

Indigenous Knowledge-based Vegetable Garden Projects for Poverty Alleviation in South Africa

Mayashree Chinsamy¹ and Motheo Koitsiwe²

¹*DST-NRF Centre in Indigenous Knowledge Systems, University of KwaZulu-Natal;*

²*Centre in Indigenous Knowledge Systems, North-West University, South Africa*

¹*Telephone: +27(0)312608588, ¹E-mail: chinsamym@ukzn.ac.za*

KEYWORDS Sustainability. Participation. Natural Disaster Management. Nutrition and Health. Gender Equity. Government Institutions

ABSTRACT This paper is based on a case study, which investigated the challenges and prospects of sustainability of indigenous knowledge-based vegetable garden projects in the Lekgophung village in the North-West Province, South Africa. The garden projects were initiated by rural women to use their local knowledge of farming and indigenous plants to alleviate their poverty situation. The study found that the sustainability of the project has been hampered by lack of project managerial skills, limited participation of the community youth, lack of commitment of project members due to irregular remuneration, problems of financial accountability, rampant theft and lack of sustainable support from by government and other developmental agencies. Among the recommendations advanced include improved incentive strategies to attract youth participation and a holistic approach to human resource capacity building. This should also involve cooperation and coordination between projects to share experiences and scarce resources.

INTRODUCTION

Safara (2005) argues that in order to promote sustainable development and eradicate poverty, Africa needs to build on its strengths. This should involve the remobilization of its abundant Indigenous Knowledge Systems (IKS), which combine local skills, practices, technologies and innovations developed and nurtured through generations, and which enable communities to survive over time. Wilson (2004) emphasizes the role of African women in this endeavor as the custodians of these local knowledge systems and practices.

A large proportion of the community activities and practices in African communities related to food security, health, natural resource management, natural disaster management (drought, famine, floods) are performed by women. In spite of this, they are the ones most affected by poverty. She elaborates that when governments and development agencies in Africa talk about food insecurity, unemployment and massive poverty in both rural and urban area women are the most affected.

There is increasing realization among development agencies on the importance of indigenous knowledge and the role of women in poverty alleviation (Saguti 2006). For instance, since its inception in 1945, the Food and Agricultural

Organization (FAO) has recognized the significant contributions women make to food and agriculture, and the relevance of on-farm/*in situ* and *ex situ* conservation of genetic resources for food and agriculture. Over the decades, FAO has included local knowledge and activities in policies, programs and projects related to a wide range of issues, including farmers' rights, poverty alleviation, nutrition and health, and gender equity, among many others.

The organization is also working with various government institutions in developing countries including African countries to support various poverty alleviation strategies in areas of food security. It is also promoting international and interdisciplinary collaboration to strengthen the interface between traditional knowledge and cutting-edge science and technology, to help maintain and enhance the world's food and agricultural diversity and sustainability (FAO 2004).

For instance, the North-West Provincial Growth and Development Strategy (2004) is one of the most important provincial action program strategies to achieve economic growth and poverty reduction in the province. The tasks and objectives contained in this provincial poverty reduction and growth strategy not only calls for targeted measures, including poverty alleviation programs and projects, to support specific

poverty groups, but also see linkages within the matrix of policies that range from macroeconomic policies, sectoral development policies and measures, to social welfare policies of all sectors and levels that must work in tandem to ensure sustainable development in the province. Its major concrete objectives are to promote rapid and sustainable economic growth coupled with attainment of social progress and equity, aimed at improving the material conditions and quality of life of all population strata in both rural and urban areas, and maintain rapid development of the dynamic areas and create favorable conditions for them to achieve high economic growth rates. At the same time, concentrate on developing agriculture and rural areas, ensure food security, create jobs, and increase rural income.

Milwood (1996) and Sarafa (2005) assert that besides the government efforts to fight poverty in the poor communities, women in most African local communities in South Africa are using their indigenous knowledge to initiate various community-based poverty alleviation projects such as vegetable gardens or food processing to mitigate their poverty situation. A number of these projects have been initiated in various local communities in the North West province (South Africa), by either the local communities themselves or in collaboration with governmental or non-governmental development agencies. One of these projects is the Lekgophung Indigenous Knowledge-based Women Vegetable Garden project in the Ramotshere Moloia Local Municipality of the Central District (North West province). The Lekgophung Village community is characterized by high levels of unemployment, particularly among the youth and women. The North West Provincial Department of Social Development (2005) indicates that more than eighty percent of the households in the village are female-headed. The majority of them (96%) are unemployed, with no regular sources of income.

It was on the basis of the above background that the Provincial Department of Agriculture, Environment and Conservation in collaboration with the Lekgophung village community initiated the Lekgophung Indigenous Women Vegetable Garden project for poverty alleviation.

However, Wilson (2004) expresses concern that most of these projects tend to experience the problem of sustainability. She defines sustainability of a project as a process that enables

a project to be prolonged over many generations rather than over a few years. Robinson (2005) stipulates different factors, which have contributed to the lack of sustainability of various community-based poverty alleviation projects in Africa including South Africa. These include the lack of capacity in trained human resources, the lack of regular remuneration of project members, inadequate government and other developmental agencies' support, lack of financial accountability, rampant theft of project facilities and produce, and lack of commitment on the part of the project members.

This paper uses the Lekgophung Community Women Indigenous Vegetable Garden Project as a case study to illustrate the prospects and challenges facing the sustainability of poverty alleviation projects. At the time of the research study, there were only 6 out of the original 20 project members. The rest had left the project because it was not sustainable and did not fulfill their aspirations of poverty alleviation through regular income. The aspects that have been discussed include the socioeconomic and demographic characteristics of the project members, factors, which contributed to lack of sustainability of the project, and lessons and suggestions for future improvement.

METHODOLOGY

The study took a case study and participatory approach in order to have an in-depth understanding of the research problem. Nachmias and Nachmias (1992) and Conrad (2002) define a case study as a careful study of some social unit that attempts to determine what factors led to its success or failure. Park (2006) defines participatory research as a research activity in which ordinary people address common needs arising in their daily lives, and in the process generates knowledge. Participatory research differs from basic and applied social science research in terms of people's involvement in the research process, integration of action with research and the practice-based nature of the knowledge that is entailed. It sets itself apart even from other forms of action-oriented research because of the central role that the community practitioners play. Participatory action-minded researchers with technical background often get involved in this process but as mainly facilitators. Therefore, qualitative research methods such as key infor-

ment interviews, focus group discussions and participant observations formed the core of the data collection methods.

Dooley (2001) describes qualitative research as concerned with non-statistical methods of inquiry and analysis of social phenomena. It draws on an inductive process in which themes and categories emerge through analysis of data collected by such techniques as interviews, observations, videotapes and case studies. Samples are usually small and are often purposively selected. Qualitative research uses detailed descriptions from the perspective of the research participants themselves as a means of examining specific issues and problems under study (Nachmias et al. 1992).

A purposive sample of 30 community members participated in the project including project members. After the sampling process, a questionnaire was administered to the research sample in an effort to collect supportive qualitative and quantitative data. Qualitative methods are frequently used in conjunction with quantitative methods to give an overall representation of behavior within a particular population. After data from both methods was collected, the results were triangulated for a comprehensive understanding of the research problem (Bowles and Klein 2003).

Key informants such as community and project leaders, and community development workers, were interviewed at all levels of the research project as a means to gain in-depth qualitative information. This approach is a traditional method used by social scientists including anthropologists, for extracting community knowledge through well-placed individuals in the study community. It is part of the ethnographic approach, often used in situations where access to official records or data is weak or non-existent. Where official records exist, it is used as a means to gain further insight by questioning key people about a specific social problem.

Focus group discussions were conducted with a randomly selected group of 6-10 community members including project members. A focus group discussion is a semi-structured interview in which the discussant knows in advance the topics to be covered (Alreck and Settle 1994). The people included were known to have been involved in specific experiences related to the research problem. Focus group discussions are different from other types of group interviews in

that they focus on a particular topic and they rely on group dynamics in order to generate data. The interaction is mainly between group members themselves and not between the members of the group and the interviewer. Group interaction is used in this type of research to generate data and as a source of data analysis. The assumption is that there is an interaction that is productive in widening the range of responses, in activating forgotten details of community or cultural experience and knowledge, and in releasing inhibitions that are part and parcel of interviews with individuals.

Qualitative data in the form of audio taped interviews were transcribed and translated from Setswana into English. Interview and participant observation notes were typed and a content analysis was conducted. Alreck and Settle (1994) explain content analysis as a method for summarizing any form of content by counting various aspects of the content. This enables a more objective evaluation than comparing content based on the impressions of a listener. Quantitative data in the form of questionnaires was checked and coded. Data was analyzed using SPSS/PC+ (Agresti and Finlay 1996). Validation checks were conducted through all phases of the research to ensure the highest level of data accuracy.

The following sections present and discuss the research findings.

RESULTS AND DISCUSSION

The respondent community and project members were asked through a questionnaire, face-to-face interviews and focus group discussions to indicate their age group, marital status, household sizes, and educational levels, problems facing the sustainability of the project, and their own suggestions to mitigate these problems. The results are discussed in detail in the following sections.

Socio-economic and Demographic Characteristics of the Project Members

The study revealed that more than sixty percent of the households in the Lekgophung village community were female-headed. All the original project members were women including the remaining project members. Focus group discussions with the respondent community mem-

bers including project members showed that the project was more appealing to women than men. Men usually preferred to work in employed jobs and earn wages, rather than running vegetable gardens.

Furthermore, as breadwinners, men were expected to provide for their families on a regular basis. The uncertainties of the poverty alleviation projects such as the community vegetable garden, in terms of income, made men lose interest in participating in such projects. Women, who were the main heads of households in the community, were interested in the vegetable garden project because it provided them with a cheap and easily accessible source of food and nutrition for the household. It reduced the costs of traveling to urban areas such as Zeerust to buy such vegetables.

Marital Status of Project Members

As a result of the high level of unemployment in the study community, most men left the village to look for employment opportunities in the mines, industrial areas, commercial farms and urban centers within and outside the North-West Province. Hence, women were left to take care of the households. The study found that the largest proportion (74%) of the project participants were married women. Interviews with the respondent community members and focus group discussions revealed that the project was more appealing to married women than to both single and widowed women. Most married women were not employed, and hence they had enough time to participate in such community projects.

Furthermore, besides the money they received from their husbands, some of the married women felt that there was a need to supplement their husbands' income by other means including participating in poverty alleviation projects such as community vegetable gardens. It was stated in the focus group discussions that most single and widowed women preferred wage employment where they earned a regular income because they had no husbands to depend on. Some of them worked as domestic workers in various neighboring commercial farms and other rich households in the village and neighboring areas.

Age Distribution of the Project Members

The World Bank (2004) states that most young people in the rural communities of most

African countries including South Africa, tend to migrate to urban areas in search of better conditions of living than those found in the rural areas. The study was therefore interested in establishing the age distribution of the project members. It was found that the majority (64%) of the project members were over 35 years of age. There were no participants below the age of 25 years. Focus group discussions with community members showed that poverty alleviation projects such as community vegetable gardens were not appealing to most young people. They preferred to go to urban areas to look for salaried jobs. They did not see any prospects of making a decent life from such projects. Moreover, the increasing decline in the production and income from the garden project discouraged most young people from participating in the project activities.

Household Sizes of Project Members

The size of the households, especially the number of dependents with no regular income tends to have an impact on the welfare of the household, especially in situations where there is only one breadwinner or there is no regular household income. The study found that the majority (72%) of the project members, who were heads of households, had three or more dependents. Interviews with the respondent project participants and information from focus group discussions showed that most heads of households who participated in the project were those who had many dependents to support. They argued that the responsibility of supporting the household should not rest with the fathers only. The fathers were most of the time away from home and some did not send regular financial support to their families at home. Therefore, if an opportunity arose to supplement the household income such as the community vegetable garden project, the mothers who were de facto heads of household participated in such projects. This was due to the fact that in spite of its various problems of sustainability, the community vegetable project provided the members with vegetables at a cheaper price than traveling to distant urban places to buy such vegetables.

Educational and Skill Levels

Education and training are important investments for the individual community member, community and the national economy as a whole.

Education and skills development for participants in poverty alleviation projects and the country's labor force in general is important for several reasons. First, technological change and the increased competition flowing from trade liberalization require higher skills and productivity among workers, both in rural and urban areas. Skilled workers are more readily able to adapt existing knowledge and processes.

Growing, competitive economies benefit from their presence and their movement to more productive employment. Secondly, investing in the productivity and skills of people raises the incomes of economically vulnerable groups, thereby reducing poverty. Thirdly, skills development has also become more important and difficult as health issues intensify. In particular, HIV/AIDS is depleting scarce human capital in the country and in local communities and magnifies the need to replace skills lost across a wide range of occupations and economic activities (World Bank 2004).

Furthermore, education and training are important aspects in the sustainability of community-based poverty alleviation projects because they contribute to the level of understanding and appreciating the commitment to the success of such poverty alleviation community-based projects.

The research study was therefore interested in establishing the distribution of the levels of education of the project members. It was found that seventy-five percent of the project participants had educational levels below standard eight. Only one percent of them had education level above grade 12. Interviews and focus group discussions with community members including the project participants showed that the low levels of education among the project participants was a problem for the sustainability of the project. The efficient management, especially financial accountability of the project requires people who had knowledge and skills of project management, particularly financial management.

More than eighty percent of the respondent project members agreed that the level of education and skills of the project members was a problem in the management of the project and its sustainability because the leadership in particular and members in general had problems in understanding project development issues. The project was managed by people who lacked such important project management knowledge and

skills. This led to the problem of lack of finance, which affected the morale and commitment of the project members to the project activities.

Problems Facing the Sustainability of the Project

Lack of Capacity in Trained Human Resource

The previous section has already indicated that the low level of education and skills among the project members and leaders affected the sustainability of the project. For instance, the study found that ninety-seven percent of the project members, including the leadership had never been involved in any form of capacity building skill training course for the development of the project.

Lack of Regular Remuneration of Participants

Brown (2001) states that in order for project members to be motivated and committed to any community-based project, they must see the benefit of that project to their daily lives. This is due to the fact that they joined the project with the expectations of improving their lives. The majority (97%) of the project participants in the study complained that they were not regularly remunerated. Remuneration was given to members only when there was enough profit above the project costs. As a result of poor management, the project did not generate enough regular income. This discouraged the members' commitment to the project activities. Seventy-eight percent of the project members rated the project members' support for the project as very poor because the benefits of the project to their lives were uncertain.

Lack of Sustainable Support and Commitment from Government and Other Development Agencies

On the issue of project support from government and other development agencies, sixty-five percent of the project members rated it as very poor. According to them, the support that was required from government and other development agencies was in terms of infrastructural, training and financial services. According to the project members, lack of sustainable government support and commitment, at all government lev-

els (national, provincial and local), demoralized project members, made some to leave the project and discouraged other community members from joining the project. It was argued that since the provincial government stopped funding the project, members had been struggling over the years to make the project survive.

The respondent community members, including project members argued that all provincial government departments, should be involved in supporting community-based poverty alleviation projects including promotion of the local knowledge systems on which the people, especially women depended on for survival. This is due to the fact that the sustainability of the projects needed a holistic approach, whereby all sectors of society including education and finance, should be involved in their development and success. Currently, the support from outside the community was practically absent. The community members felt that the government was not committed to such local community-based poverty alleviation projects, especially those run by women.

Lack of Financial Accountability

Complaining about lack of financial accountability for the project was a common problem articulated by the majority of the project members. More than sixty percent of the project members indicated that the project encountered problems of financial accountability, which impacted its sustainability. Information from focus group discussions showed that project products were sold but there was no proper explanation as to how and where the income was spent. There was no regular remuneration for the members. They called for financial management training for both the leadership and members to improve accountability. If the project was to be sustainable and fulfill the expectations of its members, all the project members should know and have the skills on how to handle, monitor and account for project money.

The Problem of Theft

Another common problem indicated by the project members was theft. The project members expressed the concern about the problem of theft of garden equipment and vegetable produce. They complained that theft was so ram-

tant that it threatened the sustainability of the project. This was due to lack of proper security for the vegetable garden project. This was partly attributed to lack of members' commitment to the project. Only nine percent of the project members indicated being seriously committed to the project. Sixty-seven percent of the respondent project members stated that they were not seriously committed to the project because it did not satisfy their life needs and expectations in terms of poverty alleviation such as food security, employment and regular income. They argued that if the project was well managed, it could provide job and income opportunities for the members.

Suggestions for Future Improvement

The research findings show that the sustainability of the Lekgophung community women vegetable garden project for poverty alleviation was limited by a number of factors including lack of capacity in trained human resource, the problem of remuneration of participants, lack of sustainable support and commitment by government and other developmental agencies, problems of financial accountability and the problem of theft. It is on the basis of these findings that the following suggestions were made for future improvement.

Develop Incentive Strategies for Increasing Youth Participation

The youth, especially women, form part of the major social groups affected by poverty and unemployment in the Lekgophung village community and the North-West Province at large. In most community-based poverty alleviation projects such as community gardens, the people involved are mostly the elderly. For instance, the main participants in the Lekgophung community vegetable garden project were elderly women above 35 years of age. This indicates that the current projects were not appealing to the youth. These elderly women did not have financial resources but depended on their local knowledge of farming and local plants to initiate poverty alleviation projects. The sustainability of this indigenous knowledge and skills depended on the young people participating actively in the activities of the elderly.

There is need, therefore, for the community leaders and other stakeholders to develop in-

centive strategies to encourage young people below 30 years of age to participate in community-based poverty alleviation projects such as community vegetable gardens. As some of the members indicated, if the community projects were well managed, including proper financial accountability, they could be a great source of employment and income generations for all sectors of society including the youth. The sustainability of these projects will largely depend on the active participation of the youth, both male and female. Therefore, the government and other development agencies should collaborate with community leaders to ensure that the projects are well managed and capacitated in terms of the necessary infrastructure, financial resources and skilled human resource training for all project members.

A Holistic Approach to Human Resource Capacity Building

Human resource capacity building in the form of training in relevant knowledge and skills for project sustainability is a key component of promoting project sustainability. However, the issue of training both project leaders and project members is very significant for a holistic human resource capacity building approach. This is due to the fact that the two have been accustomed to different perceptions of project implementation approaches. Leaders are used to giving orders and the members to receiving orders, which they either passively obey or show indifference to. Community-based projects, which involve community members' participation, require that those who are given leadership positions are trained and exposed to the concept of collective leadership, including conducting meetings democratically, ensuring transparency and accountability to the project members. This is only possible if they are themselves confident that they can handle situations in their respective localities and projects.

Fortman (1999) argues that leaders resort to dictatorial tactics because they feel insecure. One source of insecurity is when one is not sure of what he/she is supposed to do or whether he/she is doing it in the right way. However, many development projects have training components but these are normally exclusively for those occupying leadership positions. Unfortunately, the more training the leaders get without correspond-

ing training for members, the wider the gap between them.

As a result, the leaders and the led develop different perceptions concerning the project. This creates a bipolar situation of those who know, therefore, must lead, and those who do not know, hence should be led. Under such circumstances, those who lead tend to develop a sense of arrogance and paternalism. The gap might become so wide that the leadership feels isolated and the members alienated. The tendency then is for the leadership to become authoritarian and for the members to become reluctant followers or even rebellious. This tends to affect the sustainability of the project.

Cooperation and Coordination among Similar Activity Projects

Saguti (2006) states that various community-based projects for poverty alleviation like the vegetable garden projects are engaged in similar activities within the same rural or urban environment. There was no coordination, exchange of experiences and scarce resources including transfer of knowledge and skills among project members and project leaders in the North-West province and other provinces in South Africa. The project coordination, including building network and partnerships among members and leaders of similar project activities is very important for sharing experiences and other valuable scarce resources for the success and sustainability of the projects. Moreover, project members and leaders will be able to motivate one another.

Developing Marketing Cooperatives

The study found that the community members were the main market for the vegetable products of the garden project. However, the sustainability of the project requires that the project has to expand its market and become competitive beyond the Lekgophung community. The community was characterized by a high level of unemployment hence the purchasing power of the community members is limited. The project needed to improve productivity to increase the quantities of produce, the quality of the products and develop a marketing strategy.

Under the existing circumstances of limited human and other scarce resource capacity, the project could only achieve this through forma-

tion of vegetable cooperatives with other vegetable garden projects in the neighboring communities. This will enable them to market their produce in large quantities beyond the village boundaries. It will also help them get better and guaranteed profits than they received. The marketing cooperatives will also help the members and leadership to exchange business ideas, which are beneficial for the sustainability of their projects.

Sustainable Government and Development Agencies Support and Commitment

The government and other development agencies, at all levels (national, provincial and local) have an important role to play to ensure that poverty alleviation projects for marginalized social groups such as women, the youth and the disabled, receive the necessary support, in terms of human resource capacity building (training), financial, and infrastructural services, to make these projects sustainable. It is important for the government and other development agencies to ensure that when marginalized groups in poor communities start such projects, the necessary support services are available including training and monitoring of the project development. Some projects have stopped operating when members did not get regular benefits. Under such circumstances, the government and other development agencies should be available to motivate the project members to continue and find the necessary strategies for continuity and sustainability.

CONCLUSION

The paper showed that in spite of the fact that women in African local communities such as the Lekgophung village had initiatives to use their local knowledge systems to start poverty alleviation projects, these projects faced the challenge of sustainability. A number of factors were cited in relation to this problem. These included lack of capacity in trained human resource, the problem of remuneration of participants, lack of sustainable support and commitment by government and other developmental agencies, problems of financial accountability, and rampant theft.

RECOMMENDATIONS

The paper recommends that the situation could be improved through developing incentive strategies to attract youth participation, a holistic approach to human resource capacity building, that is both the leadership and ordinary members are capacitated in order to develop a common perspective of the project, promote cooperation and coordination among similar activity projects in order to share experiences and scarce resources including skills and technology transfer, sustainable government support and commitment to the sustainability of community-based poverty alleviation projects, and the government and other development agencies should take the role of women and their IKS seriously as the basis of sustainable development and poverty alleviation in African local communities. These are development resources, which are community-based and hence the foundation of any sustainable development and livelihood in African poor communities.

REFERENCES

- Agresti A, Finlay B 1996. *Statistical Methods for the Social Sciences*. San Francisco: Dellen Publishing.
- Alreck PL, Settle RB 1994. *The Survey Research Handbook*. Columbus: McGraw-Hill.
- Bowles G, Klein RD (Eds.) 2003. *Theories of Women's Studies*. London and New York: Routledge and Kegan Paul.
- Brown A 2001. *Community Land Use and Environmental Degradation in an African Village*. Dusseldorf: Hans Verlag.
- Conrad A 2002. *Case Study: Introduction, Definitions and Case Study Examples*. Boston: CSDT.
- Dooley D 2001. *Social Research Methods*. 4th Edition. Upper Saddle River, NJ: Prentice Hall.
- FAO 2004. *Traditional Knowledge and Poverty Alleviation in Developing Countries*. Rome: FAO.
- Fortman L 1999. *Peasants, Officials and Participation in Rural Tanzania: Experience with Villagization and Decentralization*. Ithaca: Cornell University Press.
- Milwood D 1996. *The International Response to Conflict and Genocide: Lessons from the Rwanda Experience*. Steering Committee of the Joint Evaluation of Emergency Assistance to Rwanda. Mzumbe University, Tanzania, March 13-15.
- Nachmias C, Nachmias D 1992. *Research Methods in the Social Sciences*. 4th Edition. New York: St. Martin's Press.
- Park P 2006. *Knowledge and Participatory Research*. London: Sage.
- Robinson M 2005. *Non-Governmental Organizations and Rural Poverty Alleviation in Africa*. London: ODI/Oxford: Clarendon Press.

- Saguti A 2006. Violent Conflict and Chronic Poverty in Sub-Saharan Africa. *Paper Presented at Workshop on Poverty and Sustainable Development in Eastern Africa*, Tanzania, 2006.
- Sarafa P 2005. *Persistent Poverty and Path Dependency. Agrarian Reform in Gabon, Lessons from Rural Study Cases*. Libreville: UDSI.
- Wilson S 2004. *Simulating the Impact of Policy upon Chronic and Transitory Poverty in Rural Areas of Southern Africa*. Discussion Paper in Development Studies, Unpublished. Harare: University of Zimbabwe.
- World Bank 2004. *Skill Development in Sub-Saharan Africa*. Washington, DC: World Bank.