

## The Sustainability of Donor Funded Projects in Malawi

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### Abstract

*This study was conducted against the background of unsustainability of donor funded projects in Malawi. Adopting an extensive review of primary and secondary sources of data relevant to the projects and underpinned by participatory development as a theoretical framework, the study was aimed at evaluating the sustainability of donor funded projects in Malawi. Particular focus was given to food security projects because they address one of the major priority areas in Malawi. The three selected projects were reviewed based on the development approaches which they promoted in their implementation of the development projects. We argue that participatory approaches to development significantly impact on the sustainability of development projects. Sustainability was determined by how much the implementation process empowered the communities to sustain the development initiatives after the projects have been phased out.*

**Key words:** participatory development, sustainability, empowerment donor funded development projects.

### 1. Introduction

Malawi is a small land-locked Southern African country. Like most developing countries, the country is deeply entrenched in poverty and this is a major obstacle to Malawi's development and growth (IFAD, 2007). In trying to address poverty, the country depends on foreign aid to shore up its weak economy and overcome food shortages. Quite a number of development projects are being implemented such that 14% of Malawi's gross Domestic Product may be attributed to foreign aid (IFAD, 2007).

Rural development occupies a prominent position in Malawi's development plans. Agriculture is the backbone of Malawi's economy accounting for 36% of the GDP. It employs about 80% of the workforce, and contributes over 80% of foreign exchange earnings. The country's rural development efforts have tended to focus on improving smallholder agricultural productivity because 90% of the rural population earns their livelihoods from agriculture (Chipande, 1984). Agriculture is also the most important source of income as it accounts for 67% of the total income for the rural poor. Above all it also contributes significantly to national and household food security (National Irrigation Development Policy and Strategy, 2000)

Most development efforts in terms of donor projects are therefore related to agriculture. It is no wonder therefore that agriculture and food security is one of the priority areas in the Malawi Growth and Development Strategy (MGDS). The MGDS is a medium term development strategy for Malawi the main thrust of which is to create wealth through sustainable economic growth and infrastructure development as a means of achieving poverty reduction. It is aimed at transforming Malawi from a predominantly consuming country to a net producer by 2011 (MGDS, 2006)

However, "agriculture in Malawi is characterized by low and stagnant yields" (MGDS, 2006). In addition, the sector is characterized by overdependence on rain fed farming which increases vulnerability to weather related shocks. There are also low levels of irrigation development and low uptake of improved farm inputs. Consequently, Malawi continues to suffer from chronic food shortages.

As a way of promoting food security, quite a number of donors are continually funding food security projects. Most of these projects have an average life span of 5-years. It is the hope of both the donor and the government, that project beneficiaries will be able to sustain development initiatives executed during the project life once the project is completed.

A review of the Malawi Poverty Reduction Strategy (2006) revealed that poverty rates have not changed significantly for the past seven years. And according to the Integrated Household Survey (2004:05), the current status of

poverty shows that 52.4% of the population lives below the poverty line, with the rural areas being poorer than urban areas and female headed households are worse off. Approximately 30% of the poor moved out of poverty during the seven year period reviewed in the survey, while 30% of the non-poor moved into poverty. This suggests that there is continued economic vulnerability in Malawi (MGDS, 2006).

This situation is contrary to the expectation that every donor has on any specific program or project's intervention. The expectation is that any intervention should produce sustainable benefits and impacts on the population. Given that there are many poverty alleviation projects in Malawi, but that poverty persists, it seems that these projects are not having a long-term effect. Thus, it is important to examine whether or not the development initiatives begun with these projects are being sustained after completion of the project.

The question is what could be the reason for the rural communities to fail to sustain the development? On the other hand, if the lack of sustainability has something to do with how these projects are implemented, then what could be the best way of implementing development project that ensures sustainability?

Since Malawi depends on foreign aid for most of its development programmes the challenge, therefore, is to make these development programmes sustainable so that there is improvement in the lives of the poor. This requires employing strategies that reach and empower the socially and economically poor farming communities to implement sustainable food security projects. These strategies should be sufficient enough to generate the level of economic activity among smallholder farmers. In addition, these strategies should also be necessary for sustainable poverty reduction and lessening continued dependence on donor funding.

Therefore, there was a need to find out the reasons for lack of sustainability of these projects and to suggest the best approaches for them to follow in order to achieve sustainability. The study therefore hypothesizes that sustainability in food security projects would only be achieved if donor supported projects were designed to allow for participatory processes from their design to implementation.

## **2. Research method**

This research focused on assessing three phased out food security projects implemented in Malawi which were funded by donors. Food security projects were preferred because of their high priority status in addressing poverty in Malawi. The Malawi Government puts a lot of effort in food security in order to address household food insecurity.

The three projects reviewed in this research were supported by various donors, including the European Union (EU) and the International Fund for African Development (IFAD). Phased out projects were selected as the unit of analysis because they provided the whole picture of what was accomplished in terms of the benefits and impacts made to the local community. The choice of these projects also accommodated projects implemented by both the Government and NGOs. This was done deliberately with the aim of comparing how the nature of the implementing agency affects sustainability of the projects. It has been argued elsewhere that NGOs due to their nature are closer to the beneficiary hence more able to empower the community (Jennings, 2000). However, the inclusion of the Government implemented project helped in suggesting how existing institutions can be empowered to assist the rural community in sustaining development programmes. Qualitative analysis of existing data was the main mode of conducting this research. The main project documents used were the final evaluation reports or project completion reports. The study also used information based on theoretical works and other primary sources like the country strategic papers, policy documents, donor agencies' country reports on development in Malawi. References were also made to secondary sources, such as journal articles on development projects in Malawi and books on theories of sustainable development. These assisted in understanding the prevailing local situation in Malawi and how issues on sustainable development have been handled from the past to the present. Comparisons were made between the project expectations at project inception and the benefits and impacts of the projects at the close of the project. Challenges faced during the project implementation and the current environments of these projects were all taken into account. These include institutional, economic, social, political, etcetera. Using all these tools, the research was enabled to determine whether the development initiatives are being sustainable. Thus sustainability was captured by analyzing projects reports to determine how much empowered the communities were to sustain projects benefits on their own. Where the development initiatives were not sustainable, the study established the main causative factors. Suggestions were therefore made as to what strategy could be employed in order to ensure sustainable development in the communities.

Three projects were analyzed to find out whether they were sustainable or not. All these projects were trying to address the problem of household food insecurity in their specific areas of implementation. To ensure uniformity and consistency in the way these projects were evaluated, the following areas were analyzed;

- The relevance of the projects which involved analysing the projects' identification process and objectives. What problems were identified leading to the establishment of those projects? What were the objectives of the projects and what approaches were being used during implementation?
- Project activities and their benefits to the community were analyzed including issues of beneficiary empowerment and local institution empowerment.
- The impacts of the projects and their contribution towards food security were also analyzed.
- Sustainability of the projects in all the steps taken by the projects during implementation.

All the reports used in this study were final evaluation reports compiled either by the projects themselves, in some cases the donor or external evaluators. In all the evaluations the farmers' views were captured and visits were made to the project sites by the people who compiled these reports.

### **3. The Ngolowindo irrigation scheme**

Ngolowindo irrigation scheme was a community development project located in Salima district in central Malawi. This district is one of the food deficit areas with very low productivity, low availability of inputs and high vulnerability to uncertain weather conditions. The scheme's membership was drawn from eleven surrounding villages. It started as a self help scheme in 1987 with start up funds from the European Union but implemented by the Ministry of Agriculture through the Department of Irrigation. This partnership remained in place until 1995 when the scheme was handed over to the participating members of the community in line with the requirements of the National Irrigation Policy and Development Strategy (2000). Subsequent to the 1995 hand-over from government to the local farmers, the scheme remained operative but did not reach its full potential. The scheme's progress stagnated due to organizational challenges and poor maintenance of scheme infrastructure especially irrigation infrastructure. The main factors impinging on its success included low levels of skills and resources required to manage the scheme which also contributed to them encountering marketing problems. In 2001 the scheme members decided to form a cooperative, known as the Ngolowindo Horticultural Cooperative Society Limited.

The problems encountered by the scheme prompted a European NGO called Co-operation for the Development of Emerging Countries (COSPE) to get involved in the scheme. To address these problems COSPE adopted an overarching objective of improving food security and reducing poverty at the household level, through small scale agricultural production projects and income generation. This objective would be achieved through the upgrading of technical and human resources, crop diversification, and the improvement of market access. Thus with the support from the project the irrigation infrastructure was upgraded to benefit 140 smallholder farmers who belonged to the already existing cooperative. The irrigated area increased from the initial 14 irrigated hectares to 17 hectares. The project provided additional infrastructure such as pumps and sub-merged electrical channels, green houses, an office and storage room (including a cold storage). Other support from the project included technical support in issues like ploughing, planting, land management and servicing of the irrigation equipment. The Government through the Ministry of Agriculture also provided some technical support.

These interventions brought reliable water supply through the installation of reliable water pumps, as well as the necessary inputs of fertilizers and a regular seed supply. In addition, the newly constructed storage facilities and greenhouses allowed for multiple harvests and enabled good management of fields through crop rotation. The project's involvement brought effective marketing strategy in place. Sales were now no longer made directly by individual farmers to customers who came to the farm to purchase produce. Farmers now had a guaranteed market with assurance of competitive prices. Competition between farmers for the same narrow market which caused local tension was removed. Through project intervention, farmers learnt the need to stagger horticultural production across the year to ensure demand driven supply of produce to the market throughout the year. The project developed a marketing plan which formed a basis for establishment of an improved marketing system for the cooperative. As a result, farmers could now supply produce to the central sorting shed grading, weighing, pricing, and packaging prior to sale. These processes were undertaken by the cooperative, thereby, ensuring fair prices, reduced internal competition among farmers, and allows for bulk sales to more distant retailers. The cooperative markets large volumes of the produce through direct sales to three large supermarket chains in Lilongwe. Ownership of a truck, provided to the cooperative by the project removed the middle-man from the process.

The project made considerable contribution towards improving the food security situation of the members of this cooperative through the multiple harvests. This was as a result of increased soil fertility through the use of fertilizers and

pest control, and improved water supply through the water pump and flood irrigation system. Most of the cooperative members doubled or tripled their cash incomes through the project's intervention. This was as a result of the establishment of the new marketing system and the ability to reach the markets by having access to their own transport which the project provided (project report, 2000).

However, the implementation of the Ngolowindo Irrigation Project had a number of challenges and limitations which affected its sustainability. Although the project was implemented within the timeframe and all the support was provided to the farmers, but the farmers' institution itself was still facing major challenges after the closure of the project. These emanated from the inadequate empowerment of the farmers by the project. Thus, even though the cooperative required a great deal of Institutional strengthening but the main initial emphasis of the project activities were on physical rehabilitation of the scheme. Institutional strengthening was done towards the end when it should have been done first prior to the provision of additional infrastructure.

Another problem that affected the sustainability of this project was concerning the type of technology used by the farmers. Thus, the original choice of the electrically powered pump for irrigation was inappropriate and the decision by the project to add an additional pump further compounded the problem. After closure of the project, the farmers started encountering the challenge of over-reliance on a technology that is difficult to fix or replace without the assistance of the project. The cost of infrastructure maintenance was high. In addition, the scheme was still unable to pay its electricity bills especially due to the fact that electricity for irrigation is charged at the full commercial rate. As a result, farmers were unable to run what had become a far more sophisticated undertaking on their own. Additionally, even though the cooperative undertook training in crop diversification, the main cash crops still remained to be tomatoes and onions. This was so because the cooperative failed to establish reliable markets for other types of vegetables (project report, 2000).

The high cost of running the electrically empowered pumps and the high dependency of the cooperatives' members on outside intervention made the irrigation system selected inappropriate. Therefore it is very difficult to sustain the benefits of the projects intervention.

All these problems negatively affected the sustainability of this scheme such that two years after the withdrawal of the NGO, the cooperative remained incapable of meeting its recurrent expenditure. The evaluation also established that members were continually unable to pay their dues to the cooperative on time. This poses doubt of its long term viability without any outside intervention.

#### **4. The Dedza food security improvement project (DFSIP)**

The major objective of this project was to improve food and livelihood security of rural poor households in Malawi. Specifically, the project would achieve this by improving agricultural productivity, income and nutritional status of 8000 rural poor households in the Traditional Authority Kachere in Dedza district in the Central Region of Malawi.

The project targeted resource poor households selected by the community itself. The beneficiaries were drawn from 108 villages. The identification of the problems to be addressed was done using the Participatory Rural Appraisal. PRA is an approach involving use of local knowledge which enables the local people to make their own appraisal, analysis and plans (Chambers, 1992). The results of the PRA revealed that 75% of the households were in the category of the poor to the poorest. Household food security was the main problem that affected the area as evidenced by the low levels of production. Food insecurity coupled with low-income levels to purchase food resulted in low food intake in terms of meal frequencies and the nutritive value of food consumed leading to high under-five malnutrition rates (CU Baseline survey, 2003).

DFSIP followed an integrated approach to achieving its overall goals of improving food and livelihood security of rural poor households in Malawi. In order to ensure ownership of the project by the beneficiaries, the project adopted the systems and structures of local governance advocated by the Local Government Act (1998) and the decentralization policy. The aspect of sustainability was addressed through sensitizations, empowerment, and commitment of the targeted communities to enable the community to identify their own problems and provide solutions. The implementation of various activities was through the existing local structures (Village Development Committees), government extension structures, and also in collaboration with other partners.

The project achieved increased agricultural diversification by ensuring sustainable availability and management of various types of seeds and planting materials at village level. Seed bank committees were established and trained to manage the seed banks which provided a readily available local source of seed. Ownership of livestock greatly increased through the establishment of the livestock pass-on scheme. The DFSIP- project evaluation report (2007) indicated that 94% of the households in the area acquired goats through this scheme. This scheme was empowered through provision

of training offered to the village livestock committees and also through the provision of animal drugs via the drug revolving fund at village level. Sustainability of the scheme was further ensured by strategically placing specially trained people to continue providing key services to the farmers after the project.

Agricultural and Environmental Technologies/Practices were improved through various interventions such as fish farming, mushroom production, small scale irrigation, bee-keeping and village level natural resources management. In all these practices, trainings were provided to specific village level committees. Where technical assistance was inadequate, the Village Extension Multipliers were trained to provide farmer to farmer extension services, thereby ensuring sustainability of the technologies introduced.

Nutrition and health education was improved through use of well-trained community based nutrition volunteers who provided technical assistance to other community members. In order to diversify the economic base of the rural households, the project facilitated formation and training of an association which was made up of clubs and group action committees. This Association was responsible for coordinating marketing activities of the farmers in the project area. The Association managed on its own to bring the much needed competition among buyers through its efforts which succeeded in raising the vendor prices in competition with offers from companies.

The project managed to achieve very high adoption rates of quality agricultural technologies which it promoted through the use of improved Extension Delivery and Communication Systems. Even members of the wider community not targeted by the project were also adopting technologies promoted by the project. The use of the Village Extension Multipliers was particularly the most effective vehicle that the project used in promoting farmer to farmer learning. These VEMs were trained in extension methodologies and technical issues according to area of specialization. The project also used a number of strategies to reach out to the farmers. These included establishment of model villages and village resource centres, distribution of leaflets, on-farm demonstrations, field and open days, extension campaigns through use of mass communication mobile van, and drama performances.

To ensure improved management of information systems and also taking into consideration that the project design was based on the sustainable livelihoods framework, the project adapted the United Kingdom's department for international development's livelihood asset status tracking (LAST) tool to be used to track changes in the livelihood capitals of the target communities. As a result a total of five LAST assessments surveys which were conducted showed that the project made positive strides towards building household capitals; the mean LAST score shows that the majority of households have moved from the poor to the better off category. To enhance the capacity of community members in monitoring and evaluation, community members were trained in community-based monitoring and evaluation. All the Village Development Committees (VDCs) in the project met on monthly, quarterly and annual basis to review progress that had been made and to plan for the coming period. This resulted in the VDCs members owning the process and taking a leading role in ensuring that what had been planned was implemented (because they formulated the plan themselves in line with their expectations). The project networked and collaborated with other stakeholders from Government line-ministries, other NGOs, and the communities at large. However, any modifications made on the approaches used were based on various surveys that the project carried out such as baseline survey, nutrition survey, capacity assessment survey of community-based committees in the project area, assessment of the pass-on scheme, feasibility of fish farming, irrigation and mushroom production, and HIV & AIDs KAP surveys.

The project addressed cross cutting issues with full participation of all the stakeholders. Thus on decentralisation, the project empowered the decentralised structures in various skills. The project had such great impact on the local governance and service structure as evidenced by the Dedza district assembly's confidence in the project's approach as a model that should be adopted by other development partners in the district. On HIV and AIDS, the project facilitated formation of Community Based Organisations (CBOs) which were effectively empowered such that they were providing valuable care and support services to the communities. The project also trained VDCs on human rights, gender and gender-based violence. The LAST assessment tool showed that the mean participation index for women which was at 9.97 was higher than that of men which was at 9.80 unlike in 2005 where the mean participation index for women was at 7.00 and that of men at 8.00 (the participation Index was used to establish the extent to which households participates in project interventions).

The project contributed towards improving food security in the area by significantly reducing the food deficit months from 6 to 1.8 (DFSIP project evaluation report, 2007). The report further states that 76.9% of households had food to last them the whole year. The National agricultural production estimates (2006/07) further indicated that only 0.65% of the households were food insecure in the project area. In addition, the project helped in increasing household income levels and reducing susceptibility to shocks such as drought due to agricultural diversification. The project also

contributed towards the reduction in under- five malnutrition status and it improved the health status of the communities in the project area.

However, the program design and implementation was faced with some challenges. The major challenge was the state of the decentralization structures at project inception. The structures were poor and needed some investment in terms of time and financial resources to have them develop to a state where they could be used in program implementation. Inadequate government extension workers also posed a major challenge. According to the program design, the project was to rely on the government frontline extension workers but the numbers were not adequate to meet the demand of the program. The other challenge was the impact of the HIV and AIDS pandemic in the target area. The initial project plan was to conduct awareness campaigns on HIV and AIDS. However, the situation on the ground required more than just awareness and hence the project approach had to be adjusted. Some project efforts were therefore diverted towards HIV and AIDS impact mitigation. The project also had very few people who adopted technology early such that adoption of technologies was mostly done towards the end of the project. There was high demand for different activities towards the end such as bee-keeping and mushroom production. These were not in the project document; as a result funds for other activities had to be diverted to support these activities.

Despite these challenges, sustainability of the project was relatively achieved because overall, given the following observations. The project was well-designed and integrated well within existing development structures. Relevant stakeholders from the district such as agricultural, health and nutrition, fisheries and forestry personnel were consulted and involved right from the beginning of the project. The project took more of a facilitation role and implementation was through the government decentralized structures in line with the decentralization policy.

The project had in-built self sustaining mechanisms as evidenced by its reduced susceptibility to weather shocks. For instance during the drought that occurred during the 2004/2005 growing season, farmers benefited from the livestock pass-on scheme because they were selling livestock as a coping strategy so as to buy other types of food i.e. maize.

Programming of the project was based on the sustainable livelihoods framework, which is also commendable as it ensures sustainability of development programs. In addition, the project had several implementation approaches that ensured sustainability of activities. These included working jointly with government officials especially the District agriculture office that will continue to provide backstopping services to the farmers and refresher courses. The project also trained the farmers through farmer field schools and also used the Village Extension Multipliers who provided extension services and training to their fellow farmers. The project also had in-built exit strategies right from the beginning such as seed bank development and animal pass on programs which were initially provided by the project such that the communities were empowered to manage their own resources using these strategies. However, future sustainability is threatened by the rising costs of agricultural inputs.

## **5. Smallholder floodplains development programme (SFPDP)**

This programme focused on rehabilitation of self-help and Government irrigation schemes and construction of new model irrigation schemes. In line with the National Irrigation policy and development strategy (2000), the focus was on organizing the farmers in the schemes into Water Users Associations (WUA) for sustainability. It was implemented by the Ministry of Agriculture through a loan received from the International Fund for Agriculture Development (IFAD). It was implemented from 1998 to 2006 in four districts of Karonga, Nkhoskotota, Machinga and Balaka with a target of 78,000 resource-poor smallholder households.

The three main objectives of the programme were to improve household food security of resource-poor and vulnerable flood plain smallholder families; to improve nutritional and health status of these families; and to provide critical health and drinking water services at the community level. Secondary objectives of the programme were to create a capability at the grass-roots level for community based associations to develop and manage their own water resource activities and to strengthen the long-term capacity of public and non-governmental institutions concerned with supporting the farm water use and irrigation sector in Malawi.

The formulation of the project was based on freshly conducted studies in the irrigation sector and workshops involving a wide cross selection of stakeholders. The formulation studies involved participatory rural appraisal exercises in all the potential areas identified, water resources assessment and financial assessment. Participatory approaches were a key issue in the design of the project. The design required establishment of farmer organizations which would be given the capacity to take over management of the developments after the project. The programme design also recognized the lack of capacity amongst staff members and therefore contained a significant amount of programme

specific capacity building for staff members in the project areas. In order to strengthen the long term capacity of public and non-governmental institutions concerned with supporting the farm water use and irrigation sector in Malawi, the design of SFPDP involved use of an NGO (Concern Universal).

The programme implemented capacity building and institutional support initiatives with the aim of re-orienting government staff towards working in response and in partnership with the irrigation smallholder farmers. Therefore, the programme supported training of students in irrigation engineering at Masters and Bachelors levels. Short courses for staff in irrigation were also supported; these initiatives resulted in creation of capacities and structures with local colleges involved to produce graduates at various levels in irrigation related training. To build institutional capacity of the farmers, eleven Water Users Associations (WUAs) were formed and registered to the Trustees Incorporation Act, as non-profit making organizations. All these WUAs were trained by an NGO in all the appropriate modules for their sustainability. An NGO known as Concern Universal was recruited to assist in farmer mobilization and implementation of the Community infrastructure. Regular coaching exercises were also conducted to enhance the impact of the trainings. Land tenure issues are very critical for irrigation development; therefore, the project put a lot of emphasis on these issues by involving all stakeholders. This led to all WUAs acquiring land leases.

On Irrigation Development of the floodplain areas, the programme aimed to develop three new model schemes, with the possibility of using them as pilot schemes for later replication. However, only a quarter in each of the two schemes was completed. The reasons for the poor performance of model schemes included poor entry strategies because the consultant engaged failed to utilize ideas from the local communities. Continuous changes in scheme designs, poor disbursement of funds on part of the donors and the overstretched staff capacities led to slow implementation progress. On the other hand, the programme managed to rehabilitate 50% of the targeted self-help schemes and also managed to rehabilitate 110% of the existing government schemes. Rehabilitation was successful where there were already existing farmer management structures and government staff; this resulted in failure to develop new schemes. Support was also given to promote catchment protection in critical areas affecting the sustainability of the irrigation schemes. In this regard village natural resources committees were formed and they established trees nurseries and they facilitated tree planting on a total area of 60 hectares.

On operation of these schemes, it was generally observed that the design of the project on choice of technologies was inappropriate especially for the motorized and electric pump based schemes. Although these pump based schemes were small, but the farmers did not have the capacity to operate and maintain them because of their high running and maintenance costs. On the other hand, small self-help flood irrigation schemes demonstrated greater success. However, their major challenges were land tenure conflicts and struggle for power between the WUA and the local leadership. These problems required greater attention and efforts to resolve.

On irrigation agronomy and marketing, the programme's aim was to train beneficiaries in agronomic practices by conducting participatory trials, demonstrations and collaborative research for rice and other crops. The programme implemented demonstrations on water management and use of herbicides. However, adoption levels remained low due to poor quality of some demonstrations and few people involved in the demonstration process. In view of this problem, farmer field schools were used for farmer to farmer technology transfer. Seed multiplication was also promoted in the schemes to ensure that farmers used certified seed to realize better yields every year. Crop diversification was also promoted and it greatly improved such that 96% of the developed area was being utilized under different crops in all schemes. The programme collaborated with research institutions and other partners who provided basic and certified rice seed for multiplication, demonstrations and production in the schemes. In order to add value to the rice produced in the scheme, most WUAs acquired rice mills such that they are able to polish and package it. To enhance group marketing of their produce, some WUAs engaged in rehabilitation of old bulking sheds while others had to start constructing new market sheds. This activity was still under way as at the time of the evaluation. Even though the schemes established contacts with different buyers, only 10 to 15% of the produce was being sold through group organized markets. Most of the farmers were still selling their rice as individuals, as a result, most of them lost out.

The programme implemented a number of community infrastructure interventions and support aimed at improving the health and sanitation of the beneficiaries. The project established drug revolving funds (DRF) through drug boxes in all the schemes. These drug boxes were placed in the custody of farmers trained in the diagnosis of common illnesses and dispensing drugs. Overall, the village drug boxes were very successful and became self sustaining. Water points were established and water committees in all the schemes were trained, maintenance funds for all water points were established. The water committees demonstrated the ability to manage these water points on their own, which was for sustainability.

The project also introduced some form of financial services to help these smallholder groups to support irrigation activities. These financial services comprised of three types of grants to the schemes. The first grant was the group procurement fund where farmers were contributing money among themselves for buying inputs for their scheme. Then the project would then deposit into their account double what they had contributed. This grant was working as a revolving fund within the schemes and most farmers were able to access farm inputs with the help of the facility. The second grant was the Innovative Technology fund where farmers were required to raise 50% of a technology they wanted to procure and the project would contribute the remaining 50%. Then lastly, the scheme maintenance funds were provided to all schemes estimates were based on the operation and maintenance manuals for each scheme.

The project made some contribution towards food security through the rehabilitation and construction of model schemes. These structures helped to increase production by enabling increased water extraction and improved distribution & drainage system thereby increasing the cultivated area. High crop yields were realized on plots where water management practices were applied with crop yields ranging from 4332 kilogrammes per hectare to 6332 kilogrammes per hectare. Baseline surveys conducted by the project revealed that food security of beneficiary households rose from 23% to over 70% by 2006. Over 54% of targeted households reported improved diets due to an increase in harvest, diversified food sources and income from irrigation schemes. The per capita income for irrigation scheme beneficiaries rose above the national estimated value of US\$170 to US\$200 per annum. The improved incomes have afforded the farmers a range of goods and services to attain the desired socio-economic status. The improved incomes also allowed farmers to invest in farm implements, farm animals and domestic items.

As observed in the description of the project activities above, the implementation of this programme was faced with a number of challenges and limitations. It was noted that even though the design of the programme was holistic in nature, but it was over-ambitious as it tried to present solutions to all the problems identified in the pre-formulation document. The programme made over-optimistic assumptions on government staff capacity to implement the project effectively. Thus, too many diverse activities required numerous institutions to take part in the implementation, presenting a challenge in terms of coordination and stakeholder participation.

The design also did not contain adequate arrangements for retaining staff trained within the project areas. In as much as the transfer of trained and experienced staff from project areas did not affect capacity at the national level, it led to a reduced capacity in the programme areas and this resulted in the need for unbudgeted retraining of new staff. In addition, staff capacities in all the implementing districts were overstretched. As a result there was slow implementation progress of irrigation development resulting in low achievement levels. Inadequate staff capacities also led to low quality of infrastructure constructed, poor designs and inadequate supervision of construction works. In the long run all these affected the cost of construction as the poor designs had to be changed and sub-standard structures had to be demolished.

Farmer trainings mainly targeted committees, and problems arose when these committees were changed. In almost all the schemes there was need to re-train new committees. It was also observed that the training given did not lead to the building of a capacity at the scheme level for continued self-training of the farmers, such that farmers are unable to keep the training materials properly either for future reference or in a form to enhance self-teaching. Slow physical progress also affected effectiveness of training because the farmers could not link capacity building activities to the physical works. In addition, monitoring and evaluation which is an important management tool was not allocated a budget line until halfway into project implementation, thereby rendering it ineffective. Disbursement of funds was usually untimely and erratic without following the farming season. And lastly, approval of work plans and budgets by the donor was usually done late.

However, despite all these challenges, the project achieved some level of sustainability because the program managed to build capacity in staff at national and district levels. This was good for sustainability since the trained government staff would be responsible to continue with the supervision of the development initiatives after project phase out. The establishment of Water Users Associations and capacity building of the farmers was a key to the sustainability of the schemes. Beneficiary involvement in the management of the schemes would be enhanced through these aspects. Through training for capacity building and also other elements which enhance ownership such as water rights and land rights, the farmers were thereby empowered to undertake activities on their own. Demonstrations, trials and farmer field schools concepts empowered farmers to use all the necessary husbandry practices involved in production of particular enterprises. Participatory Irrigation Management prepared farmers towards irrigation Management Transfer (Management handover from Government to WUAs). The WUAs were actively involved in their scheme operation and maintenance with supervision from Government except for one scheme which was not finished. The end of project evaluation report indicated that, the WUAs were now able to contract out civil works to local contractors.

There were sustained benefits from the innovative technologies which the WUAs procured such as the highly modern rice mills. In addition the Innovative technology and Group procurement funds were self- sustaining because they continued to grow since they operate as revolving funds at an interest. These continually improved their net incomes and also increased the financial base for operation and maintenance of the irrigation schemes. The WUAs were as at the time of evaluation managing multiple Bank Accounts.

## 6. Conclusion

All of the projects were incorporating the use of participatory approaches to development. However, there were compromises that were observed during implementation. These compromises to the participatory approach were especially observed on the part of staff whose preference for some technologies affected the sustainability of the project. The staff preferences contributed to how they guided or rather convinced the farmers in the choice of irrigation technologies. The case of the Ngolowindo scheme illustrates this. It was through the project interventions that the cooperative became so sophisticated in its production, irrigation, quality control, and marketing systems. As a result, the scheme required continued outside expertise in order for the scheme to continue operating at the same output levels. The implementing NGO created so much dependency that the farmers were not fully equipped to take over the running of the cooperative. In the case of the Smallholder Floodplains Programme, the electrical pump based schemes failed to take off even until the closure of the project which is frustrating to the community. However, in the DFSIP, only simple irrigation technologies were promoted which the farmers were able to maintain and replace easily thereby ensuring sustainability.

It was also observed that projects were more sustainable if their design had in-built exit strategies right from the start. Such projects did not create any dependence syndrome in their beneficiaries. It was also easy for them to disengage from the community while at the same time ensuring that local participants were really managing on their own. For instance, DFSIP was successful in ensuring sustainability because the farmers were empowered right from the onset. On the contrary, in the Ngolowindo project strengthening of the farmers' institution started towards the end. DFSIP also had other participatory strategies which empowered the communities right from project identification to implementation and even in monitoring of the project activities. These strategies included use of village extension multipliers, seed bank and livestock pass-on schemes.

The implementations of the projects under review also showed that working with the existing government structures was good for sustainability. However, caution must be taken when using government staff because the workload factor on government staff which limits their effectiveness in meeting project targets as they have to attend to other duties assigned to them apart from the project work. It was generally observed that projects which were successful complemented the use of government staff with other strategies. Examples of these strategies include empowerment of the communities in the management of initiatives such as livestock pass-on schemes, seed banks and farmer field schools. The most successful strategy was the use of village extension multipliers in DFSIP who were able to give technical guidance to their fellow farmers without waiting for outside guidance all the time.

Most importantly, it was observed that in as much as participatory projects were able to address the basic needs of the community through involvement of the community themselves, overambitious projects could sometimes be unsustainable. Therefore, the design of the projects should make sure that coordination of all the institutions involved in the project is manageable. For instance in the case of the SFPDP, it failed to coordinate the large number of institutions' and stakeholders' activities which led to some activities being done untimely or even improperly contributing to their unsustainability.

In conclusion, this study acknowledges that other externalities may have intervened positively or negatively towards the sustainability of the projects reviewed. Among others, these include droughts, erratic donor funding, flooding of the rivers. On the other hand, the study suggests that through the use of participatory processes, the communities were empowered to own the projects and maintain the levels of production initiated by these projects. This also provided an answer to questions raised in introduction as it has been observed that rural communities mostly fail to sustain development in donor funded projects if they were not adequately empowered by the project. Therefore, the review of the projects in this study confirmed the proposition that donor funded projects can only be sustainable if they allow for participatory processes from identification to completion.

If sustainability is to be achieved in donor funded projects it is important that the design of all development intervention in smallholder communities articulate how they would work with and/or build capacities of local governance & service structures that ensure effective delivery and sustainability of project benefits. To achieve this, working in

partnerships and/or collaboration with local authorities is not an option but a must in rural community development interventions. In SFPDP, most of its targets were met through the NGO which was recruited by the programme. In DFSIP, the NGO partnered with relevant government departments and the local government structures thereby achieving the much desired sustainability. On the other hand COSPE needed to partner with a well experienced partner to help in institutional strengthening.

This study also recommends that project design should clearly articulate exit strategies and ownership of project assets after projects come to an end. In addition, the communities need to be fully informed about the project's exit strategies. It is also important that any donor funded project targeting to form farmer association or cooperatives, interventions should be designed in such a way that institution building is provided first rather than starting with physical infrastructure or material benefits.

It is also important that the design of interventions involving capital intensive technologies should be appropriate to the capacities of the intended communities. This is especially true for irrigation schemes targeting smallholder farmers. Electrically powered irrigation schemes are therefore not sustainable for smallholder farmers in Malawi because electricity to irrigation schemes is being charged at full rate. Beneficiaries need to make an informed choice on technologies that they need in their area. In order to avoid officers' bias on the choice of irrigation technologies, technical staff who provide information to beneficiaries needs to have dialogue with the community and awareness of the context of the community. This can be achieved by making sure that technology identification and choice is made in participatory manner after appropriate and adequate sensitization of the beneficiaries.

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