

FINAL REPORT

RCSA Food Security Strategic Option

Synthesis and Analysis of Selected Readings

This report was prepared by Nathan Associates for the USAID/Regional Center for Southern Africa. The opinions and recommendations in this report are solely those of the author, and do not necessarily reflect those of the RCSA.



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Foreword

This report responds to a Scope of Work¹ prepared by the Regional Center for Southern Africa. It is submitted in satisfaction of Tasks C.3. and D.3. of that SOW.

A bibliography is attached at Appendix 1. It constitutes a super-set of the documents referenced in the report. Team members reviewed a considerably larger set of documents than could ultimately be included or cited in the body of the report. Consequently, judgments were made regarding the relative utility to RCSA staff of the data, information, or analysis contained in each document. The team believes, however, that all documents included in the bibliography, even if not referenced in the main body of the report, could be of possible use to RCSA staff. Considerable effort has been made to enable ease of access to these documents. The majority are available over the internet, or in readily obtainable journals.

The structure of this 50-page report is based upon the set of research questions submitted to RCSA on May 5, 2003 and approved with amendments on May 6, 2003. The research questions, as submitted, are attached at Appendix 2 and the text of the approval message is attached at Appendix 3.

Section One deals with issues relating to the overall question: what is known about the state and extent of, and trends in, food insecurity in the Southern Africa region? The information used is based on country vulnerability assessments, SADC food security and emergency reporting, GIEWS and FEWS NET situation reporting, FAO crop assessment and other market, price, health, and nutrition trend data, WFP food aid reporting, and the work of researchers and analysts on who and where are the food insecure and the causes of their food insecurity. The presentation and analysis is further sub-divided according to the traditional nomenclature of food security analysis: i.e. problems of availability, access, and utilization, plus discussion of “risk” and “vulnerability.” In addition, information from a number of sources is included and analyzed regarding the status of, and trends in, “livelihood security” in countries in the Southern Africa region.

Section Two synthesizes and analyzes documents dealing with questions of what has been attempted in the past, what is being done now, and what is suggested for the future by governments, donor organizations, implementing agents and researchers to improve livelihoods and food and nutrition security in the region.

¹ Request No. 690-0298-00045, Attachment D: Statement of Work, pp. D-15 to D-27

Section Three looks specifically at RCSA's role related to food security and livelihood security during the 2004-2010 period and offers recommendations for framing a food and livelihood strategy within the context of its regional mandate.

Executive Summary

The purpose of this report is to provide: i) an analytical synthesis, based on a broad-ranging review of the relevant literature, of the state of, and trends in, household food insecurity in Southern Africa; ii) a brief review of what has been—and is being—done to confront such food insecurity; and iii) suggestions to RCSA regarding its own possible role in dealing with the causes of food insecurity in the region during 2004–2010.

All who are concerned with the causality of food insecurity in Southern Africa concur that lack of access to minimally adequate amounts of food is extremely serious in the region—a situation that has been worsening for at least the past three decades. Development strategies intended to increase the pace of economic growth in the countries of Southern Africa have “disappointed and failed” in the main sectors: mining, industry, and agriculture. As a result, growth in production, productivity, employment creation, and household income have all lagged the rate of population growth. In particular, the agriculture sector, upon which so many depend for their livelihood, has failed to generate sufficient broad-based growth to enable the food insecure poor to gain minimally adequate entitlements to needed quantities of food on a regular basis.

This report is divided into three sections corresponding to the categories of enquiry suggested in the proposed food security research questions listed in Appendix 3.

Section 1 contains a synopsis of what is written about food and livelihood insecurity in Southern Africa. It notes, *inter alia*, that more than one-fourth of the total populations of the six countries most affected by the 2001–02 food emergency remain, as of early 2003, in a state of acute food insecurity; that chronic undernutrition in under-fives presently ranges between one-fourth and one-half of all children in that age group; and that more than half of the total population of the region—i.e., more than 50 million people—can be numbered among the chronically food insecure poor. In addition something akin to one-fourth of the adult population in these countries is infected with the HIV/AIDS virus.

The causes of these conditions are numerous and mutually reinforcing. They include: i) three decades of negative per capita economic growth; ii) failed growth strategies in all major sectors of the economy, iii) increasing frequency of droughts and other episodic shocks in the region; iv) apparent climate change contributing to increasing variability in annual and seasonal rainfall levels and increasing average daily temperatures; v) environmental deterioration particularly evident as deteriorating soil health, degraded watershed effectiveness and declining pastureland

resilience; vi) decreasing per capita availability of water necessary for human, animal, and crop use; vii) reduced viability and coverage of traditional social insurance and other safety net mechanisms; viii) continued under-investment in women as agents of economic growth; ix) deteriorating transport infrastructure and increasing geographic isolation of larger numbers of the rural poor; and x) the rapid spread of HIV/AIDS among the population—poor and non-poor alike.

The primary method among the poor of coping with, and adapting to, these adverse trends and conditions has been a rapid increase in livelihood diversification. One study (Bryceson, 2000) has determined that by the late 1990s some 55-80 percent of rural household income was being derived from non-farm sources in survey areas—a significant increase from the comparable figure of 40 percent found by researchers just 2-3 years earlier. These substantial changes are a response to diminishing returns to land and labor in the face of market failures and impediments preventing movement into agricultural niches with higher economic returns. Such profound changes in traditional livelihood modalities carry important implications for donor and government agriculture growth strategies which have, in the past, sought to improve food security primarily through activities intended to raise on-farm productivity and crop-based incomes. Efforts to speed asset creation and sustainability through the relatively frictionless and well-integrated operations of markets and institutions have not created sustainable conditions for increased production, productivity, remuneration, and household food security.

Section 2 looks at what has been done, is being done, and should be done in the future to improve overall household food security in the region. It notes the changing nature of the domains of food security and livelihood security since the mid-1970s. It suggests a growing consensus around the notion that food security requires—at a minimum—a food system operating to create a sense of assurance among the population that access to adequate food for all individuals and households is a continuing likelihood. Food security policy is intended to maintain the conditions underpinning that assurance over time.

During the 1970s and 1980s, the region's governments and donors focused—with varying degrees of success—on macroeconomic reforms, market liberalization in agriculture and other sectors, and reduction in government involvement in commercial endeavors as central elements of development policy. Investment in agriculture development programs decreased, however, particularly in agricultural services and agricultural research. The availability of agricultural inputs, marketing opportunities, and agricultural credit for smallholders—especially for those far from roads, or who were farming in the less favored geographic areas—also declined during the period.

In the late 1980s and early 1990s, investments in education, health and other social sector programs also fell—a function of declining government revenues throughout the region. At the same time, however, particularly after the publication of the World Bank's 1990 World Development Report (WDR) on poverty, an increasing focus on poverty reduction began to emerge as a central element of development programming in the region. New country development strategies were more likely to focus on the extent and causality of poverty and the impact on poverty of development

growth strategies. While economic—and, in particular, agricultural—*growth* was still viewed as essential, such growth had to be achieved in ways that lifted large numbers of the poor out of poverty, and over a shortened time frame. During the later 1990s, this concern was institutionalized in the Poverty Reduction Strategy Paper (PRSP) process in several countries in the region. At the same time, such concerns also gave rise to interest in “livelihood security” strategies (initially among the NGO community, but later throughout the donor community and governments generally) intended to involve the poor in all aspects of program activities meant to raise the economic and social status of the poorer income deciles of the populations throughout the region.

At present, there is growing consensus regarding the notion that development programs in Sub-Saharan Africa should be increasingly focused on the agriculture sector as the premier “engine of economic growth.” Research by Mellor and others on Southern and Eastern Asian economic growth modalities seems to authenticate the centrality of agricultural growth as the major contributor to overall economic development in countries like India, Indonesia and Egypt. Within overall agricultural growth, the key role is played by “middle sector” farming households in generating growth “multipliers.” Increases in productivity, incomes and expenditures on non-tradables by this particular group seem to be associated with the largest economic multipliers and the most rapid spread of growth from rural agricultural producers to, first, rural non-agricultural goods and services providers and, subsequently, to urban population groups—all linked to increases of production in both non-tradables and tradables.

While this agriculture growth-led strategy seems almost certainly to be the appropriate priority for future growth-oriented development programs in Southern Africa, there is, nonetheless, concern that the rate—and particularly the *spread*—of growth might not operate within the same 8-10 year time frame in Sub-Saharan Africa to lift the incomes of the poorer farm households which form the vast majority of the rural poor in the region. The positive impact on the livelihood status and food security might well be less, or take substantially longer, than was the case in Asia and North Africa. There are a number of corollary concerns. First, is the concern that the size of the factor and product market “multipliers” will be less, and the velocity slower, than in the studied country experiences. The much higher percentage of households with minimal high quality land and other productive assets might, through greater “friction” or inertia, serve to greatly slow or block the spread effects of agricultural growth. There may, thus, need to be a corollary element in Sub-Saharan Africa involving additional, more focused, livelihood approaches. Second, there continues to be too little attention devoted to women’s roles in agriculture and their continued under-representation in agriculture growth strategies. Third, the role of intra-regional and international trade must be more effectively addressed than in the past. Fourth, the issue of appropriately focusing agricultural research—either on the better-off areas or on food insecure poor smallholders—needs to be resolved. Fifth, the real world problems of governance—in “fragile” and, in some cases (the DRC), “failed” polities—adds complexity and difficulty to the already daunting task of effectuating pro-poor, food security-focused, agriculture-led development programs in many countries in the region.

In the “looking ahead” sub-section, the case is made that donors and governments should “buy into” an agriculture growth-led development strategy for all the countries of the region. It seems the approach most likely to generate broad and inclusive economic growth and increased production and incomes generally throughout the populations—including the food insecure poor—in Southern Africa over the longer term. The need for a second—livelihoods—element is compelling, however, in order to more quickly enable the poorer smallholders and service providers to participate at an early stage. This would add targeted efforts to assist communities in the less well-endowed areas to create and maintain sustainable assets (e.g., rural road rehabilitation and maintenance, small water projects, erosion control structures, community-owned grain storage facilities, and similar physical assets). Such efforts would likely be managed or assisted by local and international NGO development agencies and financed through food aid, social action funds, and bilateral donor projects. Early involvement of small-scale farmers in export crops—using the Malawi NASFAM model—is also proposed.

In its look into the future, the report focuses on the need to design and implement the proposed agriculture-led, livelihoods-focused growth strategy with full cognizance of the importance of confronting growing vulnerability of households to the adverse impacts of drought and other shocks and the growing risk that these adverse events will occur at any given time. The food insecure poor are made more vulnerable by the depth and pervasive nature of the poverty in which they are increasingly enmeshed. It is one thing not to be productive enough to grow food sufficient for household consumption; achieving food security is made even more difficult by not having the cash income, assets, or social insurance networks to purchase or otherwise secure enough food to prevent hunger and malnourishment.

Section 3 focuses specifically on what role RCSA could and should play in the agriculture growth-led, livelihoods focused, development strategy suggested. Recognizing that the bulk of the effort will need to be undertaken and accomplished at local, community, and national levels, there are, nonetheless, a number of areas where RCSA, with its regional mandate, can play an important—and sometimes critical—role.

First, RCSA should “buy into” the agriculture-led, livelihoods-focused strategy discussed in the body of this report as the guiding modality for a food security-oriented development strategy in the region. Second, direct support should be provided for implementation of those aspects of USAID’s AICHA strategy best dealt with in a regional context in Southern Africa. These might include efforts yielding expanded regional and international trade, facilitating riparian rights agreements for the use of increasingly scarce river and lake water resources, and investing in cross-national evaluations of long-term effectiveness and impact of USAID and NGO program and project approaches in generating improved employment, household income, food security and livelihood security. Third, RCSA should increase its focus on those aspects of USAID program design in the region that deal specifically with reducing vulnerability to—and the risk of experiencing—shocks, disasters, and calamities that affect multiple countries simultaneously, or sequentially, in the region. Whatever RCSA undertakes—within its regional responsibilities—should be designed to enable and facilitate the effectiveness of national and sub-national programs in achieving improved and enduring household food security in this highly food insecure region.

In the specific domains which have already been tentatively identified by RCSA for inclusion in a regional food security-focused strategic objective, the following suggestions are made:

Science and Technology

There are numerous elements in agriculture-related research and in the application of that research within more than one country which lend themselves to a single regional approach—rather than a number of overlapping and duplicative national approaches. Applied research in food and cash crops which can be grown in two or more countries is only the most obvious. However, there is good reason, as discussed in the body of the report, to emphasize support for regionally-based research on high value crops or livestock produced in agronomically-favored regions rather than on those produced in the less favored geographical regions by smallholders. The return on alternative investments in, say, improved road and rail links, is likely to be significantly greater in the more remote regions than investments in research in the crops grown there.

Agribusiness, Markets and Trade

Expanding agriculturally-based trade will be essential for the agricultural growth and related growth in incomes of the food insecure poor of the region. RCSA should devote a substantial share of its agriculture-focused program to improving the region's ability to market crops and livestock intra-regionally and internationally. Particular attention should be devoted to generating substantial improvement in sanitary and phytosanitary processing of Southern Africa's agricultural products as a means for expanding into European, Asian, and North American markets. In addition, RCSA should assist the region to finalize and ratify a regional trade protocol for both intra-regional and international trade.

Disaster Management and Mitigation

The aftermath of the 2001–02 drought emergency has illuminated a number of weaknesses in data-gathering, adequacy, validity of analysis, and in the veracity and timeliness of reporting which need to be addressed and improved within a regional context. RCSA is in a good position, in theory, to undertake, or support, the task of repair and rehabilitation of regional disaster management and mitigation to enable it to function more effectively and more quickly. In addition, RCSA should consider playing a leading role in helping determine the efficacy of a regional strategic grain reserve system and of the utility of establishing a regional entity to utilize grain futures markets to hedge the risk by member governments or private trading entities of under-availability of staple foods during drought or other emergency periods. In addition, this report suggests that RCSA undertake a comprehensive examination of past and possible future effectiveness of food aid as a development instrument in the region and the roles that NGOs and WFP have played and could play in promoting the recommended agriculture-led, livelihoods focused strategy in the region.

The report concludes with a caution: it is easy to claim that a donor's development strategies and activities are aimed at food security objectives. This is so because there are so many mutually reinforcing factors contributing to a resultant condition called food insecurity. Some of these are, of course, more important than others in creating and perpetuating widespread—and growing—household food insecurity in Southern Africa. RCSA should assure itself that whatever is undertaken within its food security SO addresses the most significant, rather than the less significant, of the factors perpetuating high levels of food insecurity in the Southern Africa region.

1. The Nature of Food and Livelihood Insecurity in Southern Africa

Almost 50 million people living in the region are estimated to be food insecure and over half of the population are said to be living in absolute poverty (Abalu and Hassan, 1999)²

1.1 Overview

It is clear beyond doubt that a large proportion of the population in rural and, to a growing extent, urban Southern Africa is experiencing great difficulty in securing adequate food, in both amount and quality, for a healthy, productive life—the essential requirement of food security. If there is a single theme with virtually no disagreement among the readings, it is that food insecurity—the inability at the individual or household level to secure and maintain appropriate entitlement over needed foodstuffs—is a pervasive problem in Southern Africa, which has been steadily worsening for at least the last three decades. (Duncan, 1998; Mullins, 2002; von Braun, et al., 2003; Wiggins, 2003; World Bank, 2003).

Whereas in past years, grain shortfalls in the region could be filled with imports from South Africa, this year (2002/03) South Africa, too, has experienced lower than normal yields and production. With relief aid currently insufficient to meet the needs of the population, the combination of acute and chronic food insecurity, together with the HIV/AIDS pandemic, is taking a terrible toll on the general food security status of the countries of Southern Africa. The continuing food crisis has brought great suffering to as many as 14 million inhabitants of the region. (See Appendix 4 for recent cereals production data.) There is little reason to suggest that the underlying causes of both chronic and episodic food insecurity will abate in the years ahead.

Of all sources consulted, the best tactical summation of the present food security situation is contained in SADC, (2002). The best strategic summation of the situation, and of its causality, is contained in Wiggins (2003). The Wiggins report, and the papers cited therein, are recommended reading for RCSA staff. In sum, as of early 2003 a full 26 percent of the populations of the six disaster-affected countries continue to suffer from acute transitory food insecurity and continue to require food assistance. For virtually all of these households, this extra burden of acute food

² This assertion draws on work by Pinstруп-Anderson, et al. (1997)

insecurity is in addition to the pre-existing condition of pervasive chronic food insecurity as measured by: i) inadequate access to food even in “normal” growing conditions, ii) asset poverty, iii) weak economic integration with national and regional markets, iv) a lack of basic social services—primarily health, education and training, and v) weakening social safety nets and traditional coping mechanisms (Wiggins, 2003; SADC, 2003; Stevens, et al., 2002; Drimie, 2003; Farrington and Gill, 2002; Duncan, 1998). The country vulnerability assessments cited in Wiggins conclude that the causes of this widespread insufficiency of access to food by these households stem both from long-term inadequacies of livelihoods and from 2001–02 drought- and flood-related shocks (as was the case in a nearly identical drought emergency scenario in 1992).

Long-term development models and strategies have “disappointed and failed” across the main production sectors of the region, i.e., in mining, industry, and agriculture. (Wiggins, 2003:4) This failure has, in turn, adversely affected agriculture-dependent employment, real wages, remittances, investment capital, and the resultant rates of economic expansion in the countries of the region. Approaches and programs aimed at revitalizing the smallholder farming sector in the affected countries during the 1990s have not had the hoped-for impact, nor have growth strategies aimed at strengthening the commercial agricultural sector. In such an environment—which, in effect, defines a condition of high vulnerability—the adverse impact on household food security of the localized flooding and region-wide drought of 2001–02 has been magnified and deepened.

The rural poor in Southern Africa have also been adversely affected by a number of longer-term trends. While, as discussed in Section II, the region’s governments have striven to increase rates of economic growth, employment creation, and poverty alleviation, in the main, they have not succeeded. The mining economies of South Africa and neighboring countries have shed workers over the 1980s and 1990s. Attempts to increase industrial and commercial production and employment have faltered as a result of too little investment and too little resultant business growth (Wiggins, 2003). The agriculture sector has not generated either the size or type of growth needed to extract the poor from fundamental food insecurity. This is a result of: failures of pro-poor policies (e.g., an overemphasis on commercial agriculture, high-cost parastatals, producer—and consumer—subsidies); of a limited resource base; and inadequate physical asset creation in most South African countries. As Wiggins also notes, in cases where there was emphasis on assisting small-scale producers, such emphasis was on those residing in the more favored agro-economic zones, i.e., those that were more accessible; with sufficient human skill, land, and physical resources to enable participation. These were—and are—neither the most vulnerable nor the most food insecure.

Cromwell (2002) notes that vulnerability, stemming from more than a decade of failures in rural growth, has been affected by poor integration of input, output, finance, and labor markets; the impact of HIV/AIDS; deteriorating institutional accountability; and limited availability of relevant agricultural technology options. In addition, donor support to agriculture and rural development, generally over the period, has declined. The author further suggests that even though the immediate crisis could abate in 2003, the underlying inability to cope with shocks will remain, so long as the vulnerability of the population is unaddressed. While much, relevant, high-quality research-based evidence and economic analysis on the rural economy in southern Africa exists, it

is important that this information needs to be synthesized and made available to public policy processes addressing issues of rural growth and poverty alleviation.

With the advent of donor-imposed macroeconomic structural adjustment during the 1980s came, simultaneously, the halting dismantling by the governments of the region³ of structures of agriculture characterized by producer input and production subsidies, state agricultural marketing boards and only limited devolution of marketing to the private sector. While the intent of reforms was, in part, to energize a higher rate of agricultural growth, an unanticipated result of these well-intended efforts according to some observers, has been an increase in vulnerability and a decrease in the efficacy of livelihood options for a substantial number of the most food insecure rural poor (Wiggins, 2003; Bryceson, 2000). This is further discussed in Section II.

1.2 Livelihoods

Bryceson, using data from studies of livelihood practices in seven African countries,⁴ finds strong evidence of “de-agrarianization”⁵ and “depeasantization”⁶ caused by one, or more, ‘turning point’ policies. These have ranged from restrictions on access to land, through a variety of urbanizing effects, to “...the far-reaching impact of the removal of agricultural subsidies under recent Structural Adjustment Programs (SAPs).” Subsistence agriculture, with its low-yielding, unstandardized techniques, and its relatively high transport costs has been, it turns out, the least likely option for attracting investment intended to spur agricultural growth. The farming households engaged in subsistence were [and are], for the most part, in areas remote from motorable roads and access to agricultural inputs and markets for their agricultural products. Bryceson cites the case of small scale farmers in central Tanzania, which had evolved into a “grain heartland” in the era of crop subsidies, suddenly finding themselves in the post-liberalization era facing a decimated market for their production and ignored by the new coterie of private traders. As a result, farming household incomes in the area declined by an average of 70 percent between 1979 and 1992.

Under these circumstances, livelihood options and strategies have been changing in all the surveyed countries (and, almost certainly throughout sub-Saharan Africa). The evolving picture of livelihood choices portrayed by Bryceson is important in reviewing development strategies intended to improve adequate and sustainable rural livelihoods. It is summarized in the following paragraphs.

In all surveyed countries, rural income sources are found to be more diverse and more complex than had been surmised earlier. The DARE⁷ survey results found that 55-80 percent of rural

³ Some more rapidly than others.

⁴ Nigeria, Ethiopia, Tanzania, Congo-Brazzaville, Malawi, Zimbabwe, and South Africa.

⁵ “...a long term process of occupational adjustment, income-earning reorientation, social identification and spatial relocation of rural dwellers away from strictly agricultural-based modes of livelihood.”

⁶ “...a specific form of de-agrarianization in which peasantries lose their economic capacity and social coherence, and demographically shrink in size. They literally unravel as communities.”

⁷ De-agrarianization and Rural Employment (DARE).

African household incomes were, on average, derived from non-farm sources, vs. the roughly 40 percent found in surveys (Bagachwa, 1997; Reardon, 1997; Ellis, 1998) undertaken in the 1995-7 period. Surveyed households in the seven countries were, on average, pursuing more than one (often many) non-agricultural activities simultaneously. The role of the male head of household as dominant income earner is found to be eroding. Rural women are increasing earning cash from sales of prepared snacks, beer, hair plaiting, petty retailing, prostitution, knitting, tailoring, soap-making and midwifery. In Nigeria, survey data showed an increase in non-farm activities from 33 percent of surveyed households in the mid-1980s to 57 percent in 1997. The poorest income group showed an increase from 37 percent to 80 percent participation while the upper income group showed a decrease from 33 to 25 percent.

The “individualization” of much economic activity, the attenuation of the strength of extended family ties, and the increased tendency to engage in non-agriculture income earning have had a dissolving effect on long-standing agrarian divisions of labor as well as economic rights and responsibilities within peasant households. The surveys have also found evidence of strengthening class stratification where the very smallest land holders are increasing renting their lands to the wealthier and joining the ranks of the paid agricultural workforce. On the other hand, Bryceson reports that the studies also found that “...villagers are becoming highly responsive to a wide range of investment opportunities and allocate cash accordingly...generating a new dynamism.” The author concludes that the future of the African rural poor lies increasingly in labor force participation outside the agricultural sector which, in turn, requires new skills, educational attainments and the extension of other human resources. Yet, in some places, “...food self-provisioning is gaining in importance against a backdrop of food price inflation and proliferating cash needs.”

Wiggins (2003) and the researchers he cites reach similar conclusions about the nature of changes in the landscape of livelihoods and the consequences of those changes on poverty. He, however, places more emphasis on increasing levels of vulnerability and social differentiation occasioned not only by rural economic processes, but also by such factors as climatic change, population pressures, and HIV/AIDS. “The medium and long run processes...have left large fractions of Southern Africa’s population not just poor but also vulnerable to shocks that threaten to drive them into outright destitution.” (p.6) Two groups are particularly at risk:

those lacking land, hand tools, oxen to farm, and adequate education and skills required to find adequately remunerative non-farm employment. These households regularly buy their food from the proceeds of working as laborers on the farms of others (“ganyu” in Malawi). For this group the key determinant of their level of poverty is not the price of food paid to producers but the retail prices paid by the rural consumer.

women, girls, children, those too weak or sick to work or move, and those who care for them. With their inability to produce or purchase the food they need, their recourse to minimally adequate food security is through the availability, effectiveness and sustainability of safety net systems. These too, especially those dependent upon traditional social safety nets, are eroding.

These are potentially important findings, if supported by other surveys. They call into question those food or livelihood security strategies focused on increasing household food crop production when targeted rural households have moved away from on-farm agricultural production and into exploring other non-farm employment options. At a minimum, those donors proposing a food security strategy focused on increasing smallholder agricultural production must do so in the context of careful baseline “food economy” analysis, or livelihood strategy analysis similar in nature to those being undertaken by Save-the-Children/UK, CARE, and DFID.

1.3 Agriculture Sector

Even though many poor households may be diversifying economic endeavors away from on-farm production, agriculture is, and will remain, the mainstay of the economies of Southern African countries. This is documented by a number of authors (Allen, 1999; Marongwe, 2000; Mullins, 2002; von Braun et al., 2003, Mbaya, 2003, and many others). The performance of the agricultural sector remains a powerful determinant of food security status at all levels: individual, household, community national and region-wide. The livelihoods of most people remain dependant on agriculture, and the exportation of agriculture-based products continues to be the region’s most important source of foreign exchange. According to SADC data and Mullins (2002), about 70 percent of the labor force in SADC member states is dependent upon agriculture for subsistence, employment and income. Despite being such an important sector, however, agriculture contributes less than 10 percent of the region's Gross Domestic Product (GDP) and about 30 percent of foreign exchange earnings. This is despite the fact that, while agricultural production across the SADC region has increased overall from 1990 to 2001, there has been a decline in per capita production caused by continuing low agricultural productivity combined with high rates of population growth.

Abalu and Hassan (1999:478) conclude that “No one knows for sure how well southern African agriculture is doing.” Nonetheless, the authors continue, the following is clear:

- Agricultural growth in the region has not kept pace with population growth in most countries in the region.
- In the 1970s, per capita food and cereal production were high enough to meet the food and income requirements of the average household in the region; today virtually all countries in the region produce and consume less food per capita than they did in the 1970s.
- These countries lack sufficient import capacity to make up the difference.
- Structural food deficits are common in the region.
- Chronic undernutrition is now widespread.

In most southern African countries, access to land remains the most apparent viable opportunity for poor rural households to survive. Land has been the main resource for household livelihood and food security and also a main vehicle for investment, accumulating wealth, and transferring it between generations (Marongwe, 2000). The development of a sustainable rural non-farm

enterprise sector is increasingly viewed as a crucial component of any rural development strategy. This is especially important for the smallholder sub-sector because smallholders generally derive a greater proportion of their livelihood from non-cash activities; a situation largely reversed within the commercial agrarian sub-sector.

The failure of long-term agriculture growth strategies in the southern African region has been particularly problematic in view of the need for the agriculture sector to be the driving engine of poverty-reducing development there (von Braun et al., 2003).

In most of the countries of the region, rural populations are dependant upon rainfed agriculture in production zones characterized by poor and degraded soils, increasingly variable rains, deteriorating transport and marketing systems, insufficient access to technology, increasing health hazards, declining nutritional status, increased population densities and decreasing social services (Wiggins, 2003; von Braun, et al, 2003; World Bank, 2003; Babu, 1999). The UN/ECA's February, 2003 "Report on the Status of Food Security and Sustainable Development in Southern Africa" (UN/ECA, 2003, 24) concludes:

"What is clear...is that the food insecurity crisis in Africa in general, and in Southern Africa in particular has been a recurrent phenomenon. It has happened in the past, it is here at present and will recur in the future. The causes are well known—poverty; cyclical/erratic climatic conditions that may result in droughts or floods; civil conflicts and wars; insufficient use of technological innovations; HIV/AIDS; insufficient investment in agriculture and rural development; limited attention to improving women's status and involvement in overall development efforts; population factors; economic and social policies that are not responsive to the development challenges; and resource constraints—financial and human."

To this, von Braun, et al., add the sense that policies in many of these countries have hampered the development of more open, market-driven economies, effectively taxed the small scale rural producer, subsidized production and consumption in ways constraining economic comparative advantage—all this in a context lacking other, more appropriate policies that were more pro-poor, more pro-household food security. Allen (1999) and others would add the fact that most countries of the region produce similar products for export, mainly agricultural commodities and minerals for which intra-regional demand is low. The scope for significant increases in regional trade is, thus, limited, at least in the short-term. The terms-of-trade for most of SADC's exports have been declining, as worldwide primary commodity prices have trended downward against manufactures. This underscores the importance of SADC countries becoming more competitive in new and ever-widening clusters of exports, including high value agriculture commodities and more value-added processing done in countries of origin. See appendix 5 for a listing of Southern Africa's present principal exports.

The next sub-sections look briefly at literature specific to some of the more important influences on agricultural performance and chronic and/or acute⁸ food insecurity:

⁸ "Acute" food insecurity is a sub-category of "transitory" food insecurity that can, if unaddressed, lead to famine.

1.3.1. SOILS AND NATURAL RESOURCE DETERIORATION

Environmental degradation caused by soil erosion, desertification, deforestation, and environmentally damaging agricultural practices is seriously undermining the natural resource base in Southern Africa (Abalu and Hassan, 1999:480). An estimated 80 percent of Southern Africa's total productive drylands are degraded as are 80 percent of rangelands, 80 percent of rainfed lands, and 30 percent of irrigated lands. (See "extent of soil degradation" table at Appendix 7). Overall, an estimated 65 percent of Africa's agricultural land has been adversely affected by soil degradation. Poor people, those whose livelihoods are most dependant upon land resource, are the most immediately and profoundly affected by a deteriorated natural resource endowment (DFID, 2002). The decline of the natural resource patrimony in Southern Africa takes the form of deteriorating soil health in many areas, rapid erosion stemming from environmentally unsound farming techniques, overgrazing, and widespread deforestation (see, for example, Prince, et al., 2000). These are, in turn the product of rapid demographic changes caused by recent population growth rates of 2.8 to 3.5 percent, urbanization, industrialization, increasing demands on the agricultural sector in the context of general economic decline, all of which pose threats to sustainable use of the natural resources and, in turn threaten economic, social, and environmental sustainability over the long run.⁹ Actual data regarding the extent, severity and trends in natural resource degradation in the region over the past 20 or more years are, however, difficult to locate. There are even examples of recent studies seeming to find that, say, soil losses might not be as severe as had earlier been expected (Mohamoud and Kent, 1998). Much is said about the adverse impact of natural resources deterioration in the region. It is visible to all who travel though the rural areas. Much of the literature, however, is based on site specific analysis. There needs to be considerably more effort at aggregating and synthesizing reliable evidence in order to better quantify regional trends and projections.

1.3.2. CLIMATE CHANGE

The prevailing consensus from the climate change literature is that global warming has been occurring for at least a century; the average global daily mean and average minimum temperatures increased 0.5°C during the 20th Century (Hulme, 1996). It will continue, with a likely increase of between 1° and 3.5°C, or more, in the 21st Century, depending on location (McGuigan, et al., 2002). In Southern Africa, the apparent increase in the number of drought episodes experienced, increased variability in amounts and timing of rainfall in various sub-regions, and average daily temperature increases seem already to have occurred (Hulme, 1996). Sub-regions have been variously affected, although, as Hulme and others have pointed out, the likely impacts of demographic and economic changes still greatly outweigh the magnitudes of impact thus far caused by climate change vectors. Hudson and Jones (2002) have modeled a likely future climatic scenario for Southern Africa, however, in which average daily temperatures over the 21st Century may rise by between 3.9°C in Summer and 4.1°C in Winter over present averages. This would result in drying over much of the region. Hulme's (1996) "core scenario" also suggests drying over the region and increases in rainfall variability. Other simulations suggest even drier conditions.

⁹ See reporting by the World Resources Institute at: <http://www.wri.org/>

For all scenarios, southern African grasslands are seen to decline; replaced with thorn scrub savannah or seasonally dry forest. The “core scenario” also suggests reduced run-off in the drier areas—worsening an already serious situation—but increased run-off in some regions in northern Mozambique, northern Zambia and eastern Tanzania. However, the year-to-year variability in run-off rates will increase, thus increasing household vulnerability to drought (and flood) shocks. “Such changes are most likely to affect the region in SADC where the drought events of the early 1990s [and 2001–02] have already highlighted the sensitivity of the regions’ water resources to inter-annual climate variation.” (Hulme, 2000 p.6)

Since 1972 four major droughts have occurred in the Southern Africa region with serious consequences for food security and the environment: 1972-74, 1983-84, 1992-93, 2001-02. In addition there have been a large number of localized droughts. There is evidence suggesting that long-term rainfall patterns are demonstrating greater inter-annual variability in recent years compared to previous patterns. FAO estimates from the mid-1990s suggest a 20 percent reduction in average rainfall in the semi-arid areas of Southern Africa. (FAO, 1994)

Whatever the adverse impact of climate change felt, is likely to fall most heavily on the poorest and most vulnerable. (Richards, 2003; Hulme, 1996). Adaptation strategy is the key elements of livelihood strategies that will have to be addressed not only by the poor themselves but by public and private assistance organizations in improving the enabling context. This must better inform the food insecure poor of future climatic prospects and better arm them with resources in the form of water development and conservation assets, and drought tolerant alternatives crops (e.g., greater emphasis on drought-tolerant cereals and on cassava, potatoes and other root crops in lieu of continued heavy dependence on rain-dependent maize).

Problems that perpetuate the non-sustainable use of natural resources in agricultural pursuits include: i) continuation of traditional land, soil and livestock husbandry practices in ways that degrade the environment; ii) traditional land tenure and land use arrangements which operate as if land were still not scarce; the soils and forage are becoming exhausted and degraded; iii) the undervaluation of women in their multiple roles in production, reproduction and household maintenance; iv) the method of forest exploitation caused by a large demand for fuel wood in combination with average slow forest regeneration rates in the region. Each of these must be addressed more comprehensively in future food security-focused strategies.

1.3.3. WATER USE

Many countries in Southern Africa are facing severe shortages in water availability. Abernethy (1997, cited in Abalu and Hassan, 1999) reports that per person fresh water resources in the region dropped from 20,000 m³ in 1950 to slightly above the danger point of 1,000 m³ per person in the late 1990s. There are also river basin issues and the potential for water use disputes, as the need for water for rapidly increasing, water basin-using population (now numbering more than 31 million) continues to grow. The Zambezi Basin alone counts eight riparian states. The revised SADC Protocol on Shared Watercourse Systems, signed in 2000, has yet to be ratified by all SADC member states. Given increased needs for agricultural, livestock, and human water use in the

future, there is potential for major de-stabilizing outcomes if effective water-sharing and allocation arrangements are not established for the region's water basins (Abalu, 1997).

The promotion of agriculture production in the smallholder sector also requires increased investment in irrigation systems that are sustainable and that more effectively manage increasingly scarce water resources. Small-scale irrigation systems, involving water capture at the micro-watershed level and the sustainable use of some wetlands, could significantly increase staple crop production and help to ensure food security year-round in areas where they can be developed. (Meinzen-Dick and Makome, 1999).

1.3.4. NUTRITION

The figures on nutrition status in Tables 1-4 at Appendix 16 are derived from data contained in each country's Demographic and Health Survey (DHS) as analyzed for the HPN/Poverty Thematic Group of the World Bank. Table 1 shows that, predictably, chronic malnutrition in children (i.e., "stunting" or low height for age) is prevalent. About half of the children in the poorest quintile of the population in five of the seven countries for which data are available are moderately stunted. Forty-six percent and more in the middle income quintile in four countries are moderately stunted. The country averages for chronic malnutrition range from about one-third to almost half of all children, with the exception of Namibia (29 percent) and Zimbabwe (21 percent). However, the data from Zimbabwe are from 1994 and probably do not represent children's current situation. All the country averages were more than 20 percent, which has generally been the point used to define a public health problem. Recent food shortages and the effects of HIV/AIDS have almost certainly exacerbated children's chronic malnutrition in the region.

Underweight, measured by weight for age, is often used as a global measure of nutritional status that reflects the combined outcomes of chronic and short-term malnutrition. As Table 1 shows (column 7), between 33 and 45 percent of the poorest children in all countries, except Zimbabwe with its out-of-date data, are moderately underweight.

The data for children in rural areas are sobering (Table 2). Chronic malnourishment is common in children in all income groups in the rural population, even among children of the "rich." In the fourth income quintile, between one-quarter and one-half of these children are moderately chronically malnourished (Table 2, column 6). While the proportion of children affected decreases with each higher income quintile, moderate stunting is still quite common, even among the richest income group (column 7). Based on these data, the region's rural children have been vulnerable to food insecurity for some years.

A direct comparison of rural and urban children is not possible due to lack of data. Except for Madagascar, there are no data from the poorest urban quintiles (due to the small number of cases in the DHS sample) to compare with the poorest rural quintiles. However, in most countries there is little apparent difference in moderate stunting rates in the poorest rural children compared with the rates of higher-income urban children. In Madagascar, Malawi, Namibia, Zambia, and Zimbabwe the proportions of moderate stunting in the poorest rural children and in the poor or even middle class urban children were similar (Table 3, columns three and four). The same is true

regarding the proportion of rural and urban moderately underweight children in different income groups in Madagascar, Mozambique, Namibia, and Zimbabwe (Table 3, columns five and six). Chronic and global malnutrition in children apparently is more prevalent in rural areas and poorer households, but it also is a problem in urban areas and better-off households.

1.3.5. HIV/AIDS

It is difficult to overstate the detrimental impact of HIV/AIDS on the lives of Southern Africans and this report, consequently, devotes considerable space to this enormous problem and its food security consequences. The following pages present the views of a large number of authors. The HIV/AIDS pandemic is reported to be one of the greatest threats to human health and economic and social development in history, and constitutes a long-term humanitarian crisis, particularly in Sub-Saharan Africa (FAO, 2001; Gillespie, Haddad, and Jackson, 2001; Piot and Pinstруп-Andersen, 2002; de Waal and Tumushabe, 2003). The disease has negative, systemic effects that reach from the individual to the national level and affect virtually every aspect of socioeconomic life, from agricultural productivity to food security to the national GDP. The HIV/AIDS pandemic is characterized with dire phrases: the pandemic is “massive,” the disease is “fatal and incurable,” the impacts in SSA are “staggering,” and the gap between what should and what can be done to address it “is becoming an abyss.” de Waal and Tumushabe (2003) warn that “Time is not on our side. There is too little experience in taking livelihood protection programmes and policies to scale. There is too little data and analysis of what HIV/AIDS means in a food crisis.” The combination of southern Africa’s HIV/AIDS and food-shortage crises in southern Africa is “unraveling the social fabric of society to the extent that the stability and security of the region as a whole is at risk,” according to the UN Special Envoy (Morris, 2003).

Sub-Saharan Africa has 11 percent of the world’s population and 73 percent of its HIV/AIDS-related infections (Shapouri and Rosen, 2001). There are about twenty-nine million people living with HIV/AIDS in Africa and it is the continent’s leading cause of death, responsible for more than 20 percent of deaths (UNAIDS, 2002; XIIIth International AIDS Conference, 2000). In 2001 approximately 2.4 million people in Africa died of AIDS.

Southern and eastern Africa are the two regions in the world most severely affected by HIV/AIDS and the southern region has the highest HIV infection rates in the world (UNAIDS, 2002). HIV prevalence rates are over 30 percent in Botswana, Lesotho, Swaziland, and Zimbabwe, and over 20 percent in Namibia, South Africa, and Zambia (UNAIDS, 2002; Shapouri and Rosen, 2001). Botswana’s infection rate soared from less than one percent in 1984 to 35 percent in 2000 (FAO, 2001). The estimated annual number of new HIV infections in SSA increased by 129 percent during 1989-1999, rising from 1,750,000 in 1989 to four million in 1999 (FAO, 2001). In contrast, in southern and eastern Asia, the region with the next-highest number of annual infections, the numbers rose from half a million to 900,000 in the same period, an increase of 80 percent (FAO, 2001). More than 24 million people in the SSA region are infected with HIV, or 8.6 percent of the adult population, the highest proportion in the world (FAO, 2001). This is in stark contrast with the 2.11 percent infection rate in the Caribbean, the region with the next-highest rate after SSA; with the total global

rate of 1.07 percent and with the rate of 0.12 percent in the North Africa and the Middle East region (FAO, 2001).

Facts demonstrating the extent of the regional pandemic:¹⁰

- The number of annual new cases in southern Africa is likely to almost double in the next fifteen years.
- The HIV infection rate is highest among people 20-40 years of age; one study estimated that that group may account for about two-thirds of all cases in southern Africa.
- Fifty-five percent of the HIV/AIDS-affected population are children, and 18 percent are children under five. There will be almost 10 million AIDS orphans in southern Africa in the next fifteen years.
- AIDS is responsible for 70 percent of all deaths of children under five in Zimbabwe, and 45 percent of all such deaths in South Africa.
- National adult HIV prevalence rates have risen higher than thought possible in four southern African countries: Botswana (39 percent), Lesotho (31 percent), Swaziland (33 percent), and Zimbabwe (34 percent).
- “Estimated crude death rates including AIDS mortality are greater by 50 to 500 percent in eastern and southern Africa over what they would have been without AIDS;” in South Africa, death rates are twice as high as they would have been without AIDS.
- “AIDS mortality will produce population structures never seen before,” as adults in their prime die. Increased child labor will be one unavoidable result of this demographic shift.
- Fifteen year olds in South Africa and Zambia have a 60 percent lifetime risk of HIV infection and death from AIDS; in Botswana, the risk is 80 percent.
- By 2003, Botswana, South Africa, and Zimbabwe will have negative population growth due to AIDS, down to -0.1 to -0.3 percent, instead of the 1.1 to 2.3 percent rates they would have had without the epidemic.
- The population growth rate in Zimbabwe has dropped to nearly zero due to AIDS mortality. Other countries with “sharply reduced” growth rates are Botswana, Malawi, Namibia, South Africa, Swaziland, and Zambia.
- As a result of HIV/AIDS life expectancy in SSA has dropped sharply: from 50 or more years to less than 40 in Malawi, Mozambique, and Zambia; from 71 to 39 in Botswana, and from 70 to 38 in Zimbabwe.
- Many more millions of people will die from AIDS during the next decade than did during the past two decades. “Many of the southern African countries are only beginning to see the impacts of [their] high levels of HIV prevalence”

¹⁰ Data from UNAIDS, 2002; UNAIDS/WHO, 2002; UNICEF, no date; XIIIth International AIDS Conference, 2000).

- South Africa's economy in 2010 is projected to be 20 percent smaller than it would have been, at a loss of about \$17 billion, as a result of HIV/AIDS

Despite the regional pandemic, longitudinal data showing trends are difficult to find. Table 1 in Appendix 11 shows the types and numbers of people living with HIV/AIDS in the region in 2001. Table 2 in Appendix 11 portrays the increase in reported AIDS cases in the region from the 1980s to the present. The decreases in this table may be due to poor data collection and/or reporting rather than actual decreases in the number of AIDS cases. Table 3 in Appendix 11 indicates that HIV infection rates are increasing in rural areas, based on the rates in pregnant women.¹¹

Labor is a key component in agricultural production in Sub-Saharan Africa because the use of modern inputs and technology are limited. AIDS kills young adults in their prime productive years, so the agricultural sector, particularly small-holders whose production depends heavily on labor, is especially hard-hit by AIDS. The spreading epidemic in the region's rural population is likely to lead to a labor shortage for agricultural production. The epidemic will decrease the availability and productivity of rural labor, and thus decrease food production and ultimately the availability of foodstuffs and food consumption (Shapouri and Rosen, 2001). "Little is known about the net effect of AIDS on the agricultural economy, but there is no question that food insecurity will increase in the severely affected countries" (Shapouri and Rosen, 2001). This negative impact is an issue of critical importance in Sub-Saharan Africa, given its already low and dropping agricultural productivity and consumption patterns. USDA estimates that two results of AIDS in Sub-Saharan Africa, the loss of agricultural labor and the decline in labor productivity, will result in a 12% reduction in labor productivity per year in the region (Shapouri and Rosen, 2001). "The prevailing agricultural development paradigm, which assumes the availability of surplus labor, is no longer valid" in the southern region (Morris, 2003). Table 4 in Appendix 11 shows potential labor force losses and the estimated associated decreases in agricultural production in southern Africa.

Other effects on household production and food security have been noted by several authors:

- Total output and yields decrease as illness results in lack of time and energy to invest in natural resource management (NRM), timely agricultural operations, and the cultivation of remote or extensive fields, and as decreased income limits input purchases. Tanzanian women with sick husbands spent 60 percent less time on agricultural activities and, according to one estimate, approximately two person-years of labor are lost by the time one person dies of AIDS (FAO, 2001). In Zimbabwe a death from AIDS resulted in a loss of 61 percent of the household's marketed maize, compared to a loss of 45 percent with a non-AIDS death (de Waal and Tumushabe, 2003).
- The shift to less labor-intensive crops, such as from maize to cassava, and a narrower crop-mix also affects production. Cash crops may be abandoned as labor is invested in food crops. The decreased variety in food supplies and in income ultimately affect nutrition. Communal agricultural production dropped 50% in Zimbabwe in five years mainly as the result of

¹¹ See Appendix 11 for all HIV/AIDS-related data tables.

HIV/AIDS, which has affected the production of corn, peanuts, sunflower, and cotton (FAO, 2001).

- There is a decline in livestock production and/or a shift to small livestock due to the lack of labor. Livestock holdings decrease as they are slaughtered for funerals or sold to pay for medical care. Their loss decreases the availability of manure, animal food products, draft power, income, and savings (Gillespie, Haddad, and Jackson, 2001).
- Post-production food processing and storage are compromised due to labor constraints. Seed may be eaten or sold to meet food needs.
- HIV/AIDS also affects agricultural extension and other rural services. Extension agents may be prime candidates for infection because of their social status in rural areas. Their illness and death contribute to staff turnover and to decreasing technical assistance in rural areas. Extension agents may be “dying more quickly than they can be trained” which contributes to decreased capacity of technical services in several countries. This has been reported as a problem in Zambia (de Waal and Tumushabe, 2003).
- Credit intended for agricultural production may be used for food or medical care. This results in low crop yields and income which in turn require producers to sell assets to repay the credit or to default on their loans. Commercial lenders generally consider HIV/AIDS-affected households to be poor risks, which limits their access to credit.
- Commercial agricultural production also suffers. Direct costs include the loss of hired labor and seasonal workers, and the cost of workers’ illness and death. Indirect costs include the drop in employment opportunities due to decreased productivity and competitiveness, and the drop in associated activities such as processing and marketing, which may affect the non-HIV/AIDS population (FAO, 2001).

The cumulative effect of HIV/AIDS on labor and household agricultural production ultimately is likely to have negative impacts at the national level. The loss of labor and the decrease in its productivity, and the drop in agricultural output, will negatively affect national food supplies and food prices (FAO, 2001). Table 5 in Appendix 11 provides some indication of those changes, in which HIV/AIDS was one factor. Decreased cash-crop production will affect employment and foreign-exchange supplies. All of these effects threaten economic growth and development.

The impact on women is particular troubling. “Women are biologically, socio-economically and socio-culturally more at risk of HIV infection than men” (Gillespie, Haddad and Jackson, 2001). Women’s risk of becoming infected during unprotected intercourse is two to four times higher than it is for men and untreated STDs may increase their risk of acquiring HIV by 300-400 percent (Gillespie, Haddad and Jackson, 2001). They generally cannot require protection such as condoms, are stigmatized for seeking treatment for STDs, are at risk of sexual coercion, may be obliged to trade sex for food or money due to lack of education and economic opportunities, and are subject to sexual violence (Gillespie, Haddad and Jackson, 2001). There are more HIV-infected women in the 15-30 year-old age group than men, and there are four times as many infected women 15-19 years of age than men (UNAIDS, 2002). In time, women will account for 30 percent more of all AIDS cases than men (UNAIDS, 2002).

The loss of women from HIV/AIDS has “enormous implications on nutrition and poverty” (Shapouri and Rosen, 2001). Women’s labor is a major component of agricultural production, particularly for food crops. Women also are responsible for food preparation, household hygiene, and child care that are linked to household nutritional status. Women’s death therefore will affect household food production and nutritional status, and being left widows will affect household food security due to women’s loss of or limited access to the resources for agricultural production (de Waal and Tumushabe, 2003). One consequence of the death of active women (defined as 16-58 years of age) is the high dependency ratio among women over 60 in Malawi: 78 percent of these elderly women’s households had three or more dependents per adult and 75 percent of their households had no active adults (SADC FANR, 2003). Poverty and food insecurity clearly are in their future.

Widows generally lack secure land tenure, the collateral to obtain credit, and the access to technical assistance to adopt more productive modern technologies to compensate for their households’ lack of labor. Men’s deaths leave women without a major source of household labor. Households in Malawi in which an active male adult died had planted 32 percent less area than households in which an active female adult died, an indication of the role of male labor in preparing fields (SADC FANR, 2003). The stigma of AIDS may reduce support from the extended family and community social networks (de Waal and Tumushabe, 2003). AIDS orphans increase women’s child-care responsibilities and decrease the time and energy they can invest in food production. But taking in orphans apparently is women’s work: in 2002, 29-39 percent of the female-headed households (FHH) in Malawi, Zambia, and Zimbabwe were caring for orphans, in comparison to 15-29 percent of male-headed households (MHH) (SADC FANR, 2003). Referring to women and the HIV/AIDS epidemic in southern Africa, Morris (2003) stated that “very little is being done to reduce women’s risks, to protect them from sexual aggression and violence, to ease their burdens or to support their coping and caring efforts. The current willingness to assign additional responsibilities related to HIV/AIDS to already overburdened women and girls threatens to undo the limited progress made to date towards gender equality.”

The following are some of the direct impacts of HIV/AIDS on household food security:¹²

- “High rates of HIV/AIDS infection exacerbate and are exacerbated by the current food shortages [in the SADC region]. Implications for longer-term livelihood and food security are grim”.
- “Rural households that are most vulnerable [to food insecurity] are typically characterized by being female-headed, having orphans, having few or no livestock, and small land-holdings”.
- Young men’s and women’s labor-for-food is a major means of meeting household food needs for “typical rural poor households.” If these laborers contract HIV/AIDS, the households’ food security is threatened.
- Gifts from better-off relatives decrease if they contract HIV/AIDS.

¹² Data are from: SADC-FANR, 2002; SADC-FANR, 2003; Food Economy Group, 2002.

- Relatives who adopt AIDS orphans have increased food needs to meet but not increased incomes. This increases their economic stress and their vulnerability to shocks such as drought or rising food prices.

SADC's 2002 vulnerability assessments in Malawi, Zambia, and Zimbabwe found the following effects of HIV/AIDS on household food production and income:

- Proxy HIV/AIDS households have larger cereal gaps (unmet annual grain needs) and lower consumption, and are more likely to need food aid than unaffected households.
- In Zimbabwe, about two-thirds of the households in the lowest quintile of purchasing power have high (3+ dependents/active adult) or extremely high dependency ratios (no active adults in the household).
- Poor households in Zambia with a chronically ill household head planted 69 percent less area than usual; well-off households with the same problem planted only 3 percent less area. Poor households that cannot use their land risk losing it and becoming even poorer.
- In late 2002, 18-34 percent of HIV/AIDS-affected households in Zambia had enough seed for the next planting season, versus 40 percent of unaffected households.
- Two-thirds of HIV/AIDS-affected households in Zambia in which an adult had been sick or died in the past year had reduced expenditures on nonfood items, versus 49 percent of unaffected households.
- Households in Malawi, Zambia, and Zimbabwe with chronically ill household heads (proxy HIV/AIDS individuals) cultivated less cash and cereal crops, and more tuber crops:

1.3.6. TRANSPORT INFRASTRUCTURE, GEOGRAPHY, AND ECONOMIC INTEGRATION

Farrington and Gill (2002) argue that "the location of poverty matters." Poverty is predominately located in the more "difficult" areas—those that are remote, difficult to access and weakly integrated. There is a tendency, they write, for development agents to underestimate the gulf between these areas—inhabited by the majority of the food insecure poor—and those whose relatively better off poor households are more easily accessed and, therefore, the participants in development programs that ought to be targeted on their more remote fellow countrymen and women. "...much of the desired rural growth is likely to occur in well integrated rural areas... 'spread' effects are poorly defined and will take much longer than anticipated." These 'difficult areas' are defined as having:

- Low agricultural potential (owing to combinations of climatic, hydrological, soils, topographical, or pest and disease problems)
- Fragile ecology
- Weak infrastructure
- Highly fragmented and weakly functioning markets
- Poor connectivity to national, regional and global markets.

“Difficult areas” can, in some cases, encompass entire countries, e.g., the landlocked countries of Southern Africa. The nature of South African geography places several of the most food insecure countries—Zambia, Malawi, Lesotho and Zimbabwe—far from ocean ports and overseas destinations for their agricultural products and equally far from major sources of food aid. The authors point out that the transport costs from Mombasa to Kampala are the equivalent of a 50-to-140% tariff on Uganda’s manufactured exports. Ditto for land-locked southern African states. This on-going problem may be creating a bifurcation between a small number of well-located developing countries able to integrate into world markets and those not so well positioned, e.g., most of sub-Saharan Africa. Gallup, et al. (2002) derive a similar conclusion. Their research:

...finds that location and climate have large effects on income levels and income growth through their effects on transport costs, disease burdens, and agricultural productivity, among other channels. Furthermore, geography seems to be a factor in the choice of economic policy itself. When geographical regions that are conducive to modern economic growth are identified, it is found that there is a disjunction between such regions and many areas of the world of high population density and rapid population increase. This is especially true of populations that are located far from coasts and navigable rivers and that thus face large transport costs for international trade, as well as of populations in tropical regions of high disease burden. (p.5)

While little can be done about the geographic location of countries, the isolation of food insecure populations within a country demands more attention, particularly in the context of recent econometric work showing that agriculture is the engine of wider growth, including that in the rural non-farm economy and, to some degree, in the urban economy¹³ (Farrington and Gill, 2002; Mellor and Ranade, 2002). Recent work using cross-sectional multiple regression models have suggested that an increase in agricultural yields of one-third might reduce the numbers of the poor by one-fourth or more. (Irz et al., 2001.) However, one must be careful in using cross-country analysis as a guide to analysis and policy regarding *country-specific* understanding of which economic sub-sectors are the more pro-poor. The point is that programs aimed at increasing agricultural production in the well-off areas (and in Southern Africa, the well-off countries) may not have much “trickle down” or spread effect into the weakly integrated areas where large numbers of the food insecure poor live.

In Southern Africa, long distances and the poor and deteriorated quality of much of the transport networks add greatly to marketing costs and intensifies poverty as a consequence of distances. Building and maintaining roads and rail systems is expensive in terms of both fixed and variable costs and these costs are very front-end loaded. The economic (and non-economic) returns, particularly from areas characterized by distant subsistence-based maize farmers are very long-term, or even negative over the full estimated life of the investment. This remains one of the most intractable problems constraining achievement of widespread agricultural growth and of both the food security and livelihood security objectives in the region.¹⁴ Roads are important, but building

¹³ This theme is addressed more fully in the context of “what is being done, and what should be done in the future to promote more robust food and livelihood security” in Section II below.

¹⁴ See http://www.worldbank.org/transport/tr_facil/docs/smak1.pdf for a concise presentation of major regional transport problems.

and maintaining them is expensive. Managing them is difficult. Abusing them (e.g. axle overloading) is easy. There are no simple solutions offered in the reviewed literature.

1.3.7. ECONOMIC AND DEVELOPMENT POLICY ENVIRONMENTS¹⁵

In the 1970s and 1980s many countries in the region adopted farm policies in which the state, through marketing parastatals and pricing and subsidy policies, played a major role in organizing production and other aspects of agriculture. Government agencies typically bought produce and marketed it, supplied fertilizer, seed, chemicals, and machinery services, and offered extension advice and veterinary services. Public banks offered seasonal credit at often subsidized interest rates. Prices of inputs, credit, and outputs were often controlled, and usually set uniformly for the whole country and throughout the year. Under these ultimately unsustainable policies there were some impressive increases in production. During the 1980s in Zimbabwe, for example, maize production from smallholder farms doubled in less than a decade. Distant provinces of Zambia, such as Eastern and Northern, also saw remarkable increases in the amount of maize marketed in the late 1970s and early 1980s (Celis, et al., 1991). Malawi, in the 1980s, experienced a 'mini-green revolution' in smallholder maize production, as farmers adopted packages of hybrid varieties of maize and manufactured fertilizers.

The model proved illusory; it could not be sustained. The operating costs of the parastatals were too high, the public subsidies involved were too large, and the revenue base of the governments was too limited. In addition, the state agriculture agencies were operated ineffectively and inefficiently. Moreover, the policies largely supported commercial farmers with little or no support to smallholders. In some cases, such as Malawi, there was a clear bias in agricultural policy towards the interests of burley tobacco production on the large-scale estates at the expense of any support to the majority of the rural population engaged in small-scale subsistence farming. These smallholders were, for many years, even denied access to the floors of the tobacco auctions. They were not allowed, by law, to grow burley, Malawi's leading cash and export crop. Similarly, in Angola and Mozambique, large state farms were favored over smallholdings. But even where agriculture development strategies recognized the need to support smallholder farming, such support was concentrated on smallholders in the more favored agroecological zones, and on those farmers with the resources and means to expand production, e.g., on so-called 'master farmers', 'emergent farmers', 'small-scale commercial farmers' and the like. When small farms did increase marketed output, the bulk tended to come from a small fraction of the smallholders. The majority of small farmers marketed little produce, and, indeed, most were (and are) net buyers of food, selling their labor to the larger farms and on non-farm activities to provide cash to buy minimally adequate amounts of food for their families. Their poverty, and their position as net food buyers, was barely appreciated by those making agricultural policy during the 1970s, and 1980s.

The state-led approach described above was, to a fair degree, dismantled throughout the region during the late-1980s and 1990s, under the regimen of IMF/ World Bank - structural adjustment

¹⁵ Past and present policy environments are addressed in Section II. They are touched on here only insofar as they represent one of several causes of high rates of food and nutrition insecurity.

and market liberalization. It was believed that closing down, or privatizing, the parastatals would not only cut the costs to governments and the countries as a whole, but would lead to the emergence of more efficient markets. Private agents would perform the functions of the state agencies and competition among them would provide a spur to efficiency and sector growth. The results to date, however, have been meager. Private traders throughout the region have been reluctant to travel long distances to collect crops from small farmers and equally unwilling to travel long distances to supply them with fertilizer and seed in small packets. As the road networks continued to deteriorate over time, those “long” distances grew shorter and shorter. Commercial banks, more or less, ceased to provide credit to smallholders, in part because they did not always repay, in part because profitability was low and management expenses were high. Farmers, as a result, have regularly faced liquidity problem at planting time. Few smallholders have the funds or inclination to pay for extension advice or veterinary services. While the liberalization of the 1990s has seen some successes, for example, export horticulture from Zimbabwe, large-scale cotton farming in Mozambique, and (since the mid-1990s) smallholder burley tobacco production in Malawi, these have been restricted by and large to the better-resourced farmers in accessible farming areas with good soils and reasonably good rains. Elsewhere, smallholder farmers have not had the means to take advantage of market opportunities. Indeed, in the more distant zones, such as the outlying provinces of Zambia, many farmers have turned away from markets, focusing, instead, on crops such as sorghum, millet, sweet potato and cassava for their own subsistence and to supply the immediate local markets. This, of course, may be the correct strategy under prevailing circumstances, but it is not one likely to increase household income or food availability over the longer term.

Thus, most countries have seen the bulk of their rural populations left dependent on rainfed farming, barely, under high risk, high vulnerability circumstances, managing to subsist at poverty levels, even in years without shocks. They face vagaries of weather and vagaries of the economy and of government policies. They face increasing land pressure from continued demographic growth. In such areas, southern Malawi being one of the most acute cases, many households today find themselves trying to survive on plots well under a hectare; all this before factoring in the consequences of the HIV/AIDS trends described above.

1.3.8. THE 2001–02 FOOD CRISIS

Basic reporting on the immediate events conspiring to create the 2001–02 food crisis is found at Appendix 6. The reporting shows that the crisis grew quickly out of events—scattered flooding and seasonally inadequate rainfall—that are not particularly extraordinary in the region. What was extraordinary was the speed at which the numbers of people requiring food transfers grew to 14 million, and the lack of prior realization that available food supplies (i.e., estimated production, carry-over stocks, and imports in the pipeline) were woefully inadequate. Although data gathering and analysis associated with early warning in the region has become more sophisticated and timely than in prior emergencies, it still failed to alert and inform decision-makers of the magnitude of the emergency and the paucity of available food. As Stevens, et al. (2002) note, with reference to “what went wrong” in the Malawi emergency (but generally applicable to the other affected countries), there are presently more questions than answers about how the magnitude of

the emergency could have been so underestimated for so long. The authors note that the Malawi crisis followed a sequence of adverse events: harvest failure, bad information, a depleted grain reserve, import bottlenecks and unaffordable food prices. They suggest several reasons for the failure, both technical and political:

- **Technical reasons.** i) exaggerated forecasts of root and tuber production caused by a methodological error; ii) the resultant misguided notion that Malawi had a “maize” deficit, not a food deficit; iii) the resultant slowness to action; iv) the selling off of SGR stocks in 2001 purportedly based on advice from IMF officials; v) such advice from the IMF purportedly based on inaccurate data from the Ministry of Agriculture and Irrigation.
- **Political reasons.** i) strained government-donor relations, partially the result of the SGR imbroglio; ii) a slowed donor response as a result, in part, of these strained relations.

Other problems and constraints also contributed to the problems in Malawi: i) a lack of success by government in attempting to buy grain domestically from what was believed to be available private sector stocks; ii) competition from other grain-short countries in the region in purchasing grain from South Africa and elsewhere driving up regional maize prices; iii) logistics and other delays in foreign grain arrivals in Malawi; iv) problems between ADMARC—the government’s marketing parastatal, operating under new government emergency policies, and private traders.

Stevens, et al., admit they are unable to answer all the questions. The bottom line of their analysis is, however, that the response to the growing Malawi food emergency by government, donors, and others was inadequate and slow and that the reasons are difficult to unravel. The same holds true, by and large, for the other affected countries. The major lesson to be derived from pertinent analysis: such a crisis can happen, and it can happen very rapidly. The system meant to mitigate or attenuate disasters for countries throughout the region did not function adequately and, as a result, tens of millions of the food insecure poor were placed at additional risk due to the inadequacy of early warning and safety net response mechanisms.

1.3.9. GENDER

Agriculture remains an important component of the national and rural economies in Sub-Saharan Africa, and women’s major economic activity. Current research findings support the conventional wisdom that women are Sub-Saharan Africa’s principal food producers. Women’s other household responsibilities—child care, providing fuel and water, food processing and preparation, marketing—also require significant time and energy. HIV/AIDS has become a major drain on women’s time and energy as caring for the sick and orphans becomes more common. Women simultaneously are responsible for producing household food supplies yet are marginalized in terms of access to key agricultural resources—land, water, technology, credit, extension services. The contradiction between what rural women are responsible for and what they have to work with often seems impossible. Modern trends, such as the shift in male labor to off-farm work, the increase in commercial crop production, and environmental degradation, are making this contradiction sharper. These are key points about women producers:

- Most of Sub-Saharan Africa's farmers are women, and they account for 70-80 percent of household food production in the region (Brown et al., 1995).
- Women are a disproportionately large number of the landless, unemployed, and poor in SSA and simultaneously responsible for supplying their households' basic foodstuffs (Mukhopadhyay and Pieri, 1999).
- Women's marginalization in the agricultural sector is "likely to result in forgone economic growth, through lower crop yields, delayed adoption of new technology and plant varieties, and environmental degradation" (Quisumbing, 1995).
- Women work longer hours in agriculture and in nonagricultural activities than men, have multiple roles rather than focusing on production, and may spend "considerably less time than men in meetings, which limits their active participation in issues that affects their lives" (Mukhopadhyay and Pieri, 1999).
- Women in SSA work 50 percent more hours than men in agriculture and other tasks, averaging 13-hour workdays (Saito, 1994).
- Gender roles in Sub-Saharan African agriculture are changing: women are growing cash crops and making farm-management decisions as men migrate off-farm (Saito, 1994).
- Women receive less than 1 percent of all the agricultural credit in Africa (UNFPA, no date).
- Extension services are male dominated and generally target men rather than women, and cash crops and larger farms rather than food crops and smallholders (IFPRI, 2001a).
- Only 3 percent of extension agents in SSA are women, although women are key producers and women farmers working with women extension agents evidently improves technology transfer (Quisumbing, 1995).
- Women are efficient farm managers; their lower yields are due to "lower levels of inputs and human capital than men" (Quisumbing, 1995).
- Universal primary education promotes women's productivity: an additional year of education for women has 2-15 percent returns to agricultural production (Quisumbing, 1995).
- Women producers "must be the centerpiece of agricultural strategy" to improve household food security in SSA (Saito, 1994).

1.4 Coping and Adapting—how the food insecure poor have responded

The food insecure poor are, by and large, those dependent upon rainfed agriculture, living in environmentally degraded areas, utilizing increasingly less fertile soils and pasturelands to raise crops and livestock inadequate in most years to cover—through own consumption or sale—minimally adequate nutritional requirements of all members of the household. Virtually all exist on less than the local equivalent of \$2 a day, most on less than \$1 a day in net income. Their children are malnourished, a third of them significantly stunted by age 5 years, a large percentage

of mothers suffering from iron deficiency anemia and other macronutrient and micronutrient deficiencies. They lack access to adequate water for crops and animals for much of the year and to adequate amounts of clean and potable water for their own needs. The asset basis of their livelihood systems are fragmented, fragile, and highly vulnerable to exogenous shocks and adverse trends. Their traditional strategies for coping with adversity are increasingly ineffective and their ability to adapt to changed economic, social and political circumstances highly constrained by depleted holdings of assets and wealth, and reduced access to traditional safety nets and other mitigation strategies. There are an estimated 800 million food insecure poor in the world. In sub-Saharan Africa, the number of people consuming less than the recommended daily caloric intake of 2,100 kcal/day is presently estimated at 337 million, roughly 57 percent of the total population of sub-Saharan Africa and 38 percent of the World's hungry. (Shapouri and Rosen, 2002). By 2011, USDA/ERS predicts that sub-Saharan Africa's share of the world's hungry will have risen to 50 percent. In Southern Africa,¹⁶ where, if anything, the share of the sub-region's population suffering from combinations of chronic and acute hunger will be higher than the sub-Saharan African average, the total number of the food insecure poor might well exceed 50 million people at present (Abalu and Hassan, 1999; Shapouri and Rosen, 2002).

Some of the more important factors creating and perpetuating household food insecurity and pervasive poverty have been discussed above. How have the food insecure rural poor in Southern Africa responded? How effective have these responses been? As Barrett et al. (2001) conclude from an extensive review of the literature, "diversification is the norm."¹⁷ The response, whether determined *ex ante* as mitigation, or *ex post* as response to adversities, has been to engage in combinations of on-farm, off-farm, and non-farm activities intended to increase income, preserve productive assets or wealth, or improve future outcomes—all involved, to a very great degree, in stabilizing or preserving present or future consumption.

The image of the African rural poor as engaged exclusively in farming pursuits has been found far too simplistic, and increasingly far from the on-the-ground reality. To a large degree the result of the changing situational context in rural Africa over the past several decades, the traditional livelihood strategies of the poor have been changing and becoming more complex. If nutrition, expenditure, household asset, and other poverty survey data are accurate, these strategies, at least for a large segment of the rural poor, have proved inadequate in helping gain or preserve adequate quality of life. Barrett, et al., citing earlier work by Bryceson and Jamal (1997) and Reardon (1997), note that income from non-farm activities may already account for 40–55 percent of total average household income. As noted elsewhere, more recent survey work by Bryceson (2000) in seven African countries¹⁸ reveals income levels from non-farm sources ranging from 55–80 percent of total average household incomes. These are dynamic, and apparently continuing,

¹⁶ For purposes of this discussion, including Angola, Botswana, Lesotho, Malawi, Mozambique, Namibia, Swaziland, South Africa, Tanzania, Zambia and Zimbabwe.

¹⁷ An entire issue of *Food Policy* (vol. 26 – 2001), entitled "Income Diversification and Livelihoods in Rural Africa: Causes and Consequences of Change," is devoted to concerns of livelihood, coping, and adapting strategies. The Barrett, et al, article cited herein is, to a large degree, a synthesis of the main points of the other articles. This issue ought to be of considerable interest to RCSA staff.

¹⁸ Including Tanzania, Malawi, Zimbabwe, and South Africa in the SADC region.

changes with important implications for those designing, implementing and measuring effectiveness of development assistance efforts, if improved rural¹⁹ livelihood security and/or food security are the objectives of the assistance.

Barrett, et al. (2001) ask the question “Why do households diversify?” The studies they synthesize conclude that diversification is a response to diminishing returns to labor or land, from market failures (e.g., credit), or “friction” (for mobility or entry into higher-return niches). Incomplete markets for land, labor, credit, or insurance contribute to an inability to capitalize on what otherwise would be inherent remuneration potential and engender the consequent need to search for alternative, more adequate, returns. A farmer turns, for example, to a distant labor market to earn part of his or her livelihood, even though s/he has potentially productive land, because that land is not well-located and high transaction costs impair adequate net returns. The construction of a nearby feeder road, for example, might well change the equation by reducing marketing and transport costs.

...when individuals or households are not endowed with the ratio that maximizes profits at a prevailing shadow price and there are not well-developed asset markets through which they can exchange assets to achieve the optimal mix. Diversification becomes the natural response...for the poorest, this typically means highly diversified portfolios with low marginal returns, or desperation-led diversification... (pp. 9-10)

“Missing markets” discourage diversification. The lack of a credit market can impede diversification into more lucrative economic endeavors, as when a farmer cannot afford to purchase a truck to enter a long-haul transport niche even though doing so would be highly profitable. The lack of an insurance market (formal or informal) reduces the ability of a household to smooth consumption.

Inadequate physical access to markets in remote areas forces households to diversify their patterns of production in order to satisfy their requirements for diversity in consumption. These households are particularly hampered in their ability to diversify *ex post* to cope with shocks to income. When this is coupled with missing social insurance markets, the results can be a rapid devolution into destitution and pre-famine conditions. This problem is intensified where safety nets are “meager and frequently tardy” (p.12)

Assets, broadly defined, form the foundation of food security (Barrett, 1999) and constitute the building blocks of sustainable livelihoods (Farrington, et al., 1999:3). Five classes of assets are identified: human, natural, financial, social, and physical. Cash on hand, non-farm income and remittances, land, well-heeled extended family members, and access to ready credit all decrease vulnerability to food insecurity. Livelihood systems are the economic and social configurations

¹⁹ The focus on “rural” as opposed to urban food insecurity stems from acceptance of the thesis that agriculture and those engaged in it in Southern Africa should be the focus of efforts to both generate overall economic growth and improved food security in the 2004-2010 period at issue. The nature of growing urban poverty in Africa represents a serious problem in the proximate future (see, for example, D. Maxwell, et al. 2000) but, the theory underlying the rural focus is that agriculture represents the most likely real engine of growth in Southern Africa and that improvement in urban employment, incomes, and access is best addressed in the medium- to long-term by a focus on “growing agriculture” and, through it, increased rural demand for goods and services produced by the urban wage force.

through which food security is achieved and maintained. For assets to enable adequate food security, there must exist mechanisms for converting them into appropriate amounts and types of food. Markets, as previously discussed, constitute major asset exchange portals and, as such, are vital in achieving sustainable food security within a livelihoods framework.

So, too, are “institutions” in the form of laws, edicts, policies, contracts, enforcement mechanisms and “folkways” (North, 1990). While there is much attention in the literature regarding the importance to food security and livelihood security of asset exchange markets, there has been somewhat less emphasis on the importance of institutions and institutional arrangement in the proper functioning of these markets, particularly as these “ways of doing business” have such a profound effect on transaction costs.²⁰ As Crowley and Appendini point out:

...in cases of resource scarcity or plenty, participation in different *institutions plays a key role in accounting for variations in resource endowments among households*. Participation in plough and oxen sharing arrangements, in land, labour, and agricultural markets, in ad hoc rotating labour associations, in credit contracts, and claims on the basis of national legislation can determine the types and quantities of resources with which a household is endowed, where they fall along the wealth/poverty continuum, and whether they are likely to be upwardly or downwardly mobile.

Where institutional arrangements are well-integrated into a society—i.e., where everyone understands and complies with the manner in which, say, contractual responsibilities are carried out and enforced, transaction costs are low. In a society where, for example, “handshake agreements” are always honored there is little need for expensive lawyers. Where, on the other hand, groups or individuals do not honor legal or traditional arrangements, where enforcement is weak, or where conflict over interpretation of institutions is unresolved, transaction costs rise. In an African landscape where traditional “ways of doing things” have been attenuated and where new institutional mechanisms are weak, the social and political fabric can lose cohesion and economic outcomes are greatly—and often adversely—affected.

The impact of asset availability, markets, and institutions on livelihood security are profound and must be increasingly better understood, if programs aimed at improving livelihood security—and through livelihoods—food security, can engender cost effective progress toward desired outcomes among the rural poor in Southern Africa. Better understanding helps enable appropriate application of key concepts related to sustainable livelihoods and equally sustainable reductions in household food and nutrition insecurity. Farrington, et al., (1999) suggests that such improved understanding:

- Helps to bring together different perspectives on poverty and integrate the contributions to eliminating that poverty;
- Makes explicit the choices and possible trade-offs in planning and executing different development activities;

²⁰ Crowley and Appendini (1999) (plus references cited therein) provide a brief and informative presentation, using an example from western Kenya, of the principal issues of the influence of institutions in economic and social market transactions in rural African contexts. It is also highly recommended that Nobel Laureate Douglass North’s seminal work on this issue (North, 1990) be reviewed in this context.

- Helps to identify the underlying constraints to improved livelihoods and the means of overcoming these;
- Helps to link improved micro-level understanding of poverty into policy and institutional change processes.

The practical difficulties are:

- Understanding how conflict over access to resources impinges on livelihood choices, and what can be done to address this;
- Developing cost effective modes of livelihood analysis that ensure that the needs of the poorest are prioritized;
- Identifying appropriate in-country partners, and developing collaborative approaches to understanding the complexity of poverty and integrating that understanding into a common livelihoods frame;
- Understanding how, in practice, to handle trade-offs, as for instance, between local pressures (e.g. for increased short-term income or better infrastructure) and wider concerns about resource sustainability and national-level policy considerations.

In Farmington's later work (Farmington and Gill 2002) there is the added difficulty of achieving food and nutrition security in "weakly integrated" rural areas. As the authors note, visions of market-oriented economic growth "...tend to underestimate the gulf between areas well-integrated and weakly integrated into markets, and the relatively small size of the former, especially in Africa."

2. What Has Been Done, Is Being Done, and Should Be Done

This section deals with what has been done, is being done and considered for the future in terms of improving food security and livelihood security in the region. It is divided into four subsections which look at i) the history of food security and livelihood security as goals of development; ii) what has been undertaken in the Southern Africa region regarding food security during the 1970-2003 period; iii) what is the present state of play regarding attempts to promote food security, nutrition security and livelihood security; and iv) what is proposed for the future by knowledgeable scholars and development practitioners.

2.1. The History of the concepts food security and livelihood security

There is neither time nor space available to recount the history of food policy, food security policy, and livelihood security policy as each has evolved (or not evolved) over the three decades, 1974-2003, for each of the 14 SADC governments or the region as a whole. A highly abbreviated history, therefore, sets the stage for a review of present policies in the region and a discussion of actions by these governments, donors, NGOs and local organizations to confront food and nutrition insecurity and the role of a livelihoods approach within that nexus. This will, in turn, lead to a discussion of actions proposed for the future. Section III will deal specifically with suggestions for RCSA consideration of its own role in confronting the causes of food insecurity Southern Africa in the 2004-2010 period.

“Food security” as an objective, or agenda, for action is usually traced to the World Food Conference of 1974, the first to deal with global issues of food and hunger. The emphasis at that time was on food availability and changes in the global supply. Food security was defined as: “Availability at all times of adequate world supplies of basic foodstuffs...to sustain a steady expansion of food consumption...and to offset fluctuations in production and prices...” (UN, 1975). The 1980s saw the beginnings of concern among macroeconomists over the possibility that structural reform programs might be making the poor even poorer.²¹ In 1981, Amartya Sen published *Poverty and Famines* with its discussion of hunger as the result of inadequate direct or

²¹ A concern that is still very much alive in the context of “market liberalization” and “expanding agricultural trade” agendas in the Southern African region. See below.

exchange “entitlements” to food, or assets exchangeable for food. In 1986, the World Bank, on the verge of creating specific units to deal with the “social dimensions of adjustment” and “food security” published *Poverty and Hunger*, written by Shlomo Reutlinger and Jack van Holst Pellekaan which contained what is still the most widely used definition of food security: “...access by all people at all times to enough food for an active, healthy life...” In the U.S., the 1990 “Farm Bill” added the concept of “food security” as a major objective of American food aid and, in 1992, USAID issued PD-19 which officially defined “food security” for all US development programs as achieved: “when all people at all times have both physical and economic access to sufficient food to meet their dietary needs for a productive and healthy life.” There are now, by one count, nearly 200 distinct definitions of the term “food security” (Maxwell and Frankenberger, 1992), but any that contain reference to the need to be concerned with continually impaired access to nutritionally adequate foodstuffs by individuals or households will serve most purposes. Food security is particularly relevant to Sub-Saharan Africa because the level of poverty remains so high and because of the central maxim of Engle’s Law which stipulates: the poorer one is, the greater the proportion of income spent on food. Thus, the acquisition of food in Sub-Saharan Africa consumes a greater share of disposable income and the expenditure of a greater share of human, natural, physical and financial assets than in any other region of the world.

The 1990s have evinced increasing interest in: i) nutritional outcomes, ii) greater participation by the poor, iii) the role of institutions and governance in achieving economic and social progress, iv) improved methods for measuring verifiable progress in achieving output targets and goals, v) strengthening livelihood systems used by the poor to mitigate against or cope with shocks and emergencies – both natural and man-made. Also of interest, to those focused on food security outcomes, is improving the robustness of hypotheses linking achievement of assumed food security-related outputs to improved food security status, and the methods used to measure that relationship. In this regard, Patrick Diskin (1995) has written:

The conventional wisdom among many policymakers concerned with food security has been that high degrees of correlation exist between food availability and access, between food access and consumption, and between food consumption and nutritional status. In other words, increased food availability leads to increased access, leads to increased nutritional well-being...However, much evidence in the literature suggests that, in many cases, and for many reasons, assumptions of strong and straightforward linkages along the pathway from food production to nutritional outcomes are not well founded. Many factors, other than household food production and income, for instance, may affect rural food consumption (e.g., intra-household resource allocation resource patterns). Also, many factors other than food consumption may affect nutritional status (e.g., infectious diseases)...While there is no question that adequate food availability, access, and consumption are *necessary* conditions for attaining adequate food access, consumption and nutritional well-being respectively, there is also little doubt that the former conditions are *not sufficient* for achieving the latter. In particular, a number of cases suggest that *how* gains in availability, access and consumption are achieved may matter more than *whether* they are achieved. (Diskin, 1995:2)

It had become increasingly clear during the 1990s that however useful the concept of “food security” as an objective of policy or as a goal, it is not programmatically separable from similar concerns related to reducing poverty, raising incomes, creating conditions for equitable economic

growth, improving nutritional well-being, or the need to expand options at the household level for sustained and adequate livelihood security. No matter how approached, none of these resultant conditions has proved easy to attain anywhere in Sub-Saharan Africa; certainly not in Southern Africa. If having enough of the right types of food was a logical objective, the expanding of livelihood options has been increasingly viewed as the most viable way to get there. (Barrett, 1999; Barrett, et al., 2001)

Livelihood security is a concept that first gained currency in the late 1990s among NGOs such as CARE/USA and Save the Children/UK and has been championed since by DFID, ODI and other donors, including WFP, USAID and the World Bank. At its heart, the concept focuses on the interaction between human capabilities, physical, natural, financial and other assets and the central need to achieve economic progress (Barrett, et al., 2001). It moves away from narrow focus on production, employment and income to embrace social dimensions, vulnerability, and environmental sustainability in a development framework very much centered on discovering and building on local strengths and locally-determined priorities. (Shackleton, et al., 2000) The CARE definition is representative:

...the adequate and sustainable access to income and resources to meet basic household needs (including adequate access to food, potable water, health facilities, educational opportunities, housing, and time for community participation and social integration)...²²

The livelihoods of the poor in Southern Africa are both complex and dynamic "...typified by a diverse portfolio of activities that not only enhance household income, but also food security, health, social networks and savings..." (Shackleton, et al., 2000).

2.2 What Has Been Done to Improve Food Security

In the 1950s and 1960s advances in the art of plant breeding led to the development of high-yielding dwarf wheat and rice varieties which helped launch a "Green Revolution" in food production in those agronomic zones of India and Asia where these crops were technology well-adapted and produced well. Rapidly increasing food availability, together with employment-creating growth policies of governments helped lift a number of countries in the region out of the range of famines and pervasive hunger (Perkins, J.H., 1997), if not fully out of poverty. Not so in Africa. In the early 1970s, at a time when Green Revolution countries in Asia were becoming, for the first time, exporters of coarse grains, Africa entered the world's conscience with the Sahelian and Ethiopian famines of 1973. "Hunger" in Africa, its growth and trends – and the resultant level of donor resources (as a percentage of all development resources) allocated to emergency relief – have had profound impacts on development and agricultural strategies for Africa and in limiting the levels of resources available to confront the longer-term impediments to growth and agricultural development.

²² <http://www.kcenter.com/phls/hls.htm>

In Southern Africa, the advance toward food security objectives has been studded with thoughtful statements of purpose (e.g., Magwende, 1991) yet halting and inadequate progress. The Southern Africa Development Coordinating Committee (SADCC), the precursor to the present SADC, was established in 1980. The responsibilities for various elements of the region's development agenda were apportioned early on among the member states. Food security was assigned to Zimbabwe and the headquarters for food security-related research and policy formulation was established at the University of Zimbabwe. Michigan State University was selected in 1984 to provide technical assistance and training in food security research and policy formulation in Southern Africa and to help strengthen the coordination of all types of agricultural research in the region.

Initially in the early 1980s, those responsible for agriculture growth in Southern Africa were confronted by the fact that while, at least in reasonably good growing seasons, the region was able to produce enough food to cover consumption needs, agriculture production was not growing fast enough to keep up with population growth. An annual 4 percent growth rate in food production would be needed for at least 20 years to maintain then levels of consumption.. To do that, "...we must, from now on, provide our farmers with supporting infrastructure and appropriate incentives" (Mangwende, 1991). That, in turn, required cooperation across the region in removing barriers to agricultural trade and, especially, in agricultural research and its application to overcoming agronomic impediments and, in addition, to confront the factors constraining access by poor people to the food they require. The areas of greatest early emphasis were: i) the establishment of a Regional Early Warning Unit (REWU) (Masundire, 1991), ii) national crop monitoring, iii) research on issues food access and nutrition (Tagwireyi, 1991), iii) national grain marketing policies and the evolving relationship between the public and private sectors, iv) clarifying issues related to household food security, and v) maintaining a research agenda capable of informing country and regional policy makers and program implementers.²³

As Wiggins (2003) points out, during this same period state intervention models of agricultural growth were seen increasingly by the World Bank and other donors as flawed and unsustainable, due to high operating costs, the budgetary impact of large subsidies, and heavy losses incurred by parastatals. Agricultural and food security efforts during the 1980s were heavily influenced by IMF, World Bank and other donor recommendations for eliminating subsidies, liberalizing markets and reducing the roles of the governments of the region as active players in agricultural markets. During the 1980s, the World Bank's support for development programs in Sub-Saharan Africa moved away, to a certain extent, from sector-based lending (including agriculture sector lending) and support for macro-economic reform towards efforts more consistently focused on increasing the rate at which people moved out of poverty. While growth was a necessary concomitant of sustained poverty reduction, more than growth was needed. In Southern Africa, World Bank efforts included surveys of food security status in Mozambique, Malawi and Zambia, and financing of activities in these three countries intended to reduce poverty through

²³ Much of the information used here regarding the evolution of food security concerns, institutions, organizations and research priorities in Southern Africa during the 1980s is contained in two books of edited articles - Bryant, ed.: *Poverty, Policy and Food Security in Southern Africa* (1988), and Rukuni and Wyckoff, eds.: *Market Reforms, Research Policies and SADCC Food Security* (1991).

strengthening local government capacity to analyze conditions creating food insecurity at the community level, to strengthen intermediary local implementing organizations and to improve the local delivery of low-cost, effective health and nutrition services. Other donors, particular the Nordic countries, the EU, CIDA and UNDP followed with similar emphases. Lacking in all these programs, however, was a coherent, concerted effort to strengthen the agriculture sector, in particular that part of the sector made up of poor, food insecure, smallholder households.

The emphasis in agricultural policy reforms throughout Southern Africa during the 1990s was the continuation of pressure on governments to: i) reduce the role of government as a participant in the buying and selling of agricultural inputs and agricultural production; ii) enable an environment for private firms to perform market functions, and iii) empower farmers to participate fully and fairly in markets. Each country's resultant approach and policy environment was distinct, but there were commonalities of objective, if not always of approaches.²⁴

Economic growth was consistently viewed as essential for reducing rural poverty. Since the majority of the citizenries labored on small farms in agricultural pursuits, overall economic growth would, at least initially, have to come from agricultural growth. Such growth would increase incomes in rural areas which would enable increased effective demand for non-tradables from their neighbors, and tradables from urban firms and factors. This in turn would spur growth in urban employment (with lags) and increases in demand for (increasingly differentiated) agricultural products. See Mellor, (1966) for an early and cogent expression of the agriculture-as-engine-of-growth thesis and Mellor & Ranade, (2002) for a later, and econometrically more robust, version. The issue in the region (with the possible early exception of Zambia in the 1970s and 80s, owing to copper) has been not so much whether agriculture should lead growth, but how to generate high growth in agricultural production that includes the rural poor. Through the 1990s, Zimbabwe, Zambia, and Malawi all dealt with issues of where to allocate resources for research, credit, extension outreach – to the high potential areas, populated by a minority of well-off farmers or herders with extensive asset bases, or to the majority of smallholders dwelling on small plots of relatively poor land with few assets and limited access to improved inputs, extension, credit or markets.²⁵

During the 1980s and 1990s research, credit availability, inputs and other forms of government attention was directed at the commercial sectors. Specific issues needing to be addressed by these governments have included:

- Increasing agricultural production in ways that spur economic growth and reduce poverty
- Helping keep the price of food affordable to the poor majority (though perhaps not to the poorest)
- Reducing high variance in availability of staple foods by use of parastatal marketing boards, price controls, strategic grain reserves

²⁴ See Appendix 9 for recent country matrices of national policies influencing food security.

²⁵ See Renkow (2000) for a succinct discussion on this issue. He concludes agricultural research in these kinds of countries must focus on the more productive areas.

The development of “strategic” (for supply and price stabilization) and/or “food security” (for emergencies) grain reserves (both termed SGRs) has been a much discussed and analyzed issue with differing outcomes in the countries of the region. Since the severe Sub-Saharan African droughts of 1972-73, many African countries have established SGRs – government-held stores of staple grains (usually maize in Southern Africa) used for either price stabilization or for emergency transfers, or both. In some cases, the reserves are abetted by cash “reserves” immediately available for domestic or international staple grain purchases in emergencies. The issues have been many but they can be boiled down to: How large? How financed? How managed? How effective? Some economists argue that while they may be necessary, such reserves should be kept to the smallest size possible and used only for emergency relief. When used to stabilize grain prices, they interfere with market signals and supply and demand responses to those signals. When they are too large, and the grain they contain is not needed because national supplies are adequate, they can become an expensive liability, creating pressures to sell SGR grain into national or international markets when these markets are, by definition, saturated. As such, SGRs can become pro-cyclical and counter-productive, i.e. performing in a manner contrary to their supply or price stabilization mandates.

The concern for “just the right size” is complicated by variance in international market responses to supply shocks in the country in question. An SGR might, for example, be designed to enable provision of, say, 1000kcal/day of maize (about 300-350 grams per person per day) for, say two months for, say, half the estimated rural population. If a drought should cause total loss of production by 3/4ths of the rural population, and if on-farm carry-over was less than normal, the country would have to order, have transported, and have delivered to the communities of the food deprived rural population a large amount of imported grain within two months. Sometimes – perhaps even much of the time – normal commercial processes require more than this amount of time. On the other hand, if SGRs are larger, containing the equivalent of 3 or 4 months of presumed emergency needs in an “average” one-year drought, costs mount, management requirements are higher, and the ultimate disposal of aging stocks without disruption in periods of ample domestic production and low producer prices is an even bigger headache. Simply put, there is no easy-to-follow rule book governing the size of a national SGR and the conditions for buying, selling, or transferring of its grain or cash resources. The aforementioned Malawi problem in 2002 is a grim case in point.²⁶

There is much interest in the possibility that careful investments in grain futures markets (in South Africa, elsewhere in the region, or in global markets) might provide a fairly inexpensive method for insuring against future grain supply failures at the national level. This may be so. Such instruments are presently used successfully in South Africa and Namibia and have previously been used in Zimbabwe. They are universally used in developed countries to hedge commodity trading risk. The option as a form of insurance against future food shortages should be seriously studied by all countries in the region.

²⁶ FAO's “Agriculture Services Bulletin No. 126” (FAO, 1997) distills the basic requirements for establishing and managing an SGR in an African setting. For those interested, it should be required reading. The issue of whether there could be an effective regional strategic grain reserve is addressed, briefly, in Section III.

2.3. Women's roles in agricultural development

Women are disproportionately important in African agriculture yet they have secondary social and legal status in Sub-Saharan Africa's generally male-dominated societies, in agriculture as in other spheres. The general pattern is that men control the allocation of land and labor for food- and cash-crop production and the derived outputs. Women's labor is used to produce cash crops as well as food crops, although men typically control revenue from the former. Marketing food crops for cash for household needs is mainly women's work but, as the primary household authority, men ultimately control that activity also. Animal husbandry is, characteristically, a component of livelihood systems for many households and another area of responsibility for women. Women are typically responsible for small livestock but they also help care for the large livestock that men control. Processing and marketing milk products is primarily women's work. Men and women as individuals often have "separate, sometimes competing, own-account activities" (Mukhopadhyay and Pieri, 1999). Women's social status puts them at a disadvantage in this competition. Childcare and women's related responsibilities tie them to the home and income-generating activities linked to farming, such as food processing, marketing, and wage labor. Men often seek off-farm wage labor outside the agricultural sector, leaving the household farm in the hands of wives and other extended family members.

Women generally do not own, inherit, or control land in Southern Africa; customary law gives these rights to men through patrilineal inheritance (FAO, no date; Saito, 1994). In SSA women have usufruct rights through male relatives by blood or marriage; widows' land tenure is insecure and often is claimed by the husband's family. Modern land reform and tenure laws do not necessarily benefit women as they often are biased and may be unknown or ignored in favor of customary law in rural areas. Colonization did not improve women's land-rights, since it allocated "new lands to white male settlers and then black African males but never [to] women" (Saito, 1994). The modernization of landholdings, including the privatization of traditionally communal land, has "led almost exclusively to the transfer of land rights to male heads of households" (FAO, 1995). Land reform most often gives titles to men "regardless of women's economic contribution to the household, their customary rights, or the increasing number of women heads of households" (FAO, 1995; Brown et al. 1995; FAO, no date). Tanzania's modern distribution of village land gave all rights to men: "no provision was made in the law for widows, divorced or separated women" (FAO, 1995). As late as 1995 Tanzanian women did not have the rights to land ownership or inheritance. Zimbabwean women's access to communal land was problematical, even though 60 percent of the households in communal areas were women-headed. Namibia's marriage laws limited women's access to land and credit (FAO, 1995).

Insecure land tenure can create many problems for women. Lack of control over the primary resource in an agricultural economy is a fundamental cause of their marginalization from other resources of production. The fact that men control the parcels that women use means that their investment in natural resource management is seen as hardly worthwhile. Ultimately it would accrue to men. Women's limited investment in NRM is logical, given multiple demands on women's energy and the high priority of producing food crops. Women also lack the resources – time, money, inputs – to invest in NRM in their fields. This leads to mining a key natural resource

– the soil – and resultant reductions in fertility and yields. FAO (no date) notes that secure tenure would allow women “to invest in, rather than exploit, the land’s productive potential and [make them] more likely to adopt environmentally sustainable farming practices.”

Control over land often is linked to control over important decisions such as crop choice, production methods, and the allocation of products to marketing and household consumption (FAO, no date). If women had rights to land and could make decisions regarding its use, household food availability might well improve – at least in the near term – since women focus mainly on food crops and tend to spend income on food and household needs more consistently than men (FAO, no date; Brown et al., 1995). However, men usually control the decisions concerning agricultural production, although women’s control increases in their absence (FAO, 1995). “In Zimbabwe, in male-headed households, men dominate all decision making...” When they are absent their wives have “substantially more decision-making power than those with husbands on the farm... [although] the absentee husband still generally decides on how much crop to sell and on the use of money from crop sales” (FAO, 1995). Women’s control over agricultural production in Namibia “may well be increasing” as men consistently seek off-farm employment (FAO, 1995). Decision-making in parts of Tanzania apparently is shared, “with men dominating slightly in those cases when it is not” (FAO, 1995).

When women own land they own smaller amounts that are less productive (FAO, 1995; Mukhopadhyay and Pieri, 1999). As population pressure has decreased the amount of productive agricultural land that is available women are given even smaller plots (Saito, 1994). Only one-quarter of Tanzanian women own land and their landholdings are about three-quarters the size of men’s (FAO, 1995). In the mid-1990s women owned only 3 percent of the land in the small commercial sector in Zimbabwe and only 10 percent in the large commercial sector (FAO, 1995). Women use less organic and inorganic fertilizers than men. Studies in Malawi showed that most women did not use inorganic fertilizer because they could not afford it. The average female-headed households used two-thirds the amount used in male-headed households (Mukhopadhyay and Pieri, 1999).

On average, African women receive less than 1 percent of the credit available for agriculture (UNFPA, no date). In five countries (Kenya, Malawi, Sierra Leone, Zambia, Zimbabwe) they received 1 percent of all agricultural credit and less than 10 percent of credit for small-holders (FAO, 1995). In 1992 only 15 percent of the membership of Tanzania’s formal rural savings and credit associations were women (FAO, 1996). Obtaining credit “remains the biggest barrier” to improving production “for small holder farmers and women in particular” (Mukhopadhyay and Pieri, 1999). Not owning land leaves women without the most common form of collateral in rural areas and often bars them from joining associations that facilitate access to credit. Other factors that limit women’s access to credit include the fact that rural loan agencies generally do not favor small-holders and food production and that they often need men’s signatures on legal contracts (IFPRI, no date; FAO, 1995). Additional reasons include women’s high rates of illiteracy, their lack of legal rights to make contracts, lack of knowledge of credit programs and procedures, and lack of time and transportation to go to the urban centers where credit programs usually are located (FAO, 1995). NGOs and women’s associations have worked to improve rural women’s access to

credit with some success. In Zimbabwe the proportion of women among all those who received credit increased from 11 percent in 1982 to 32 percent in the mid-nineties (FAO, 1995).

Extension services are another resource that is lacking in women producers' lives. These services are male dominated and generally target men more than women, cash crops more than food crops, and larger farms rather than small-holders (IFPRI, 2001a). "Lack of access to information is one of the biggest constraints that restrict women farmers' effective participation in agriculture in Sub-Saharan Africa." They need technical assistance to overcome their production constraints, but as subsistence farmers they often are considered tradition-bound and "non-adopters" (Mukhopadhyay and Pieri, 1999). Cultural norms may constrain women producers' contact with male extension agents and even limit their attendance at learning sessions (Mukhopadhyay and Pieri, 1999). Women's lack of technical assistance is counterproductive as the "gross value of output for farmers who had contact with extension agents [in four countries in SSA] is higher than for those who did not," and the women had significantly less contact than men (Saito, 1994). In addition, research indicates that women extension agents are more effective in transferring technology to women producers, but only 3 percent of the agents in SSA are women (Brown et al., 1995).

2.4 Donor programs in recent years

Another team is preparing a report on donor programs in the region. That work is not repeated here. However, brief mention is made of work underway within the framework of the Poverty Reduction Strategy Paper process and the increasing emphasis on livelihood security as an objective of donor and government policy. Several countries in the region (See Appendix 8) are participating in the World Bank/IMF PRSP process. Countries who are in the Heavily Indebted Poor Country (HIPC) category can qualify for debt reduction and poverty-focused donor financial support by preparing PRSP programs developed in a highly participatory fashion with all sectors of civil society, NGOs, donors and government. Such strategies are underway, or are in preparation, in the DRC, Mozambique, Malawi, Tanzania and Zambia. In all cases they are focused on implementing actions that: i) reduce poverty through economic growth stratagems, ii) improve governance, iii) increasing popular participation at all levels of the development process, iv) raise the participation and social esteem of women, v) reduce food and nutrition insecurity, and vi) promote livelihood security.

Much effort has gone into the early stages of PRSP preparation and activities under the PRSP umbrella are only now getting underway. The success of these efforts is not guaranteed, however, as donor, government, and private financial and skill resources are scarce and the objectives will be difficult to achieve. There have been criticisms that "fighting poverty becomes the newest justification for aging prescriptions geared to increasing the overall opening of the 'host country' to external economic actors and free market rules" (Guttal, et al., 2001). Most of such criticisms echo the theme that the PRSP process is "old wine in new bottles."

2.5 Trade

Official intraregional agricultural trade probably accounts for about 20-25 percent of total trade²⁷ in Southern Africa. If non-recorded cross-border trade were to be included, the figure would probably rise to 30-35 percent of all trade occurring intra-regionally.

The possibilities inherent in liberalized trade among SADC member countries have been much discussed (Maasdorp, 1998; Saasa, 1998; Weeks & Subasat, 1998) and measurable progress was made during the 1980s and 1990s. There have also been several studies of the advantages inherent in expanding trade between the Southern African countries and the outside world. There are many food security-related and livelihood security-related reasons to do so. Expanded trade can lead to increased employment opportunities in economic sectors where the region may have comparative advantage. There are a number of niche crops and products which can profitably be grown in the region and sold elsewhere in the world. Cashews, tea, groundnuts, spices, and, from time to time, staple cereals are examples. There are many others, actual and potential. Weeks & Subasat (1998) conclude that the potential for trade within SADC and with nearby east African countries has been underestimated. Part of the task of increasing such trade would be dismantling of the high and complicated tariff barriers on agricultural products between countries of this enlarged trading bloc. "A quick movement toward a common external tariff and a near-zero internal tariff could have substantial trade-inducing effects (p.87).

Maasdorp (1998) also argues that expanding trade within the region would have a substantial positive effect in inducing increased food security status among the poor in the region. He notes, that while shipping high bulk, low value crops like maize over long distances may not be the full answer, the maize producing states have the advantage that they produce – and the region consumes – white maize while the rest of the world trades yellow, an inferior product in terms of Southern African taste preferences. The most efficient producers of white maize in the region would be able to serve a larger internal market, reducing costs, and prices, for white maize. Subsistence producers in the less efficient maize producing areas could take advantage of lower consumer prices for white maize and shift their own production to other, hopefully higher value, crops or shift into non-farm livelihood choices. Such a move into heightened levels of annual trade intra-regionally would require much improved marketing, pricing and transport systems than are now in place – not easy hurdles to overcome.²⁸

A substantial stumbling block for a major expansion of Southern African agricultural trade is the present policy in low-cost developed country agricultural systems of large and, frankly, unfair producer subsidy regimes found particularly in the U.S., the EU, and Japan. Farmers in these countries are presently encouraged by subsidy programs to grow more than their domestic markets and normal trade would consume at non-subsidized prices. The result is pressure in these highly efficient producing countries to find new markets for all that grain by selling at prices lower than actual costs of production. The result is large-scale "dumping." As Suppan (2003) argues:

²⁷ *International Herald Tribune*, November 29, 1999

²⁸ See Appendix 17 for additional discussion of intra-regional trade.

“dumping is a gross distortion of commodity markets that undermines the livelihoods of the 70 percent of the world’s poorest people. We have the means to address agricultural dumping. It is now up to the governments to act.” Later in that recent Harvard address Suppan also lamented:

To add insult to injury, in February, the 25th anniversary conference of the International Fund for Agricultural Development noted that within the overall decline of official development assistance of the past two decades, the share of ODA devoted to agriculture and rural development has declined by 50 percent between 1988 and 1999. So neither agricultural trade nor aid is having large-scale positive effects for development.

Present wrangling in the WTO with regard to global agricultural trade is well beyond this paper to unravel. Of particular concern to potential Southern African agricultural exporters is the EU’s apparent hard line on phytosanitary and GM agricultural products. Otsuki, et al. (2001) determine that proposed phytosanitary regulations in the EU, regarding levels of allowable aflatoxin in agricultural imports would reduce health risk by approximately 1.4 deaths per billion per year at a cost to African agricultural exports of \$670 million compared to what would be imported under prevailing phytosanitary regulations. These are potentially very serious consequences. A tough stance on these issues among European governments could foreclose a considerable share of potential agricultural exports from all countries in the region save, perhaps, South Africa itself.

The countries of Southern Africa have over the years developed, or participated in, a number of overlapping trade agreements. These include: i) the General Agreement on Trade and Tariffs (GATT), ii) the World Trade Organization (WTO), iii) the Southern African Customs Union (SACU) between South Africa, Botswana, Lesotho, Namibia, and Swaziland, iv) the Common Market of Eastern and Southern Africa (COMESA) including countries from Egypt south to South Africa, v) the Lome Agreement which until recently covered preferential trade between the EU and a large number of African states, and vi) the SADC Trade Protocol initially signed in 1996, revised in 2000 and awaiting final ratification. The present status of these agreements and conventions is complex and beyond the scope of this report. Suffice to say, that, as a matter of principal, Southern African governments generally favor increased trade ties with each other and with the outside world and that, to the extent that expanded trade occurs, it is believed to work to the advantage of the food insecure poor. There are several corollary issues however and these are taken up in the next subsections of the paper.

The total percentage of the food insecure poor who are engaged in growing cash crops for export is a very small percentage of the rural population. The belief is that expanded trade would create many more such opportunities for food insecure households. Winter (2000) cautions however:

Trade liberalization is generally held to have long-run benefits, but, as we teach our undergraduates, it more or less requires adjustment in a country’s output bundle to achieve them. If adjustment is costly it could lead to periods of decline and / or poverty before things get better. (p 43)

As was the case in the 1980s and 1990s with liberalization in Southern Africa, there may be hidden traps in a full-scale advance toward freer trade that might have near- and medium-term adverse impact on the food insecure poor in some countries. Proceed with care.

2.6 Problems with an agricultural-trade food-security strategy

In addition to the points raised in the too-brief history of regional trade earlier in this section two problems confronting the region require further discussion. They relate to agricultural research, and biotechnology.

2.6.1. AGRICULTURE RESEARCH

Agricultural research in the region has under-served the smallholder sector by favoring cash crops, commercial farmers, and the more productive geographic areas. Renkow (2000) argues, however, that this may not be a bad thing, and that, as a general matter, agricultural research serves a poverty-reduction agenda better when it is directed to the agriculturally-favored rather than the agriculturally-marginal areas, even though the poorest people inhabit the latter. The authors argue that the results of successful research will, almost by definition, have a lower impact on production and incomes in marginal areas than will like research results enabling a more rapid and pervasive positive response in favored areas. "...spillover effects, operating through factor and product markets...tend to be larger when they emanate from favored areas." (p.476). Furthermore, investments of equal financial resources in infrastructure and institutional reforms may well, Renkow posits, generate substantially larger and more rapid benefits to the inhabitants of marginal areas than would investments in agriculture research in those areas – particularly "...where non-agricultural sources of income are relatively important."

Given the findings of Bryceson, Barrett and colleagues cited elsewhere that the food insecure poor throughout the region are moving rapidly into diversification of livelihoods outside of on-farm subsistence production, Renkow's assertions deserves careful consideration by those favoring large-scale increases in funding for agricultural research focused on the products of these marginal areas.

The special case of seed policy should be mentioned here because it bridges concerns related to the role and extent of agricultural research in the region and the next issue relating to the global "earthquake" in biotechnology and genetically modified (GM) agricultural products.

An ICRISAT team of experts has recently reviewed seed policy options in Southern Africa. In their presentation to the FANRPAN regional policy dialogue on March 26-27, 2003 on agricultural recovery, trade and the food security, Rohrbach and Mgonja highlighted the following weaknesses in regionalized (national and international) seed sector development:

- Limited multiplication of open and self-pollinated varieties of food crops (concentration on hybrids and cash crops)
- Limited reach of retail seed market into rural areas
- Limited seed security stocks

Despite these limitations, a case has been made for regionalizing the seed sector as an option for improving productivity through better crop varieties. It is argued that such an endeavor can speed up the release (or registration) and distribution of new varieties leading to faster adoption, quicker

production and larger income gains. The availability of better seed on the regional market could improve responsiveness to current and future droughts. Moreover, the ICRISAT team suggests, regionalized release allows a more efficient allocation of research resources and makes it possible for crop breeding via national agricultural research services (NARS) and regional programs to concentrate on location specific needs (i.e., specialized breeding and crop management). Regional economies of scale in crop breeding research would enable NARS to specialize in breeding different crops based on comparative advantage; for example, Tanzania could specialize in sorghum, Malawi in groundnut, Mozambique in rice, Namibia in pearl millet and South Africa in Sunflower. Such specialization could eventually encourage development of a strong regional seed market.

2.6.2. BIOTECHNOLOGY

There has been considerable attention devoted to the GM (genetic modification) issue, both as it affects commercial or donor-provided food imports and the potential for future export of genetically-modified crops from the region to external markets. There are many in African governments concerned about the potentially harmful implications of germplasm research in Africa while at the same time interested in the potentially beneficial rewards in the development of modified foods with desirable characteristics (e.g., cotton resistant to pests, cereals with added nutrient content or reduced moisture needs). Falcon & Fowler, (2002) remind such individuals that few indeed are the countries that have functional food systems based on genetic resources of purely indigenous origin. The authors, however, warn of four trends in the emerging GM industry interacting in ways that give cause for concern: i) new provisions on intellectual property, ii) increased concentration of new enabling technologies in a few, large, multinational companies, iii) heightened anxieties over transgenic crops, and iv) new problems rising from international agreements.

The first problem relates to the number of new patents issued in the U.S. in the period since 1996-2001 compared to earlier periods. For example, in the 10-year period 1981-1990 a total of 344 patents were issued containing both the terms 'corn' and 'gene.' In the 5-year period 1996-August 2001 a full 5,074 patents were issued with this same combination of descriptors – all to cover genetic modifications to corn germplasm. (Falcon & Fowler, 2002:201). For the important modification of vitamin-A enhanced rice, for example, dozens of patents were issued. Access to genetic resources previously in the public domain is now increasingly restricted in order to prevent these items being patented by private companies. This means that stricter limitations on public sector use of these previously public materials is now seriously impeding agriculture research related to developing country crops.

The second problem involves mergers and takeovers of small research companies to the point now where a half-dozen major firms²⁹ hold most of the key patents on germplasm. This, in turn, is directing crop research along avenues of greater profitability to the firm holding the patent. It is no accident, the authors note, that two of Monsanto's earliest seed products, Roundup Ready™ corn

²⁹ Monsanto, Aventis, DuPont, Seminis, Dow Chemical and Syngenta.

and soybeans, were linked to the company's major herbicide. (p.205). There is a point of considerable concern to Southern Africa in the implications of these trends:

...these circumstances pose serious difficulties for the poorest countries of the world. The use of biotechnology on major crops is becoming increasingly difficult for them. This point is of great concern where breakthroughs are needed and where dietary dependency can be high—for example more than 50 percent of calories come from maize in several southern African countries. Most of these nations have small GDPs and they also rely disproportionately on non-hybrid, tropical and 'poor people's' food crops of little concern to major plant biotechnology companies—crops that will receive little attention from the private sector. Further, these countries typically lack the trained scientists needed to use or develop new technology. (p 206)

Thirdly, the “transgenic battles” concerning the safety or “morality” of transferring genetic materials from one species to another now has come to involve many developing countries. A total of 44 million ha (i.e., twice the size of the UK) is now planted to such crops. One issue is whether developing countries will be allowed to make their own decisions regarding whether or not their people will be able to consume these crops. A second decision relates to whether developing countries which decide to grow these crops will be able to find markets for them in countries in both the developing and developed worlds presently restricting or prohibiting their importation, e.g. the EU (Paarlberg, 2002). These are difficult issues which will not be resolved in the near term. They have a major impact on decisions by any Southern African country as to whether to import or grow and export genetically-modified agricultural products. The need to confront this and related issues in the near future (and the inadvisability of delay) is underscored by Scones (2001:36):

...all commentators agree that sub-Saharan Africa is the region least able to deal with the consequences of declining yield growth and the prospects for increasing world food prices, especially given the declining availability of food aid.

There is certainly need for SADC to attempt to develop consistent region-wide policies on these contentious issues in the near future.³⁰

2.7. The present situation

As noted, something like half the population remains at risk from factors causing chronic food insecurity. Primarily, they constitute subsistence farming households unable to grow enough food or exchangeable agricultural production to provision themselves through the marketplace. To a very large degree they are also HIV/AIDS-afflicted. The nexus of causative factors discussed in Section I remain, to a very large degree, unabated. The history of attempts to confront food insecurity over the past three decades in the region is one of numerous programs, projects and activities aimed at increasing agricultural production, rural economic growth, more extensive primary education, attempts to increase the effectiveness of basic health and nutrition services and attempts, on many fronts, to restructure policy frameworks at the national level – and to a more

³⁰ Another good source to review on these and related biotechnology issues is Pingali & Traxler (2002).

limited extent at the regional level – to increase food availability and through improved returns to the factors of production available to the rural food insecure poor. Taken as a whole, they have proved inadequate. Production has failed to show any significant growth over the past 30 years (Clay, et al., 2002; Abalu and Hassan, 1999). The number of food insecure poor in the region has grown.

The long-term causes are, to date, insufficiently addressed. Economic growth has been stagnant. Agricultural production has not kept pace with population growth. Sufficient jobs have not been created in either the rural or the urban sectors. Governments are strapped for resources, revenues are inadequate. Overall, long-term causality of high levels of household food insecurity and poverty has not been adequately addressed, because of insufficient resources, poor planning/implementation, or both. The capacity to respond to short-term emergencies, too, has been inadequate and the ability to better confront the causes is still largely lacking.

The present 2002/03 food emergency situation seems to be improving, assuming the continuation of improved rainfall.³¹ Nonetheless, there is a wide diversity of relief and rehabilitation underway which is likely to continue for some time. A brief perusal of the most recent postings on the UN/OCHA website³² provides a sampling of these operations in the region:

- Angola—demobilized soldiers and their families requiring feeding operations until they can begin new lives.
- DRC—widespread violence in the eastern regions; danger to food aid personnel; and looting of food aid stores.
- Lesotho—some emergency distribution still underway; considerable relief—especially to HIV/AIDS-affected households and in the context of the on-going school feeding program—still being provided.
- Malawi—WFP organizing beneficiary database to improve relief targeting; reorganizing of food distribution underway; planning for next year's distribution underway.
- Mozambique—food distribution is on-going; FFW programs are underway in rehabilitating irrigation systems destroyed in the flooding.
- Swaziland—modest food distribution underway; government is promoting planting of drought-tolerant crops such as cassava, as maize crop has failed for three successive planting seasons.
- Zambia—local area flooding continues, feeding of refugees, orphans, displaced also continues
- Zimbabwe—food security situation seems to be improving, but *quelea* birds and insect infestations are a problem; government price controls remain in effect; the Grain Marketing Board (GMB) faces serious transportation problems in delivering food to distant food insecure areas. Political disarray continues to hamper recovery and shades prospects for long-term recovery.

³¹ See Clay, et al. (2002) regarding the influence of ENSO and El Niño events and their likely impact on the 2002/03 growing season.

³² <http://www.reliefweb.int/w/rwb.nsf>

Relief and rehabilitation efforts such as the above are likely to continue – and to absorb substantial financial, food and technical skill resources well into the future. Given that these food crises are occurring in Southern Africa with apparently increasing frequency, there is debate over: i) how to better predict, mitigate and respond to them in the future; ii) what might be done to reduce their frequency and severity; and iii) how to reduce the vulnerability of the peoples in the region to their devastating effects. While, for the most part, relief, rehabilitation, and the transition to development activities are the domain of national governments, donor agencies and NGO agencies, there remain a number of disquieting issues still to be addressed, some of regional scope.

The 2001-02 food crisis, like those before it, occurred for a number of reasons which varied in magnitude from one country to another. Oxfam staff (2002) suggest “...climate, bad governance, HIV/AIDS, unsustainable debt, collapsing services...and the failure of agricultural policies” as major causes, and ask the question: “...why, they ask, after years of World Bank and IMF designed agricultural sector reforms, do Malawi, Zambia, and Mozambique face chronic food insecurity?” The authors assert that part of the answer is that donor-imposed sector reform packages which were put into place without having first undertaken serious assessments of their likely impact on poverty and food security. The reforms were intended to replace inefficient and corrupt state intervention in agriculture with private sector entities. Without questioning the overall need for many of these reforms, Oxfam suggests “the ‘one size fits all’ liberalization approach failed to deliver the intended improvements, or growth. They have, instead, “..exacerbated the exclusion of the poorest from the market whilst further undermining their food insecurity.” The Oxfam report recommends: i) mandatory impact assessments before proceeding further with liberalizing reforms in the agricultural sector; ii) better efforts at ensuring food security, including food reserves in Zambia and Malawi that are not in the private sector and that focus on food security; iii) reconsideration of the appropriate roles that governments must play in market reforms; iv) improved timeliness by donors in delivering food aid; v) suspended debt repayments; inclusion of a ‘Development Box’ in on-going WTO Agreement on Agriculture discussions; and vi) the end of agriculture export ‘dumping’ by the EU and the U.S.

The other side of the debate – the World Bank, IMF, and similarly minded donors – might well respond with questions of their own: Were these reforms the wrong thing to do, or were they just done poorly, or too slowly? Was the theory wrong, or did the problems reside in less-than-perfect implementation? Would not the food crisis have occurred, no matter what agricultural policies were in place? Is not this really a problem of where to place safety nets and making sure they work well, rather than deriding needed reforms and the way they were introduced? Further, the Bank would almost certainly argue, the IFIs have been vitally interested in economic growth that is focused on poverty reduction at least since the 1990 World Development Report on Poverty made it official World Bank policy. The 2000/01 WDR *Attacking Poverty* states “We at the Bank have made it our mission to fight poverty with passion and professionalism, putting it at the center of all the work we do.” (World Bank, 2001:v) There is ample ammunition on both sides of these arguments and they need to be argued. The overriding issue remains, however, what should be done to improve household food security in the near and in the long term in Southern Africa?

2.8 Options for improvement of food and livelihood security

Food and nutrition insecurity remain major attributes of the poor majority in Southern Africa. Even though much has been done and said about reducing the incidence of food insecurity, malnutrition, and the pervasive poverty that maintains them, inadequate progress has been made. If NGO, government, and donor pronouncements of the past few years are to be given credence, the effort to reduce food insecurity will continue and a “livelihoods” approach will be a principal vehicle – in the context of recast economic reforms – to begin to make measurable progress in the lives of the food insecure poor. What will that mean?

2.8.1. AGRICULTURAL GROWTH AS THE CENTERPIECE OF REGIONAL DEVELOPMENT

If one assumes that the Mellor and Ranade thesis on the importance – and *structure* – of agricultural growth to overall economic growth holds, then focusing financial and TA resources on revitalizing agriculture in much of Southern Africa becomes the heart of a strategy for pursuing growth and improving livelihood security and, through these approaches, food and nutrition security in the region. A number of studies add support to this agriculture growth-led approach. As Anderson (2001:13) points out, based on work by Block and Timmer (1994):

...in Kenya the multipliers in agriculture are about three times as large as in nonagriculture. The reason is that incomes generated through agricultural growth are to a larger extent spent on locally produced goods and services. The multiplier effects had worked out within four years; the size of the agricultural multiplier is 1.64 and for nonagriculture 1.23. This means that a dollar increase in agriculture's income generated a further 64 cents in the next four years; and the corresponding figure for nonagriculture was 23 cents. Note, however, that the percentage impact of growth on non-traded sectors will be much larger as they constitute a smaller share of the economy.

Danielson (2001) suggests, however, that such an approach has much stronger impact in the medium term than in the short term because the powerful indirect poverty reduction mechanisms reside in market-based multipliers that take time to operate via factor and financial markets in addressing “growth-hampering” income inequality, gender inequality, and skills development constraints. Thus, while a strong focus on agriculture-led growth is almost certainly the correct basic approach, something more is needed to improve the lot of the food insecure rural poor during the period until these multipliers are operating to full effect in ways that reduce food insecurity. That “something” is an added effort to strengthen livelihood security among at risk, vulnerable rural poor households.

2.8.2. DIVERSIFICATION AND ASSET CREATION WITH A LIVELIHOODS FOCUS

Assuming decisions are made to focus on agriculture-led growth, the next issue is how best to involve the rural food insecure poor at an early stage. Under the Mellor paradigm, the outcomes of agricultural growth reduce the levels of rural poverty rather slowly, i.e., over a 6-8 year time frame operating largely through factor and product market channels.

What, then, can be done in the interim for the least efficient (because of lack of assets – primarily land and inputs) agricultural producers? The livelihoods approach would seem a near-perfect answer. Bryceson's (2000) work cited earlier reveals that anywhere from 50 to 80 percent of the income of the rural food insecure poor now stem from non-farm sources and that these households are already deeply engaged in diversification as a means of accumulating assets of all types: human skills assets, land assets, livestock assets, productive physical assets and stored value assets. Barrett (1999:1) states:

Assets, broadly defined, form the foundation of food security. Someone with cash can purchase food, even in their crop fails. Someone with land and appropriate production technologies can grow their own food, even when markets are disrupted. Someone with a strong supporting network of family and friends or access to government or private charitable support can obtain food even when they're penniless and landless. Stocks of financial, natural, manmade, and social capital empowers individuals to manage risk so as to prevent vulnerability. Vulnerability goes hand in hand with asset poverty

The near-term approach for achieving improved household food security within a longer-term agriculture-led growth strategy thus becomes one aimed at assisting the food insecure poor to create productive assets of many types. Particular importance is assigned to those spurring and perpetuating agricultural growth. A livelihoods approach, utilizing community-based and NGO intermediaries for the most part, is at the center of the effort. The near and medium-term objectives would be: i) increasing community participation in preparing local development plans; ii) making use of social action funds, food-for-work, and other sources of finance in implementing community action plans; iii) designing and implementing asset-creating activities within these plans such as reforestation, small-scale irrigation works, local rural road rehabilitation and maintenance, gully interdiction, hillside terracing, small pond construction, shallow well construction, stream and seep diversion and water capture schemes, compost pits, latrines, and other public works programs whose priority is determined by community action and whose work assignments are made and managed by the community.

The second element of such a near-term strategy would be to generate greater collaboration and eventual cooperation among smallholders in economic endeavors. The model here could be the highly successful ACDI/VOCA NASFAM program in Malawi³³ which began in the mid-1990s as a project to assist smallholder tobacco clubs in marketing their tobacco more efficiently. By 2002 the project had helped create a national farmers' association with 93,000 smallholder household members growing and selling a wide variety of export cash crops generating high returns to the members. The secret has been in getting farmers to cooperate with their neighbors in ways that reduce production and transaction costs, increase quality and uniformity of the products and increase marketing margins. It is worth noting that there is relatively little in the literature of income diversification scenarios that discusses the potential effectiveness of local cooperative action among individual smallholders around local economic and marketing issues. There should be much more attention to this approach.

³³ The reader is referred to the following website for a summary description of progress under this important project: <http://www.worldbank.org/poverty/voices/globcoal/grassroots/nasfamcs.pdf>

In another example of a livelihoods approach that works, this one from Mexico, Farías (2001) describes a livelihood diversification activity focused on smallholders growing and exporting a large and diverse group of exotic and non-traditional crops including vegetables, fruits, nuts, spices and medicinal plants all aimed at filling market niches for high value, low volume commodities. The project was able to exploit Mexico's broad biodiversity. The government provided support, but success was largely accomplished via the private sector. The farmers made contact with exporters or other buyers at exhibitions. Of participating farmers, 82 percent established commercial links, and were selling their exotic products through these links, mostly initiated at these exhibitions. The average participating farmer increased annual income by 54 percent as a direct consequence of such participation.³⁴

2.8.3. WORKS PROGRAMS

Earlier discussion has strongly suggested that household vulnerability to shocks is reduced by diversifying livelihoods. In particular cases, this can be accomplished or facilitated through public, NGO, and/or community-sponsored public works programs triggered into action when livelihoods fail, access to food fails, and chronic and/or acute/transitory food insecurity exceeds a pre-determined trigger level. In this regard, it should be remembered that such "shelf" food-for-work programs (often referred to as "employment generation schemes – EGS) have formed the heart of the Indian government's successful efforts to prevent famines, beginning with the Maharashtra famine response program in 1972-73 (Drèze & Sen, 1989:68). There is mixed history with FFW in Sub-Saharan Africa, but there are numerous examples in the evaluation literature (Riley, et al., 2002; Barrett, 2002; Sharpe, 1999)³⁵ illuminating long-term successes in physical asset creation at the community level accomplished in FFW programs. Such asset creation lies at the heart of a livelihoods-based food security strategy. The issue with FFW, as Humphrey, (1999?) And Sharp (1999) point out is difficulty in targeting benefit incidence directly on those among the food insecure poor who are in greatest need of the food commodities. This is particularly difficult in emergency relief operations.

2.8.4. CONFLICT AND "FRAGILE STATES"

Another problem affecting the ability to achieve desired food security outcomes relates to continued propensities in some places in Sub-Saharan Africa for significant, widespread, often lingering, conflict and violence. Most of the countries in the Southern Africa region are, with the possible exception of South Africa and Botswana, "fragile states"³⁶ – or, in the case of DRC, a "failing state" as defined by Zartman (1995). Angola may be heading back from the "failed" category. Mozambique has moved back during the 1990s from "failed" to "fragile". Nonetheless

³⁴ See Appendix 10 for a listing of crops and products.

³⁵ The summaries of WFP's evaluations of its emergency and development food aid operations, including FFW activities, can be found at: http://www.wfp.org/index.asp?section=7_1

³⁶ Zartman, William I., ed. (1995) *Collapsed States: the Disintegration and Restoration of Legitimate Authority*. Rienner Publishers, Inc.: Lynn MA. Fragile states are those at low levels of development, particularly those with weak governmental controls and susceptibility to corruption. They are more vulnerable to various types of shocks – political, ethnic or religious violence, gangsterism, political coups, and natural disasters – than are countries with more robust political institutions, capable, at a minimum, of offering acceptable levels of physical security for their citizenries.

there are real issues regarding the extent to which the governments of failing or failed states in the region have operational “policy levers” effectively connected to economic issues of concern to food insecure households in remote areas. Increasingly, as Africa is dotted with geographic entities where basic government services and responsibilities such as provision of physical security are not provided (the eastern DRC, parts of Burundi and Rwanda, Somalia, Liberia, Sierra Leone, Southern Sudan, perhaps Côte d’Ivoire and substantial tracts of several other African countries) the failures of governance adversely impact food and nutrition security and greatly complicate efforts to reduce primary causes of poverty and severe food insecurity. In such countries it is virtually impossible to engage in the type of agricultural growth of the type required to attenuate the causes creating conditions of chronic food insecurity. Humanitarian relief with the possibility of providing assistance to households and communities in relatively more secure areas enabling increased food availability is, in most cases, the limit of what is possible, particularly in failed states.

2.8.5. HIV/AIDS

There is broad consensus that HIV/AIDS must be addressed as a complex development issue and on a massive scale. Given the systemic impact of HIV/AIDS on households and communities, addressing it as a means of protecting rural livelihoods is an appropriate element of a food security agenda. Piot & Pinstrup-Andersen (2002) make two useful points in terms of framing mitigation strategies: HIV impact assessments should be a standard element of program design, and one must “take action on a scale commensurate with the epidemic. The time for pilot or demonstration projects is over. By delivering responses that are rooted in communities, we build to the scale of response required.” Mitigation, prevention, and care for HIV/AIDS are complementary and all three should be integrated into strategic programming to address this multi-faceted problem. The conventional distinction between treating HIV/AIDS as a health problem (preventing infection through behavioral change) or addressing it as a development issue (mitigating its socioeconomic impacts) should be replaced by integrating the two. In short, programs that promote sustainable livelihoods also can promote HIV/AIDS prevention, as they help people and nations build the economic and food security necessary to avoid the risky behaviors, environmental degradation, and undernutrition that underlie the epidemic. “Interventions need to be designed and assessed not only in terms of their ability to mitigate the current impacts of HIV/AIDS, but also in terms of their ability to reduce susceptibility to future infection and vulnerability to various types of impact” (Gillespie, Haddad, and Jackson, 2001).

The key recommendations for sound strategic planning to address HIV/AIDS in terms of protecting rural livelihoods are:

- Use an “HIV/AIDS lens” to examine rural livelihood issues and design programs. This will help integrate mitigation, prevention, and care; it also can help agencies and target populations identify and work toward livelihood strategies that “minimize risk and/or mitigate impacts” (Piot and Pinstrup-Andersen, 2002). It is important to note that this same HIV/AIDS lens should be used to assess the utility of existing programs and policies, to determine their potential for adaptation: agencies “should not be blind to the threat of HIV/AIDS, but neither should they be blinded by it” (Gillespie, Haddad, and Jackson, 2001).

- HIV/AIDS is a complex development issue that requires an integrated program approach. “A people-centered, multi-sectoral, community-based approach to development is fundamental for creating and sustaining the conditions in which HIV/AIDS can be prevented and its impact addressed most effectively” (FAO, 2001). A participatory, bottom-up approach to program planning and implementation also is necessary (FAO, 2001; Gillespie, Haddad, and Jackson, 2001).
- Socioeconomic variation from the community to the national levels is a fact. Different macroeconomic conditions and rural livelihood strategies in different countries will preclude generic mitigation strategies. HIV/AIDS will have different impacts on populations affected by conflict or complex emergencies, as it will on pastoralists, smallholder agriculturalists, or the better-off rural population. Using the HIV/AIDS lens and making HIV impact assessments a standard part of program planning will help design integrated programs that fit particular groups and areas.
- Eliminate the stigma of HIV/AIDS linked to the denial, silence, and social estrangement that contribute to counterproductive livelihood strategies. Stigma results in the “reluctance to identify those most in need” of support for working toward food security and sustainable livelihoods (Piot and Pinstруп-Andersen, 2002). Working at the community level will capture those most in need without labeling them.
- Community-based targeting is appropriate for the reasons cited in the two paragraphs above. Programs aimed at strengthening rural livelihoods will capture poor, food-insecure households that have been affected by HIV/AIDS and some that have not. The latter “should not be considered an inclusion error” (Gillespie, Haddad, and Jackson, 2001). Community-based nutrition programs, for example, are a neutral means of reaching people who live with HIV/AIDS. Targeting also should balance the relative needs for mitigation, prevention, and care that will vary by location and over time.
- Uganda’s National AIDS Control Program’s is a source of “lessons learned” for success in preventing and mitigating HIV/AIDS. Infection levels have decreased by half in Uganda following the implementation of this program. The program included training community leaders, mobilizing communities, “innovative communication techniques” to address stigma and change attitudes, reducing discrimination, and the participation of people living with HIV/AIDS in prevention and care activities (FAO, 2001). Government recognition of the epidemic and allocating sufficient resources to is essential for creating other success stories: “endorsement at the highest political level for cross-sectoral action is an essential step” (FAO, 2001).
- Development programs should recognize and work at the scale of the epidemic. Using the HIV/AIDS lens and impact assessments will provide information on the scale of the problem among different social groups and in different locales. The quotes at the beginning of this section indicate that the scale and scope of mitigation programs need to be increased in order to address the magnitude of the epidemic’s effects on rural livelihoods as a whole, and on food security. “The challenge is to find ways of scaling up locally relevant, community-driven approaches” (Gillespie, Haddad, and Jackson, 2001).

- The partners for HIV/AIDS-related programs include people living with the disease, community representatives, local health authorities, and the faith-based organizations that tend to focus on providing care (Gillespie, Haddad, and Jackson, 2001). The former are a “powerful and influential factor in effective prevention, mitigation, and care interventions” (*ibid*). Collaboration with partners in diverse sectors is necessary to deal with multifaceted impacts of HIV/AIDS on people’s livelihoods. Prevention and mitigation are both key; expertise to address these different aspects of the problem will be found in different partners.
- Agricultural production technologies that support sustainable rural livelihoods are necessary in the context of low productivity in Southern Africa, HIV/AIDS, and the proclivity for natural disasters. HIV/AIDS’ effect on labor is a key consideration given its impact among the region’s rural populations. The constraints on access to resources that women face, and their prime responsibility for producing food, must be key considerations in adapting and diffusing technological innovations. Labor-saving tools and crops, including lighter tools for women and children; high-value crops; better water management to improve production; access to labor and credit; taking gender and age into account in new technologies; and innovations in food production and processing are some options for addressing the impacts of HIV/AIDS on agricultural production (FAO, 2001; de Waal and Tumushabe, 2003).
- Monitoring the HIV/AIDS epidemic is necessary for effective response but faces operational constraints. One general constraint is the “weak demand [for monitoring information] and a weak ability to supply it,” partly because of the stigma of HIV/AIDS and the consequent difficulty in collecting information related to it (Gillespie, Haddad, and Jackson, 2001). Existing indicators for monitoring household economic and food security can be used and refined as necessary using the HIV/AIDS lens. Community input can be used to identify additional indicators as well as how to and who can collect the data. Secondary data from health centers also is useful.

2.9. WHERE DOES SOUTHERN AFRICA GO FROM HERE IN PROMOTING SUSTAINABLE LIVELIHOODS AND IMPROVED FOOD AND NUTRITION SECURITY?

Barrett and Sahn, (2001) provide analysis and guidance on how instruments of food policy can preempt or relieve food insecurity, chronic as well as transitory, caused by severe macroeconomic and non-economic shocks. Reduced vulnerability may itself, the authors suggest, be an important contribution to escaping chronic food insecurity. The poor performance of governments in sub-Saharan Africa and elsewhere in assisting communities, households and individuals in response to shocks is the impetus for their paper. The focus is on the food insecurity that results from unpredictable events. However, as they point out: “...to the extent that the chronically food insecure are most vulnerable to shocks, and that such episodic events and phenomena contribute to chronic food insecurity, we define the domain of our interest more broadly.” The authors look at three levels of food insecurity: individual, community and national and the nature and characteristics of food insecurity at each level and at the linkages by which shocks are transmitted between them.

The impact of shocks is felt in its most concrete form at the household and individual levels. This is also where governments have the fewest viable policy instruments. Whatever might occur within the household – however critical they might be, ultimately, for the food security of individual members – governments have few policy levers which can induce change or improvement in intra-household factors influencing individual food security status. In addition, it is difficult to detect policy impacts at the household³⁷ level. The authors' analysis focuses on Sen's concepts of failures of 'direct' and 'exchange' entitlements as the location of pertinent policy impact, wherein job loss, loss of farm productivity, and reduced wages or assets are "direct" entitlement losses. Food price increases constitute losses of "exchange" entitlements. Drought, floods, livestock disease, pest infestations can cause direct entitlement losses while poor transport systems, inadequate information flow, and underdeveloped rural financial systems adversely affect exchange entitlements by increasing transaction costs. In rural areas, particularly those underserved by markets, adverse impacts on *direct* entitlements predominate. In urban areas, where reliance on food markets and their prices are vital to household food security, it is adverse impact on *exchange* entitlements that counts most.³⁸

"Vulnerability" is the essential issue.³⁹ There are a variety of ways shocks are transmitted nationally, to communities and within communities to their household and individual members. The ability of households to "cushion" the adverse impact of shocks depends on such variables as income levels, the range and liquidity of assets, the availability of social insurance, and the number of individual members in affected households. Within each of these categories there are other relevant parameters. With regard to income, for example, smallholder households with diversified sources of income are likely to be less vulnerable. These are likely to be households with better human capital and physical and financial assets. Of particular concern is whether adaptation of improved agricultural technologies, e.g., hybrid maize, may have increased vulnerability to shocks because they are less drought tolerant.⁴⁰ Finally, a key concern related to vulnerability to shocks at the household level is level of recourse to various safety nets, publicly or privately endowed, formal or informal.

Barrett & Sahn focus considerable attention on national level food security issues:

...the shocks of concern in this paper result from international or national events that are transmitted to communities and households through factor and product markets (p.8).

Adequate food availability at the national level is necessary, though it not sufficient. To achieve it, reliance on international trade is a reasonable strategy for, as the authors assert, commercial food trade has historically fared well in stabilizing national level food availability in poor countries.⁴¹

³⁷ Using the standard definition of "household" as those who eat from a common pot.

³⁸ In areas such as southern Malawi, where rural households have long been net food purchasers, the impact on exchange rather than direct entitlements is also more important.

³⁹ Although 'risk' factors that increase the *probability* that a shock or shocks will occur can be equally important. The authors do not address this concept of 'risk' in their analysis.

⁴⁰ Although much farming systems research seems to show that farmers in the region are very unlikely to have abandoned growing open pollinated varieties even when they have adopted high-yielding varieties as cash earners. See Celis, et al., (1991) for examples from Zambia.

⁴¹ Better than food aid, the authors contend. They do not acknowledge that there are an array of food aid instruments enabling food deficit countries to import needed food in cases where the country lacks adequate financial resources

“...one of the most essential components of a successful food policy in dealing with crisis situations is ensuring that private intermediaries maintain unrestricted access to international food markets to import in response to emerging market signals.”

The authors provide a conceptual framework to trace the paths by which shocks can impact food security. The key concept is that of “mediating mechanisms” between macro and sectoral policies and household level issues. It is the impact on market functions and outcomes – particularly on product prices, wages, employment asset and financial markets – that is of greatest concern. In particular is the contribution of shocks to rapid inflation and a resultant drop in real incomes.

In identifying policy instruments that can be used to “interrupt” the path of transmission of shocks to the food insecure poor, the authors note that issues of targeting effectiveness, speed of policy enactment, relative costs of policy options, intra-household issues of actual vs. desired benefit incidence, the form and medium of transfer, and the potential of “elite capture” of intended effects must be considered. The policy options in times of emergency and its aftermath are: food subsidies, other types of transfers, public employment schemes, price stabilization, credit, and micronutrient interventions. The authors conclude that overall economic growth is the most important medium- and long-term answer. The short-term policy options must be based on sound early warning, the available of pre-existing safety net options, the existence of strategic reserves comprised of both staple commodities but cash for quick purchase from abroad and a good social service infrastructure and adequate roads.

The prevailing consensus, then, is that economic growth is the essential ingredient of all processes intended to generate improved food security in Southern Africa. And also, many authors suggest, it must almost certainly be agriculture-led growth. The Mellor thesis, with its increasingly robust underpinning of analyses (Mellor, 2002), focuses on agriculture, appropriately structured and with known lags, as the best option for growth and poverty reduction. For all countries in Southern Africa, save, perhaps, for South Africa itself, there would seem no other legitimate choice.⁴² As previously discussed, the first requirement is to insure that the agriculture sector is provided the attention and the capital resources needed to generate significant growth. A second and equally important requirement is to undertake activities in the near and medium term that insure that the benefits from longer-term growth generated from a focus on agriculture are captured by the majority of the people of the countries in the region, i.e., those most vulnerable to shocks, and most in need of improved livelihood security and food security.

During the 1995-2003 period the first steps have been taken. There is now greater concern for nutritional outcomes, a greater emphasis on participation by the poor themselves, greater attention to measuring outputs and outcomes, (but, perhaps, not yet enough attention devoted to measuring impacts and collecting sound evidence of progress toward goals). There is now considerable

to do so commercially. The authors suggest concessional balance of payments support – a much more difficult avenue to pursue with many donors.

⁴² With the possible exception of: i) Mozambique where the potential increased export of electricity and exploitation of coal and other mineral resources offers non-agricultural options; ii) Botswana, where minerals are also a better option than agriculture, and, to a certain extent, and iii) Angola where petroleum resources offer non-agricultural options as well.

emphasis in looking at livelihood strategies, focusing on the relief-to-development continuum in shock-prone countries, and on those most seriously at risk and vulnerable – particularly rural women. Some of the more promising strategic approaches suggesting better focus on issues of livelihood strategies and improved food and nutrition security outcomes for the future include:

- DFID focus on livelihoods
- IFAD focus on agriculture's contribution to reducing poverty
- USAID emphasis on quantifiable results and the role of private entrepreneurial approaches within the AICHA framework.
- WFP stress on using food aid to enhance enabling environments for development
- World Bank focus on blending macro financial assistance with poverty-reduction focused planning and participatory implementation – the PRSP process.
- The increasing effectiveness of NGOs in delivering measurable development results using food aid resources.⁴³

Areas where improved performance will be necessary:

- Vulnerability assessments need to be used not only for emergencies but as programming tools for the design, implementation and evaluations of development projects.
- Targeting needs to be improved with consideration given to geographic area targeting as opposed to household-level targeting as more cost effective
- Participation by the food insecure poor needs to be greatly strengthened in the context of livelihood security approaches – community level management for development planning and implementation needs strengthening, presumably best undertaken by NGOs.
- Food aid as a development resource can be greatly enhanced. It must be programmed in a highly coordinated manner with other forms of development assistance.
- The trade-offs between development resources used to respond to emergencies, those used to reduce the incidence of emergencies and their severity, and those used to reduce the vulnerability of those who suffer from such shocks need to be made visible and programmatically inter-related in planning, implementation and evaluations of relative effectiveness.

To achieve results from an agricultural-led focus on reduced food insecurity and improved livelihood security the following should be undertaken:

- Renewed, more focused, substantially enlarged, and higher priority efforts to strengthen Southern African national and regional organizations centered on agriculture, food security and

⁴³ RCSA may wish to consult Riley, (2002a) for a presentation on the possible role of food aid and NGOs in support of AICHA objectives in Eastern Africa. There is broad applicability to Southern Africa, as well. The report is available from REDSO/EA.

livelihood security within SADC, the universities and research institutes of the region, the private sector, and the donor community.

- The special problem of the inadequate regional transport network needs to be reviewed, starting with “sensitivity” analysis of various options and trade-offs for utilizing always inadequate financial resource to best effect in increasing agricultural trade with and outside Southern Africa.
- A much strengthened effort to seriously improve collaboration between donors to improve cost-effectiveness of a multiplicity of projects in a multiplicity of sectors.
- Consideration of establishing a regional SGR system as a back-up to national SGRs – in effect a “central bank” to back up national-level SGR food “banks.”

In sum, strong, broad agriculture growth must lead the effort. A focus on the problems of the food insecure poor must be woven into any agriculture-growth led strategy, particularly in a Southern African situation where the abjectly rural poor are such a high percentage of all in the region who are poor. The Mellor thesis suggests that the main burden of leading an agriculture initiative will fall on the “middle poor” who have the initiative, the land, and the physical assets and resources in place already, not on the asset-less, absolutely poor. The means of enabling the poorest to participate sooner rather than later is very much the task of corollary livelihood strategies that can help generate among very poor communities productive asset “building blocks” that would enable their growing participation in agricultural growth in the near- or medium-term. Section III picks up this theme and suggests that RCSA consider how it might best participate in this “two-pronged” proposed strategy of agriculture-led growth but with an added livelihoods-focused sub-strategy.

3. What Tasks to Improve Food Security Fall within the Purview of RCSA and its 2004–2010 Strategic Plan?

The first two sections of this report have explored, in summary fashion, some of what can be gleaned from pertinent literature about the scope and causality of food and livelihood insecurity in Southern Africa and of experience elsewhere that pertains. The function of this sub-section, given the above, and also RCSA's interest in considering livelihoods options, is to suggest a course for RCSA (within an AICHA-oriented⁴⁴ strategic framework) that enables food security in the region to improve substantially while using a sustainable livelihoods approach to more quickly broaden its impact among the most food insecure.

3.1. Agriculture-led growth with a livelihoods-oriented focus: a suggested overall approach

Sections 2.8 and 2.9. propose general support for a strategy that promotes agricultural growth as the centerpiece of overall economic development in the region, using as guidance the Mellor agenda (summarized in Appendix 14). Also recommended is a second component – direct support for food insecure smallholders in a livelihoods strategy focused on income diversification to speed asset creation in the near- and medium-term. This second element is necessary because agricultural growth alone is unlikely, in the Southern African context to improve household food security quickly enough over the initial phases of agricultural growth. The percentage of the rural poor who are what Mellor terms “middle peasants” – those with sufficient land and other resources who would be the immediate beneficiaries of agricultural growth may be too small in number to initiate and expand an agriculture growth-led process bringing benefits to the vast numbers of their poorer colleagues within the 15 year timeframe Mellor suggests. The fear is that the velocity of the factor and product market “multipliers” may be too slow to raise the many, many extremely food insecure poor out of absolute poverty within those 15 years. Something else

⁴⁴ Agriculture Initiative to Cut Hunger in Africa, AICHA.

may need to be done to, in effect, prepare the vulnerable, food insecure, asset poor, majority of rural smallholders for mid-term (as opposed to later-term) participation in Mellor's growth scenario. That proposed "something" would be a "second prong" effort to speed their being able to participate sooner rather than later. An example from Ethiopia might clarify what is suggested for consideration:

There are several thousand Ethiopian farmers' associations which have participated in NRM FFW programs in drought-prone Tigray and Amhara Regions. Some of these programs have gone on for many years – enough time for there to have been a number of successes and a number of failures. The successful farmers' groups have managed to maintain – and improve on – the physical assets created 10 and 15 years earlier, apparently because they had learned to operate effectively as communities and have continued, through good years and bad, to protect hillside watersheds, maintain water diversions, care for their hillside terraces, etc., long after outside food aid programs were completed. They have, in effect, created local governance that works. Many of these groups have proven their ability to establish local development priorities, prepare development plans, to implement activities successfully, and to continue to improve on earlier works. As a result, in the context of the new 2002 World Bank's "Ethiopia Food Security Project," such groups have been specifically identified as having qualified themselves to receive financing for the next – in this case commercial – step toward increased productivity and higher incomes. Their having had the experience of FFW asset creation, and having had enough time to prove themselves capable stewards of their own development processes has made them "credit-worthy" candidates for community-organized and designed cash-earning enterprises under the Bank's plan.

In Southern Africa, there are opportunities for local variations of this type of process to be implemented, operating in a similar fashion, within a livelihoods framework. Such efforts, undertaken in countries across the region, could be specifically designed to shorten the time during which agriculture-led growth projects begin to result in reduced household food insecurity among substantial numbers of the more asset-poor, food insecure rural households.

Such, then, is the variant of the Mellor agriculture growth model suggested here. It would add to Mellor's agriculture growth model a second, separate element with emphasis on vulnerability assessments, livelihoods-based, locally-organized, community-focused, planning, organizing, and implementing specifically aimed at sustainable asset creation. Funding could come from food aid, "social action funds," and specific donor projects. Implementation would be largely through international and local NGOs assisting community-based organizations and farmer's associations. This two-pronged, twinned, growth/livelihood concept is proposed for RCSA consideration as *the* model for growth to guide its preparation of a food security-focused development strategy for the 2004-2010 period. Given the imperatives of supporting AICHA and utilizing a sustainable livelihood mechanism to do so, it would seem a good fit.

3.2. Enhanced Regional Food Security Strategic Option

This Report now looks at the role RCSA is considering for itself in confronting food insecurity, in light of the information and analysis contained in the previous two sections.

The proposed strategic orientation consists of: supporting "...the implementation of AICHA in ways that contribute to increased rural and peri-urban agricultural productivity, "growing" economies through backward and forward market linkages, improved regional disaster management and mitigation, and increased competitiveness of agricultural products in local, regional, and global markets. Diversification of rural livelihoods is a strategic linkage between food security and water management strategic options." RCSA would focus on those aspects of AICHA-related activities best dealt with in a regional – as opposed to national – context. The tasks selected would be intended to facilitate progress in national programs by, among other things, helping achieve greater across-border trade, helping the region to participate more effectively in international trade (e.g., WTO) discussions, facilitating economies of scale in agricultural research, sharing of experiences and lessons learned among the country partners, and assisting USAID efforts in all the countries in the region to improve market-oriented agricultural growth. Four focus areas are being considered. They are discussed in turn, in the following paragraphs:

3.2.1. SCIENCE AND TECHNOLOGY

The suggestion is to focus RCSA support on regional initiatives developing applications of particular utility to small- and medium-scale farmers enabling production increases and agribusiness development in the smallholder sector. In Section 2.6.1., above Renkow cautions against agricultural research focused on the very types of endeavors suggested. He argues that alternative investments in infrastructure are likely to have a larger and more immediate pay-off and that the longer-term impact of investing in agriculture among better-off farmers is likely to generate more production, a greater overall income boost, and larger spread effects than would research aimed specifically at farmers in marginal areas. These are compelling arguments. Another issue is whether there may already exist appropriate technologies available for dissemination that have not yet been extended to the poorer and more remote smallholders. Prior to investing in additional research, there should be, at a minimum, a thorough review of what may already exist on the shelf. The issue of support for Southern Africa-specific research in biotechnology, while potentially yielding important technological breakthroughs, also holds the possibility of being politically contentious and yielding products which might adversely affect export prospects. The discussion by Falcon and Fowler (2002) in Section 2.6.2. above is also pertinent and suggests impediments may lie in wait.

The strengthening of linkages and partnerships with foundations corporations, and non-profit research entities and the region's various research networks should be an absolutely essential element – and a mainstay – of any RCSA endeavor in the science, technology, research domain.

3.2.2. AGRIBUSINESS, MARKETS, AND TRADE

Strengthening the region's phytosanitary standards and its ability to effectuate them in its export industry would almost certainly generate a handsome export payoff in potentially increased export levels to the EU, Japan and elsewhere (See Otsuki, et al 2001, cited on page 31 above) and is highly supported here. Assisting the region's governments to harmonize agricultural policies and to finish the ratification process of the revised SADC Trade Protocol is also strongly supported, given the arguments in Maasdorp (1998). Of possibly greater benefit, although not a part of RCSA's proposal, would be an on-going effort to report factually to pertinent U.S. Government offices on the magnitude of adverse effects being felt among Southern African farmers and agricultural exporters resulting from continuing U.S., EU and Japanese government subsidies to their farmers. As mentioned in Section 2.8.2. above, the NASFAM project operating in Malawi would seem a near-perfect example of a program utilizing a cooperative model, an agribusiness implementation mode, and an international trade modality to raise household incomes of tens of thousands of poor smallholders in one of Africa's poorest countries.⁴⁵ An important role for RCSA might well be in helping determine the suitability of the NSAFAM model for application elsewhere in the region and in assisting NASFAM and USAID/Malawi staff in identifying actual multipliers and the pace of "spread effects" emanating from the project. To what extent have increased incomes of NASFAM participants led to increased employment and non-farm remunerative activity in project areas. Can factor and product multipliers be determined?⁴⁶ In other words, what types and magnitudes of benefits may have extended beyond those derived by the primary NASFAM member beneficiaries, and to whom?

It is also clear that transport infrastructure in the region remains a major impediment to global competitiveness of agriculturally-derived products from much of the region. It should, thus, come as no surprise to RCSA staff that improved transport links are critical to the long-term success of agriculture-led efforts to expand the benefits of growth to the food insecure poor and that RCSA should focus, during the 2004-2010 period in seeking ways to enable revival of deteriorated road and rail links that cross country borders.

3.2.3. DISASTER MANAGEMENT AND MITIGATION

This is an area where RCSA could well generate significant improvement in performance by the region's governments, donors and NGOs. As discussed in Section 1.3.8. the rapid escalation of the 2001-02 emergency into a true disaster situation is in part the result of faulty data gathering and in the inherent difficulty in judging when a seemingly "normal" rainfall shortage suddenly escalates into a life-threatening crisis. It did not take a long time. The world's ability to respond quickly is limited. Therefore accurate prior warning is essential and that, in the Southern African context, means improved data gathering, speeded analysis and clear, well-documented, persuasive warnings. This in turn requires that all countries in the region begin to do these jobs better. SADC and its various early warning and information gathering elements is the entity that needs to do the job but it, in turn, relies on its member governments and their own information gathering

⁴⁵ NASFAM may well be one of many other, similar, models in the region, but it is good model for this discussion.

⁴⁶ See Delgado, et al., (1998) for a suggested methodology in determining these multipliers.

capacities. They need to be standardized and, most importantly, their staffs need to be adequately trained and supported. The added cost to donors caused by having to respond quickly is great. It would be in the best interests of everyone that the entire disaster warning, response and mitigation machinery of the region be fully investigated and improvements designed, financed, and put in place enabling timely warning and more cost effective responses. Easier said than done, of course. But there has to be a central location responsible for “goading” this process along and RCSA is probably the place.

One element to be considered is the possibility of locating one or more regional strategic grain reserves, in one or more countries in the region – but not under the political control of an individual government or governments – and responding to declared emergency situations utilizing pre-agreed procedures for utilization of whatever levels of commodity and financial resources had been sequestered for emergency purposes. There are possible advantages, and there are many possible disadvantages to strategic food (and cash) reserves under control of a to-be-determined regional authority. RCSA should, as a matter of priority, commission the drafting of options and recommendations from a panel of international experts on the feasibility of commissioning an investigation into the possibility of regional SGRs.

In addition, there is clear utility in use of one or more grain futures markets as a means of decreasing the risk that in some future emergency there would be insufficient grain available for responding appropriately. As populations in the region continue to grow and as the risk of serious food shortages also increases, it would be prudent to investigate the possibility of setting up a *regional* financial entity to engage in the buying and selling of grain futures on behalf of participating governments. Such entity, most likely an arm of an international financial trading house, could operate to hedge future risks at a cost likely to be significantly less than if public or private entities in each of the Southern African countries undertook these responsibilities individually. At a minimum it is suggested that RCSA undertake a study to investigate the financial feasibility of such an operation, the political feasibility and the risks and rewards that could flow from its establishment.

In the context of a disaster management and mitigation strategic objective, RCSA could undertake a number of operations intended to improve the effectiveness of food aid as a tool for mitigation and development in the region. First, an impact evaluation of the comparative experiences in the utility of food aid (from all sources) in *ex post* responses to, or *ex ante* mitigation of, the adverse impact of all forms of shocks should be commissioned. Second, RCSA should assist bilateral USAID missions in the region to increase food aid’s effectiveness – in association with DA-funding – in activities aimed at agriculture growth, particularly the strengthening of livelihoods-oriented asset creation (e.g., in FFW programs in both emergency and development settings). Third, RCSA should seek to increase its understanding of the development impact of food aid used by NGOs and WFP in a wide variety of development operations in the region. There is much development potential in the often overlooked, on-going work being undertaken by the NGOs and WFP using food as the primary resource. More needs to be known and shared among all donors about these development activities, particularly in a livelihoods-oriented strategy setting. A similar suggestion has been made to REDSO/EA (See Riley, 2002a).

3.2.4. REGIONAL PROGRAMMATIC INTEGRATION

There can be little doubt that helping, in all ways, to increase the role played by regional organizations in confronting the causes of household food insecurity, could be beneficial. The issue, however, is that much of the causality of food insecurity is local, some is national, and a lesser number of causative factors are regional or global. The strongest emphasis needs to remain focused on factors operating at the community and local geographical levels. Regional efforts can not substitute for these efforts. They can, however, compliment them in many ways, particularly in creating enabling environments in intra-regional and international trade, integrated approaches to agricultural growth, sharing the costs (and the professional skills) needed in research and in gradually removing economic and non-economic barriers to overall growth. First among these, of course, is in the gathering and sharing of information regarding best practices in reducing factors causing food insecurity. This, in turn, requires much improvement in the collection and validation of data on effectiveness and impact. RCSA could be of inestimable help in this regard by, in effect, evaluating the quality and utility of baseline surveys, monitoring of the indirect indicators used to identify food security status (anthropometry, agricultural production and yield data, household income and expenditure surveys, and surveys of food availability and access, etc.) As almost all who participate as analysts of food security status can attest, the data are poor, the statistical validity of analyses of the data is often suspect, and the reporting is inadequately nuanced – leading to sometimes serious voids in understanding of what is cause and what is effect. RCSA could endeavor to improve the abilities of all who participate in gathering, analyzing and report the data and the abilities of those who use it to parse the good from the bad.

3.2.5. A GENERAL CAUTION

Since so many factors contribute to a “resultant condition” called “food insecurity”, it is almost impossible for a development agency not to conclude that whatever development activities it is undertaking, and in whatever development sector or sub-sector the agency chooses to operate – that it is aimed at reducing food insecurity. Unfortunately, the food insecurity beast is so large, it is hard not to hit it, no matter which direction one is aiming. The trick is to select from among all possible food security-enhancing development endeavors those that would have the largest, most enduring, payoff in terms of sustained improvements in household food security among large sectors of the food insecure poor.

RCSA can be an active and effective partner with regional organizations, the member governments, all USAID missions, other donor organizations, private development agents and NGOs in a concerted effort to identify and counteract, if not eliminate, the major causes of food insecurity in the Southern Africa region. Of the options under review in its “enhanced food security strategic option”, support for strong growth in the agricultural sector of a type similar to that proposed in the Mellor thesis is of primary importance. The case in made above that such a strategy needs something of a boost to speed the possible involvement of the poor majority of Southern Africans; that boost should occur in an identified livelihoods component aimed at improving the pace of asset creation – assets of all types – by the rural food insecure poor.