IMPROVING LIVELIHOOD OUTCOMES FOR PEOPLE LIVING WITH HIV

by Betty Chiduo and Emily Bostick

Highlights from an integrated Microfinance, Agriculture and AIDSRelief project

BACKGROUND

Over 36 percent of the population of Tanzania lives below the poverty line and more than 80 percent depends primarily on subsistence agriculture.\(^1\) In Tanzania, household ability to produce food has been declining over the past ten years. Although much of the decline in agricultural production has been attributed to drought, there are other contributing factors as well: declining soil fertility, lack of improved and appropriate crop varieties, poor crop husbandry practices, and lack of cash for purchasing necessary inputs. Another significant factor affecting agriculture productivity is the reduction in workforce due to HIV. Within Tanzania, poverty and malnutrition are often compounded in households and communities affected by HIV. The loss of productive labor and resultant decrease in available sources of income can drain those savings and assets required to meet pressing healthcare needs. Productive and healthy family members, especially women, are often forced to reduce or stop working to care for the sick, which further reduces income.

It is estimated that 40 percent of the population live in regions that experience recurrent food shortages due to irregular rainfall and that 11.5 million Tanzanians are clinically malnourished.\(^2\) According to the 2004 Tanzanian Demographic and Health Survey (DHS), malnutrition, including Vitamin A deficiency, is a problem in the Mara region. In children under five years of age, 38.7 percent were moderately stunted (height-for-age) and 16.5 percent were severely stunted. Only 46.5 percent of children under five had consumed Vitamin A rich foods in the 24 hours prior to the DHS survey and 11.4 percent of women of reproductive age had a body mass index (BMI) below 18.5.\(^3\)

Access to improved income and good nutrition can delay the progression of HIV to AIDS, prevent opportunistic infections\(^4\) and influence the success of antiretroviral therapy (ART).\(^5\) To address the issues of food insecurity, poor

---

productivity and loss of assets due to the impacts of HIV, the CRS Tanzania team decided to complement the activities of its existing Savings and Internal Lending Communities (SILC) and ART projects\(^6\) with agriculture activities. This learning paper highlights some of the lessons learned from this experience and seeks to provide some insight on the design of integrated programs in the future.

**PROJECT OVERVIEW**

In 2002, CRS and partners initiated an HIV project in the Nansimo division located in the Bunda district, within the Mara region. The purpose of the project was to improve community knowledge about HIV and access to HIV-related services in the area. The project was implemented in collaboration with the Kibara Mission hospital through an AIDSRelief grant.\(^7\) In 2005, the project staff decided to introduce savings and internal lending communities (SILC) as a coping mechanism for vulnerable households affected by HIV. SILC was seen as an important strategy for poor and vulnerable households to prevent further loss of assets, protect and recover income, and grow household wealth over time. SILC was also instrumental in helping households to better manage their small resources.

Based on the promising approaches seen within the community in supporting PLHIV and OVC through SILC, the project staff decided to use SILC as the entry point to introduce nutrition and agricultural activities that would further decrease vulnerability and increase livelihoods. As such, in February 2008 CRS, in collaboration with its partners, introduced an integrated microfinance, HIV, and agriculture project to mitigate the impact of poverty, HIV, and malnutrition in the area.

**PROJECT OBJECTIVES AND OUTCOMES**

Throughout the life of the project CRS worked with the Kibara mission hospital to inform community members about SILC. Community members heard about the service whenever they went to use voluntary HIV counseling and testing (VCT) services. SILC was strongly promoted to individuals who tested positive and were scheduled to receive counseling. SILC was introduced to help meet the economic needs of families impacted by HIV and was seen as a good complement to some of the other services provided by the project, including psychosocial support, home-based care, and ART.

This project was designed to:

1. Support continued growth of Savings and Internal Lending Communities (SILC) to improve community cohesion, provide basic financial management skills, and provide access to small amounts of capital (through group savings) for household consumption needs and business opportunities.

---

\(^6\) Currently being administered through the Kibara Mission Hospital
\(^7\) The AIDSRelief consortium brings together industry leaders to provide rapid scale up and delivery of lifesaving antiretroviral therapy for patients in ten countries in Africa, Latin America and the Caribbean. Led by Catholic Relief Services, consortium members include the University of Maryland School of Medicine Institute of Human Virology, Futures Group International, IMA World Health, and the Catholic Medical Mission Board.
2. Support HIV-related behavior change in communities affected by HIV through the utilization of an HIV and life skills education curriculum and the promotion of VCT.

3. Create community support systems through SILC that socially, emotionally and financially support SILC group members and vulnerable members of the community.

4. Increase the production and consumption of orange flesh sweet potato (OFSP), a product rich in Vitamin A, among SILC group members who represent resource-poor households, and for people living with HIV (PLHIV). It was expected that the introduction of OFSP would not only improve the nutritional status of vulnerable populations but could also increase the household income of participating families in the Nansimo Division as they produced more to sell.

At the end of 18 months, the final evaluation showed the following successes:

1. Better than anticipated participation. At the start of the project 1,470 households were targeted to participate in SILC groups. By the end of the project over 1,900 households were actively engaged in SILC activities.

2. Improved awareness of HIV through the introduction of an HIV education and life skills curriculum. The number of participants stating that they had been exposed to the lessons in the curriculum improved from 72 percent at the start of the project to 85.2 percent by the end of the project.

Table 1: Project Outcomes

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Baseline Value</th>
<th>End of Project Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Households owning livestock</td>
<td>77%</td>
<td>84.6%</td>
</tr>
<tr>
<td>Persons that have been exposed to HIV education and life skills training</td>
<td>72%</td>
<td>85.2%</td>
</tr>
<tr>
<td>Persons that have been tested for HIV</td>
<td>53%</td>
<td>71.2%</td>
</tr>
<tr>
<td>Persons that have collected the results</td>
<td>51%</td>
<td>69.8%</td>
</tr>
<tr>
<td>Persons that grew OFSP</td>
<td>14.8%</td>
<td>44.5%</td>
</tr>
<tr>
<td>Persons that sold OFSP</td>
<td>0%</td>
<td>17%</td>
</tr>
<tr>
<td>Households that ate three meals a day during harvest time</td>
<td>29.5%</td>
<td>64.8%</td>
</tr>
</tbody>
</table>

3. Improved frequency of meals. The percentage of participating households reporting increased ability to eat three meals a day during harvest rose from 29.5 percent to 64.8 percent.

The program provided a new variety of sweet potato different from the local variety, that is rich in Vitamin A.
4. **Improved nutrition.** The proportion of participants that reported consumption of orange fleshed sweet potatoes rose from 27.1 percent to 67 percent.

**GROWTH OF SILC**

The number of SILC groups expanded from 36 to 89 in the eighteen months of project implementation, representing an increase from 886 group members to 1,935. The interest in SILC far exceeded project goals of forming a total of 60 groups and reaching 1,470 direct beneficiaries. When questioned about joining SILC, focus group respondents in all four wards explained that the SILC program had built a good reputation for itself, which compelled more members to join. Outsiders had seen the impact of savings and lending on participating members who had increased livelihoods. There were also perceptions that SILC would enable community members to test their skills as entrepreneurs. With access to loans, they could try new business ideas and reap the benefits that they had seen neighbors enjoy. They had heard of low repayment rates and thought this system to be preferential as an alternative to other lending mechanisms. In focus groups, SILC members explained that borrowing from individuals did not afford them the same level of dignity as receiving a loan through the SILC group. Members were uncomfortable begging for money from acquaintances for school fees and other necessary expenses. With access to capital through their SILC, members could now plan their finances, improve their incomes and improve their lives.

**SILC MEMBERSHIP—PARTICIPATION OF HIV POSITIVE MEMBERS**

When this project was initiated it was based on the idea that SILC, in combination with agricultural and nutritional activities, would increase livelihoods and strengthen the coping mechanisms for communities deeply affected by the HIV pandemic, including PLHIV and their households. The project assumed that PLHIV would join SILC groups at the same rate as individuals with HIV-negative or unknown status. Therefore, with a 7 percent HIV prevalence, the assumption was that an estimated 135 of the 1,935 active SILC members would be HIV-positive.

The project had planned to integrate PLHIV into existing and newly-created SILC groups in Nansimo ward by providing referrals to local SILC groups at VCT sites. The Kibara Mission Hospital staff felt that this approach would lead local SILC groups to include PLHIV who would benefit from SILC much like other members. Validating this assumption empirically however proved challenging for the project because the project data were collected by community-based resource persons (CRP, or SILC field agents) who knew the SILC members. As a result there were concerns about maintaining client confidentiality if HIV status was included as part of the survey conducted by CRPs, as well as concerns about putting undue pressure on PLHIV SILC-members to disclose their status. Furthermore, the validity of the results could also be questioned. It is important to note that disclosure of HIV status was not (nor should it ever be) a requirement of SILC membership. The project also considered cross referencing ART registries with SILC membership enrollment lists to identify HIV-positive members, but this was rejected on ethical grounds.
Given the interest of the project in improving access to SILC for PLHIV and gaining a better understanding of the impact of SILC on PLHIV and their households, the CRPs worked closely with the Kibara Mission Hospital to identify 14 PLHIV interested in providing collective assistance to one another. These individuals were identified from among clients attending monthly counseling, many of whom had recently started ART. Like other SILC groups, they received CRP support in conducting SILC meetings, documenting finances and the other basic activities of SILC. Members of this group had access to other training modules and two were trained in the production of orange flesh sweet potatoes, two in the processing of these potatoes, four in nutrition, three in SILC and three in home-based care (HBC).

Much like other newly formed SILC groups, members were apprehensive about saving into the SILC group. This challenge was compounded by illness and weakness which inhibited many members’ ability to attend SILC meetings regularly or begin an income generating activity. On average savings contributions were smaller than other SILC groups, and most members were reluctant to borrow due to concerns about their ability to repay the loan.

The final evaluation found that this group did not experience an increase in assets or savings due to small group size and small savings contributions. That said, it is important to recognize that few SILC groups demonstrate strong growth in savings and assets within their first cycle. It is often not until subsequent cycles that there is evidence of an increase in savings contributions and investments in assets.

In addition to the normal challenges SILC members face, many of these clients were recently diagnosed with HIV and started ART, both of which represent major life changes. Despite the challenges faced by this group, SILC members reiterated that the group meetings were very beneficial thanks to the social and emotional support they received from their peers.

One important consideration for the future design of HIV and microfinance initiatives would be to determine whether a homogenous group of HIV-affected members is likely to operate as effectively as an integrated group. Discussions with CRPs seemed to imply that PLHIV involved in SILC groups with other non-HIV participants tended to do better financially than those in a purely homogenous group. To date, however, no research has been conducted to validate this assumption.

**SILC SUPPORT TO PLHIV AND OVC—ALIGNING EXPECTATIONS**

One of the initial expectations of the project was that SILC members would use some of their funds to support OVC and PLHIV that were within the community but outside of their care. In many cases SILC is introduced as part of an exit strategy to support activities that were previously subsidized by a donor. In the case of the Kibara project there were instances of success whereby households were willing to share their resources with needy community members. This was, however, not seen as an undertaking that all SILC members were willing to sustain. In contrast, SILC demonstrated much of its promise as an exit strategy by the fact that participating households incrementally worked to assume the responsibility of paying for certain previously subsidized support—such as the
payment of health insurance, better nutrition and school fees.

**IMPROVING AGRICULTURE AND NUTRITION—THE INTRODUCTION OF ORANGE FLESHED SWEET POTATOES**

In 2007, focus groups were conducted with some of the SILC groups in the Kibara district to determine development needs and ways that CRS and its partners could support them in meeting their goals. SILC members had requested support in acquiring cuttings for the orange fleshed sweet potato (OFSP) plant and training in the production of OFSP. The farmers had heard of similar OFSP schemes in the region and had expressed interest in trying the new crop. Motivation for the introduction of this new crop was partly related to an increased threat of Cassava Brownstreak Disease, an infection which is forcing local farmers to switch from cassava as the primary crop to other staple foods. According to baseline data, approximately 70 percent of SILC members in the area relied on agriculture as their primary income source.

Given the high prevalence of HIV, the nutritional value of OFSP, and the interest of farmers in OFSP, CRS and its partners were hopeful that OFSP would be used first for consumption and then for income generation by selling the unprocessed potatoes or value-added sweet potato flour. The project staff also thought that the existence of the SILC groups could provide a platform for continuing to disseminate HIV and nutrition messages, as well as a vehicle for coordinated training on OFSP.

With the introduction of OFSP, CRS chose to partner with the Tanzania Home Economics Association (TAHEA) for the agricultural component of the project, based on previous experience with the organization. As no CRS agricultural manager was available, the Kibara Lifelines project relied heavily on technical support from TAHEA. In order to improve the capacity of the organization, CRS funded training for TAHEA on flour production. TAHEA staff was then able to train SILC members in OFSP cultivation and value-added processing.

TAHEA provided technical training on basic farming techniques and cultivation to SILC farmers was as well as start-up vines for multiplication plots. These plots were maintained by the SILC groups. In total, 110 farmers were given 228 bushels to plant and distribute to fellow SILC members. These farmers were trained in irrigation, pest control and proper planting and harvesting techniques. Community members were trained to process OFSP for selling and utilize OFSP to increase the nutrition of participating households. Training and assistance from TAHEA proved to be essential in promoting OFSP.

The trainings in OFSP offered to farmers within SILC groups resulted in an increase in OFSP production from 14.7 percent at baseline to 44.5 percent at final evaluation. At baseline, many farmers said they were unable to access vines. By the final evaluation, 67.9 percent of OFSP farmers had been able to access vines directly from TAHEA.

The project funded the cost of planting materials and training through TAHEA and farmers contributed by identifying/hiring plots for production and multiplication and using their own hoes and other agriculture tools to produce the OFSP.

Despite TAHEA’s diligence in providing a series of trainings to the farmers, many...
struggled to meet their production targets. One of the main challenges faced by farmers (93.8 percent of members surveyed), was a drought that affected OFSP multiplication – especially for the first group of farmers from Kisorya and Nansimo wards who were given the planting materials towards the end of the rainy season. A few of the farmers had plots close to the lake shores and were able to use their plots for multiplication purposes.

In Kibara, members received some training in OFSP utilization but most had not harvested enough roots for home use. Some had not tasted the OFSP and were waiting for the next planting season. Much of the crop was used during the training rather than for home use or sales. The training increased awareness of the nutritional benefits of the crop but at the time of the evaluation the group was merely waiting for another opportunity to cultivate OFSP. One village in Kisorya ward and another in Igundu ward managed to keep enough planting materials in their multiplication plots for the next season.

Nansimo ward also had challenges relating to OFSP production. OFSP vines were delivered late to the community and members were not able to prepare them at home since the little they produced was used for training on OFSP utilization. The participants stated that poor planning on the part of trainers had inhibited the group from producing OFSP. They also faced additional challenges as hippos along the lakeside were feasting on the vines. Access to vines continues to be an inhibiting factor for the Nansimo farmers.

Farmers in Kisorya knew how to process OFSP and were aware of the plant’s nutritional benefits. They used loans from SILC groups for OFSP cultivation. Many farmers felt that they were better prepared to take care of vines and seeds than at the beginning of the project. This season, farmers were able to sell the potatoes and vines to other SILC groups in the area for the training on utilization. They looked forward to increasing their income in the upcoming season.

Overall, the groups had varying degrees of success with OFSP cultivation due to both internal and external factors. One common experience is that the trainings in OFSP processing were premature, resulting in limited ability to continue harvesting OFSP. Groups had to use their entire supply and even buy potatoes from successful Kisorya farmers in order to participate in the training. Both the timing of the trainings and the expectation of communities to provide OFSP from their own harvest should have been reconsidered.

Another challenge related to OFSP sustainability is the lack of monitoring. While CRS was aware of the numbers of farmers that were trained and the number of bushels distributed, there was no data available to indicate what happens once the vines were in the ground. Without this data, the program was less able to adapt to challenges and to aid farmers in responding to them.

External challenges such as drought (experienced by 93.8 percent of farmers at final evaluation) and pests (a problem for 60 percent of farmers at final evaluation) inhibited OFSP production. As this imported crop was less drought resistant than the locally grown sweet potatoes varieties, innovative solutions will need to be found for such persistent problems.

TAHEA explained that with a limited budget and short implementation timeframe...
their usual training schedule and support systems were altered. The ideal time for such a project is three years. Closing earlier left farmers without extended agricultural support and caused frustrations as farmers struggled to work with the new crop.

On a positive note, the integration of SILC and farming activities proved to be a promising source of financing for certain agriculture activities. Farmers engaged in SILC were willing to take loans from their SILC groups and invest in OFSP production (e.g. for the purpose of hiring plots, buying agriculture tools, and hiring laborers). In turn, they were able to acquire additional income from their business investments and save more in their SILC groups. In most cases, the costs of maintenance, labor and irrigation were paid from the SILC group savings. Individual farmers did not have the time to work the collective plot as they were occupied with their individual farming activities. Bushels grown in the collective plot were then distributed to individual farmers for cultivation and, eventually, consumption, processing and marketing.

**IMPROVED NUTRITION**

The nutrition component of the Kibara Lifelines project was based on population level data which suggested relatively high levels of chronic malnutrition and limited consumption of Vitamin A rich foods among children under 5, and relatively low rates of undernutrition among women of reproductive age. BMI measurements conducted at baseline and final evaluation suggested that only a small minority (3.8 percent at baseline and 4.4 percent at final evaluation) of adults were undernourished with a BMI of less than 18.5 kg/m2. Nevertheless, the number of people who reported eating three meals daily increased from 29.5 percent at baseline to 64.8 percent at final evaluation. The final survey found that 67 percent of adults reported consuming OFSP compared to 27.1 percent at baseline. Knowledge about the benefits of OFSP consumption also improved. This was partly a result of 360 trainings on nutrition, with a focus on the benefits of OFSP, conducted by 16 HBC volunteers during TAHEA trainings.

**KEY PROJECT ACCOMPLISHMENTS**

**ACCELERATED SAVINGS**

With the continuation of SILC programming in Nansimo ward, group members have been able to realize the long-term benefits of communal savings and lending. With the introduction of OFSP, another means of making a profit, the savings process has accelerated. This has allowed members to purchase more assets and make necessary improvements on their homes.

Self-reported increases in assets were also confirmed by comparing final surveys with baseline data. It is also noted that the longer members are in SILC, the more they benefit from savings and lending groups. Looking at livestock acquisition, for example, it was noted that of those surveyed who had been SILC members for less than six months, 0 percent were able to increase their livestock; at 6-12 months, 50 percent were able to buy livestock; at 1-2 years, 55.4 percent; and at over 2 years, 70.9 percent.

The number of people reported eating three meals daily increased from 29.5 percent at baseline to 64.8 percent at final evaluation.
INCREASED GROUP SOLIDARITY AND INDIVIDUAL RESPONSIBILITY

SILC has not only produced material benefits, it has also contributed to a shift in mentality. SILC members spoke of the challenging process of thinking long-term, making safe financial decisions and considering their obligation to the group when spending borrowed money. This collective consideration carried over into spending decisions which benefited the group as a whole. For example, Riziki group and Tujijenge group (both from Nansimo ward) contributed 600,000 Tsh (approximately $450) and 400,000 Tsh (approximately $300) respectively to the purchase of irrigation pumps for group use. This purchase speaks to a shift towards local sustainability. While most groups still request such machinery from CRS and partners, these two proactively found solutions to group challenges without having to resort to requesting outside financial assistance.

REDUCTION IN HIV STIGMA

Another positive change in the Nansimo community is reduced HIV-related stigma. More people are being tested and are open to HIV education. Focus groups indicated that there has been a shift in attitude as well as behavior. In Kisorya, focus group participants reported being less promiscuous, less judgmental and more open about HIV. In this area, it is now more accepted to openly discuss the cause of an HIV-related death. In Kibara, the focus group reported that they were more aware of VCT services and many have been tested up to three times since the project began. Likewise in Nansimo, focus group members reported less promiscuity, increased awareness of the importance of VCT and more education about the progression of HIV.

In Kibara, members reported that they would be comfortable sharing an HIV-positive result, as they would get support from their group. However, in Igundu and Nansimo, participants revealed that most people would only share their results if negative. Notably, one member of the Kisorya group reported how he shared his positive results with his group and did not feel ostracized.

This qualitative data is supported by survey statistics indicating that more individuals are being tested. The hospital also supports this claim. As for actual change in behavior, focus groups may lead to exaggerated claims due to social desirability bias. Still, education on safe practices seems to be informing claims of behavior change.

LESSONS LEARNED AND FUTURE PROGRAM DESIGN IMPLICATIONS

A number of lessons gleaned during the implementation of this project are important to highlight, particularly as they may inform the design of future programs.

DEFINE ISSUES OF INTEREST AT THE PROJECT INITIATION

Having clearly defined research or learning questions at the project design phase was seen as one of the weaknesses of the project. Such questions would have enabled the use of an appropriate methodology for data collection and facilitated
comparison groups. If done properly this would have resulted in an improved ability to attribute project outcomes to project activities. Examples of questions requiring different data collection methods include the following:

- Do PLHIV participating in SILC have more assets than PLHIV who do not participate in SILC?
- Do PLHIV support groups do better as stand-alone groups or when integrated with SILC groups?
- Do HIV-positive SILC members in mixed groups do as well as SILC members who are HIV-negative/unknown status?
- Do communities with SILC groups utilize fewer negative coping mechanisms than communities without SILC groups?

IDENTIFY AND ENROLL PLHIV FROM THE START OF THE PROJECT

Future projects focusing on increasing coping mechanisms and mitigating the effects of HIV should identify these clients from the beginning. This process must be confidential as SILC members should not be obligated to share their status with the group. Determining the number of PLHIV who participated in trainings and how they benefitted from SILC and nutrition activities would be useful in adapting project implementation to meet the projects goals and in designing future projects. In-depth communication with partners and HIV-positive key informants in target communities at the design phase would ensure that all implementers have the same understanding on who the target population is and how to measure outcomes and outputs. It was unfortunately, and wrongly, assumed that the partner would develop mechanisms to track PLHIV enrolment in SILC groups. Suggestions for identifying PLHIV could have included: having CRPs confidentially ask SILC members about their status for record keeping purposes only; altering current adherence surveys administered by the hospital to include a question on SILC involvement and awareness; conducting a rolling admissions survey at the hospital for PLHIV seeking services by asking whether they are participating in SILC and what are the perceived benefits; or instructing CRPs, with support from HBC Volunteers, to document open PLHIV SILC members in SILC registries.

Other ideas for program monitoring and evaluation are:

1. Adapt existing data collection mechanisms (e.g. incorporate SILC membership into existing partner tools, such as the AIDSRelief adherence survey).

2. Work with hospital administration beforehand to identify PLHIV attending the clinic and survey both PLHIV participating and not participating in SILC. The study would compare PLHIV in SILC to non-SILC group members and the evaluator(s) could collect data from PLHIV over a set period of time as they come to the clinic for treatment or counseling. Both groups would need to be from the same catchment area, and information could be gathered on socioeconomic status, SILC participation, length of time on ART, adherence (particularly in determining if SILC membership increases adherence), occupation, and number of children. This would begin to help program staff develop a profile of SILC members within the target group.
3. Final evaluations should be conducted by external evaluators not associated with the project or from the community.

MULTI-PURPOSE COMMUNITY RESOURCE PERSONS

The Kibara Lifelines project utilized Community Resource Persons (CRPs) in several capacities. The CRPs were trained in many areas (i.e. HIV and life skills training, OFSP cultivation and processing, basic nutrition). In theory, this made them able to support the SILC members in their various activities. However, this could have overburdened CRPs. In addition, SILC groups were more concerned with income generation and savings. As such, other program components took priority over HIV education. In the future, CRS Tanzania would recommend using different CRPs for different program components and would also choose times outside of SILC meetings for HIV education.

CONCLUSION

The Kibara Lifelines project benefited the Nansimo community in many ways. The number of SILC group members in the area has more than doubled. Data showed that the majority of participants were able to increase their assets and savings and increase OFSP cultivation, production and consumption. This project simultaneously provided groups with trainings and activities including HBC training, HIV education and life skills training, OFSP cultivation, OFSP processing, nutrition and SILC. Using the Integral Human Development framework, it is necessary to address the myriad of factors contributing to health and wellbeing. However, an ambitious program design can lead to limited ability to document the actual impact of project activities.

Despite challenges, final evaluations indicate that Nansimo SILC members are benefiting from SILC group activities and are prepared to continue OFSP cultivation. Funding for the Kibara Lifelines project has come to a close but SILC activities continue independently.

Contributors: Wendy-Ann Rowe and Carrie Miller
Photo Credit: David Synder