

# Learning to Live Positively: a key development tool for promoting “treatment preparedness” amongst HIV/AIDS-affected rural communities in Africa

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**Abstract:** Community learning processes are crucial to increasing resilience to HIV/AIDS in Africa’s remote rural areas: This paper describes our experiences of using the “How to Live Positively” discovery-learning process to empower rural communities in Benin, Malawi, Nigeria and Zimbabwe to reduce their vulnerability to HIV/AIDS, improve household nutrition and clean up their environment to reduce opportunistic infections. This process also promotes “treatment preparedness” amongst resource-poor farmers and should, therefore, be implemented alongside national and international programmes to roll out anti-retroviral drugs across Africa.

## *The extent of the AIDS problem in Africa*

According to UNAIDS (2005) the HIV/AIDS epidemic killed more than 2.4 million people in sub-Saharan Africa last year, while an estimated 3.2 million more people acquired HIV during this time. This means that there are currently 25.8 million Africans, 57% of them women, who are living with HIV/AIDS. Most of these people live in remote rural areas and depend on subsistence agriculture for their survival. Extreme poverty is driving the HIV/AIDS pandemic: the poverty that forces men to leave their wives for many months at a time in order to find work and the destitution that forces women and girls to indulge in “survival sex” (De Waal and Whiteside, 2003). The deaths of so many men and women is thus plunging whole communities into destitution as their labour capacity weakens, incomes dwindle and assets are depleted (FAO, 2003)

Lucy Wyson is caring for nine children, including six orphans – three from her late brother and three from her late sister. Back in her home village she had just 1.5 acres, which was insufficient to maintain food security for 10 people. She left the four oldest children to farm the land and came to Lake Chilwa with the other five in order to make money to buy food. She buys maize flour to fry donuts for sale and buys and sells fish. She admitted that some of her friends resort to prostitution with the fishermen in order to survive. However, Lucy claimed to be “abstaining” because she feared AIDS.  
S L J Page, 2002.

Jesse Ndafera emerged slowly from her tumble-down shack, dressed in a dirty, torn frock, looking extremely thin, frail and depressed. She appeared to be suffering from full-blown AIDS. She told us that she is 28 years old and is taking care of her late sister’s children who are aged 4 and 5 years. She is now too weak to do anything for herself and is relying on her disabled uncle who lives close by to provide food for all three of them, while the oldest child is responsible for fetching the water from the river. She told us that neither she nor the children had eaten anything for the past two days.  
SLJ Page, 2002.

Whereas much attention has been focussed on prevention of infection in young people and home-based care for patients with full-blown AIDS, little has been done in Africa to address the needs of millions of apparently healthy people who are still in the early stages of the disease. This is despite the fact that life expectancy for people living with HIV in Africa is comparatively short as a result of chronic malnutrition and ignorance of the underlying causes of opportunistic infections. African women are particularly vulnerable due to their continued subjugation at both family and societal levels. The premature deaths of these women are having terrible consequences on young children who are being orphaned prematurely. Such orphans are

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severely traumatised and, without guidance from a caring adult, are likely to grow up displaying anti-social behaviour, which will increase their vulnerability to HIV/AIDS (Page, 2001). Women are also the guardians of household food security and with their passing go thousands of years' worth of inherited knowledge on the production of food crops in Africa's diverse and hostile environment.

Almost everyone in sub-Saharan Africa is now either affected by or infected with HIV/AIDS:

- People are *affected* by HIV/AIDS either directly or indirectly. This could be because of the need to share household resources with orphans or someone who is dying of AIDS, or by being part of a community that is severely impacted by the pandemic.
- *Infected* people are HIV positive and in the early stages of the disease can pass it on unwittingly unless they have access to voluntary counselling and testing. These people are susceptible to opportunistic infections and will quickly develop full-blown AIDS, in the absence of basic health care, a balanced diet and emotional support. This situation puts a great strain on the household and their contribution to the well-being of the community (Gari, 2001)

19-year-old Louis Gobede is the oldest of 6 orphans. His father passed away when he was 8 and his mother died three years later. Since then his grandmother had been caring for all the children and had even paid for Louis to attend secondary school through the sale of goats. Last month their grandmother died, leaving the family without food. The children now have to labour to buy food as most of their land has been grabbed by neighbours.

SLJ Page 2002.

Forty-three year old Alieta Daveson was widowed seven years ago. She admitted that her husband had probably died of AIDS - he was sent home from the South African mines when he was sick and she nursed him for his last three months. Mrs Daveson was bitter about the lack of openness by local hospital staff. She said that they should tell people the truth - "we have a right to know, so that we can take care of ourselves".

S.L.J. Page. 2002.

In the absence of a national welfare system, the impacts of HIV/AIDS become progressively severe in terms of increasing poverty and labour constraints, as time goes by. These impacts can be described as "moderate", where affected households are barely able to cope with caring for orphans or a sick relative, to "severe" where a single adult is taking responsibility for the orphans or sick relative and "very severe", where the carers are becoming sick and the surviving children begin fending for themselves (see Table 1). In Africa's rural areas, households that are severely impacted by HIV/AIDS suffer from food insecurity and extreme poverty, together with the stress associated with these conditions. Such households are no longer able to be self-reliant due to fatigue, reduced access to land, declining soil fertility, erosion

of indigenous knowledge, lack of appropriate seed and an inability to generate income. Systems of good agricultural practise must be developed to address all these problems at no cost and without increasing the demand for labour.

**Table 1: Impacts of HIV/AIDS on African households in terms of increasing poverty and labour constraints, in the absence of a national social welfare system**

|             |  |
|-------------|--|
| Moderate    | Two adults caring for orphans                            |
|             | Two adults nursing a sick relative                       |
| Severe      | Widow caring for orphans                                 |
|             | One adult nursing a sick relative                        |
|             | Grandmother caring for orphans                           |
| Very severe | Main bread-winner suffering from AIDS-related infections |
|             | HIV+ widow caring for orphans                            |
|             | HIV+ wife nursing her sick husband/relative              |
|             | Children nursing a sick parent/relative                  |
|             | Orphans fending for themselves                           |

***The need for participatory learning to fight the AIDS pandemic***



Mrs Mudzipurwa is a widow and a smallholder farmer. She succumbed to full-blown AIDS after drought and crop failure forced her to take part in road-building in a “Food for Work” programme. She is now being cared for by friends and neighbours, who bring food and provide emotional and spiritual support. None of these women have been tested for HIV but all say that they live under the assumption that they are HIV positive. Such women need more information on how to increase their life expectancy by reducing their vulnerability to HIV and AIDS, farming for improved nutrition and reducing the sources of opportunistic infection within their environment.  
S L J Page 2001

Most Africans who are vulnerable to HIV/AIDS are lacking in formal education and have limited access to hospitals and clinics. UNAIDS/WHO (2005) is concerned that knowledge about HIV transmission routes is still low in much of sub-Saharan Africa. Generally, women are less well-informed about HIV than are men; this is also true of rural areas compared with those living in cities and towns. This is the case even in the ten countries where more than one out of ten adults is infected. In 24 sub-Saharan countries (including Cameroon, Côte d’Ivoire, Kenya, Nigeria, Senegal and Uganda), two thirds or more of young women (aged 15–24 years) lacked comprehensive knowledge of HIV transmission (various surveys, 2000–2004). Data from 35 of the 48 countries in sub-Saharan Africa show that, on average, young men were 20% more likely to have correct knowledge of HIV than young women. Loevinsohn and Gillespie (2003) argue that promoting AIDS awareness needs much more than simple messages because the situations

of HIV/AIDS risk are widespread, shaped by diverse and locally specific factors and influenced by many persons' actions. There is need therefore, to develop a broad-based learning of all these factors amongst rural Africans. They stress that learning processes that help people understand their risks should be central to the struggle against AIDS.

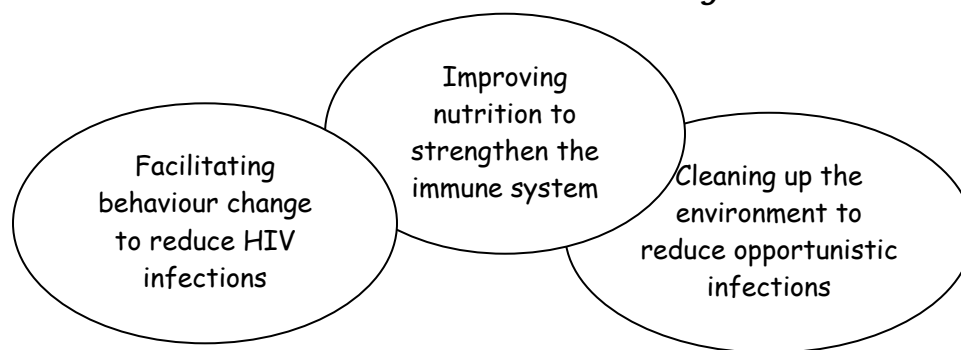
Examples of effective learning processes for people in HIV/AIDS-affected areas are *Farmers' Life Schools* (FLS) in Asia and *Stepping Stones*, which has been primarily used in Africa. FLS is an extension of the successful Farmer Field Schools programme that has been widely promoted by FAO, to reduce the use of hazardous pesticides, throughout the developing world. The core process within FLS is the linking of ecology, group organisation and student centred learning applied through what is termed, 'Human Ecosystem Analysis' (HESA). The HESA involves groups of farmers investigating various threats to their lives, in the same way that pests are looked at in their fields. The farmers quickly see the inter-relations and that success in one area can have impacts on another (Vuthang, 2002). *Stepping Stones* is a participatory process that enables people from both rural and urban areas to explore their personal relationships and identify the sources of risk they confront and how to reduce or avoid them (Welbourn, 1998).

### ***The How to Live Positively training process***

The *How to Live Positively* (HTLP) training is a holistic process that was developed with the help of farmers, NGO workers and extensionists in Malawi and Zimbabwe to focus on the specific needs of resource-poor, smallholder farmers and aims to provide scientific explanations of the links between diet, the environment and immunity to disease. It involves a series of inter-active discussions and discovery-learning exercises, which encourage participants to take responsibility for the improved health of themselves and other family members, leading to increased longevity for all those who are living with HIV<sup>4</sup>. The provision of "food for learning" in the form of a nutritious lunch for the participants and their dependents will ensure that the poorest people can attend the training sessions.

The participatory exercises focus on three main areas of self-help: reducing vulnerability to HIV through behaviour change, improving nutrition to strengthen the immune system and cleaning up the environment to prevent disease. A minimum of two days is spent on each main topic and at the end of the training the community are encouraged to draw up action plans containing activities that will implement the 3 pillars of *positive living* within their village, see Fig 1.

**Figure 1.**  
**The 3 Pillars of *Positive Living***



<sup>4</sup> The *How to Live Positively* training manual is available free of charge, in English, French or Portuguese, from CTA: [www.cta.int](http://www.cta.int) or via the authors.

The community action plans could include support groups for women and young people, nutrition gardens for orphans, nutrition orchards for invalids and the elderly, improved maize or rice technologies and cash cropping systems, as well as building improved latrines and protecting water sources. Links can be made with local and international organisations that supply Voluntary Counselling and Testing (VCT), anti-retroviral drugs (ARVs), condoms, bed-nets, nutrient supplements and food aid, through in-country national programmes. Local NGOs and government agencies will then be called upon to provide the necessary follow-up support to enable the communities to implement their action plans in full.

The success of this training depends on the selection of effective PL facilitators who are trusted by farmers and can motivate impoverished communities. PL facilitators can be extension or health workers, IPM facilitators, NGO workers, faith leaders, community leaders or inspired farmers. They should be culturally sensitive and aware of their HIV/AIDS status. Additional PL facilitators can be selected and trained from within the empowered communities to enable a “cascading” number of community training sessions to be conducted. Ideally the training should consist of a series of three, 2-day workshops; the timetable for these workshops is set out in Table 3.

**Table 3:  
Suggested timetable for implementing “How to Live Positively”**

|           |  |
|-----------|--|
| DAY ONE   | REDUCING VULNERABILITY TO HIV                        |
|           | Looking at vulnerability to HIV                      |
|           | Looking at ways of reducing vulnerability to HIV     |
|           | Lunch  |
|           | Taking responsibility                                |
|           |  |
| DAY TWO   | ACTION PLANNING TO REDUCE VULNERABILITY TO HIV       |
|           | Reducing vulnerability to HIV within the family      |
|           | Lunch  |
|           | Reducing vulnerability to HIV within the community   |
|           |  |
| DAY THREE | PROMOTING GOOD HEALTH                                |
|           | What makes us healthy? Eating nutritious food        |
|           | Lunch  |
|           | Eating the right food for Positive Living            |
|           |  |
| DAY FOUR  | ACTION PLANNING TO PROMOTE GOOD HEALTH               |
|           | Calculating family nutrient requirements             |
|           | Lunch  |
|           | Crop planning  |
|           |  |
| DAY FIVE  | PREVENTING DISEASE                                   |
|           | Types of diseases                                    |
|           | Lunch  |
|           | Improving our natural defence to infectious diseases |
|           |  |
| DAY SIX   | ACTION PLANNING TO PREVENT DISEASES                  |
|           | Cleaning up the environment                          |
|           | Lunch  |
|           | Planning the way forward                             |

## ***Using the HTLP learning process to promote “treatment preparedness”***

“Treatment preparedness” describes the condition in which HIV positive people have been able to modify their behaviour to reduce the risk of re-infection with sexually-transmitted infections (STIs), gain access to adequate food and nutrition and minimise the risk of opportunistic infections. “Treatment preparedness” allows patients to benefit fully from treatment with ARVs. The WHO strategy to treat more than 3 million people living with HIV/AIDS in poor countries with these drugs depends on strengthening community safety-nets and stimulating demand through community mobilisation in Africa’s remote rural areas (WHO, FANR SADC, 2003). The HTLP training is fully supportive of the “treatment preparedness” condition, not only in individuals but amongst whole communities, thereby strengthening their function as safety nets for the most vulnerable people within their midst. This means that this training will be highly effective when it is conducted in conjunction with national AIDS programmes to roll out ARVs into the rural areas.

To date, only limited funding has been available to implement the HTLP training programme amongst farmers in Benin, Malawi, Nigeria and Zimbabwe, however much valuable information has been gained from this experience and this is reported on below:

## ***Putting the HTLP discovery-learning process into practise***

### **1. PILLAR ONE: Reducing vulnerability to HIV/AIDS within the community**

The HTLP training process begins by giving separate groups of sexually active, married women and men and young, unmarried women and men the opportunity to look at the underlying causes of their vulnerability to HIV. After discussing these underlying causes the same groups are encouraged to suggest ways of reducing their vulnerability. This exercise is particularly valuable to woman, both married and unmarried, when they are forced to confront the reality that their ability to reduce vulnerability depends on being able to negotiate rights from fathers, boyfriends and husbands. Malawian women appreciated that they felt “powerless” within the confines of their society and went on to examine the root causes and effects of this



*Women's and men's discussion groups in Benin*

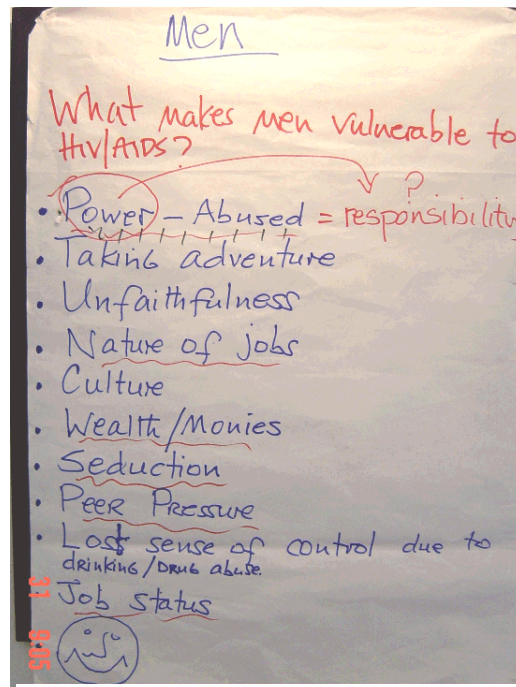
“powerlessness”, by drawing the problem tree shown in the photo below. They identified culture, religious conservatism, poverty and lack of education as the root causes of their powerlessness and low self esteem, continuing poverty and lack of human rights as some of the effects. Married men in both Bwanje Valley, Malawi and Benue State, Nigeria have admitted that it is their comparative wealth and abuse of power in terms of their sexual relations with wives and girlfriends, that often make them vulnerable to HIV, see photo below. Workers have reported similar admissions by men in Benin.

In the general discussion that follows these sessions, one of the participants usually questions the role of the “head of household” in reducing his families’ vulnerability to HIV. The facilitator will then focus on this issue by asking each participant to write down on A5 cards the list of

responsibilities that she or he attributes to the head of household<sup>5</sup>. Once the cards are displayed on a nearby wall, participants can discuss the extent to which they agree or disagree with the key roles and responsibilities that have been listed.



Malawian women analysed the causes and effects of their "powerlessness"



Malawian men looked at the causes of their vulnerability to HIV

The training manual also contains cartoons depicting everyday social situations, which expose men and women to the risk of contracting HIV: unfaithfulness, job interviews, negotiating condom use and the dilemma faced when a sister-in-law is widowed. These cartoons provide starting points for discussion of sensitive cultural issues. Facilitators in Benin have converted these cartoons into role-playing exercises in order to have a more dramatic impact. The *Positive Living* facilitators in Benin also included sessions on HESA in their training programme in order to explore the impacts of livelihoods on vulnerability.



Villagers discussing their role-playing exercises

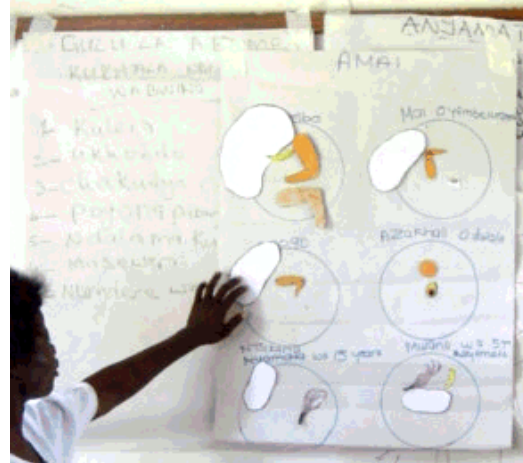
In Benin, a total of 311 men and women from 11 villages have been involved in the HTLP training. So far 276 individuals have reported behaviour change in their partners, within 8 to 24 months after the initial training. These behaviour changes have had a positive impact on the vulnerability of the whole community. For example, it was reported that sex-workers used to travel from neighbouring towns, and even from Togo, across the border, to visit the villages during the cotton and sugar cane harvests, to take advantage of the farmers' increased wealth at that time. Since the training intervention these workers have reported that they have had to move to other villages because

<sup>5</sup>. In Africa the head of household is normally the father/husband/uncle/elder brother in each household.

business has declined. One woman exclaimed, "Since my husband participated in the training, he spends more time at home with me and the children". Anecdotal evidence provided by a local community nurse suggests that there has been a decline in teenage pregnancies in the two years since the training. This has been put down to parental pressure as a result of their improved knowledge. The cultural practise of "levirate" or marriage between a widow and her brother-in-law is also said to have declined.

## 2. PILLAR TWO: Improving food and nutrition security to build immunity

HIV/AIDS and nutrition are intimately linked: Poor nutrition can damage the immune system and contribute to the acceleration of full-blown AIDS, while AIDS itself may lead to malnutrition (FAO, 2003). According to Piwoz and Preble (2000) maternal malnutrition increases the risk of mother-to-child transmission. They also state that HIV positive people require 50% more protein and 15% more calories in order to remain healthy. In addition, these people need between 2 and 5 times as much of key vitamins and minerals, particularly antioxidants such as vitamins E, C, beta-carotene and selenium to strengthen immunity. Furthermore, supplementation with zinc may be required for communities that are farming soils that are deficient in this mineral. Gari (2001) stresses the importance of home gardens in the provision of nutrition as well as a source of income for HIV/AIDS-affected households.



Exercise 7: How do we share our food?

The *Positive Living* approach to solving the problem of malnutrition begins with a group discussion on what is needed for good health in terms of fresh air, clean water, exercise, emotional support and good food. This is followed by an exercise to find out how food is normally shared within the household. Invariably the women, who are responsible for preparing the food, discover that they have been giving the lion's share of the most nutritious food to their husbands and sons, at the expense of themselves, the sick and the elderly. This usually prompts lively debate between husbands and wives, with the husbands protesting that they never ask for the lion's share, while the wives explain that men and boys are brought up to expect the biggest and best portions. This exercise promotes awareness of the cultural constraints on women and the need for men to ensure that nutritious food is shared more equally amongst all members of the household, particularly those who are sick. The manual contains information on the nutrient content of common African food stuffs and the nutrient requirements for men, women (including women who are pregnant or lactating) adolescent and young children as well as people who are HIV positive. For the next exercise each participant uses coloured crayons to draw what she/he ate for the main meal the day before on a paper plate. The illustrated plates are displayed on the wall and the farmers use the food nutrient content tables to determine who amongst them ate the most nutritious meals. This has been found to be an extremely

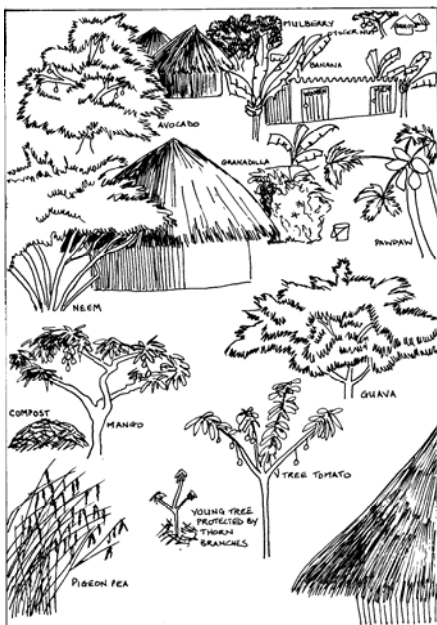


Diagram of a nutrition orchard

effective way of raising awareness of the importance of diet in the maintenance of good health and the vital role that farmers play as local food producers. In Benin, households reported sharing meat more equally and increasing their consumption of fruit following the training. One woman said, "After the training, my husband insists on giving the best parts of the meat to the children".

The ability to plan crops to ensure household food security in terms of the daily calorific requirements per household is learned firstly by determining the amount of grain required to meet these needs on a daily and then on an annual basis for each family member, based on their age, gender and HIV status<sup>6</sup> and then working out the area of land that must be planted to achieve this intake, see Table 2. In countries that do not have an established marketing system, where farmers are unfamiliar with the idea of weighing their produce, volumetric measurements should be used.

**Table 2: Minimum annual grain requirement for a 6-person household**

| Person                | Minimum no. of calories needed per day | Grain weight needed per year (kg) | Minimum no. of 50kg bags of grain per year |
|-----------------------|--|-----------------------------------|--|
| Father                | 2,500                                  | 250                               | 5  |
| Mother (pregnant)     | 2,500                                  | 250                               | 5  |
| Auntie (HIV+)         | 2,300                                  | 230                               | 4.6  |
| Grandmother           | 2,000                                  | 200                               | 4  |
| Daughter (15 yrs)     | 2,000                                  | 200                               | 4  |
| Son (5 years)         | 1,500                                  | 150                               | 3  |
| <b>Total required</b> | <b>12,800</b>                          | <b>1,280</b>                      | <b>25.6</b>                                |

In order to meet the nutrient needs of HIV positive people in terms of their increased requirements for energy/protein dense and vitamin rich foods, indigenous crops such as avocado pears, baobab fruits, bambara beans, guava, pumpkin leaves and finger millet are recommended. Participants are also encouraged to establish nutrition gardens and labour-saving nutrition orchards, with an emphasis on trees that begin bearing fruits within 1-2 years (see Table 3) together with



*Mr & Mrs Sibanda cultivating their dambo garden to feed orphans*

low labour-demanding, small-scale livestock, such as rabbits and pigeons. In Zimbabwe, AFFOResT's *Positive Living* facilitators have worked with farmers to develop an "optimum household food and nutrition system" based on maize, sorghum or millet as the main food staple. Increasing crop diversity is integral to this system: A wide range of traditional and exotic vegetables are used to this end, with an emphasis on traditional varieties as they are bitter, rather than sweet, and suit local tastes. Spreading intercrops, such as sweet

<sup>6</sup>2,500 calories per day or 91kg of maize grain per year for an adult; 2,000 calories per day or 73kg of maize per year for an adolescent; 1,500 calories per day or 55kg of maize per year for a child. Those who are HIV+ require 15% more calories/day, grain/year.

potatoes, pumpkin and cowpea not only provide improved nutrition but also conserve moisture and smother weeds, thereby reducing labour requirements. By including indigenous crops, such as pigeon pea, *nyevhe* and mustard, which have white or yellow flowers, when allowed to run to seed, natural enemies are attracted into the field. Fragrant herbs and spices, including garlic and chilli repel insects and provide the ingredients for botanical sprays, thus eliminating the need for chemical pesticides. Farmers are advised to produce food crops without the use of pesticides, due to the negative effect of organophosphates on the maintenance of T-cells within the human immune system (Repetto and Baliga, 1996).

Fourteen year-old Elembia's father died six years ago, since then he and his four brothers and sisters have been brought up by their mother and grandmother. Both women are active in the community project: They have planted a wood-lot and several fruit trees, including papaya, orange, banana and *masau*. Elembia's mother also keeps chickens, ducks and guinea fowl. She gets seed from the project in return for making compost out of kitchen waste, *Casuarina* leaves, chicken manure and ash. By putting two handfuls of this compost into each planting hole she can raise her maize yield from 200 to 400 kg per acre. Cassava, pigeon pea and groundnut will also be included in her 2.5 acre plot.

S LJ Page, 2002

Despite these low input, high nutrient, output strategies some HIV positive people may still need to include dietary supplements to ensure adequate amounts of vitamin C, selenium and zinc. Communities are advised to consider this issue during their action planning. For example, a community in Malawi decided to use proceeds from their maize milling enterprise in order to purchase food supplements for the most vulnerable people within their community (Page, 2003).

**Table 3: Tree Crops for Positive Living**

| Tree/vine                 |                               | Important nutrient | No. of years to first fruits |
|---------------------------|-------------------------------|--------------------|------------------------------|
| English name              | Latin name                    |                    |                              |
| Banana                    | <i>Musa spp.</i>              | Vitamin B          | 1                            |
| Mulberry                  | <i>Morus nigra</i>            | Vitamin C          | 1                            |
| Oyster nut/fluted pumpkin | <i>Telfairia occidentalis</i> | Protein            | 1                            |
| Paw-paw                   | <i>Carica papaya</i>          | Vitamin A          | 1                            |
| Pigeon pea                | <i>Cajanus cajan</i>          | Protein, iron      | 1                            |
| Granadilla/Passion fruit  | <i>Passiflora edulis</i>      | Vitamin C          | 1 - 2                        |
| Tree tomato               | <i>Cymphomandra betacea</i>   | Vitamin C          | 2                            |
| West Indian cherry        | <i>Malpighia biflora</i>      | Vitamin C          | 2                            |
| Guava                     | <i>Psidium guajava</i>        | Vitamin C          | 2 - 3                        |
| Citrus                    | <i>Citrus spp.</i>            | Vitamin C          | 4 - 6                        |
| Mango                     | <i>Mangifera indica</i>       | Vitamin A          | 5 - 7                        |
| Avocado                   | <i>Persea americana</i>       | Vitamin A, oil     | 7 - 10                       |

### 3. PILLAR THREE: Cleaning up the environment to reduce opportunistic infections

The majority of Africa's resource-poor farmers live in remote rural areas, far away from clinics and hospitals. These people survive in smoky huts, in disease-ridden villages, without clean water or sanitation and with the ever present threat of food shortages. Every African child must develop a strong immune system if she is to survive into adulthood, despite the many endemic diseases to which she is continuously exposed. It is unsurprising therefore that immunosuppressed HIV positive people who live in such conditions quickly succumb to full-blown AIDS.

This means that cleaning up the environment is crucial to preventing the spread of opportunistic infections and thus, slowing down the progression to AIDS.

The HTLP training process looks at the three main causes of disease in Africa, that is, those due to nutrient deficiencies, those due to physiological disorders and those due to micro-organisms. For rural people to understand that the underlying causes of infectious diseases are due to the spread of micro-organisms rather than witch-craft, they must be convinced of the existence of these "invisible" creatures. This is done through the use of entertaining exercises, which look at how flour particles (masquerading as microbes) are transferred during hand-shaking and the activities of mosquito larvae in stagnant water. Quizzes and games are also used to expose situations, habits and life-styles that contribute to poor health.

In order to raise awareness and encourage positive peer pressure from the more educated members of the community, participants are encouraged to conduct a health survey within their village. For example, a survey of a typical village in Benin found the following:

- 1 case of alcohol dependence
- 3 cases of cigarette dependence
- Several households without mosquito nets
- Several households without latrines
- Some kitchens without doors, allowing entry to livestock

However, in a typical village in central Malawi, this survey revealed additional possible sources of infection:

- 1 case of malaria
- 1 suspected case of cholera
- Several cases of severe scabies.
- Pit latrines without facilities for washing hands.
- No kitchen doors, allowing free access to dogs and other animals.
- Small, unventilated kitchens, exposing women to smoke from the fire.
- Toilet cover kept in the kitchen.
- Pigs and other animals kept alongside the bedroom.
- Six children, one with severe diarrhoea, sharing dirty blanket in a bedroom, 2 x 3 metres.
- No mosquito nets.
- Child's potty, full of fermenting excrement lying under the dish rack.
- Floors unswept with refuse strewn about.

The results of the survey conducted in a typical village in Benue State, Nigeria exposed typical life-threatening conditions that are suffered by rural people:

- Two households without latrines.
- Most latrines without hand-washing facilities.
- Over-crowded sleeping facilities.
- Dirty bathing facilities.
- Shallow, unprotected wells at risk of contamination from nearby latrines.
- High prevalence of flies and mosquitoes around the homesteads.
- Low use of bed-nets.
- Extremely high prevalence of infectious diseases, mainly affecting children, including mosquito transmitted diseases such as malaria, filariasis and yellow fever.

Following their discussions, workshop participants in Bwanje valley and Benue State realised that individual households could improve their health at low cost by hand-washing with soap after

visiting the latrine and using bed-nets at night. Suggested community actions to reduce parasitic infections included building ventilated improved pit (VIP) latrines, constructing deep boreholes and controlling mosquitoes in the field and around the homestead by eliminating stagnant water, see Table 4 (Page & Kormawa, 2006).

In order to assist farmers in their understanding of the reasons why people who are HIV+ get sick, it is necessary for them to have a rudimentary understanding of the human immune system. In Zimbabwe, facilitators likened the T-cells, which are crucial to the outcome of HIV infections, to tiny soldiers who protect the body from disease and soon the word “masoldias” was incorporated the local language! These communities were then able to look at factors that reduce masoldias or T-cells, such as exposure to pesticides, hard labour and lack of vitamins, as well as ways of preventing their decline such as improving nutrition, discouraging harmful habits and cleaning up the environment. In Benin, facilitators noted distinct improvements in household cleanliness following the training: One man said, *“After participating in the training, my wife prepares different food types and the house is cleaner.”*

The HTLP training manual also contains instructions for preparing herbal and other remedies for promoting good health, such as:

- Solar-sterilised drinking water
- Oral re-hydration drink
- Traditional weaning foods
- Herbal remedies to treat common ailments and promote appetite
- Soymilk

Workshop participants are given the opportunity to prepare these remedies hygienically, using local resources. Simple measures for controlling mosquitoes and water snails that transmit bilharzia, can also be tried out, where necessary.

### ***Community action planning to live positively***

To date, the activities contained in the community action plans have only been financially supported in Benin. These action plans included the construction of improved latrines, homestead refuse collection, vegetable gardening and income generating projects for women. Several local NGOs have assisted the communities in their implementation of these activities. The most successful activity reported so far involves groups of women who began selling male condoms at a rate of between 50 and 200 per week.



*Action planning in Benin*

**Table 4: Results of a participants' village survey for health hazards, in Nigeria**

| Q. no. | Possible health hazards            | Households visited   |                   |                         |                         |                         |  |                                     |   |                                    |
|--------|------------------------------------|--|-------------------|-------------------------|-------------------------|-------------------------|--|-------------------------------------|---|------------------------------------|
|        |                                    | 1  | 2                 | 3                       | 4                       | 5                       | 6  | 7                                   | 8   | 9                                  |
| 1      | Clean yard?                        | Yes  | Yes               | Yes                     | Yes                     | No                      | Yes                                      | No                                  | Yes   | No                                 |
| 2      | Toilet?                            | Yes  | No                | Yes                     | No                      | Yes                     | Yes                                      | Yes                                 | Yes   | Yes                                |
| 3      | Clean toilet?                      | No   | -                 | No                      | No                      | No                      | No                                       | No                                  | Yes   | No                                 |
| 4      | Hand washing?                      | No   | ?No               | No                      | No                      | No                      | No                                       | No                                  | Yes   | No                                 |
| 5      | Bathing facility?                  | Yes  | Yes               | Yes                     | No                      | No                      | No                                       | Temp.                               | Yes   | Yes                                |
| 6      | Clean bathing?                     | No   | No                | No                      | No                      | Yes                     | -  | No                                  | Yes   | No                                 |
| 7      | Bathing water source?              | Well   | Stream            | Well                    | Well                    | Well                    | Well                                     | Well/stream                         | Stream  | Stream                             |
| 8      | Drinking water source?             | Well   | Well              | Well                    | Well                    | Office                  | Well                                     | Well                                | Well/stream   | Bore hole                          |
| 9      | Well protection?                   | No   | Yes               | Yes                     | Yes                     | -                       | No                                       | No                                  | No  | No                                 |
| 10     | Mosquitoes?                        | Yes  | Yes               | Yes                     | Yes                     | Yes                     | Yes                                      | Yes                                 | Yes   | Yes                                |
| 11     | Flies?                             | Yes  | Yes               | No                      | Yes                     | Yes                     | Yes                                      | Yes                                 | Yes   | No                                 |
| 12     | Ventilated Kitchen?                | Small  | No                | No                      | -                       | No                      | -  | No                                  | No  | No                                 |
| 13     | Kitchen door?                      | Yes  | No                | Yes                     | -                       | No                      | -  | Yes                                 | No  | Yes                                |
| 14     | Animals near kitchen?              | Yes  | Yes               | Yes                     | -                       | -                       | Yes                                      | Yes                                 | Yes   | Yes                                |
| 15     | Pesticides in bedroom?             | Yes  | Yes               | -                       | -                       | -                       | Yes                                      | No                                  | In roof   | Yes                                |
| 16     | Bedroom occupants?                 | 5  | 7                 | 3                       | 5                       | 5                       | 2  | 3/4                                 | 3-5   | -                                  |
| 17     | Use of bed nets?                   | No   | Yes               | No                      | No                      | No                      | Yes                                      | Yes                                 | No  | No                                 |
| 18     | Clean rooms?                       | No   | Yes               | Poor ventilation        | No                      | No                      | Yes                                      | Yes                                 | Yes   | No                                 |
| 19     | Clean Bedding?                     | Yes  | Yes               | Yes                     | Yes                     | Yes                     | Yes                                      | Yes                                 | Yes   | No                                 |
| 20     | Clean clothes?                     | ?  | Yes               | Yes                     | Yes                     | Yes                     | Yes                                      | Yes                                 | Yes   | No                                 |
| 21     | Washing place?                     | well   | Yes               | Well                    | Well                    | Yes                     | Well                                     | Yes                                 | Yes   | Yes                                |
| 22     | Soap used?                         | Yes  | Yes               | Yes                     | Yes                     | Yes                     | Yes                                      | Yes                                 | Yes   | Yes                                |
| 23     | Recent child sickness?             | Diarrhoea vomiting malaria   | Malaria           |                         | Fever diarrhoea         |                         | Scabies, vomiting                        | Malaria                             | Diarrhoea, vomiting, malaria                        | Diarrhoea, vomiting, malaria       |
| 24     | Sick People now?                   | Yes  | Yes               | No                      | No                      | No                      | Itching vomiting fever                   | Yes                                 | Baby  | Yes                                |
| 25     | Current illnesses?                 | Malaria  | Filariasis        | -                       | None                    | None                    | Itching, vomiting, fever, liver problems | Stomach ache                        | Tetanus, malaria, measles, meningitis, yellow fever | Arthritis                          |
| 26     | Causes of sickness?                | Standing water   | Standing water    |                         | Poor water & sanitation | -                       | Standing water                           | ?                                   | Standing Water                                      | Heavy labour                       |
| 27     | Main health hazards?               | Mosquitoes, dirty environment  | Mosquitoes, files | Poor water & sanitation | Poor environment        | Poor water & sanitation | Bad drainage                             | Bad drainage, toilet close to house | Poor sanitation                                     | Mosquitoes, worms, poor sanitation |
| 29     | Individual actions to reduce risk? | Hand-washing with soap after visiting the toilet, use of bed nets                  |                   |                         |                         |                         |  |                                     |   |                                    |
| 30     | Community actions needed?          | VIP toilet-building, deep bore-hole construction with protection, mosquito-control |                   |                         |                         |                         |  |                                     |   |                                    |

### ***Community responses to the HTLP training***

Despite having had insufficient funding to fully implement the HTLP training process to date, in terms of community action plan implementation and detailed data collection for impact assessment, resource-poor farmers in all four countries, namely Benin, Malawi, Nigeria and Zimbabwe, where it has been piloted, were eager to get involved and keen to take the process further. Initial impacts have been encouraging, in that the majority of farmers within these communities have accepted that reducing vulnerability to HIV



*Graduates of the Positive Living training in Benin*

depends on personal behaviour change and the need for men, in their role as head of household, to accept their responsibility for keeping their families safe from disease. In Benin everyone that had received training said they were willing to undergo VCT and those who were found to be HIV+ have been able to access ARVs immediately. In general, both women and men were ready to change life-time habits of giving the most nutritious food to fathers and sons in order to improve nutrition for all family members. Communities in Zimbabwe have improved household nutrition through the development of integrated, low-external input cropping systems for the production of cereals, vegetables, fruits and small-scale livestock. In Benin villagers have planted fruit trees, such as papaya and citrus and gather mangoes from the wild. All communities have been made aware of the need to clean up their environments in order to reduce opportunistic infections. In addition, communities in Benin who have been able to access additional funding and NGO support to implement their action plans, have been able to build improved latrines and set up income generating projects.

### ***Scaling up the Positive Living training programme across Africa***

Facilitators in Benin are keen to incorporate the *Positive Living* methodology into that country's National AIDS Programme. There is also an urgent need to attract more on-going funding to enable increasing numbers of farmers to be trained and to support local NGOs that can assist the communities in the implementation of their action plans.

In Zimbabwe, more funds are needed to extend *Positive Living* to hundreds of other villages. AfFOResT is currently trying to convince members of AIDS committees, at both village and national levels, that alleviation of the HIV/AIDS problem does not only lie in the use of ARVs but also in the provision of a healthy diet, good sanitation and access to clean water. Efforts are also being made to persuade the extension service to focus on the attainment of household food security, rather than the production of cash crops for export.

In Malawi, several community-based organisations have requested support for implementing the programme more fully amongst farmers' groups in the South and Central regions of the country.

In Nigeria, funds are actively being sought to enable the Benue State Agricultural Development Authority, in collaboration with CABI and WARDA, implement the *How to Live Positively* training process amongst more than 28,000 resource-poor farming families.

It is clear that, given the appropriate level of funding and sufficient numbers of motivated *positive living* facilitators, the HTLP discovery-learning process can transform the lives of rural people in terms of building their resilience to HIV/AIDS and other fatal diseases. Evidence from Benin, has shown that rural people who have undergone HTLP training can make a range of positive behavioural changes that are conducive to “treatment preparedness”. The HIV/AIDS pandemic is responsible for undermining the last 40 years of agricultural and rural development in Africa and is now a major development issue (FAO, 2006). This alarming decline can only be reversed through knowledge transfer and the widest possible availability of ARVs - HTLP is a key development tool that will ensure that vulnerable communities are prepared for this life-saving treatment.

## **References**

- De Waal, A. and Whiteside, A. (2003)** HIV/AIDS, food crisis and governance: ‘New variant famine’ in southern Africa. Draft technical background paper. African Growth and Opportunity Act Forum.
- FANR/SADC (2003)** Towards identifying impacts of HIV/AIDS in food security in southern Africa and implications for response. UN-SADC Stakeholders meeting, 7 May. [www.sahims.net](http://www.sahims.net) (retrieved 10 May 2004)
- FAO (2006)** AIDS a threat to rural Africa. [www.fao.org/FOCUS/E/aids/aids1-e.htm](http://www.fao.org/FOCUS/E/aids/aids1-e.htm) (retrieved 6 August 2006)
- FAO, (2003)** Incorporating HIV/AIDS considerations into food security and livelihood projects. [www.fao.org](http://www.fao.org) (retrieved 27 September 2004)
- Gari, J. A. (2001)** Guidelines for integrating HIV/AIDS concerns in agricultural emergency interventions. SDWP/TCOR/ESNP, Food and agriculture Organisation of the United Nations (FAO) Rome, Italy.
- Loevinsohn, M. and Gillespie, S. (2003)** HIV/AIDS. Food security and rural livelihoods: understanding and responding. International Food Policy Research Institute, Washington. FCND Discussion Paper No. 157.
- Page, S. L. J. (2003)** Reducing vulnerability to HIV/AIDS amongst COMPASS grantees. Compass workshop report. Development Alternatives Incorporated. [www.compass-malawi.com](http://www.compass-malawi.com)
- Page, S. L. J. (2002)** Impact of HIV/AIDS on natural resource management in Malawi. Compass document 55. Development Alternatives Incorporated. [www.compass-malawi.com](http://www.compass-malawi.com)
- Page, S. L. J. (2001)** Promoting the survival of rural mothers with HIV: a development strategy for southern Africa. SAfAIDS News, 9 (4) 2-8.
- Page, S.L.J. & Kormawa, A. (2006)** Building resilience to HIV/AIDS among smallholder farmers in Benue State, Nigeria. Planning workshop report. 10-11 May, Makurdi, Nigeria. [www.warda.org](http://www.warda.org)
- Page, S. L. J. & Nyakanda, F. (2005)** How to live positively: a practical manual for facilitating community action in HIV/AIDS-affected areas. 78pp. CABI/CTA [www.cta.int](http://www.cta.int)

**Piwoz, E. and Preble, E. (2000)** HIV/AIDS and nutrition: A review of the literature and recommendations for nutritional care and support in Sub-Saharan Africa. SARA Project. Washington D. C.: US Agency for International Development.

**Repetto, R. and Baliga, S. S. (1996)** Pesticides and the immune system: the public health risks. World Resources Institute, Washington.

**UNAIDS (2003)** Organizing the UN Response to the Triple Threat of Food Insecurity, Weakened Capacity for Governance and AIDS, particularly in southern and eastern Africa. UN Directors' Meeting Maputo, July 2003.

**UNAIDS/WHO (2005)** AIDS epidemic update: 2005. [www.unaids.org](http://www.unaids.org) (retrieved 16 January 2006)

**Vuthang, Y. (2002)** Farmer empowerment through Farmer Life School, adapted from Farmer Field School approach. International learning workshop on Farmer Field Schools: emerging issues and challenges. 21-25 October 2002, Yogyakarta, Indonesia.

**Welbourn, A. (1998)** Stepping Stones: A training package in HIV/AIDS, communication and relationship skills. London: ActionAid.