Regional Network for Equity in Health in Southern Africa

DISCUSSION Paper NO. 22

Food security, rural development and health equity in Southern Africa

Dr Mickey Chopra

University of the Western Cape
South Africa

Regional Network for Equity
in Health in Southern Africa (EQUINET)

EQUINET DISCUSSION PAPER NUMBER 22

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This paper has been produced with the support of
Rockefeller Foundation

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EXECUTIVE SUMMARY

Up to two-thirds of all people in east and southern Africa (ESA) live in rural areas, and three-quarters of them live below the poverty line. Local agriculture is crucial to their survival. In southern Africa, agriculture makes up 35% of the region's gross domestic product (GDP) and 13% of its total export earnings. In addition, about 70% of the population of southern Africa depends on agriculture for food, income and employment. These figures suggest that agriculture and food security still play a fundamental role in determining the development and health of the poorest in southern Africa, especially in the light of the recent widespread food crisis in the region that plunged more than 16 million people into starvation.

The Regional Network for Equity in Health in Southern Africa (EQUINET) recognises the importance of food security in health equity and has commissioned this paper to explore equity concerns around food security and nutrition within the SADC and East Africa region, drawing information from available secondary data. This paper aims to analyse the current food security and nutrition situation in the region, as well as the relevant health, equity and policy issues, in order to propose areas for policy and programme engagement and for further research and debate by EQUINET.

The findings of this paper are that food security and nutrition must be given high priority if actions to improve health equity and socio-economic development across the region are to succeed. The following five reasons are put forward:

- Levels of poverty, hunger and undernutrition are worsening in ESA, even though they are improving in almost every other region. This undermines the achievement of UN Millenium Development Goals in this region.
- Instead of the potential virtuous cycle that could be created between improved nutrition and improved economic wellbeing, ESA is currently caught in a vicious cycle of worsening poverty, hunger and undernutrition. This exaggerates inequalities in income and health, and increases the vulnerability of the poor.
- Proven effective interventions indicate that public policy can make a difference, that nutritional improvements can be effected, even under conditions of poverty, and that these can have positive impacts on economic wellbeing.
- Implementing public policies that address food security provides an opportunity to deal with the demands of AIDS, the challenges

of the competing signals from global trade to health and development and the challenges to equitable public policy in the current governance of the food supply system.

- Confronting poverty and hunger provides one further area where alternatives can be built that promote policy objectives of justice and equity. Interventions are needed to build a multi-disciplinary and integrated response to food security and nutrition, with a focus on fair trade, gender inequalities and community control over productive resources. In other words, these interventions need to ensure food sovereignty.

The above reasons suggest that equity in health will be difficult to achieve in this region unless more explicit attention is paid to the underlying problems of undernutrition and food security. These problems are being shaped by larger forces such as trade rules, the corporatisation of the food supply chain, HIV and AIDS, and gender inequalities. In this context, this paper set out to identify areas of common action that would strengthen equity in food security, nutrition and health outcomes. It found that an equity programme should focus on the following areas:

- Build civil–state alliances around a programme of action that links a food sovereignty perspective with a supporting and equitable public policy.
- Promote further assessment of the links between trade and health in the region to feed into advocacy for trade policies and agreements that strengthen public health.
- Support, inform and evaluate policies and initiatives that provide safety nets to those most severely affected by unfavourable trade and agricultural policies, and by HIV and AIDS.
- Continue to examine how gender inequalities exacerbate the impact of globalisation and HIV and AIDS on the poorest families and decrease the efficiency of policy responses. Propose suitable programme and policy responses for these problems.

FOOD SECURITY, RURAL DEVELOPMENT AND HEALTH EQUITY IN SOUTHERN AFRICA

1. INTRODUCTION

Addressing rural poverty and agricultural failure is central to any response for addressing inequalities in eastern and southern Africa (ESA). Up to two-thirds of all Africans in this region live in rural areas, trying to make a living from often marginal land with little opportunity to earn wages. Three-quarters of those living in rural areas also live below the poverty line. Agriculture contributes 35% to the southern African regional GDP and 13% of total export earnings (SADC, 2004). In addition, about 70% of the population of the region depends on agriculture for food, income and employment. The impact of immediate factors such as drought, flooding and unseasonal weather have combined with underlying factors such as continual poverty, effects of structural adjustment programmes and HIV and AIDS to undermine food security and the state's capacity to respond to household food insecurity. In 2003 this resulted in more than 16 million people in southern Africa suffering from food shortages. More than half the Zimbabwean population, over a third of the populations of Malawi and Lesotho, a quarter of all Zambians and one in 20 Mozambicans needed emergency assistance up until the harvests in 2003 (Lambrechts and Barry, 2003).

This paper will argue that there are at least five good reasons why food security and nutrition should be given high priority in actions to improve health equity and economic development across the region (adapted from Devereux and Maxwell, 2001):

- Levels of poverty, hunger and undernutrition are worsening in ESA, even though they are improving in almost every other region. This undermines the achievement of UN Millenium Development Goals in this region.
- Instead of the potential virtuous cycle that could be created between improved nutrition and improved economic wellbeing, ESA is currently caught in a vicious cycle of worsening poverty, hunger and undernutrition. This exaggerates inequalities in income and health, and increases the vulnerability of the poor.

- Proven effective interventions indicate that public policy can make a difference, that nutritional improvements can be effected, even under conditions of poverty, and that these can have positive impacts on economic wellbeing.
- Implementing public policies that address food security provides an opportunity to deal with the demands of AIDS, the challenges of the competing signals from global trade to health and development and the challenges to equitable public policy in the current governance of the food supply system.
- Confronting poverty and hunger provides one further area where alternatives can be built that promote policy objectives of justice and equity. Interventions are needed to build a multi-disciplinary and integrated response to food security and nutrition, with a focus on fair trade, gender inequalities and community control over productive resources. In other words, these interventions need to ensure food sovereignty.

Each of these five reasons will be analysed, backed up by empirical evidence, to illustrate the changes in policies, institutions, relationships and actors involved in food security at different levels from global to household and their impact on issues of equity. The paper will then go onto outline the implications for policy, advocacy and research. In particular, it will assess the following issues in relation to equity:

- public sector policy and programmes – for example, the need to broaden the focus of a food policy from a narrow one based on household food security to one that recognises the bigger changes taking place in the production, distribution and marketing of agricultural products and how this impacts upon public health and health equity;
- civic education and civil society advocacy around food security and the public policies that support it; and
- knowledge and evidence gaps in support of these policies and programmes and the research agenda that this implies.

2. POVERTY, HUNGER AND UNDERNUTRITION IN ESA

2.1. Poverty

There is a great deal of controversy surrounding the changes in global poverty levels during the last two decades. It is generally accepted, however, that many millions in countries such as China and East Asia have been lifted out of poverty (FAO, 2003). The picture is more mixed in South Asia and Central and South America but there is consensus that poverty levels in sub-Saharan Africa, especially in the ESA region, have worsened considerably. Roberts' (2004) recent appraisal of the progress towards achieving the Millennium Development Goals in ESA makes for somber reading in this respect. Although nearly all countries in the region achieved economic growth during the 1990s, it was at a much lower rate than the decade before and not high enough to reduce the absolute numbers of people slipping into poverty. The benefits of this growth were unequally distributed between rich and poor. In fact, five countries in southern Africa (Namibia, Lesotho, Botswana, South Africa and Zimbabwe) are amongst those countries with the most unequal distribution of wealth in the world. Not surprisingly, in light of the HIV epidemic, the Human Development Index was lower in 2002 than 1990 in all ESA countries, apart from Mauritius and Mozambique (Roberts, 2004).

A few statistics illustrate the challenges that many Africans face (taken from World Bank, 2002:10):

- Africa has the lowest density of paved roads of any of the world's regions, due to relatively sparse population, low investment in roads and high road-maintenance costs. One-third of Africa's people live in landlocked countries without a seaport, resulting in higher transport costs in order to access international markets.
- Walking is the principal means of transport for 87% of rural households in Burkina Faso, Uganda and Zambia, according to a recent study.
- Less than half the people in Africa have access to safe drinking water.
- Only about 5% of Africa's rural residents have access to modern electricity. The rest depend on traditional fuels, mainly wood and cow dung, for cooking, warmth and light. This leads to increased deforestation, which increases the severity of seasonal weather systems.
- Very few African villages have any telephones. It is estimated that

> the number of people with telephone lines is 25 times greater in urban than rural areas of Africa. The disparity of 'teledensity' (number of lines per person) between urban and rural areas in Africa is estimated to be as high as 25:1. (World Bank, 2002:10)

While some commentators, especially from the North, consider the lack of good governance and accountability as the major reasons for the perpetual poverty many African nations seem to be mired in, the evidence points to deeper structural and economic factors. For example, the backlog of poor infrastructure even in African countries with good governance structures is enormous (see Table 1).

Table 1: Backlog of infrastructure development in Africa

The infrastructure of six African countries lauded for vastly improving governance compared with other developing countries outside Africa

	Average for six African countries	Average for non-African developing countries
Paved roads per person	0.01 km	4.49 km
Electricity consumption per person	118.5 KwH	1,227.9 KwH
Public health expenditure per person	US$6.20	US$87.50
Primary education: pupil-to-teacher ratio	44.7:1	27.6:1

Source: Sachs (2004)

2.2. Hunger and undernutrition

> *FAO'S latest estimates signal a setback in the war against hunger. The number of chronically hungry people in developing countries declined by only 19 million between the World Food Summit (WFS) baseline period of 1990–1992 and 1999–2001.*

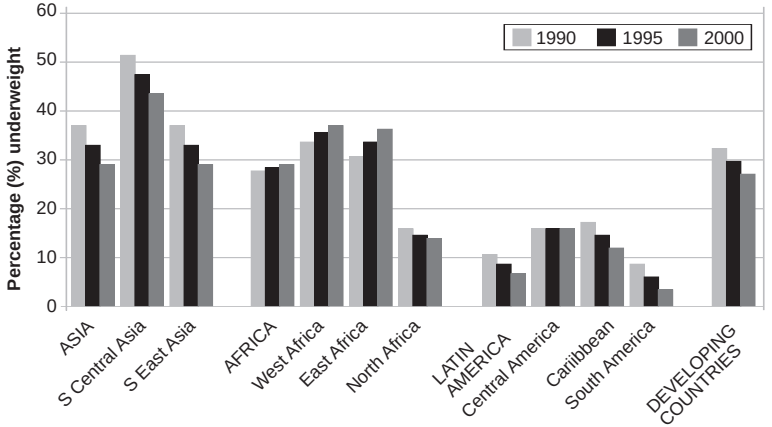
These opening lines of the 2003 FAO Food Insecurity Report (FAO, 2003) illustrate the global failure to fulfil a basic right for millions of people. The reality is even worse than this. Whilst there were reductions in the number of chronically hungry people in the first half of the 1990s, between 1995

and 1997 the number increased by over 18 million. Every day 799 million people in developing countries, about 18% of the world's population, do not consume enough calories to be able to perform everyday tasks. In South Asia one person in four goes hungry, and in sub-Saharan Africa it is as high as one in three. About 180 million children under the age of five were underweight in 2000: 30% of children in Sub-Saharan Africa and 48% of those in South and Central Asia (ACC/SCN, 20040). This results in mental impairment, poor school performance, increased vulnerability to disease and death, and reduced work capacity in adulthood.

Whilst hunger is difficult to measure, the situation regarding the proportion and numbers of people who are undernourished is even more bleak. The number of undernourished people actually increased by 4.5 million per year during the second half of the last decade. Twenty six countries experienced increases in their numbers of undernourished people. Furthermore these countries were predominantly those that already had a large proportion of their population undernourished (greater than 20%). According to FAO, the number of hungry people in these countries rose steadily for nine years (from 1992) increasing by almost 60 million (FAO, 2003). The Millenium Development Goal of halving the percentage of hungry people by 2015 is further away than ever. Tragically, every seven seconds, a child under the age of 10 dies directly or indirectly due to hunger somewhere in the world. More than 2 billion people worldwide suffer from 'hidden hunger', or micronutrient malnutrition. This leaves children and adults mentally and physically stunted, deformed or blind, condemning them to a marginal existence.

When we focus more closely on childhood undernutrition, as measured for instance by low weight for age (the reduction of which is another official Millenium Development Goal) it appears that the situation in sub-Saharan Africa is particularly dire (see Figure 1 on page 8). Whilst the goal of halving the proportion of underweight children has been achieved in South America, other areas have had less success. In Asia the drop in child malnutrition rates has been relatively small, from 36% to 29% (with China contributing a large proportion of this). In sub-Saharan Africa the proportion and absolute number of malnourished children has actually increased (see Figure 1). Eastern Africa is the subregion experiencing the largest increases in numbers of underweight children –projected to increase by 36% from 1990 to 2005. Findings for stunting, or extreme shortness of stature – which reflects long-term undernutrition – and extreme thinness, or wasting, are similar (ACC/SCN, 2004).

Figure 1: Trends in child malnutrition in developing countries 1990-2000

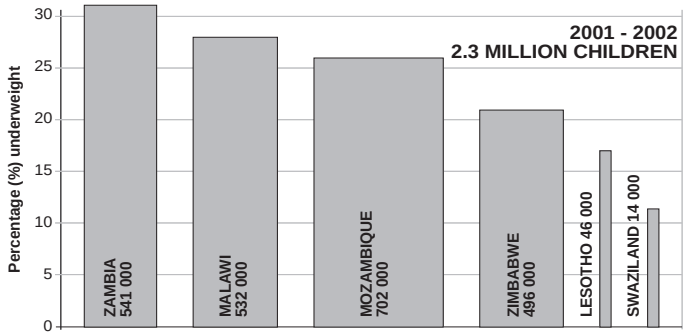


(Source: ACC/SCN, 2004)

Even more depressing is the lack of progress for women. According to the 5th Report on the World Nutrition Situation, only three out of the ten African countries with maternal nutrition data showed a decline in the prevalence of severe maternal undernutrition (BMI<16) in the last decade (ACC/SCN, 2004).

A recent UNICEF study provides some important insights into the present situation regarding nutrition in the southern African region and its relationship to HIV and AIDS (UNICEF, 2003a). The study examined all available large-scale nutritional survey data over the last ten years in Lesotho, Malawi, Mozambique, Swaziland, Zambia and Zimbabwe. The study found that the slow national trend for improvement in nutrition in the 1990s ceased by the end of the decade. The latest data from Zimbabwe and Zambia show deterioration in 2001–2003. The levels of malnutrition remained shockingly high in Malawi and Mozambique with more than 30% of children exhibiting stunted growth. Overall, 2.3 million children are underweight in the six countries (Figure 2). Importantly, these national figures hide important sub-national variations with some districts showing distinct improvements whilst others have deteriorated sharply.

Figure 2: Underweight children in Southern Africa



(Source:UNICEF 2003a)

2.3. Undernutrition and inequality

The Commission for Macroeconomics and Health (2001) summarised the results of a range of studies examining the role of population health and economic growth:

"The difference in annual growth, therefore, accounted for by LEB (life expectancy at birth) between a typical high income country (LEB=77 years) and typical least developed country (LEB=49 years) is about 1.6% points per year, which cumulates to enormous effects over time. In short, health status seems to explain an important part of the difference in economic growth rates, even after controlling for standard macroeconomic variables." (ibid:24)

Much of the difference in the impact of life expectancy at birth on economic development is due to childhood nutrition and health outcomes. Box 1 is taken from 5th Report on the World Nutrition Situation (ACC/SCN, 2004) and details two studies, among many, that illustrate the long-term impacts of both positive and negative nutritional interventions on individual development. Iron deficiency in the 6–14 month age group impairs the intellectual development of 40–60% of the developing world's children (Grantham-McGregor and Ani, 2001). Iodine deficiency in pregnancy causes as many as 20 million babies a year to be born intellectually impaired. It is estimated that this lowers the average IQ of those born in iodine-deficient areas by 10–15 IQ points (Caulfield et al, 1998).

There is now a plethora of rigorous studies documenting the critical role of macro- and micronutrients on brain and cognitive development (Black, 2003; Mendez and Adair, 1999). Economists have started to translate this

nutritional deficit into actual losses at a macro-economic level. For example, Horton and Ross, using a tight econometric model, estimate that just three types of malnutrition – protein-energy malnutrition, iron deficiency, and iodine deficiency – are responsible for 3–4% of GDP loss in Pakistan in any given year and 2–3% of GDP loss in Vietnam (Horton and Ross, 2003). Even if we take a conservative estimate of 1% of GDP, then the annual cost for countries in South Asia is US$5.9 billion, and for countries in Africa US$9.2 billion. The Nobel Laureate economist Robert Fogel has even suggested that approximately half of the economic growth achieved by the UK and a number of western European countries by 1980 could be attributed to better nutrition and improved health and sanitation conditions – social investments made as much as a century earlier (Fogel, 1994).

Box 1: Impact of early nutrition on development

Zimbabwe

In 2000, a study in rural Zimbabwe isolated the impacts of exposure to the 1982–84 drought on 665 children. The drought resulted in an average deficit in height of 2.3cm and 0.4 grades of schooling. Had the median pre-school child in this sample had the height of a median child in a developed country, by adolescence, he/she would have been 4.6cm taller, would have completed an additional 0.7 grades of schooling and would have started school seven months earlier. The authors estimate that this height deficit and related loss of schooling and potential work experience results in a loss of lifetime earnings of 7–12%, and note that this is likely to be an underestimate of the true losses.

Guatemala

A study in Guatemala considered the impact of a 1970s community-level experimental nutritional intervention in rural Guatemala on several different education measures over the life cycle. These measures were used to estimate the functional benefits of a nutritional intervention (a high protein-energy drink, atole) given to children during the critical period from the age of six months (roughly when complementary feeding was introduced) until they were 24 months old. The preliminary results indicate significantly positive and fairly substantial effects of the atole nutritional intervention on many educational and cognitive outcomes:

- the probability of attending school and of passing the first grade;
- the grade attained by age 13 (through a combination of increasing the probability of ever enrolling and reducing the age of enrolling);
- the grade completion rate per year in schooling;
- the highest grade completed; and
- adult cognitive achievement scores.

As seen above, there are important education-related effects that appear to persist well into adulthood. These education effects will result in lifetime income losses, the magnitude of which depends on how the Guatemalan and migrant labour markets reward these attributes.

(Source: ACC/SCN, 2004)

Reducing hunger and malnutrition is critical if the MDGs are to be attained. Box 2 highlights some of the ways in which good nutrition underpins six of the MDGs.

Box 2: Nutrition and the MDG Goals

Goal 1: Eradicate extreme poverty and hunger
Malnutrition erodes human capital, reduces resilience to shocks and reduces productivity (impaired physical and mental capacity).

Goal 2: Achieve universal primary education
Malnutrition reduces mental capacity. Malnourished children are less likely to enroll in school, or more likely to enroll later. Current hunger and malnutrition reduces school performance.

Goal 3: Promote gender equality and empower women
Better-nourished girls are more likely to stay in school and to have more control over future choices.

Goal 4: Reduce child mortality
Malnutrition is directly or indirectly associated with more than 60% of all child mortality. Malnutrition is the main contributor to disease in the developing world.

Goal 5: Improve maternal health
Maternal health is compromised by an anti-female bias in the allocation of food, health and care. Malnutrition is associated with most major risk factors for maternal mortality.

Goal 6: Combat HIV and AIDS, malaria, and other diseases
Malnutrition hastens onset of AIDS among those who are HIV-positive. Malnutrition weakens immunity to certain infectious diseases and contributes to their increased severity.

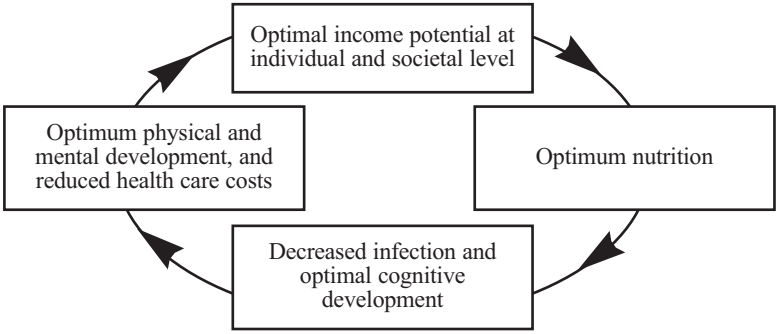
(Source: ACC/SCN, 2004)

The evidence presented in Box 2 suggests that there is potentially a 'virtuous cycle' between good nutrition, health and economic growth (see Figure 3 on page 12).

However, instead of enjoying this 'virtuous cycle' of improvements in nutrition leading to improvements in health and ultimately in economic development, many in the region are trapped in a negative 'vicious cycle' of early malnutrition, poor health and poverty. More importantly, unlike

short-term economic shocks, early shocks to the growth and development of children are partially irreversible, even with intensive interventions later in life. In many cases, the damage is done even before the child is born. Being born with a low birth weight (below 2.5kg) increases the risk of becoming underweight and of suffering the subsequent negative consequences (Gillespie et al, 2003). Undernourishment among mothers is a major reason why babies are born with a low birth weight. One estimate is that about 50% of all growth retardation during gestation in rural developing countries is attributable to small maternal size at conception and low gestational weight gain (or inadequate food and energy intake during pregnancy) (Kramer, 1987). Malnutrition among infant girls is therefore one of the main routes for the inter-generational transmission of poverty.

Figure 3: The virtuous cycle of improved nutrition and economic wellbeing



Poorer people spend much more of their time and income trying to secure food. It is the loss of access to food that normally drives people to leave their homes to become either economic migrants or refugees. Increasing lack of food security is also responsible for the increasing vulnerability of millions of families and individuals across the region especially women. With increasing landlessness and diminishing returns on agricultural produce, increasing numbers of people across the region are looking at other means to secure food rather than through agricultural production. In this context, undernutrition can play a critical role in limiting the capacity of individuals to work their way out of poverty.

There are also the direct costs to households of seeking care and treating the increased episodes of illness due to malnutrition. For many of the poorest populations, living in the poorest countries, the rise in user fees and out-of-pocket expenses as a result of recent health service reform has significantly increased the direct costs of ill health (McPake, 1993). Finally, there is the lost income due to incapacity to work due to either the direct effects of malnutrition or the associated morbidity (Goodge and Govender, 2001).

3. EFFECTIVE PUBLIC POLICIES

The UN Millenium Development Goal task team for Hunger (2004) reports malnutrition rates according to the farming system used. They find that forest-based (7%), highland-perennial (8%), pastoral (8%), root crops (10%), agro-pastoral millet/sorghum (10%), highland temperate mixed (10%), maize mixed (13%) and cereal-root crops mixed (15%) farming systems account for 81% of the underweight in sub-Saharan Africa, with all but the first three of these thought to be of medium to high potential in terms of reducing poverty and hunger. They suggest that this finding indicates that there is a significant potential to reduce hunger and malnutrition, and that this is dependent upon effective public policies that are sensitive to the local terrain. This section supports this position, and argues that public policy can make a difference to improving nutrition even under conditions of poverty.

It is important to remember that malnutrition is not just caused by hunger or starvation. Indeed in many settings there is enough food but still many are malnourished. UNICEF has developed an elegant conceptual framework capturing the major causes and possible relationships between the various causes of malnutrition (Figure 4). For each part of the framework the poor are worse off. They are more likely to be born with low birth weight (Gillespie et al, 2003) to mothers who are undernourished (Kramer, 1987), and are less likely to receive energy-rich complementary food (Brown et al, 1998) or iodised salt (UNICEF, 1998). The only advantage they have, and this is only in poorer countries, is that they are more likely to be breastfed, and for longer, than their richer counterparts (Butz et al, 1984). However, the risk of transmitting HIV through breast milk is now eroding this tendency in some regions. Poorer children also live in environments that predispose them to illness and death (Esrey, 1996). They are less likely to live in households with safe water or sanitation (Huttly et al, 1997) and more likely to be exposed to indoor air pollution – a result of the greater reliance on burning coal and biomass fuel (eg: wood and animal dung) for cooking and heating, coupled with inadequate ventilation (Bruce et al, 2000).

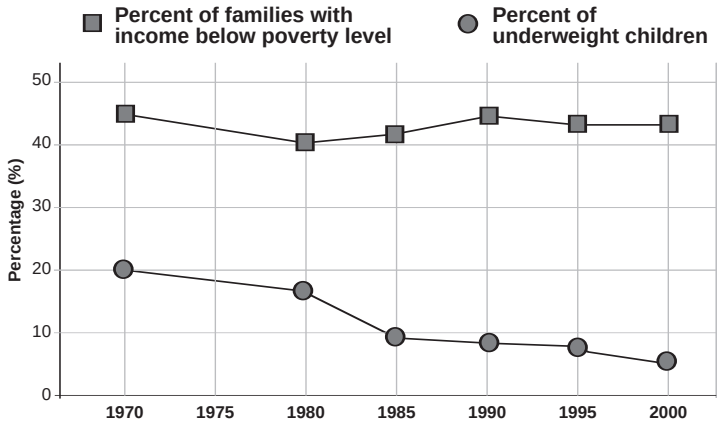
Effective public policies can address these inequalities. There is evidence that significant improvements can occur across populations when suitable policies are in place. This is signalled for example by the significant differences between countries in the rates of change in child health and nutritional status. For example, in a comparison between Sri Lanka, Indonesia, the Philippines and Thailand, Sri Lanka and Thailand showed rapid improvement in nutrition in the 1980s to 1990s. Indonesia showed slower but consistent improvement, and the Philippines little progress (Mason, 2001).

Policies providing for female education, social safety nets, affordable food and public health services are identified to have contributed to this difference. The impact on child nutrition and survival of widespread female education in Sri Lanka is well documented, with 77% of married women in Sri Lanka now having above primary schooling. Drèze and Sen (1989) also highlight the establishment of social safety nets, especially the free or heavily subsidised distribution of rice, providing a minimum consumption floor for the poor, as important reasons for the impressive performance of Sri Lanka. In a more recent review, Save the Children UK (2004) emphasises the provision of a universal, equitable and efficient public health system as an important reason for the low levels of maternal and child mortality in this country.

An interesting feature of the success in Thailand was the incorporation of nutrition as an important part of the National Economic and Social Development Plan (NESDP). This led to the establishment of an extensive community-based network of village health communicators and volunteers with existing village committees and leaders. The focus of these groups was the fulfilment of basic needs such as optimal nutrition (as measured by community-based growth monitoring and promotion) and education (Tontisirin and Winichagoon, 1997).

At a regional level, malnutrition in Latin America decreased from an estimated 21% in 1970 to 7.2% in 1997, while the rate of poverty (measured by income level) decreased only slightly over the last three decades, from 45% in 1970 to 44% in 1997 (Figure 5).

Figure 5: Changes in malnutrition and poverty in Latin America 1970–2000



(Source: UNICEF, 1998)

These trends show that the reduction of malnutrition is not solely dependent on increases in income. In Latin America, the gains in reducing malnutrition are attributed, at the underlying level, to good care practices (such as improved complementary feeding) and access to basic health services, including family planning, and water/sanitation services; and, at the basic level, to women's empowerment in terms of their education and the cash resources they control (UNICEF, 1998).

Wagstaff and Watanabe (2001) have calculated the level of inequality in the distribution of stunting and plotted it against the general inequities in income for twenty countries. Not surprisingly, countries with unequal income distributions also tend to have unequal distributions of malnutrition. Unequal distribution of purchasing power, prima facie, leads to an unequal distribution of food spending (intake), health spending and utilisation of health services, and consequently unequal health outcomes.

But the authors go on to point out that "what is more interesting, perhaps, is the fact that the fit of the bivariate regressions is fairly bad – there are, in other words, many countries that buck the trend. Nepal and Peru, for example, have roughly the same level of income inequality, and yet Nepal has far lower levels of inequality in stunting and underweight than Peru. This implies that there must be some form of mechanism in these countries that breaks the link between poverty and malnutrition. For example, in the case of Egypt, which tends to positively deviate from the mainstream trend, it would be of interest to explore what factors, given the level of consumption inequality, contribute to relatively low inequalities in malnutrition." (ibid:12)

Public policies and interventions therefore have the potential to significantly improve equity. The ability of southern African states to implement such policies is however becoming increasingly constrained. The factors affecting this are outlined in the next sections.

4. KEY DIFFERENCES WITH THE PAST

4.1. HIV and AIDS

There have been a number of comprehensive reviews of the impacts of the HIV and AIDS epidemic on the agricultural sector and on food security (Hadaad and Gillespie, 2002; de Waal and Whiteside, 2003). The evidence from these reviews indicate the following:

- The disproportionately severe effects of AIDS on relatively poor households increases rural inequality.
- A reduction in household assets and wealth due to AIDS leads to less capital-intensive cropping systems for severely affected communities and households.
- A high rate of deaths from AIDS undermines the transfer of knowledge of crop husbandry and marketing to succeeding generation of African farmers.
- HIV and AIDS further undermine nutritional status and health as diets worsen because of decreased food security and also because of a shift to less nutritious but more easily cultivated crops such as cassava.

The insidious role that HIV and AIDS is playing in undermining development in the region is shown by comparing the recent droughts to the earlier droughts in 1991–92. The 1991–92 drought was far more severe and yet there far fewer reported deaths from starvation were reported. Some commentators are now arguing that, just as HIV destroys the immune system, it has now disabled the body politic – a 'new variant famine' (de Waal and Whiteside, 2003). Through its devastating impact on economically active members of society the epidemic is eroding the capacity of many communities to cope with the usual challenges that poverty brings. Young people are inheriting debts and, at the same time, having to grow more food to feed more dependents without the luxury of having gone through an apprenticeship in agricultural techniques and with less opportunity for accessing credit and knowledge through community and state institutions. In Zimbabwe, a study found that output on smallholder farms shrank by 29% for cattle, 49% for vegetables and 61% for maize if the household had suffered an AIDS-related death (UNAIDS, 2002; UNAIDS, 2003). Overall, in maize production, there was a decline of 54% of the harvested quantity. The amount of land planted to cotton decreased by about 34% and marketed output by 47%; while groundnut and sunflower production experienced an average decline of 40% (Kwaramba, 1997).

Perhaps what is less appreciated are the ways in which worsening livelihoods and food security can directly or indirectly affect the transmission of HIV:

- *Malnutrition affects immune systems:* The impact of malnutrition on infectious diseases is well established. There is a vast body of literature from Africa showing the crucial role macro- and micronutrients play in the immune response to infectious diseases and ultimately in survival (see Tomkins and Watson, 1993 for the review). It has been estimated that the underlying cause of over half of all infant deaths is malnutrition. Substantial reductions in childhood mortality have also been achieved with vitamin A supplementation (Beaton et al, 1993). The impact of HIV is particularly important as the virus directly attacks the immune system. Malnutrition and HIV work in tandem. HIV compromises nutritional status and this in turn increases susceptibility to opportunistic infections. Malnutrition, on the other hand, exacerbates the effects of HIV by further weakening the immune system. Clinical studies show that HIV progresses more rapidly in individuals with compromised nutrition.

  Malnutrition in HIV and AIDS presents as weight loss and muscle wasting, altered metabolism and the increased use and excretion of nutrients. Deficiencies of vitamins and minerals such as vitamins A and E, B vitamins, selenium and zinc, which are needed by the immune system to fight infection, are commonly observed. Wasting has been long recognised as an important risk factor for mortality in HIV. For example, one study (Semba R et al, 1995) found that HIV-positive intravenous drug users with wasting (more than 10% loss of weight from baseline to last visit before death) had an approximately eightfold higher risk of mortality compared with controls, after adjusting for CD4 cell counts. The exact direction of causation (i.e. the degree to which malnutrition is the cause of, as opposed to being the result of, the progression to AIDS) is difficult to ascertain. Unfortunately there have only been a few nutrition intervention trials with HIV patients in both developed and developing countries.
- *High-risk behaviour and poverty/ hunger:* Some of the personal coping strategies used by people in times of food insecurity can put them at higher risk of HIV infection. There is widespread evidence that the migration of men and women and the sexual exploitation of women are the two most important factors facilitating the rapid spread of HIV across the region. Both of these phenomena can be traced to poor food security in rural areas.
- *Sexual exploitation and poverty/ hunger:* Poverty and hunger can disempower people and place them at risk of sexual exploitation

by those who control access to resources, whether it is within households or in the wider community. This applies especially to young women and girls.

The problems listed above suggest that the policy response to the crisis wrought by the HIV and AIDS epidemic cannot be only short-term. If we are to take the concept of the 'new variant famine' seriously, we need a more long-term approach that attempts to strengthen livelihoods and food security. This, in turn, requires the participation of infected individuals, households and communities, as well as the state. It needs to be supported by a critical re-examination of the global contexts in which possible regional and national responses are shaped.

4.2. Impact of globalisation and trade liberalisation

There is increasing debate concerning the many impacts that globalisation and trade liberalisation are having on agriculture and food security in sub-Saharan Africa and the possible policy responses. Countries in the region have rapidly moved away from the goal of securing national food security through investing in local agriculture and rural livelihoods towards focusing upon a few key agricultural exports and relying upon food imports to feed an increasingly urbanised population.

The shift away from national food sufficiency is a global phenomenon – international cereal, wheat and rice imports have grown from 80, 46 and 6.5 million metric tonnes respectively in 1961 to 278, 120 and 27 million metric tonnes respectively in 2001. The fastest growth of food imports has occurred in Africa, which accounted for 18% of world imports in 2001 (up from 8% just fifteen years previously) (FAO, 2004). This has occurred partly because of a decline in agricultural and rural investment in Africa, leading to a decline in agricultural productivity. Agricultural productivity per worker for the region as a whole has fallen by about 12% from US$424 in 1980 to an estimated US$365 per worker (constant: 1995 US$) in the late 1990s. Agricultural yields have also been level or falling for many crops in many countries in the southern African region. Growth in agricultural output has arisen mostly from expansion in the area under cultivation. The UN MDG Hunger Task Team (2004) interim report summarises the consequences:

> *Expanding the area under food production is inherently unsustainable, as the supply of new lands in densely populated areas of Africa is largely exhausted or must be maintained as natural systems for biodiversity conservation and other ecological services. The first effect in Africa and elsewhere in*

> *the tropics has been to expand into land that was previously available for fallows. Leaving land fallow allows land under cultivation the necessary time to recover from the effects of the crops taking nutrients from the soil. As a result of the reduction or elimination of fallows, soil fertility has fallen dramatically in many places, and yields are reducing with time. As the land becomes exhausted, there develops a serious tendency to continually sub-divide land among family members, which leads to smallholdings that are too small to produce a family's food. (UN MDG, 2004:52)*

Significantly, the yields of most important food grains, tubers and legumes (maize, millet, sorghum, yams, cassava and groundnuts) in most African countries are no higher today than in 1980. Average annual cereal yields are 1,120 kilograms per hectare, compared with 2,067 kilograms per hectare for the world as a whole. The environmental impacts of deforestation and drought, floods and the loss of topsoil are being compounded by the lack of investment. Only about 4.2% of land under cultivation in Africa is irrigated. This compares with 14% in Latin America and the Caribbean, a region with similar population densities and resource endowments (World Bank, 2002). Fertilizer application is 15% lower today than in 1980. The number of tractors per worker is 25% lower than in 1980 and the lowest in the world. Africa's share of total world agricultural trade fell from 8% in 1965 to 3% in 1996 (ibid).

For years, public investment in agriculture has been falling, not rising. The UN reports that countries with low levels of food security spend two to three times more on defense than agriculture, with investments in agriculture declining further over the past decade. In countries where 20–35% of the population is defined as food insecure, agricultural spending averaged 7.6% in 1992 and 5.2% in 1998. For countries with more than 35% of their population suffering food insecurity, agricultural spending in 1992 was 6.8% and declined to 4.9% in 1996, the last year for which data is available (International Food and Policy Research Institute, 2004).

World Bank lending for agriculture declined dramatically between 1980 and 2000, from about 31% of its total lending portfolio in 1979–81 to less than 10% in 1999–2000. Similarly, from fiscal years 1992 to 1997, USAID reduced its funding to agriculture programs from 10% of its total obligations to only 5%. It cut agricultural investments in Sub-Saharan Africa during that period by 57%, to about US$80 million. By 2000, African agriculture received less US development assistance than any other sector (IFPRI, 2004). In recent years America gave a negligible $4m a year to Ethiopia to boost agricultural productivity, but then responded with around $500m in emergency food aid in 2003 when the crops failed (much

like its paltry contribution of less than $50m a year for Africa to prevent AIDS during the 1990s but now spending $3 billion per year to treat the disease after it has spread to more than 30m Africans) (Sachs, 2004).

The shift of resources away from rural areas and agriculture can be traced to the increasing role of food aid in the 1960s. This provided cheap cereals and encouraged national governments to focus investment on large-scale industrial developments. The New Deal price support programmes began to lead to large accumulation of surplus wheat in the US after the Second World War. Through the Public Law 480 the US was able to export wheat to developing countries at concession prices. Wheat exports grew 250% between 1950–1970, with the share of developing nations increasing from 19% in the late 1950s to 66% in the late 1960s. In this period per capita consumption of wheat grew by 63% in developing countries whilst consumption of other cereals only rose by 20% and root crops fell by 20% in the same countries (Friedman 1994). This could explain some of the changes in diet in the developing countries. For example, in Senegal a rural worker consumes about 158kg of millet, 19kg of rice and 2kg of wheat a year whilst his urban counterpart in Dakar consumes 10kg of millet, 77kg of rice and 33kg of wheat (Delpeuch, 1994).

More recently this process has been accelerated by the undermining of the prices of agricultural commodities and products because of the massive farming subsidises in the developed countries. In the European Union, the average European dairy cow has a bigger annual income than most people in the world. In the US, the 2002 Farm Bill recently authorised the paying out of US$ 180 billion over a 10-year period as 'emergency measures', mainly in support of staple cereal crops (IATP, 2004).

The Institute for Agriculture and Trade Policy has calculated that US subsidies mean that major crops are put on the international market at well below their production costs: wheat by an average of 43% below the cost of production, soyabeans at 25% below, cotton at 61% below and rice at 35% below (IATP, 2004). This depression of commodity prices is having a devastating effect on farmers in developing countries. Research by the International Food Policy Research Institute (IFPRI) shows that subsidies to farming in the Organisation for Economic Cooperation and Development (OECD) countries, which totalled US$ 311 billion in 2001 (or US$ 850 million per day), displaces farming in the developing countries, costing the world's poor countries about US$ 24 billion per year in lost agricultural and agro-industrial income (IFPRI, 2004). Box 3 gives three examples of the devastating impact on local agriculture that these policies have when combined with the liberalisation of trade barriers in the region.

Box 4: Three examples of impact of agricultural subsidies

Kenya had more than doubled production of processed milk between 1980 and 1990. But then imports of milk powder soared, increasing from 48 tonnes in 1990 to 2 500 tonnes in 1998. At the same time, domestic production of processed milk plummeted almost 70%. Kenya's ability to diversify into processing was undermined and small producers bore the brunt of the decline in demand for fresh local milk.

EU beef is sold in Southern Africa for 30 pence a kilo whereas it costs one pound per kilo to produce it. This has completely changed the whole economics of the Namibian meat canning industry which has now shifted from local beef towards the imported subsidized beef.

South Africa dismantled its subsidy scheme for fruit and vegetable as part of its re-entry into the international market. However the EU kept its subsidies while also placing tariffs of between 11% to 23% on South African canned fruit and vegetables. This has led to many small fruit and vegetable South African farmers having to sell or consolidate with larger farming concerns

(Adapted from Madeley, 2003)

What is less well appreciated is that these subsidises hurt many farmers in the OECD countries as well. Most of the subsidies go to the larger farms, owned or contracted to corporations. For example, from 1997 to 2002, the US lost over 90,000 farms smaller than 2,000 acres in size, while the number of farms bigger than 2,000 acres increased by over 3,600. In the European Union 70% of subsidies go to 20% of Europe's largest farms (IATP, 2004).

The World Trade Organisation does allow countries to block the 'dumping' of produce that is well below production price. This mechanism, which can be costly and complex, is ironically mostly used by OECD countries. About one-half of anti-dumping actions are initiated against producers in developing countries, who make up 8% of all exports. The use of anti-dumping actions by OECD producers, even when they are unlikely to win a dispute on its merits, creates onerous legal and other costs to current producers in developing countries, and chills new job-creating investment in sensitive sectors.

4.3. Consequences for ESA

The logic of the present international trade approach is that a country should focus on its 'comparative advantage' and put these products on the

global market. The foreign exchange earnings should more than cover the cost of increased food imports. This strategy is having a particular impact in the region due to its existing rural and agricultural landscape (Box 4).

Box 5: Dominant food systems in Southern Africa

According to Mousseau (2004) agriculture across many countries in ESA can be characterised by two main features, inherited from the colonial time and generally perpetuated since independence:

- maize mono-cropping, which is the main crop for a large majority of small scale farmers and the main staple food for consumers; and
- the duality of the production system, which is shared between an estate-based commercial sector and a predominantly subsistence-oriented smallholding sector.

Estates and commercial farms occupy a large part of the arable land, generally the most fertile and with an adequate source of water for irrigation, whilst subsistence farming is concentrated on less fertile soils and is more reliant on rain-fed agriculture, with limited access to land (60 to 80% of the population are smallholders, with less than 2 hectares per household).

In most countries the milling industry is playing a key role in the state-controlled and stae-supported marketing system, receiving price-controlled grain and ensuring the distribution of maize meal in a national, private or public marketing system. The dual system means that many smallholders have to work on other farms, estates and mines to complement their income.

A highly integrated system that maintains low prices and limits fluctuations on food and inputs markets is both a condition and a result of the above. Farmers, consumers, estates, traders, the state and the milling industry are notably interdependent. This system is costly and depends on revenues from other sectors such as mines, industries or cash crops. It relies also on the fragility of the livelihoods of the poorest.

At least four important consequences of the trend towards exporting agricultural products can be identified:

- The higher quality control and infrastructure requirements for the international market mean that high levels of capital investment and economies of scale are needed. Large commercial farms are consolidating their dominance across many countries in the region. South Africa, for example, has an active land

redistribution programme that is focused upon increasing the number of smallholdings, yet the average size of farms has actually increased in the last five years. A minority of 45,000 farmers own 86% of all agricultural land, 50% of farmers own 6% and just over a quarter (26%) of farmers earn 81% of agricultural income (Nieuwoudt and Groenewald, 2003). This trend is being exacerbated by the growing dominance in the local retail market of supermarkets that now sell more than 70% of retailed food but source 98% of this food from commercial farms.

- There is significant shift in the use of land (especially the most fertile) from being used for growing food for local consumption towards horticulture and growing export crops. This is well documented in Latin America. In Chile the total area under local food crops fell by 30% just three years after liberalisation. In Brazil the soya bean export crop increased from 1.4 million hectares in 1970 to more than 15 million in 2000, and in Argentina it increased from 10,000 hectares to 5 million (quoted in Madeley, 2001). In the ESA region there is increasing conversion of the most fertile land, for example around the Lake Victoria, being used for horticulture exports to European markets.
- Increased growing of food crops for export is redirecting the already small investments in rural areas towards expensive infrastructure projects designed to provide rapid road connection between the commercial farms and the airports, ports and other points from which produce can be distributed to international markets. It is also undermining other support mechanisms for small farmers such as agricultural research. The annual growth rate in funding for agricultural research declined from 2.0% in the 1970s to only 0.8% in the 1990s. As a consequence, average spending per scientist declined by about half between 1971 and 2000, though for many countries the decline was even more extreme (IFPRI, 2004). This is being partially replaced by private funding and overall there is increasing emphasis upon research to support commercial applications such as biotechnology.
- Increasing reliance upon exports makes countries in the region especially vulnerable to changes in agricultural policies in OECD countries, especially to those from the EU, which account for 50% of agricultural exports from the ESA region. The recent promises to reduce agricultural subsidies may be at the expense of the special treatment that many agricultural exports from this region have in the EU. For example, recent moves to reduce the price of sugar within the EU is calculated to cost over $250 million to African (including Mozambique, Kenya and Swaziland) and Caribbean sugar exporters.

The latest evidence seems to indicate that the strategy of relying upon food exports is actually worsening the balance of payments. A FAO study of 14 developing countries and their experience of agricultural liberalisation found that the average annual value of food imports in 1995-98 exceeded the 1990-94 level in all 14 countries, ranging from 30% in Senegal to 168% in India. The food import bill more than doubled for two countries (India and Brazil) and increased by 50-100% for another five (Bangladesh, Morocco, Pakistan, Peru and Thailand). The study also measured the ratio of food imports to agricultural exports and found it was higher in 1995-98 than in 1990-94 for 11 of the 14 countries . The worst experiences were those of Senegal (86% increase), Bangladesh (80%) and India (49%). This also seems to be the case for many of the countries in the ESA region (Stevens and Kennan, 2002).

4.4. Legitimation of neo-liberal policies

> *In terms of public health and equality perhaps the most important impact, and one that is not traditionally highlighted, is the paradigm shift with respect to food security. Food is increasingly being considered as just another commodity and food security is now defined in terms of the market. Such a radical departure from one of the traditional functions of states – to be in control of food production so it can feed its population – has required a re-conceptualisation of the meaning of national food security. Thirty years ago the concept of food security was unproblematic and was summarised by the First World Food Conference as the "availability at all times of adequate world supplies of basic food-stuffs…to sustain a steady expansion of food consumption…and to offset fluctuations in production and prices. (Devereux and Maxwell, 2001:2)*

The focus of this definition was unequivocally on the supply of food and reflected the international concern at that time on national food self-sufficiency, national food balance sheets and proposals for world food stocks or import stabilisation schemes. However, experience from the field already suggested that widespread hunger could co-exist with adequate food supply, either at the national or international level. This was forcefully pointed out by Amartya Sen, who showed that during many widespread famines, such as the Bengal Famine of 1942, food was actually being exported from the very same areas experiencing the famine (this has been repeated recently in Ethiopia, which exported food during its famines in the last two decades).

Sen's analysis led to a shift towards entitlements, and more specifically access, instead of just supply. He emphasised that availability of food had to be combined with ensuring that the most vulnerable acquire sufficient resources (financial, physical, knowledge and cultural) to be able to access and optimally utilise this food. These ideas quickly became accepted but they also gave rise to some discussion as to the unit of analysis – whether it should be the household or the individual. There are some similarities here with debates in the equity literature. The WHO method of measuring inequality by using defining cut-off points in the population-wide distribution of income or health has been strongly criticised for not taking into account the underlying social and economic forces that shape different groups within society. It is only by more specifically examining the experiences of these specific groups in the context of their relations with other groups in society that we can begin to uncover the dynamics that produce and reproduce these inequalities. Similarly the term 'household' covers a multitude of different relationships that occur within it. Access to food by individuals within a household is often a proxy for their general social standing in the household. Within the field of nutrition and child survival the differences in access to foodthis difference among individuals in the same household can be substantial, especially when you consider whether the resources are controlled by women or not (see the section later in this paper, called 'Policy and actions').

In the epidemiological study of the relationship between income inequality and health inequality there is an increasing recognition that income inequalities across society are a marker and, in most cases, the result of weak public institutions and poor social cohesion. This manifests itself in poor health by worsening subjective feelings of ill-health and social exclusion. Food, more than any other commodity, is closely connected with self-perception and forms part of much wider social intercourse. As Roland Barthes explains, "when he buys an item of food, consumes it, or serves it, modern man does not manipulate a simple object in a purely transitive fashion; this item of food sums and transmits a situation; it constitutes an information; it signifies" (Barthes, 1979).

If we accept this explanation, then, we must also accept that any definition of food security must consider not just the quantity of food but also its quality in terms of consistency with local food habits, cultural acceptability and human dignity.

Greater appreciation of the subjective nature of food security has also led to another important insight into and evolution of the concept of food security. Whereas previously it was thought that food security was a fundamental need that would be protected at all costs, closer examination of the priorities of poor people has revealed that they are quite prepared to

forsake food if it means preserving more long-term livelihood assets. For example, de Waal working during the 1984–85 in Dafur, Sudan, found that "people are quite prepared to put with considerable degrees of hunger, in order to preserve seed for planting, cultivate their own fields or avoid having to sell an animal…avoiding hunger is not a policy priority for rural people faced with famine" (quoted in Devereux and Maxwell, 2001:18).

This insight has led to an appreciation of the broader issue of livelihood strategies and in particular the management of risk and vulnerability. Any discussion of food security must be situated within a broader political, economic and social context. Devereux and Maxwell summarise the complex nature of food security when they say that "flexibility, adaptability, diversification and resilience are key words. Perceptions matter. Intra-household issues are central. Importantly…food security must be treated as multi-objective phenomenon, where the identification and weighting of objectives can only be decided by the food insecure themselves" (ibid:19).

But as mentioned earlier, national food security is now a contested terrain. In order to legitimise eroding the capacity of communities and nations to control food, an important commodity, basic terms such as development and food security have been redefined: "In the aftermath of the 'era of development' in which nations were responsible for managing economic growth, including managing food security via green revolution technologies, development is now defined as a necessary global project in which international institutions and firms are increasingly responsible for managing economic growth, including managing food security as a global problem with global solutions via biotechnologies" (McMichael, 2004:124).

More specifically the idea of food security has been reconstructed as a global market function that is based upon the presence of a free market and governed by corporate rather than social criteria. This position was boldly stated by a senior US official to the WTO, when he said that the "idea that developing countries should feed themselves is an anachronism from a bygone era. They could better ensure their food security by relying on US agricultural products, which are available, in most cases, at much lower cost" (quoted in McMichael, 2004:127). This is the fundamental policy position that is driving many of the changes in agriculture and food security in developing countries.

Naturally, the national food security of developed countries is a different matter altogether. In his address to the Future Farmers of America in Washington on 27 July 2001, President George W. Bush clearly recognised the fundamental role that agriculture plays when he stated: "It's important

for our nation to build – to grow foodstuffs, to feed our people. Can you imagine a country that was unable to grow enough food to feed the people? It would be a nation subject to international pressure. It would be a nation at risk. And so when we're talking about American agriculture, we're really talking about a national security issue." (Bello 2000:12)

Differentiating between inequalities and inequities in health can be a guide to what actions are needed to combat differences in health status. Similarly in the field of food security it is crucial to broaden our understanding from the dominant discourse with its emphasis on the availability and consumption to one that includes production and the control of the food supply chain as well.

4.5. Changes in governance of the food supply system

Globally, there is an urgent need for a different response to the challenge of declining livelihoods and food security. The capacity and power of national states, public agencies and communities has been seriously attenuated. The devastating impact of structural adjustment programmes, with their explicit aim to reduce the size and influence of the state, is well documented. This has perhaps most starkly manifested itself in the events leading to the most recent famines across southern Africa.

In 2000 the International Monetary Fund (IMF) advised the Malawian national food reserve agency to reduce its near-full capacity stocks to around 30,000-60,000 metric tonnes of maize, enough to feed the entire Malawian population for two to three months, and to use the proceeds to pay back its debts, to pay salaries to cover running costs and to replenish old maize. This proved to be very costly, as Malawi was unable to import enough grain from the international market to prevent widespread hunger the following season (Lambrechts and Barry, 2003).

In an attempt to stimulate greater involvement by the private sector, the World Bank, through its structural adjustment reforms, replaced the Zambian grain marketing authority with the much smaller Food Reserve Agency. However, a lack of infrastructure has made it uneconomical for private traders to do business in remote areas and people have been left with no access to markets on which to sell their produce or buy inputs. An independent IMF evaluation found that the liberalisation of the state marketing board contributed to a 30% increase in rural poverty between 1991 and 1994 (Lambrechts and Barry, 2003).

It is important to widen our perspective so that we can appreciate the increasingly narrow policy space many states in Africa have in responding to the challenges of development. This is not only because of the power of the Bretton Woods institutions but also due to the increasing domination of the food supply chain – including seeds, farms, food processing, distribution marketing and retailing – by a small number of massive transnational corporations (TNCs). For example, six corporations account for 85% of world trade in grain, eight account for 60% of global coffee sales, seven for 90% of the tea consumed in the West, three for 83% for world trade in coca and three for 80% of bananas (Madeley, 2002). One TNC, Cargill, controls 80% of grain distribution throughout the world through its ownership of grain elevators, rail links, barges and ships (Kneen, 1996). The situation in the agrochemical sector is the same: ten agrochemical companies control 81% of the $29 billion global agrochemical market and, in Asia, three companies (Cargill, Pioneer and CP-DeKalb) currently control almost 70% of the seed market, supplying hybrid seed for 25% of the total corn area. Four corporations now own nearly 45% of all patents for staple crops such as rice, maize, wheat and potatoes (Action Aid, 2003).

The ESA region is also experiencing the same problem. In South Africa, Monsanto completely controls the national market for genetically modified seed, 60% of the hybrid maize market and 90% of the wheat market. At the other end of the food supply chain three large retailers are now responsible for over 70% of total food sales. Vorley (2004) has illustrated how the growing concentration of food corporations is tightly controlling the food supply chain for many foods and cereals.

Figures 6 and 7 are typical examples of the 'bottlenecks' that are being built up around all agricultural commodities. In the coffee and banana industries a handful companies control the trading, processing and retailing of these commodities. This explains the apparent anomaly of falling commodity prices and increasing retail prices. The power of the TNCs allows them to drive down producer prices and keep the added value during processing and retailing. In the case of coffee, the roasters and retailers retain $2.21 per kg as opposed to the $0.10 received by the farmer and the wet processor.

Figure 6: The global coffee bottleneck

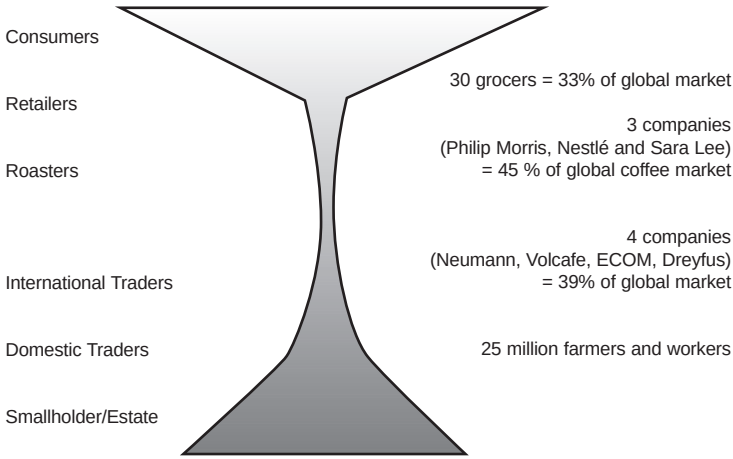
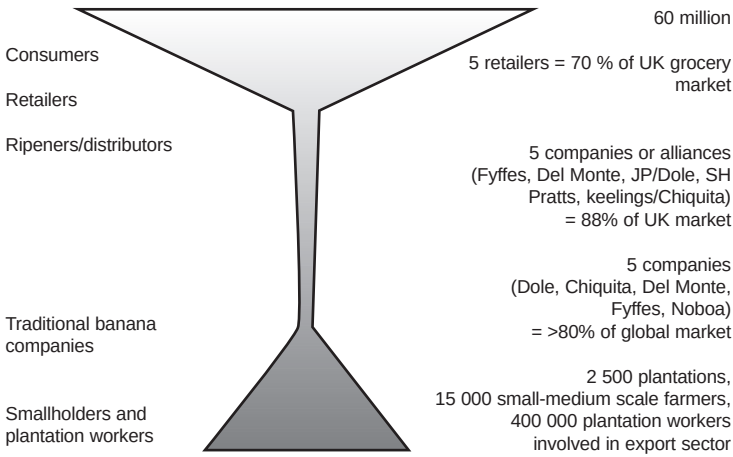


Figure 7: The global banana bottleneck



The concentration of power and control in the hands of a few TNCs is accelerating with trade liberalisation. For example, the local exporters' share of the Côte d'Ivoire cocoa export market declined from 43% in 1997-1998 to less than 10% in 1999-2000 following the dramatic liberalisation in of the sector in 1999. Three multi-national processors now dominate the market: ADM, Cargill, and Barry Callebaut (Vorley, 2004).

5. POLICY AND ACTIONS

On closer inspection, the responses of governments, international agencies and major donor agencies to issues of hunger and malnutrition show a growing convergence of views on what key actions are needed to alleviate these problems. There is an acceptance that those factors conducive to economic growth, particularly in rural areas, will also be conducive to reducing hunger. These include building human capital, creating fair and accountable relations between the state, civil society and the public, establishing effective market institutions and rural infrastructure, enlarging the range of economic opportunities both on and off-farm, providing the poor with secure access to their primary resources and ensuring that safety nets are in place to provide sufficient food security for those individuals who do not have access to adequate food, whether due to a generalised food security crisis or due to individual shocks pushing vulnerable households into hunger and poverty.

The SADC ministers highlighted the following key interventions to improve food security in the region:

- the promotion of programmes to remove farm labour constraints and to facilitate the development of rural infrastructure such as roads, information and communication technology, water and sanitation services, and electricity;
- the acceleration of land policy reform initiatives and the sharing of experiences in order to pass on best practices;
- the improvement of agro-industrial development and processing;
- the control and eradication of crop and livestock pests and diseases;
- an increase in the production of crop, livestock and fisheries resources;
- the engagement in non-traditional agriculture production, such as growing mushrooms, for food security;
- the sustainable use and management of natural resources;
- the undertaking of research and technology development and the wide dissemination of all information and findings;
- the involvement of the private sector in agriculture and rural development; and
- increased market access for agricultural products.

There is, however, an interesting oversight in many of these strategies – they downplay the political economy of hunger, especially with respect to the present direction that globalisation is taking, especially with regard to the implementation of trade rules. This is accentuated by the failure in

many to integrate and relate the changes to the food system with the broader challenges of improving health and social justice in the region. Links are never made between the corporatisation of the food supply system and privatisation of basic services, between the hijacking of intellectual property rights of indigenous farmers and the actions of pharmaceutical multi-nationals, or between the increasing dependency upon international markets for food security and limits to domestic policy. In turn, the analysis of the mobilisation of political will and resources to fight hunger more aggressively is seriously superficial.

In contrast, a mixture of international NGOs and grassroots organisations are making important links between those fighting for equity and social justice and those focusing on food security issues. An important example is the recent report '80 millions lives: Meeting the Millenium Development Goals in child and maternal survival' (Grow Up Free From Poverty Coalition, 2004) from a coalition of 18 international NGOs. This report explicitly relates child and maternal survival to the worsening food security, health care and poverty faced by the poorest within the national and global context. Another important response has been from civil society.

Recent assessments of the food crisis across Southern Africa conducted for Oxfam-UK have emphasised the critical need for social safety nets for large numbers of rural peoples who have been hit by the many challenges facing rural agriculture in the region (Drimie, 2004; Mosseau, 2004). Even though these assessments have traditionally focused on food aid, Drimie and Mosseau have begun to highlight the limitation of such an approach, in that it contributes little towards increasing the long- term resilience of affected individuals and communities. They suggest that other forms of safety nets, such as cash transfers, agricultural outreach and primary health care, are needed to complement the immediate food aid response.

Many are now also taking up the challenge of broadening the concept of 'food security' to become 'food sovereignty' and using this to outline a programme of action. During the World Food Summit in 2002, an NGO/CSO forum on food sovereignty, which was attended by representatives of over 400 civil society and farming organisations, defined food sovereignty as follows: "Food sovereignty is the right of peoples, communities, and countries to define their own agricultural, labour, fishing, food and land policies which are ecologically, socially, economically and culturally appropriate to their unique circumstances. It includes the true right to food and to produce food, which means that all people have the right to safe, nutritious and culturally appropriate food and to food-producing resources and the ability to sustain themselves and their societies." (Via Campesina 2003:2) The requirements for achieving food sovereignty are listed in Box 5.

Box 5: Requirements for food sovereignty

Food sovereignty requires:

- *Prioritising* food production for domestic and local markets, based on peasant and family farmer diversified and agro-ecologically based production systems;
- *Ensuring* fair prices for farmers, which means the power to protect internal markets from low-priced, dumped imports;
- *Access to land, water, forests, fishing areas and other productive resources* through genuine redistribution;
- *Recognition and promotion of women's role* in food production and equitable
- access and control over productive resources combined with decision making powers;
- *Community control over productive resources,* as opposed to corporate ownership of land, water, and genetic and other resources;
- *Protecting seeds,* the basis of food and life itself, for the free exchange and use of farmers, which means no patents on life and a moratorium on genetically modified crops; and
- *Public investment* in support of the productive activities of families, and communities, geared toward empowerment, local control and production of food for people and local markets.

(Source: Food First 2003)

In contrast to the traditional definition of food security, food sovereignty focuses attention not just upon access and availability of sufficient food but also the food production process. It also embodies a call for greater access to resources by the poor, especially women, challenging what is perceived as a growing concentration of ownership of resources. This implies "challenging existing relations of power and distribution through, for example, engaging in agrarian reform. It also implies challenging the increasing concentration of ownership of agricultural trade, processing and marketing by transnational agribusiness corporations through, for example, improving competition law (anti-trust law) at a transnational level and through the prohibition of the appropriation of knowledge through intellectual property-rights regimes. It calls for recognition of communities' rights to their local, traditional resources, including plant genetic resources, and for protection of farmers' rights to exchange and reproduce seeds." (Via Campesina 2003:5)

In 2003, parliamentarians held a meeting for Parliamentary Alliances for Equity in Health in Eastern and Southern Africa, convened by EQUINET, the SADC Parliamentary Forum and GEGA. They recommended that governments take the following actions to protect their food sovereignty:

- Countries should protect their government authority in all trade agreements to safeguard public health and regulate services in the interests of public health.
- Government trade negotiators should consult health ministries, parliamentary health committees and civil society on positions to be taken to trade negotiations for their public health implications.
- Governments should assert their rights under the Doha Declaration on Trade Related Aspects of Intellectual Property Rights (TRIPs) and Public Health to define what constitutes a public health problem.
- Governments should strengthen their efforts to take full advantage of the flexibilities and policy measures allowed in TRIPs to access cheaper medicines and protect indigenous knowledge systems.
- Given the central role of nutrition and food security in public health, countries should retain the right to raise tariffs and demand elimination of subsidies on exports to protect food sovereignty in agricultural production.
- Governments should not make any commitments under the General Agreement on Trade in Services (GATS) in health or health related services that compromise their right to regulate according to national policy objectives.
- Countries should conduct a comprehensive 'health check' on GATS commitments made or proposed so far, with the active involvement of health ministries, parliamentary health committees and civil society (EQUINET/GEGA/SADF PF, 2003).

There is a need for sustained advocacy in support of the above actions. In turn, this advocacy needs to be supported by pertinent research documenting the impacts of current policies, particularly from the perspective of smallholders and those presently marginalised. The focus on food sovereignty and global trade must therefore be informed by gender and HIV and AIDS issues, and the research must provide the disaggregations and be implemented in processes that support this.

The gender dimension of food sovereignty is central not only to equity, but also to addressing the overall thrust of food sovereignty. Drimie (2004) concludes a comprehensive review of the causes of the recent food crisis

in southern Africa by noting that, "in order to understand the reality of vulnerability on the ground (in order to develop effectively targeted interventions), a disaggregated approach to rural communities is required, along with an understanding of power relations within these groups, with a commitment to reaching those who are most at risk, namely women and children." (ibid:25)

Women are responsible for 80% of food production in Africa, including the most labour-intensive work, such as planting, fertilising, irrigating, weeding, harvesting and marketing. They achieve this despite unequal access to land (less than 1% of land is owned by women), unequal inputs such as credit (<10% of credit provided to small farmers goes to women), poor access to improved seeds and fertilizer, and unequal access to information. Their work also extends to food preparation, as well as nurturing activities. Though there is only limited evidence, it appears as though the changes wrought by globalisation in the agricultural sector are widening gender inequalities. The shift from supporting smallholders towards supporting large commercial farmers is at the expense of supporting women farmers. This makes them more likely to be used as cheap labourers for more export-orientated commercial farming concerns.

The lack of support for women farmers is often justified by evidence that, on the surface, appears to show that agricultural yields of land controlled by women are much lower than those of men. Other studies, however, show that these lower yields are usually the result of using less labour and fertiliser per acre rather than because of managerial and technical inefficiency. Unequal rights and obligations within the household, as well as limited time and financial resources, place much greater constraints on women than on men. Given equal access to resources and human capital, women farmers can achieve equal or even, as some studies show, significantly higher yields than men. For example, Saito et al (1992) report that, in Kenya, the gross value of crop output per hectare for men is 8% higher than that for women. However, if women had the same capital endowments and had used the same level of factor inputs as men, the value of their output would have increased by more than 20%.

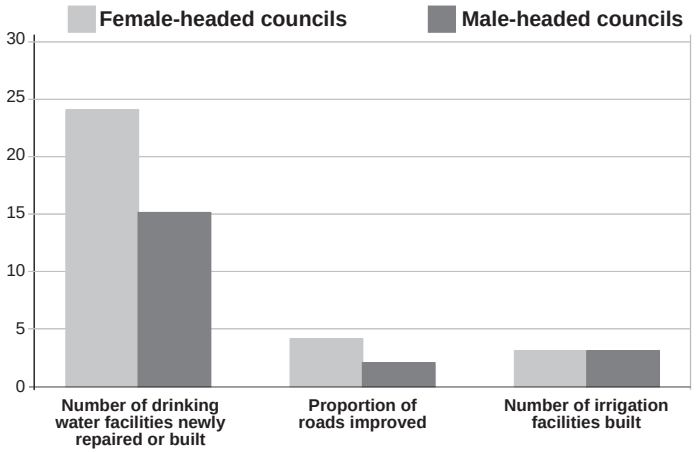
All of this highlights the critical role of women for successful food production. An evaluation of 43 of USAID's agricultural projects indicates that "the strength of the interaction between female farmers' access to project resources and achievement of project goals is largely the result of the importance of women's management and labor in the targeted agricultural activities. Ignoring women's roles can lead to reduced labor inputs, increased learning time for new production techniques, and loss of producer feedback, all of which reduce project success" (Carloni, 1987:23).

There is accumulating evidence that increasing women's access to resources not only increases agricultural productivity, but it is also more likely to be used to improve the well-being of children in the household. Studies from across Africa have consistently found that income controlled by women has a far greater impact on childhood nutritional status (Kennedy 1991; Haddad and Hoddentot, 1994; Jones, 1986). A study in Brazil found that child survival was 20 times greater in households where income from non-formal activities was in the control of women when compared to households where it was in the control of men (Thomas, 1991).

There is also now some evidence that increasing the authority of women also has important development impacts. A study in two Indian states randomly assigned one in three village councils to female leadership. A few years later the impacts of this change in power were measured (Figure 6). Of the three outcomes measured, the number of drinking water facilities newly repaired and efforts to improve roads were significantly higher in the women-headed councils – reflecting the material issues they cared most about.

In particular, HIV and AIDS is exacerbating the existing social, economic and gender inequalities that define women's status in society. Taking a gender perspective is therefore critical in coming to a complete understanding and hence formulating effective policy responses. For example, Beegle (2003) found that households in Tanzania experiencing a death did not shift cultivation towards subsistence food farming. She concludes that afflicted households were able to maintain their supply of labour by drawing back other family members, or that the agricultural system in this area of the Lake Victoria Basin is not highly vulnerable to labour shocks. By contrast, by explicitly comparing the response between rich and poor and male- and female-headed households in Kenya, Yamano and Jayne (2004) show that it was only households in the lower half of the income distribution (that were predominantly female-headed) that suffered as a result of the death of either male head-of-household or the spouse. These households incurred a 1.2 acre decline in cereal crop cultivation when compared to non-afflicted neighbour households, and a slight but imprecisely measured increase in traditional cash crop cultivation. Households in the upper half of income, in contrast, did not show a significant difference in cereal crop cultivation when compared to non-afflicted neighbours.

Figure 8: Impact of female-headed village councils



(Source: Chattopadhyay and Duflo, 2003)

Most resources in the response to HIV and AIDS have traditionally been channelled towards making interventions in preventive and curative health and bringing about behavioural changes. Less attention has been paid to the social and economic determinants, impacts and context of the epidemic. There is a danger that a sole focus on a package of cost-effective preventive and treatment interventions may actually exacerbate inequities. This is not just because the wealthier tend to utilise existing health services more and are in a better position to be able to act on prevention messages, but also because the impact of HIV and AIDS is far greater on poorer households. Nutrition and food security can play a critical role in mitigating the impact of HIV and AIDS for poor households. Improved nutritional status can directly improve the strength and resistance of individuals, allowing them to function productively for longer, and improved food security reduces risky behaviour. Furthermore, food and nutrition programmes can provide valuable experience around engaging communities in the sort of participatory processes that have been found to be most effective in addressing the social dimensions of health interventions.

Following multi-country assessments of successful HIV and AIDS mitigation projects, Connolly (2003) outlines the following key principles for such interventions:

- The most effective and promising approaches to mitigation have been those that have focused on participatory and group problem-solving approaches, facilitated with, and for, communities.

- Interventions that focus on holistic and systemic processes in social community development and foster ownership, initiative and resilience on the part of communities strengthen these communities to take responsibility for their own livelihoods through emancipation and empowerment.
- There is need for competent facilitators. This often makes the difference between success and failure in community development processes, which is why support and investment in the training and development of such facilitation competencies merits priority attention with development agencies/service organisations in districts/communities and within local communities themselves.

It is crucial to foster improved services coordination, particularly for services provided by the public sector, and to forge strong local partnerships among organisations with complementary skills spanning agriculture, health, education, social protection, and so on. For example, an integrated approach involving home-based caregivers, orphan committees, agricultural extension agents and health workers can ensure that food, school fee relief, home gardens and health care go directly to families that most need them. This is a broad version of the AIDS 'continuum of care' (IFAD, 20021). Topouzis (2003) has outlined some of the steps required to achieve this level of integration:

- Assess the capacity of services to deliver, as well as the impact of existing sectoral policies on the capacity of households and communities to cope with HIV and AIDS.
- Make HIV and AIDS mainstream issues.
- Build links between gender and HIV and AIDS into the analysis and response of sectoral programmes.
- Prioritise working with vulnerable groups.
- Strengthen the resilience of existing farming and livelihood systems.
- Link relief, rehabilitation and development.
- Build conflict prevention.
- Build scaling-up mechanisms.
- Monitor and evaluate responses.

6. CONCLUSION

This paper has identified five critical policy and advocacy issues that have serious consequences for equity, health and wellbeing in the region:

- Food security and nutrition are absolutely fundamental in any analysis of development in the region. Agriculture is still the dominant source of income for most people in the region and actions to secure food security dominate many lives. Poor nutrition, whether overnutrition or undernutrition, is also a major cause of ill health and the reproduction of poverty in the region.
- Lack of food security and poor nutrition are both a cause and a reflection of the great inequalities in the region. Experiences from other parts of the world and historical precedents suggest that any successful intervention to reduce inequalities and inequities must start with improving the health and nutrition of the poor. Public policies have been shown to make a significant difference even in the context of poor overall economic growth.
- The HIV and AIDS epidemic is closely related to food security and nutrition. The impact of the epidemic is worsening the food security and nutrition situation whilst at the same time the lack of food security and poor nutrition is increasing vulnerability to HIV and AIDS.
- The present situation in the region with regard to food security and nutrition can only be understood in the context of global changes in the production and trade of agricultural products. A successful response to the huge challenges outlined in this paper requires an analysis that integrates equity, health, food security and nutrition within the major global, regional and national trends. It must however go further- this analysis must be linked to a strong, organised demand for government responsiveness and accountability to social needs, and for government authority and action to safeguard social needs within global policy and corporate and commercial practices.
- The formation of trade blocs such as SADC is a response to the challenges of globalisation and can be used as a platform for greater domestic investment and the development of more appropriate policies. These policies should uphold the rights of women and provide them with support, in both their productive and their caring capacities.

To achieve and sustain the political will to meet all people's basic needs, and to regulate the activities of transnational corporations and international agencies, a process of participatory democracy – or at least a well-

informed movement of civil society – is essential. A 'strong' civil society participation with clear perspectives is important not only in securing greater government responsiveness to social needs but also in providing the active, conscious and organised population that is critical to the design, implementation and sustainability of comprehensive health and food systems (Sanders, 1997).

This analysis suggests that equity in health will be difficult to achieve in this region unless there more explicit attention is paid to the underlying nutrition and food security determinants. In turn, these are being shaped by larger forces, including trade rules, the corporatisation of the food supply chain, HIV and AIDS, and gender inequalities. These are profound and powerful forces. However we can start to identify areas of common action that would strengthen equity in food security, nutrition and health outcomes.

Based on the evidence presented, it would appear that an equity programme should focus on the following issues:

- *Strengthen and inform a food sovereignty perspective* by conducting analyses, widely disseminating information about the usefulness of this perspective and demonstrating its application within the ESA region. In particular, such a perspective would need to assess, at a more specific level within countries and within the region, the impact of agricultural trade policies and agreements on food security, nutrition and health *from a food sovereignty perspective.* It also needs to identify those with the greatest need for and the greatest potential to benefit from improvements in their nutrition and health. This work would need to inform policy makers in trade, health and the actual communities of the distribution of nutrition and health burdens of current policy choices. It would in particular need to identify the specific gender inequalities that exacerbate the impact of globalisation and HIV and AIDS on the food security of the poorest families.
- *Provide policy options and share evidence of concrete examples of progressive responses* from a food sovereignty perspective, particularly those that address the challenges outlined in this paper of globalisation, of HIV and AIDS, and of the concentration of power and control over food systems in the region. Within health, for example, such options would include:
  - Promoting, supporting and evaluating health sector programmes that increase the resistance and resilience of rural communities to the impact of HIV and AIDS on their agriculture and livelihoods;

  - Introducing policies and programmes that provide community or public sector safety nets to those most effected by trade and agricultural policies and by HIV and AIDS (and particularly to women), and that address the specific gender inequalities that undermine food sovereignty; and
  - Responding with policies that protect government authorities and remaining flexible to protect and promote health, especially with respect to the most vulnerable social groups.

- *Build civil–state alliances around a programme of action and advocacy* that links a food sovereignty perspective with equitable public policy that supports this. This will need to add weight to existing programmes, strategies and campaigns within states and civil society in the region that are aimed at ensuring that trade policy strengthens and does not harm public health. It will need to be backed by monitoring and advocacy that raises the profile and visibility of food security, nutrition, gender and health inequity within policy platforms in the ESA region, and that draws attention to the role and types of health interventions that address the gender inequities that undermine food sovereignty and that improve the food security and livelihoods of vulnerable social groups.

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Equity in health *implies addressing differences in health status that are unnecessary, avoidable and unfair. In southern Africa, these typically relate to disparities across racial groups, rural/urban status, socio-economic status, gender, age and geographical region. EQUINET is primarily concerned with equity motivated interventions that seek to allocate resources preferentially to those with the worst health status (vertical equity). EQUINET seeks to understand and influence the redistribution of social and economic resources for equity oriented interventions, EQUINET also seeks to understand and inform the power and ability people (and social groups) have to make choices over health inputs and their capacity to use these choices towards health.*

EQUINET implements work in a number of areas identified as central to health equity in the region:

- Public health impacts of macroeconomic and trade policies
- Poverty, deprivation and health equity and household resources for health
- Health rights as a driving force for health equity
- Health financing and integration of deprivation into health resource allocation
- Public-private mix and subsidies in health systems
- Distribution and migration of health personnel
- Equity oriented health systems responses to HIV/AIDS and treatment access
- Governance and participation in health systems
- Monitoring health equity and supporting evidence led policy

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