

Promising Practices: three Diversifying livelihoods for smallholder farmers

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About SCIAF

The Scottish Catholic International Aid Fund (SCIAF) works with people in some of the poorest countries in the world, providing emergency aid and practical long-term support to those affected by hunger, poverty, war and disasters. In Scotland we mobilise public support in parishes, schools and the wider community to lobby governments and big business with campaigns to address the root causes of global poverty and injustice. Our mission is to create a more just world for all in which everyone can live life, and live it to the full.

Acknowledgement

SCIAF is grateful to the Scottish Government for their encouragement and financial support, without which the Mangochi Livelihoods and Economic Recovery Project (MLERP) would not have taken place. Warm thanks in particular go to the International Development team at the Scottish Government for their insight and guidance.

SCIAF's partner, the Catholic Development Commission in Malawi (CADECOM) Mangochi, worked tirelessly to ensure that this project was successfully implemented, and effectively met the community's needs. Thanks go to the team at CADECOM Mangochi for their dedication and hard work which made the project a success.

Lastly, SCIAF would like to express its thanks to the communities involved in this project for their hard work, commitment and willingness to work together to support the whole community, which again greatly contributed to the success of the project.

Percy Patrick Programme Manager SCIAF

Photographs: Louis Suwedi and Val Morgan.

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List of acronyms

CADECOM	Catholic Development Commission in Malawi
DRR	Disaster risk reduction
FGD	Focus group discussion
GDP	Gross domestic product
IGA	Income-generating activity
MLERP	Mangochi Livelihoods and Economic Recovery Project
MVAC	Malawi Vulnerability Assessment Committee
NAPA	National Adaptation Programmes of Action
NGO	Non-governmental organisation
SCIAF	Scottish Catholic Internationa Aid Fund
TA	Traditional authority
VCPC	Village civil protection committee
VSL	Village savings and loans

Foreword

SCIAF has been helping to improve the lives of Malawians living in poverty since 1985. This has primarily involved supporting communities to grow more crops each year. However, with 94%¹ of Malawi's rural population dependent on farming, their access to food can often be disrupted due to flooding and prolonged drought which is being made worse by climate change. In recent years, SCIAF has provided emergency support to families badly affected by floods and drought.

The Mangochi Livelihoods and Economic Recovery Project (MLERP) is one of the ways SCIAF is helping communities tackle their vulnerability to flooding, drought and changing seasons. Through the project 3,000 households in Mangochi District have increased their agricultural production, improved their access to food, and increased their household income.

The three-year project, implemented with support from the Scottish Government, was designed using a holistic approach to improve households' quality of life. The project focused on supporting farmers grow crops twice a year by improving irrigation, access to markets, providing livestock, and taking part in savings and loans groups. By focusing on different ways to increase agricultural production and household income, the beneficiaries had the security of an alternative if one of the two elements of the project failed. The project was delivered by our partner, the Catholic Development Commission in Malawi (CADECOM) Mangochi, who has worked in the community for many years and has a strong relationship with local people.

This report examines the success of the project and highlights best practice and important lessons which will be incorporated into SCIAF's future livelihoods projects in Malawi and elsewhere. During the project's



implementation it became clear that the holistic approach gave beneficiaries more security: better irrigation facilities helped them deal with shorter rainy seasons; sustainable agriculture methods were augmented by manure from the livestock; savings and loans clubs meant that beneficiaries had money available during lean months so they could buy supplies or get a loan to set up small businesses. SCIAF will strive to implement projects with a more holistic approach in the future.

In February 2015, I travelled with Archbishop Cushley to Malawi and saw first-hand the great difference this project has made to many poor Malawian families. We spent time with the communities who had been involved in different aspects of this project including farmers and members of the savings and loans groups. The people we met spoke of the challenges they had faced before the project began and gave concrete examples of the impact the project had had on their families' lives.

SCIAF thanks everyone who has made our work in Malawi possible, including our generous supporters in schools and parishes across the country, the Scottish Government, and especially the Malawian communities who have welcomed us with open arms.

Alistair Dutton, Director, Scottish Catholic International Aid Fund (SCIAF)



Introduction

The Mangochi Livelihoods and Economic Recovery Project (MLERP) ran from May 2013 to March 2016 with funding from the Scottish Government under its Malawi Development Fund, and the Scottish Catholic International Aid Fund (SCIAF). The programme provided support to 3,000 smallholder farming households in the Mangochi district of Malawi with the aim of increasing their income and food security. The project was implemented by CADECOM Mangochi, a longstanding partner of SCIAF.

The main objective of the project was to achieve increased agricultural livelihood opportunities and productivity, and to reduce the poverty levels of vulnerable households in the Mangochi district of Malawi. In order to achieve this, the project implemented a number of activities aimed at diversifying income, improving yields, strengthening the asset base of communities, and building resilience to climate change.

This report will outline the overall project design and results. It will include best practices, positive developments, challenges, and key learning and recommendations.

The report has been compiled with input from project participants, project staff and field research.

Overview: setting the scene in Malawi

Malawi is ranked as one of the poorest countries in the world². The country is vulnerable to extreme weather events such as flooding and droughts³, and has suffered two consecutive years of extremely erratic weather leading up to 2016. During 2014 and 2015, the country experienced severe flooding followed by dry spells, leading to approximately 2.8 million people requiring assistance to meet their annual food requirements⁴. Following an El Nino related drought during the following year, the Malawi Vulnerability Assessment Committee (MVAC) reports indicated that over 6.5 million people (39% of the population) would require support to meet their daily food needs for the year⁵.

Although Mangochi District has a large proportion of fertile farming land, in recent years it has suffered from crop failure due to heavy rainfall. During 2014 and 2015, 104,790 people were affected by floods and storms while 102,374 people were impacted by a severe lack of rain⁶. In the 2015 MVAC report, it was estimated that the district had 207,000 people at risk of food shortages for approximately four to six months of the year. The same assessment conducted in 2016 has seen the affected population more than treble to 657,585⁷.

7 MLERP project baseline (2014).

² Malawi's National Adaptation Programmes of Action (NAPA), 2006.3 Malawi Vulnerability Assessment Committee Report, 2015.

⁴ Government of Malawi Ministry of Finance, Economic Planning and Development press statement: results of the 2016 food security assessment.

⁵ Coulibaly, Y.J., Mbow, C., Sileshi, G.W., Beedy, T., Kundhlande, G. and Musau, J. (2015) 'Mapping Vulnerability to Climate Change in Malawi: Spatial and Social Differentiation in the Shire River Basin'. American Journal of Climate Change 4, 282–94. http://dx.doi.org/10.4236/ajcc.2015.43023.

Spatial and Social Differentiation in the Shire River Basin'. American Journal of Climate Change 4, 282–94. http://dx.doi.org/10.4236/ajcc.2015.4302 6 Malawi Vulnerability Assessment Committee Report 2016.

Livelihoods in Mangochi have traditionally centred on fishing and subsistence farming. In recent times, declining fish stocks in Lake Malawi have greatly impacted on households. This, combined with failed harvests and poor yields, have been major contributing factors to poverty in these communities.

The project was implemented in Nankumwa, which is situated on the Lake Malawi shore (Figure 1). Baseline study results indicate that as much as 60% of household incomes are from farming and the use of natural resources. The results also demonstrated that income levels in general were low at the start of the project, with the average monthly income for most households estimated at less than £50. Food security was also at a critical level, with as few as only 9% of households having enough food for all 12 months of the year⁸.



and the project site in the Traditional Authority (TA) Nankumwa

Theory of change: enhance agricultural production and diversify livelihoods

As many as 84% of Malawians live in rural areas, where around 11 million people are engaged in smallholder subsistence farming but only one-third of the land is suitable for cultivation because of mountains, forests and rough pastures. Despite this, agriculture accounts for more than one-third of gross domestic product (GDP) and 90% of Malawi's exports. Smallholder farmers contribute to 75% of the country's food needs and cultivate 5.3 million hectares of arable land. However, they have less than a hectare of land on which to grow the bulk of their food. This, coupled with declining soil fertility and limited access to credit and extension services, has resulted in seriously limiting the amount smallholder farmers are able to produce. More than one-third of rural households earn their livelihood only from farming or fishing. An additional 25% combine work on their farm with other jobs, largely in the agricultural sector. Low agricultural productivity is one of the major reasons for poverty and hunger for the majority of smallholder farming households and is a result of poor farming practices, erratic weather conditions, poor quality inputs and nutrient-depleted soils.

As such, an over-dependence on agriculture and lack of alternative employment during lean periods is a major contributing factor to poverty and hunger among smallholder farmers, making households extremely vulnerable to recurring shocks such as increasingly unpredictable weather, inflation, and illness or injury, including death in the family, and HIV and AIDS. This often results in households being forced to adopt costly coping strategies such as selling assets, reducing food consumption, withdrawing children from school and limiting access to health care, which forces many families deeper into poverty.

Another reason for poverty and hunger among smallholder farmers is a lack of diversity in the agricultural sector, and the likelihood of remaining unemployed for the rest of the year. The recurrence of shocks, whether weather-related, illness or injury, HIV and AIDS or inflation, undermine households' attempts to escape poverty and hunger. This vicious circle of poverty, hunger and vulnerability never ends for poor smallholder farming households. The MLERP focused on providing targeted support to smallholder farmers by strengthening agricultural practices and introducing other types of farming including keeping small animals, sowing cash crops such as groundnuts, and setting up small businesses. This in turn helped households to diversify their sources of income, develop their capacity and gain a whole host of skills to become more resilient to shocks. High agricultural productivity is crucial for poverty reduction, food security and economic growth. Given that the majority of smallholder farmers are women, more effective farming also contributes to reducing barriers to inequality.



Figure 2: Diversification of livelihoods



Project design

The project was designed to be a holistic approach to improving the livelihoods, incomes and food security of 3,000 households. It focused on increasing agricultural production and building resilience to the effects of climate change, as well as diversifying income sources and establishing a community asset base. The overall strategy was one that focused on capacity building, as opposed to purely providing material inputs to participants. Where these were supplied (e.g. treadle pumps in irrigation schemes), they were supplemented with training on their use and upkeep.

The main project areas

Sustainable agriculture skill development

Farmers were trained in sustainable agriculture techniques to support long-term improvements to their yields and overall improvement in the health of their soil. In addition, farmers were provided with initial farming inputs such as higher quality, fast-maturing maize seed, as well as other crops such as potato and cassava.

Irrigation

Irrigation schemes were developed with the aim of reducing the households' dependence on rain-fed agriculture. These mainly included community members who had access to land in the irrigable area. Motorised pumps, solar pumps and treadle pumps were promoted in different schemes. Women and female-headed households were prioritised for participation in this project, with certain activities identified as ways for women to become fully immersed in the project to ensure that they were given the same opportunities as the men in target areas. Activities such as livestock distribution, road construction and participation in the village savings and loans (VSL) clubs were key for women. In addition, the traditional division of tasks along gender lines, with fishing seen as a 'male' occupation and farming as the preserve of women, meant that activities relating directly to agriculture were particularly relevant and useful for women.

Water management associations were created to coordinate the activities within each scheme to increase the capacity and sustainability of the project.

Disaster risk reduction (DRR)

Village civil protection committees (VCPCs) were established to co-ordinate community responses to natural disasters, and ensure that village-specific disaster management plans were written and followed. The aim was to improve resilience to disasters and reduce their negative socioeconomic impacts on communities.

Village savings and loans (VSL)

The establishment of VSL clubs and provision of business training provided a savings

mechanism, access to credit for community members and an excellent support structure for women, who formed the majority of members. The VSL clubs also aimed to enhance leadership skills, promote solidarity, and help to reduce gender inequality within communities. As previously mentioned, these clubs, in addition to the promotion of best practice for livestock and sustainable farming, were a key element of the programme.

Income-generating activities

The promotion of income-generating activities (IGAs) aimed to diversify income sources at a household level. Participants were taught about basic profit and loss accounting, and advised on setting up alternative income sources.

Livestock ownership and management

The livestock pass-on scheme comprised providing the poorest participants with two goats or a dairy cow, and training on management and treating basic illnesses. When the livestock had offspring, they were given to the next beneficiary on the 'pass-on' list. Livestock were also an important component of sustainable agriculture, and farmers were trained in utilising manure to provide essential nutrients to their soil. In addition to this, dairy farmers were co-ordinated to form a farmers' co-operative.

Cash for work (rural roads)

The cash-for-work programme sought to strengthen farmers' accessibility to markets and resources by developing and improving rural roads. As a result of this, transportation facilities were also upgraded and beneficiaries earned capital to invest in other livelihoods options. Cash-forwork programmes of this magnitude also have an additional benefit of galvanising communities and increasing morale.

Farmers' associations

Co-operatives were established for both dairy farmers and those relying on rain-fed systems. The aim was to enable farmers to demand better prices for their produce, promote a business approach to agriculture and access government programmes.

Project results

The overall project objectives were to reduce the number of people living in poverty in the target area and to increase the number of households becoming more food and financially secure. The project was successful in achieving this, despite challenges relating to climate shocks and economic instability during the project period.

In year two of the project, 65% of people were food secure but this dropped to 42% due to the climate shocks. However, this is still a significant increase from 8.5% at the beginning of the project. This is a remarkable outcome when put into context with the rest of the district, which has seen an approximate 50% decrease in household food security over the last two seasons.

Feedback from project participants demonstrated that targeted training, capacity building and material input provided through the project enabled communities to become better equipped at dealing with the challenges they were faced with. The VSL clubs in particular were pivotal to the success of this project.

By the end of the project there were 474 IGAs that were fully operational and profitable - significantly exceeding project expectations. The end-of-project evaluation revealed that 53% of respondents in the target community were VSL members and of those, 65% had financial credit from the VSL groups in the last year. As 78% of the VSL members were women, the clubs were particularly beneficial in enabling women to gain a whole host of relevant skills and to access capital and other opportunities.

Treadle pump irrigation enabled farmers to enjoy a second harvest. This was particularly important to families, given the widespread crop failure of rain-fed fields due to a severe lack of water.

Sustainable agriculture techniques were successfully adopted by the farmers in this project. Of the many practices that farmers were trained in, mulching, minimum tillage and manure-making continue to be the most popular. Organic manure application in particular has proven popular, with around 44% of all households practising the technique. Communities greatly value these techniques for the benefits they provide in limiting the impact of climate change.

A total of 293 households received livestock as part of the programme and the sustainable model means that 105 animal offspring provided through the project were passed on by the end of the project to other families.

A total of 130 VCPC members (96 female and 34 male) were trained during the course of the project, and disaster management plans were established for each of the 16 villages. They positively demonstrated resilience to recent climate shocks, and have worked well with authorities and organisations to co-ordinate disaster response activities.





Promising practices

The MLERP has demonstrated a number of promising practices that should be incorporated into SCIAF's future projects when implemented in similar contexts. Most of the promising techniques indicated in this report have been documented directly from the project participants.

The MLERP was implemented by CADECOM Mangochi, who is a locally based nongovernmental organisation (NGO) with a strong presence in the target district. The following aspects of the project represent the positive elements of its design and implementation.

Holistic design

The main strength of the MLERP was the holistic approach it took, where different project components built upon one another to strengthen the overall impact of the project. To provide farmers with a safety net, they were supported to try different areas of farming methods to help counter extreme weather conditions.

Understanding the need

The project approach, aims and objectives were informed by the target audience, and a thorough needs assessment by CADECOM Mangochi provided a baseline at the start of the project. This, coupled with CADECOM Mangochi's longstanding relationship with the community, helped buy-in for the project and contributed hugely to its successful implementation.

Capacity-building approach

Inputs such as improved seeds, livestock and cash for work were key elements of the project and promoted capacity building. Community management committees, on the other hand, were set up and trained to oversee the implementation of the project, with the support of the CADECOM Mangochi field staff and local government staff. These management committees enabled two field staff to work effectively and support 3,000 households.

Ensuring that the community was on board with the project approach, and building their knowledge and capacity with new agricultural methods enabled it to take ownership of the project and ensure that the project continued to meet their needs. The skills they have learned go beyond the life of the project and continue to be an asset long after the project has ended.

"We as CADECOM, we are just facilitators... it is their (the communities') project."

Anastanzio Makulula, CADECOM Field Officer

Working hand in hand with government staff

CADECOM Mangochi implemented the project with the support of local government staff from the departments of irrigation, disaster management affairs, agricultural extension services, public works and trade and industry. This close co-operation ensured that both sets of skills and experiences were fully utilised to successfully implement the project.

The inclusion of government representatives provided further endorsement for the project and has helped ensure that the community will continue to work with them.



Figure 3: Mulching using stalks and grass to cover the surface of the soil

Sustainable agriculture

The project beneficiaries were taught a number of different sustainable agricultural methods to improve their yields in the face of a more unpredictable climate. By the end of the project, 85% of the 3,000 participants had adopted at least two of the methods they were trained in, such as manure application, mulching and minimum tillage. The farmers were taught in groups, at a demonstration plot, which enabled them to work together and tackle challenges they faced as a community. This peer support system proved a very effective model in promoting community cohesion and sustainability of the project.

Mulching using maize stalks and grass to cover the surface of the ground has made a big difference to both irrigated and rainfed fields. The layer of material over the soil reduces evaporation from the soil; when the mulch decays, it increases the micro-nutrient content of the soil. Minimum tillage of soil when preparing the land is crucial for soil and water conservation. It has also been effective in reducing the number of weeds that take hold in the soil. Long-term application will improve soil quality.

Manure preparation from livestock droppings has proven to conserve moisture in the soil, and to restore soil organic content and micro-nutrients.

Diversifying crops proved to be a great support mechanism for farmers. Farmers who usually only produced maize were supported to also grow vegetables such as cassava, potatoes, pumpkin, soya, pigeon peas and develop vegetable gardens. This improves soil fertility, but also provides an alternative harvest in the event of one crop failing.

Tenesi Limao

Tenesi Limao is a farmer who lives in Katole Village with his wife and two children.

During a time of intense drought, when the harvests of most farmers who were relying on rain-fed agriculture had failed, Tenesi has reaped the benefits of adopting the farming methods he learned from the project, such as mulching, tillage and the use of manure in his fields. This year, he harvested around 600kgs of maize from his half-acre plot, which was markedly different to his neighbour's harvests.



Figure 4: Tenesi Limao with maize harvested from his field

"The others who didn't do it (mulching, manure and no tillage) got nothing."

Tenesi Limao

Irrigation

Three different types of irrigation systems were implemented in this project: treadle pumps, solar pumps and motorised irrigation pumps. Of the three, treadle pumps were the most successful and have led to farmers actively planting and harvesting crops at least twice a year.

Practices required for a successful irrigation scheme include:

• a written constitution between all members of the irrigation projects detailing roles and responsibilities, an

irrigation schedule, maintenance fees and sanctions for breaches of the agreement.

- working within existing land tenure arrangements to avoid conflict in communities.
- using technology that can be easily maintained using locally available materials or which can be replaced locally at a reasonable cost.
- ensuring that regular contributions by association members are adequate for maintenance and replacement of pumps.

Nice Yobe

Nice Yobe is a smallholder farmer who lives in Mbapi Village. He has six children, five boys and one girl. Nice is a member of the local water management committee. The committee is made up of 30 people and within this, there are smaller groups of four or five people who share a treadle pump provided by the project.



Figure 5: Nice Yobe with his family

Now that he is part of the irrigation scheme, Nice grows crops twice a year. His main crop is maize, which is supplemented with cassava and nutrient-rich vegetables such as pumpkin.

Nice has learned a lot of sustainable agriculture techniques through the project. He feels that manure application has been one of the most useful in providing a better harvest.

Prior to getting involved with the MLERP, Nice had a tough life as a fisherman:

"Before, I was in the water too much, it was about just catching and eating and living day by day."

Nice has benefitted hugely from being involved in the irrigation scheme. He now grows enough crops for his family and can sell the remainder at a local market.

"since I have started using manure, people have been amazed to see how well my plants are doing and are keen learned about."

With additional income, he has managed to construct a new house, and all of his children now attend school.

to know what i'm doing. It's been great to tell them about the different methods I have



Figure 6: Nice using a treadle pump

VSL clubs

VSL clubs have demonstrated supportive links to most other elements of the project. As such, they represent the core of the resilience building and entrepreneurship activities. One of the key features of the VSL clubs is that they provide a source of income in times of need, and promote money-saving schemes when people are in a position to save, enabling communities to become more resilient to future shocks.

Even in highly challenging economic and climatic conditions, the continued functionality of VSL clubs demonstrates a strong element of sustainability. VSL members are adamant about continuing the initiative: "We will still find a way to contribute, even if it means we are only able to contribute a little at a time." (MLERP participant, Matekwe Village).

The VSL clubs were successful as a result of:

- strong and clear rules to define the functioning of the VSL club. These are decided among members and bound in a written constitution.
- locally appropriate values which are assigned according to the shares each member holds which correlate directly to their loan limits.

- the sharing of dividends timed in line with the rainy season, when demand for resources to be used in farming inputs, maintenance, food and school fees are at their highest.
- the most successful VSL members using the resources provided by the club to strengthen other livelihood aspects of the project, such as livestock, irrigation farming and business.

As a result of the VSL clubs, a number of people set up local IGAs such as grocery shops, selling vegetables, fish and small snack stalls and tea rooms. Wider trading outside of the community was also established, and has been very lucrative but required greater capital start-up. This was done primarily in the form of exporting locally-caught fish into a chain that supplied major towns. Some people also bought goods and vegetables outside of the local community as these could be bought cheaper and sold for a profit.

Stelesi Labani

Stelesi lives with her husband Macdonald in Binda Village. They have three young daughters. Stelesi is a member of the 'Gwirizano' VSL club, which she joined when the project first started in 2014.



Figure 7: Stelesi Labani with a bicycle she acquired through her business activities





Figure 8: Stelesi and Macdonald Labani with their youngest daughter

Lenia Benson

Lenia lives in Manzi Village with her husband and four children. She is a member of the VSL club called 'Tikondani'. Prior to taking part in the MLERP, Lenia was a subsistence farmer and lived in a village close by. These days, Lenia spends most of her time in a grocery shop situated in a small trading centre. Her family owns the premises, which also includes a business centre tenant and two small film houses. They currently live in a house that is situated directly behind the shop.



Figure 9: Lenia Benson

With the dividends and profits in Lenia's first year (£105.26), she decided to invest everything they had into growing tobacco instead of maize, so that they could sell it

for more money. They harvested a very large crop, and decided to take their profits to buy property in the trading centre. This is now where they live and work.

The property is worth substantially more now as demand for space has grown considerably over the years. In addition, sub-letting one shop brings in £9.47 a month for the household, while the grocery and film houses generate additional steady income for the family. Through the MLERP, she has learned about how to calculate profit and loss, as well as the importance of maintaining good relationships with customers. These business skills have been essential in the establishment of a thriving suite of businesses.



Figure 10: Lenia runs a well-stocked grocery shop

Livestock ownership and management

The livestock scheme included the provision of goats and dairy cows to selected project participants who in turn were able to pass on their animal offspring to other targeted project participants. The participants were taught basic techniques around livestock management. In addition, selected individuals from each village were given in-depth training in basic veterinary care as community vets, with the help of the government veterinary department. They were also given starter medicine kits to provide basic local veterinary services to the community. Some of the promising practices identified in this area include:

 building a raised house out of wood, which helps to improve the health of livestock, as droppings which can cause foot rot fall to the ground below. This also helps protect small livestock from predatory animals such as hyenas and snakes.

- establishing an authority to review the project which is pivotal to its successful implementation. The pass-on scheme is governed by a village committee and is supported by the local chief. This is the point of recourse if there are any complications or conflicts relating to the scheme.
- training on health enables participants to look for signs of ill health among their livestock, and prevents their animals from becoming seriously ill.
- establishing local veterinary assistance in the form of community vets which helps to provide essential community support, whereby common ailments and birthing complications are able to be effectively addressed at a community level.

Ephraim Jestino

Ephraim Jestino lives with his wife Maria and their four children in Yesaiyah Village. In 2014 Ephraim received two goats from the project. He now has three in total and has already had the opportunity to pass on two of the kids to the next participant in line.

Prior to joining the project, he had neither assets nor any safety net during difficult times; his small herd now provides him with that security. The goats enable him to make nutrient-rich manure which has made a big difference to his yields. "The manure goes straight into the field and it helps a lot! We actually have four sacks already made and are waiting for the rainy season to start so we can apply it." Ephraim Jestino

Community vets trained by the project are a huge asset to farmers like Ephraim.

"Recently, the goat had red and weeping eyes, so I took it to the community vet who advised me to use penicillin mixed with Vaseline. The goat got better in just two days." Ephraim Jestino



Figure 11: Ephraim and Maria Jestino next to their raised corral

Catherine and Kondwani Manyumba

Catherine and Kondwani Manyumba have five children, three boys and two girls. Catherine is an experienced livestock farmer.

Even though Catherine is an established livestock farmer, she has benefitted substantially from the project by learning about techniques, such as the raised corral for the goats which prevents disease and protects the livestock from predators. She has also started to use manure on her crops. Catherine's husband, Kondwani, was trained as a community vet and is experienced in treating minor ailments for the village. Common conditions treated include pneumonia, coughs, minor injuries, leg breaks and birthing. His normal procedure is to recommend the medicine that the livestock owner then procures and administers. He estimates that he deals with around ten cases a week; his experience and training helps him to provide a valuable service to the surrounding villages.



Figure 12: Catherine Manyumba



Challenges

Climate shocks

Climate shocks during the course of the project have had a significant effect on its impact and outcome. Malawi has suffered two consecutive years of being plagued by natural disasters. Severe flooding and dry spells in 2014 and 2015 were followed by an El Nino related drought in 2015 and 2016, one of the worst in recent history. In an area where livelihoods are strongly dependent on rain-fed agriculture, the impact of this on communities has been significant.



Figure 13: Maize field during a recent drought

The capacity-building approach to improve resilience in communities has helped targeted communities in dealing with the impacts of climate change. Irrigation in particular has been a key element in improving resilience to recurring shocks, while livestock assets and the VSL clubs have been essential in providing an alternative means of income. Additionally, the promotion of high-quality, early maturing seeds and technologies aimed at improving soil and water conservation and quality have resulted in higher yields. Thus, while climate shocks have heavily impacted on project participants, the project has helped to shield them from the worst and they have fared much better than those who have not been involved in the project.

"The practices that we learned about have proved to be very effective. I did box ridges in my field last season, and even though the rains were not adequate, I managed to harvest some maize." MLERP participant, Yusef Village

Motorised and solar irrigation

Motorised irrigation schemes have the benefit of being able to service a much larger area of land than treadle pumps. It is also possible to use a deeper well or borehole, which means water is available even in the dry season. However, as the pumps are diesel powered, they require continuous fuel and maintenance to run. The cost of fuel, maintenance and logistical issues involved have proven to be unsustainable for the project participants.

The implementation of solar schemes presented some challenges in terms of maintenance, with lack of locally available expertise to rectify issues. This led to long periods of the pumps being non-functional, which is detrimental to farmers dependant on irrigation.

Land tenure and irrigation

Customary land laws that apply to much of rural Malawi state that ownership of land is technically in the hands of the traditional authorities and chiefs. However, farmers who have been granted land and utilise the land have a claim to it. As such, fields can be held in the same family for generations along either matrilineal or patrilineal lines. Farmers in rural communities often provide an annual portion of the harvest or other financial and asset contributions as a 'gift' or 'tribute' to the chief for use of highly productive land. Despite these arrangements, security of tenure in terms of formal title deeds or rights is tenuous, and things can quickly change within the local context.

In terms of the MLERP, challenges related to the exclusions of some farmers from irrigation schemes, as they did not already hold land in these areas. Existing land tenure arrangements in the irrigable area close to the lake meant that community members who did not have an existing claim to the land could not be selected as part of the water management associations. As a result, some of the poorest community members may have been excluded from the irrigation initiative.

Key learning and recommendations

Buy-in from key stakeholders such as project participants and the local government is key to the successful implementation of a community project such as this. As such it is vital to ensure the needs and constraints of project participants are taken into account and principal stakeholders are included in the planning and implementation process from the outset.

Recommendation 1: include key stakeholders in all aspects of the project, from project design through to implementation, monitoring and evaluation.

Recommendation 2: diversify farming and sources of income, including setting up effective VSL clubs to compliment agricultural practices and to provide a safety net for smallholder famers during difficult periods.

Recommendation 3: incorporate climate unpredictability as the 'new normal' in the project design and include early warning systems, seasonal projections and flexibility in order to respond effectively to unpredictable weather conditions.

Recommendation 4: establish new techniques and technologies to improve production and farming practices and to provide resilience to climatic shocks.

Recommendation 5: identify early adopters and champions who can be trained in key aspects of the project to promote essential learning at a community level, which in addition to tailored programme design and implementation, will help ensure project sustainability.



I would encourage you to keep in mind all those people around us who are trapped in a cycle of poverty. They too need to be given hope.
Pope Francis, Laudato Si'

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