Exploring definitions of food insecurity and vulnerability: time to refocus assessments

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Abstract

Recent high food prices and changes in the world food situation are exacerbating the conditions of households that are vulnerable to food insecurity, especially those with weak livelihood strategies. To address the impact of these and other stressors it is necessary to develop a deeper understanding of concepts such as 'vulnerability' and 'food insecurity'. This is challenging as both concepts are used rather loosely in the food security literature, despite both having at least two dimensions. Vulnerability has an external and internal dimension, and food insecurity has a temporal and intensity dimension. However, assessments are often only concerned with one dimension at a time. An exploration of the two concepts suggests that in both cases the dimensions need to be combined in order to understand the different interactions and the interconnections between different dimensions and the multiple levels of the systems in which they are embedded. This combination of dimensions is important for understanding the significant role that livelihoods play in the accumulation of assets and for accessing food. It makes the understanding of the multiple causes and consequences of vulnerability and food insecurity for different households clearer. Those households and individuals considered chronically poor or food-insecure are likely to experience severe food insecurity in the long-term, as a result of their weak livelihoods and minimal assets. Consequently, future studies on vulnerability to food insecurity should focus on these chronically food insecure households in order to determine the multidimensional nature of the stressors they experience and their ability to cope and adapt to these stressors. This would contribute to our understanding of the contexts in which the data from larger quantitative studies are embedded.

Keywords: High food prices; livelihoods; vulnerability; food insecurity; multidimensional stressors

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1. Introduction

Southern African consumers have felt the negative effects of the most recent surge in national and global food prices since 2006, peaking in 2008. Escalations in food prices have come during a decade in which a chronic food security crisis has unfolded across the region, with a greater number of people being increasingly vulnerable to food insecurity (Wiggins, 2003; Maunder & Wiggins, 2007). Drimie and Casale (2009) note that this chronic food crisis is a result of the persistence and interaction of 'multiple stressors', which effectively undermine household livelihood strategies. These stressors include sudden shocks (e.g. floods, droughts, unemployment, death and price increases) and also gradual changes (e.g. changes in service delivery, land degradation, social and economic marginalisation, erosion of assets as a result of the AIDS epidemic and the changing nature of the world food situation).

In order to assist those who are most exposed to multiple stressors, it is necessary to determine which households are currently food-insecure and which are vulnerable to food insecurity. However, this is a complex undertaking as a plethora of definitions and indicators exist (see Maxwell, 1996 and Hoddinot, 1999). As argued below, this complexity is compounded by the diverse use of the concepts food insecurity and vulnerability across and within the multiple disciplines engaged in different aspects of food security and vulnerability studies (Webb & Harinarayan, 1999; Casale *et al.*, forthcoming). Food insecurity and vulnerability are sometimes used separately and sometimes synonymously (Devereux, 2006). Food insecurity may be interpreted as a particular form of vulnerability (vulnerability to inadequate access to food or vulnerability to hunger) and at other times as an outcome of vulnerability (Du Toit & Ziervogel, 2004). Vulnerability is sometimes taken to simply infer risk, while at other times it is used more broadly to denote the sensitivity and resilience of people to exposure (Chambers, 1989). One's perspective on these concepts often determines the measures (objective and subjective) invoked, the scales (national, household and individual) of use, and their focus (e.g. nutrition status, experiences of hunger, income and expenditure, and ability to access food). Consequently, different estimates of food insecurity and those vulnerable to food insecurity prevail in South Africa and elsewhere (Hendriks, 2005; Hendriks & Maunder, 2006). Estimates and understandings are further compounded by the fact that neither food security nor vulnerability status is static. Both are dynamic in nature and need to be understood in terms of their dynamism.

In the absence of national, representative panel studies to determine levels of food insecurity and vulnerability in South Africa, Hendriks (2005:118) calls for

more qualitative in-depth local studies of household experiences of food insecurity and vulnerability '...to develop a baseline knowledge of how households respond to household food security shocks and stressors...' under 'normal' conditions, i.e. during times when households experience gradual changes and seasonal fluctuations, rather than sudden temporary shocks. This focus would illuminate the long-term structural conditions that underpin chronic poverty and chronic food insecurity (see Du Toit, 2005b). It would explain why some people remain food-insecure more or less permanently and why some may manage to become permanently food-secure. This understanding is crucial to determining when and what types of responses are required. For example, Devereux (2009) has argued that prevailing structural conditions are actually more responsible for the persistence of famines or food security crises in sub-Saharan Africa this century than the actual shocks that trigger them. Therefore the approach of Hendriks (2005) should lead to improved understanding of contributing factors and the subsequent development of appropriate policies and strategies directed towards those most prone to shocks and stressors.

While in agreement with Hendriks's stance, this author argues that, to ensure that such studies are suitably focused and contribute effectively to the development of appropriate policies and interventions for those most vulnerable to food insecurity, a deeper understanding of the commonly-used definitions of vulnerability and food insecurity is required. The critique that follows highlights the challenges associated with the diverse meanings applied to these concepts and illustrates that they require adequate definition and understanding in order to increase the contribution made by qualitative studies. In order to provide a context within which to critique and analyse these definitions, section two briefly considers the nature of recent food price trends in South Africa and thereby illustrates their possible future impacts on food-insecure households. Given the importance of livelihood strategies in accumulating the assets required for accessing food, the third section illustrates how the effectiveness of livelihoods in this regard is determined not only at the household or local level, but is also a consequence of the household's location within the complex configurations of society as a whole. The fourth and fifth sections of the paper respectively, explore the complexities inherent in the more common definitions of vulnerability and food insecurity. Key issues from these discussions are then combined in section six to illustrate that those who are most vulnerable to food insecurity are the chronically food-insecure. Consequently, close attention should be paid to the different systems involved, the stressors they generate and the diverse impacts they have in different contexts and at different levels. Section seven concludes by supporting calls for qualitative and in-depth studies that focus

on the multiple stressors and multiple dimensions of the 'normal' experiences of household vulnerability to food insecurity.

2. High food prices in South Africa

Unlike many Southern African countries, South Africa is considered to be food-secure at the national level, but this does not mean that everybody is food-secure. South Africa experiences both chronic poverty (Du Toit, 2005b) and chronic food insecurity (HSRC, 2007), largely due to income distribution and structural inequalities (Seekings & Nattrass, 2006). Recent figures show that chronic food insecurity is experienced by 20% of children, indicated by stunting, and that 10% of children are underweight (Labadarios *et al.*, 2008; Chopra *et al.*, 2009).

Most South African households, including the urban and rural poor, are net purchasers of food (Hendriks & Maunder, 2006) and have a high dependency on paid employment (Du Toit, 2005b) to access food. High food prices at retail markets negatively affect people's ability to purchase foods of sufficient quantity and quality. According to the National Agricultural Marketing Council (NAMC, 2009b) the year-on-year food price increase for 2008 was 16.7%, significantly higher than the 2006 year-on-year increase of 6.7%. While commodity prices appear to have levelled out, retail food prices have followed far more slowly (NAMC, 2009b). The NAMC (2009a) reported that food prices appeared to be softening in the period January to April 2009, representing a year-on-year increase of 8.4%. Year-on-year, food prices rose 5.3% in 2001, increased dramatically by 16.7% in 2002, but the rate of increase dropped to 2.0% in 2004 (NAMC, 2009b). That price hike can be construed as a shock, while the current experience may well be evidence of gradual change, although year-on-year food price increases remain high. It remains to be seen whether the year-on-year food price increase trend will persist.

Given the changes in the global food system this century, and in terms of new drivers of food demand, supply and pricing, it seems likely that low food prices are a thing of the past (Von Braun, 2007; Evans, 2009). South African consumers experience the effects of changes in the global food system as well as those taking place in the local food chain. Through processes of modernisation and change, the linkages between households and complex commodity chains and economic networks has become stronger. Globalisation has intensified and restructured the ways in which these linkages and relationships function. Even the most remote rural households feel the impacts of certain global events and changes (political, economic, social and environmental). From a food security perspective, this is most evident in the

impact of rising food prices in South Africa, which were largely triggered by political and socio-economic events outside the country, such as the impact of the new driving forces in the global food chain (Von Braun, 2007), and various South African responses (or lack thereof) to these changes.

The current global economic recession is having a negative impact on local consumers as it follows in the wake of the high food prices. International and national reactions to the recession are unlikely to help the situation as the public and private sector attempt to maintain economic stability (often experienced in the form of job losses or reduced public sector spending). It is therefore likely that more people will be exposed to these and other stressors. Household livelihood strategies and existing asset bases might not cope with increased exposure to stress and access to food will be constrained for such households. The most severely affected will probably be the poor and those currently food-insecure (Hendriks, 2005).

Although brief, this discussion on high food prices in South Africa highlights two significant points. Firstly, current high food prices may initially seem to be temporary shocks, but given the changes in the global food system in recent years, food prices will remain high, with a longer-term negative impact on those households that are currently poor and food-insecure. Secondly, the ability to access food is strongly influenced by the broader context (local, national and global) and systems or networks (economic, social, political and environmental) in which South African households pursue their livelihoods.

3. Significance of household livelihoods and assets

Amartya Sen (1981) is generally credited with shifting the food security debate away from an exclusive focus on the availability of international and national food supplies, towards a focus on the ability of households to access food (Maxwell & Slater, 2003). His work highlighted the effect of personal entitlements (resources used for production, exchange and transfers) in ensuring access to food.[2] Following Sen's work a number of changes were brought into the understanding of food security. Household purchasing power is now considered key to accessing food and is dependent on market integration, pricing policies and temporal market conditions (Webb *et al.*, 2006; Devereux, 2009). A focus on household livelihoods and assets is deemed necessary to understand the ability of households to access food (Maxwell,

[2] *Sen's seminal work on the issue sought to explain certain puzzling aspects of the great Bengali famine of 1943–1944; in particular, to address the question of why so many households had gone hungry while the country as a whole had adequate food stocks.*

2003), either through production, purchase or transfers. The focus on livelihoods resulted in an awareness of the different abilities of households to cope with stressors, which undermine their ability to access food. While some households were observed to be severely affected during short-term setbacks and fluctuating levels of food security, others seemed to cope and recover (Chambers & Conway, 1992). The ability to accumulate assets under normal conditions enables households to draw on them during times of stress. Assets may be personal, socio-political, infrastructural, economic or ecological (Drimie & Casale, 2009). Household food security is highly dependent on the strength and ability of livelihood strategies to ensure that assets are available.

The Sustainable Livelihoods Framework draws attention to the fact that activities that take place within the broader policy and institutional context at different times can support or undermine livelihood strategies (DFID, 2000), and thereby impact on asset availability. Household asset accumulation is thus as much a consequence of the lack of access to broader public and private sector services (e.g. health, information, credit and social protection) (Segnestam, 2004), as it is about a lack of access to local resources. Livelihood options, which ensure the ability of households to generate and accumulate resources and make use of services, are shaped by the broader context and systems in which people pursue their livelihoods (Du Toit & Ziervogel, 2004). Therefore, access to assets is not only determined at household or local level but is embedded in the complex configurations of society as a whole (Wisner, 2001) and has much to do with one's historical, social, economic and geographical position in society at large (Mgquba & Vogel, 2004).

Position in society has differential effects on various groups of people and households and individuals within these groups. Conditions of poverty may well decrease the ability of households to accumulate, draw on and renew assets. The poor typically have insecure livelihoods, few physical and financial assets, low levels of income and inadequate access to services (Drimie & Casale, 2009), which determine their health, political influence and general well-being. They are therefore more severely affected by stressors. The stressor acts as a trigger that reacts synergistically with existing structural conditions to move affected people into a crisis situation (Eakin & Luers, 2006). Exposure to regular shocks and/or gradual changes impact negatively on the existing situation and reduce the ability of the poor to improve their situations, often resulting in a shift to greater levels of poverty and food insecurity (Wisner, 1993; Devereux, 2001). For those people who are close to an edge or tipping point (the ultra-poor) at the time of a shock, even a minor shock can cause an irreversible or hard-to-recover-from decline in well-being (Alwang *et al.*, 2001; Devereux, 2002; Ellis, 2003), further denying them the opportunity to

accumulate a diverse set of assets. Those who have better access to assets, income and services will be more likely to cope with stressors. Similarly, such people may perceive the seriousness of a shock as temporary condition from which they can recover without undue loss to well-being, while those with fewer endowments might view it as an extreme threat and respond accordingly. The availability of assets therefore determines vulnerability.

4. Vulnerability

One of the earliest, but most widely accepted definitions of vulnerability is that of Chambers (1989:1):

> Vulnerability refers to exposure to contingencies and stress and difficulty in coping with them. Vulnerability thus has two sides: an external side of risks, shocks and stress to which an individual or household is subject: and an internal side which is defenselessness, meaning a lack of means to cope without damaging loss.

External vulnerability refers to the structural elements that determine sensitivity and risk to exposure (Moser, 1998). McCarthy *et al.* (2001) illustrate that the interactions of socio-economic, political and biophysical factors cause and shape this dimension of vulnerability. These factors include processes such as economic globalisation, the spread of infectious diseases such as HIV and AIDS, political changes, conflicts and environmental changes (McCarthy *et al.*, 2001; Drimie & Casale, 2009). These multiple processes can be global, national or local in nature, but have household level impact. Therefore, exposure is influenced by the existence of systems that either reduce the likelihood of or cause exposure. Exposure is not simply about exposure to a temporary natural disaster such as a flood or drought, but can be long-term and gradual.

Internal vulnerability concerns the ability of households to respond and cope with stressors and the actions required to overcome, or at least reduce, the undesirable effects of exposure to processes of environmental, economic, political and social change (Bohle, 2001). This dimension of vulnerability has been less well understood because the ability of people to cope in times of crisis but also with the pressures of everyday living and seasonal risks is extremely complex, context-specific and dynamic (Drimie & Casale, 2009). While some groups of people may be considered vulnerable due to criteria such as income, gender, age, disability and location, there may well be households or individuals within such categories who are not vulnerable (Webb & Harinarayan, 1999). Merely placing exclusive attention on a certain

group of people or an area defined to be at risk to exposure by means of probability theories, oversimplifies the situation (Scoones, 1996). Some people, within such groups or areas, have the ability to avoid exposure or resist its affects. This is determined by their livelihood strategies, subsequent access to assets and the ability to draw on these under normal conditions and in times of need (Moser, 1998).

Dividing vulnerability into two dimensions is useful to our understanding of what researchers are focusing on when investigating the causes and nature of vulnerability. However, such a distinction may obscure the intersections and interactions between the external and internal dimensions, and the systems in which they are embedded. Analyses of the external side of vulnerability, in terms of exposure, are often frustrated by the fact that it is virtually impossible to focus on a single or simple cause of vulnerability because the stressors are multiple and often interlinked (Casale *et al.*, forthcoming).

Vulnerability is a complex phenomenon and involves the interaction of multiple causal factors at different levels in the broader systems within which household livelihood strategies are embedded (Du Toit & Ziervogel, 2004). Furthermore, the internal side of vulnerability is highly context-specific and is often not visible. As Ellis (2003) has stressed, local people carry out their own risk assessments and diversify their livelihood patterns according to their perceptions of risk and in terms of available risk management strategies. Responses to stressors may be reactive or anticipatory. Both can have positive and negative outcomes. Extra livestock, accumulated for such an eventuality, may be sold to purchase food in times of stress. Children may be withdrawn from school in order to look for work or to carry out household chores while elder members seek employment. Natural resources may be eroded as people look for alternative sources of food (wild plants and animals), thereby undermining the sustainability of the ecological system they inhabit. A lack of awareness of the context-specific nature of risk-averse behaviour can result in the generalising of causes and their attribution to the external dimension, or at least a blurring of causes and their location (Casale *et al.*, forthcoming).

Interconnectedness of dimensions

The local availability and access to a wide variety of resources and services that encompass household assets are determined by the interplay of events, decisions and capabilities that are situated across various levels of society. Some of these may in fact act as stressors, undermining the ability to generate new assets and erode current assets. In light of these broader links, vulnerability is perhaps better understood as the property of systems or

networks, and not so much that of individuals. When we talk about vulnerable people we are actually saying something about the systems upon which they depend (Du Toit, 2005b). Vulnerability is a consequence of the functioning (or not) of these systems and the ability to cope within the existing systems and with associated dynamics. Such systems include political, social, economic and ecological systems. An understanding of vulnerability has to consider global-national/regional-local dynamics and how they are interconnected. There are numerous factors within these different levels that are interlinked and determine the ability of household livelihoods to generate assets and thereby influence the context of vulnerability (Du Toit & Ziervogel, 2004). There are backward and forward linkages whereby actions at one level will affect circumstances at another (Casale *et al.*, forthcoming).

As a result of the interconnectedness of the external and internal dimensions of vulnerability, any understanding needs to pay careful attention to the different scales at which political, social, institutional, ecological and economic processes operate (Stephen & Downing, 2001; Casale *et al.*, forthcoming). The issues that affect livelihood strategies in a particular household or place (village or town) will be different to those encountered when analysing vulnerability at a district, a provincial or a national level. A focus on one level will not say much about what is taking place at another level. This is largely because stressors intersect and interact in different ways at different levels. The impact of stressors at one level will be experienced differently at another level. What is required is a rigorous understanding of the interconnectivities and the causal links at different levels. Rather than dealing with the two dimensions of vulnerability separately, they should be integrated and understood in conjunction with the variety of stressors, their causes and how these are manifested at different loci.

5. Food insecurity

Most current definitions of food security include the phrase 'at all times' (see United Nations, 1975; World Bank, 1986; FAO, 2006) but do not distinguish between different durations and intensities of food insecurity.

> Food Security exists, at the individual, household, national, regional, and global levels when all people, *at all times*, have physical, social, and economic access to sufficient, safe, and nutritious food to meet their dietary needs and food preferences for a healthy and active life (FAO, 2001) (author's emphasis).

Such a distinction is necessary for policy development and interventions. To facilitate these processes, the concepts of chronic and transitory food insecurity were developed. Despite this the World Food Programme (WFP, 2004) notes that the distinction between populations experiencing chronic and transitory food insecurity is often unclear in that many situations have chronic underpinnings. This has much to do with seemingly vague ways in which the concepts are defined in theory and operationalised in practice (Devereux, 2006).

The temporal dimension

Chronic food insecurity is long-term or persistent in that it can be considered to be an almost continuous state of affairs. It is closely related to structural deficiencies in the local food system or economy, chronic poverty, lack of assets and low incomes which persistently curtail food availability and access over a protracted period of time (DFID, 2004; FAO, 2005). It is often a normal state of affairs. Transitory food insecurity, on the other hand, is usually sudden in onset, short-term or temporary and refers to short periods of extreme scarcity of food availability and access (Barrett & Sahn, 2001). Such situations can be brought about by climatic shocks, natural disasters, economic crises or conflict. Experiences of transitory food insecurity may arise through smaller shocks at the household level (e.g. loss of income and crop failure). While not the normal state of affairs shocks can be severe and unpredictable.

Food insecurity has a third temporal feature. Seasonal or cyclical food insecurity may be evident when there is a recurring pattern of inadequate access to food such as prior to the harvest period (the 'hungry season') when household and national food supplies are scarce or the prices higher than during the initial post-harvest period (Devereux *et al.*, 2008). It is generally considered to be more easily predicted than transitory food insecurity as it is a known and regular occurrence. Devereux (2006:4) suggests that because of its limited duration (two to three months), it is better understood as a form of recurrent transitory food insecurity, which has important linkages to chronic food insecurity. During this seasonal period, poorer households may consume or sell their limited assets to acquire food in order to survive. The depletion of assets can result in a shift from a situation of food security to one of insecurity. For those already chronically food-insecure, this will worsen their situation (Devereux, 2009) as the depletion of assets may make future experience of food insecurity more severe.

Except perhaps for seasonal food insecurity, which sometimes has a natural time frame, the other two definitions do not specify absolute time periods.

This creates the fuzziness that makes it difficult to determine exactly when transitory food insecurity ends and chronic food insecurity starts. As a means of resolving this dilemma, Devereux (2006:5) suggests that rather than being distinct conceptual and empirical categories, "they could be seen as lying at two ends of a continuum, with cyclical food insecurity in between". But this seems to oversimplify the matter as a further problem persists in that the intensity dimension is not adequately captured in current definitions.

The intensity dimension

Understanding the intensity, rather than the duration, of food insecurity may be initially critical for correct targeting of the food insecure at the time of a shock with the most appropriate immediate intervention. A focus on intensity informs us of the magnitude of the food gap (usually measured in terms of energy intake), while a focus on the duration can tell us something about the nature of the causes and assists with long-term development planning. However, a focus on intensity is also required under normal conditions as this will tell us not only how severe the existing situation is, but what it might be like in the future if conditions gradually get worse or a shock is experienced.

Due to the gradual nature of chronic food insecurity, it is often referred to as moderate food insecurity and the implication is that it is less serious than transitory food insecurity (WFP, 2005a). This suggests that less attention is likely to be given to situations that have been determined to be chronic in nature. As it results from a sudden shock, transitory food insecurity is often referred to as acute food insecurity, implying a greater food gap and greater severity (WFP, 2005a; HSRC, 2007). Consequently, emergency relief measures tend to focus on the latter, while largely ignoring the former, to the further detriment of the poor (Prendiville, 2003). This is despite the fact that a focus on the factors that cause gradual change in food security status might actually prevent shocks from resulting in extremely severe food insecurity. Devereux (2009) argues that the recent food crises in Malawi, Ethiopia and Niger could have been prevented if attention had been paid to the gradual effect of stressors that brought about the situation prior to the shocks that triggered the crises.

The practice of considering transitory food insecurity to be more serious than chronic food insecurity is questionable. While both are associated with an inability to meet basic food consumption requirements, 'chronic' has been linked to the persistent inability to do so and 'transitory' only to a temporary inability (Devereux 2006). A further assumption is that transitory food security is a rapid change from a level of food security to one of food insecurity.

According to a recent World Food Programme definition (WFP, 2004) 'transitory food insecurity affects households that are able to meet their minimum food needs at normal times, but are unable to do so after a shock'.

More likely, being moderately chronically food-insecure prior to a transitory or cyclical shock increases the risk of becoming severely food-insecure. A subsequent WFP publication reports that: 'A large number of chronically food insecure households are affected by shocks' (WFP, 2005b).

Interconnectivities between dimensions

To clarify the lived experience of food insecurity, this state can be separated into four categories relating to the intensity and temporal dimensions. These range from long-term moderate experiences to short-term severe emergencies requiring relief/humanitarian intervention, as shown in Table 1. Such a separation corrects the perception that 'chronic' implies moderate and 'transitory' implies acute. Rather both chronic and transitory food insecurity can have moderate and severe intensities. Table 1 suggests why the usual practice of focusing on transitory food insecurity ignores those who experience severe chronic food insecurity. Without separating out the intensity dimension, chronic situations are considered moderate. Consequently, severe chronic situations may be seen as normal conditions and moderate transitory situations are understood as severe and seen as warranting emergency intervention (see Prendiville's (2003) analysis of prevailing conditions in 2002 that saw food aid being supplied to Southern Africa but not to Somalia).

Table 1: Combined temporal and intensity dimensions of food insecurity

		INTENSITY	
		Moderate	**Severe**
TEMPORAL	**Chronic**	*Moderate chronic food insecurity (chronic hunger)*	*Severe chronic food insecurity (high infant mortality rate and crude mortality rate [CMR])*
	Transitory	*Moderate transitory food insecurity (e.g. seasonality)*	*Severe transitory food insecurity (emergencies)*

Source: Devereux (2006:7)

Devereux (2006) argues that there are strong negative synergies between chronic and transitory food insecurity and between moderate and severe food insecurity. There are transitory-to-chronic linkages by virtue of chronic food insecurity and poverty being the products of consecutive rapid shocks, rather than gradual changes, which result in the depletion of assets and the undermining of livelihoods. These lead to situations in which people are

unable to return to their previous lower level of food insecurity (see Carter *et al.*, 2004 for examples). There are also moderate-to-severe linkages in that most of those households which are susceptible to food crises already lead a marginalised existence and experience chronic moderate food insecurity. Even a minor shock can imperil their ability to respond positively (see Devereux, 2009 for examples). Gradual processes, such as declining land availability, the spread of HIV and AIDS and related policies that do not effectively deal with these stressors, gradually erode the resource base of this kind of household. This loss of assets undermines the ability of marginal households to cope with future shocks and changes. People may well become caught up in a trap of 'coping' (Casale *et al.*, forthcoming) as they are not able to overcome the impact of shocks and stressors to their lives.

These synergies suggest one reason why the:

> Most recent food crises (e.g. in Ethiopia, Malawi, Niger and Sudan) have affected countries – and population subgroups within those countries – that are poorer and more undernourished than global or national averages (Devereux, 2006:10).

They also suggest why shocks triggered the recent food crises in Malawi, Niger and Ethiopia, but why the same shocks had little effect on neighbouring countries (Devereux, 2009).

The interaction between chronic and transitory food insecurity is captured in Devereux's (2006) concept of composite food insecurity. Households that experience composite food insecurity are moderately chronically food-insecure most of the time and as a result are also highly sensitive to periodic food shocks. Consequently, the intensity of their experience of food insecurity is likely to fluctuate between moderate and severe. At a fundamental level, household vulnerability to chronic and transitory food insecurity are often inseparable (Devereux, 2006:11). The World Food Programme (WFP, n.d.) argues that in many countries vulnerability to food insecurity is best understood as a synthesis of past and current circumstances and events. Therefore, an exclusive focus on the effects of the current (crisis) situation is inadequate and food insecurity vulnerability assessments should include those who are currently moderately chronically food insecure during normal times.

6. Food insecurity and vulnerability combined

The examination of the temporal and severity dimensions of food insecurity along with the interconnectivities between them, which result in the notion of composite food insecurity, enable a better understanding of the concepts of food insecurity and vulnerability. Both vulnerability and food insecurity are functions of households' exposure to stressors and their ability to cope with these. Households with livelihoods that do not enable accumulation of the assets required to cope with shocks or gradual changes brought about by the systems of which they are a part will gradually deplete such assets as they have, thereby increasing their level of vulnerability to, and experience of, severe food insecurity. In this instance, food insecurity is an outcome of vulnerability (Du Toit & Ziervogel, 2004) that becomes a stressor (Casale *et al.*, forthcoming). Those who are most vulnerable to further food insecurity are those who are already experiencing food insecurity, i.e. the chronic food-insecure. Consequently, in such situations vulnerability equates with the current experience of food insecurity. The assumption that vulnerability refers to the risk of moving from a food-secure status to an insecure status is too narrow and does not capture the reality of the situation experienced by most of the food-insecure (Devereux, 2006). However, such a narrow assumption may well explain why food insecurity is most often only addressed when it becomes a crisis (Maunder & Wiggins, 2007; Devereux, 2009).

Food insecurity interventions need to be based on an understanding of what caused the stressors along with a disaggregated understanding of the effects of those stressors on households with different abilities to cope. As Devereux (2006:8) argues:

> The objective of all emergency, rehabilitation and development interventions in [food insecurity] contexts .... should be to move households from increasing vulnerability (i.e. declining ability to manage risk) to increasing resilience (i.e. enhanced ability to manage risk) over time.

This necessitates a deeper understanding of the factors that generate the stressors or shock and the ability of households to cope. Such an understanding cannot be achieved without paying close attention to the different systems involved, the stressors they generate and the diverse impacts they have in different contexts and at different levels. As Du Toit and Ziervogel (2004:6) point out, under normal conditions:

> ... food security can be achieved by a multitude of different strategies, *each* of which integrates a wide range of different approaches, environments and systems, and all of which may be dynamic and interdependent in a variety of ways. Exactly how any particular stress, change or shock affects food security will be mediated by these intervening factors [emphasis in original].

The multidimensional nature of food insecurity (and vulnerability) has implications for national level assessment frameworks of vulnerability to food insecurity that rely almost exclusively on quantitative data (e.g. Food Insecurity and Vulnerability Information Mapping Systems, Integrated Food Security and Humanitarian Phase Classification Framework). Such frameworks are unable to adequately collect and interpret qualitative information (Du Toit, 2005a). Rather, in order to fit the framework, the preference is for:

> *information that is readily quantifiable and standardised, that abstracts from local complexity and appears to sidestep non-transparency – [and which]leads not to an accurate grasp of the dynamics of a situation, but to distorted and misleading accounts that miss crucial dynamics* (Du Toit, 2005a:12).

By design, these assessment frameworks are unable to grasp the complexity and multidimensional nature of stressors, and the diversity of household sensitivity and resilience. Far more promising are local studies that adopt a more combined and multidimensional approach to understanding the effects of multiple stressors.

A recent 15-month, qualitative study undertaken in South Africa and Malawi, which took into account people's experiences of multiple stressors, has shown that this is possible (Casale *et al.*, forthcoming). The developed framework facilitated the analysis of multiple stressors within both the external and internal dimensions of vulnerability. Furthermore, it enabled a contextual understanding of the impacts of stressors on household livelihoods, access to assets, and household responses, while describing the multi-dimensional nature and dynamics of poverty, including food insecurity. The study notes that while stressors intersect and interact differently due to the context-specific nature of the experience, they also exhibit similar symptoms across the different locations, suggesting that it is probable these symptoms are more widespread. The benefit of this approach is that it identifies often 'hidden' dimensions and presents them as tangible issues. As such, this type of study provides a more comprehensive understanding of stressors and their impact,

and provides valuable information for the design of policies and interventions aimed at addressing food insecurity.

7. Conclusion

South Africa's experience of chronic food insecurity deserves more in-depth attention. Recent high food prices and changes in the world food situation are exacerbating the conditions of afflicted households. These and other stressors may worsen their situation, leading to increases in the severity of their experience of food insecurity. The critique of vulnerability and food insecurity show that those households with sensitive livelihood strategies (the chronically poor and food-insecure) are those most likely to be affected by stressors (shocks and gradual changes). The critique also shows that the various dimensions included in these concepts need to be combined during assessments because of their interrelationships and the synergies that exist between the different dimensions. The concepts of food insecurity and vulnerability also need to be understood in terms of the interconnectivities between the different dimensions and the systems in which these states exist.

The livelihood strategies that determine households' sensitivity and resilience to stressors and their ability to accumulate necessary assets (resources and services) to acquire food should be understood in terms of the systems in which they are embedded. While these systems might improve households' abilities to cope with stressors, they can also *act* as stressors, thereby undermining the resilience of households. What transpires depends largely on the context and the levels at which these stressors intersect and interact.

Given that prevailing structural conditions are largely responsible for the persistence of food crises in sub-Saharan Africa and that they are significant components of the multiple stressors that are underpinning the food security crisis in Southern Africa, it is important to understand the causes, nature and impact of these conditions and stressors. Consequently, Hendriks's call for local-level, and in-depth qualitative studies of households' experiences under 'normal' conditions is vital. Such studies will enable the determination of how households currently attempt to address existing chronic food insecurity, cyclical/seasonal food insecurity, and how they may fare during a temporary shock or crisis situation. However, these studies must be multidimensional in approach to the extent that they consider the causes and the nature of stressors at the various scales and their differential impacts in diverse contexts. While illuminating context-specific constraints, they will also indicate the existence of commonalities across sites. Therefore, this type of study will enable the broader understanding of the existing causes of chronic food insecurity, the

differential impacts on various households, the possible effects of future shocks, and what developmental initiatives are required to ensure improved food security and resilience to stressors at different scales. Furthermore, in-depth studies of this nature will provide the information that is required for a better understanding of the context in which larger quantitative studies, such as national assessments of food and nutrition insecurity, and those studies whose data is spatially located by means of geographical information systems (GIS). Subsequent developmental programmes, along with necessary crisis responses, should aim at strengthening livelihood strategies and enabling people to better manage their sensitivity to stressors.

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