

Food Security and HIV/AIDS in Southern Africa: Case Studies and Implications for Future Policy

A Paper prepared for Action Aid

April 2004

Scott Drimie¹

**Integrated Rural & Regional Development
Human Sciences Research Council
Private Bag X41
Pretoria, 0001
South Africa**

sedrimie@hsrc.ac.za

¹ Lesley Holst of the National Smallholder Farmer's Association of Malawi and Nathalie Paraliieu of Competencies of Africa for Africa and Abroad contributed to this report.

Contents

1.	Introduction and Objectives	3
2.	Methodology	3
3.	Conceptual Framework: HIV/AIDS and Food Security	5
3.1	Measuring HIV/AIDS Impacts:	7
3.2	HIV/AIDS' effects on household livelihood strategies:.....	8
3.3	HIV/AIDS and agriculture:.....	9
3.4	The Gender dimension:	10
3.5	The impact on institutions:	11
3.6	"New" Responses to HIV/AIDS:	11
4.	General Findings emerging from the Case Studies	13
4.1	A "multi-layered" response to HIV/AIDS:.....	13
4.1.1	<i>The MSF Integrated Community Home-Based Care programme in Thyolo, Malawi</i> ...	13
4.2	Participatory Approaches:.....	16
4.3	Building on local responses:	17
4.3.1	<i>Orphan Care and Self Mobilisation case study based in Lilongwe South, Malawi</i>	17
4.4	Women:.....	19
4.5	Land rights:.....	19
4.6	Orphans and vulnerable children:	20
4.6.1	<i>Food Security for Orphan and Vulnerable Children, Swaziland</i>	20
4.7	Safety nets:	28
4.8	Labour saving technologies:	28
4.8.1	<i>The provision of ox-drawn ploughs, Nyanga, Zimbabwe</i>	29
4.9	Agricultural Interventions with an AIDS focus	32
4.9.1	<i>The provision of drip-irrigation, Chiredzi District, Zimbabwe</i>	33
4.9.2	<i>Seed Fairs, Marracuene District, Maputo Province, Mozambique</i>	35
4.10	Scaling up and "Mainstreaming":.....	37
4.11	HIV/AIDS and nutrition interventions:	38
4.11.1	<i>Nutrition Intervention (Sweet Potatoes), Manhica & Marracuene, Mozambique</i>	38
5.	General Conclusions:.....	40
	References	42

1. Introduction and Objectives

In the 2002-2003 period, Southern Africa experienced the worst food crises the region has encountered since 1992. Most assessments of this period of acute food insecurity and vulnerability have understood this phenomenon to be as much a crisis of livelihoods, or of development in general, as a simple food shock. This has resulted from a range of "entangling crises" such as rainfall failure, widespread disruptions in food availability, failures of governance, extreme levels of prevailing poverty and the continuing erosion of livelihood strategies through HIV/AIDS.

A number of studies focusing on this prevailing situation have highlighted the role of HIV/AIDS in undermining livelihoods and food security. However, as Action Aid have noted, there has been inadequate attention to interventions that mitigate some of the impacts of the epidemic despite widespread recognition of the compounding impact that HIV/AIDS is having on prevailing poverty levels and food security. While the current debates around the ongoing livelihoods crisis in the region and the consequent responses have brought a focus on some of the key issues, a specific understanding of the role of HIV/AIDS is imperative if long-term and effective responses to the crisis are to be found. In pursuit of its mission to fight poverty by working with poor people to eliminate the injustices and inequities that undermine livelihoods, Action Aid is currently seeking 'a more robust interrogation of these issues in the search for lasting solutions to the food crisis'.

Building on its experiences of working at local level to strengthen livelihoods, Action Aid has endeavoured to raise the awareness of and adoption and institutionalisation of 'best' practice in supporting communities affected by HIV/AIDS in securing food security. While models and estimates have been made of the overall impact of HIV/AIDS on economies, limited programmatic attention has been given to the impact of HIV/AIDS on the ability of households and communities to meet their own food requirements and sustain themselves. Cognisant of the scale of the epidemic in the sub-region as well as the long-term duration of the support needs, Action Aid has set out to build a coherent strategy based upon experiences of promising initiatives from around the Southern African region that have supported communities affected by HIV/AIDS to meet their food requirements and other livelihood needs. This paper was therefore commissioned to document best practices in improving livelihoods of HIV/AIDS affected households in Southern Africa and to provide an analysis of linkages between HIV/AIDS and food security policies. In order to do so, the author worked with a range of civic organisations and NGOs dealing with HIV/AIDS and food security to provide perspectives, best practice experiences and policy critiques on food security interventions in countries in the sub-region.

2. Methodology

Action Aid have recognised that there is limited material readily available for discussion and debate around mitigation strategies that have been recorded from practical experiences by NGOs or other agencies. This reflects the need for a systematic approach to allow the comparison of mitigation strategies that capture crucial aspects of changing development practice. AIDS-affected communities and NGOs have been at the forefront of responding to the impacts of the epidemic and many innovative local projects have emerged that engage with the devastating impact of the epidemic on households and communities. Yet these have rarely been written up for public consumption, largely due to the constraints which prevail upon development practitioners working at field level.

This issue was also recognised by Southern African Regional Offices of Oxfam-GB, which developed a framework for such analysis that would be available for community-based practitioners. This framework was refined by the steering committee of the workshop on “Mitigating the Impacts of HIV/AIDS in Agriculture and Rural Development”, which was hosted by Oxfam-GB, the FAO sub-regional offices based in Harare, Zimbabwe, the Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) and the Human Sciences Research Council held in May 2003. The workshop was intended to initialise a process of analysing successes and constraints in mitigating HIV/AIDS through agriculture and rural development, and to define future actions (see www.sarpn.org.za). An analytical tool emerged from the workshop process that enabled practitioners to evaluate examples of mitigation strategies and to compare these usefully. The tool was drawn from basic aspects of programme design using questions such as who, why, what, how and with whom. The framework enabled practitioners to consider how the mitigation strategy differed from standard interventions, to assess constraining factors and additional ideas or potential improvements. This framework was used in this study as a starting point for evaluating a range of case studies depicting “best practice” from around the region. These cases included:

1. A community home-based care project in Thyolo, Malawi, supported by Medecins Sans Frontieres;
2. A community based orphan care project in Lilongwe South, Malawi;
3. An agricultural technology project in Nyanga, Zimbabwe, supported by Action Aid utilising ox-drawn ploughs;
4. An agricultural technology project in Chiredzi, Zimbabwe, supported by Action Aid utilising drip-irrigation;
5. Nutritious production (sweet potato) intervention in Manhica District in Maputo Province, South Mozambique, supported by Action Aid;
6. Seed fair intervention in and Marracuene District in Maputo Province, South Mozambique, supported by Action Aid; and
7. A community based orphan and vulnerable children support project in Swaziland facilitated by the National Emergency Response Committee on HIV/AIDS.

These case studies were either visited in person by the author or by a specialist commissioned to undertake the research on behalf of the overall project. In this regard, the gender co-ordinator of the National Smallholder Farmer’s Association of Malawi (NASFAM), Lesley Holst, was commissioned for the two Malawi studies, which were selected by the author and NASFAM in 2003. Nathalie Paraliu, development specialist and founder of Competencies of Africa for Africa and Abroad was commissioned to conduct the studies in Mozambique, which brought an interesting comparison to her experience with similar initiatives in Brazil. In addition, a range of other projects were accessed from other sources, such as the “Mitigation Workshop” website and wider literature, which were used to supplement the detailed studies. These have been tabled in appendix one.

3. Conceptual Framework: HIV/AIDS and Food Security²

This section reviews the impacts of HIV/AIDS on people's livelihoods, looking particularly at the effects of the epidemic on households and communities over time. It is now well recognised that household food insecurity and vulnerability in rural and urban Southern Africa cannot be properly understood if HIV/AIDS is not factored into the analysis. Carolyn Baylies notes that HIV/AIDS can, on one hand, be treated in its own right as a shock to household food security, but on the other, it has such distinct effects that it is a shock like none other (2002). However, before an analysis of the relationship between vulnerability, food security, and HIV/AIDS can proceed, a few conceptual definitions are necessary.

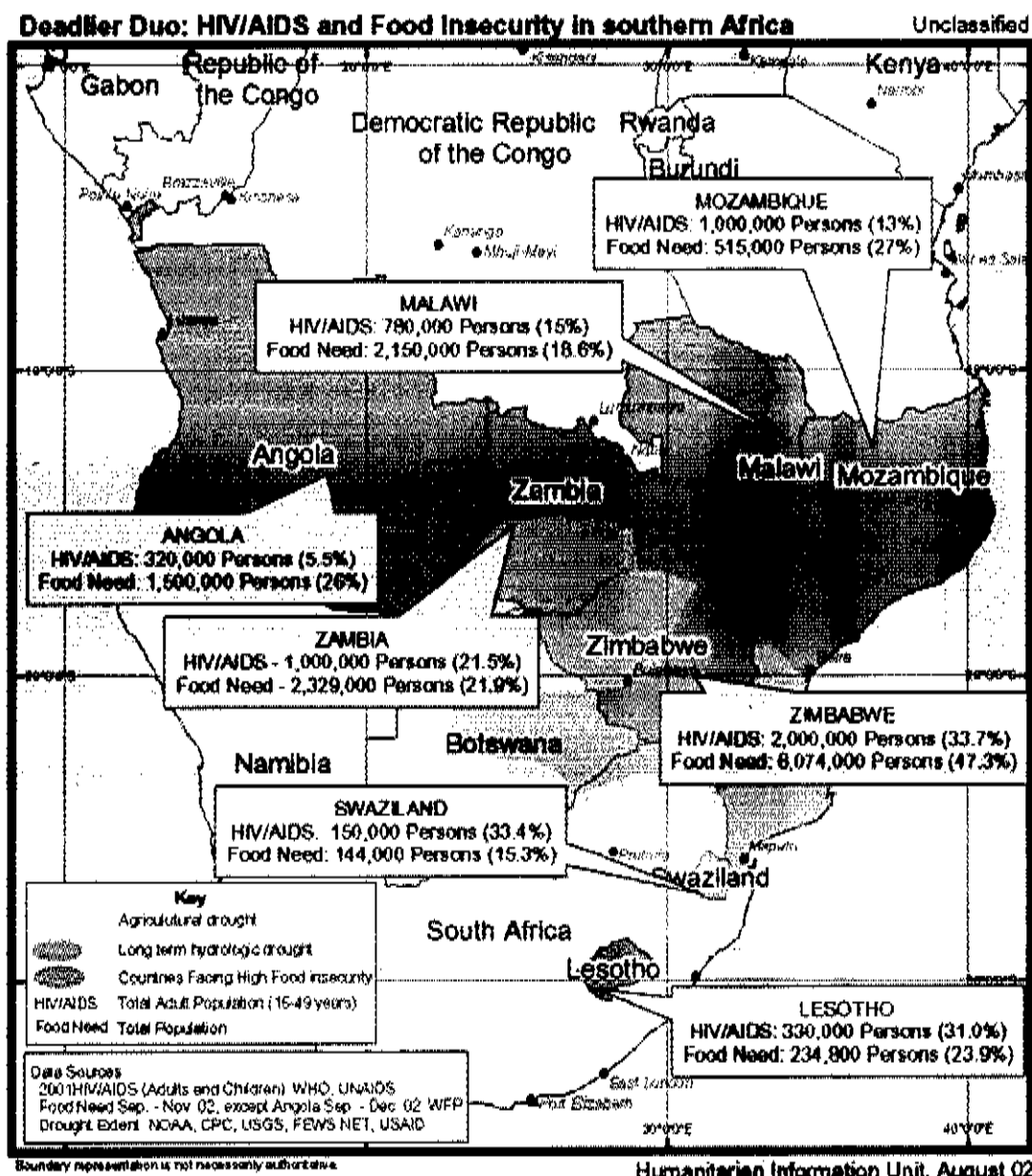
For the purpose of this discussion, definitions of vulnerability and food insecurity have been drawn from a background document informing the establishment of a Food Insecurity and Vulnerability Information and Mapping System in South Africa. This paper, written by Andries du Toit and Gina Ziervogel makes the following definitions:

- Vulnerability is a *forward-looking* concept, relating to the exposure and sensitivity to shocks and stresses and to the ability to recover from them. It can be used to describe the general characteristic of complex systems (thus an economy, an ecology or a system can be said to be vulnerable) but it is also often used to describe the individuals or groups that depend on those systems (see du Toit & Ziervogel, 2004).
- Food insecurity is understood to be a *sub-set*, or a *particular kind* of vulnerability. It describes the characteristics of the systems and strategies on which individuals, households and larger groups rely in order to secure sufficient physical and economic access to nutritious food. When these systems become subject to shocks and stresses, or less resilient, such people can be said to be food insecure. Food insecurity is vulnerability to food deprivation. People can be food insecure even if *at a particular point of time* they have access to sufficient food, but when that access is prone to failure, or when people have reason to fear hunger in the future (see du Toit & Ziervogel, 2004).

It is now broadly accepted that food security refers not only to the global and national level food availability ('malthusian' food security) but also to the *access* and *entitlement* of individuals and households to that food (Sen 1981); and that this has in turn been recognised to depend on the resilience or vulnerability of people's livelihoods. All dimensions of food security – availability, stability, access and use of food – are affected where the prevalence of HIV/AIDS is high. As the current crisis in southern Africa has shown, those living with or affected by chronic illness have less labour, spend time caring for others, and have decreasing experience and skills. They may have to sell off productive assets, or leave them under-utilised, and probably have to adapt their livelihood strategies, which are sometimes risky in nature, in order to cope. Therefore the possibility of substantially increased vulnerability to other shocks is increased, such as drought or conflict, the emergence of new types of vulnerability, the erosion of some capacities and skills for coping with shocks and adaptation and emergence of new capacities in response to these threats (Harvey, 2003).

² This section draws partly on a report prepared by the author for Oxfam-GB entitled "The underlying causes to the food crisis in the southern African region – Malawi, Mozambique, Zambia and Zimbabwe", March, Pretoria, South Africa.

Livelihoods-based analysis of linkages between food security and HIV/AIDS show that the impact is systemic, affecting all aspects of rural livelihoods (Haddad and Gillespie, 2001); and that effective analysis of the causes and outcomes of HIV/AIDS requires a contextual understanding of livelihoods unique to a given area and/or social groups (SADC FANR VAC, 2003). The claim that the current Southern African humanitarian crisis is inextricably linked to the widespread HIV epidemic, which has deepened the crisis, is supported in much of the food security literature and current thinking (see Harvey, 2003). This claim is underpinned by the fact that the region has the highest prevalence rate in the world (Lesotho 31 percent; Malawi 16 percent; Mozambique 13 percent; Swaziland 33 percent; Zambia 22 percent and Zimbabwe 34 percent), with infection levels around 25 percent of the population, 58 percent of the affected being women (UNAIDS, 2002). The diagram below usefully maps the extent of the epidemic, particularly in the four regional countries where the case studies were situated (Malawi, Mozambique, Swaziland and Zimbabwe).



3.1 Measuring HIV/AIDS Impacts:

Available analysis still provides an unclear picture on how the epidemic is definitely affecting food security and vulnerability. Despite the fact that the epidemic is now in its third decade in Africa, available analysis to date provides a very murky picture as to how HIV/AIDS is affecting the agricultural sector – its structure, cropping systems, relative costs of inputs and factors of production, technological and institutional changes, and levels of production and marketed surplus (Jayne *et al*, 2004). Much of the current “knowledge” on HIV/AIDS and food security is based upon a few empirical studies and a range of material that embodies “anecdotal recycling” (Gillespie, 2003). Most rigorous household-level studies have measured the effects of death *in their households* on household-level outcomes, typically over a two to five year time frame. Given the dearth of longitudinal household data over a long time period and methodological limitations, the longer-term effects of AIDS, and particularly the community-level effects, have yet to be rigorously measured. This is especially the case when considering inter-generational effects such as the inability of deceased adults to pass along accumulated knowledge to future generations and the less tangible benefits that children receive from their parents (Jayne *et al*, 2004). A greater number of empirical datasets and quantitative impact studies are necessary to have a clearer and more accurate understanding of what is going on in different countries. It is with these caveats in mind that available empirical studies on the effects of HIV/AIDS on food security, the agricultural sector and rural economy in general should be assessed.

However, this is not to understate the multiple impacts of HIV/AIDS on food security and the rural economy. This raises a wider and important point that the HIV/AIDS epidemic in southern Africa is taking place in a context of already fragile economies. Disentangling the relative impact of HIV/AIDS on food security in Zimbabwe from the current economic collapse, for instance, would be difficult. Perhaps the more important point is that these issues are mutually reinforcing. The challenge for analysts, policy makers, and donors is to understand with greater precision how the rural socio-economy is being affected by the epidemic, and consequently how rural development policy should be modified to better achieve food security objectives. As emphasised above, because of the long-wave nature of the AIDS epidemic, the full impact of the disease will not manifest until the next several decades (Barnett and Whiteside, 2002). For this reason, assessments of what is happening now do not provide a reliable picture of what will be happening in the future.

Indeed, the few available empirical studies on the impacts of prime-age adult mortality on agricultural production and incomes indicate that the effects are more severe on households that were relatively poor to begin with. Relatively poor households appear to suffer the most after incurring an AIDS-related death in the household because they are less able to cope with the economic and social shocks that it generates. These results carry obvious implications for household food security and nutrition for the poor in particular.

Following from the theoretical review informing the conceptual framework in the previous section, the HIV/AIDS epidemic will have an impact at the level of individuals, on households in the rural areas, on the villages and communities living there, and thus will also be felt at the national level. Intuitively one would expect that data collected on the topic will confirm these impacts, given the burden of illness of a relatively large number of persons (as a result of accompanying infections) as well as shocks induced by the loss of household members. Yet the expected significant relationship between households infected and/or

affected by HIV/AIDS being worse off than households not affected has not been overwhelmingly apparent in surveys conducted by, for example, the Vulnerability Assessment Committees (VACs) operating in the SADC region during the ongoing livelihoods crisis (see Mdladla *et al*, 2003).

One important conclusion that can be made regarding HIV/AIDS and food security in the current VAC assessments is that it was extremely difficult to draw out the specific impact of HIV/AIDS as the single most important cause of the food insecurity facing the six SADC countries undergoing assessments. The adverse effects of HIV/AIDS on food security and the agricultural sector in general can be largely invisible or subtle enough so as to be undetectable from other causes of food insecurity. It would appear, particularly in Zambia and Zimbabwe, that climatic conditions, food pricing policies, the lack of agricultural support and extension services, environmental degradation, a lack of infrastructure and poverty play a larger role in creating inadequate harvests than HIV/AIDS. However, the epidemic may compound matters during an environmentally induced food shortage, such as what happened the previous season.

The adverse effects of HIV/AIDS on the agricultural sector can be largely invisible as what distinguishes the impact from that on other sectors is that it can be subtle enough so as to be undetectable (Topouzis, 2000). In the words of Rugalema, "even if [rural] families are selling cows to pay hospital bills, [one] will hardly see tens of thousands of cows being auctioned at the market...Unlike famine situations, buying and selling of assets in the case of AIDS is very subtle, done within villages or even among relatives, and the volume is small" (cited in Topouzis, 2000). This clearly has implications for analysis. Furthermore, the impact of HIV/AIDS on agriculture, both commercial and subsistence, are often difficult to distinguish from factors such as drought, civil war, and other shocks and crises. It is thus important to remember that HIV/AIDS is only one of a complex web of factors that impact on rural people's livelihoods and that it is often difficult to disentangle the effects of AIDS from other environmental, political and economic events and trends.

3.2 HIV/AIDS' effects on household livelihood strategies:

The HIV/AIDS epidemic is eroding the socio-economic well-being of households and threatens the social cohesion of communities (See Lamptey *et al*, 2002). Gillespie argues that there is a two-way relationship between HIV/AIDS and livelihoods; first livelihoods differ with regard to the degree that they expose individuals and households to the virus; and secondly through stripping households and community assets and eroding institutional capacity (2003). For households, the impact is different from that of other diseases. Those infected are most likely to be at the peak of their productive and income-earning years. Households feel the impact as soon as a member falls ill. This is associated with a decline in income as the member's ability to work decreases, while living costs increase, such as medical and funeral expenses.

The literature on the impact of adult illness and death on household livelihood or coping strategies suggests that individuals and households go through processes of experimentation and adaptation as they attempt to cope with immediate and long-term demographic change (see SADC FANR VAC, 2003). It is believed that households under stress from hunger, poverty or disease will be adopting a range of strategies to mitigate their impact through complex multiple livelihood strategies. These entail choices that are essentially "erosive" (unsustainable, undermining resilience) and "non-erosive" (easily reversible) (see SADC

FANR VAC, 2003). The distinction between erosive and non-erosive strategies depends crucially on a household's assets (for example, natural capital, physical capital, financial capital, social capital and economic capital), which a household can draw upon to make a livelihood. As an example of the distinction between erosive and non-erosive strategies, the example of livestock sales is revealing (SADC FANR VAC, 2003). Sales of chickens, goats or cattle are classic coping strategies that households all over sub-Saharan Africa engage. Some level of livestock sales is normal and does not result in increased poverty. At a certain point, however, household livestock holdings reduce to the level where they are no longer sustainable. At this point, livestock sales become erosive.

Consumption reducing and switching strategies are generally the first line of defence against food shortage. Households may, for example, switch to "wild foods" or skip entire days without eating. Another option for households under stress is the removal of children from school in order to release them for household strategies requiring labour or to relieve costs associated with school attendance (fees, uniforms, stationary). The "erosive" nature of such a strategy is the diminishing stock of human capital for future livelihood options. Another "negative" for food security is that these children may be removed from school feeding schemes and denied opportunities for nutritional balance.

By killing productive adults who are key family providers, HIV/AIDS shatters the social networks that provide households with community help and support and thus underpin their livelihoods (Barnett and Rugalema, 2001; UN, 2003). Particularly in rural areas, where public services may be absent, traditional community support systems are crucial to impoverished households (UN, 2003). HIV/AIDS may contribute towards weakening this critical social and economic capital, as traditional knowledge may be gradually lost as working age adults die and leave children orphaned. Survivors are left with few relatives upon whom to depend, with gender and age as critical determinants of social exclusion in the face of HIV/AIDS. Households and communities with fewer adults have less surplus adult-time to help others, undermining community resilience. In rural areas, increasingly impoverished communities may receive fewer visits from traders, or suffer a reduced availability of services and consumer products (UN, 2003). Just as HIV/AIDS-affected households may ultimately disintegrate, so too may HIV/AIDS-affected communities through the loss of significant numbers of their members, economic collapse and social breakdown.

3.3 HIV/AIDS and agriculture:

As one dimension of food security and of the diverse multiple livelihood strategies discussed above, it is important to reflect on the impact of HIV/AIDS on agricultural production. Between 60 and 80 percent of the population in the Southern African Development Community (SADC) countries depend on small-scale or subsistence agriculture for their livelihoods, so the impact of the epidemic on this sector is crucially important. While agriculture is central to many African countries, not least of all for household survival, there are marked differences among countries in terms of current economic conditions and agricultural and economic potential. Generally, however, this sector is facing increasing pressure from heightened levels of poverty, dwindling inputs and a lack of support services, amongst other issues. The additional impact of HIV/AIDS on these agricultural systems is thus severe. The potential impact of HIV/AIDS on agriculture may include:

- A decrease in the area of land under cultivation at the household level (due to a lack of labour stemming from illness and death among household members).
- A decline in crop yields, due to delays in carrying out certain agricultural interventions such as weeding and other inter-cultivation measures as well as cropping patterns.
- Declining yields may also result from the lack of sufficient inputs, such as fertiliser and seeds.
- A reduction in the range of crops produced at the household level.
- A loss of agricultural knowledge and farm management skills, due to the loss of key household members due to AIDS.
- The resultant psychosocial impact of the AIDS death (partly through stigma) and the long-term implications of this on agricultural production.
- Decline in livestock production as the need for cash and the loss of knowledge and skills may force some families to sell their animals.

In largely agrarian societies, the HIV/AIDS epidemic is intensifying existing labour bottlenecks, proving a barrier to traditional mechanisms of support during calamities, adding to the problems of rural women, especially female-headed farm households arising from gender division of labour and land rights, and deepening macroeconomic crises by reducing agricultural exports.

3.4 The Gender dimension:

There are a number of interlocking reasons why women are more vulnerable than men to HIV/AIDS, which include female physiology, women's lack of power to negotiate sexual relationships with male partners, especially in marriage, and the gendered nature of poverty, with poor women particularly vulnerable (Walker, 2002). Inequities in gender run parallel to inequities in income and assets. Thus women are vulnerable not only to HIV/AIDS infection but also to the economic impact of HIV/AIDS. This is often a result of the gendered power relations evident in rural households (Waterhouse and Vifjhuizen, 2001), which can leave women prone to the infection of HIV. With increasing economic insecurity women become vulnerable to sexual harassment and exploitation at and beyond the workplace, and to trading in sexual activities to secure income for household needs (Loewenson and Whiteside, 1997). As a result, women have experienced the greatest losses and burdens associated with economic and political crises and shocks (Collins and Rau, 2001):

- Breakdown of household regimes and attendant forms of security: decades of changes in economic activity and gender relations have placed many women in increasingly difficult situations including increasing household responsibilities. For example, more active care giving for sick and dying relatives have been added to the existing workload. Children have been withdrawn from school, usually girl-children first, to save both on costs and to add to labour in the household. In this way, HIV/AIDS is facilitating a further and fairly rapid differentiation along gender lines.
- Loss of livelihood: whether women receive remittances from men working away from home, are given "allowances", or earn income themselves, HIV/AIDS has made the availability of cash more problematic. This has been discussed in the livelihoods section above.
- Loss of assets: although poorly documented, fairly substantial investments in medical care occur among many households affected by HIV/AIDS. These costs may be met by disinvestments in assets. Household food security is often affected in negative ways.

Furthermore, in many parts of Africa, women lose all or most household assets after the death of a husband.

- **Survival sex:** low incomes, disinvestments, constrained cash flow – all place economic pressures on women. Anecdotal evidence and some studies indicate that these pressures push a number of women into situations where sex is coerced in exchange for small cash or in-kind payments.

In rural areas, women tend to be even more disadvantaged due to reduced access to productive resources and support services. A number of studies have shown that women who are widowed due to HIV/AIDS sometimes lose rights to land, adding to an already precarious situation (see Drimie, 2002). These problems of land tenure overlap with the problem of gender disparities. Some research has documented that widows and their dependents in patrilineal societies are in a more tenuous position with regard to maintaining control over land (Barnett and Blaikie, 1992). When combined with evidence that female-headed households tend to be poorer in general than their male-headed household neighbours, governments and donors face a serious challenge to devise means to protect poor households (and particularly poor female-headed households) rights to land within future poverty alleviation and rural development strategies (Jayne *et al*, 2004).

3.5 The impact on institutions:

The main effects of HIV/AIDS at community level are through the health of community members, effects on demographic composition and structure of community, educational attainment, labour force and the quantity and quality of service providers, including those of organisations such as Action Aid (Mullins, 2001). As has been emphasised by Wiggins, some of the more damaging impacts for farm households and communities may be those arising from wider processes, including the likely reduction in public services to support agriculture resulting from loss of key staff and pressure on budgets (2003).

In service-oriented sectors such as Ministries of Agriculture, which generally comprise the largest staff components of governments, AIDS deaths reduce the quality and quantity of services. In addition to the direct loss of skill and institutional memory, financial costs increase for training of new staff, increased demand for health care, funeral payouts and pensions. This weakened government capacity obstructs its ability to not only meet its mandate, such as the provision of extension services and other agricultural support, but also to meet new kinds of demands that will be forthcoming from AIDS-affected communities. Critical examples include the growing numbers of orphans and vulnerable children who require a whole range of services; changing demographic patterns in communities that place more burdens on the elderly and children; and increased disease burden. Finally, the impoverishing effect of AIDS on households simply heightens the services demanded of the state and its partners (UN, 2003).

3.6 “New” Responses to HIV/AIDS:

Thus HIV/AIDS can be seen to be a “creeping emergency” that progressively erodes the lives and livelihoods of those affected by the epidemic. Barnett and Whiteside describe HIV/AIDS as a ‘long wave event’ the impact of which takes place over many decades and see HIV/AIDS impoverishment as an event that will last as long as a century (2002). They point out that; ‘by the time the wave of HIV infection makes itself felt in the form of AIDS illnesses in

individuals, the torrent of the epidemic is about to overwhelm medical services, households, communities' (Barnett and Whiteside 2002). For these reasons, the developmental effect of HIV/AIDS on agriculture continues to be absent from the policy and programme agendas of many African countries. Many studies on HIV/AIDS that have focused on specific sectors of the economy such as agriculture have been limited to showing the wide variety of impacts and their intensity on issues such as cropping patterns, yields, nutrition, or on specific populations.

It is vital that agencies such as Action Aid develop an understanding of how the impact of the epidemic interacts with other factors and therefore the HIV/AIDS epidemic reinforces the need for humanitarian systems to interact more effectively with long-term development assistance, particularly with development actors engaged in responses to food insecurity and HIV/AIDS. Agencies responding to crises have a responsibility to understand the ways in which HIV/AIDS is impacting upon livelihoods and to address these issues in their response. Thus issues relating to HIV/AIDS should be considered in all sectors and across the programme cycle.

4. General Findings emerging from the Case Studies

Rather than presenting and analysing each of the seven documented case studies separately, general discussions have been presented around themes drawn from the collection with supplementary examples being provided from the wider literature. The case studies are available from Action Aid or the author on request or from the SARPEN website at www.sarpen.org.za

4.1 A “multi-layered” response to HIV/AIDS:

An overarching issue to emerge was the need to tackle existing poverty and resource constraints, while also understanding the interplay between HIV/AIDS and prevailing problems. In their entirety, the collection of case studies reveal both how existing development work can be reviewed and adapted in the light of knowledge of the impacts of HIV/AIDS on beneficiary families and communities and also how specific activities can be devised to meet the particular needs of particular groups within communities. A package of different types of interventions done at the same time will ensure that different types of people affected by HIV/AIDS can be reached. For example, using new animal technology that utilises two heads of cattle instead of four will meet the needs of those with fewer livestock left after loss due to an AIDS or other impact. A mix of interventions also ensures that people's immediate needs are satisfied while they wait for the benefits of longer-term strategies.

Often interventions form part of a wider programme which not only includes livelihood activities such as agriculture and income-generation, but can also include counselling, home care and support for people living with HIV/AIDS and their families, the promotion of “positive living” for people living with HIV/AIDS (for example education on healthy diets, support in declaring sero-status and planning for the families' future), HIV/AIDS awareness-raising, activities to counter stigmatisation of people living with HIV/AIDS, and HIV prevention work. This highlights the importance of a “multi-layered” response to the impacts of HIV/AIDS. Unlike some HIV prevention activities, which work in isolation, these activities documented in the case studies make a particularly positive contribution by being part of a wider programme aimed at tackling the “bigger picture” of HIV/AIDS, poverty and vulnerability.

4.1.1 The MSF Integrated Community Home-Based Care programme in Thyolo, Malawi

The Integrated Community Home-Based Care programme developed by Medecins Sans Frontieres - Luxembourg (MSF) in Thyolo, Malawi is an example of such a programme designed to provide a basket of services aimed at individual, family and community capacity building focused explicitly on poverty alleviation. The ultimate goal is the provision of equitable, quality service, which will lead to improved quality of life for all citizens. The programme will become part of the Malawi Integrated Community Home-Based Care Model pilot being conducted by the Government of Malawi (GoM) in Thyolo District in 2004.

Although MSF is primarily a health service provider, it has developed a much broader programme adopting a holistic, multi-sectoral approach to HIV/AIDS care and prevention. The four essential services are:

- **Income Generation** based upon sustainable food production through, for example, communal gardens and income generating projects. These projects are inclusive and village based and thereby target all vulnerable members of the community and not just people living with HIV/AIDS. PMSF provides seeds, in particular cabbage, tomato, onion, rape and soya, and hoes to affected households.
- **Home-Based Care** is provided through the programme by primary caregivers such as family members or friends assisted by trained, community Home-Based Care (HBC) volunteers. MSF trains the volunteers to provide palliative care, medication and information on nutrition to registered AIDS patients and their guardians under the supervision of a nurse, a clinician and a HBC co-ordinator. The monitoring of the nutritional status of registered patients is implemented and a nutritional supplement provided in the form of a porridge prepared from maize meal and fortified with soya and vitamins to those in need.
- **Orphan and Vulnerable Child Care** includes child-care and nutrition training for women caring for children under five years; multi-purpose children's groups organised on Saturdays offering education, support, a solid meal and recreation (aimed mainly at school age children and involving all children, not just vulnerable children); skills training for older children, especially those who are not at school; reading centres or libraries; and formal and informal foster care.
- **Counselling** is provided at Voluntary Counselling and Testing (VCT) centres, along with psycho-social counselling, life skills development targeting youth, peer counselling and ongoing individual and family counselling for positive living.

The different components and levels of the model are illustrated on the following page in the form of a grain store, which is often seen in villages in Malawi.

In order to implement such a diverse programme that includes components outside the core competencies of MSF, a range of partnerships is necessary. The model adopts a holistic approach to care, which relies on successful collaboration, not only coordination, between large numbers of partners. MSF works closely with the District Health services and Thyolo District Hospital and has established partnerships with UNICEF in PMTCT programme on training of health workers in counselling. The services outlined in the model are to be provided through a partnership between government, the private sector and philanthropic societies. The main partners are the Ministry of Health and Population, the Ministry of Gender and Community Services, the National AIDS Commission, NGOs, Community Based Organisations (CBOs) and Faith Based Organisations (FBOs) and Village Committee Members (volunteers and community leaders).

MSF has worked closely with the communities involved in the development of their programme, building on existing community responses where possible. For example, many of the Home-Based Care (HBC) volunteers working within the programme were already caring for the sick in their community prior to being identified and trained by MSF. It is very important to identify communities and individuals, who are already trying to respond positively to the problems the community is facing, even where resources are very limited and to explore ways of supporting their efforts without taking away the initiative and self-help spirit. Successful examples of such interventions need to be highlighted and widely shared to

serve as an inspiration for other communities as well as organizations and donor agencies. There is a common perception among the latter, and indeed among Malawians themselves, that community mobilisation is particularly challenging in Malawi due to widespread dependency syndrome. The intervention counteracts stigma and discrimination of people living with HIV/AIDS through the inclusive, village-based approach, where not only HIV/AIDS affected households and orphans are targeted, but all vulnerable people and, in the case of the multi-purpose children's groups, all children. Similarly, health education and prevention targets the whole community.

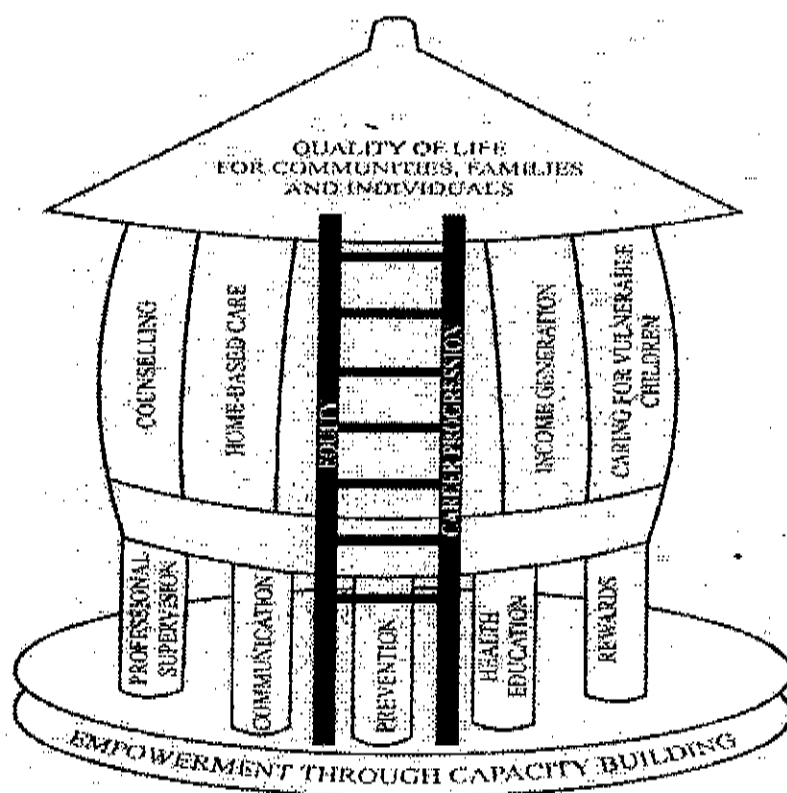


Figure one: The Malawi Model for Integrated Community Care

The most immediate benefit of the intervention has been communities pulling together to address problems caused or compounded by the HIV/AIDS epidemic. Volunteers and community members often provide food for the affected households and in some cases money from their own, usually very limited supplies, where families are unable to cope, in addition to assisting with the cooking and cleaning and maintenance of houses of the patients. Community gardens have been established in some areas and the orphan care activities such as the pre-schools, vocational training and income generating activities are also community initiated. Awareness of nutritional needs of AIDS patients has improved through information and advice provided by HBC volunteers to the guardians.

Community HBC volunteers who were interviewed, highlighted the improved health of the AIDS patients receiving home-based care. Individuals, who were previously too sick to work, have in many cases recovered sufficiently to be able to cultivate their fields and carry out domestic work. The HBC volunteers have also seen an increase in the number of people approaching them to ask for counselling and for condoms. While it is still mostly men and only few women who ask for condoms, these are used by couples for family planning as well as for protection against HIV and Sexually Transmitted Infections.

The MSF intervention of providing seeds and hoes to affected households has not been monitored adequately and it is therefore not known how many have planted the seeds and what the impact has been on the food security and nutritional status of the households in the season, where seeds were provided. MSF pointed out that it has neither the necessary technical expertise to supervise nor the capacity to monitor a project of this nature as it is primarily a provider of medical services and care. MSF would therefore like to collaborate with other organizations specializing in crop production and food security interventions in order to better support the HBC activities.

The spirit of volunteerism has been successfully retained in the HBC programme. The volunteers are not paid any allowances and are provided only with material support to support the HBC system such as the provision of medical kits, rain clothes, boots and umbrellas. Bicycles are provided only to the most active volunteers, identified by the community. Among the HBC volunteers interviewed, some had seven to eight dependents to provide for in their own household, yet they were still able and willing to devote more than 30 hours a week to providing care for the sick. When asked what motivated them to continue, typical responses were "Blessed are the ones, who give" and "If I give to others today, hopefully others will give to me, when I am in need one day".

Food diversification could also be promoted through awareness raising and through establishment of kitchen and communal gardens. This would have a significant impact both on food security and nutritional status. However, changing the Malawian preference for maize would be a major challenge, as would the idea of not relying on inorganic fertiliser. Establishing communal gardens, school gardens and kitchen gardens as demonstration plots with a wide range of well-adapted plants and fruit trees, vegetables and legumes using compost manure could help to persuade people that it is possible to grow food for a greater part of the year without expensive inputs. Demonstrations and training on food preparation of these alternative food sources is also imperative if habits are to change.

4.2 Participatory Approaches:

In virtually every case study documented in this paper and as exemplified in the MSF programme described above, interventions were planned in direct response to problems identified through participatory consultation with communities, which revealed the different kinds of impacts that HIV/AIDS has on individuals and communities. In many of these cases the use of participatory methods to design interventions is highlighted, as is working with existing local structures to enhance community involvement. Local political support for projects can be out of the control of project staff, but where positive relationships are developed this can make a critical difference. Traditional support groups and structures are often under strain as a result of HIV/AIDS, and there is often the need for capacity building to help strengthen these groups or even to establish complementary new groups in order to achieve impact.

It is sometimes difficult to bridge the technical side of organisations/aid work (within agencies and local governments) with the community development aspects, both of which are very important. Sometimes agencies have tried to introduce new technologies without paying proper attention to the process, particularly how they are introduced. Conversely, development approaches need to have something to offer communities in terms of knowledge and/or technology.

Often the trust which is built from a positive engagement between communities and NGOs in the area of livelihood activities (for example agriculture, credit and loan systems) through participatory processes that is built upon and discussions and new interventions emerge in more sensitive areas, relating to sexual behaviour. For example, farmers' groups that have emerged as a result of new agricultural training may be used as entry points for education and training in around HIV prevention. "Farmer to farmer" interactions have worked well as a way of getting farmers to adopt new technologies in many contexts. In Zambia scaling up some conservation farming activities has been successful through extension services.

This raises the issue of working with people living with HIV/AIDS in design and implementing development projects. This should also acknowledge the danger of stigma and the fact that many infected people may not participate within AIDS support groups in fear of being labelled.

4.3 Building on local responses:

This section attempts to highlight responses that have their origin within affected communities and upon which interventions have been built or complemented by outside agencies such as *Medicins Sans Frontiers*. It has been widely documented that households under stress from impacts such as hunger, poverty or disease (for example HIV/AIDS, malaria and tuberculosis) adopt a range of strategies to mitigate their impact through complex multiple livelihood strategies. The literature generally suggests that individuals and households go through processes of experimentation and adaptation as they attempt to cope with immediate and long-term household demographic changes. The main source of help and support for the households impacted by chronic sicknesses comes from kinship networks. Neighbours helped those affected with small immediate needs, usually on a reciprocal basis. Parents, children and siblings were the main source of support for the affected households.

A powerful message from a number of the studies was the need to strengthen community and kinship based networks to provide more systematic and assured support to the affected households. The role of community AIDS coordinating committees to establish a cadre of trained community based volunteers who can provide information and advise, and the strengthening of the capacity of faith-based institutions to respond to people's needs, can be important measures taken in this regard. Building on existing institutional forms implies the preservation and transmission of knowledge. This message was most clearly articulated in the Tiyanbenawo Orphan Care and Self Mobilisation case study in Lilongwe South, Malawi.

4.3.1 Orphan Care and Self Mobilisation case study based in Lilongwe South, Malawi.

The Tiyanbenawo Orphan Care group was formed in March 2003 by three women, in response to the growing number of orphans in their community and the lack of assistance

given to the orphans or the families caring for them. Many of the caregivers are elderly grandmothers and there are also some orphan-headed households. The orphans receive inadequate care and schooling either because the caregivers are unable to provide sufficient food, shelter, clothes, blankets and school fees etc. due to poverty, weakness or ill-health or, in some cases, because the orphans are stigmatised by the caregivers and their needs and welfare are not given the same priority as other household members. The women approached the Village Headman, who offered them his full support and assistance. There are now thirteen women in the group.

The Village Headman has set aside 3 acres of land for the group to grow food crops for the orphan care activities. The women have planted maize on 2 acres of the land this season. Due to lack of fertilizer and seed they were unable to plant soya and groundnuts as they had intended. Through NASFAM, the group was linked to the International Women's Association of Malawi (IWAM), which provides grants for community initiatives of this kind. IWAM have pledged to provide the fertilizer and seed, which will be used for *dimba* (wetland) cropping in the winter season. The food crops grown by the women will partly be used to feed the orphans and partly sold to generate income. Winter-crops are sold at a higher price than crops grown in the rainy season, as many people have depleted their own food stocks by the time the crops are harvested.

The group organizes gatherings for the orphans every Saturday. The children are divided into four groups according to age, ranging from 3 to 15 years. In each group, children are taught songs, games, dances, drumming, sports, lessons appropriate to their age. Issues of HIV/AIDS, stigmatization of orphans, good behaviour and morals are addressed by the women through drama, poems and prayers. Through these activities the women aim to encourage the orphans to become good, productive citizens as well as to provide them with entertainment and recreational opportunities as a relief from the problems, they face in their daily lives, and to keep them from getting into trouble through boredom. For the smallest children of pre-school age, the activities also help to prepare them for school in the absence of a nursery school in the area. Some food is also provided at these gatherings, whenever the group is able to.

The group has so far raised all funds for the activities through contributions from the group members themselves. The women do casual labour (*ganyu*) in the fields in the area to support the group and contribute MK30 (approximately US\$0.25) each every week. The group wishes to start raising dairy cattle as an income generating activity and to be able to provide milk for the orphans. The feasibility of this is currently being assessed and if the outcome of the assessment is positive, the group will be assisted to raise capital for buying cows and be provided with technical training and supervision. The National Smallholder Farmer's Association of Malawi (NASFAM) has linked the group to the organisation Land O' Lakes, which runs the Malawi Dairy Business Development Programme. Land O' Lakes have conducted an initial feasibility study of the group's project on dairy cattle raising and will provide training and ongoing technical supervision of the group if the dairy cattle project goes ahead. All costs associated with this are covered by Land O' Lakes.

All the interventions are entirely self-initiated and have for the first year been carried out without any external agent or funding. Such examples of self-mobilization need to be highlighted and shared widely. It is often reported by donors and NGOs, as well as many Malawians, that the dependency syndrome has become so common in Malawi, that

mobilizing communities can be very difficult. While there is some truth in this representation, it is also very important to document cases where communities are themselves attempting to address the problems they face. Every household is affected by HIV/AIDS in one way or another through the loss of a spouse or close relative, through taking on the added responsibility of caring for the orphaned and the sick, and through the simple fact that when people around you are dying and families are struggling to feed themselves and bury the dead, the strain is felt by every member of the community. In spite of the fact that the resources of communities and individual households appear to be stretched to the limit and beyond, some are still able to find resources to assist those in greater need.

News of the gatherings and the activities of the group has spread to other villages in the area. In October 2003, the group had registered 407 orphans. By February 2004, the number had risen to 657. Children walk more than 5 kilometres to attend the Saturday gatherings. This is a reflection of the great need for the kind of care and assistance, that the group provides, and of the fact that no other groups in the area are providing it. A number of orphans, who had stopped attending school, have now returned as a result of the group advocating for the importance of education and there is a greater feeling of hope and optimism among the orphans. As the communal maize garden and the winter-cropping project are not yet producing a yield – the maize will be harvested in March and the winter crops in September/October – it is still too early to assess the impact of these. There is a need to conduct another study at the end of the year to assess the impact of food security and nutrition interventions and also once the dairy cows have been acquired and are producing.

4.4 Women:

All of the studies reiterated the issue that women and their dependants should clearly be a central component of any intervention aimed at tackling the social and economic impacts of HIV/AIDS. This is based on the knowledge that women carry out the brunt of caring, both for family members who are sick, but also in supporting the dependants of those who are sick or die, although both male and female grandparents can play an important role in caring for orphans. Women-headed households are likely to be under particular pressure and in this sense the HIV/AIDS epidemic is bringing the limitations of women's rights into full relief. The case studies presented reveal how even relatively small inputs which enhance women's access to financial capital can assist women in developing effective income-generating strategies which can benefit their entire family. Marked gender inequalities in the access and ownership of productive resources make the whole society more vulnerable in the wake of an external shock such as AIDS (Jayne *et al*, 2004). Therefore, projects and programmes that seek to ensure gender equality in participation and access will have a protective effect for the society.

4.5 Land rights:

Land tenure or the terms and conditions in which individuals, households or groups hold, use or transact land, is a central issue that must be addressed, or at least considered. Laws and practices to define tenure are context specific, often related to gender and can affect peoples abilities/desire to make long-term investments in their land. As afflicted households lose productive members of their families, including those possessing the rights to their households' land, conflicts over the inheritance of land may escalate over the coming decades (Barnett and Blaikie, 1992).

Jayne *et al* have argued that the cumulative effects of loss of land rights may turn out to be an increase in the concentration of landholdings within the small farm sector, with control of land shifting from poor households to relatively wealthy ones (2004). This is a likely outcome if relatively wealthy households are better able to maintain their control over land after incurring a prime age death in the family, and also if they are able to gain control over land assets shed by poorer households that cannot continue to productively use their land after incurring a death. Land disputes and possible land concentration over time are consistent with broader economy-wide predictions that AIDS is likely to exacerbate income inequality in many countries.

While an important coping strategy for afflicted households may be to rent out land that cannot be productively utilised after incurring a death, Barnett (1994) found that widows especially were reluctant to do this for fear of losing rights to their land. A major challenge for agricultural and land policy is to provide greater clarity over rules governing land rights, including protecting the rights of owners who wish to rent land. Developing land rental markets is envisioned to assist afflicted households earn revenue from renting land that would otherwise go un-utilised.

4.6 Orphans and vulnerable children:

Orphans are a further group in need of support due not only to the psychological impact of the loss of one or more of their parents, but their limited entitlement to resources such as land and even food, and their reduced chances of completing their education. Young people in general are another critical target group as they constitute the future generation and in many cases will need to support their extended families and grandparents.

Many of those affected by HIV/AIDS need special support to help them participate and benefit from interventions. Children and young people need the opportunity to develop their own skills and resources by staying in school; they should not have to drop out to keep their families alive. Those most affected by AIDS simply don't have the time or ability to engage in development efforts, and need relief, social protection or welfare over an extended period in order to survive.

The increasing numbers of orphans and collapse of extended family networks leads to inadequate transmission and preservation of knowledge. To counteract this trend the FAO have suggested the following strategies (www.fao.org/sd/ip):

- Self help groups and community mobilisation
- Promotion of agricultural training and school gardens,
- Promotion of youth organisations,
- Encouragement of farmer-to-farmer knowledge sharing,
- Documentation of traditional indigenous knowledge systems,
- Develop village based business modules focusing on indigenous products

4.6.1 Food Security for Orphan and Vulnerable Children, Swaziland

The NERCHA Intervention: Ensuring Food Security for Orphans and Vulnerable Children in Swaziland (*Indhunkhulu* Project). The NERCHA project sites visited were the Mvuma and

Nkamazi Chiefdoms situated in the Hhohho region in the Middleveld Food Economy Zone in northern Swaziland. According to the 2002 antenatal clinic survey, Hhohho Region has an HIV prevalence rate of 36.7 percent, which is one of the highest rates recorded globally, although slightly lower than the Swaziland national average of 38.6 percent.

The National Emergency Response Council on HIV/ AIDS (NERCHA) was first established as a Committee in December 2001 and changed to a statutory Council by an Act of Parliament (see NERCHA Act No. 8 of 2003). NERCHA is mandated by the Swaziland government to co-ordinate and facilitate the national response to HIV/AIDS and thus oversee the conversion of the "National Strategic Plan for HIV/AIDS" produced by HIV/AIDS Crisis Management and Technical Committee into action. The institution attempts to ensure that appropriate and comprehensive services in the areas of prevention, care and support and impact mitigation of HIV/AIDS are delivered to the people who need them at grass roots (community) level. The NERCHA Directorate is thus responsible for co-ordinating and facilitating the national response to the HIV/AIDS epidemic, including identifying gaps in the response and proposing interventions to implementing agencies where necessary. In most instances NERCHA plays a key role in conceptualising the intervention or programme and then facilitating the entry of strategic partners, which are usually government departments, to implement the process.

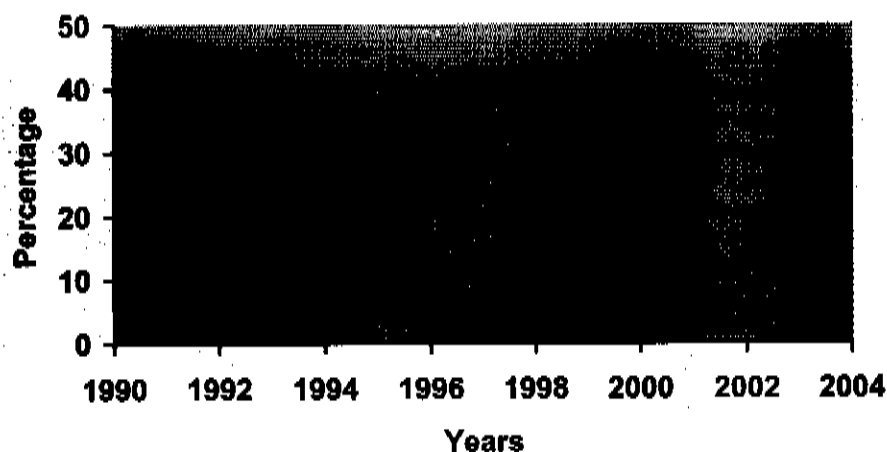
As elsewhere in the region, the HIV/AIDS epidemic is a serious threat to Swaziland. It is generally believed that the epidemic started in Swaziland about two decades ago. In the initial period, the epidemic was largely unseen and the main source of data pertaining to the epidemic was notified AIDS cases (Whiteside *et al*, 2003). From the first AIDS case reported in 1986, there was a steady increase in the number to over 150 in 1993. In 1992 the first national survey to determine prevalence of HIV in the country was carried out among women attending a sample of antenatal clinics. The results of this survey indicated a prevalence of 3.9 percent among pregnant women. Since 1992 similar surveys have been carried out at antenatal clinics every two years. In 1994 the HIV prevalence rate was estimated to be 16.1 percent. The subsequent surveys showed a trend of a steep increase in the prevalence rate on a survey-by-survey basis.

The results of the 2002 survey indicate that Swaziland now has the second highest HIV prevalence rate (38.6 percent) in the world after Botswana (see UNAIDS 2003). This is consistent with near uniform high infection rates within the sub-region. Another finding of the 2002 surveillance survey worth noting is the fact that the epidemic is widespread within the country and has an effect on all age groups. In fact, according to Whiteside *et al*, the uniqueness of Swaziland in terms of HIV/AIDS stems from how uniformly bad the epidemic is (2003).

It is estimated that 66 percent of the population in Swaziland live below the poverty line (FAO & WFP CFSAM, 2002). According to poverty assessment surveys conducted by the World Bank, poverty in rural Swaziland is worse than in urban areas: approximately 43 percent of the rural population fall below the national upper poverty line (UPL), while about 30 percent of the urban population are poor (2000). The depth and severity of poverty are also worse in rural Swaziland. Moreover, rural areas have a greater share of the poor (84 percent) than they have of total population (79 percent). Not only is a rural Swazi more likely to be poor - and in deeper poverty - than a Swazi living in town, but the majority of poor people reside in rural Swaziland. The impoverishing impacts of HIV and AIDS will result in

many of these people falling deeper into poverty. Another major concern arising from the epidemic is the estimated 60,000 orphans in Swaziland in 2003, with approximately four children per household and an average age of 11 years old (NERCHA, 2003a). At least 15,000 households are headed by children, which have no resources or skills to provide for their basic needs. The growing number of these households in Swaziland indicates that the extended family is finding it increasingly difficult to cope with the additional financial burden of feeding and caring for orphans.

Figure 1: HIV Prevalence level among pregnant women in Swaziland



Thus it is clear that the HIV/AIDS epidemic has continued unabated. In short, it threatens to undo many of the social, health and welfare gains made in the past couple of decades in the country.

The NERCHA Directorate has divided the response to the epidemic into three core areas; these being prevention, impact mitigation, and care and support. NERCHA's Impact Mitigation office seeks to reduce the impact of the disease through various interventions and particularly by increasing community participation and strengthening of programmes of organisations addressing the impact of HIV/AIDS in society. Impact Mitigation operates in three fields:

- Orphan and Vulnerable Child Care where the focus is on providing basic needs of this group through social support, food security, education and income generating projects by skills training;
- Legal Response that seeks to review/amend or bring about new legislation to respond to issued of HIV/AIDS; and
- Government Capacity to deliver services by assisting government to develop and implement HIV/AIDS strategies in the work place.

Whilst the main area of operation for Impact Mitigation is on the Orphan and Vulnerable Child Care, this is viewed as a medium for reaching other vulnerable groups within communities (such as the elderly). The area has therefore become a core strategic focus. The care of orphan and vulnerable children (OVCs) has been divided into four components, these being (1) food security, (2) socialisation, (3) psycho-social support and (4) economic empowerment.

NERCHA works with implementing agencies as their mandate is essentially around co-ordination and support. In the case of food security, NERCHA is working closely with the Ministry of Agriculture and Co-operatives (MOAC). In addition, NERCHA utilises existing social structures such as *Imphakatsi* or Chiefdoms to deliver HIV/AIDS services. With the number of orphans projected to reach 120,000 by 2010 there is an urgent need to provide OVCs with access to food as well as adequate care and support services. To address this, the traditional concept of *Indlunkhulu* is being revised. This is a *siSwati* term referring to the provision of food from the Chief's fields for members of the community that are unable to support themselves. In Swazi law and custom, Chiefs are responsible for the welfare of orphans within their area and, although this concept has fallen away in many Chiefdoms, it provides an existing basis on which to build a sustainable mechanism for the delivery of food to orphans and vulnerable children. The project involves providing support for farm inputs to all Chiefdoms through the MOAC. Fields allocated for *Indlunkhulu* are communally attended and the produce distributed to those who need food in the communities, with a particular emphasis on orphans and vulnerable children³.

Food Security – the Indlunkhulu system

Over 150 Chiefdoms responded to NERCHA's initial request in 2002 for the re-establishment of *Indlunkhulu* fields. After being sensitised to the needs of OVCs within their communities, each Chieftaincy appointed a committee to be responsible for co-ordinating the project. In addition to a Chief's representative, the committee included representatives from the church, male and female youth, women's traditional regiments, schools, community police, rural health motivators, the agricultural extension service of the MOAC, and local non-governmental organisations. These groups were selected for existing involvement in the welfare of children. The first task of each committee was to compile a register of all OVCs eligible for feeding in the Chiefdom. A principle adhered to was that all orphans and vulnerable children that required assistance with feeding were eligible, not only those whose parents were known to have died of AIDS-related illnesses. In the case of the Mvuma Chiefdom, 94 children were registered as OVCs. This community-driven evaluation represents a value decision that ensures that the entire community engages with the situation of the vulnerable.

The MOAC provides the initial agricultural inputs, which are funded by NERCHA, for the *Indlunkhulu* fields, which are then established with the assistance of labour from the local community. The agricultural inputs provided for each community include tractor time, seeds, fertiliser and pesticides. Seeds that are provided include maize, sorghum, cowpeas, beans, sweet potatoes and groundnuts. The quantity of the supplies varies according to the size of the land available for the *Indlunkhulu*.

OVCs also assist in tilling the *Indlunkhulu* fields to enable them to obtain practical experience in subsistence farming. The participation of the children in the preparation and harvesting of the fields ensures that important life-skills central to the rural local economies of the Chiefdoms are shared through the elders sharing their experiences. Without their active participation, many of these children would be denied the knowledge of their communities. In the context of modernisation many indigenous knowledge systems have been lost, a process that may be accelerated by the increasing numbers of orphans and children denied the

³ A vulnerable child may include someone taking care of a sick parent(s), who may be infected by HIV and is therefore expected to die.

guidance of their parents or community elders. The active participation of the entire household in the localised economy is a traditional concept that is being strengthened by the *Indlunkhulu* fields system. Community members insist that such practices should not be compared to child labour or exploitation of vulnerable groups in the community, but a valuable process that ensures the survival of orphans in a context of increasing poverty and vulnerability.

Once the commitment of the Chieftaincy is evident, a supply of grain is placed by the MOAC in each Chieftaincy to feed OVCs until the first harvest from the *Indlunkhulu* fields is ready. It is intended over a period the harvest will replenish the orphan food supply, whilst the excess will be used to purchase future agricultural inputs. In this way the *Indlunkhulu* fields are intended to provide a sustainable source of food for OVCs. Indeed, by the end of the 2002 planting season a Chief from the Shiselweni Region, who is female, had harvested 40 tonnes of maize indicating the potential output of the system. However, due to the ongoing drought emanating from 2002/2003, many Chiefdoms will not harvest enough to feed and restock the orphan stores and will, in the short-term, require continued assistance from the Swaziland government.

A rapid assessment of grain storage facilities revealed that these were not adequate in most communities, which led to the MOAC supplying five tonne storage tanks each community targeted in the *Indlunkhulu* project. In order to safeguard the quality of the food distributed, each community supplied with a tank were given E500 to construct a shelter for the tank. The grain storage facilities have proved to be a strategic intervention in that they have been used not only for produce from the *Indlunkhulu* fields but also for food from other donors.

The MOAC and NERCHA monitor the situation of the Chiefdoms in order to ensure that they are sufficiently stocked to sustain themselves without the seed inputs. Ongoing monitoring and evaluation would potentially be provided by the government's early warning system situated within MOAC to gauge future stresses on communities. The underlying objective of this approach is to ensure the sustainability of the intervention through the provision of the basic infrastructure of a renewed economic system. In addition, NERCHA and the MOAC intend to introduce appropriate cropping systems in order to increase yields through the use of drought resistant crops in certain areas. Discussions on nutrition and HIV/AIDS enhance the knowledge of communities. As will be discussed, the *Indlunkhulu* concept forms the nucleus of a comprehensive system that focuses on immediate relief for vulnerable and orphan households, the rehabilitation of local economies facing the vagaries of increasing poverty and HIV/AIDS, and the sustainable development of systems incorporating ongoing economic empowerment and social support.

Socialisation – building on the *Indlunkhulu* system

NERCHA recognises that in addition to access to food, orphans require social and psychological support to ensure that they develop to be productive members of their communities and society at large. NERCHA has therefore utilised the structures put into place for the *Indlunkhulu* project to provide care and support services for the OVCs within communities. Thus the mentorship of orphan children in the agricultural process inherent in the *Indlunkhulu* field system.

Children that are orphaned often lack basic life skills due to their young age and relative inexperience in socio-economic activities. In the absence of a parental figure to impart such knowledge, orphans may not benefit from the guidance and support that families with such figures are better placed to experience. To address this issue, each orphan family is placed under the supervision of a trained *Lutsango* care mother. *Lutsango* is a traditional regiment in traditional Swaziland society comprised of all married women. Local women suitable to care for OVCs are identified by the Chieftancy committee and mandated to access food from the *Indlunkhulu* stores and be responsible for the health, development and emotional well being of these children, as well as to teach them community values and morals.

Training is presently being developed for the care mothers and will be delivered through the national and regional *Lutsango* offices established with NERCHA assistance. The training will cover issues such as how to care for HIV positive children, HIV education and prevention strategies for children, as well as basic life skills such as hygiene and nutrition. The Chieftancy committees manage the *Lutsango* initiative at the local level, with technical and financial support provided by the Government of Swaziland. The national co-ordination of the programme remain with NERCHA, which actively seeks to encourage and involve communities, particularly with the overall vision of the intervention.

One objective of this system is to enable orphans to remain within their own communities. Assigning local women to care for OVCs enable them to stay on their parental land, cared for by community members known to them before their parents died. In the case of vulnerable children with sick parents, a relationship can be formed with the care mother before the child is orphaned. The presence of an individual carer for each child will also assist in the protection of vulnerable children against abuse and exploitation on the loss of the parental protection.

Through funding from The Global Fund To Fight AIDS, Tuberculosis and Malaria (see www.theglobalfund.org), NERCHA has been collaborating with the Deputy Prime Minister's Office, which are currently building Social Centres (*kaGogo*) within each Chieftdom. The concept of the *kaGogo* structure is being used to promote social responsibility at this level and each centre will be used as feeding and Early Childhood Care and Development Centres. They will also be used to provide health care and educational assistance as well as be used for any other social event that the community sees as being beneficial.

Each centre is built by the community itself using local materials and labour at a cost of E35,000. A common design is followed, which has been supplied by NERCHA and which ensures that there is space for community meetings and for the children to gather and play, for a private counselling room where HIV-affected persons can seek professional support, a store room and office, and a cooking area. In the Nkamazi Chieftdom the community were able to leverage a donation of bricks for the construction of the centre, which was then tiled with locally produced tiles, made on site using a machine supplied on loan from NERCHA. The tile making skills were intended to stimulate economic opportunities in the community although the machine was allocated elsewhere on completion of the roof. NERCHA had identified the provision of additional tile making machines as important assets to underpin economic opportunities in a number of communities.

Psychosocial Support – building on the Lutsango system

The provision of psychosocial support for HIV/AIDS orphans is a crucial component of orphan care. Orphans are often traumatised at the same time as being bereaved and may be marginalized and excluded from the communities due to the stigma associated with AIDS. This may lead to stress, depression and hopelessness as they struggle to maintain their families and property. After caring for sick parents, children may feel responsible for their death.

These difficult questions are being considered by NERCHA in a context where orphan numbers are increasing and there exists a general limited human capacity to engage with these problems. One option under serious consideration is the training of Rural Health Motivators working with professionals to monitor and advise orphans. The Motivators will look at the health aspects of the OVCs in collaboration with *Lutsango* care mothers who identify the children and refer them for assistance to the Motivators or the Ministry of Health, which will make visits through the centre. In addition, in order to ensure that the child is given emotional support and integrated into the community, the social centres established in each Chieftancy will be central venues where out of school orphans can regularly meet and play. This enables the *Lutsango* care mothers to observe children who are experiencing psychological problems and then refer them to professional assigned to particular communities. It is NERCHA's vision that local and regional supervisors for psychosocial support would be trained to work in partnership with *Lutsango* mothers to identify problems with children and to provide knowledge of appropriate interventions where necessary.

Economic Empowerment Programme – building on the Indlunkhulu system

NERCHA's economic empowerment programme is intended to help communities to financially support OVCs and to revitalise their local economic situation. Income generating programmes have been piloted in a few communities in order to transfer resources and skills essential to underpin economic recovery in such places. An initial needs assessment is carried out in participating Chiefdoms to assess existing levels of infrastructure, natural and human resources and to identify potential income generating activities. NERCHA will then provide necessary equipment and relevant training required to support these activities. The income from successful projects will be shared between participants and a Fund created to support local orphans and vulnerable children.

Educating OVCs – building on the economic empowerment programme

NERCHA maintains that economic empowerment begins with education and thus one of the priorities will be to ensure that OVCs have access to educational bursaries to enable them to remain in school. It is envisaged that local OVCs will also have the opportunity to participate in income generating projects and so learn necessary skills.

It has been well documented that the labour impact of HIV/AIDS and the caring of HIV positive people can seriously deplete the resources of a household. One such outcome of these impacts may be the forced removal of children from school due to the reduced economic status of the households. Thus these children may fail to gain an education and skills needed to support themselves in the future. In addition, orphans that lack financial resources or are too young to work must be cared for by their communities, something that many are unable to do due to the increasing loss of productive members of society and rising death rates amongst the extended family. NERCHA is currently working with the Department of Education to

find means of increasing access to education for OVCs and is developing a strategy that will ensure the allocation of bursaries by Government and other stakeholders to these children. In addition, non-formal education is being considered through the centres, which, in time, should be supported by libraries in each community.

The benefits and impact of the intervention were clear. The loss of economic and human resources has left many communities struggling to provide OVCs with the assistance needed to survive. The interventions designed and implemented by NERCHA and its partners aims to establish a comprehensive orphan care programme that will enable communities to fulfil this responsibility and provide OVCs with access to food as well as care and support services. NERCHA's approach has been to build upon existing systems and structures to deliver HIV/AIDS services and to promote the active participation of local community members to ensure that these services reach OVCs at community level.

How is this different from standard interventions? The NERCHA "philosophy" is based upon four tenants, which may be instructive for other interventions:

- A national vision informs all interventions in that the reach must be as wide as possible across the country. This is to ensure that equity is a key principle and that the human rights of all people are addressed. In NERCHA's perspective, it is "easy to create pockets of privilege", through establishing a closed orphan intervention for example, but this will leave a large number outside.
- The challenge for NERCHA is to ensure that all interventions are ultimately driven from the communities themselves after initial facilitation. Through enabling communities to respond themselves, the projects have more chance of success and long-term sustainability. The debilitating effects of poverty limit affected people's perspectives, as their choices are ultimately severely limited. The challenge is therefore to break this impasse.
- NERCHA is determined not to create new structures but to find and build on local initiatives. In NERCHA's view, there is always something to work with at community level, which will ensure that duplication is avoided and capital costs are reduced. For example, NERCHA utilises existing social structures to deliver HIV/AIDS services. In the provision of orphan care at the community level, these services are delivered through the Chieftaincy system. The Kingdom of Swaziland is divided into 368 *Imphakatsi* or Chiefdoms, the most basic level of societal organisation and the structure that rural households will turn to when in need of assistance if the extended family is unable to help. Households are finding it increasingly difficult to meet these needs with the added impact of HIV/AIDS and increasing numbers of OVCs. NERCHA has begun to work with 360 Chiefdoms under the Global Fund project within rural, urban and peri-urban areas.
- The challenge of sustainability must be considered throughout every intervention particularly in an environment where donors have a short-term financial commitment.

An important dimension of the project, which deserves further discussion, is the provision of seeds by the MOAC. Although hybrid seeds have largely been provided, it is expected that indigenous drought resistant seeds used traditionally will be disbursed. These seeds are economically more accessible and relatively resistant to the impact of drought and are therefore regarded as important options for the future despite the potentially lower yields. Forty communities have received traditional seed varieties through the intervention in a partnership between NERCHA, MOAC, the World Food Programme and the Food and

Agricultural Organization of the United Nations. Traditional crops that are no longer commonly in use such as cassava will also be utilised in the future. The focus on indigenous knowledge systems such as traditional cropping will have a bearing on the future sustainability of the interventions. Another dimension to the use of traditional seeds is that of the higher nutritional value of such plants and the re-invigoration of traditional planting systems.

The effectiveness of using traditional crops needs to be carefully assessed before a major rollout is considered. For this reason the University of Swaziland has been commissioned to monitor and evaluate the impact to feed into policy decisions. NERCHA is planning to support orphan homes where there is an elder child to plough at their homestead. This intervention will be supported by the *Lutsango* who is looking after the home, by the community in general and by an agricultural extension officer assigned to the Chiefdom. The use of oxen as a labour saving device will be used where possible. NERCHA and the MOAC are looking towards increased yields on the *Indlunkhulu* fields to help the communities to develop capacity to procure farm inputs without outside support and thereby sustain the programme. This is highly dependent of the drought situation in the country, which has severely impacted on food security.

4.7 Safety nets:

Social protection strategies for rural (and urban) poor should be refined to prevent the erosion of critical livelihood assets, as well as coping mechanisms (such as safety nets) to help destitute farmers survive effects of multiple shocks. These efforts should include the protection and support of the elderly.

Part of the problem of securing such safety nets is through strengthening political will. This should be done by networking among stakeholders committed to social protection of incapacitated households in order to exchange information on research results, concepts and strategies and in order to pool resources. Awareness and advocacy can be promoted through making information available, holding workshops, exposing decision makers to the reality of AIDS affected households and communities (exposure excursions) and by giving them access to the experience of countries which are operating effective social transfer schemes like the old age social pension scheme in Namibia.

4.8 Labour saving technologies:

An intervention strategy that has recently received much attention in the literature and in the field concerns efforts to make labour-saving land preparation and weeding technologies more available to rural households and communities (see appendix one). Animal draft power, such as ox-driven ploughs and harrows, is a commonly utilised land preparation technology in most of eastern and southern Africa, particularly Ethiopia, Kenya, Zambia, and Zimbabwe (Jayne *et al*, 2004). However, as Jayne *et al* have argued, household surveys in the region generally find that ownership of oxen and tillage equipment is concentrated disproportionately among relatively wealthy households in the top half of the income distribution (see 2004).

According to the literature and field experience, farm households tend to utilise remittance and off-farm income as a primary means to afford expensive assets such as oxen, ploughs, and fertiliser, which are used to capitalise farm production. Households infected and affected by HIV/AIDS often experience a reduction in these sources of income, particularly if they are

vulnerable to shocks. Afflicted households face a multifaceted loss of labour, capital, and knowledge. Unlike the loss of labour and knowledge, which represent a loss to entire communities, capital assets lost by afflicted households are generally re-distributed within the rural economy rather than lost entirely (Jayne *et al*, 2004). This may exacerbate rural inequality over time, and particularly deplete the productive potential of relatively poor households. However, some interventions, such as the one described below, counter these problems by ensuring a broad-based community use of assets such as an ox-drawn plough to ensure both equity and efficiency outcomes for households infected and affected by HIV/AIDS.

4.8.1 The provision of ox-drawn ploughs, Nyanga, Zimbabwe

FACT Nyanga, an HIV/AIDS Service Organisation partnered by Action Aid, has been working with twelve communities in Nyanga, particularly focusing on vulnerable households and individuals infected and/or affected by HIV/AIDS, who have been adversely affected by the ongoing food crisis in Zimbabwe. In the context of repeat crop failures, increasing food insecurity and land being left fallow due to HIV/AIDS-induced labour constraints in south and west Zimbabwe, the project was intended to:

- Facilitate the recovery of agricultural food production for HIV/AIDS infected and affected individuals and households in disadvantaged and marginalized communities;
- Stimulate and strengthen community coping strategies and responses to the socio-economic consequences of the HIV/AIDS pandemic through the provision of direct material needs (food, seed and agricultural tools) for identified community members;
- Strengthen the capacity of communities to respond effectively to the pandemic and to curb further transmission of HIV.

The project focuses explicitly on the provision of seed and agricultural tools, in particular hoes and ox-drawn ploughs, and also fertiliser, to HIV/AIDS infected and affected families and individuals. FACT realised that communities affected by HIV/AIDS were unable to utilise their land resources due to the impoverishing impact of HIV/AIDS. The provision of ploughs and other agricultural implements has allowed communities to utilise their land in order to better cope with food insecurity. In particular the provision of ploughs has been focused on orphans and child-headed households through the support structures within the communities.

The plough allocated to each community is kept in a central place, usually the homestead of one of the members of the voluntary community support group that administers home-based care to chronically ill community members. One community benefiting from the intervention consisted of 331 households with 254 orphans (defined as having lost either one or both parents). The plough is utilised by beneficiaries who are identified and selected through community structures. The committee as a priority target orphan or child-headed households. These households are lent cattle by other community members to provide draught power and shown how to till the land by community members in order to impart necessary "life skills" to these households and thereby reduce dependency and a sense of pride through being self-sufficient. Less affected community members may also submit requests to the committee to utilise the plough. Decisions are made according to a roster that ensures equitable use of the community asset. The issue of maintaining the effectiveness of the plough was met through

contributions made by the community into a central fund. Additional money was raised through hiring out the implement to farmers and through the sale of surplus produce.

Seeds and other inputs have also been provided by FACT and Action Aid to ensure food security for communities that have little access to seeds in time of economic stress. Seeds are provided in two phases through the year: in summer in the form of beans, groundnut and maize, and in winter for community vegetable gardens. The provision of vegetable seeds, in particular onions and tomatoes, supplements the nutritional intake of vulnerable and HIV/AIDS-affected households. The vegetables are supplied through the home-based care system already in existence in the village to help chronically ill community members. Other agricultural inputs such as hand-held hoes are also provided which allow more regular maintenance of fields and gardens. The provision of such implements has facilitated the guidance of orphans in field preparation and maintenance by community members. The provision of inorganic fertiliser enabled the community to harvest significant yields in the previous season.

The surplus of these harvests is sold in order to raise cash to purchase non-food items such as salt, soap and school exercise books – and, indeed, the maintenance of the plough. The collection and storage of excess seeds is an important factor to ensure that harvesting can take place in the following season. This is important in the current situation where seeds are expensive and communities have less money than in “normal” years outside of drought and the economic challenges facing Zimbabwe.

Action Aid provides seed and agricultural tools to FACT Nyanga on request, which are distributed to families and individuals infected and affected by HIV/AIDS. The local organisation identifies the direct beneficiaries through their own structures and networks of community support groups. These local organisations utilise their registers of members, which include people living positively with HIV and AIDS, grandparents taking care of grandchildren, child-headed households and orphans, to select the beneficiaries. In most instances, orphans have been identified as the priority group. The eight organisations were given budgets to identify and procure local inputs that were necessary in the specific areas of activity. Fertilisers and local seeds were usually sourced locally. In Nyanga, FACT used as innovative approach of buying twelve ox-drawn ploughs. The ploughs and draught power was shared amongst clusters of people (groups of households or a single village) with management structures set up to oversee the group arrangement. The use of the ploughs was controlled through a roster. People outside of the beneficiary groups could also utilise the ploughs through rental, which brought in funds to maintain the equipment.

The benefits and impact of this intervention were clear. The provision of the ploughs has revitalised community support structures and united people struggling against the increased pressures of deepening food insecurity. Thus the mitigation intervention provided by Action Aid and FACT has facilitated the strengthening of traditional institutions for the benefit of their communities. This empowerment strategy should theoretically be sustainable on the exiting of the outside support.

The home-based care initiative already in place in the community (through facilitation by FACT) was reinforced and supplemented by the ox-drawn plough initiative. In particular the provision of surplus produce, which was of high nutritional value, and the ability to actively support orphan and child-headed households were important activities to support the care

initiative. The provision of the plough ensured that the community was able to pull together during a time of stress and to ensure that members learnt from each other. The use of the plough resulted in an increased harvest that incited the interest of other community members. In this way, knowledge about the technology and its uses was filtered throughout the area. The committee agreed that the plough had certainly improved the lives of the community in general.

In addition to the support provided through the intervention, the relationship with an outside NGO with links to other institutions ensured that information around human rights were imparted to the community. Thus information about property stripping was provided to the community in order to sensitise members about possible scenarios that might afflict their community and what options were available to mitigate such problems.

The case study reflects a different intervention from standard practice in that it explicitly focuses on building the capacity of local AIDS service organisations and by complementing existing projects set up by the AIDS Service Organisation. The intervention is also not imposed by outside "experts" but based upon opinions and ideas expressed through community discussions. If possible, the intervention is based upon existing community institutions and responses. The project explicitly focuses on building the capacity of local AIDS service organisations, locally based extension services whether from the government or the partner organisation. According to Harvey, the impetus for considering HIV/AIDS in the recent humanitarian response in 2002/2003 came largely from the top down prompted by the Lewis report in September 2002 and the Lewis and Morris report in early 2003 as well as pressure from donors and headquarters (2003). This meant that initially HIV/AIDS as an issue remained largely at the level of rhetoric, partly to explain the crisis. The practicalities of engaging with HIV/AIDS in humanitarian programming only started to be addressed in 2002/3. An obvious exception to this was where agencies or their partners had ongoing long-term HIV/AIDS programmes and used these to build an emergency response. An excellent example of this is the Action Aid programme in Zimbabwe and the relationship with AIDS service organisations to provide seeds and tools.

Effective partnerships established with local AIDS service organisations that ensured adequate personnel and expertise were committed to the project. The fact that these organisations, in particular FACT, were well organised and had established HIV/AIDS support groups added to this success. The organisations had experience working with community-based organisations and support groups and had developed strong relations of trust with communities. Action Aid technical support guaranteed that effective support was available for the project. Strong community support was secured through participatory approaches and the engagement with and respect for traditional institutions. Local authorities participated in the project also ensured that ongoing support was continually forthcoming.

The communities were situated in a high rainfall area in the east of Zimbabwe and thus did not experience the worst of the drought that affected the country. In addition, the communities were largely old A1 Communal Type resettlement projects from the 1980s and thus were relatively secure from an economic perspective. The local economy appeared to be functioning well despite having lost the previous access to markets that were enjoyed when the transport system operated more regularly in the past.

There were, however, inadequate agricultural inputs in relation to the need/demand and a delay in the distribution of inputs. The shortage of basic commodities such as food, fuel, seed and fertiliser hampered the project considerably but seemed unavoidable, as these were indicative of the overall situation in Zimbabwe. Limited geographic coverage restricted the overall impact of the intervention. The lack of previous experience of the partner organisations in emergency response also constrained the overall impact. Another major constraining factor to the overall sustainability of the project is the increasing return of sick adults to rural communities. Many adults in their prime working age leave their communities in order to seek work in distant urban places and sometimes return with AIDS. This unpredictable drain on community resources may place excessive strain on the support base that has been supplemented by the Action Aid / FACT intervention.

As the benefits of the plough become more evident to a larger group of people, particularly when alternative livelihood opportunities are scarce, will probably result in increased demand on its use. In order to overcome this, additional ploughs will either have to be bought by the community or donated by the two supporting NGOs. Over-use of the plough, particularly on hardened and dry surfaces common during the dry season, would also increase maintenance requirements on the blade in particular. An opportunity exists in imparting knowledge around the preservation and preparation of foodstuffs produced through the intervention. Committee members and care givers raised the issue that sometimes they did not have adequate food to give to the HIV/AIDS affected households they were visiting, particularly during the hungry season. Preservation techniques, particularly through sun drying produce such as tomatoes, would ensure that a stock of nutritious food was always available for needy households. In addition, preparation techniques that conserved as many nutrients as possible in the produce would be an important opportunity for the community.

4.9 Agricultural Interventions with an AIDS focus

The challenge for the agricultural community and specifically for the agricultural research community is to develop farming practices that adapt to the reality of middle and late-stage HIV/AIDS affected environments and yet maintain productivity levels (Haddad and Gillespie, 2001). Despite the devastating effects of HIV/AIDS on agricultural production and rural livelihoods, and in spite of the fact that up to 80 percent of the people in the most affected countries depend on agriculture for their subsistence, most of the response to the epidemic has come from the health sector. The agriculture sector has either remained silent or has adopted similar health-sector initiatives to counter the effects of the epidemic. The agricultural sector is in a strong position to assist in both the prevention and mitigation of the consequences of HIV/AIDS.

A number of principles should be borne in mind when designing appropriate agricultural sector responses to HIV/AIDS (Haddad and Gillespie, 2001: 34-38). There is a need for interventions to be designed and assessed not only in terms of their ability to mitigate the current impact, but also in terms of their ability to reduce susceptibility to future infection and vulnerability to various types of HIV/AIDS impacts. There is a need to recognize the limits of influence of sectoral policies and interventions in terms of their ability to mitigate HIV/AIDS impacts. It is also difficult for policy and programmes to respond to HIV/AIDS if the epidemic cannot be monitored effectively. Another major issue is the fact that most HIV/AIDS programmes are very small-scale in nature, and have been referred to as "expensive boutiques" available only to a small percentage of the affected population

(Binswanger cited in Haddad and Gillespie, 2001). For example, in Kagera, Tanzania, only two of five districts are covered by HIV/AIDS services, which service only five percent of the population in these districts. The challenge is therefore to find ways of scaling up locally relevant, community-driven approaches.

4.9.1 The provision of drip-irrigation, Chiredzi District, Zimbabwe

Action Aid, in partnership with Linkages for the Economic Advancement of the Disadvantaged (LEAD), targeting three thousand households infected and/or affected by HIV/AIDS identified by community support groups facilitated by a local AIDS Service Organisations (ASO). In the context of repeat crop failures and increasing food insecurity in south and west Zimbabwe, the project was intended to:

- Stimulate and strengthen community coping strategies and responses to the socio-economic consequences of the HIV/AIDS pandemic through the provision of direct material needs (agricultural technology) for identified community members in Chiredzi;
- Strengthen the capacity of communities to respond effectively to the pandemic and to curb further transmission of HIV;
- Through the use of technology (drip-irrigation) reduce the reliance of vulnerable communities on rain-fed agriculture;
- Diversify sources of food for HIV/AIDS affected households; and
- Improve the productivity of HIV/AIDS affected households to ensure that they are food secure through the reduction of labour, time and capital required to produce food.

In this way, Action Aid believed they have transcended the gap between relief and development through building in the element of sustainability into the intervention. The inter-relationship between HIV/AIDS and the persistent drought meant that interventions have to address long-term issues of sustainability.

The distribution of drip-irrigation (micro-irrigation) kits for community nutrition gardens for households worst affected by HIV/AIDS. All households within these communities are judged by LEAD and Action Aid to be affected by HIV/AIDS; but households worst affected are selected through community support groups established and facilitated by a local ASO. These are households consisting of orphans, child-headed households, and grandparent-headed households. The use of drip-irrigation as a necessary strategy to reduce the reliance on rain-fed agriculture in a drought-prone region, particularly for HIV/AIDS affected households. The intervention was complemented by the distribution of vegetable seeds and pesticides to ensure greater food security and the training of beneficiaries on equipment usage, horticulture, food preparation and preservation, and nutrition.

Each drip-kit consists of a 210-litre water tank raised above the garden with a pipe network laid out between the plants. Action Aid and LEAD have found an alternative to the expensive, imported tanks from Italy in the plastic barrels used by industry in Harare. Two-thousand barrels have been effectively recycled as water tanks and supplied to the project. Each tank is raised one-and-a-half to two metres above the garden with a t-junction pipe and main distribution pipes leading off the gravity-driven water source. An accompanying network of smaller pipes and micro-pipes lead off into the fields, which are situated alongside plants to ensure a continuing supply of water. Each tank supplies a 100 metre squared garden with water at a rate of about one tank (210-litres) per day depending on the moistness of the soil.

Each tank is either rain-fed or supplied from a nearby water source such as a river or village borehole. Sourcing an adequate water supply for the technology has not hitherto been a problem, as most communities have some access to water. Many such sources were established in the 1980s and 1990s during the Rural Reconstruction Programme whereby the government provided infrastructure for disadvantaged areas. The Water and Sanitation Programme, which formed a major component of rural restructuring, covered 100 percent of Zimbabwe and drilled boreholes and supply dams. Maintenance problems have arisen despite locally-based teams being established to keep them at working level. A major challenge for this technology has been getting the water into the raised tank. Action Aid is looking at the provision of treadle pumps as a way of mitigating the labour impact of moving 210-litres of water per day into each tank.

If a communal water source such as a borehole or well is used then Action Aid encourages the use of communal gardens to better ensure equitable water management. Action Aid has recognised the heterogeneity within communities between poorer and better-resourced households and the importance of utilising communal resources fairly. In addition, a communal garden is also easier for extension officers to provide support to a group than to a range of individuals. The proximity of the plots within a communal garden also encourages knowledge to be shared and mutual support.

LEAD has staff in the field that can carry out technical extension and support for the targeted groups and have developed training material for the target communities. Action Aid take project beneficiaries to other examples of similar projects with the extension officer at hand in order to build the capacity of both the farmers and the extension officer. The focus of such cross-fertilisation of experiences is largely on use of technology and on nutrition and food preparation, particularly for HIV/AIDS-affected households. The travel allowance and costs of the extension officer, whether employed by LEAD or the government, are covered by Action Aid. In addition, the community is empowered to monitor the extension officer through recording when and how support was provided. Action Aid is thus able to evaluate whether the financial support directed at building the capacity of local extension is having a direct benefit to their projects.

Action Aid have also attempted to build local capacity through the establishment of Village Community Workers, who can provide further technical support to the project beneficiaries. However, this requires considerable support in the initial stages and the provision of incentives to ensure that these Workers continue to impart knowledge to the community. They require considerable technical capacity to complement their ability to mobilise communities. Until February 2004, Action Aid has simply provided these Community Workers with drip-irrigation kits to support their own initiatives.

The benefits and impact of the intervention are clear. Drip-irrigation is very cheap (GBP27 each) in comparison to conventional irrigation. In addition, it ensures three crops per annum as opposed to a single crop as per rain harvest. The technology has a significant HIV/AIDS mitigation component in that it is suitable for growing AIDS-relevant crops, utilises a minimum of water and reduces the labour required. The technology has been used to grow immune-building varieties of crops that benefit people living with HIV/AIDS. Emphasis is placed on the use of sustainable farming methods such as utilising organic fertiliser and natural pest management that help reduce the use of expensive inputs such as fertilisers and

pesticides. The training programmes and support material ensure that skills are transferred to the targeted households. Excess produce can be sold to generate income to meet the other needs of the households, thus reducing the need for adopting risky coping strategies. The project also strengthens community-based initiatives through supporting labour-sharing and mutual assistance arrangements. In effect, the project has re-invigorated community institutions that have been under pressure from increasing poverty.

There are, however, some concerns about the costs of drip-irrigation scheme that have been articulated in the recent DEC Report by Valid International (2004). Drip or trickle irrigations systems have pipes laid permanently on the ground with a single water emitter providing a trickle of water to each plant. Drip irrigation systems were originally developed for high value crops in high labour cost countries with arid conditions. The systems need clean water, to prevent the drip tubes being blocked; careful management, to keep the system operating; and a secure environment to prevent the drip tubes being stolen. These conditions are rarely found in rural Africa and therefore while drip irrigation systems may have a role in market gardening in Africa, they do not really have a role in smallholder production (Valid International, 2004). As indicated above, these systems are being heavily promoted by USAID as being more water efficient, promoting higher yields, and being less likely to promote salinity. According to the DEC Report by Valid International, if Action Aid had technical competence in irrigation they would not be promoting these relatively expensive systems for household food security (2004).

These strategies imply that the sector cannot continue with "business as usual". The agriculture sector will have to revise the content and delivery of its services, the process of transferring agricultural knowledge, which is essential to development, to farming communities. It will be necessary to develop appropriate technologies and to integrate indigenous knowledge. The sector will therefore have to:

- ❑ be more creative in the delivery of services;
- ❑ work multi-sectorally with other stakeholders;
- ❑ provide a co-ordinated response;
- ❑ providing a decentralised process in which the local capacity of rural institutions are strengthened and local safety nets supported to promote community-based initiatives.

The challenge is to be able to deliver a responsive service when agriculture institutions are also suffering from acute staff shortages and the associated cost due to increasing HIV/AIDS mortality and morbidity.

4.9.2 Seed Fairs, Marracuene District, Maputo Province, Mozambique

Mozambique experienced cyclical disasters (floods in 2000 and 2001 and droughts in 2002 and 2003) that affected food security dramatically. Among the huge international assistance developed health assistance, food distribution, housing, sanitation, rehabilitation of schools and infrastructure, free distribution of kit seeds has been usually provided to allow the rehabilitation of agricultural activities. Seed fairs were another mean to provide access to seed. The pioneer of this new method; Catholic Relief Services introduced it first in Tanzania, Kenya, Uganda and Sudan. The International Crops Research Institute for the semi-Arid

Tropics (ICRISAT) published with INIA⁴, a handbook presenting the methods (project funded by USAID after the severe flood of 2000). In February 2001 after the floods, Action Aid with the FAO supporting the Mozambican government tested these methods of emergency in the South and Central Mozambique. The experience is now expanding in different areas due to its success.

The core objectives of the seed fairs are:

- To ensure that subsistence farmers affected by drought have seeds for the next campaign.
- Promotion of seed fair as a new method of seeds distribution
- Promotion of the local economy (through producers, traders and Community Based Organisations)
- Strengthening coordination at local government level under supervision of local authority and exchanging knowledge.
- Contribution to food security

Before drafting the project Action Aid and the local government did a participatory diagnostic with the communities in Manhiça (13 689 families) of which they identified 9 000 needy families. In Marracuene the last monitoring report (August 2002) was used. It highlights 29 481 needy persons. A first emergency action plan was elaborated of which included cassava and sweet potatoes seed distribution to reactivate the farming systems. Seed fairs were organized to facilitate the marketing of seeds according to the farmer taste and strategies.

The intervention was based upon a participatory approach at community level. A first meeting organized with the leaders to present the work team and tasks. The system of the project was discussed and dates were settled to meet communities. The promotion team expands the information at each administrative council inviting the local traders. A date was appointed to meet with the local traders interested in participating. Vouchers to be used at the fair were printed, and verified by *brigadistas*. Two days before, the place is demarcated with the community that include a space for recipients, a space for trading, and a space for *brigadistas* to register the transactions. Traders and recipients seem to appreciate this initiative but we don't know the impact regarding the general access of community to seed, etc. Collection of data has been done in a proper way but the analysis presented in the report cannot conduct to an evaluation of the impact. No feedback valuation at community level.

Action Aid definitively breaks the common pattern of assistance system. A solidarity scheme based on recognizing the poorest of the poor inside the community is combined with boosting local economy by procuring seed supply at local level. Seed choices are strengthened to ensure a better use of seed in the field. This method takes into account the subsistence practices and knowledge. Scenarios and participatory approach that define beneficiaries' selections are monitoring through field assistance.

In the whole process Action Aid is more *fait faire* institution providing a lot of participatory, and assessing methods. Its capacity comes from its funding ability. The local government has few means in implementing project due to a lack of finances. Action Aid supplied it in partnership. The DDAR is in charge of all process at local level, and we can see that the CBOs are very much involved and participate fully in the implementation process.

⁴ See Organizing seed fairs in emergency situations at <http://www.icrisat.org/web/uploads/presentations/18062003163009Organizing%20Seed%20Fairs.pdf>

Action Aid elaborated the Project with post consultation at community level. The Action Aid involvement for more than 6 years in the area allows us to think the project is built upon well-known problems and challenges. However the Action Aid project is built with its own society project view, and it is not trusty that it reflects the local one. Action Aid works at district level and has a paternalist relationship at community level. The paternalism linkages settled through the emergency aid still overpass the real development possibility of the area. "The local people see us like a father that challenges our implication within development issues. They are used to seeing us as a donor, that helps for free".

The question is: Can poverty be alleviated reinforcing assistance and a paternalism structure? The huge education program engaged by Action Aid will probably help the NGO in following another way and step by step conducing man and woman to their independence, and self-governing capacity. From the kit seed distribution to the local seed fair a huge step has been made. This case study can really be seen as a rich experience that deserves to be documented in a more scientific approach for publication. Furthermore, it is recommended that Action Aid work more closely to the Universities to avoid hardening micro-local perspectives. It is important that training programs systematically include linkages with academics and feedback research to open the debate from local to national and international perspectives.

4.10 Scaling up and "Mainstreaming":

A number of projects, which have become successful at a local level, are now at a stage where they are widening their response to cover a larger population and geographical area. This scaling up has significant resource and support implications and also raises the question as to how effectively projects can be replicated from one region to another. Careful adaptation to the local context and the establishment of effective monitoring systems are critical.

The importance of recruiting or training staff to have an understanding of the relationship between HIV/AIDS and development that is dynamic, flexible and open to new ideas was raised in a number of the case studies. This relates directly to the issue of "mainstreaming", which implies staying with core business and objectives, but using an HIV/AIDS lens (see Abbot, 2004). Haddad and Gillespie argue that 'new interventions to address HIV/AIDS mitigation should only be developed if existing agriculture, food security and nutrition intervention areas cannot be effective by adapting them through the use of an HIV/AIDS "lens" (2001). Oxfam-GB and CARE South Africa - Lesotho define "mainstreaming" not as a series of fixed activities but rather a process of changing attitudes and deepening understanding about complex issues requiring continual learning and reflection (Abbot, 2004). In essence it is important for staff involved in projects to continually deepen understanding of HIV/AIDS and how it relates to vulnerability and food security.

In the case of the MSF Community Home-Based Care programme, there is great potential for scaling up through collaboration due to the large number of NGOs, CBOs and FBOs operating in the District. Technical expertise on crop production, livestock, labour-saving technologies, soil conservation techniques and income generating activities would complement the Home-Based Care activities and increase the impact of these through increased food security for affected households and communities. The Zikometso Smallholder Farmers' Association, World Vision and Oxfam-GB could provide such expertise in collaboration with government departments.

4.11 HIV/AIDS and nutrition interventions:

The focus of the Action Aid intervention in Mozambique was to increase nutritive food consumption for a better diet that can strengthen health and fight against HIV/AIDS. Difficulties with food production lead to poor nutrition: both protein-energy malnutrition and deficiencies in micronutrients such as iron, zinc and vitamins (Barnett and Whiteside, 2002). Poor nutrition leads to compromised immune systems, making individuals more susceptible to infection in general. Research has shown that the onset of the disease and even death might be delayed in well-nourished HIV-positive individuals, and diets rich in protein, energy and micronutrients help to develop resistance to opportunistic infections in AIDS patients (Gillespie et al, 2001). Barnett and Whiteside argue that for rural populations, the impact of HIV/AIDS on nutrition is potentially serious and an issue that has been largely overlooked in the focus on prevention (2002).

4.11.1 Nutrition Intervention (Sweet Potatoes), Manhica & Marracuene, Mozambique

As emphasised throughout this paper, HIV/AIDS threatens the labour force capacity of a household. This impact is reinforced by alimental deficiency due to food insecurity. The distribution of seed to rehabilitate agriculture activities is often the first response to strengthen food production. This response is to alleviate food risk has recently being combined with the idea of introducing highly nutritive varieties into the farming system to ensure a better diet for the community, including people infected with HIV. The intervention is thus focused on the entire community and not on a specific group that might cause stigmatisation. The intervention is coupled with an HIV/AIDS awareness strategy based upon “stepping stones” techniques⁵, which focus on engaging with taboos around infection to ensure those in need receive care and protection.

Action Aid in Mozambique has implemented a nutrition programme based on the introduction of sweet potatoes rich in Vitamin A known as “*Batata doce polpa alarajanda*”. These potatoes are suitable to reinforce the immune system and in particular to fight against poliomyelitis during childhood. The new variety of sweet potato is more resistant to climatic variations such as drought or floods than older types. The introduction of this new variety was facilitated through communities that used these potatoes as the main subsistence crop in their areas. The focus on diet and the need for nutritious food was the main focus of the intervention to create “open-mindedness” in the local customs and to facilitate the consumption of this new variety. In addition, Action Aid used the introductory seed to develop an agro-processing component by linking it to their seed fairs intervention.

In terms of the impact of this intervention since its introduction in 2002, in particular on the dissemination of this new variety, it was impossible to comprehensively evaluate the benefits. However, a number of persons interviewed in Manhica and Marracuene claimed that most of the subsistence farmers in the area were cultivating the potato and eating it with tea, because of it particularly sweet taste. Anecdotal evidence indicated that the intervention remained at the local level, as it was still scarce in the Maputo markets. This was probably due to the lack of a trade network. It was, however, beginning to appear amongst other local varieties in neighbouring areas. There is a huge demand for a sweet potato in the area and the market is

⁵ <http://www.unesco.org/education/ibe/ichae>

open. Combined with an emergency saving scheme it will allow members of the community in facing better natural disasters.

The opportunities of increasing the impact of the intervention, particularly if it does strengthen immunity, should be a priority for the organisations involved in the project. Marketing the potato more widely and ensuring its availability in the urban markets would be a natural scaling up opportunity for the intervention. A short Internet search shows different regional networks in Africa that are connected to the International Potato Centre (<http://www.cipotato.org>), which provides immediate advise on scaling up on interventions. An obvious concern about the new varieties was the uncertainty about whether it had been genetically modifies, particularly in the context of the contentious debate around GMOs in the region.

5. General Conclusions:

From this general discussion and from reflection of the working group, which set up the Pretoria "Mitigation Workshop", six general recommendations can be defined:

i. Development, relief and rehabilitation must be addressed together.

Standard practice focuses on social and economic development, punctuated by occasional emergencies that require short-term relief until people get "back on track." However, increasing poverty rates and the collapse of services show that development work has not been successful in the past. The advent of AIDS underscores the fact that 'business as usual' is no longer applicable. Thus given the reality of AIDS, the entire approach to development must undergo a vigorous reconceptualisation. Interventions in any community should always combine development, relief and rehabilitation aspects.

ii. Policy should encourage and be influenced by local implementation.

National and international policies provide important direction for the fight against AIDS. However, efforts are always implemented locally. Too often, policy-makers do not understand the practical problems in communities, or the specific factors that lead to success or failure. Ministries, organisations, and international bodies should make stronger efforts to learn from the successes and difficulties encountered within efforts to minimize the impacts of AIDS. These lessons should be continually used to review and improve advocacy, and eventually policy.

Use of a standard, systematic format for writing up short case studies allows examples to be compared, and makes it easier to assess efforts. Through development of more case studies, it will become easier to identify examples of good indicators of success.

iii. Better targeting and participation helps affected people take charge.

Practitioners must be clearer about whom they are working with, and are not working with. It is insufficient to target 'people affected by AIDS.' Impacts of illness and premature death vary widely across families; even the situation of a single family changes dramatically over time. Agricultural support can help one family, but be meaningless for its neighbour. Young girls at high risk of HIV may not benefit from programmes that are successful with older women. Service organisations should use participatory approaches, through which they seek out and work with affected men, women, boys and girls who usually are unintentionally excluded. Efforts to work with 'the vulnerable' as a broad group must be replaced by a more sensitive approach that is responsive to people with different types of vulnerability.

iv. Focus on multi-sectoral partnerships at district and village level.

No single intervention can work for everyone in a community, so there must be a range of services and responses. It is recognised that HIV/AIDS is not a health issue alone: a single family may need a mix of services across sectors. However, no one organization or department can address all the needs and it is therefore crucial to forge strong local partnerships among organisations with complementary skills spanning agriculture, health, education, social protection, and so on. For example, an integrated approach by home-based

caregivers, orphan committees, agricultural extension agents and health workers can ensure that food, school fee relief, home gardens and health care go directly to families that most need them. This is a broad version of the AIDS "continuum of care". Partnerships have been discussed for decades, but are less easy to implement. There are examples of strong partnerships among specific organizations and departments in some districts or communities, but we need keener efforts to encourage these local partnerships more widely.

v. Beyond 'labour saving' technologies and practices.

People affected by AIDS tend to have multiple burdens, with less time to address them. One common response is to encourage "labour saving technologies and practices." However, these can be useful in some situations, but the focus on labour-saving should be broadened to "labour management." In addition to saving labour, labour management can include spreading labour demands over time to minimise work needed at peak periods (such as different approaches to land preparation), enabling quick returns to labour (through fast-maturing varieties or animal breeds), or increasing returns to labour (through adding value to any goods that are marketed). Development of a range of technologies and practices should include active involvement of the people who could benefit, taking indigenous knowledge and cultural aspects into consideration.

As Jayne *et al* have argued, the loss of family labour due to a death in the household does not mean that labour necessarily becomes the limiting input in agricultural production, and hence it does not necessarily follow that the appropriate policy response for agricultural research and extension systems is to focus inordinately on labour-saving agricultural technology (2004). Labour-saving technology may be appropriate for many households such as those who already face high land/labour ratios and lack other resources that could be substituted for labour, such as cash for hiring labour. The main implication of this argument is that a broad range of agricultural production technologies need to be established, which are appropriate for the wide range of land/labour/capital ratios found among small-scale farm households, and which are needed to respond to the AIDS.

vi. Base policy and practice on experimentation and evidence of success.

Good practice should be based upon evidence of what works, not merely on seemingly good ideas. The situation created by HIV/AIDS requires more experimentation and creative approaches, backed by evidence of successful interventions. These can then influence policy and practice more widely. Action research provides one way of assessing interventions for understanding what does and does not work in specific situations, for different types of people.

References

Abbot, J (2004) 'Rural livelihood interventions for households affected by HIV/AIDS', paper prepared by CARE South Africa – Lesotho for DFID Zimbabwe, February.

Balyamajura, H; Bachmann, M; & Booysens, F (2001) 'Rural Development and HIV/AIDS: Results from a Pilot Study in Qwaqwa, Free State Province, south Africa', paper presented at the National Land Tenure Conference, Durban, 26-30 November.

Barnett, T (1999) 'Subsistence agricultural sector', AIDS Brief for Sectoral Planners and Managers, HEARD, University of Natal, Durban.

Barnett, T & Blaikie, P (1992) *AIDS in Africa: Its present and future impact*, Guilford Press, New York.

Barnett, T; Whiteside, A & Desmond, C (2001) 'The social and economic impact of HIV/AIDS in poor countries: a review of studies and lessons', *Progress in Development Studies*, Vol. 1, No. 2.

Barnett, T & Whiteside, A (2002) *Aids in the Twenty-First Century: Disease and Globalisation*, Palgrave/Macmillan, New York.

Barnett, T & Topouzis, D (2003) 'Mitigation of HIV/AIDS impacts through agriculture and rural development', unpublished workshop presentation, "Mitigating the Impacts of HIV/AIDS in Agriculture and Rural Development: Successes and Constraints", FAO, GTZ and Oxfam-GB, May, Pretoria.

Bosire, E; Kiai, W & Mwangi, W (2002) 'The impact of HIV/AIDS on the land issue in Kenya', unpublished report for the FAO.

Brockerhoff, M and Biddlecom, A (1999) 'Migration, sexual behaviour and the risk of HIV in Kenya', *International Migration Review*, Vol. 33, No. 4, pp. 833-856.

Bryceson, D and Banks, L (2000) 'End of an era: Africa's development policy parallax', *Journal of Contemporary African Studies*, Vol. 19, No. 1, pp. 5-25.

Cohen, D (1997) 'Socio-economic causes and consequences of the HIV epidemic in Southern Africa: a case study of Namibia', HIV and Development Programme Issues Paper No. 31, UNDP.

Cohen, D (1999) 'Sustainable development and the HIV epidemic in Africa', in Mutangadura, G; Jackson, H & Mukurazita, D, (eds) *AIDS and African Smallholder Agriculture*, Southern African AIDS Information Dissemination Service (SAFAIDS), Harare

Collins, J & Rau, W (2000) 'AIDS in the context of development', United Nations Research Institute for Social Development (UNRISD) Programme on Social Policy and Development, Paper No. 4, December.

Cousins, B (2001) "Not rural development, but agrarian reform": beyond the neo-liberal agenda', unpublished paper presented at the Department of Land Affairs Land Tenure Conference, Durban, November.

De Waal, A (2001) 'AIDS-related national crises: an agenda for governance, early warning and development partnership', Justice Africa: AIDS and Governance Issue Paper No. 1.

De Waal, A & Tumushabe, J (2003) "HIV/AIDS and food security in Africa", available at http://www.sarpn.org.za/documents/d0000235/P227_AIDS_Food_Security.pdf

De Waal, A and Whiteside, A (2003) "New Variant Famine": AIDS and Food Crisis in Southern Africa', *The Lancet*, forthcoming edition, see <http://www.thelancet.com/journal>

Donahue, J; Kabbucho, K & Osinde, S (2000) 'HIV/AIDS – Responding to a silent economic crisis among microfinance clients', unpublished report, MicroSave Africa

Drimie, S (2002a) 'The Impact of HIV/AIDS on Rural Households and Land Issues in Southern and Eastern Africa: A Background Paper prepared for the Southern African Regional Office of the Food and Agricultural Organization of the United Nations (FAO), August 2002

Drimie, S (2002b) 'The Impact of HIV/AIDS on Land: Case studies from Kenya, Lesotho and South Africa', Synthesis Report prepared for the Southern African Regional Office of the Food and Agricultural Organization of the United Nations (FAO), August 2002

Drinkwater, M (1993) 'The effects of HIV/AIDS on agricultural production systems in Zambia: a summary analysis of case studies conducted in the Mpongwe area, Ndola rural district and Teta area, Serenje district', August.

Dwasi, J (2002) 'Impacts of HIV/AIDS on natural resource management and conservation in Africa: case studies of Botswana, Kenya, Namibia, Tanzania and Zimbabwe', <http://www.frameweb.org/pdf/Natural%20Resource%20IRG21full.pdf>

Du Guerny, J (2001a) 'Agriculture and HIV/AIDS', paper prepared for EASE International, May

Du Guerny, J (2001b) 'The elderly, HIV/AIDS and sustainable rural development', unpublished paper presented at a seminar on "Aging and Rural Development", FAO.

Du Toit, A & Ziervogel, G (2004) 'Vulnerability and food insecurity: background concepts for informing the development of a national FIVIMS for South Africa', unpublished paper, Programme for Land and Agrarian Studies, University of the Western Cape and Climate Systems Analysis Group, University of Cape Town.

FAO (1995) 'The effect of HIV/AIDS on farming systems in eastern Africa', FAO publication, Rome.

FAO (1999) 'HIV/AIDS and agriculture: an FAO perspective', FAO Fact Sheet, Rome.

FAO (2000) 'AIDS – a threat to rural AFRICA', FAO Fact Sheet, December

FAO HIV/AIDS Programme (2002a) 'HIV/AIDS, food security and rural livelihoods', www.fao.org

FAO HIV/AIDS Programme (2002b) 'Measuring impacts of HIV/AIDS on rural livelihoods and food security', Information Division, FAO, Rome.

Foster, G; Shakespeare, R; Chinemana, F; Jackson, H; Gregson, S; Marange, C; and Mashumba, S (1998) 'Orphan prevalence and extended family care in a peri-urban community in Zimbabwe', *HIV/AIDS Care*, 7 (3): 3 – 17.

Gillespie, S (2003) 'HIV/AIDS and livelihoods', paper prepared for the UN RIACSO Technical Consultation on Measuring Vulnerability in the light of the HIV/AIDS pandemic, IFPRI.

Gillespie, S; Haddad, L & Jackson, R (2001) 'HIV/AIDS, food and nutrition security: impacts and actions', paper presented at a consultation on "HIV/AIDS and Rural Livelihoods", International Food Policy Research Institute, Washington.

Gillespie, S & Loevinsohn, M (2003) 'HIV/AIDS, food security and rural livelihoods: understanding and responding', RENEWAL Working Paper No. 2

Haddad, L & Gillespie, S (2001) 'Effective food and nutrition policy responses to HIV/AIDS: what we know and what we need to know', Food Consumption and Nutrition Division Discussion Paper No. 112, International Food Policy Research Institute, Washington.

Haslwimmer, M (2000) 'Is HIV/AIDS a threat to livestock production? The example of Rakai, Uganda', FAO Farm Management and Production Economic Service, FAO, Rome.

Human Sciences Research Council (2001a) 'HIV/AIDS in Southern Africa: A review paper for the W. K. Kelloggs Foundation', unpublished report by the Social Aspects of HIV/AIDS and Health Programme, HSRC, Pretoria.

Human Sciences Research Council (2001b) 'Social Aspects of HIV/AIDS Research Alliance', unpublished report of the Social Aspects of HIV/AIDS and Health Research Programme at the Human Sciences Research Council Consultative Meeting, 7 August, Pretoria

International Centre For Research on Women (ICRW) (1996) 'Vulnerability and opportunity: Adolescents and HIV/AIDS in the developing world', ICRW, Washington DC.

International Fund for Agricultural Development (IFAD) (2001) 'Strategy paper on HIV/AIDS for East and Southern Africa', working document.

Jackson, H (2002) 'AIDS Africa - continent in crisis', SAfAIDS, Harare, Zimbabwe.

Jayne, T; Villarreal, M; Pingali, P; & Hemrich, G (2004) "Interactions between the agricultural sector and the HIV/AIDS pandemic: implications for agricultural policy" ESA

Working Paper No. 04-06, Agricultural and Development Economics Division, FAO, March, see www.fao.org/es/esa (May, 2004)

Kienzle, J (2003) 'Labour Saving Technologies and Practices for Farming and Household Activities in Eastern and Southern Africa', Agricultural and Food Engineering Technologies Service, FAO, paper presented at "HIV/AIDS Mitigation Workshop", Pretoria, South Africa.

Lewis, J.D (2001) "Policies to promote growth and employment in South Africa", World Bank Discussion Paper, No. 16, The World Bank Southern Africa Department, Pretoria.

Loewenson, R & Whiteside, A (1997) 'Social and economic issues of HIV/AIDS in Southern Africa', report prepared for SAFAIDS, Harare, Occasional Paper Series, No. 2.

Loewenson, R and Whiteside, A (2001) 'HIV/AIDS: implications for poverty reduction', paper prepared for the UNDP for the UN General Assembly Special Session on HIV/AIDS, 25-27 June 2001.

Mbozi, P (1999) 'Coverage of HIV/AIDS vis-à-vis agriculture among the media of Zambia and strategies for sustainable media coverage', in Mutangadura, G; Jackson, H & Mukurazita, D, (eds) *AIDS and African Smallholder Agriculture*, Southern African AIDS Information Dissemination Service (SAFAIDS), Harare.

Mphale, M; Rwambali, E & Makoe, M (2002) 'HIV/AIDS and its impacts on land tenure and livelihoods in Lesotho', unpublished report for the FAO.

Mullins, D (2001) 'Land reform, poverty reduction and HIV/AIDS', paper presented at the Southern African Regional Poverty Network conference on "Land Reform and Poverty Alleviation in the Region", Pretoria, <http://www.sarpn.org.za>

Munyombwe, T; Pfukenyi, D & Ushewokunze-Abatolu, U (1999) 'HIV/AIDS in livestock production in the smallholder sector of Zimbabwe', in Mutangadura, G; Jackson, H & Mukurazita, D, (eds) *AIDS and African Smallholder Agriculture*, Southern African AIDS Information Dissemination Service (SAFAIDS), Harare.

Mutangadura, G; Jackson, H & Mukurazita, D (eds) (1999) *AIDS and African Smallholder Agriculture*, Southern African AIDS Information Dissemination Service (SAFAIDS), Harare.

National AIDS Commission (Malawi) (2003) '2003 Joint Annual Review', Social and Economic Impact and Mitigation Technical Working Group, UNAIDS Malawi.

Natural Resources Institute (2002) 'Facing the challenge: NGO experiences of mitigating the impacts of HIV/AIDS in sub-Saharan Africa', unpublished report, University of Greenwich, UK.

Ncube, NM (1999) 'The impact of HIV/AIDS on smallholder agricultural production in Gweru, Zimbabwe, and coping strategies', in Mutangadura, G; Jackson, H & Mukurazita, D, (eds) *AIDS and African Smallholder Agriculture*, Southern African AIDS Information Dissemination Service (SAFAIDS), Harare.

Ngwira, N; Bota, S & Loevinsohn, M (2001) 'HIV/AIDS, agriculture and food security in Malawi', Regional Network on HIV/AIDS, Rural Livelihoods and Food Security (RENEWAL) Working Paper 1.

Rugalema, G (1999a) 'Coping or struggling? A journey into the impact of HIV/AIDS on rural livelihood in Southern Africa', unpublished paper.

Rugalema, G (1999b) 'It is not only the loss of labour: HIV/AIDS, loss of household assets and household livelihood in Bukoba District, Tanzania', in Mutangadura, G; Jackson, H & Mukurazita, D, (eds) *AIDS and African Smallholder Agriculture*, Southern African AIDS Information Dissemination Service (SAFAIDS), Harare.

Rugalema, G (2002) 'HIV/AIDS and land issues: beyond proximate linkages', opening remarks prepared for the FAO/HSRC-SARPN Workshop on the "Impact of HIV/AIDS on Land Issues", Pretoria, 24-25 June 2002.

SADC (2003) 'Food security crisis update', SADC Secretariat, 16 January, <http://www.sadc.int/index>

SADC FANR Vulnerability Assessment Committee (2003) 'Towards identifying impacts of HIV/AIDS on food insecurity in southern Africa and implications for a response: findings from Malawi, Zambia and Zimbabwe', Harare, Zimbabwe.

Schubert, B (2003) 'Social Welfare Interventions for AIDS Affected Households in Zambia', unpublished consultancy report, Lusaka, Zambia.

Schriftenreihe des Seminars für Landliche Entwicklung (2000) 'Incorporating HIV/AIDS concerns into participatory rural extension: a multi-sectoral approach for Southern Province, Zambia', Centre of Advanced Training in Rural Development (CATAD), Humboldt University, Berlin.

Schriftenreihe des Seminars für Landliche Entwicklung (2001) 'HIV/AIDS prevention in the agricultural sector in Malawi', Centre of Advanced Training in Rural Development (CATAD), Humboldt University, Berlin.

Sen, A (1981) 'Poverty and famines: an essay on entitlement and deprivation', Oxford, Clarendon Press.

Shah, M; Osborne, N; Mbilizi, T & Vilili, G (2002) 'Impact of HIV/AIDS on agricultural productivity and rural livelihoods in the central region of Malawi', CARE International in Malawi, January.

Topouzis, D (1999) 'The implications of HIV/AIDS for household food security in Africa', paper presented at ECA/FSSDD workshop, Addis Ababa, 11-13 October.

Topouzis, D & du Guerny, J (1999) *Sustainable Agriculture: Rural Development and Vulnerability to the AIDS Epidemic* UNAIDS Best Practice Collection, UNAIDS and FAO, Geneva

UNAIDS (2002) AIDS Epidemic Update, December 2002, Joint United Nations Programme on HIV/AIDS (UNAIDS) and the World Health Organization, Geneva, Switzerland.

UNICEF (1999) 'Children orphaned by AIDS. Front-line responses from Eastern and southern Africa', UNICEF, New York, December.

Walker, C (2002) 'Ensuring women's land access', moderators comments, Regional Workshop on Land Issues in Africa and the Middle East, Kampala, Uganda, April 29 – May 2, 2002.

Williams, B; Gouws, E; Lurie, M & Crush, J (2002) 'Spaces of vulnerability: Migration and HIV/AIDS in South Africa', Southern African Migration Project, Migration Policy Series No. 24, IDASA, Cape Town.

Wiggins, S (2003) 'Lessons from the current food crisis in southern Africa', paper presented at the Regional Dialogue on Agricultural Recovery and Trade Policies and Strategies for Southern Africa, organised by CTA & FANRPAN, Gaborone, Botswana, 25–27 March 2003.

Appendix One: Agricultural Technologies - Farming support and farming technologies

Options	Effect on labour / energy	Targets	Impact on livelihoods	Barriers	Miscellaneous
<i>Conservation Agriculture – hand hoe farmers (very poor)</i>					
Basin Planting (Siayavonga, Zambia).	The basins (potholes to retain water) are used as a water harvesting device; they are made by hand hoe during the dry season before the rains start; this way the labour is spread and shifted to a time where labour is available. Making the potholes takes a similar time for preparing a field for maize. Compost, trash or fertilizer is incorporated.	The poorest households are the ones who do not have access to draught animal power (DAP) for land preparation, hence they are the target group for the basin system.	More drought resistance due to the water harvesting effect of the basins; hence – higher and more stable yields.	Small farmers and vulnerable household members need strong incentive to make the basins if they have not been exposed to the basin system before.	Should not be 'labelled' as system for the poorest households because of resistance from households "labelled". The basins can be made in portions each year; existing basins can be 'maintained' with little labour requirement.
Pit farming (GTZ, Southern Province, Zambia).	Conserves water, labour (through minimal cultivation and weeding), and reduces the risk of soil erosion through minimal disturbance of surface vegetation.	Male and female farmers, small-plot agriculturalists.	Round holes filled with organic material can be used for 4-5 years before refilling required. Intercropping with legumes as well as fruit trees.	Initial labour required. For households affected by HIV/AIDS, pooling of village labour, including available youth, is practiced to meet labour needs in initial outlay. Extension across Zambia.	Spreading through farmer-to-farmer extension. Though very labour intensive for initial layout and digging, pit farming saves considerably on labour in subsequent planting seasons.
Soil cover – using crop residues (Karatu, Tanzania).	Soil cover and crop residues which are left on the field suppress weeds – reduce labour demand for weeding.	The poorest households sometimes use this approach as a 'coping mechanism'.	Increases water retention capacity of soils and maintains soil moisture, hence helps to improve yields in dry years.	Conflicts with free ranging livestock is a probability. Conflicts with standard extension messages of maintaining a clean seedbed (land preparation) and a clean field during cropping cycle (weeding throughout).	Community leaders should be involved in acknowledging and accepting this way of farming. In garden farming soil cover reduces requirement for watering (irrigation).
Soil cover – Using <i>dolicos lab lab</i> and <i>mucuna</i> as cover crops (Karatu, Tanzania).	It requires an additional activity to intercrop the cover vegetation (crop) but results in big labour savings by almost eliminating weeding; the cover crops are leguminous	Cover crops have been very attractive to vulnerable households; need technical assistance and training plus assistance in getting	The legumes do fix nitrogen from air in the soils, hence natural fertilization <i>Dolicos lab lab</i> is a cash crop as middle	Conflicts with free grazing livestock but cover crops do produce fodder. Availability of cover crops seeds. Change of perception of	South to South cooperation is encouraged as this system of incorporating various cover crops has been developed by farmers in Brazil.

Options	Effect on labour / energy	Targets	Impact on livelihoods	Barriers	Miscellaneous
	crops that fix nitrogen, hence natural fertilisation of soil and improving soil fertility happens without additional labour input.	access to crops in the beginning.	men from Kenya are buying the bean harvest.	'dirty fields'.	
Light weight hand hoes for planting.	Lighter hoes are less energy demanding.	Hand hoes are available but specific lighter hand hoes are sometimes rare.			Light hoes should be part of emergency interventions together with the standard heavy hoe.
Hand Jab Planter (hand tool to plant into soil cover) – is widely in use in Brazil and Paraguay.	Reduces labour / energy demand after a period of learning how to best use it. Requires only one person for planting instead of three (digging hole, planting, closing hoe).	A hand labour tool like the hand hoe is suitable for small farmers. Can be used by women and older children.	Can be produced locally. Is an investment opportunity for local making plus for specializing in being hand jab planter service provider.	Cost is approx \$ 10 is currently made in CARMATEC / Arusha or imported from Brazil. Repair and maintenance cultural acceptance?	South to South cooperation and technology transfer is encouraged.
Forage chopper (labour saving technology introduced by MAIAF, Uganda. See http://www.fao.org/sd/ip/)	The project aimed at promoting promising farm power, crop processing and household energy-based technologies with a strong gender perspective. Improved fixed knife forage choppers found to be ergonomically safe, less cumbersome with reduced forage chopping and controlled length of chop.	Attractive to affected households – reduces labour time, suitable for small farmers. Women in particular.	Addressed constraints encountered by farmers in forage chopping by hand machetes. They reduced the risks posed by machetes to the users, fodder spoilage, low labour productivity and feed-use efficiency.	Uptake, dissemination and adoption have not been well understood. Despite the advantages the use of the improved fixed knife forage choppers, many farmers (87%) had not yet adopted them due to financial limitations, lack of awareness on the possible sources and advantages of the technology as well as the false beliefs and opinions about difficulties encountered in maintenance of the choppers.	Data on available chopping methods indicated that 88% of male headed and 79% of female headed households used machetes, 10% of male headed households and 18% of female headed farm families utilised fixed knife choppers and only 3% of both male and female headed households had adopted manual crank wheel choppers
Treadle pump - water conveyance (labour saving technology introduced by MAIAF, Uganda. See	The project aimed at promoting promising farm power, crop processing and household energy-based technologies with a strong	Children played the largest role in water collection. Saved labour for girls,	Reduced time/labour constraints - Head portage at 43% (bicycle at 34% and a	Uptake, dissemination and adoption have not been well understood. In addition, knowledge about the	

Options	Effect on labour / energy	Targets	Impact on livelihoods	Barriers	Miscellaneous
http://www.fao.org/sc/tp/	gender perspective. Treadle pump has the capacity to draw water and raise it to sufficient levels and convey it for household use.	boys, women and men.	combination of head portage and bicycles at 13%) was the major method of collecting water from sources located about a mile away. Improved livestock productivity.	appropriateness, relevance and effectiveness of such technologies has hitherto been lacking. Farmers had not largely adopted this technology because its applicability was not consistent with the existing terrain.	
Treadle pump – water conveyance (introduced by Oxfam-GB in Mulanje District, Malawi)	Modified treadle pumps reduced time spent on irrigating one field – before modification it took 6 hours to finish an average sized field. After modification it took between 3–4 hours.	Groups of farmers with access to wetland/dambo land. Vulnerable households benefited through community sharing.		Technical support not available for households which had never used the pumps. The pumps were dismantled when delivered without help provided in installing them. Community education/sensitisation of new technology not adequate.	
<i>Conservation Agriculture - Introduce draught animals and DAP technologies to reduce hand labour</i>					
Ripper (another type of tool, is a substitute for the plough) (Babati / Tanzania).	Done before onset of rains (spreading labour similar to basin system) with 2 animals, cuts furrow rather than soil inversion, faster than ploughing.	Poorest households don't have access to draught animals but it might be easier for them to find one or two rather than four oxen. See above. Only available in selected pilot sites e.g. Karatu.	Is available locally as it is adjusted from the mouldboard plough.	Difficult to use when too much soil cover and crop residues are on the field Training of oxen required.	Also available with planter attachment to combine ripping and planting.
Knife roller to chop the cover crop for land preparation – eliminates slashing by panga (Karatu/Tanzania)	Only one or two animals required.	See above.	Time savings allows people to work for others.	Accessibility of fodder availability, vet care.	Can be made locally currently only available in pilot sites.
No-tillage direct planter (Karatu / Tanzania) FAO	Planting through soil cover, eliminates land preparation; two animals instead of four.	See above.	Time saving allows farmer to diversify or work for others.	Not available locally, Expensive.	South to south transfer and communication required (Brazil, Paraguay – Africa).

Options	Effect on labour / energy	Targets	Impact on livelihoods	Barriers	Miscellaneous
<i>Livestock</i>					
Restocking of small animals such as rabbits and guinea fowl.	Diversifying livelihoods - AIDS-affected can cultivate less.	Most vulnerable - need quick return, Especially for orphans, elderly headed households.	Income generating activities, food source, can act like a savings account to mitigate risks.	Care of animals, this increases with the size of the animal.	Options for types of animals e.g. rabbits, guinea fowl; chicken, goats.
Donkeys.	Use for transportation of goods and people, water harvesting, firewood, marketing.	Specifically targeted to women farmers as donkeys have relatively low status.			Are not slaughtered for funerals; are normally not eaten Cows / oxen.
<i>Using Less Labour intensive crops</i>					
Cassava Cuttings distribution (Oxfam / Malawi).	Cassava is a root crop, can be harvested as required for food.	Normally considered a women's crop. Food crop.			
Crops - millet.	Weeding of millet is labour intensive.	Protein rich plant, very nutritious.	Sold to make beer as income generating activity.		
Traditionally under utilized crops that are labour saving (Uganda, Theta NGO)	Those crops should be made available if they have labour saving features; should be included in seed banks and see fairs.	Local indigenous farmers may use locally known seed sources.		Must be adapted to local conditions and climates.	
<i>Fishing</i>					
Project to provide start up cost for households to purchase fish that they then dry and sell (and buy more fish to sell...).	Attractive to households with minimal labour eg. old women plus orphan headed households.	Grand parent and orphan households.	Source of income.	Competition to buy fresh fish (context specific).	Any intervention with fishing communities should have a specific programme on HIV/AIDS prevention and mitigation as fishing communities have high HIV prevalence rates.

Source: Adapted from Working Group on Agricultural Technologies at "Mitigation Workshop", Pretoria, South Africa, 27 - 29 May 2003. See in particular Kienzie, J (2003) 'Labour Saving Technologies and Practices for Farming and Household Activities in Eastern and Southern Africa', Agricultural and Food Engineering Technologies Service, FAO, paper presented at "HIV/AIDS Mitigation Workshop", Pretoria, South Africa.