries have been attributed to post-cold war geopolitics and state collapse, increased exposure to unstable global commodity and finance markets, climate change and – in southern Africa especially – the spread of AIDS. These sources of increased exposure to vulnerability have been compounded by a declining ability to respond by governments (the aforementioned dismantling of state-led intervention strategies) and communities (erosion of traditional social support mechanisms).

Initial responses by donors to this new 'crisis of development' in Africa aimed at providing 'safety nets' to tackle what was understood to be 'transitory vulnerability' following livelihood shocks, in particular those due to drought-induced crop failures. Emergency food aid dominated, followed

up with rehabilitation measures such as seeds and tools for affected farmers. During the 1990s, as donor government interest in food aid as a means of surplus disposal waned, recognition grew that these periodic shocks signalled an underlying chronic vulnerability for which emergency food aid was not a sustainable or cost-effective solution. Safety nets were diversified, to include such interventions as food-for-work or cash-for-work programmes supported by quasi-independent 'social action funds', farm input supply programmes to support smallholder production and cash transfers to support especially vulnerable households. In southern Africa, the 2002-2003 food crisis added urgency and focus to these developments, which were also shaped by an emerging social protection policy agenda that sought to address both poverty and vulnerability, driven especially by the ILO from the perspective of extending rights to social security and 'decent work' beyond the confines of formal employment, by the World Bank from one of managing risk in advance of crises, and by the adoption of the MDGs.

Table 1. Seasonality in 20 social protection projects in southern Africa

Case Study Programmes	Seasonality?
Food transfers	
Food Assistance Programme, Mozambique	Food baskets to AIDS patients and their families; no recognition of seasonality but transfer is unaffected by seasonal food price rises.
Urban Food Programme, Zimbabwe	Food-denominated vouchers adjusted for exchange rates, protecting access during period of hyperinflation.
School Feeding, Lesotho	Protects school children's food access when prices rise.
Neighbourhood Care Points, Swaziland	Food provision protects OVC food access when food prices rise.
Cash transfers	
Public Works Programmes, Malawi (includes food- and inputs-for-work)	Timed during the hungry season, to bridge seasonal food deficits – but competes for household labour.
Dowa Emergency Cash Transfer (DECT), Malawi	Timed during a seasonal food crisis, index-linked to local food prices.
Old Age Pension, Lesotho	Year-round monthly cash transfer can help recipients prepare for lean season, but, unless indexed, food value is subject to erosion when food prices rise. Little impact on food markets as programmes are too small, except in Lesotho and Swaziland where food markets are well integrated.
Old Age Grant, Swaziland	
Social Cash Transfers, Zambia	
Food Subsidy Programme, Mozambique	
School Bursaries for OVC, Swaziland	Could limit dropouts caused by lean season hardship.
Farm input/asset transfers	
Input Trade Fairs, Mozambique	Seasonal input transfers with some potential to boost recipients' production in good years and shorten their next 'lean' season, but little insulation from high prices following poor growing seasons. Programmes are too small to affect food or input markets.
Chief's Fields for OVC, Swaziland	
Farm Inputs for Child-headed Households, Swaziland	
Food Security Packs, Zambia	
Agricultural Input Subsidy Programme, Malawi	Seasonal government input transfer – as above but limits high input & food prices & low wages in markets.
Other programmes	
Small Livestock Transfers, Zimbabwe	Asset provision insulates against intra- and inter-seasonal livelihood threats.
Education Material Fairs, Mozambique	No recognition of seasonality, though fairs coincide with lean season.
Burial Societies, Lesotho	No recognition of seasonality.
Rural Microfinance, Zimbabwe	May ease seasonal hardship through use of loan funds for food and farm inputs/assets.

Note: Programmes in italics are those initiated without the support of donors or international NGOs

This "new social protection agenda" in Africa in the 2000s has a number of characteristics that distinguish it from the state-led 'seasonal safety net' agenda discussed above. These include:

1. most social protection interventions have been designed and financed by international donors (though some important programmes have been initiated by governments);
2. they sometimes notice but more often than not ignore seasonality;
3. most are designed with protecting food consumption as the primary objective, rather than promoting food production;
4. they target individuals and households, not systems and structures.

In RHVP's 2006-07 regional evidence-building work, 20 case studies of social protection programmes in southern Africa were investigated.[1] Table 1 summarises the seasonal dimensions of each programme.

- Only eight of the 20 (in *italics* in Table 1) were not initiated and supported by international donors and NGOs; three of these are sizeable state-led cash transfer programmes (the Old Age Pension/Grant in Lesotho and Swaziland and the Food Subsidy Programme in Mozambique), and two are state-funded agricultural input transfers (Malawi's Input Supply Programme and Zambia's smaller Food Security Packs scheme);

- Only two of the 20, both in Malawi, were explicitly designed to address seasonal vulnerability directly – public works programmes (see Box 2), and the Dowa Emergency Cash Transfer (DECT) programme (expanded upon in Section 2.2 below). Of the remaining 18:

  - The four food transfer programmes were not designed to address seasonality, but had the potential to protect recipients' access to food and insulate them from seasonal food price rises.
  - The five other cash transfers are all, apart from Swaziland's School Bursaries, year-round programmes which could ease seasonal vulnerability by allowing

Box 2. Seasonality and Malawi's public works programmes

For many years, the World Bank and other donors have sponsored short-term public works programmes (PWPs) as 'counter-cyclical' safety nets, in principle providing income transfers to poor households during times of seasonal need and preventing distress sales of assets, while at the same time creating infrastructure that can help reduce future risks.

In practice, the capacity of PWPs to curb acute seasonally-induced vulnerability depends critically on the time of year at which employment is offered, the flexibility of work arrangements and the level and form of payment. Most projects have been implemented during the lean season, when need is greatest. However this is the time of year not only when projects are most difficult to operate because of the wet conditions, but also when household labour supply is under most pressure due to peak labour demands for own-farm activities and peak incidence of malaria, dysentery, undernutrition and other debilitating conditions. Participating households therefore bear significant opportunity costs in terms of their own production, correspondingly reducing the net value of the transfers they receive.

The form of payment that best meets participants' needs also varies by season. Surveys of Malawian PWPs found participants preferring food rations during the lean season when food is expensive, cash around harvest time when food is more plentiful and other expenses have to be met, and farm inputs at planting time. While inputs-for-work have been piloted in Malawi, varying the form of payment according to season participant preference has yet to become commonplace, probably due to the management challenges involved.

(McCord, 2008; White & Appleton 1998:9; Zgovu et al. 1998:18)

1 These are summarised in the Regional Evidence-Building Agenda (REBA) Case Study Briefs series, available at http://www.wahenga.net/briefs/case_study, alongside a series of cross-cutting REBA Thematic Briefs at http://www.wahenga.net/briefs/thematic. Based on the REBA work, the book Social Protection in Africa (Ellis et al., 2009) features 15 of these case studies.

recipients to buy food during the lean season, although the amount of food they could purchase with the cash would be eroded by price rises during the lean season.
  - A further five programmes involve seasonal farm input transfers which aim to increase smallholder productivity, which would help recipients reduce the lean season food gap and avoid food purchases at times of high food prices – however, any incremental production sold at harvest time would fetch seasonally low market prices, and crop failure (e.g. due to drought) would leave recipients with little to show for the scheme and vulnerable to high food prices during the following lean season.
  - The final group of four programmes, all relatively small, may have enabled participants to avoid expenses or deploy cash or assets in a way which eases seasonal hardship, although this was not their primary purpose.

- Only the five farm input schemes and small livestock transfers in Zimbabwe supported production, and of these the two in Swaziland had minimal impact; the remainder were all consumption-oriented, although rural microfinance in Zimbabwe was in some cases used to invest in production.

- All 20 of these schemes were targeted at individuals and households; none operated at the level of systems or structures, so with the partial exception of the more broadly targeted schemes such as Malawi input subsidy programme, any direct impact they may have had in addressing seasonal vulnerability would have been largely limited to target groups.

3. Cash transfers and food price seasonality

Despite the diverse range of projects listed in Table 1, the current social protection agenda is dominated by targeted cash transfers, but seasonality presents several challenges for cash transfers which have not been properly acknowledged and understood. The biggest test is seasonal variability in food prices. The global food price crisis of 2008 drew attention to the threat that rapid inflation poses to cash-based social assistance programmes. But in Africa, food prices vary seasonally every year (as shown in Figures 2 and 3), especially in rural areas and in unimodal rainfall systems, where there is only one annual harvest. As seen above, food prices are highest in the annual "hungry season" – in the months leading up to the main annual harvest, and this is also when needs for social assistance peak.

Can cash transfers protect household food security against high food prices and seasonal food crises? At least five approaches have been tried: index-linking, flexible duration, vouchers, reverting to food aid, and disbursing cash plus food.

3.1 Index-linking

The best way to protect the value of cash transfers against price inflation is to index-link the payment level to relevant prices. Many formal cash transfers are adjusted annually, in line with the national Consumer Price Index (CPI). But since seasonality is a period of rapid and localised inflation (as seen above, prices in rural markets can double within 3-4 months), cash transfers need to be adjusted more frequently – ideally, monthly – by tracking prices in local markets. This requires an unprecedented degree of administrative and budgetary flexibility, which might be beyond the capacity of national governments and international donors. But it can be done.

Case study: Following localised droughts in Malawi in 2006 and 2007, Concern Worldwide implemented "emergency cash transfer" projects (the DECT programme in Table 1 was one of these) that delivered cash to several thousand affected households for four months during the hungry season. The objective was to protect access to food by enabling cash recipients to purchase a basic WFP food ration (maize, beans and cooking oil) in local markets. Crucially, the payment level was adjusted every month: as local food prices rose in January and February, cash transfers increased, and as prices fell back when early harvesting started in March, cash transfers were reduced (see Figure 5). This allowed households to purchase adequate food even when prices peaked. An evaluation found that cash recipients recorded better food security outcomes in terms of meals per day, dietary diversity and avoiding damaging coping strategies, compared with non-recipients (Devereux *et al.* 2006).

Table 2. Population requiring social assistance in 'average' and 'inflation' years, southern Ethiopia

Deficit months	Months of assistance required	Average year (2006)		Inflation year (2008)	
		Total beneficiaries	Percent of population	Total beneficiaries	Percent of population
0.5–1.5	<3	14,002	5%	26,545	10%
1.5–4.5	3	9,726	4%	55,963	22%
4.5–7.5	6	0	0%	13,587	5%
7.5–10.5	9	0	0%	0	0%
Total		**23,728**	**9%**	**96,095**	**37%**

Source: Compiled from FEG Consulting (2008).

Figure 5. Cash transfers (kwacha/month – right scale) and maize prices (kwacha/kg) in Malawi, 2006/07

Source: Derived from Devereux *et al.* 2006

3.2 Flexible duration

If raising the level of cash transfers in response to short-term price movements is too administratively complex, another option is to extend the duration of programmes that normally operate for only part of the year – i.e. pay people the same amount each month, but make more payments than usual. A seasonal cash transfer or public works programme that usually runs for four months during the hungry season could be extended to six or eight months in a bad year, for instance.

Case study: The Productive Safety Net Programme (PSNP) in Ethiopia is designed to operate as a seasonal safety net from January to June each year, this being the period when self-reported food insecurity is highest. A simulation exercise was conducted to assess whether 6 months is an appropriate duration. The findings suggested that it was longer than required in a "normal" year (e.g. 2006), when 9% of the population of one district in southern Ethiopia needed up to three months of assistance (PSNP Direct Support or Public Works). In a year with the same crop production but much higher food prices (e.g. the crisis year of 2008, when food prices trebled), this figure quadrupled to 37% of the population, 5% of whom needed 6 months of social assistance (Table 2). In a year of failed harvests, these figures would rise even higher. The policy implication is to scale social assistance interventions up or down each year, according to an assessment of the severity of the hungry season.

3.3 Food aid, not cash transfers

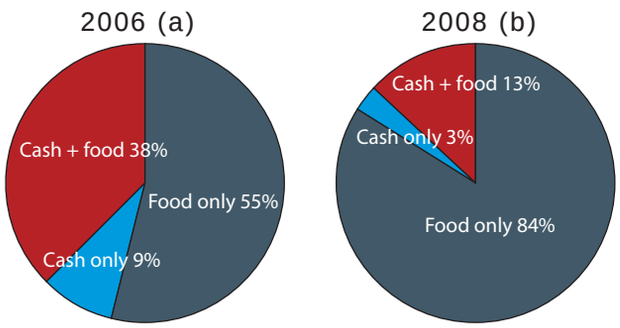
If the value of cash transfers is eroded by high or variable prices, this might result in a loss of confidence in cash-based social transfers, especially since the need for social protection rises when food prices rise. This can result in a backlash against cash transfers that are not adjusted to retain their purchasing power over time, and a preference for commodity transfers which – despite their limitations – do retain their real value.

Case study: In Ethiopia, the PSNP aimed to break the cycle of dependency on annual emergency appeals, by moving towards multi-annual programming and cash transfers rather than food aid. District administrations were assessed for their capacity to manage cash, and those with good capacity disbursed cash while those with weak capacity continued to deliver food. After the PSNP was launched in 2005, food prices increased steadily: seasonally; due to regular inflation; following the *belg* harvest failure of 2008; and during the global food price crisis of 2008/09. But PSNP cash transfers lagged behind – payments were

2 For a review of the "cash-food debate" in Ethiopia, see Sabates-Wheeler and Devereux 2010.

raised only occasionally, and always by less than food price inflation. As a consequence, beneficiary attitudes toward cash transfers shifted. Almost half (45%) of beneficiaries surveyed in 2006 expressed a preference for "cash only" or "cash + food", but by 2008 this figure had fallen to less than one in six (16%), with an overwhelming majority (84%) requesting payment in "food only", up from just over half (55%) two years earlier (Figure 6). In many districts, PSNP staff responded by switching out of cash transfers and back to food.[2]

Figure 6. Beneficiary preferences for cash or food transfers in Ethiopia, 2006-08



Source: Devereux *et al.* 2008: 38

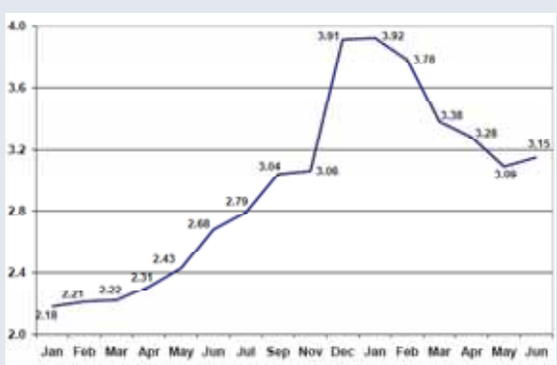
3.4 Cash plus food

Recent "emergency cash transfer" interventions in Lesotho, Malawi and Swaziland have delivered a combination of "cash + food", in recognition of the strengths and limitations of each modality. Food can be scarce and expensive during food crises, so distributing food packages guarantees access to food and provides protection against price inflation. On the other hand, cash allows people to meet their non-food needs and protects their assets against "distress sales" for food.

Case study: The Cash and Food Transfers Pilot Project (CFTPP) in Lesotho was World Vision's response to the 2007/08 food crisis, which was triggered by a drought that reduced maize yields by 42% and left 553,000 people (25% of the population) in need of emergency assistance. The effects were concentrated during the hungry season, which peaks between December and April each year – the evidence that this was a seasonal food crisis is clear from the evolution of food prices (see Figure 7a). Since 70% of Lesotho's food requirements are imported even in good years, a feasibility study concluded that food markets were resilient enough to respond to cash transfers. The CFTPP delivered three different transfer packages to 41,200 beneficiaries, each month from December 2007 to May 2008. Of these, roughly one-third received "cash only", one-third received "cash + food" equivalent to a full food ration, half in food (cereals, pulses and cooking oil) and half in cash (enough to buy the same commodities in local markets at November 2007 prices), and one-third received full food rations. Food prices in monitored village markets in January 2008 were 80% higher than in January 2007, but the CFTPP cash payment was not adjusted until April 2008, when a once-off increase of 25% was implemented (Figure 7b). Nonetheless, beneficiaries surveyed preferred the mixed package (52%) to either cash (35%) or food (13%) alone (Devereux and Mhlanga 2008).

Figure 7. Maize prices and cash transfers in Lesotho, 2007-2008

(a) Average retail maize price in Lesotho, 2007-08 (Maloti/kg)



(b) Cash transfer payment, December 2007 to May 2008 (Maloti per person per month)

Source: Devereux and Mhlanga 2008: 42, 15

3.5 Vouchers

Vouchers can be denominated either in cash terms (e.g. $50 worth of commodities from participating stores) or in commodity terms (e.g. 25kg of maize from a parastatal agency)[3]. Vouchers are preferred to *food aid* by policy-makers in contexts where a secondary objective (beyond social protection) is to stimulate rather than compete with local markets and traders. Vouchers are preferred to *cash transfers* by policy-makers who want to control how transfers are used (because they can specify which commodities can be purchased at which outlets). Both commodity- and cash-denominated vouchers require well functioning markets, so they might be less effective at protecting household food security during periods of scarcity, such as the hungry season or a seasonal food crisis.

From a beneficiary perspective, vouchers with a cash value have the advantage of flexibility – they can be used to meet multiple needs, unless they are restricted to a shortlist of goods and/or services – but the disadvantage of losing their purchasing power when prices rise. Conversely, commodity-denominated vouchers have the disadvantage of being inflexible and limiting in terms of choice, but the important advantage of retaining their real value irrespective of price variability.

Case study: WFP's 2008-2010 Protracted Relief and Recovery Programme in Zambia – *Response to Natural Disasters and Economic Shocks* – aims to reach 800,000 people, and is piloting the distribution of food vouchers to vulnerable groups affected by high food prices and economic downturn in eight urban and peri-urban areas. Target groups include households with malnourished children or members attending HIV/AIDS and TB centres, and participants on labour-based schemes involving sanitation works and urban gardens. Monthly vouchers can be exchanged for 25kg of maize meal, 2kg of pulses, 750ml of vegetable oil and a bar of soap at participating retail outlets.

An interesting feature of this programme is its use of a delivery strategy known as 'SPLASH' (Sustainable Programme for Livelihoods and Solutions for Hunger), whereby the food voucher takes the form of a scratch card (or 'SPLASH card') which recipients can use in any participating retail outlet at a time of their own choosing. The SPLASH card contains two codes. When the first code is entered into the retailer's mobile phone, it shows the amount of food to be provided to the cardholder. Once the supplies are handed over, the second code is entered to confirm the transaction. Using the phone, the retailer can then obtain immediate confirmation that WFP has credited his or her account accordingly, based on pre-negotiated prices. An automated mobile delivery and tracking system manages beneficiary registration, commodity tracking and financial payments, allowing efficient real-time reporting and security/authorisation points to safeguard transactions as they are processed. According to WFP:

> *"The use of food vouchers gives greater flexibility to the beneficiaries in collecting food, injects resources into the local economy and supports local markets in the highly-affected areas without distorting urban food availability and local retailers. A cost-benefit analysis carried out by the WFP country office indicates a cost saving of over 30 percent through vouchers versus traditional food distributions, enabling WFP to reach more beneficiaries."*[4]

Like the Zimbabwe Urban Food Programme mentioned in Table 1, which also used commodity-denominated vouchers, this programme protects vulnerable households from loss of economic access to food at a time of rising prices, including high food prices due to seasonality.

4. Conclusion

For most people living in rural Africa, lives and livelihoods revolve around the seasons, but the variety and extent of seasonal influences on production and food security, markets and local economies, nutrition and health are often overlooked by development professionals (Chambers 2009). These influences extend to urban populations too, notably through seasonal fluctuations in prices of domestically produced food and other agricultural commodities in urban markets. As we have seen, seasonality can have severely negative impacts on the wellbeing of rural Africans even in "normal" years, which are intensified when seasonal food crises occur. With a trend towards increasingly unpredictable departures from normal seasonal weather conditions, associated with climate

3 In the latter case, these are sometimes as referred to as 'coupons' rather than 'vouchers'.

4 Protracted Relief and Recovery Operation, Zambia PRRO 10594.0, Budget Revision: 01, WFP, Rome, page 3. Available at http://one.wfp.org/operations/current_operations/BR/105940_0906.pdf.

change, seasonal deprivation seems set to deepen across much of the continent.

Until the 1980s, governments deployed a number of "seasonal safety nets" to counter the adverse impacts of seasonality, including farm input subsidies, grain reserve management, food subsidies, pan-territorial and pan-seasonal pricing policies, implemented by parastatals operating at national level. Though not without their drawbacks, these interventions were focused on limiting vulnerability to seasonal deprivation, and were generally effective in achieving this. Their dismantling during the liberalisation drive of the 1980s ushered in an era of deepening hunger and vulnerability, which the new agenda of "social protection" has attempted to address since 2000. Unlike the earlier state-led interventions, new social protection approaches are mostly designed and financed by international actors and are less attuned to seasonality. With some exceptions, they are more consumption than production focused, which gives them an important capacity for palliative consumption-smoothing and perhaps local multiplier effects, but limits their impact on the overall economy and root causes of seasonal vulnerability. They target individuals or households rather than systems or structures, which means that their impacts are constrained by their ability to target accurately. This was illustrated above by reference to the cross-section of 20 social transfer schemes studied by RHVP during 2006-07.

As this "new social protection agenda" has evolved, cash transfers have increasingly come to dominate, based on their perceived advantages over in-kind transfers in terms of support for local economies and markets, and the choice they offer to recipients. Yet in a situation of rapidly rising food prices – as occurred during the global food price crisis of 2008, but which recurs each year during the hungry season – cash transfers have the serious drawback that they lose their value in food terms. In the previous section we examined several alternative approaches to getting round this problem, which can be compared as follows:

- ***Index-linking*** cash transfer levels according to prevailing market prices of food and other essentials preserves their real value to recipients if adjustments are sufficiently frequent (e.g. monthly), but is administratively more demanding and requires flexible budgeting.
- ***Flexible duration*** aims for a similar effect by extending the length of seasonal (rather than year-round) transfer programmes. This avoids the need for monthly adjustments in levels, but also requires flexibility in overall programme budgets and may not fully compensate beneficiaries for very severe seasonal price spikes.
- ***Reverting to food or cash plus food*** is an effective fallback when cash transfer levels cannot be adjusted quickly enough to match price inflation, or where local food markets remain in deficit because they are not being supplied fast enough from elsewhere despite higher prices. In this case recipients are likely to prefer food or a "cash + food" package.
- ***Food vouchers*** can combine some advantages of cash transfers with an assured food value, even if prices are rising. A key design decision is whether to denominate vouchers in commodity terms or in cash terms. Vouchers that are restricted to a prescribed food basket limit beneficiary choice but provide better protection against seasonal price spikes.

There are many other interventions that governments can adopt to mitigate seasonal risk. Scope exists for improving traditional public sector market stabilisation instruments such as buffer stocks or strategic grain reserves and import/export operations. Better market infrastructure, research, extension, agrarian reform and employment guarantee schemes all have potential roles to play. New information technologies enable market information systems to operate with far greater speed and coverage than in the past. FoSP Brief No.6[5] examined a range of newer "market-based instruments" for which governments might provide partnership or at least initial support and an appropriate regulatory framework. These include weather-based insurance contracts to compensate farmers for seasonally adverse weather, and commodity exchanges, futures markets and warehouse receipt systems to smooth or hedge against seasonal price fluctuations.

Providing such government interventions are sufficiently predictable and rules-based to promote rather than undermine market integration, they can do much to counter the seasonal deprivation

5 FoSP Brief No.6, *Policy options for reducing risk and instability in staple food markets*, Regional Hunger and Vulnerability Programme, Feb. 2010. Available at http://www.wahenga.net/node/1706

that amounts to an annual crisis for so many poor households, and so limit the need for emergency humanitarian interventions. Moreover, they have enormous potential synergies with permanent, year-round social protection programmes such as social pensions which can help smooth consumption across seasons, and could be linked to civil society mobilisation and campaigns for legislative change to entrench entitlements.

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