MEDIATING ROLE OF CITIZEN EMPOWERMENT IN THE RELATIONSHIP BETWEEN PARTICIPATORY MONITORING AND EVALUATION AND SOCIAL SUSTAINABILITY: A CASE OF KAREMO AREA DEVELOPMENT PROGRAMME, SIAYA COUNTY KENYA.

BY
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DECLARATION

This Thesis is my original work and has not been presented for a degree in any other university.

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DEDICATION

This is to my dear wife, son and daughter who have supported me throughout my academic journey. To you I will always be grateful.

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LIST OF ABBREVIATIONS AND ACRONYMS

ADP	Area Development Programme
AGM	Annual General Meeting
AIDS	Acquired Immune Deficiency Syndrome
CBO	Community Based Organisation
FGD	Focus Group Discussion
GDP	Gross Domestic Product
GSE	General Self-efficacy
HIV	Human Immune-deficiency Virus
INGO	International non-governmental organisation
IPM	Integrated Programming Model
KMO	Kaiser-Meyer-Olkin
KNBS	Kenya National Bureau of Statistics
K-S	Kolmogorov-Smirnov
M&E	Monitoring and Evaluation
MWW	Mann-Whitney-Wilcoxon
NGO	Non-governmental Organisation
OECD	Organisation for Economic Co-operation and Development
OVC	Orphans and Vulnerable Children
PFA	Primary Focal Area
PLWDs	People Living with Disabilities
PLWHIV	People Living with HIV
PM&E	Participatory Monitoring and Evaluation
PRA	Participatory Rural Appraisal
SPSS	Statistical Package for Social Sciences
UK	United Kingdom

ABSTRACT

While the measurement of ecological and economic conditions remains important in understanding sustainable development, analysing of how social processes such as participatory monitoring and evaluation (PM&E) influence sustainable development can provide some strong arguments in the debate about sustainability. Similarly, while there is considerable enthusiasm for PM&E, the claim to its effectiveness has hardly been tested empirically. Using the case of Karemo Area Development Programme (ADP), the study sought to investigate the influence of PM&E on social sustainability as mediated by citizen empowerment. Karemo ADP adopted a World Vision International driven participatory programming model since 2011. This is an innovative operationalization of PM&E with the aim of leading communities through a participatory and empowering process to research, implement, monitor, evaluate and terminate a shared programme. The influence of this PM&E model on social sustainability was examined by means of an empirical analysis. The empirical investigation took the form of a mixed-methods approach and cross-sectional survey design. The objectives of this study were to: assess the extent to which PM&E influences social sustainability; determine the extent to which PM&E influences citizen empowerment; establish the extent to which citizen empowerment influences social sustainability; determine the moderating influence of demographic factors on the relationship between PM&E and social sustainability; and establish the joint influence of PM&E and citizen empowerment on social sustainability. The study employed a concurrent parallel design, in which samples of quantitative and qualitative components were different, but drawn from the same population and data collected within the same timeframe. Given the small size of the population, census was applied in the quantitative component. Simple and stratified purposive sampling designs were, however, used to select participants for the qualitative phase of the study. Except for focus group discussions (FGDs) with CBOs, participants were mainly members of the community who participated in the World Vision International's PM&E model. A total of 6 FGDs were conducted; 2 with starter group members (representing 6 to 12 members who participated in the PM&E process from 2 randomly selected locations) and 4 with 4 CBOs randomly selected from each of the 4 locations within the study area. Quantitative data from the study respondents (N = 212, response rate = 88.3%) were analysed through bivariate and multiple regression analyses. Conversely, the qualitative component utilized iterative inquiry, where data were collected and subjected to a critical reflective process of preliminary data analysis and thematic analysis followed by data classification. Both the quantitative and qualitative findings supported the hypotheses that: there is a positive linear relationship between PM&E and social sustainability (F (r = .579; R^2= .335; p<.05); there is a positive linear relationship between PM&E and citizen empowerment (r = .707; R^2= .499; p<.05); and that there is a positive linear relationship between citizen empowerment and social sustainability (r = .73; R^2= .529; p<.05). The study also found that when PM&E and citizen empowerment are considered together, citizen empowerment seems to have a dominant influence on social sustainability than PM&E itself (r = .733; R^2= .537; p<.05). The study, therefore, theorizes that citizen empowerment mediates the relationship between PM&E and social sustainability. Thus, in improving and enhancing social sustainability outcomes, the government and development practitioners should put extra effort in promoting citizen empowerment. Contrary to expectations, the study found no moderating influence of demographic factors in the relationship between PM&E and social sustainability. This has the implication that PM&E will positively predict the attainment of empowerment and social sustainability outcomes regardless of one's demographic characteristics. PM&E, therefore can be a tool for pacifying the effect of inequality, hence having a far-reaching impact on the poor and the disenfranchised.

CHAPTER ONE
INTRODUCTION

1.1 Background to the study

International development through Non-governmental Organisations (NGOs), although fraught with criticism, remains the dominant means by which the developed nations contribute to the growth and development of the low-income countries (Crawford, 2004; Harsh, Mbatia and Shrum, 2010). NGOs are frequently portrayed as the channel through which; wealth flows from rich to developing countries, poverty is reduced, and the poor are empowered. This has led to explosive growth of Western and local non-governmental organisations in Africa. According to World Bank (2011), Kenya received public current transfers (money sent to non-governmental organisations and civil society organisations) worth US$ 0.06 billion. Although a decline from US$0.2 billion in 2010, this still represents a significant contribution to Kenya's economy. However, in the face of escalating poverty and Gini coefficients, one wonders whether or not development, as advanced by NGOs, promote or inhibit sustainability.

The concept of sustainability has emerged as a leading framework for understanding economic development, community development, and natural resource management around the world (Bramley, Demsey, Power and Brown, 2006; Fraser, Dougill, Mabee, Reed and McAlpine, 2006; Schlossberg and Zimmerman, 2003). Issues related to sustainability have in the past been examined along the lines of economic, environmental and social sustainability (Bailey, 2009; Hutchins and Sutherland, 2008; Magis and Shinn, 2009; McKenzie, 2004). The primary focus has, however, been on economic and environmental sustainability. The inclusion of social aspects in the sustainability debate and practices has been marginal compared to the attention that the other two are receiving. Social sustainability is, therefore, the least developed of the three and is usually conceived in relation to ecological or economic sustainability (Magis and Shinn, 2009). This is mainly due to the problematic nature of social indicators and their measurement. Social sustainability is, however increasingly being noted to be key and with crucial interrelationships which need to be considered in the sustainability debate.

Participation of primary stakeholders in project design, implementation, monitoring and evaluation has featured severally in the debates on sustainability. Fraser *et al*. (2006), for example, argue that

using stakeholders participation as a way of selecting relevant indicators provides a number of benefits. The first benefit is that indicators accurately measure what is locally important. Secondly, beneficiaries engagement may help build a community's capacity to address future problems, which is more important than the results of the actual development interventions. This might in turn lead to community ownership and sustainability of project benefits.

Participatory forms of development have grown out of a concern that processes of international development both create and sustain unequal power relationships (Sanderson and Kindon, 2004). The use of participatory methodologies was made popular from the 1980's onwards as organisations started taking more inclusive, rights-based approaches to the design, implementation and assessment of community-based interventions (Lennie, 2005). It is against this back-drop that participatory monitoring and evaluation (PM&E) has taken root. PM&E has, therefore, come to be seen as a development theory and practice that delivers power to the marginalized. In this approach a range of stakeholders, especially beneficiaries are engaged in designing and implementing the evaluation, and then action on its findings (Jackson, 1999). The philosophy behind this proposition is that real development must be people-centered instead of production-oriented. Participation of the beneficiaries is therefore seen as integral to authentic development (Kurt and Van Wicklin III, 1989).

Much is already being claimed of PM&E. PM&E is being said to be 'empowering', 'cost-effective', 'more accurate' among other positive adjectives (Guijit, Arevalo and Saladores, 1998; Papineau and Kiely, 1998; Jackson, 1999; Mayoux, 2005; Gueye, 2005; Lennie, 2005; Fraser *et al*., 2006). Participatory forms of evaluation is further said to produce a range of empowering outcomes and impacts. These include increased community capacities in planning; conducting evaluations; improved communication and trust among stakeholders; broader stakeholder participation in decision-making and constant improvement initiatives in ways that meet community needs (Lennie, 2005). These claims link PM&E to empowerment and sustainability (Fraser *et al*., 2006; Lennie, 2006; Papineau and Kiely, 1998).

PM&E has been successfully used in a number of community development projects both in developing and developed countries. It has also been employed in a diversity of fields, including community development, agricultural extension, education, health, rural banking and organisational management (Lennie, 2005; Papa, Auwal and Singhal, 1997). The essence of

PM&E is to improve social and economic development as well as citizen empowerment. Citizen empowerment, according to Ibrahim and Alkire (2007) is instrumentally important for pro-poor growth and to increase the sustainability of communal activities and the cost effectiveness of various development projects. Building community capacities and fostering empowerment are seen as more effective ways of achieving sustainable community development than programmes and success indicators imposed by outside experts.

The knowledge created through PM&E processes is seen as related to power and while power itself is related to change (Lennie, 2005). PM&E is, therefore said to encourage involvement of participants and stakeholders in the design and conduct of projects as well as supporting capacity building processes which in turn contribute to long-term sustainability and success of community and economic development programmes. This is consistent with Laverack and Labonte (2000) assertion that achieving empowerment outcomes would improve the quality of individuals' social relations with each other (social cohesion), their individual and collective experience of capacity (self-efficacy, self-esteem, perceived power) and their perception as an important group by other institutions and social actors (political legitimacy, social status).

Experiences from both developed and developing countries seem to suggest that PM&E has a bearing on sustainability outcomes. Using case studies from Coastal British Columbia – Canada, Guernsey in United Kingdom and Kalahari Rangelands in Botswana, Fraser and others assessed the impact of participatory processes on environmental management projects. The study examined a situation where an external agency brought stakeholders together to design a development programme through participatory processes. In all these cases, they concluded that the process of engaging people to select indicators provides an opportunity for community empowerment that conventional development approaches have failed to do (Fraser *et al*., 2006). This and the other claims highlighted above motivated this research. It was, therefore, imperative to empirically examine the influence of PM&E on citizen empowerment and sustainable development, in form of social sustainability, as well as look at the moderating influence of the demographic factors. The variables and the study population are discussed.

1.1.1. Social Sustainability

Sustainable development is a widely-used term, which has enjoyed increasing influence in many development planning and other policy areas worldwide. The debates on sustainable development

are slowly moving from being an environmental concern to include economic and social dimensions (Bramley *et al*., 2006). Development practitioners and theorists are militating towards an approach in sustainable development that includes the social dimensions of development outcomes. This notwithstanding, the area in which the discussion on sustainable development is almost untouched is social sustainability (Maloutas, 2003; Magis and Shinn, 2009). However, according to Magis and Shinn (2009), subordinating social systems to economics or the environment fail to probe into the factors that sustain a community of people. This proposition reflects a shift from the belief that income growth is enough to solve the complex issues of poverty. Littig and GrieBler (2005), for example, suggest that socio-scientific analyses of the influence of social values such as participation (or even PM&E) to sustainable development may provide some strong arguments in the debate about sustainability. Thus, for development to be sustainable, it must also address itself to social dimensions as well.

While there is a relatively limited literature that focuses specifically on social sustainability, Bramley *et al*. (2006) note that there is a broader literature on the overlapping concepts of social capital, social cohesion and social exclusion. From these concepts flow some of the dimensions that are significant in helping to understand social sustainability. These include: social capital; social cohesion; Interaction in the community/social networks; community participation; sense of community; community stability; security; and capability of improving individual's well-being. Social capital is generally understood as the institutional dimension of sustainability and is described by Valentin and Spangenberg (2000) as human interaction and the rules by which they are directed. Social sustainability thus refers to a society that is socially just, cohesive, interactive, has a sense of community, equal, inclusive and with decent livelihood for everyone.

1.1.2. Participatory Monitoring and Evaluation

Participatory monitoring and evaluation (PM&E) emerged primarily because of the limitations of the conventional approach of monitoring and evaluation to reflect the aspirations of primary stakeholders who are directly affected by development. It involves primary stakeholders, development agencies, and policy makers deciding together how progress in development should be measured, and results acted upon. Hilhorst and Guijit (2006) define PM&E as a process where primary stakeholders – those who are affected by the intervention being examined – are active participants; take the lead in tracking and making sense of progress towards achievement of self-

selected or jointly agreed results at the local level, and drawing actionable conclusions. In consonant with this definition is Obure, Dietz and Zaal (2008) who argue that a truly PM&E is one in which all the stakeholders take part in all the processes of monitoring and evaluation (M&E). However, as Guijit *et al.* (1998) observe, a key part of understanding PM&E depends on how 'participation' is interpreted. Unfortunately, participation has many different interpretations as each process, with its unique purpose and context, will involve different groups of people to varying degrees.

The definition of PM&E thus goes beyond involving primary stakeholders in a process of 'conventional' M&E, where they are only consulted on indicators and involved in providing information and feedback on the results (Hilhorst and Guijit, 2006). The process as Fraser *et al*. (2006) note, should be as simple as possible so that members who are not as sophisticated can participate in all areas right from the identification of the indicators, decision on data collection methods, interpretation and presentation as well as utilization. PM&E has, therefore, come to be seen as a development theory and practice that affords power to the marginalized (especially the 'poor', women, children and people with disabilities). In this approach a range of stakeholders, especially beneficiaries are engaged in designing and implementing the evaluation, and then acting on its findings (Jackson, 1999). The ideal PM&E situation is one in which all the stakeholders take part in all processes of design, implementation, monitoring and evaluation (M&E).

PM&E processes are commonly being implemented in communities with the objective of improving social and economic development and the empowerment of citizens. The compelling question that should be asked is, therefore, "whether or not PM&E as applied by the NGOs is effective in empowering primary stakeholders". Although there are some exceptions, the gulf between the ideal PM&E and those that are applied by many organisations is often huge. Ideal PM&E demands that stakeholders, particularly at the local, be involved actively in all stages of the M&E. This involves: determining the objectives of monitoring or evaluation, identifying indicators to be employed, as well as participating in data collection and analysis (Ezemenari, Rudqvist, and Subbarao, 1999; Fraiser *et al*., 2006). One can use participatory methods not only at project formulation stage, but throughout the duration of the project, and especially for evaluating how the poor perceive the benefits from the project (Ezemenari *et al*., 1999; Leeuwen *et al*., 2000; Codd, 2011).

While rhetoric abounds, arguing for participatory approaches to M&E in development programming, the use of such approaches appears to be limited and the claims have hardly been tested empirically (Abbot and Guijit, 1998; Burton *et al.*, 2006). The current study has attempted to empirically explore the influence of PM&E on social sustainability as mediated by citizen (individual) empowerment.

1.1.3. Citizen Empowerment

Empowerment as a construct has been conceptualized variedly by different writers and researchers. This conceptualization also differs across levels of analysis. According to Zimmerman (1990), at the individual level (citizen empowerment), empowerment includes participatory behaviour, motivations to exert control, and feelings of efficacy and control; at the organisational level empowerment includes shared leadership, opportunities to develop skills, expansion, and effective community influence; and empowered communities include opportunities for citizen participation in community decision making, and allow for fair consideration of multiple perspectives. This also resonates well with Laverack and Labonte (2000) assertion that achieving empowerment objectives would improve the quality of individuals' social relations with each other (social support), their collective and individual experience of capacity and their perception as being important in the eyes of other institutions. Spreitzer (1996), advancing the same argument as Zimmerman defines empowerment as intrinsic motivation manifested in four cognitions reflecting an individual's orientation to his or her work role. The four cognitions are meaning, competence, self-determination, and impact. This is well summarized by Hilhorst and Guijit (2006), who note that empowerment is about building the capacity, self-reliance and confidence of citizens, programme staff and other partners to guide, manage and implement development initiatives effectively.

Empowerment has also been defined as a construct that links individual strengths and competencies, natural helping systems, and proactive behaviours to matters of social policy and social change (Kasmel and Tanggaard, 2011). According to Kasmel and Tanggaard, empowerment is associated with feelings of competence to change a situation (self-efficacy) and with expectations of positive outcomes for one's efforts (locus of control). This is elaborated further by Gigler (2004) who identifies outcome indicators for the psychological empowerment. These he claims include: the improved ability to analyse and solve problems; to enhance a person's

self-esteem; and a sense of participation in the modern world. According to Gigler, the psychological dimension of empowerment is relevant for strengthening a person's ability to influence strategic life choices – human agency, one of the core concepts of empowerment (Alsop, Bertelsen and Holland, 2006). The experience of both citizen empowerment and social sustainability is moderated by demographic variables, among others education, literacy, income, occupation, age and gender.

1.1.4. Demographic factors

Demographic variables have been established to influence social sustainability and empowerment outcomes (Khan, Mann, Zafar, Hashmi and Akhtar, 2010; Spreitzer, 1996). Accordingly, Lennon, Rentfro and Curran (2012) observe that people's beliefs and attitudes toward social networks differ based on gender, age, marital status and parenthood. Spreitzer (1996) also argues that demographic variables such as gender, age and education have possible relationships to empowerment. In a study to establish the determinants of women empowerment, Khan *et al*. (2010) conclude that education, political participation and working for paid job of women are important determinants of women empowerment. Khan *et al*. (2010) singles out education as an important variable which brings many positive changes in a human's personality. Education, for example, provides knowledge, awareness and confidence, which are all attributes of empowerment. Consequently Nasir, Akhtar and Salm (2007) argue that in order to see the extent of the level of empowerment status, it is important to elaborate the economic, demographic and reproductive behaviour of the respondents. Lennon *et al* (2012) also observe that demographic variables account for the differences in beliefs about social networking, attitudes toward social networking, and reasons for choosing and using specific networks. These are indicators of social sustainability.

1.1.5. Karemo Area Development Programme (ADP)

Karemo ADP is one of the programmes among many others, which are benefiting from World Vision International's programming model. In its development programming model, World Vision aims to promote a transformational development approach, which is community based, sustainable and focused on the needs of the poor and the disenfranchised. Karemo ADP was initiated to respond to myriads of development challenges facing Karemo Division, key among these are challenges posed by Human Immune-deficiency Virus (HIV) and Acquired Immune Deficiency Syndrome (AIDS). As at 2009, up to 25% of the households were taking care of orphans and

vulnerable children (World Vision International, 2009). Due to the vulnerabilities, majority of households are, therefore, unable to effectively provide basic requirements for their members including food, shelter, and clothing; health, water and education. It is against this background that Karemo ADP was established with the overall goal of promoting sustainable transformational development in Karemo Division.

World Vision International is one of the INGOs that pride in successfully operationalizing PM&E in their development programming. Its design, monitoring and evaluation framework explicitly enlists 'participation' as one of its key principles (World Vision International, 2007. p13). The organisation has since developed an approach that it argues, leads staff and communities through a participatory, empowering process to research, design, manage and end a shared programme. The organisation does not direct the process, but it only facilitates a joint planning process with the community and local stakeholders, building their capacity to implement and manage shared projects (World Vision International, 2010). This, in a sense mirrors the tenets of PM&E.

Using the case of Karemo Division as a *defacto* environment where PM&E processes have taken place, this study sought to understand the extent to which PM&E as operationalized by the programme; has influence on empowerment and social sustainability as a basis for recommending new directions for understanding and achieving greater impact in future development initiatives as well as influencing the theory and practice of M&E. In this sense, the study employed both analytical and normative approaches. This fits well with social sustainability as a concept. Littig and GrieBler (2005), for instance, recognize social sustainability as both a normative and an analytical concept.

1.2 Statement of the problem

The popularity of participatory forms of monitoring and evaluation is growing by the day. Many development agencies seem to be looking towards PM&E as the next area of methodological innovation. But as Guijt *et al*. (1998) observe, amidst the growing number of exciting experiences, many fundamental questions and challenges have appeared. In the face of escalating poverty and Gini coefficient, one wonders whether development processes (participatory or otherwise) as advanced by NGOs promote sustainability. Whereas development practitioners, especially M&E experts agree that development assistance has contributed to improving economic and social

wellbeing, the effectiveness of this assistance has often fallen short of expectations. This condition seemingly exists even where PM&E processes have been applied.

Karemo ADP is one of the programmes which have adopted a World Vision driven participatory programming model since 2011. The model is an innovative process that, as argued by the organisation leads staff and communities through a participatory, empowering process to research, design, manage, monitor, evaluate and end a shared programme (World Vision International, 2010). The process is implemented at the backdrop of increasing poverty levels facing Karemo Division. As at 2009, the average number of people living below the poverty line in the division was estimated at 69% with East Alego and South Alego Locations having the highest poverty index of 78% and 73% respectively (World Vision International, 2009). The question is, why the persistence of poverty in the light of so much effort and investment by many NGOs in the area?

While there is extensive rhetoric and considerable enthusiasm for participatory approaches to M&E in operational terms, the use of such approaches appears to be relatively limited and the claim itself has hardly been tested empirically (Abbot and Guijit, 1998; Burton *et al*., 2006). The literature reviewed generally indicate that little work has been done to examine whether the expected results of participation are well grounded in demonstrable or replicable cause-effect relationships (Burton *et al*., 2006; Fraser *et al*., 2006; Papineau and Kiely, 1996). This is what makes it difficult to predict with any accuracy the impact of a participatory intervention. This lack of clarity also makes it difficult both to scale-up in terms of geographical coverage and to predict how participants benefit from a successful participatory process.

Furthermore, while it has been noted that social sustainability have key issues with important interrelationships, examination of sustainability has in the past focused primarily on economic and environmental sustainability (Bailey, 2009; Maloutas, 2003). Similarly, attempts in measuring empowerment dynamics have in the past concentrated on the actual exercise of agency while neglecting its influences on the institutional context (Ibrahim and Alkire, 2007), which has a bearing on social sustainability. And as McElroy (2008) argues, by adding context, the true sustainability of an organisation's operations can be determined. Likewise, except for community psychology, the contextual and demographic influences have received less attention in most research areas (Hasset, 2006). It is against all these that the research to determine the influence of PM&E on social sustainability and the mediating effect of citizen empowerment was conceived.

The joint influence of PM&E and citizen empowerment on social sustainability was also found to be insightful, and so was explored. The joint influences of these variables have scarcely been explored in the past.

This study, therefore, sought to establish the validity of the claim by many commentators (Fraser, *et al*., 2006; Gueye, 2005; Guijit, *et al*., 1998; Lennie, 2005; Papineau and Kiely, 1996) that PM&E promotes empowerment and social sustainability. In seeking to understand the relationships between PM&E and social sustainability outcomes, the study imperatively further sought to account for the mediating and moderating influences of other variables which were considered important in determining the outcomes. These include citizen empowerment (mediating variable) and demographic factors (moderating variables) such as age, socio-economic status, gender, occupation among others. It was necessary that the influences of these variables were taken into account in order to isolate the particular influence of PM&E.

Methodologically, nearly all research on PM&E in the past have applied one of the pure approaches – qualitative or quantitative; yet given its complexity, adaptable methods such as mixed-methods have been preferred (Burton *et al*., 2006; Papineau and Kiely, 1996). In this study, the mixed methods approach was thus applied.

1.3 Purpose of the Study

The main purpose of this study was to establish the influence of PM&E on citizen empowerment and social sustainability in the context of a developing country. The moderating influence of demographic factors on the relationship between PM&E and social sustainability was also examined.

1.4 Objectives of the Study

The objectives of the study are to:

1. Assess the extent to which PM&E influences social sustainability.
2. Determine the extent to which PM&E influences citizen empowerment.
3. Establish the extent to which citizen empowerment influences social sustainability.

4. Determine the moderating influence of demographic factors on the relationship between PM&E and social sustainability.
5. Establish the joint influence of PM&E and citizen empowerment on social sustainability.

1.5 Research Questions

This study sought to answer the following research questions:

1. To what extent does PM&E influence social sustainability?
2. To what extent does PM&E influence citizen empowerment?
3. To what extent does citizen empowerment influence social sustainability?
4. In what way do demographic factors moderate the relationship between PM&E and social sustainability?
5. To what extent do PM&E and citizen empowerment jointly influence social sustainability?

1.6 Hypotheses of the Study

The study hypothesizes that PM&E has influence on social sustainability, but mediated by citizen empowerment and moderated by demographic factors. The following hypotheses were therefore tested:

H1: There is a relationship between PM&E and social sustainability.

H2: There is a relationship between PM&E and citizen empowerment.

H3: There is a relationship between citizen empowerment and social sustainability.

H4a: The strength of the relationship between PM&E and social sustainability depends on the level of education.

H4b: The strength of the relationship between PM&E and social sustainability depends on the level of income.

H4c: The strength of the relationship between PM&E and social sustainability depends on gender.

H4d: The strength of the relationship between PM&E and social sustainability depends on age.

H4e: The strength of the relationship between PM&E and social sustainability depends on the level of literacy.

H4f: The strength of the relationship between PM&E and social sustainability depends on occupation.

H5: The joint influence of PM&E and citizen empowerment on social sustainability is greater than PM&E or Citizen Empowerment independently.

1.7 Significance of the study

This study is important to the government and development practitioners in that it can be used to address issues of involvement of citizens in an informed and systematic way. This would ensure that the contributions of primary stakeholders are reflected in development programmes and policies in the future. The understanding of the role played by PM&E is also important in facilitating the inclusion of people with disability and other marginalized segments of the society in the government and non-governmental organisational design; planning; monitoring and evaluation. This can in turn influence the theory and practice of M&E as well as contribute into the disability mainstreaming debate. The findings contribute to new knowledge as well as new research-based evidence that informs development agencies to intentionally create an environment in which the participation of primary stakeholders in PM&E is encouraged, regardless of whether the PM&E process is community driven or agency-driven. The findings of the study are useful in bringing about an understanding of inclusion of primary stakeholders in the context of PM&E. Understanding the influence of PM&E on social sustainability can also be crucial to the overall sustainable development debate as well as its implication on poverty reduction.

1.8 Delimitations of the Study

The study was conducted in one division – Karemo Division. This was necessary as a control for aspects of culture and policies, which could impact empowerment and social sustainability resulting from the interventions. Karemo Division was selected because it provides the necessary condition, having had experience with many NGOs and had in the last 3 years benefitted from a participatory process as applied by World Vision. And since the process involves empowering

community members to manage their own resources for posterity, the degree to which this is realized was assumed to provide a good pointer to the success of the PM&E process.

Given the nature of the research objectives and time constraint, this study employed a cross-sectional survey design. The study was mainly based on the individuals drawn from the groups, functional within the targeted population where similar treatment was being administered. For the sake of cost-effectiveness and practicality, the PM&E was primarily related to initiatives in a single agency – in this case World Vision-driven development programme. This was necessary as a control measure for confounding factors related to the subject of study.

Indicators of empowerment can be measured at the individual household, group, community, local government, national government, or global level (Ibrahim and Alkire, 2007). This study, however focused on the individual level, but was supplemented with data from other units of analysis, which in this case were starter groups and community-based organisations (CBOs).

According to Ibrahim and Alkire (2007) measuring empowerment data require panel data, as well as indicators that might capture the dynamic processes of change. As a result three types of information might be gathered: factors affecting the capacities of individuals to act as agents; the actual exercise of agency; and influences on the institutional context. This study focused on the second and third, that is, the actual exercise of agency and influences on the institutional context as the best measures of empowerment. However, influences on the institutional context were also considered important but only as a measure of social sustainability.

Although the study was a mixed methods research, the purpose for this approach was more for triangulation and not for complementarity, initiation, development or even expansion. The purpose being triangulation, the study employed concurrent questionnaire design. Onwuegbuzie and Collins (2007) argue that if the purpose of the mixed methods research is triangulation, then a concurrent design is appropriate such that the quantitative and qualitative data can be triangulated. In concurrent triangulation designs, quantitative and qualitative data are collected and analysed at the same time (Hanson, Creswell, Clark, Petska and Creswell, 2005). Furthermore the nature of constructs under study, namely PM&E, social sustainability and empowerment, not only have multiple definitions, they have objective and subjective dimensions as well. This necessitates the

use of mixed methods approach. The use of subjective and objective questions was also employed for purposes of strengthening rigorous analysis.

The study employed Likert-type scale. While Likert-type data are theoretically considered ordinal, the Likert-scale in the study was assumed to constitute interval-level measurement. This was made possible since in the study, the questions considered utilized the same Likert scale. And since each of the questions explored had multiple items, it was possible to sum the multiple Likert question responses together resulting in interval data. Likert scales consisting of sums across many items are usually considered interval in literature (Carifio and Perla, 2007; Carifio and Perla, 2008). The argument as Norman (2010) observes is analogous to the everyday life and is perfectly defensible since ordinarily, the sum of correct answers on a multiple choice of binary-type tests, is considered interval scale. This allows for analyses to be based on parametric tests such as Pearson *r* correlation, regression, *t*-tests and *F*-tests. Moreover, Norman (2010) citing from (Pearson, 1931; Pearson, 1932a; Dunlap, 1931; Havlicek and Peterson, 1976) concludes that Pearson *r* is insensitive to extreme violation of the basic assumptions of normality and the type of scale. Consequently Pearson *r* correlation can be used with Likert-type data, with small sample sizes, with unequal variances, and with non-normal distributions without coming to the wrong conclusion.

1.9 Assumptions of the Study

Drawing from Benini (2008), one of the plausible assumptions about empowerment is that the empowered have stronger abilities to formulate, including the process and attribution of their empowerment. The study in the same way assumed that the respondents were able to articulate their empowerment as well as social sustainability outcomes in terms that could be measured empirically. The study further assumed that all the respondents had similar interaction with the PM&E as applied by the programme and as such were familiar with the attendant processes.

The study was also based on the assumptions of normality, linearity, interval data, homoscedasticity and independence of residuals, which refer to the various aspects of the distribution of scores and the nature of the underlying relationship between the variables. These assumptions allowed for analyses to be based on parametric tests. The assumptions were checked through tests such as Kolmogorov-Smirnov (K-S) test, Shapiro-Wilk's test, Chi-square tests of

independence, independent samples *t*-test and Levene's test; as well as through residuals scatterplots, normal Q-Q plots, P-P plots and box plots.

Additionally, the study was based on the assumption of *p*-value. *P*-value is essentially defined as the probability, under the assumption of no effect or no difference, of obtaining a result equal to or more extreme than what was actually observed (Goodman, 1999). It is a measure of the discrepancy between the data and the null hypothesis; and it has been used in the study as one of the procedures of drawing conclusions from the observed dataset. *P*-value was calculated on the assumption that the null hypothesis was true. While p value has been criticized for not taking into account the size of the observed effect, it has variously been used over the years for hypothesis testing (Goodman, 1999). By choosing to use the *p*-value, the study surrendered its ability to measure evidence, or judge truth as argued by Goodman (1999). Consequently, the study reported only whether or not the results were statistically significant and acting in accordance with that verdict. On the basis of this premise, therefore, the study assumes that proper conclusions have been drawn from the study.

1.10 Definition of significant terms

This section examines some of the key concepts were integral to this study. The terminologies described include: Sustainability; social sustainability; PM&E; self-efficacy; citizen empowerment; and community based organisations (CBOs).

Sustainability: The ability of community to continue drawing the benefits of a project or intervention after the implementing agency has departed.

Social Sustainability: Social sustainability is defined as the capacity within the local institutions or individuals to sustain the long term viability of the impact of the development processes. This is reflected in the character, functioning, resource mobilization, networking skills of community institutions as well as participation in the case of individuals.

Participatory Monitoring and Evaluation: A process in which the project beneficiaries are active participants, involved in the design, implementation, monitoring and evaluation of project interventions.

Self-efficacy: Self-efficacy is defined as the perceived competence to change a situation.

Citizen empowerment: An individual's belief that it is possible to achieve what s/he is trying to accomplish; and includes self-efficacy, locus of control, sense of participation as well as acquisition of knowledge and skills.

Community based organisations (CBOs): CBOs are grassroots level organisations/bodies managed by members on behalf of the general membership, with the aim of performing certain functions that contribute to improvements in the quality of life.

Gender: The social roles ascribed to men and women. It is also defined as the state of being male or female.

Occupation: An individual's principal work or business, especially as a means of earning a living.

Income: Money received by an individual on a regular basis, for work or through investments.

Education: The knowledge or skill acquired or developed by an individual through a learning process resulting from years of schooling that incorporates studies of a variety of subjects.

Age: The length of time that an individual has lived or existed measured in years.

1.12 Organisation of the study

This study is organized into five chapters. Chapter one presents the background to the study, statement of the problem, purpose of the study, objectives of the study, research questions, hypotheses of the study, significance of the study, delimitations of the study, limitations of the study, assumptions of the study and the definitions of significant terms used in the study. Chapter two, which constitutes the literature review, summarizes the study variables and their relationships. It begins with a brief description of the study concepts, namely social sustainability; PM&E; and citizen empowerment. This is followed by summarizing and evaluating the existing evidence on the relationship between PM&E and social sustainability; the relationship between PM&E and citizen empowerment; the relationship between citizen empowerment and social sustainability; as well as the moderating influence of demographic factors on social sustainability. The influence of PM&E and citizen empowerment on social sustainability has also been reviewed. The chapter ends by presenting the theoretical and conceptual frameworks as well as the summary of literature reviewed. Chapter three describes the research methodology. In this section the research paradigm and design are discussed; target population described; sampling design explained; sample size

defined; data collection instruments described; and data collection procedures discussed. Chapter three also describes how validity and reliability of the data collection instruments have been tested and assured. It goes further to demonstrate how the variables have been operationalized before discussing the data analysis technique; which also highlights the test of hypotheses and the study models. The chapter ends with a description of some ethical considerations. Chapter 4 presents the results of the study and interprets its findings. The discussions of the results are also presented. Finally, chapter 5 summarizes the findings of the study in relation to the objectives. This chapter also covers conclusions; recommendations for theory, policy and practice of monitoring and evaluation; contribution of the study to knowledge; limitations of the study; and suggestions for further research. The chapter further gives recommendations for improvement before drawing conclusions of the study.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

Throughout the review process, efforts have been made to examine the influence of PM&E in the context of broader attempts to validate or void the claims to its effectiveness in influencing social sustainability. To do this, it was necessary to examine the concepts of social sustainability, PM&E and citizen empowerment; establish the influence of PM&E and citizen empowerment on social sustainability; look at the relationship between PM&E and social citizen empowerment; as well as examine the influence of demographic factors on the relationship between PM&E and social sustainability. Further, summary of the literature reviewed has also been given with the view of setting out parameters within which the study has been premised. This section also highlights the theoretical and conceptual frameworks against which the study was underpinned.

2.2 Social Sustainability

Social sustainability is a concept centered within the broader debates on sustainable development. Sustainability as a concept first emerged in the early 1960s, but its popularity exploded onto the global arena in 1987 with the Brundtland Report, where the concept was first defined (McKenzie, 2004; Fricker, 1998; Magis and Shinn, 2009). The report defined sustainable development as development that meets the needs of the present without compromising the ability of future generations to meet their own needs (Fricker, 1998; McKenzie, 2004; Vallance, Perkins and Dixon, 2011). This definition is however, criticized for defying the objective interpretation or operational implementation (Fricker, 1998). The definition is also dismissed as vague and hence only provides a ‘smokescreen’ behind which business operations can continue unhindered by environmental imperatives, while paying little attention to the needs of future generations. It therefore allows business and development interests to claim that they are in favour of sustainable development when actually they are the perpetrators of unsustainability (McKenzie, 2004). This underscores the fact that sustainable development is still a contested concept.

Even with the contestations around its definition and operationalization, the concept of sustainability has emerged as a leading framework for understanding economic development,

community development, and natural resource management around the world (Bramley *et al*., 2006; Fraser *et al*., 2006; Schlossberg and Zimmerman, 2003). Issues related to sustainability have thus been examined in three categories, namely: economic, environmental and social sustainability; with the primary focus on economic and environmental sustainability (Bailey, 2009; Hutchins and Sutherland, 2008; McKenzie, 2004; Magis and Shinn, 2009). But as Magis and Shinn (2009) note, social sustainability is the least developed of the three and is usually conceived in relation to ecological or economic sustainability.

While the concept of sustainable development originally included a clear social mandate, the human dimension has been overlooked (Hutchins and Sutherland, 2008; Magis and Shinn, 2009; Maloutas, 2003; McKenzie, 2004; Vallance *et al*., 2011). According to McKenzie (2004) the interrelationship between the environmental, social and economic aspects of sustainability is commonly represented by one of two models. The first model portrays economic and social aspects to be dependent on the health of the environment. On the other hand the second model holds that the three aspects (environmental, social and economic) are equal to one another. McKenzie holds that any community or organisation that adopts the second model should immediately include social sustainability as a concern equal to either environmental or economic sustainability. While the measurement of environmental and economic conditions remain very important, the significance of other indicators, especially social indicators in helping communities determine sustainability are equally becoming critical.

Although a social dimension to sustainability is increasingly becoming widely accepted, what this means in reality has not been very clearly defined and agreed upon (Bramley *et al*., 2006). This indicates that a clear theoretical concept of social sustainability is yet to be established. And as McKenzie (2004) notes, the problem inherent in social sustainability is the fact that it is a condition. Difficulties arise because it is impossible to define a condition without reference to some of its features and as soon as you are done with definition, the distinction between the condition and the framework to measure it becomes marred. This is further aggravated by the fact that social sustainability has been applied in the past to link environmental protection with social equity (Littig and GrieBler, 2005). This has created a challenge, both from a theoretical and a practical point of view. But as Magis and Shinn (2009) observe, the construct of social sustainability is informed by a rich and mature tradition of research on social well-being. The

importance of social sustainability as an aspect of the broader sustainable development is therefore without a doubt.

One of the main reasons why social aspects of sustainability have received limited attention is that they are difficult to define as well as to quantify (Bramley *et al*., 2006). To assess the social dimension of sustainability, Littig and GrieBler (2005) suggest a set of four core indicators, namely: Satisfaction of basic needs and the quality of life; equity in the distribution of resources; equal opportunity regarding quality of life and participation; and social coherence, measured by integration into social networks, participation in the implementation of community-led activities as well as measures for solidarity and tolerant attitudes. Similarly, Bramley *et al*. (2006) in their definition, observe that social sustainability incorporates both social equity issues (particularly access to services and facilities), and sustainability of community issues. On the other hand Magis and Shinn (2009) identify four conditions critical to social sustainability, namely human well-being, equity, democratic government and democratic civil society. Evidently, human well-being (satisfaction of basic needs), equity, equal opportunity and participation as well as social coherence are the key indicators. According to Littig and GrieBler (2005), socio-scientific analyses of how social values such as participation, equal opportunities, justice among others influence sustainable development can provide some strong arguments in the debate about sustainability and the fight for the aforementioned rights. Thus, the absolute importance of social sustainability cannot be overemphasized (Magis and Shinn, 2009). This study sought to further contribute to this debate by examining the influence of PM&E on social sustainability.

2.3 Participatory Monitoring and Evaluation (PM&E)

Participatory monitoring and evaluation is one of the forms of evaluations that involve stakeholders. Other forms, according to Njuki, Mapila, Kaaria and Magombo (2008) include collaborative evaluation, participatory evaluation, development evaluation, and empowerment evaluation. These are distinguished by the degree and depth of involvement of local stakeholders or programme participants. PM&E is thus a complex concept. As a result, PM&E in practice takes different approaches. The complexity stems from the fact that a key part of understanding PM&E depends on how 'participation' is interpreted (Guijt *et al.*, 1998). The construct 'participation', however, has many different interpretations as each process, with its unique purpose and context

involves different people to varying degrees. In the words of Singhal (2001) "participation comes in all shapes and sizes" (p. 9). This view is well captured by Jones (2001) who argues that since no single operational definition exists of 'participation', different definitions also exist of PM&E.

Holding similar view to Jones (2001) is Njuki *et al*. (2008) who observe that participation in evaluation spans a gradient from complete community-controlled monitoring of change, to agencies consulting communities about the results of interventions, to the participation of field workers and researchers in evaluation with little focus on community involvement. Pasteur and Blauert also agree with this pluralistic view of PM&E. Pasteur and Blauert (2000) argue that there are three basic approaches to viewing PM&E identifiable from literature, depending on one's own functional perspective, namely: utilization of PM&E for improving beneficiary involvement in research; focusing on improving the efficiency and appropriateness of traditional donor-initiated M&E through increased beneficiary participation; and conceptualization of PM&E as a form of introspection or an action-reflection-action process for the implementing agency and the communities themselves so as to contribute to the improvement and sustainability of the development intervention.

Pasteur and Blauert (2000) observe that the first approach is now becoming more widely accepted in researchers. However, the perception of the extended time and costing required by using participatory approaches to stakeholder evaluation of policy and development interventions have limited its uptake. Though the second approach of improving the effectiveness of traditional donor led M&E through increased participation of beneficiaries remains valuable, Pasteur and Blauert (2000) argue that this approach cannot be considered as participatory in its strictest sense – that is initiated by, devised by, and wholly relevant to those most affected by the project actions. The third approach therefore embodies ideal participatory approach. This approach is also referred to as community-based PM&E in some literature (Njuki *et al*., 2008).

Njuki *et al*. (2008) further liken community-based PM&E to empowerment evaluation. Just like empowerment evaluation, community-based PM&E aims to increase the probability that programmes will achieve results by increasing capacity of programme stakeholders to plan, implement, and evaluate their own programmes. In the context of community-based PM&E, all the community segments are actively involved throughout the evaluation process and are seen as experts in as far as community issues are concerned. According to Njuki *et al*. (2008), the

community-based PM&E approach is unique because of the emphasis on developing a system that is managed and supported by local communities, for their own purpose. Thus, in community-driven PM&E, members themselves identify their own objectives and initiate activities to achieve these objectives; develop their indicators for measuring progress towards achievement of the objectives; are in charge of the data collection and analysis; and finally use the PM&E results and make necessary adjustments to their activities (Njuki *et al*., 2008). The purpose of community-driven PM&E is thus to empower the local community to initiate control and take corrective action and to basically empower themselves to improve their social wellbeing.

Participatory monitoring and evaluation advocates that the ultimate beneficiaries of a development intervention – the poor, the disadvantaged, the disempowered – can, and should, lead the effort among stakeholders to define the results to be achieved by a given intervention (Ezemenari *et al*., 1999; Jackson, 1999). On the same note Hilhorst and Guijt (2006) define PM&E as a process where primary stakeholders are active participants, take the lead in tracking and making sense of progress towards achievement of self-selected or jointly agreed results at the local level, and drawing actionable conclusions. In a PM&E process, the project beneficiaries themselves are active participants in that they lay down project priorities, lead in tracking as well as making sense of progress towards achievement of their shared results and interpretations thereof. To fulfill the requirements of participatory monitoring and evaluation, stakeholders, particularly at the local level, should be actively involved in all stages of the monitoring and evaluation. This involves: determining the objectives of monitoring or evaluation, identifying indicators to be employed, as well as participating in data collection and analysis (Ezemenari *et al.*, 1999). PM&E is built on the premise that each phenomenon or reality unfolding in a project has multiple facets that need to be understood. Hence, there cannot be one best or correct interpretation of that observed reality (Mulwa, 2006). PM&E promises to ensure that stakeholders, particularly primary stakeholders, are actively involved in all stages of the monitoring and evaluation.

Citizen participation in M&E or otherwise is often justified on two grounds – procedural and substantive. According to Burton *et al*. (2006), the procedural strand claims involvement as a fundamental civil right whose benefits emanate from the application of due process in reaching public decisions. Individuals who get involved benefit through feeling more valued as a result of their contributions; feel more connected with their communities; and develop their self-efficacy.

Communities to which these individuals are part benefit from cohesion established through greater involvement which then serves as infrastructure (or social capital) to further positive social relations. A further benefit, they argue, is seen in the enhanced collective self-confidence; and the recognition that problems which might not be amenable to individual solution can be managed collectively.

Despite the positive outcomes of PM&E, the approaches are not without shortcomings. Njuki *et al*. (2008) indicate that as a limitation, PM&E is based on community indicators which are most often highly specific and localized. This limits wide application of common community indicators for evaluating programmes that span social and geographical space. It also limits the comparability of the results of the M&E process. The other criticism stems from its application. Obure *et al*. (2008), in a study conducted in Northern Ghana to look at how participatory methodologies are applied in various contexts found out that participation of beneficiaries was more an 'inclusion perspective' and little a 'decision making' perspective. In other words the attitude in most cases is that of 'ticking the box' and claiming that the process was participatory while the engagement may not have been substantial. In this context, the participatory process does not do much to address the power issues inherent in non-participatory methodologies, which is a contradiction to one of the cardinal objectives of participatory evaluation – 'to give power back to the people'.

These limitations are well summarized by Neef (2003) who argues that the main issues bedeviling the PM&E and other participatory approaches include: methodological limitations and lack of scientific rigour; naivety about the complexity of communication processes, group dynamics and power relations; reduction of participatory methods to the diagnostic stage; myth of instant analysis of local knowledge; 'tyranny of techniques' and instrumental character of participatory methods; underestimation of the costs of participation; and participation as a substitute for good governance.

Another set of summaries are provided by Mohan (2001) who highlights three problems of PM&E. First, is that most development agencies use the rhetoric of participation with only limited empowerment. This is motivated by the need to gain funding or legitimacy. Mohan's argument is similar to Neef (2003) criticism that participatory methods have been reduced to the diagnostic stage. Second, is that much participatory development has treated communities as socially homogenous although more sensitive participatory approach picks up on heterogeneity. Neef (2003) describes this as 'naivety about the complexity of communication processes, group

dynamics and power relations'. Mohan argues that while community empowerment might be an improvement on unresponsive bureaucracies, there have been cases where support for 'the community' has meant that funding and authority is passed on to elites so that the most marginalized are further sidelined. Thirdly is that participatory development seeks to give local people control, but many processes affecting their lives are often not readily tackled at the local level. Some could be systemic issues in the government which can be hard for local people to change. This is consistent with the twin problems describe by Neef as the myth of instant analysis of local knowledge as well as the use of participation as a substitute for good governance. Alluding to the same line of thought, Lennie (2006) argues that idealistic or naïve assumptions are sometimes made that community participation will automatically lead to empowerment. This may not always be true.

While there are limitations in the application of PM&E, its effectiveness in influencing empowerment and possibly sustainability outcomes cannot just be wished away without a well-grounded empirical research. This further justified the need for this study.

2.4 Citizen Empowerment

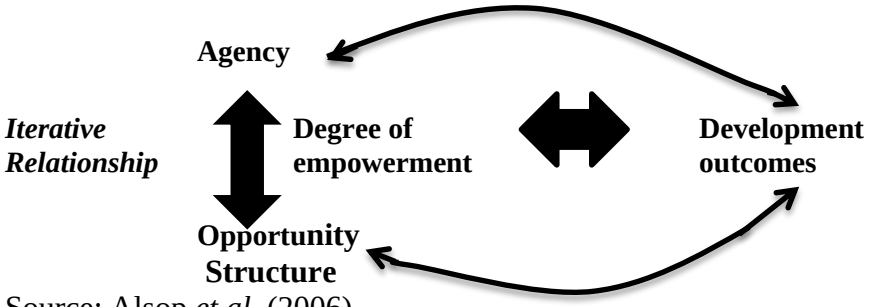
Focus on empowerment has its roots in the human development approach, advanced by Amartya Sen. Human development approach emphasizes on assessing development by how well it expands the capabilities of all people (Fukuda-Parr, 2003). As a construct, empowerment has been conceptualized variedly by different writers and researchers. This conceptualization also differs across levels of analysis. According to Zimmerman (1990), at the individual level, empowerment includes participatory behavior, motivations to exert control, and feelings of efficacy and control; at the organisational level empowerment includes shared leadership, opportunities to develop skills, expansion, and effective community influence; and empowered communities include opportunities for citizen participation in community decision making, and provide for fair consideration of multiple perspectives.

This is consistent with Laverack and Labonte (2000) assertion that achieving empowerment objectives would improve the quality of individuals' social relations with each other (social support), their collective and individual experience of capacity (self-efficacy, self-esteem, perceived power) and their perception as an important group by other institutions and social actors

(political legitimacy, social status). Spreitzer (1996), advancing the same argument as Zimmerman defines empowerment as intrinsic motivation manifested in four cognitions. The four cognitions are meaning, competence, self-determination, and impact. This is well summarized by Hilhorst and Guijt (2006), who note that empowerment is about building the capacity, self-reliance and confidence of citizens, programme staff and other partners to guide, manage and implement development initiatives effectively.

Empowerment, according to Kasmel and Tanggaard (2011) is associated with feelings of competence to change a situation (self-efficacy) and with expectations of positive outcomes for one's efforts (locus of control). Thus, empowerment begins with an individual belief that what one is trying to accomplish is possible to achieve. This is elaborated further by Gigler (2004) who identifies outcome indicators for the psychological empowerment. These he observes include: the improved ability to analyse and solve problems; enhanced self-esteem; and a sense of participation in the day-to-day community activities. According to Gigler, the psychological dimension of empowerment is relevant for strengthening a person's ability to influence strategic life choices – human agency, one of the core concepts of empowerment (Alsop *et al*., 2006).

Empowerment, defined by Alsop *et al*. (2006) as capacity to make effective choices, is influenced by two sets of interrelated factors: agency and opportunity structure. Collectively, the agency and opportunity structure give rise to different degrees of empowerment. They define agency as an actor's or group's ability to make purposeful choices – that is, the actor is able to envisage and purposively choose options. The agency is however, constrained by their opportunity structure, defined as those aspects of the institutional context within which actors operate that influence their ability to transform agency into action (Alsop *et al*., 2006). Collectively, the agency and opportunity structure give rise to different degrees of empowerment. These factors are assumed to have mutually reinforcing effects on development outcomes. It is therefore the relationship between the agency and opportunity structure that determines the degree to which a person or group experiences empowerment. This interaction can be extended to include the relationship between empowerment and development outcomes. In another perspective, this captures their 'theory of change'. This is represented in Figure 1.



Source: Alsop *et al*. (2006)

Figure 1: *The Relationship between Outcomes and Correlates of Empowerment*

In their framework Alsop *et al*. (2006) argue that to enhance empowerment, a person or group's agency can be largely predicted by their asset endowment. They define assets as the stocks of resources that equip actors to use economic, social, and political opportunities, to be productive, and to protect themselves from shocks. The assets can be psychological, informational, organisational, material, social, financial, and human. They, however, note that some of these assets are easier to measure than others. The difficult ones include measurement of social capital and psychological assets, such as the capacity to envision. Assets interact with each other, and opportunity structure can influence the accumulation and use of asset stocks. For example, education (a human asset) often gives an actor greater access to information (itself an asset) and can also improves his or her capacity to envision alternative options (a psychological asset). This has the implications for data collection and analysis, hence the need for information on the range of asset endowments and for analysis that tests the effects of one asset on another as well as their association with empowerment and sustainability outcomes.

According to Alsop *et al*. (2006), in measuring or tracking empowerment, three direct measures are important, namely: whether an opportunity to make a choice exists (existence of choice); whether a person or group actually uses the opportunity to choose (use of choice); and whether the choice brings about the desired result (achievement of choice). For example, if a project was to assess the degree of empowerment of primary stakeholders, it would need to gather information on (a) whether opportunities for participation in the design of the PM&E system exist, such as whether they were allowed to participate; and if so, (b) whether the primary stakeholders attempted to participate and (c) whether they actually participated. The project would then need to ensure

that the structures and processes of the intervention were such that these three ends were achieved and monitored.

The relationship between social structure and empowerment may not be unidirectional (Spreitzer, 1996). Overtime, empowered individuals can also affect their environments through proactive behaviours. Spreitzer thus argues that the relationship between what individuals perceive to be an empowering environment and their perceptions of empowerment may be mutually reinforcing through a feedback loop between empowered behaviours and context. He however, notes that reciprocity does not necessarily mean that different influences are of equal strengths, nor do reciprocal influences occur simultaneously. This therefore implies that it takes time for a causal factor to influence and to activate this reciprocal relationship.

Indicators of empowerment can be measured at the individual household, group, community, local government, national government, or global level (Ibrahim and Alkire, 2007; Zimmerman, 1990). Ibrahim and Alkire (2007) propose that empowerment indicators should include control over personal decisions, domain-specific autonomy, household decision-making, and the ability to change aspects in one's life at the individual and communal level. These and other indicators proposed in the literature reviewed have been considered in this study. The last indicator is significant since it is a proxy indicator of sustainability.

2.5 PM&E and Social Sustainability

PM&E stems from the assumption that primary stakeholders have more to offer to the development process than just material or human resources. PM&E has variously been argued to have a host of benefits, from better policy through greater social cohesion to enhanced self-respect for those who get involved (Fraser *et al*., 2006; Mayoux, 2005; Mohan, 2001; Jackson, 1999; Ezemenari *et al*., 1999; Papineau and Kiely, 1996; Zimmerman, 2001). The other benefits are that participation affirms dignity and self-respect; develops political and moral awareness and responsibility; develops community cohesion; and empowers communities (both individuals and groups) to be self-reliant (Abbot *et al*., 2000; Leeuwen *et al*., 2000).

PM&E processes according to Hilhorst and Guijt (2006) has potential of influencing the equity outcomes by continuously seeking to understand who is participating and benefiting in a project and who is excluded. Going through these processes enables the primary

stakeholders/beneficiaries to be more aware of how equitably the benefits are provided and where there is need for improvement. PM&E thus help to determine whether there are inherent biases that fuel exclusion as opposed to promoting inclusion.

One of the defining characteristics of PM&E is the involvement of multiple stakeholders in the development processes. PM&E can promote interaction between these stakeholders resulting in a strong partnership as it invokes clarity about shared aspirations and builds trust through the information sharing that comes about (Hilhorst and Guijt, 2006). This may end up in enhancing social sustainability outcomes in the form of social cohesion, peaceful coexistence, building social networks and improved social interactions among the stakeholders.

2.6 PM&E and Citizen Empowerment

PM&E advocates that the ultimate beneficiaries of a development intervention – the poor, the disadvantaged, the disempowered – can, and should, lead the effort among other stakeholders to define the results to be achieved by a given intervention (Ezemenari *et al*., 1999; Jackson, 1999). This has the implication of the primary stakeholders taking part in defining what change should look like (indicators of intervention); participating in the monitoring and implementation where the progress towards the realization of the change is tracked and reports generated (reports in this case capture the stories as told by the beneficiaries); and involvement in the evaluation to establish whether the desired change has occurred.

A study conducted by Prestby, Wandersman, Florin, Rich, and Chavis (1990 cited in Zimmerman, 1990) observes that analysis of the effects of perceived benefits and costs of participation provides a unique understanding of psychological empowerment. In their study, Prestby and others observed that the most highly involved individuals reported more benefits of participation – learning new skills, gaining information, helping others, increasing social contact, and fulfilling obligations – than less involved individuals. Samah and Aref (2011) also note that people who are involved in setting up community groups and organizing their activities learn and gain knowledge. These are all considered outcomes of empowerment in literature. Papineua and Keily (1996), for instance, operationalize the construct to include aspects like: perception of self-efficacy and control: the transformation from a self-perception of powerlessness to viewing oneself as efficient, competent at carrying out activities to attain goals, and in control of one's life; acquisition of

resources, knowledge and skills needed to accomplish personal and collective goals; participation in collective action to effect change leading to improved quality of life and sustainable development.

According to Abbot and Forward (2000), participation affirms dignity and self-respect; it develops political and moral awareness and responsibility; it develops community cohesion; and it empowers communities, community groups and individuals to pursue their own interests and to challenge existing power structures. However, according to Strandberg (2001), for empowerment to be transformative it must be seen as a process existing on all levels – individual, group and societal. Leeuwen *et al*. (2000) also argue that PM&E is an indispensable means for ensuring that NGOs and aid agencies are accountable, not only to their supporters and donors, but also to the poor, for whom PM&E may serve as a basis for self-reliance and empowerment. As a matter of fact, the adoption of participatory methodologies in evaluation has been argued from different perspectives, but commonly from the perspective of citizen's empowerment (Fetterman, 2001).

This idea of empowerment is emphasized further by Papineau and Kiely (1996) who argue that the issue of promoting stakeholders empowerment goes beyond the notion of shared control over the evaluation process to a focus on changing larger social structures through a process of grass-roots empowerment. Empowerment thus is the essence of stakeholder participation in an M&E process (Obure *et al*., 2008). Allowing primary stakeholders to plan their own interventions, make their own decisions and take part in research (or monitoring and evaluation) and policy formulation creates such empowerment and as a result, independence (Codd, 2011). Codd argues that empowerment of the user generates confidence, independence and greater social inclusion. And as Hilhost and Guijt (2006) argue, empowerment is about building the capacity, self-reliance and confidence of citizens, program staff and other partners to guide, manage, and implement development initiatives effectively.

2.7 Citizen Empowerment and Social Sustainability

Citizen empowerment as considered in literature seems to mediate the relationship between PM&E and social sustainability (Laverack, 2001; Fraser *et al*., 2006). Fraser *et al*. (2006) for instance, argue that empowering community can be a means to extending the benefits of an intervention. In their study Fraser and others observed that in British Columbia – Canada, the participatory process

helped defuse many of the tensions that led to resource-based conflicts; disparate stakeholder groups learned to work together; and in Botswana, the actual process of identifying indicators built capacity within communities. The capacity is focused on how conditions for social sustainability are created through the character, functioning, resource mobilization, networking skills of community organisations (McKenzie, 2004). The same view is supported by Ibrahim and Alkire (2007) who observe that empowerment may be important for growth and to increase the sustainability of collective activities and the cost effectiveness of development interventions. Empowerment is thus seen as a means to achieving sustainable community development (Lennie, 2005). Laverack and Labonte (2000) also advance the argument that achieving empowerment outcomes may influence individuals' social relations with each other.

Empowerment described as a construct that links individual strengths and competencies, natural helping systems and proactive behaviours to matters of social policy and social change (Kasmel and Tanggaard, 2001), gives credence to Spreitzer (1996) assertion that the relationship between social structure and empowerment may not be unidirectional. This is because the empowered individuals can also affect their environment through proactive behaviours. There is therefore a mutually reinforcing relationship between empowerment and social sustainability. Laverack (2001) observes that the organisational aspects in themselves may act as a proxy measure for the social aspects of community empowerment. These he argues include: the existence of functional leadership, supported by established organisational structure with the participation of its members who have demonstrated the ability to mobilize resources. These indicate a community which already has strong social support elements, hence social sustainability (Ibrahim and Alkire, 2007).

2.8 Demographic factors and Social Sustainability

Attention to the social context has been proven to enhance development results (Alsop *et al.*, 2006; Gueye, 2005). The implication of this is that development projects should take into account, within any given society, its formal and informal norms, value systems, and institutions. To be comprehensive therefore, development has to incorporate economic, environmental, human, and social dimensions. Similarly, in order to facilitate positive social change that creates social sustainability, development strategies must be informed by an understanding of power dynamics, culture, and value systems, as well as of the informal and formal norms of the societies in which

they work. Understanding the influence of context on social sustainability cannot, therefore, be overemphasized. Context is vital in understanding social interactions and, by extension, working on social development. For this reason, it is imperative that development efforts are aware of, and respond to, the specific context. This is equally true for social sustainability outcomes.

The forgoing argument is also acknowledged in the empowerment theory discourse. According to Zimmerman (1990), empowerment takes different forms in different people and contexts. It is inherently context-dependent. Accordingly, Zimmerman, Israel, Schulz and Checkoway (1993) observe that the focus of both empowerment theory and practice is to understand and strengthen processes and context where individuals gain mastery over decisions that affect their lives. As such, empowerment at the individual level of analysis is a process by which individuals gain mastery and control over their lives, and a critical understanding of their environment. Contributing to the same argument in relation to participation, Chua and Iyengar (2006) note that the effectiveness of participation hinges on numerous contextual factors such as individual differences, organisational characteristics (for example, size), and situational demands (for example, time pressure). Contextual factors therefore influence how people respond to different empowering situations and hence social sustainability outcomes.

Besides, different individuals experience empowerment differently depending on their environment. It is on this basis that Zimmerman (1990:175) posits that psychological empowerment is a contextual construct that requires analysis of individual knowledge, decision-making processes, and 'person-environment fit'. Worth noting is that, while the multifaceted nature of empowerment is well represented in literature through the investigation of context-specific questions, the range of empowerment experiences within a particular setting has not been fully explored (Hasset, 2006). Hasset further notes that while contextual influences have been studied in community psychology, they have received less attention in development literature. Other than the contextual factors, demographic variables have also been established to influence empowerment and social sustainability outcomes. Spreitzer (1996) argues that demographic variables such as gender, age, education have possible relationships to empowerment. The influence of demographical factors on social sustainability as identifiable in literature are subsequently discussed as follows.

2.8.1 Gender and Social Sustainability

The gender of the respondent has variously been argued to matter when it comes to social sustainability outcomes. Munasib (*undated*), for instance, argues that males socialize more than women, and that singles socialize more than the married people. Similarly, Smith (2000) notes that women and men differ in terms of the structure and composition of their networks. Compared to men, women's networks are denser, but lack occupational range. According to Smith (2000) women's networks are composed of higher proportion of kin, more types of kin, and a larger number of neighbours than men. Men's networks on the other hand are significantly composed of more friends, advisors, and coworkers, even among employed women and men. Thus, Smith (2000) concludes that, women appear less likely than men to be embedded in networks that can provide opportunities for status, income, and occupational advancement than men.

In line with the preceding arguments on the gender differentials in the achievement of dimensions of social sustainability, Munoz-Goy (2013) also notes that social capital is hardly evenly distributed across the gender groups. In her study, Munoz-Goy (2013) found that gender differences is evident in the access, mobilization and type of social networks, as well as in the extent and type of social participation. She, however, noted that these differences are less prominent in more affluent communities or households.

Likewise, in a study to explore the explanations behind the vertical and horizontal membership segmentation between men and women in an association, Norris and Inglehart (2003) found that women participated less in associational life than men. Their study confirmed the well-known tendency for participation in different types of civic association, which suggests that membership in an association is sex-segregated; both horizontally and vertically such that some groups and organisations are disproportionately male while others are dominated by the female. On the other hand, the study found out that the gender gaps in levels of associational membership and social trust were small but significant, and found in societies at all different levels of development. This finding also gives credence to taking explicit account of gender in social capital; and by extension social sustainability rather than assuming that the concept is gender-neutral.

A study conducted by Norris and Inglehart (2003) to examine the gender gaps in formal associational membership revealed that there was a difference between women and men in relation to their social networks. Thus, time spent with family members and close relatives, as common

among women does not necessarily lead people to join formal organisations and community-based organisations. On the contrary, time spent informally with workmates and friends was positively correlated with participation in formal associations. This is because such networks of friends and workplace colleagues draw people into belonging to social organisations, attending meetings, or even becoming active in community organisations or groups. This therefore, indicates that gender has implications on social sustainability outcomes.

In a study to determine the importance of gender differences for the maturity and effectiveness of natural resource management groups, Westermann, Ashby and Pretty (2005) concludes that collaboration, solidarity, and conflict resolution all increase in groups where women are present. Additionally, they observed that norms of reciprocity are more likely to operate in women's and mixed groups. They also found that the capacity for self-sustaining collective action increase with women's presence and significantly higher in the women's groups. On the strength of these findings, Westermann *et al.* (2005) argue that the women are very important for collaboration and in social sustainability. On the contrary, in a study to investigate the effect of social capital on generalized trust and controlling for gender effect, Migheli (2007) concludes that gender and trust are related and that women tend to trust less than men.

The gender differences can be explained by the opportunity structure (Talmud and Izraeli, 1999). This is also what defines the observed difference in the career behavior of men and women in organisations. It therefore follows that, if women were provided with the same opportunities as men, their behavior would be more similar. Differences in achievement between men and women are also explained by the differentials in the social networks. According to Parks-Yancy (2006), it is men's social ties that help them reach higher career levels than women's social ties. Parks-Yancy attributes this to men's social ties which often have an abundance of social capital resources to share unlike the social ties of women. Evidently, all the literature reviewed seem to suggest that gender influences social sustainability outcomes such as trust, social network and social capital.

2.8. 2 Education and Social Sustainability

Education has been described variously to influence social sustainability. As rightly described by OECD (2007), education affect individual's lives in ways that go far beyond what can be measured by economic indices. The social outcomes of education, such as impact on health, among others

are, however, neither currently understood nor systematically measured (OECD, 2007). Helliwell and Putnam (2007), for instance argue that education is one of the most important predictors of many forms of political and social engagement. This, they attribute to its influence on human capital. Education is, therefore, considered to be of value to individuals because of its effect on their knowledge and skills. Subsequently, research has consistently showed that individuals with more education tend to be more engaged citizens than those with less education (Helliwell and Putnam, 2007). The same outcome has been reported in relation to trust in the neighbourhood. According to Ziersch, Baum, MacDougall and Putland (2004), education is significantly associated with neighbourhood trust, with those with higher educational achievement more trusting of others in the neighbourhood.

This notwithstanding, mixed results have been recorded in research on the influence of education on social sustainability outcomes. Analysis by Norman Nie, Jane Junn, and Kenneth Stehlik-Barry (1996), cited in Helliwell and Putnam (2007), for instance, found positive externalities for trust, and negative ones for various types of social engagement. It is against this background that, Helliwell and Putnam sought to investigate the source of these mixed results. In their finding, however, Helliwell and Putnam (2007) argue that the contextual effects of education on social participation are generally positive, and never significantly negative, even in using the same data and basic equations used by Nie, Junn and Stehlik-Barry.

Similarly, in a study to establish the determinants of women empowerment, Khan *et al*. (2010) conclude that education, political participation and working for paid job of women are important determinants of women empowerment. Khan *et al*. (2010) also observe that education is an important variable which brings many positive changes in human's personality. Education, for example, provides knowledge, awareness and confidence, which are all attributes of empowerment. Education is associated with greater skills, and as such represents a human capital enhancing process in which other skills, including participation in development processes are improved (Chiswick, Lee and Miller, 2002).

2.8.3 Age and Social Sustainability

The influence of age on various social sustainability outcomes have been examined by various scholars. Glaeser, Laibson and Sacerdote (2002) in a study to analyse an individual's decision to

accumulate social capital, concludes that social capital first rises and then falls with age. This confirms other studies that have shown that civic involvement increases substantially with age, rising from relatively low levels in a person's teens and twenties to peak in his forties and fifties (Letki, *undated*; Ronald La Due Lake and Huckfeldt, 1998; Ziersch *et al*., 2004). Ronald La Due Lake and Huckfeldt (1998) in a study to understand the production of politically relevant social capital within networks of social relations also explored the influence of various individual characteristics on the social structure of organisational membership. They conclude that a respondent's age produces statistically discernible effects on political interaction frequency and network size, but not on network expertise. Older age predicts more frequent political interaction within social networks. However, Ronald La Due Lake and Huckfeldt (1998) note that age is not a predictor of the political expertise within networks. These results suggest that as a person gets older, the relative frequency of political interaction with a particular discussant increases, but the number of discussants decreases.

Similarly, Ziersch *et al*. (2004) in their study also found age to be positively directly associated with neighbourhood trust. Older age groups were more likely to think fellow residents could be trusted. In their study, age accounted for 31% of the variance. In consonant with this finding is Letki (*undated*), who studied the effect of age on particular dimensions of social capital. Letki (*undated*) argues that age increases one's probability of forming positive attitudes towards other people, but it may also inhibit formal and informal engagement. The declining levels of formal and informal activism and social trust has, however been attributed to generational change (Putnam, 2003 cited in Letki, *undated*). From his findings, Letki observe that older people are far more likely to have a positive image of their local community and enjoy living there, making age the single strongest determinant of neighbourhood attitudes ($\beta = .302$). It was also the strongest factor influencing sociability, but with a negative effect ($\beta = -.504$). He also found that older age restricts other forms of formal and informal involvement, especially in organisations or self-help activities.

Likewise, a study by Ronald La Due Lake and Huckfeldt (1998) found that individual characteristics such as age, income, level of education, minority status, and whether the respondent reported working for pay show discernible effects on the likelihood that respondents are organisationally involved. Thus, as people earn more income, attain higher levels of education,

become employed and get older, they report joining more organisations. Similarly, minority segments of the population are more likely to report organisational memberships.

Another interesting finding by Ronald La Due Lake and Huckfeldt (1998) was that a respondent's age produces statistically discernible effects on political interaction frequency and network size, but not on network expertise. Older age predicts more frequent political interaction within social networks. These results suggest that, as a person gets older, his or her relative frequency of political interaction with a particular discussant increases, but the number of discussants decreases. Ronald La Due Lake and Huckfeldt (1998) however, note that age is not a predictor of the political expertise within networks.

Contrary to the findings above, Veenstra *et al*. (2005) observe that when gender, age and neighbourhood of residence are controlled for, overall involvement retained a modest but non-signficant effect on self-related health. The same line of thought has been advanced by Newton (2001) who observes that social trust does not correlate widely or strongly with the usual set of socio-economic variables such as income, education, class, gender, age, employment status among others, but there is a slight tendency for it to be found in some social types.

2.8.4 Literacy and Social Sustainability

Another aspect of demographic factors is literacy. Literacy has been described as a fundamental resource in all social interactions globally (Falk, 2001). It has been defined by OECD (2013) as the ability to understand, evaluate, use and engage with written texts to participate in society, to achieve one's goals, and to develop one's knowledge and potential. This definition presupposes that literacy results in empowerment which in turn leads to social sustainability. Increases in literacy levels have been linked to increases in economic growth, measured in terms of Gross Domestic Product (GDP); and to the earnings of individuals over their lifetimes. Shomos (2010) for instance, in a research to analyse the links between literacy and numeracy skills and labour market outcomes of the Australian adult population, concludes that regardless of people's educational attainment, improving their literacy and numeracy skills has a significant positive effect on both labour force participation and wages. Accordingly, Falk (2001) argues that it is the role of literate interactions in community activities that propagates social capital (social sustainability) among the community members. Social capital is therefore given meaning through

the interactions of the literate within the community (Salomon, 2010). This makes literacy to be essential for the development of social sustainability.

Evidence suggests that communities with the lowest literacy also have the lowest social capital and vice versa (Dugdale, 2011). Dugdale (2010) also observes that social capital (an aspect of social sustainability) have been found in both literature and evidence-based research as a ubiquitous outcome of adult learning and literacy interventions internationally in the past twenty years. Literate adults arguably have greater ability to reach out, communicate with and become involved with others, whether at home, at work, or in the community.

2.8.5 Occupation and Social Sustainability

The effect of occupation has also been studied in the past in relation to social capital. Testing the hypothesis that individuals in relatively social occupation acquire more social capital, Glaeser *et al*. (2002) found that the least sociable occupations appear to offer low returns to social capital investment. Social capital thus rises in occupations with greater returns to social skills such as physicians and clergymen. This, according to Glaeser *et al*. (2002) is motivated by the assumption that individuals in social occupations have more gain by acquiring social capital. Conversely, people with mobile careers may display low place attachment, community engagement, or local social interaction, and high mobility (Bramley *et al.*, 2009).

Marshall and Marshall (2007) in their study of how fishers cope and adapt to prospective changes in resource policy found that the ability of fishers to plan, learn, and reorganize was important in determining their resilience to policy change. Fishers who prided themselves on developing new fishing methods or displayed adaptive business management skills tended to score more highly for this component of resilience. Marshall and Marshall (2007) note that the way resource users such as fishers evaluate threats and opportunities is strongly influenced by their level of confidence in themselves and the institutions that govern their circumstances and prospects. This resonates with social sustainability. Social sustainability has been described by Chambers and Conway (1991) to involve two dimensions, namely coping with stress and socks; and enhancing and exercising capabilities in adapting to, exploiting and creating change, and in assuring continuity.

2.8.6 Income and Social Sustainability

While there are few studies directly looking at the effect of income on social sustainability, most of the studies in the past have examined the effect of income on its related concept of social capital. In a study to test whether income affects social capital investment, Munasib (*undated*) found that once the endogeneity of income is accounted for, it does not seem to have an independent effect on social capital investment. Consistent to this finding Groot, Maassen van den Brink and Bernard Van Praag (2006) in establishing the determinants of social capital did not find statistically significant effects of household gender, ethnic origin or household income on the size of the social network or the extent of the social safety net. Their findings, however confirmed previous studies that suggest higher education to be positively associated with social capital and hence social sustainability (Khan *et al*., 2010; Chiswick *et al*., 2001).

According to Munasib (*undated*), in Economics Working Paper Series (Oklahoma State University), once the endogeneity of income is accounted for, it does not seem to have an independent effect on social capital investment, an aspect of social sustainability. His findings showed that income ceases to matter once the fact that it can be endogenous is accounted for. This findings is consistent with other studies which obtained a similar result. Ronald La Due Lake and Huckfeldt (1998), for instance found that when other personal characteristics such as education and age are controlled for, income does not produce a discernible effect.

In order to see the extent about the level of empowerment status, Nasir *et al.* (2007) argue that it is important to elaborate the economic, demographic and reproductive behaviour of the respondents. The same argument can also be applied to social sustainability. According to Littig and Grießler (2005), there have been hardly any efforts to link the debate on social sustainability with the debate on demographically-sensitive social and welfare policy. It is against these assertions that the study undertook to examine the moderating influence of demographic factors on social sustainability. The findings thereof would be an important contribution in the sustainability debate.

2.9 The Influence of PM&E and Citizen Empowerment on Social Sustainability

PM&E processes are being implemented in communities with the objective of improving social and economic development and citizens' empowerment. Empowerment is considered in literature

as a process that progresses on a continuum from individual empowerment; small groups; community organisation; partnerships; and political action (Laverack, 2001). Laverack links the interpersonal elements such as individual control (agency), social capital and community cohesiveness with the organisation aspects of community empowerment. Notably, these are all elements of social sustainability. As a matter of fact, social sustainability has been used as a synonym for social capital (McKenzie, 2004). Thus, social sustainability is usually translated into social capital as a first step to operationalizing its meaning. Similarly, Bramley *et al*. (2006) observe that social sustainability engender such concepts as social capital, social cohesion and social inclusion. Describing 'Social Capital', McElroy *et al*. (2008) argue that social capital consists of shared knowledge and related organisational networks that enhance the potential for effective individual and collective action in human social systems. There is therefore some kind of overlaps between the two constructs – 'empowerment' and 'social sustainability'.

Although the ability of the community to mobilize resources and the ability to negotiate resources both internally and externally have been used as a pointer toward empowerment (Laverack, 2001), the same can be used as indicator of social sustainability. Fraser *et al.* (2006) for instance, observe that local engagement may help build community capacity to address future problems. In their case study of Kalahari Rangelands in Botswana, they observed that community empowerment can be enabled by using local knowledge as the starting point in research/evaluation and then using scientific tools as a means to extending the local findings to wider areas. In their study Fraser and others observed that in British Columbia – Canada, the participatory process helped defuse many of the tensions that led to resource-based conflicts; disparate stakeholder groups learned to work together; and in Botswana, they noted that the process of identifying indicators built capacity within communities. Their findings resonate with social sustainability. Social sustainability has been described by McKenzie (2004) as a life-enhancing condition within communities, and a process within communities that can achieve that condition. The capacity is focused on how conditions for social sustainability are created through the character, functioning, resource mobilization, networking skills of community organisations.

Similarly, Ibrahim and Alkire (2007) observe that empowerment may be instrumentally important for pro-poor growth and to increase the sustainability of collective activities and the cost effectiveness of various development interventions. Encouraging poor communities to participate

in development processes not only increases the sustainability of these efforts but also promotes pro-poor growth and a more equitable income distribution. Thus socially sustainable communities have been considered equitable, cohesive and democratic and provide a good quality of life where key services (including health, education, transport, housing and recreation) are accessible (McKenzie, 2004). Building community capacities and fostering empowerment are seen as more effective ways of achieving sustainable community development than programmes and success indicators imposed by outside experts. The knowledge created through participatory evaluation process is seen as related to power and power is related to change (Lennie, 2005).

PM&E therefore encourages active involvement of participants and stakeholders in the design and conduct of projects and supports capacity building processes, which in turn contribute to long-term sustainability and success of community and economic development programmes. This is consistent with Laverack and Labonte (2000) assertion that achieving empowerment would improve the quality of individuals' social relations with each other (social cohesion), their individual and collective experience of capacity (self-efficacy, self-esteem, perceived power) and their perception as an important group by other institutions and social actors (political legitimacy, social status). Thus, if people participate in activities within their local community, then they will have stronger ties to the community, feel attached to their neighborhood and contribute to its development. There is therefore a mutually reinforcing relationship between empowerment and social sustainability.

PM&E has been conducted in a wide diversity of fields since the 1970s, including agriculture, rural development, education, social services and health among others. However, the influence of PM&E as an evaluation methodology has not been empirically tested especially as it relates to empowerment and sustainability (Lennie, 2005). According to Magis and Shinn (2009) studies subordinating social systems to economics or the environment fail to delve into the factors that sustain a community of people. Magis and Shinn thus recognize social sustainability as an essential constituent of sustainable development. Likewise, empowerment is often argued to be instrumentally important in achieving positive development outcomes, such as improved incomes, more equitable access to resources, better access to justice and strengthened poor people's organisations. These claims according to Ibrahim and Alkire (2007) have been put forward without the benefit of a large and well-established body of empirical research. The focus of this study was

therefore to understand the influence of PM&E on sustainability, which in this study has been delimited to social sustainability.

2.10 Theoretical Underpinnings

The study was influenced by human development or "Sen's theory" as it is sometimes called; and complemented by other theories, namely: Social capital theory, empowerment theory, social cognitive theory and complexity theory. The theories are discussed as follows:

2.10.1 Human Development Theory

Human development is a trans-disciplinary theory. It integrates ideas from ecological economics, sustainable development, welfare economics, and feminist economics. It focuses on measuring well-being and social welfare or quality of life. The most notable proponents of human development theory are Amartya Sen and Mahbub ul Haq (Fukuda-Parr, 2003). According to human development theory, development is an expansion of capabilities: the idea that the purpose of development is to improve human lives by expanding the range of things that a person can be and do, such as to be healthy and well nourished, as well as to be knowledgeable, and to participate in community life (Fukukda-Parr, 2003; Chimni, 2008). This resonates well with empowerment theory. And as Chimni (2008) observes, of importance is that Sen's theory offers a conception of development that goes beyond the 'technocratic fixes' p. 7. It among other things draws attention to the need to consult and deliberate with the subjects of social policies, consistent with the participatory paradigms.

Human development theory has, however, been criticized for being ambiguous. According to Chimni (2008), the concept of development, advanced by the theory is not as attentive to social structures and processes that inhibit its realization. The theory fails to deal adequately with the questions of power and social conflict. It thus does not advance a theory of practice commensurate with its own perception of development as creation of capabilities. It is this absence of any strategy to achieve the goals of development that undermines its utility. Related to this is the fact that the theory neglects the subject of political economy that offers valuable ideas into social processes and structures necessary for the realization of development goals. Furthermore the theory does not explore specifics in the context of real world situations and how these could undermine goal achievement. Similarly, while the theory views the individual as the key agent of social change, it

does not explore the role of collective action (social capital) in the shaping of social processes. Because of its inadequacies, it was necessary to incorporate other theories in the study with the aim of addressing the foregoing limitations in the human development theory.

2.10.2 Social Capital Theory

In order to produce improvements in quality of life and social cohesion as ascribed by human development theory, people often need to be linked through social capital (Bramley, *et al*., 2006). The organisation for Economic and Cultural Development describes social capital as the "networks, together with shared norms, values and understandings that facilitate cooperation within or among groups" (Cote and Healy, 2001:41). Drawing from this definition, Dugdale (2011) concludes that the main aspects of social capital should therefore include citizenship, neighbourliness, social networks and civic participation. The proponents of social capital theory include Bourdieu and Woolcock. The theory has been described variously by different scholars. It is described as the ability of an individual or a group of individuals to secure benefits by virtue of membership in social networks or other social units or structures. Social capital, as observed by Perkins and Long (2002) is important to the functioning of community life. The theory views sustainability as an asset, occurring naturally and with varying degrees within societies, which allows them to maintain coherences and overcome change and hardship (McKenzie, 2004).

Social capital, according to Bramley, *et al*. (2006) is the product, intentional or unintentional, of social processes aimed at the building and reproduction of durable and useful social relationships necessary for both material and symbolic benefits. Consistent with Bramley and others' definition is McElroy (2008) view that social capital consists of shared knowledge and related organisational networks that enhance the potential for effective individual and collective action in human social systems. These relationships are believed to help enlarge individual or collective actors' action of capabilities and can be extended to social system's action of capabilities too. But, what is apparent from attempts to measure social capital with indicators is that the indicators take place at various levels, namely individual, community, country or organisational.

2.10.3 Empowerment Theory

PM&E processes are usually implemented in communities with the objective of improving social and economic development; and the empowerment of citizens (Bailey, 2009). This calls for the need to examine empowerment theory. The origin of empowerment as a form of theory is traced

back to the Brazilian humanitarian and educator, Paulo Freire (Hur, 2006). Paulo Freire's, "*The pedagogy of the oppressed (1970)* provided the conceptual base for the debates on empowerment. However, according to Bodja (2006), Ernst Friedrich Schumacher's '*Small is Beautiful' (1973),* which came into circulation at a similar time with Freire's piece, is also known to have influenced the debate on empowerment. According to Zimmerman (1990), empowerment theory postulates that participation in decision making may enhance individual's sense of empowerment and that empowered individuals are likely to be active in community organisations and community activities.

Empowerment as a construct is multifaceted. Theories of empowerment therefore touch on different dimensions of life. Hur (2006) argues that empowerment theories are not only concerned with the process of empowerment, but also with results that can produce greater access to resources and power for the disadvantaged. An empowering intervention is that which builds capacity of individuals to positively influence their wellbeing outcomes. Rappaport (1995) in support of this argument observes that the goals of empowerment are enhanced when people discover, or create and give voice to, a collective narrative that sustains their own personal life story in positive ways.

Just like social capital, empowerment is operative at various levels: personal or individual, interpersonal, organisational, community, and collective (Hur, 2006). This is consistent with Zimmerman *et al*. (1993) observation that the focus of both empowerment theory and practice is to understand and strengthen processes and context where individuals gain mastery and control over decisions that affect their lives. This is the whole essence of empowerment theory. Thus, interventions that provide genuine opportunities for individuals to participate may help them develop a sense of psychological empowerment (Zimmerman, 1990; Zimmerman *et al*., 1993). Typically therefore, an empowering development process might begin with an environmental assessment of the opportunities to participate and develop strategies to include participants in the design, implementation, monitoring and evaluation of interventions.

Empowerment, however, is not a panacea for all individual and social illness. It has been criticized as "overly individualistic and conflict-oriented, resulting in an emphasis on mastery and control rather than cooperation and community" (Speer, 2000, p. 58 cited in Hur, 2006). According to Hur (2006), although the practice of empowerment is effective for the removal of powerlessness, certain factors still exist that may inhibit the manifestation of empowerment. He enlists these

factors to include organisational aspects, such as an impersonal bureaucratic climate, supervisory styles described as authoritarianism and negativism as well as arbitrary reward systems.

The other argument against the empowerment theory is the 'loose' manner in which empowerment as a concept is framed. According to Lincoln, Travers, Ackers and Wilkinson (2002), empowerment is a highly elusive theoretical concept. This is because, as a concept it has no single guru, nor does it have a clear definition. The same view is held by Bodja (2006), who argues that at a broader level, the concept of community empowerment is short of a strong theoretical foundation. Consequently, the term is attractive, loose and ambiguous enough for it to gain superficial initial acceptance by most people (Lincoln *et al*., 2002). Bodja (2006) attributes this 'vagueness' in empowerment theory to the non-academic origin of the concept. The concept has its origin in 'conscientization' and 'gift of knowledge' both of which to a larger extent have their origins in practical development work and not academia. The other deficiency, according to Bodja is that there is no single model of empowerment. There exist diverse empowerment instruments, which are used in different contexts by development practitioners.

The issue of construct measurement also comes to mind. Brook and Holland (2009) identify three challenges that make the measurement of the empowerment construct difficult: measuring empowerment captures processes and relational changes that are less predictable, less tangible, more contextual, and more difficult to quantify. This raises challenges of meaning, causality, and comparability; changes in power relations (empowerment) are not single-event outcomes, but dynamic, process-based tied up with bargaining, cooperation, conflict, co-option, rent seeking, and other forms of contracting; empowerment often involves relative rather than absolute changes in states of being: an observable move towards empowerment by one person or group cannot be assumed to apply to other individuals or groups, both within and across communities or countries. Hence, empowerment as a concept can best be understood under the complexity framework.

2.10.4 Social Cognitive Theory

Empowerment can also be explained by social cognitive theory. Social cognitive theory is a learning theory developed by Bandura as a direct response to Behaviourism to describe how behaviours are learned. The theory is founded on the model of causation, in which behaviour is depicted as being shaped and controlled by environmental influences or by internal dispositions (Bandura, 1989). The internal disposition, also referred to as 'self-influence' in Bandura (1991),

encompasses the self-efficacy which is an outcome of empowerment, as it plays a central role in the exercise of personal agency. Personal agency is generally considered as one of the factors that influence empowerment (Alsop *et al*., 2006; Bandura, 1991). Self-efficacy is the individuals' beliefs about their capabilities to exercise control over their own level of functioning and over events that affect their lives (Bandura, 1991). Self-efficacy beliefs are not only confined to judgments of personal capabilities, it also encompasses perceived collective efficacy representing shared beliefs in the power to produce desired effects by collective action (Bandura, 2002). The latter resonates with social capital.

Critical to the understanding of social cognitive theory is self-regulated behavior. Bandura (1989) defines self-regulated behavior as the process of one using one's own thoughts and actions to achieve a goal; identify goals and adopt and maintain their own strategies for reaching the goals. According to Bandura (1989), without self-regulation, people would not maintain behavior until it could be reinforced. Thus, human behavior occurs without immediate reinforcement or punishment. Self-regulation also encompasses the self-efficacy, a component of empowerment (Papineau and Keily, 1996; Zimmerman, 1990; Zimmerman *et al*., 1993; Alsop *et al*., 2006; Bandura, 1991). Self-efficacy is the people's beliefs about their capabilities to exercise control over their own level of functioning and over events that affect their lives (Bandura, 1991). Bandura (1991) argues that people's beliefs in their efficacy influence the choices they make, their aspirations, how long they persevere in the face of difficulties and setbacks, the amount of stress they experience in coping with challenging environmental demands, and their vulnerability to depression. Self-efficacy beliefs are not only confined to judgments of personal capabilities, it also encompasses perceived collective efficacy representing shared beliefs in the power to produce desired effects by collective action (Bandura, 2002).

Social cognitive theory is based on a number of assumptions, namely: people learn by observing others; learning is internal; and that learning is a goal directed behavior. The theory therefore assumes that values and behavior patterns arise from diverse sources of influence and are promoted by institutional backing. It highlights the idea that much human learning occurs in a social environment. However, social cognitive theory alone is insufficient to explain why there is often substantial variation in values and behavior patterns, even within the same community segments. The other limitation is about how to measure the related constructs such as general self-efficacy.

Chen, Gully and Eden (2001) argue that commonly used generally self-efficacy (GSE) measures have low content validity and multidimensionality. This is worsened further by the confusion with the related constructs such as self-esteem. Chen *et al*. (2001) note that the utility of GSE for both theory and practice is low due to the confusion as to whether GSE is a construct distinct from self-esteem.

2.10.5 Complexity Theory

Complexity theory is an outgrowth of general systems theory (Manson, 1999). Unlike systems theory which studies static entities linked by linear relationships defined by flows and stocks, complexity often concerns non-linear relationships between constantly changing entities. Advocates of complexity theory see it as a means of simplifying seemingly complex systems. These work together in a coordinated way within a strategic framework, hence creating synergies, that provides catalytic resources to lever out the benefits such that the whole becomes greater than the sum of the parts.

Complexity theory has implication for empowerment related research. Being a complex concept, researchers and evaluators face substantial difficulties operationalizing empowerment in such a way that follows theory-based approaches. Conventional research is based upon the assumption of stability and equilibrium, or linearity in the relationship between variables. Such approaches according to Sanderson (2000) are not appropriate in seeking to understand empowerment that exhibits complexity. And as Anderson (1999) observes, complex systems change inputs to outputs in a nonlinear way because their components interact with one another via a web of feedback loops. Complexity theory underscores the importance of context in as far as evaluation is concerned. This is even more true when considering empowerment as an outcome of a process, say PM&E. In this context the causal models may not cover all important effects. In such models, the mediating institutional and organisational levels should be brought to explain how policy effects are realized in practice (Sanderson, 2000; Manson, 1999).

Both social sustainability and empowerment are multifaceted and context dependent constructs; making them more ‘flow’ rather than ‘stock’ concepts. Just like empowerment, sustainability (and social sustainability for that matter) is not only a complex and elusive notion, but one which is fraught with potential contradictions (Gray, 2010). The implication of this is that, the constructs can better be understood within the framework of complexity theory, which concerns non-linear

relationships between constantly changing entities. Complexity theory holds that if the right circumstances can be created, then potential exists for promoting transformative change in economic and social contexts (Sanderson, 2000) – a kin to empowerment and human development theories. The right circumstances involve getting the right mix of economic, social and political agents. With the constructs under consideration, namely: social sustainability, PM&E and citizen empowerment exhibiting complexity, complexity theory was considered as the connecting theory for this study. This is in line with Stame (2010) contestation that non-linear issues need to be analysed through an alternative lens that acknowledges complexity instead of rejecting it.

2.10.6 Theoretical Framework

While the study was mainly influenced by human development theory, the inadequacies exhibited by the theory created demand for an alternative theoretical framework to respond to these limitations. The study was based on a framework that integrates human development, social capital, empowerment and social cognitive theories; all of which have certain limitations with complexity theory as the integrative theory. From literature, human development theory emerged as a trans-disciplinary theory that integrates certain ideas resident in the other three theories. Human development theory, for instance, describes development as an expansion of capabilities (Fukukda-Parr, 2003), a phrase used to describe empowerment (Alsop *et al*., 2006). Empowerment itself can also be explained by social cognitive theory (Bandura, 1991). Besides, to produce improvement in quality of life and social cohesion as described by human development theory, people need to be linked through social capital (Bramley *et al*., 2006). The interrelationships are further explained by Perkins and Long (2002), who distinguish four distinct dimensions of social capital, namely: sense of community; efficacy of organized collective action (empowerment); informal neighboring behaviour, and formal participation in community organisations. Citing from Chavis and Wandersman (1990), Perkins and Long (2002) observe that over time, sense of community may lead to greater self and collective efficacy (empowerment), which results in increased participation. Participation, in turn, enhances sense of community, which has also been related to community satisfaction and collective efficacy. Empowerment is thus seen both to lead to participation in community organisations and to result from it (Perkins and Long, 2002). Owing to the interrelationships in the theoretical underpinnings, the study resorted to a theoretical framework shown in the schema in Figure 2. The proposed framework borrows from all the major

theories that influenced the study, namely: Human development, social capital, empowerment and social cognitive theories.

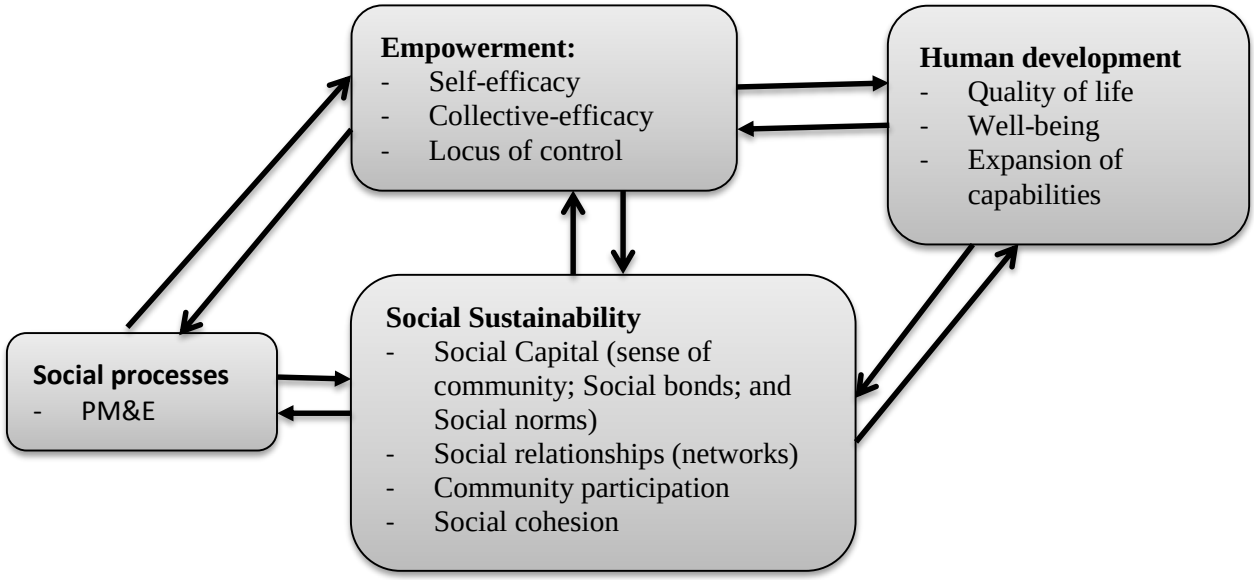


Figure 2: *Proposed Theoretical Framework*

2.11 Conceptual Framework

This study was aimed at establishing the extent to which PM&E influences social sustainability. Some of the PM&E processes influencing social sustainability and citizen empowerment outcomes may include: participation in project design, participation in reflection during implementation, participation in the implementation of activities, as well as participation in the M&E of activities. These have long been recognized as factors promoting desired outcomes in PM&E (Pollnac, Crawford and Gorospe, 2001). In Figure 3, the relationship between the Independent Variable (IV) and Dependent Variables (DV) is represented. The study examined the influence of the PM&E (IV) on citizen empowerment (Mediating Variable) and Social Sustainability (DV). Social sustainability has been operationalized to include: social capital; social networks; community participation and social cohesion. Citizen empowerment on the other hand has been operationalized as perception of self-efficacy; perception of self-confidence; decision-making; acquisition of new skills; and increased information about the programme. The moderating influence of demographic factors on the relationship between PM&E and Social Sustainability was also examined. In this study, demographic factors have been operationalized to include level of education, level of income, gender, age, level of literacy and occupation. The influence of the

moderating variable in the form of cultural orientation was, however, not tested; it was controlled for by drawing samples from a population with similar cultural values.

Furthermore, the study sought to establish the joint influence of PM&E and citizen empowerment on social sustainability. This understanding would be important in redefining the theory and practice of M&E towards improved social sustainability outcomes. While this was stated among the objectives and hypotheses tested, the same could not be presented in the schema without interfering with the logical flow, hence its omission. That notwithstanding, the study tested five (5) major relationships. The conceptual framework of the study is as shown in Figure 3.

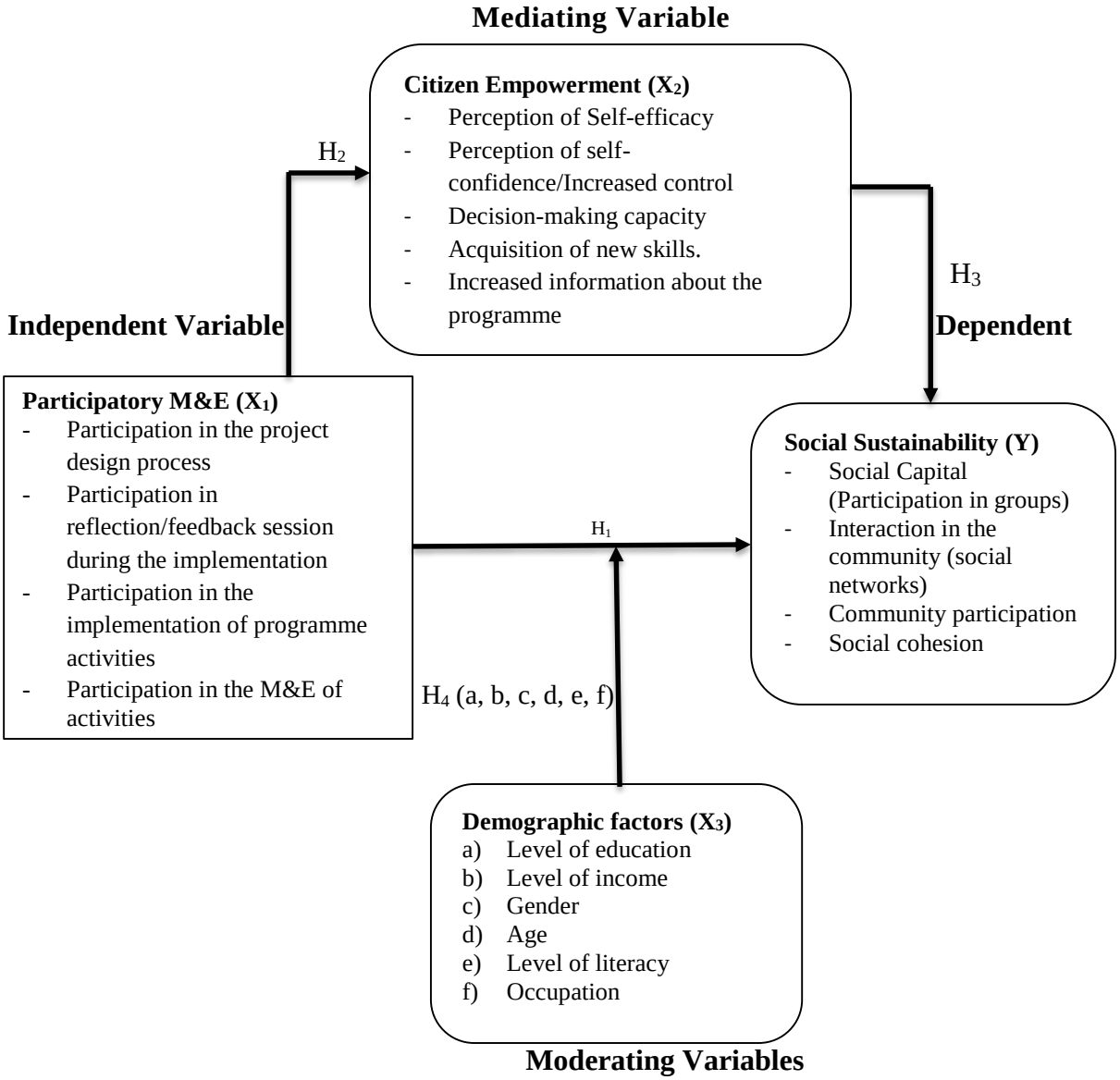


Figure 3: The Conceptual Framework

2.12 Knowledge Gaps Identified in the Literature

The study involved intensive review of literature related to PM&E and its influence on the various empowerment outcomes. From the literature reviewed, a number of gaps have emerged which in a sense provided the motivation for this study. Jones (2001), for instance, note that although researchers using participatory methods have observed the success of the approach in a variety of fields, the impact of using participatory research in contrast to other models are rarely systematically analysed and documented. This lack of well documented analysis undermines the credibility of participatory methods. Similarly, Abbot and Guijt (1998) observe that although much is written about PM&E, relatively few practical experiences are documented. Burton *et al*. (2006) also on the same note observe that while community involvement is assumed by many to be beneficial, there have been few empirical studies that set out to rigorously test whether the benefits of greater involvement are realized in practice. It is therefore not clear whether the expected results of PM&E are grounded in demonstrable cause-effect relationships (Burton *et al*., 2006; Fraser *et al*., 2006; Jones, 2001; Papineau and Kiely, 1996). This is what makes it difficult to generalize about its impact and to understand what contributes to success, or to predict with any accuracy what the impact of a participatory intervention is likely to be. The study was aimed at testing the hypothesis that PM&E is as beneficial – especially as it relates to citizen empowerment and social sustainability outcomes.

2.13 Summary of the literature reviewed

Majority of the literature reviewed generally indicates that not much has been done to examine whether the expected results of participation are well grounded in demonstrable or replicable cause-effect relationships (Burton *et al*., 2006; Fraser *et al*., 2006; Papineau and Kiely, 1996). From the literature reviewed it is difficult to generalize about the impact of participation, to understand what contributes to success, or to predict with any accuracy what the impact of participatory intervention like PM&E is likely to be. Owing to this lack of clarity about the causes of success and failure, it becomes difficult both to scale up the geographical coverage and to predict how many participants benefit. Methodologically, Papineau and Kiely (1996) recommend that research on PM&E process could incorporate a mixed-method approach to study stakeholders' experiences by pairing open-ended questions with likert-type scale items exploring, for example,

the degree of control stakeholders felt they effectively exercised over the PM&E process and the degree to which specific skills have been acquired.

Moreover, although social dimension of sustainability is becoming acceptable, social aspects of sustainability have received limited attention than the economic and ecological dimension, both in policy circles and in academic writings (Bramley *et al*., 2006). This could be because social sciences have for a long time remained quiet in the debate on sustainable development. Even where sustainability issues have been discussed, these have been hardly on social terms. Yet social bonds and norms are recognized as key elements of sustainable development and livelihoods. And as Littig and GrieBler (2005) observes, socio-scientific analyses of how social values such as participation, equal opportunities, justice among others influence sustainable development can provide some strong arguments in the debate about sustainability. It is these assertions that have motivated this study. This study therefore sought to test the hypothesis that PM&E is as beneficial – especially as it relates to social sustainability and citizen empowerment, as it has been variously claimed. Table 2.1 gives an analysis of the major empirical studies and the knowledge gaps.

Table 2.1: Summary of knowledge gaps

Research	**Objective**	**Methodology**	**Findings and conclusions**	**Gap in knowledge**
Bramley, Demsey, Power and Brown (2006)	To understand the relationship between urban form and social sustainability outcomes; taking into account the influence of other variables (age, household composition, socio-economic status	Empirical neighbourhood research, based on three case study areas	Support the hypothesis that urban form affects satisfaction with area of residence, and specifically that higher density, as well as some housing types associated with higher density, makes for somewhat less popular neighbourhoods.	Context was a mature-industrial society, the UK; to produce improvements in quality of life and social cohesion, people need social capital
Ibrahim and Alkire (2007)	To explore the causal connection between empowerment and other domains of	Adopted survey questions previously used to measure	Macro-level studies are especially weak on measuring agency and often do not employ a relevant conceptual framework;	Propose contextual dependent measures of empowerment; propose the hypotheses (1) whether individual

Research	Objective	Methodology	Findings and conclusions	Gap in knowledge
	poverty, and articulated the need to control endogeneity;	agency and empowerment		empowerment promotes project effectiveness at the local level, (2) whether individual empowerment and good governance (an aspect of social sustainability) are mutually reinforcing
Lennie (2005)	Analysis of the empowering and, at times, disempowering impacts of the implementation of a framework known as ' the LEARNERS process' (Learning, Evaluation, Action and Reflection for New technologies, Empowerment and Rural Sustainability)	Used Participatory Evaluation and Participatory Action Research (PAR) methodologies (Case studies)	Participatory evaluation had a range of empowering impacts and effects on participants – Social, technological, political and psychological forms; Social empowerment – gaining new knowledge of participatory planning and evaluation, increased evaluation and communication skills, obtaining and sharing new information, applying new knowledge, networking with others, participating in various groups.	Did not take into account issues of gender and power in relation to leadership, communication and control; did not take into account the 'gendered' nature of PM&E; Did not differentiate individual empowerment elements (acquisition of new knowledge and information, awareness and understanding of issues, skills, abilities and competence etc.) from community and organisation level (participation in group activities and networking)
Bailey (2009)	To examine the challenges faced by telecentres in their ongoing operations as	Thematic content analysis of interviews	The content analysis revealed that stakeholders in all aspects of telecentre initiatives were aware	The use of pure qualitative design might have undermined the

Research	Objective	Methodology	Findings and conclusions	Gap in knowledge
	they try to evolve in response to new issues that arise in communities they serve; to discover and explicate key issues of social sustainability faced by telecentres as they endeavor to fulfill their development objectives	(Qualitative study design)	of issues related to the initial establishment of telecentres; telecentre users whose literacy levels were very high employed various methods to get tasks accomplished (more empowered)	generalizability of the findings
McElroy (2008)	To develop a context-based measurement model for determining the social sustainability of a human collective; to address how to incorporate sustainability context in a sustainability report	Design effort to produce a design specification for a measurement model for context-based sustainability reporting; literature search	Context-based measurement models exist only for environmental reporting. The use of such methods in business or organisational settings is quite rare; context-based measurement model for determining the social sustainability of a human collective was conspicuously missing.	The strict positivist approach might not give holistic assessment of the impact of interventions on sustainability outcomes
Fraser *et al*. (2006)	To assess the impact of participatory processes on sustainability identification and environmental management	A comparative assessment between case studies	Participatory methods helped generate more complete lists of indicators that lead to more accurate assessment; the process of engaging people to select indicators provide opportunity for community empowerment	Basing findings on the secondary data raises the question on validity of the findings –primary data is necessary; assumption that it is not possible to use Results-based management (RBM) methodologies in a

Research	Objective	Methodology	Findings and conclusions	Gap in knowledge
				participatory manner is misleading; The findings are not clear on the measures of community empowerment derived from the participatory process. Did not look at the mediating role of citizen empowerment on sustainability. Did not look at the joint influence of a participatory process like PM&E and empowerment on sustainability.
Burton *et al*. (2006)	To consider why the impact of community involvement on complex interventions has proved difficult to research and evaluation.	Comparative study based on documents review (review of existing research evidence).	Locally variable circumstances are critical to any 'thick' understanding of local practice.	Inadequate description of the research design; observe that few empirical studies set out to rigorously test whether the benefits of greater involvement in practice; recommend case-study designs, in which complex relationships can be explored intensively using qualitative methods; propose that context matters in the evaluation of the impact of

Research	Objective	Methodology	Findings and conclusions	Gap in knowledge
				community involvement.
Papineau and Kiely (1996)	To outline the process and results of programme evaluation and planning activities within an organisation involved in community economic development.	Mixed-study methodology: interviewed stakeholders that had participated in small group work; participants observation and document reviews	Stakeholders felt that their participation increased their perception of self-efficacy; acquisition of new evaluation related skills and information; more informed decision making; involvement and commitment to the organisation.	Did not go beyond the empowerment outcomes to look at how this is manifested in the sustainability indicators; advise mixed-method approach to study stakeholders' experience of empowerment by pairing open-ended question with Likert-type scale items, for instance, explore the degree of control.

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

This section provides the description of the kind of research methodology that the study employed. As Chao (2010) states, "methodologies are the tools of conducting research studies" (p.5). The term method is also used to mean steps followed by the researcher in answering research question(s) (Mugenda, 2008). Methods in research include procedures such as: sampling, instrumentation, data collection and data analyses as well as interpretation and presentation. This chapter thus describes the research paradigm, research design, target population, sampling design, sample size, data collection instruments, data collection procedure, data analysis techniques, reliability and validity as well as operational definition of variables. Ethical considerations have also been discussed. These are described in the sections below.

3.2 Research Paradigm

A paradigm is defined as a set of beliefs and practice that guide a field. It has also been described by some as worldviews or ways of experiencing and thinking about the world, including beliefs about morals, values, and aesthetics (Hall, 2012; Morgan, 2007; Onwuegbuzie and Leech, 2005). It is the assumption about how things are understood, and defining how knowledge claims are created, how one knows, the values attached and the way phenomena are studied. This has an influence on how research questions are asked and answered. This is built on the understanding that research inherently involves epistemological issues about the nature of knowledge and knowing (Morgan, 2007). The three commonly agreed paradigms are positivism (also referred to as 'purists'), constructivism (also 'situationalists') and pragmatism (Onwuegbuzie and Leech, 2005). While positivists on the one hand are closely identified with quantitative research, constructivists on the other hand are identified with qualitative research (Hall, 2012).

This study was based on a spectrum; with positivists at one end and constructivists at the other. This speaks to pragmatic paradigm (Onwuegbuzie and Leech, 2005). Pragmatic paradigm has the advantage of being flexible in its investigative techniques. Pragmatic researchers are characterized by having a positive attitude towards both qualitative and quantitative techniques, using qualitative

research to inform the quantitative portion of research studies (Morgan, 2007; Onwuegbuzie and Leech, 2005). Whereas the study utilized quantitative methods of inquiry, the nature of the constructs considered in the study, namely social sustainability, PM&E and citizen empowerment demanded that certain interpretations be derived from the subjects of the study in order to gain deeper and wider understanding of the different reality perspectives. As such, both constructivists' and positivists' perspectives were applied in the study. Taking a theoretical position somewhere along the continuum is always preferred when M&E is involved (Leborgne, Brown and Hearn, 2011). The study, therefore, applied pragmatism as its philosophical underpinning.

3.2.1 Research Design

Research design is informed by both the research paradigm and research approach. Research approaches fall into two major forms namely, quantitative and qualitative. While quantitative approach is based on positivism and neo-positivism methodological principles, qualitative approach employs principles and strategies that are mostly non-quantitative and is associated with the application of diverse methods. This study however, used a mixed-methods approach involving cross-sectional survey design. Hanson *et al*. (2005) observe that mixed methods approaches involve the collection, analysis, and integration of quantitative and qualitative data in a single or multiphase study.

Mixed methods research draw from the strengths and minimize the weaknesses of both quantitative and qualitative research studies. Today's research world has increasingly become interdisciplinary, multidisciplinary, complex and dynamic, hence the need for researchers to compliment one method with another; and as such are required to have solid understanding of multiple methods to facilitate communication, promote collaboration, and more importantly produce superior research (Johnson and Onwuegbuzie, 2004). Taking a mixed methods approach allows a researcher to pick a mix of design components that offer the best chance of responding to the objectives of the study.

Data arising from different methodologies can be used not only to verify findings from elsewhere through processes of triangulation, but also to extend and to problematize findings and models arising from different methodologies (Tikly, 2010:20). Thus, the basic purpose of the mixed methods approach is to ensure dependable feedback on a range of questions; improve the depth of understanding of particular interventions; give a holistic perspective; and enhance the validity,

reliability, and usefulness of the findings (Stufflebeam, 2001; Driscoll, Appiah-Yeboah, Salib and Rupert, 2007).; Creswell, 2009)

With reference to strategies for researching empowerment, Zimmerman (1990) argues against the use of methods that are primarily quantitative. He observes that qualitative approaches such as in-depth case studies, investigative reporting and participant observation are useful starting points. This however, does not mean that a mixed method that integrates both qualitative and quantitative methods is ineffective in researching empowerment. As a matter of fact Zimmerman commends studies that have integrated the two, arguing that in such studies the qualitative aspects reinforce the quantitative data presented and as a consequence, further strengthen the research. Hence, this study applied a mixed methods approach.

Mixed methods approach, in literature is categorised on a number of key dimensions, but more often on the logic of enquiry that drives the study. This concerns whether the study is primarily going to be inductive aimed at discovery or deductive aimed at testing hypotheses (Brannen, *n.d*). In this study, both inductive and deductive logics have been applied, which is consistent with the survey study design. The other consideration is however, in terms of the sequencing and dominance of qualitative and quantitative methods (Brannen, *n.d.;* Driscoll *et al*., 2007, Hanson *et al*., 2005; Creswell, 2009). Two designs are therefore identifiable from literature, namely simultaneous/concurrent and sequential mixed methods designs (Creswell, 2009; Hanson *et al*., 2005; Muskat, Blackman and Muskat, 2012).

Just like in the pure approaches, namely qualitative and quantitative; mixed-methods approach can take different forms. Hanson *et al*. (2005) identify six primary types of designs: three sequential (explanatory, exploratory, and transformative) and three concurrent (triangulation, nested, and transformative). Accordingly, each of these six designs varies with respect to its approach to implementation, weight given to the quantitative and qualitative data, stage at which the data are analysed and integrated, and procedural interpretations. While the approach to implementation is defined by the existence of sequential or concurrent data collection procedures, the stage at which the data are analysed and integrated is described by whether the data are separated, transformed, or connected. The implementation approaches in Hanson *et al*. (2005) classification is akin to 'time orientation bases' as described by Onwuegbuzie and Collins. According to Onwuegbuzie and Collins (2007), time orientation indicates whether the qualitative and quantitative phases of the

study occur at approximately the same point in time such that they are independent of one another: concurrent or whether these two components occur one after the other such that the latter phase is dependent, to some degree, on the former phase: sequential.

Notably, the decision to use mixed methods approach can be influenced by many factors. However, a key point of using mixed methods is to triangulate data sources so as to check the validity of one instrument against another (Bamberger, Rao and Woolcock, 2010; Sale, Lohfeld, and Brazil, 2002). Even when the decision to use the mixed methods approach is settled, there is still the need to choose which form the study should take, and according to Hanson *et al*. (2005), if the purpose is to triangulate, then the data may be collected concurrently. And since the purpose for using mixed methods approach in this study was more for triangulation than any other reasons, concurrent triangulation design was considered most appropriate during the data collection. This presented different permutations with the dominant approach indicated in CAPITAL letters. Thus in simultaneous (concurrent) designs, possibilities could include: (1) QUAL + quan or (2) QUAL + QUAN or (3) QUAN + qual or (4) QUAN + QUAN or (5) QUAL + quan or (6) QUAL + QUAL (Brannen, *n.d;* Muskat *et al*., 2012). With the quantitative phase of the study being dominant, option 3 (QUAN + qual) was considered appropriate. While the quantitative component involved collection of data by use of questionnaires, data collection for the qualitative component was through Focus Group Discussions.

3.3 Target Population

The study was situated in Karemo Area Development Programme (ADP), one of World Vision International's development programme areas. Karemo ADP is in Karemo Division of Siaya District, Siaya County in the western part of Kenya. Karemo Division is one of the four Divisions within Siaya district. The division is divided into 4 Locations encompassing 17 sub-locations. The locations include; Township, East Alego, South Alego and South East Alego locations. The programme covers 4 locations with a total of 17 sub-locations. In the implementation of the World Vision Development Programming Approach, the programme established functional committees/starter groups also called Primary Focal Areas (PFAs). PFAs were amorphous groups; sub-location based, with a population of between 15 members each; and 5 and 9 members for Township-based Sub-Locations. There were 17 PFAs in total. These are the groups that

participated in Karemo ADP programme redesign process in 2010 through to 2011. These PFAs were phased out immediately the design process was completed, but the members are still in the community. In total, the study targeted a population of 240 from the 17 PFAs, which formed the sampling frame for the study.

3.3.1 Study Site

Karemo ADP is located in Karemo Division, Siaya County. According to Kenya Census Report 2009, Siaya County was projected to have a total population of 924,704 (437,651 male and 487,053 female) by 2012, representing 47% male and 53% female (Kenya National Bureau of Statistics, 2009; Ministry of Health, 2013). This can be extrapolated to the other units of the population from district level, to division, location, sub-location and village levels. A multi indicator cluster survey, conducted by Kenya Bureau of Statistics (KNBS) revealed that, in 2011, about 86% of females aged 15-24 were literate whilst only 75 per cent of children who were attending the first grade of primary school had attended pre-school the previous year. The primary school completion rate was 80% but the transition rate to secondary school was only 67% (KNBS, 2013). Similarly, only 16% of Siaya County residents have a secondary level of education or above; and 20% have no formal education (KNBS and Society for International Development, 2013). This notwithstanding, Siaya County is considered among the 5 most rural and most equal counties when the ratio of average income in top to bottom ward is considered (KNBS and Society for International Development, 2013).

Kareme Division is administratively divided into four locations, namely, Township, East Alego, South Alego and South East Alego locations. The division has experienced increasing poverty levels over the years despite several years of development interventions by World Vision International and other international non-governmental organisations (INGOs). In 2009, the average number of people living below the poverty line in the division was approximated at 69% with East Alego and South Alego Locations having the highest poverty index of 78% and 73% respectively (World Vision International, 2009).

3.4 Sample Size and sampling procedures

This section describes the framework within which the sampling was undertaken. This includes the sample size determination and the sampling procedures. These are described as follows:

3.4.1 Sample Size

The choice of sample size is as important as is the choice of sampling scheme. This is because it determines the extent to which the researcher can make statistical and/or analytic generalizations (Onwuegbuzie and Leech, 2004). Generalization is further enhanced by the completeness of the sampling frame. Completeness of a sampling frame is critical to "representativeness" of a sample chosen from the frame. This is also consistent with Bartlett, Kotrlik and Higgins (2001) assertion that the common goal of survey research is to collect data representative of a population. And since the study targeted known individuals who participated in a PM&E process and with the list available, the completeness of the frame was guaranteed. Other than these individuals, the study also targeted CBOs within the target community with the aim of understanding the extent to which social sustainability outcomes have been realized. The list of all the CBOs within the programme's operation area was also available for consideration. This notwithstanding, the size of the sample is informed primarily by the research objective(s), research question(s), and subsequently, the research design (Onwuegbuzie and Collins, 2007).

This study was based on 17 functional/starter groups/PFAs – sub-locations based units, with a population of between 6 and 15 members each. In total the study had a target population of 240. According to Bartlett *et al.* (2001) a common goal of survey research is to collect data representative of a population. To arrive at a reasonable sample size, Yamane formula was applied. Yamane (1967) provides a simplified formula to calculate sample sizes. The formula is stated as:

$$n = \frac{N}{1 + N\,(e)^2}$$

Where n is the sample size, N is the population size, and e is the level of precision. With a population of 240 participants and assuming a 95% confidence level and $p = .5$, when this formula is applied, we get:

$$n = \frac{240}{1 + 240\,(.05)^2}$$

$$n = 150$$

Also, in a table developed to determine minimum returned sample size for a given population, Bartlett *et al*. (2001) observe that a population size of 300 for categorical data and a margin of error of 0.5 should yield a sample size of 169 (p.48). However, this depends on the power coefficient set by the researcher. According to Onwuegbuzie and Leech (2004), conventionally, most researchers set the power coefficient at .80 and the level of significance at .05. Thus, once the expected effect size and type of analysis are specified; the sample size needed to me*et al*l specifications can be determined. The two approaches give a sample size of between 150 and 169.

Taking the higher sample size of 169 and assuming that the proportionate sample size would have been a factor of the chosen sample size and the population (169/240 = .70*Cluster N); this pushes the sample size to 176 participants. Table 3.1 shows the sample size by sub-location (starter group) based on the proportional assignment of sample sizes by starter group. The sample size per sub-location has been computed based on their respective population sizes.

Table 3.1: Sample Size – Individual participants

Starter Group/PFA	Total (N)	Sample size (169/240*N)
Ulafu	16	11
Barding	15	11
Barosimbo	15	11
Baragulu	15	11
Murng'iya	15	11
Nyajuok	15	11
Masumbi	15	11
Mur Malanga	15	11
Pap Oriang'	15	11
Randago	15	11
Bar Olengo	15	11
Karapul	15	11
Umala	15	11
Olwa	15	11
Nyangoma	15	11
Nyandiwa	8	6
Mulaha	7	5
Total	**240**	**176**

However, given that the study population is small enough, census method was preferred. All individuals who participated in the PM&E process were, therefore, considered for the quantitative component.

Taking into consideration the complexity of issues related to PM&E, empowerment and social sustainability, the study opted to go beyond the quantitatively generated data to understand what is behind the statistics. To do this, simple and stratified purposive sampling design was used to select participants for the qualitative phase of the study. On one hand, two locations were randomly selected where 2 sets of between 12 to 15 participants who participated in the World Vision's design process were selected to participate in Focus Group Discussions (FGDs). On the other hand FGDs were also conducted with 4 CBOs to help generate qualitative data to help triangulate findings on social sustainability from the quantitative phase of the study. The respondents in the FGDs with the CBOs were mainly management committee members who self-selected to participate in the study. A total of 6 FGDs were, therefore, conducted in the study. These discussions mainly generated qualitative data, which helped explain the causal mechanisms at work in the quantitative analyses.

3.4.2 Sampling Procedures

Sampling procedures represent the framework within which the sampling takes place. Selection of an appropriate sampling design in mixed methods study involves two criteria, namely: time orientation and relationship of the qualitative and quantitative samples (Onwuegbuzie and Collins, 2007). According to Onwuegbuzie and Collins (2007), relationships can either be identical, parallel, nested, or multilevel. An identical relationship indicates that exactly the same sample of members participate in both the qualitative and quantitative phases of the study (for example, a questionnaire that contains both closed and open-ended items, can be used to collect both quantitative and qualitative data simultaneously). A parallel relationship on the other hand specifies that the samples for quantitative and qualitative components of the research are different but are drawn from the same population under study. The study applied a concurrent, parallel sampling design, whereby the samples for quantitative and qualitative components were different but drawn from the same population and data collected within the same timeframe.

The study employed stratified purposive sampling to select CBOs whereby the study area was divided into four clusters (location-based) from which four CBOs were drawn with each of the cluster represented by a CBO. According to Elder (2009), stratified sampling has the following advantages, namely: reduced sampling error; permits control over design and selection of the sample within each stratum; more representativeness of the population characteristics; reduced

travel and other costs of data collection. In order to obtain a stratified random sample, the sampling frame was first divided into sub-populations, or strata. Next, a random sample was selected from each stratum. The goal of stratified random sampling was to select a sample in such a way that the target CBOs would have equal chance of being selected in the same proportion that they exist in the population. The CBOs were first divided into four strata based on their geographical coverage; locations. Simple random sampling technique was employed to select 4 CBOs from 4 locations to ensure each location within the study area was represented. FGDs were then conducted with 8-15 management committee members of each of the CBOs selected.

The other phase of qualitative data collection involved respondents from the list of community members who participated in Karemo ADP's redesign process (the study population). Simple random sampling technique was applied to select participants to be included in the FGDs. Two locations were randomly selected where 2 sets of between 6 to 12 participants who participated in the World Vision's design process were selected to participate in the FGDs. All the participants in this segment also participated in the quantitative phase of the study.

3.5 Data Collection Instruments

This study employed the use of questionnaires to gather quantitative data and Focus Group Discussion (FGD) Guides to collect qualitative data. The questionnaires were administered to individual members from the defunct PFAs within the programme area. The questionnaires were designed to help generate a range of measures of dimensions of the study variables as had been operationalized in the study. A number of composite measures were designed to capture each of these dimensions. The dimensions were arrived at through the review of literature. Consequently, the questionnaire had two sections, namely: Section one having demographic factors; and section two with the main study variables and their related sub-variables or indicators. Each of the sub-variables was defined by its composite items measured in 5 point Likert scales. The questionnaires were used to gather quantitative data from all the individuals who were members of the 17 PFAs. The questionnaires were administered to 212 members of the defunct PFAs who were the respondents in the quantitative phase of the study. The questionnaires were either self-administered or administered through 10 research assistants who underwent a one-day training.

Although the major component of the study was quantitative, the study also collected qualitative data to gain impression on the mechanisms at play in the quantitative dataset. The qualitative phase of the study utilized Focus Group Discussion (FGD) guides as the main instrument for data collection. The FGD guides highlighted the discussion topics, key concepts to be explored and the guide questions to help in exploring the concepts. Focused group discussions were first conducted with two PFAs, whose membership was primarily individuals who participated in the PM&E processes, which were the main subject of the study. Individuals who participated in this phase of the qualitative data also responded to the quantitative phase of the study. In addition, four FGDs were conducted with four different CBOs, who were purposively selected, due to their geographical outreach and having been identified by Karemo Area Development Programme as partner CBOs. Focus group discussions were held with the management committee members of these CBOs, who self-selected to participate in the study. Using both qualitative and quantitative data is advised since it allows the researcher to simultaneously generalize results from a sample or a population, gain deeper understanding of the phenomena of interest as well as test theoretical models and falsify them at the same time based on participants' responses (Hanson *et al*., 2005).

3.5.1 Pilot Testing

To improve internal validity of the research instruments, the study undertook pilot study procedures. Through pre-testing, the internal consistency of the questionnaires was established before embarking on data collection. This involved administering the instruments to pilot subjects in exactly the same way as was later done in the main study. The study questionnaires were first administered to 30 individual (representing more than 10% of the target population) members who participated in a similar PM&E process in Pala Area Development Programme, Homa Bay County. The subjects were asked for feedback to identify ambiguities and difficult questions. Responses were then checked to ensure each question gives an adequate range of responses. A sample of between 10% and 20% of the sample size for the actual study is considered adequate for conducting a pilot study (Baker, 1994; De Vaus, 1993). This process was also aimed at assessing the questions in terms of their meaning and vocabularies.

From the Pilot Study, it was clear that some questionnaire items, especially those that relate to citizen empowerment were not well understood by the respondents. It appeared that majority of the participants were not able to decode questions 21, 22 and 23 correctly and therefore responses

to these questions might not have been accurate reflection on the items provided. These questions were excluded in the actual data collection. The list of initial questions, along with the revised questions as a result of Pilot study outcomes is shown in Appendix II.

3.5.2 Validity of Instruments

Two types of validity might undermine any given research. These are internal and external validity (Onwuegbuzie and Collins, 2007). Internal validity is the basic minimum without which any research is useless. It asks the question; did the research or experimental treatments make a difference in this specific instance? The external validity on the other hand asks the question of generalizability: To what extent populations, settings, treatment variables, and measurement variables can this effect be generalizable? (Cohen, Manion and Morrison, 2007). The selection of designs strong in both types of validity is ideal (Campbell and Stanley, 1963; Cohen *et al.*, 2007). This is also well captured by Borsboom, Mellenbergh and Heerden (2004) who argue that the test is valid for measuring an attribute if (a) the attribute exists and (b) variations in the attribute causally produce variation in the measurement outcomes.

Validity of instruments asks whether the measuring instrument measures what it is intended to measure or not, and the degree of accuracy of that measurement (Onwuegbuzie and Johnson, 2006). In this study, therefore, the following questions were asked regarding the questionnaire namely: Does the questionnaire measure what it is intended to measure and; does the questionnaire comply with content, criterion and construct validity criteria? Several approaches have been proposed to enhance validity. Bamberger *et al*. (2010), for example, argue that mixed methods can significantly strengthen the validity and operational utility of the constituent designs. The key point of using mixed methods is to triangulate data sources so as to check the validity of one instrument against another. The study utilized triangulation as a way of enhancing validity of the questionnaire. Validity of the instruments and the study in general was also strengthened by collecting both quantitative and qualitative data concurrently.

The content validity of the instruments was established through the review of literature to see evidence of content validation studies and reported reliability statistics of published studies that have used the instruments. An attempt was also made to systematically examine the test content to determine whether it covers a representative sample of the behavior domain to be measured. The items that were included in the test were carefully selected through a rigorous process as

informed by the literature review. Through the literature review, items were chosen only to the extent that they complied with the test specifications drawn through a thorough examination of the variable or indicator domain. Experts in the field of monitoring and evaluation were also engaged to review the test specifications and the selection of items. Their reviews generally agree with the fact that the items cover a representative sample of the behavior domain.

3.5.3 Reliability of Instruments

Reliability is considered a prerequisite for validity (Stratford, 1989). Before administering the questionnaire (the quantitative research instrument for the study); in order to determine whether the instrument would measure the intended objectives, the questionnaire was pre-tested for reliability. Stratford (1989) argues that a reliable instrument is one with small errors of measurement, one that shows stability, consistency, and dependability of scores for individuals on the trait, characteristic or behavior being assessed. The questionnaire was pretested with a total of 30 respondents representing 12.5% of the study population before the actual data collection process began. These were drawn from a different population, but one that had experienced a similar intervention. 10% of the sample size is considered reasonable enough for pilot testing study instruments (De Vaus, 1993; Baker, 1994).

The reliability of the research instruments was tested using Cronbach's Alpha method. The reliability of more than 0.6 was considered acceptable. This is consistent with Nunnally's observation that for basic research, a reliability of between 0.5 and 0.6 is just adequate and as such increasing reliability beyond 0.8 is unnecessary (Nunnally, 1967). A total of 30 questionnaires, representing 12.5% of the targeted participants were administered before the actual data collection process.

The reliability and validity of the data collection instruments was an important consideration before the collection of data. This was more so critical for the quantitative phase of the study. Cronbach's reliability tests were conducted to determine the appropriateness of the test items in measuring the various study variables. The research questionnaire reported an overall reliability coefficient based on Cronbach's alpha of .89 as indicated in Appendix XII. This is very strong and indicates a strong internal consistency among the 110 items comprising of social sustainability, PM&E and citizen empowerment.

The tests for reliability of the dependent, mediating and independent variables yielded a Cronbach's Alpha of between .735 and .929. The Cronbach's alpha coefficients for social sustainability items ranged from between .715 and .769 as shown in Appendix XII. The overall alpha coefficient for the social sustainability social sustainability instrument for the 59 items considered was 0.735. Alpha coefficients at this level are considered high, indicative of the high consistency among the 59 items of social sustainability. This means that the items applied in the study can effectively discriminate the levels of social sustainability among the study participants.

Citizen empowerment as a variable in the study had 36 items. A reliability analysis was conducted to determine the appropriateness of the items in understanding the levels of citizen empowerment in the study population. The Cronbach's alpha coefficients for the various citizen empowerment items ranged between .903 and .916 as shown in Appendix XII. This is very high and was considered appropriate for the purpose of this research. The overall coefficient for the citizen empowerment items was .91 (36 items), which indicates a very high internal consistency of the items. According to Nunnaly's (1967), for basic research, a reliability of between 0.5 and 0.6 is just adequate and as such increasing reliability beyond 0.8 is unnecessary.

Participatory monitoring and evaluation yielded a Cronbach's Alpha of 0.929 (15 items), however the individual indicators of participatory monitoring and evaluation had reliability with alpha ranging from 0.68 (participation in PM&E activities – 5 items); 0.821 (participation in programme design – 3 items); 0.916 (participation in reflection and feedback sessions – 3 items); 0.867 (participation in the implementation – 2 items); 0.873 (participation in M&E – 2 items). The Cronbach's alpha coefficients for the various PM&E items ranged between 0.916 and 0.936 as shown in Appendix XII. The reliability results show that the overall alpha coefficient for participatory monitoring and evaluation was 0.929. Alpha coefficients that fall within this range are considered very high and indicate consistency among the items in the various indicators of PM&E. This shows that the items within each indicator were able to effectively discriminate high participation from low participation with regard to the level of participation in the PM&E processes.

3.6 Data Collection Procedure

The research study engaged a multi-methods approach at each stage of data collection. Data gathering entailed extensive literature review and the use of questionnaires to gather quantitative data. The questionnaires were either self-administered or administered through well trained research assistants. Ten (10) research assistants (5M and 5F) were trained for 1 day on the content of the instruments as well as on research ethics. The qualitative data were collected through FGDs with the management committee members from the sampled CBOs; as well as with the PFA members from randomly selected PFAs. Data from the FGDs was later analysed and used as proxy evidence of social sustainability as well as to explain the causal mechanisms at play in the quantitative data set.

3.7 Data Analysis Techniques

For quantitative analysis, data entry template was prepared from the revised questionnaire following the pilot study. This was administered to the study respondents – starter group members. Data from the respondents were entered, cleaned and analysed using the Statistical Package for Social Sciences (SPSS) Version 17.0 software. The data was then explored for normality, linearity, kurtosis, skewness, homogeneity and factorability to decide on the probable statistics if relevant assumptions were met. Since most of the assumptions for parametric tests were met, the study utilized both descriptive and inferential statistics amenable to parametric analysis. Whereas descriptive statistics involved the use of central tendency (mean, mode and median), frequencies, proportions, standard deviation and variance; the inferential tests employed the use of Pearson *r* correlation to test the relationships between the main study variables and the nature thereof; as well as to test the hypotheses. The relationships were considered strong when $r = .5$ and above, moderately strong when *r* is between 0.3 and 0.49, weak when *r* is below 0.29; and a correlation of 0 indicated no relationship. Once analysed, the information was presented in the form of tables, which form a significant part of this research report.

Although the bivariate relationships were examined, it is the combination of variables explained by multivariate analyses that were considered of most interest in establishing the influence of a PM&E process. Multivariate analyses were thus, employed in determining these influences. To identify combination factors that could be used to predict the influence, the study utilized stepwise

regression analysis. All the independent variables statistically significant (p<.05) related to an influence were first inter-correlated with the dependent variable. The variable with the highest correlation (that is the one that explains the most variance in the success measure) would be entered first into the multiple regression equation. In the next step, the independent variable with the highest partial correlation with the dependent variable would be entered, but controlling for variables already entered. This stepwise procedure was helpful in controlling for multicollinearity. The mediating influence of citizen empowerment and the moderating influence of demographic factors on the relationship between PM&E and social sustainability were also examined.

The statistical tests for measuring the influence of PM&E were based on regression approach and correlation coefficient and their transformation. A standard approach of stating the null hypothesis of zero coefficient of correlation between dependent and independent variables was applied. The empirical analysis was based on the standard regression formula:

$Y_i = b_0 + b_1X_1 + b_2X_2 + \ldots\ldots\ldots\ldots\ldots B_nX_n + \epsilon_i$

Where:

Y_i = Social sustainability (dependent variable); and citizen empowerment (Mediating Variable).

X_1 = the first predictor variable (and b_1 is the coefficient of the first predictor, X_2 is the 2nd predictor variable and b_2 is the coefficient of the 2nd predictor X_2. b_n is the coefficient of *n*th predictor X_n. The mediating variable acted as a dependent variable at one time and independent at another. This was because the study sought to establish the influence of PM&E (an independent variable) on citizen empowerment as a means to social sustainability. As a dependent variable, citizen empowerment was considered a predictor to social sustainability. Dummy variables were introduced to convert categorical data into numerical data set.

In order to appropriately interpret the ensuing statistics, the following considerations were made:

When: r = -1 (a perfect negative linear relationship); r = -.70 (a strong negative linear relationship; r = -.50 (a moderate negative relationship); r = -.30 (a weak negative linear relationship; r = 0 (no linear relationship); r = +.30 (a weak positive linear relationship); r = +0.50 (a moderate positive linear relationship); r = +.70 (a strong positive linear relationship); r = +1 (a perfect positive linear relationship). *t*-value of greater than 1.96 with less than .05 indicates that the independent variable

is a significant predictor of the dependent variable within and beyond the sample. The greater the *t*-statistics, the greater the relative influence of the independent variable on the dependent variable. A *t*-statistics of less than 1.96 with a significance greater than .05 indicates that the independent variable is not a significant predictor of the dependent variable beyond the sample. Coefficient of Determination (R^2): R^2 = 1 (perfect fit); R^2 = 0 (no variation). Table 3.2 gives a summary of hypotheses of the study, the model, type of statistical analysis and interpretation of the results.

Table 3.2: Summary of test of hypotheses

Hypotheses	**Model**	**Statistical Analysis**	**Interpretation of Results**
H1: There is a relationship between PM&E (IV) and social sustainability (DV).	$Y_1 = b_0 + b1X1 + \epsilon 1$ Where: Y_1 = social sustainability X_1 = PM&E	Pearson *r* Correlation coefficient: Linear regression r, R^2, F and t values	The model establishes the variation in social sustainability resulting from one explanatory variable (PM&E)
H2: There is a relationship between PM&E (IV) and citizen empowerment (Mediating Variable).	$Y_2 = b_0 + b_1X_1 + \epsilon_1$ Where: Y_2 = citizen empowerment X_1 = PM&E	Pearson *r* Correlation coefficient: Linear regression r, R^2, F and t values	The model establishes the variation in citizen empowerment (mediating variable) resulting from one explanatory variable (PM&E)
H3: There is a relationship between citizen empowerment (MV) and social sustainability (DV).	$Y_1 = b_0 + b_2X_2 + \epsilon_2$ Where: Y_1 = social sustainability X_2 = citizen empowerment.	Pearson *r* Correlation coefficient: Linear regression r, R^2, F and t values	The model establishes the variation in social sustainability resulting from one explanatory variable (X_2)
H4: The strength of the relationship between PM&E (IV) and social sustainability (DV) depends on	$Y_1 = b_0 + b_1X_1 + b_3X_3 + b_4(X_1*X_3) + \epsilon_1$ Where:	Pearson *r* Correlation coefficient: Multiple Regression Analysis r, R^2, F and t values	The model shows how PM&E influences sustainability when demographic factors are controlled for.

demographic factors (moderators).	Y_1 = social sustainability X_1 = PM&E X_3 = each of the demographic factors (gender, age, education, literacy, occupation and income)	- Stepwise regression	
H5: The joint influence of PM&E (IV) and citizen empowerment (mediating variable) on social sustainability (DV) is greater than PM&E or Citizen Empowerment independently.	$Y_1 = b_0 + b_1X_1 + b_2X_2 + \epsilon_1$ Y_1 = social sustainability X_1 = PM&E X_2= citizen empowerment.	Pearson *r* Correlation coefficient: Multiple Regression Analysis r, R^2, F and t values - Stepwise regression	The model shows how each variable influence social sustainability when all of the other variables are controlled for. If the p-value is above 0.05 (5%) then the variable can be left out.

Where:

Y_1 = The main dependent variable (DV)

$Y_2 = X_2$ = Mediating Variable (acting as DV at one point and second IV at another)

X_1 = The first predictor (IV)

X_3 = The moderating variable (and also third predictor variable)

b_0 = y-intercept (the constant term)

b_1 = The coefficient of the first predictor variable

b_2 = The coefficient of the second predictor variable

b_3 = The coefficient of the third predictor variable

(X_1*X_3) = The interaction term between the independent variable (X_1) and the moderating variable (X_3))

While quantitative phase of analysis involved the use of data analysis software, the qualitative component involved drawing analytical conclusion from qualitative datasets. Qualitative data were summarized into themes. Techniques such as interpretive, coding and recursive abstraction were then employed in order to summarize the dataset into meaningful chunks. The interpretive technique was used to give and report the observer's impression in a structured form. On the other hand coding was applied in order to organize the data and provide a means to introduce interpretations into certain quantitative methods. To accomplish this, data was analysed to read the data and demarcate segments within it. Each of these segments was labeled with a 'code' – a word or short phrase suggesting how the associated data segments describe the specified research objectives. This qualitative data analysis technique was, especially applied in analyzing data from FGDs with selected members of PFAs in 2 Locations randomly selected as well as data from 4 CBOs, selected through purposive stratified sampling procedure to participate in the study.

The analysis also employed recursive abstraction, where data was analysed without coding. The technique involves summarizing the datasets several times until the correct impression about the variable is achieved. The process of analysis involved reading of the qualitative data, discovering of significant groupings and the generation of categories, the regrouping of themes and patterns, testing of evolving understanding of the issues and a search on alternative explanations or divergent views which helped in the identification and explanation of key issues which are likely to have influence on the study findings.

Data collection and analysis was, thus based on iterative (hermeneutic) inquiry, where data were collected and subjected into a critically reflective process of preliminary data analysis which involved checking and tracking data to make meaning out of the dataset. This 'reflexive' process, as it is described by Srivastava and Hopwood (2009), is key to sparking insight and developing meaning, and it involves visiting and revising the data and connecting them with emerging insights, progressively leading to deeper understanding. Preliminary analysis is a process of engagement with the text in order to gain a deeper understanding of values and meaning which lie therein (Grbich, 2007). This process was necessary in order to highlight emerging issues, to allow all relevant data to be identified and to provide directions for the seeking of further data. Following the completion of this process, was data collation and summary of the major points gained from the focus group discussions into the relevant themes that had been predefined in the questionnaire.

The preliminary data analysis and thematic analysis were followed by data classification. In this study, taxonomies was applied as the most preferred classificatory tool of analysis. This involves the organizing of knowledge into discrete categories in a logical manner (Grbich, 2007). Through this approach, data was analysed further in order to identify and clarify the categories that the data represented. The process of classification involved grouping information of particular relevance to the research questions. This is also consistent with Srivastava and Hopwood (2009) who argue that patterns, themes, and categories do not emerge on their own, but are driven by what the researcher wants to know and how the researcher interprets what the data are telling her or him according to subscribed theoretical framework and subjective perspectives, ontological and epistemological position, and intuitive field understandings. And as advised by Grbich (2007), the typology formation in this study involved collating all data relating to the particular research question; identifying variations, layers and dimensions; classifying into types (subgroups); and representing the same to the reader. The study, thus applied a combination of procedures and techniques suggested by Srivastava and Hopwood (2009) and Girbich (2007)

3.8 Ethical Considerations

As part of ethical considerations, research permit was sought from the Ministry of Education Science and Technology (MoEST), Department of National Commission for Science, Technology and Innovation (NACOSTI). It is only after the approval was given that data collection process began. Moreover, participation in both quantitative and qualitative components of the study by all participants was voluntary, confidential and anonymous. The respondents were informed about the objectives of the study and then requested to consider participating. The informed consent was aimed at protecting the research participants on issues of personal disclosure and personal privacy. The identities of the participants were thus not disclosed in the entire study process. Participants were at liberty to refuse to respond to any questions or pull out of the process at any stage.

3.9 Operationalization of Variables

Objective	Variables	Indicators	Measurements	Measurement scale	Study Design	Tools of Analysis	Specific tools	Tools of data collection
1. To assess the extent to which PM&E influences social sustainability.	**Independent Variable** Participatory Monitoring and Evaluation (PM&E)	- Participation in the project design process. - Participation in reflection session during the implementation. - Participation in the implementation of programme activities - Participation in the M&E of activities	- Level of Participation in the project design process. - Level of participation in reflection sessions during the implementation - Level of participation in the implementation of programme activities - Level of participation in the M&E of activities.	Interval Interval Interval Interval	Descriptive Survey Inferential statistics	-Central Tendency -Test of Relationships	Mean, Mode Median - Standard Deviation - Proportion Pearson *r* correlation test; R^2 - F and t test	Q12, Q13, Q14, Q15, Q16
	Dependent Variable Social sustainability	- Social capital - Interaction in the community (social networks). - Community participation - Social cohesion	- Participation in group activities. - Nature of interaction in the community - Level of participation -Group membership - Nature of social cohesion.	Interval Interval Interval Interval Interval	Descriptive Survey Inferential statistics	-Central Tendency -Test of Relationships	Mean, Mode Median - Standard Deviation - Proportion Pearson *r* correlation test; R^2 - F and t test	Q2, Q3, Q4, Q5, Q6, Q7, Q8, Q9, Q10 Q11
2. To determine the extent to which PM&E influences	**Independent Variable** Participatory Monitoring	- Participation in the project design process.	- Level of Participation in the project design process.	Interval	Descriptive Survey	-Central Tendency	Mean, Mode Median	Q12, Q13, Q14, Q15,

citizen empowerment.	and Evaluation (PM&E)	- Participation in reflection session during the implementation. - Participation in the implementation of programme activities - Participation in the M&E of activities	- Level of participation in reflection sessions during the implementation - Level of participation in the implementation of programme activities - Level of participation in the M&E of activities.	Interval Interval Interval	Inferential statistics	-Test of Relationships	- Standard Deviation - Proportion Pearson *r* correlation test; R^2 - F and t test	Q16
	Mediating Variable Citizen Empowerment	- Perception of self-efficacy - Perception of self-confidence - Decision-making capacity - Acquisition of new skills - Acquisition of knowledge on M&E - Information about the project	- Being in control of one's own life. - Being optimistic of the future - Informed decision making - Knowledge about the importance of M&E - Whether the respondent has acquired new skills or not. - Change in the level of information about the programme.	Interval Interval Interval Interval Interval Interval	Descriptive survey Inferential statistics	-Central Tendency -Test of Relationships	Mean, Mode Median - Standard Deviation - Proportion Pearson *r* correlation test; R^2 - F and t test	Q17, Q18, Q19, Q20, Q21, Q22, Q23, Q24, Q25, Q26, Q27
3. To establish the extent to which citizen empowerment influences social sustainability.	Citizen Empowerment	- Perception of self-efficacy - Perception of self-confidence - Decision-making capacity - Acquisition of new skills	- Being in control of one's own life. - Being optimistic of the future - Informed decision making - Knowledge about the importance of M&E	Interval Interval Interval Interval Interval	Descriptive survey Inferential statistics	-Central Tendency -Test of Relationships	Mean, Mode Median - Standard Deviation - Proportion Pearson *r* correlation test; R^2	Q17, Q18, Q19, Q20, Q21, Q22, Q23, Q24, Q25, Q26, Q27

		- Acquisition of knowledge on M&E - Information about the project	- Whether the respondent has acquired new skills or not. - Change in the level of information about the programme.	Interval			- F and t test	
	Dependent Variable Social sustainability	- Social capital - Interaction in the community (social networks). - Community participation - Social cohesion	- Participation in group activities. - Nature of interaction in the community - Level of participation -Group membership - Nature of social cohesion.	Interval Interval Interval Interval Interval	Descriptive Survey Inferential statistics	-Central Tendency -Test of Relationships	Mean, Mode Median - Standard Deviation - Proportion Pearson *r* correlation test; R^2 - F and t test	Q2, Q3, Q4, Q5, Q6, Q7, Q8, Q9, Q10 Q11
4. To establish the moderating influence of demographic factors on the relationship between PM&E and social sustainability	**Moderating Variables** Demographic factors	- Education - Literacy - Income - Gender - Age - Occupation	- Level of Education - Level of literacy - Level of income - Male/Female - Age cohorts - Occupation type	Ordinal Ordinal Interval Nominal Ordinal Nominal	Descriptive Survey Inferential statistics	-Central Tendency -Test of Relationship	Mode Proportion	Q1
5. To establish the joint influence of PM&E and citizen empowerment on social sustainability	**Dependent Variable** Social sustainability	- Social capital - Interaction in the community (social networks). - Community participation - Social cohesion	- Participation in group activities. - Nature of interaction in the community - Level of participation -Group membership	Interval Interval Interval Interval	Descriptive Survey Inferential statistics	-Central Tendency -Test of Relationships	Mean, Mode Median - Standard Deviation - Proportion Pearson *r* correlation test; R^2	Q2, Q3, Q4, Q5, Q6, Q7, Q8, Q9, Q10 Q11

			- Nature of social cohesion.	Interval			- F and t test	
	Citizen Empowerment	- Perception of self-efficacy - Perception of self-confidence - Decision-making capacity - Acquisition of new skills - Acquisition of knowledge on M&E - Information about the project	- Being in control of one's own life. - Being optimistic of the future - Informed decision making - Knowledge about the importance of M&E - Whether the respondent has acquired new skills or not. - Change in the level of information about the programme.	Interval Interval Interval Interval Interval Interval	Descriptive survey Inferential statistics	-Central Tendency -Test of Relationships	Mean, Mode Median - Standard Deviation - Proportion Pearson *r* correlation test; R^2 - F and t test	Q17, Q18, Q19, Q20, Q21, Q22, Q23, Q24, Q25, Q26, Q27
	Independent Variable Participatory Monitoring and Evaluation (PM&E)	- Participation in the project design process. - Participation in reflection session during the implementation. - Participation in the implementation of programme activities - Participation in the M&E of activities	- Level of Participation in the project design process. - Level of participation in reflection sessions during the implementation - Level of participation in the implementation of programme activities - Level of participation in the M&E of activities.	Interval Interval Interval Interval	Descriptive Survey Inferential statistics	-Central Tendency -Test of Relationships	Mean, Mode Median - Standard Deviation - Proportion Pearson *r* correlation test; R^2 - F and t test	Q12, Q13, Q14, Q15, Q16

CHAPTER FOUR
DATA ANALYSIS, PRESENTATION, INTERPRETATION AND DISCUSSIONS

4.1 Introduction

This chapter outlines specific details on data analysis, presentation and interpretation of the findings. The chapter also includes a discussion of the findings. The study was designed to respond to the need for an empirical study to test the claims regarding the effectiveness of participatory approaches to monitoring and evaluation. From the literature reviewed, it was apparent that few studies have been undertaken to examine whether the expected results of participation are well grounded in evidence-based or replicable cause-effect relationships (Abbot and Guijt, 1998; Burton *et al*., 2006; Fraser *et al*., 2006; Papineau and Kiely, 1996). The purpose of this research was therefore to establish the influence of PM&E on social sustainability as mediated by citizen empowerment. The moderating influence of demographic factors such as gender, age, socio-economic status, level of education, level of literacy and occupation on the relationship between PM&E and social sustainability was also analysed. The analyses further investigated the joint influence of PM&E and citizen empowerment on social sustainability. The research employed a mixed-methods study approach, which involved both quantitative and qualitative methods; and was based on a concurrent, parallel sampling design, whereby the samples for both quantitative and qualitative components were drawn from the same population.

The study was undertaken to explore five research objectives, namely: To assess the extent to which PM&E influences social sustainability; to determine the extent to which PM&E influences citizen empowerment; to establish the extent to which citizen empowerment influences social sustainability; to determine the moderating influence of demographic factors on the relationship between PM&E and social sustainability; and to establish the joint influence of PM&E and citizen empowerment on social sustainability. These were later formulated into hypotheses that were finally tested using various test statistics. Prior to the analyses, all the data (both quantitative and qualitative) were examined to ensure the variables of interest were appropriately computed and coded. No errors were found during the computation and coding process. The quantitative data were further explored for various assumptions to determine whether the preferred test statistics would be appropriate. Before the analyses, the data were explored for normality of the distribution,

homogeneity of variance, interval data and independence. The data satisfied the normality and other tests conducted.

As one of the ethical considerations, the study committed to conceal the identities of the respondents both at individual levels and group levels. Consequently, starter groups and CBOs that participated in the study were assigned codes. The use of pseudonyms or codes is usually advised, especially when the goal is to maintain anonymity (Grbich, 2007). PFA 1 and PFA 2 have been applied in this study to describe the two starter groups that were interviewed. On the other hand CBO 1, CBO 2, CBO 3 and CBO 4 have been used to identify the four CBOs that responded to the focus group discussions.

4.2 Questionnaire Return Rate

The quantitative phase of the study began, first by establishing the response rate. Establishing the response rate was necessary as a measure to enhance external validity. According to Sivo, Saunders, Chang and Jiang (2006), high response rate is one of the factors that enhance external validity. The number of questionnaires that were administered to the respondents was 212 out of the intended 240 individuals, representing 88.3% response rate. Those who did not participate either declined or were not available to respond to the questionnaire. A response rate of more than 70% is usually considered very good (Babbie, 1990). The response rate of 88.3% was therefore adjudged to be appropriate and so further analysis was considered plausible. The questionnaires were administered to starter group/PFA (Primary Focal Area) members (people who participated in a World Vision driven participatory monitoring and evaluation process). Table 4.1 represents the questionnaire return rate by cluster.

Non-response to questionnaire items was minimal. Out of the 212 individuals (92 males and 120 females) who responded to the instrument, 210 individuals (92 males and 118 females) completed the entire instrument. Only .009% of all the respondents representing (2 females) did not completely answer all the questionnaire items.

Table 4.1: Questionnaire Return Rate

Starter Group	Total (N)	Response rate (%)
Ulafu	16	100.0
Barding	15	100.0
Barosimbo	12	80.0
Baragulu	15	100.0
Murng'iya	15	100.0
Nyajuok	11	73.3
Masumbi	12	80.0
Mur Malanga	12	80.0
Pap Oriang'	14	93.3
Randago	10	66.7
Bar Olengo	14	93.3
Karapul	14	93.3
Umala	13	86.7
Olwa	13	86.7
Nyangoma	13	86.7
Nyandiwa	7	87.5
Mulaha	6	85.7
Total	**212**	**88.3**

4.3 Demographic profile of the Respondents

The research population was drawn from Karemo Area Development Programme (ADP), one of World Vision International's (Kenya) programme areas. Participants for the qualitative phase of the study were drawn from two categories. The first were members of starter groups from two locations randomly selected, where 2 Primary Focal Areas (PFAs) consisting of between 6 to 12 members were selected to participate. PFAs were functional units formed by the programme to facilitate the redesign process. Participants in this category represented people who were involved in World Vision – Karemo Area Development redesign process. Since the process was considered an empowering process, the study hypothesized that the members who were involved would be exhibiting empowerment and social sustainability outcomes as well as being able to articulate the same.

The other category consisted of 4 CBOs randomly selected from among the list provided by Karemo Area Development Programme. The CBOs were first grouped by locations before a CBO was randomly selected per location to be interviewed from among the 4 clusters/locations identified. The participants in this category represented self-selected members of a CBO. Thus 4

focus group discussions were conducted to establish the levels of social sustainability as a result of PM&E processes within the study area.

The criterion used to define the participants for the quantitative component of the study on the other hand was mainly based on the participants' involvement in the World Vision Development programming approach. All the individuals who participated in this process under the functional units dubbed PFAs qualified to take part in the study. Out of 240 individuals targeted, 212 (92 females and 120 males) agreed to participate in the study. Table 4.2 presents the analysis of the study population by gender. The research population was 56.5% males and 43.4% females. This shows that a good attempt is being made by the programme to include women in the design, monitoring and evaluation processes. However, based on the KNBS (2009), Siaya County was projected to have a total population of 924,704 (437,651 male and 487,053 female) by 2012, representing 47% male and 53% female (Ministry of Health, 2013). This can be extrapolated to the other units of the population from district level, to division, location, sub-location and village levels. Accordingly, female are the majority and should therefore have had more representation in the redesign and other PM&E processes.

Table 4.2: Analysis by Gender

	Frequency	Percent	Cumulative Percent
Female	92	43.4	43.4
Male	120	56.6	100.0
Total	212	100.0	

The study population was further analysed by various demographic characteristics. Table 4.3 shows a cross tabulation by various demographic characteristics. While all the 92 females who participated in the study had some form of formal education, 10 out of the possible 120 male participants had no formal education. This indicates that 95.2% of the research participants had formal education. Analysed by education levels, a bigger proportion, represented by 46.2% had secondary education followed by those with primary education at 39.6%. Those with diploma or degree level of education were 8%, while those with adult education were 1.4%.

In terms of literacy, 8 male respondents indicated not to have had the ability to read or write, representing 3.8% of all the research participants. Two (2) participants- all female, could only read

but not write. The remaining 202 (112 males and 90 females) of the respondents, representing 95.3% could both read and write.

The primary occupation of majority of the research population was predominantly farming, with 138 (76 males and 62 females), representing 65.1% picking farming as their primary occupation. This could be explained by the fact that the participants were largely drawn from rural parts of the county, which form the biggest part of the programme's catchment, which in this case was the study area. Farming is the predominant livelihood activity in this rural community. Only 6.6% of the research participants had formal and informal employment. Women were 57% of the employed among the research population. This was interesting, since ordinarily more men would be employed than women. Those who were involved in casual labour and business were 4.7% and 20.3% respectively. The remaining 3.3% observed that they were engaged in other occupations besides the ones listed. Others, according to the research participants were those who were either involved in more than one livelihood activities, volunteers, community social workers or the retired.

The ages of the research population were put into four categories. The vast majority of the respondents (83%) were 36 years and above with only 17% representing the youth with ages ranging from 18 to 35 years. Men were the majority in all the age cohorts, except for the more than 50 years cohort where there were 30 females against 27 males.

In summary, the population in the study were fairly educated with majority having primary level of education and above; high literacy level; and predominantly a farming community. Desegregated by age cohort, majority were 36 years and above; and the youth only represented 17%. The study had targeted 240 participants, but only 212 participants agreed to participate in the study.

Table 4.3: Demographic characteristics cross tabulated by gender

		Gender			
		Female	Male	Total	Cumulative Total
Level of Education	No formal education	0	10	10	10
	Primary Education	25	59	84	94
	Secondary Education	54	44	98	192
	Diploma and Degree	12	5	17	209
	Adult Education	1	2	3	212
Literacy	Can read	2	0	2	2
	Both read and write	90	112	202	204
	None	0	8	8	212
Primary Occupation	Farming	62	76	138	138
	Employed	8	6	14	152
	Casual Labour	5	5	10	162
	Business	14	29	43	205
	Others	3	4	7	212
Age	18-25 years	0	4	4	4
	26-35 years	7	25	32	36
	36-50 years	55	64	119	155
	More than 50 years	30	27	57	212

Average Monthly Income

The study also sought to understand the level of income from the study respondents. Table 4.4 indicates that the mean monthly income for the respondents was 6,384.76 with the median, mode and standard deviation being 5,000, 3,000 and 5830.09 respectively.

Table 4.4: Average income of the respondents

Descriptive Statistics	**Average Monthly Income (KES)**
Mean	6,384.76
Median	5,000
Mode	3,000
Std. Deviation	5830.09

4.4. Tests for Statistical Assumptions and Analysis

Data exploration was necessary to ensure that basic assumptions for parametric tests were true. Most parametric tests based on the normal distribution have four basic assumptions that must be met before analyses can proceed, namely: normality of the distribution, homogeneity of variance, interval data and independence (Field, 2009). Except for the selected demographic factors (gender, level of education, literacy and occupation) which were based on nominal and ordinal scale, the

rest of the study variables were measured at the interval level. Thus the assumption of interval data was met for the dependent, independent and mediating variables; and so this did not require any tests.

4.4.1 Test of Normality

Tests of normality were conducted to determine whether the distribution was normal. One of the tests conducted was Kolmogorov-Smirnov (K-S) test. According to K-S test, social sustainability outcomes were normally distributed among female as shown in Table 4.5. A significant value of less than .05 indicates a deviation from normality. The social sustainability outcome for males at .006 shows a huge deviation from normality. Thus, the K-S test was highly significant, for female and not for male. Similarly, a Shapiro-Wilk's test was $p>.05$ for females and $p<.05$ for males. This shows that social sustainability values were approximately normally distributed for females but not for males.

The normality test was also observed from the histogram output. *Appendix VII* shows the histogram and the corresponding P-P plot from social sustainability responses. From the histogram it appears that the distribution is symmetrical and does not look seriously peaky or flat. This is also reflected in the P-P plot. From the P-P plot, it can be noted that the data only deviate slightly from the ideal diagonal line. This shows that the distribution was normal. A visual inspection of histograms, normal Q-Q plots and box plots thus showed that social sustainability measures were approximately normally distributed for both males and females. The distribution was, therefore, considered normal. This is also consistent with the central limit theorem that as sample sizes get larger, the less the assumption of normality matters because the sampling distribution will be normal regardless of what the sample data look like, and as such a test of normality is more likely to be significant even for data that do not need to be corrected (Elliott and Woodward, 2007; Field, 2013). Elliott and Woodward (2007), for instance argue that Kolmogorov-Smirnov and Shapiro-Wilk tests are more recommended only when dealing with a sample size which is less than 50. According to Elliot and Woodward (2007), for large sample sizes (40 or more), central theorem can be assumed, and as such the use of parametric procedures can still be justified.

Table 4.5: Test of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Gender	Statistic	df	Sig.	Statistic	Df	Sig.
Social Sustainability	Female	.049	92	.200*	.989	92	.672
	Male	.099	120	.006	.880	120	.000

a. Lilliefors Significance Correction

*. This is a lower bound of the true significance.

The resulting boxplot is shown in Figure 4. It shows a separate boxplot for female and male in the data. The boxplot helps us to identify an outlier from the histogram, which in this case is shown in the asterisk (*) and the case number (212) which is producing it. Looking at this case from the raw data reveals a score of 1.66 which falls way below the mean which is 3.8 for social sustainability. But since it is within the range of possible scores, it is considered acceptable.

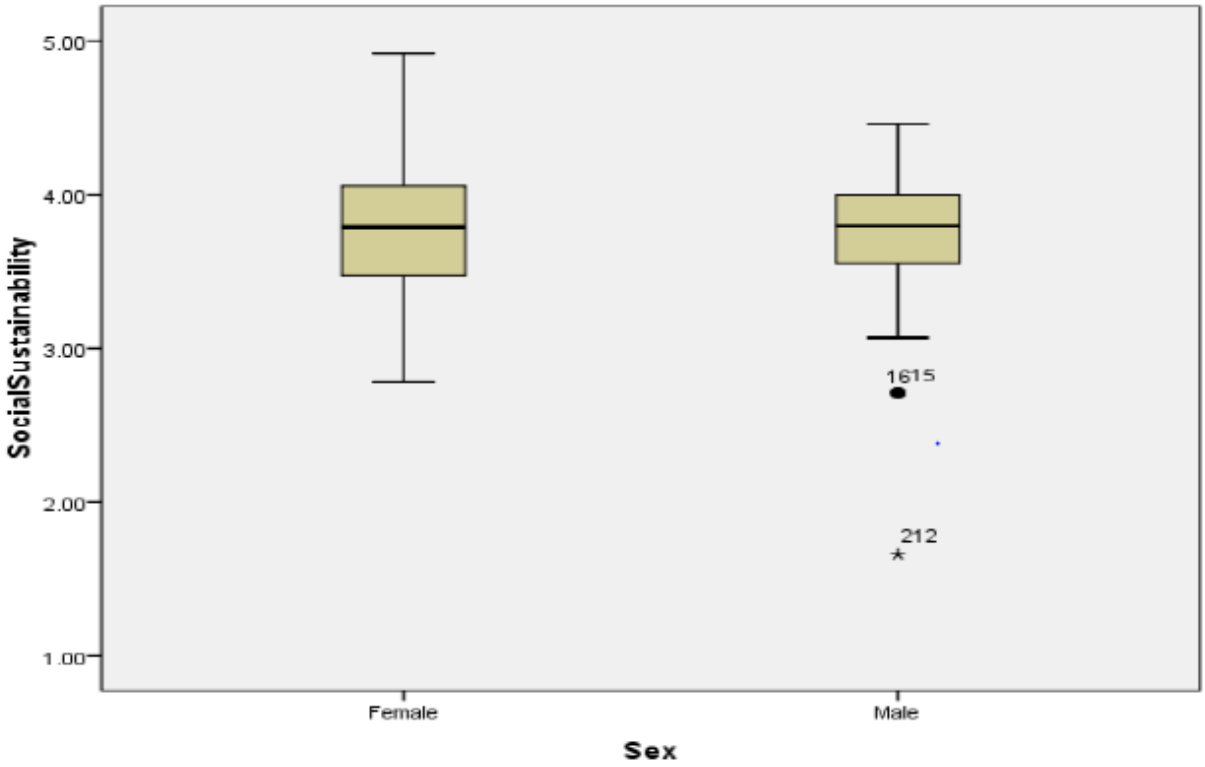


Figure 4: Boxplot for Social Sustainability by Gender

4.4.1.1 Test of Skewness and Kurtosis

The other important measures that were conducted are the skewness and kurtosis, both of which have associated standard error as shown in Table 4.6. The standard errors were converted to z-scores. This was derived by: $Z_{skewness} = S\text{-}0/SE_{skewness}$ for skewness; and $Z_{kurtosis} = K - 0/SE_{kurtosis}$

for kurtosis. Thus for female the z-score for skweness is 0.018/0.251 = 0.072 and for male it is -1.892/.221 = - 8.56. And since the z-score is less than 1.96 for female, it is clear that social sustainability for females is only slightly positively skewed, while for male it is significantly negatively skewed with the z-score greater than -1.96. This indicates that there is a high pile-up of social sustainability scores on the right side of the distribution. When z-scores were computed for kurtosis, females score was .066/.498 = 0.132 and males z-score was 8.486/.438 = 19.37. The female z-score was within the acceptable level of kurtosis (z score<1.96). However, this was not true for the males z-score which fell way beyond the acceptable threshold of 3.29 for large sample more than 200 (Field, 2009). But as Field (2013) also acknowledges, these criteria may not be reliable in large samples. The use of the shape of the distribution visually, is therefore advised in large samples. Accordingly, the histogram in *Appendix VII* seems to suggest that the shape represents a normal distribution and as such the data was considered normal. Furthermore, Pearson correlation have been described by Norman (2010) as robust with respect to skewness and non-normality.

Table 4.6: Tests for Skewness and Kurtosis

	Gender			Statistic	Std. Error
Social Sustainability	Female	Mean		3.7572	.03996
		95% Confidence Interval for Mean	Lower Bound	3.6778	
			Upper Bound	3.8366	
		5% Trimmed Mean		3.7550	
		Median		3.7881	
		Variance		.147	
		Std. Deviation		.38333	
		Minimum		2.78	
		Maximum		4.92	
		Skewness		.018	.251
		Kurtosis		.066	.498
	Male	Mean		3.7571	.03351
		95% Confidence Interval for Mean	Lower Bound	3.6908	
			Upper Bound	3.8235	
		5% Trimmed Mean		3.7823	
		Median		3.7966	
		Variance		.135	
		Std. Deviation		.36709	
		Skewness		-1.892	.221
		Kurtosis		8.486	.438

4.4.2 Test of Independence

Two variables are considered independent if the classification of a case into a particular category of one variable (group variable) has no effect on the probability that the case will fall into any particular category of the second variable (the test variable), which in this case is social sustainability. The study tested the relationship between gender and social sustainability. The assumptions of the chi-square Test of Independence are that it can be used for any level of variable, including interval level variables grouped in a frequency distribution; and that no cell has an expected frequency less than 5. The hypothesis that the two variables are dependent was tested. This was considered true if the observed counts for the categories of the variables in the study are different from the expected counts. If the probability of the test statistic is less than or equal to alpha of .05, the null hypothesis is rejected and a conclusion is made that the data support the hypothesis that there is a relationship between the variables. Table 4.7, shows that the probability of the chi-square test statistic (*chi-square* =75.926) was p = .353, which is greater than the alpha

level of significance of .05. The null hypothesis that changes in social sustainability are independent of difference in gender was therefore accepted. The two variables are not statistically significant; hence it was concluded that they are independent to one another. The Chi-Square Tests result also indicated that 100% of the cells have expected count less than 5 and the minimum expected count is .44

Table 4.7: Chi-Square Tests of Independence

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	75.926[a]	72	.353
Likelihood Ratio	98.305	72	.021
Linear-by-Linear Association	.000	1	.714
N of Valid Cases	212		

a. 144 cells (100.0%) have expected count less than 5. The minimum expected count is .43.

The same analysis using an independent samples *t*-test is shown in Table 4.8. An independent sample *t*-test was used for comparing means on social sustainability between male and female. The study ran a test to establish if there is a statistically significant difference between male and female on their experience with social sustainability outcomes. Table 4.8, provides the test statistic, the degrees of freedom and the *p*-value. With $p>.05$, the null was accepted and conclusion was made that the difference in means was likely due to chance or sampling error. This provided a preliminary indication that one's gender does not necessarily affect their level of social sustainability outcomes.

Table 4.8: Independent Samples Test

		Social Sustainability Equal variances assumed	Equal variances not assumed
Levene's Test for Equality of variances	F	1.975	
	Sig.	.161	
t-test for Equality of Means	t	.001	.001
	df	210	191.541
	Sig. (2-tailed)	.999	.999
	Mean Difference	.00004	.00004
	Std. Error Difference	.05186	.05215
	95% Confidence Interval of the Difference	Lower = -.10227 Upper = .10218	Lower = -.10291 Upper = .10283

4.4.3 Test of Homogeneity of Variance

Levene's test was conducted to examine the homogeneity of variances between male and female experience of social sustainability and citizen empowerment. Levene's test tests the null hypothesis that the difference between the variances is zero. If the test is significant at $p \leq .05$ then it can be concluded that the null hypothesis is incorrect and that the variances are significantly different. If this happens then the assumption of homogeneity of variances has been violated. Table 4.9 indicates the result of Levene's test from the study data set. For the social sustainability outcomes, the variances were equal, F (1, 210) = 1.98, *ns*, but for citizen empowerment outcomes, the variances were significantly different when sex was considered. With F (1, 210) = 4.120, p = .044, the test was significant for citizen empowerment. This means that the assumption of homogeneity of variances was violated in the case of citizen empowerment (mediating variable). This necessitated the use of the Welch test, also known as unequal variance *t*-test, as an alternative to the ANOVA F test. Welch test is usually recommended when equality of group means cannot be assumed (Garson, 2012).

Table 4.9: Test of Homogeneity of Variances

		Levene's Statistic	df1	df2	Sig.
Social Sustainability	Based on Mean	1.975	1	210	.161
	Based on Median	2.017	1	210	.157
	Based on Median and with adjusted df	2.017	1	206.176	.157
	Based on trimmed mean	2.082	1		.151
Citizen empowerment	Based on Mean	4.120	1	210	.044
	Based on Median	3.281	1	210	.072
	Based on Median and with adjusted df	3.281	1	208.284	.072
	Based on trimmed mean	3.849	1	210	.051

The Welch test, tested the null hypothesis that the two population means were the same but the two population variances may differ. If the *p*-value is larger than .05, the null is accepted and conclusion is made that the evidence does not support the fact that the two population means are different, even though you assume the two populations may have different variances. The Welch test results are shown in Table 4.10. The Welch tests yielded *F*-ratio of F (1, 191.541) = .000, p = .999 for social sustainability; and F (1, 179.107) = .010, p = .920 for citizen empowerment. In both

cases the *F* ration was non-significant, hence the null hypothesis that means were the same for male and female, but with different variances was accepted. With Welch test non-significant, parametric tests were still considered plausible, and as such no data transformation was required.

Table 4.10: Robust Tests of Equality of Means

		Statistic[a]	df1	df2	Sig.
Social Sustainability	Welch	.000	1	191.541	.999
	Brown-Forsythe	.000	1	191.541	.999
Citizen empowerment	Welch	.010	1	179.107	.920
	Brown-Forsythe	.010	1	179.107	.920

a. Asymptotically F distributed.

4.4.4 Tests for Factorability and Sphericity

Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy was used to test for the sample sufficiency. KMO compares the sizes of the observed correlation coefficients to the sizes of the partial correlation coefficients for the sum of analysis variables. Overall, as shown in Table 4.11, the measure of sampling adequacy was at 70.4%. A KMO index greater than 0.7 is considered factorable (Anastasiadou, 2011). Similarly, supposition test of sphericity by the Bartlett test (H_0: All correlation coefficients are not quite far from zero) was rejected on a standard statistical significance $p<.05$ for Approx. Chi-Square = 286.005. The coefficients were therefore not all zero, so that the second acceptance of factor analysis was satisfied. Consequently, both acceptances for the conduct of factor analysis were satisfied and so the data was considered factorable.

Table 4.11: Kaiser-Meyer-Olkin (KMO) and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.704
Bartlett's Test of Sphericity	Approx. Chi-Square	286.005
	Df	3
	Sig.	.000

4.4.5 Treatment and Decision Rule for Likert-Scale

Depending on how the Likert-scale questions are treated, a number of different analysis methods can apply. While it is becoming a common practice for many researchers to assume that Likert-type questions can constitute interval-level measurement, still certain assumptions have to be met (Norman, 2010). Non-parametric tests are preferred where the data is clearly ordinal, but where

the researcher is confident that the data can be justified as interval, attention should shift to the sample size and to the normality of the distribution. As a matter of fact, sample size and normality of the distribution are considered more important than level of measurement in determining whether it is appropriate to use parametric tests (Knapp, 1990). This notwithstanding, the preferred statistical method to analyse Likert-type data depends on the nature of their non-equidistance as well as their skewness (Lantz, 2013). Jakobsson (2004) on the other hand argues that parametric methods can be used to analyse data that are not equidistant by nature.

Likert-type data are often assumed to be equidistant by applied researchers so that parametric methods can be applied to analyse the data. There is need for the researcher therefore to consider the way subjects perceive the response before deciding on what statistical methodology to analyse Likert-type data (Lantz, 2013). But in general, the perceived distance between scale points on a regular five-point Likert-type scale depends on how the verbal anchors are used. However, according to Carifio and Perla (2008), while Likert-type questions may well be ordinal, Likert scales consisting of sums across many items can be treated as interval. This view is also held by Norman (2010) who observes that this treatment of sum of Likert items is analogous to the everyday life since ordinarily, the sum of correct answers on a multiple choice test, each of which is binary, is considered interval scale. This helps to strengthen the argument that parametric statistics can be used with Likert data, small sample sizes, with unequal variances and with non-normal distributions without coming to wrong conclusion (Norman 2010; Murray, 2013). In a study to determine whether the type of statistical tests conducted on Likert scale data affect the conclusion drawn from the results obtained, Murray (2013) concludes that parametric and non-parametric tests such as Pearson and Spearman rho conducted on Likert scale do not necessarily affect the conclusions. In another study to compare the Type I and II error rates of the *t* test versus the Mann-Whitney-Wilcoxon (MWW) for five-point Likert items, De Winter and Dodou (2010) conclude that for five-point-Likert items, the *t* test and MWW generally have similar power, and as such researchers do not have to worry about finding a difference whilst there is none in the population

In this study, it is clear that the underlying population fits a normal distribution and that the sample size is large enough. This means that the data are, therefore, amenable to parametric tests. The study utilized multiple Likert-type questions. Responses were summed together resulting in data

that was then treated as interval. Likert-type items consisting of sums across many items are considered interval in literature (Carifio and Perla, 2007; Carifio and Perla, 2008; Norman, 2010). All questions in the questionnaire utilized the same Likert scale, and with the coding indicating magnitude of difference between items, the items were such that they were measuring a single latent variable. Five-point Likert-type scale was applied. The anchors ranged from a very low score to very high score between 1 and 5, with the other anchors representing, low, high and neutral. Consequently the averages of the summed scores also ranged from 1 to 5. In order to fulfil the equidistance assumption, the decision rule was such that Very Low/Strongly Disagree (SD) $1.0<SD<1.8$; Low/Disagree (D) $1.8<D<2.6$; Neutral (N) $2.6<N<3.4$; High/Agree (A) $3.4<A<4.2$; and Very High/Strongly Agree (SA) $4.2<SA<5.0$.; hence giving an equidistance of 0.8. This decision rule was especially followed during the descriptive analysis and interpretations.

4.5 Descriptive Statistics for Social Sustainability, Citizen Empowerment and PM&E

The complex nature of the variables necessitated that the analyses take both quantitative and qualitative angles. The qualitative component was mainly to ensure that a detailed view about the variables under consideration was obtained from the study participants; as well as for triangulation purposes. Data were obtained by utilizing two distinct instruments, namely questionnaire for the quantitative component and focused group discussion guides for the qualitative component. While quantitative data were summarized by using statistical package for social scientists (SPSS) version 17.0, qualitative data were mainly manually coded and summarized into themes and interpretations derived.

The quantitative component involved administering questionnaires to individuals who participated in the World Vision development approach. The purpose of this study was to establish the influence of PM&E on citizen empowerment and social sustainability exhibited by individuals who had been involved in an agency driven participatory monitoring and evaluation process. While social sustainability was the dependent variable; PM&E and citizen empowerment were the independent and mediating variables respectively. The study further examined the moderating influence of demographic characteristics on the relationship between PM&E and social sustainability. In order to understand the dataset, the analysis began by describing the main study variables.

4.5.1 Social Sustainability Outcomes

In this study, social sustainability was operationalized to include social capital, social networks, community participation and social cohesion. A descriptive analysis was conducted to determine the characteristics exhibited by the respondents in their experience of social sustainability. Respondents were asked to indicate the degree to which they agreed with different statements defining the social sustainability indicators. For all the four indicators, responses were recorded on a 5-point scale. Measures of central tendency – the mean, mode, median and standard deviation are shown in Table 4.12. The variable that accounted for the highest mean was community participation at 3.97 followed by social capital, social network and social cohesion at 3.84, 3.70 and 3.44 respectively. From the mode point of view, two variables (social capital and community participation) recorded the highest score as 4.00. Social networks and social cohesion on the other hand the score of 3.53 and 3.45 respectively as the scores that were frequently chosen. Standard deviation for social capital, social networks, community participation and social sustainability were recorded as .4918, .4039, .5442 and .4559 respectively.

Table 4.12: Descriptive statistics for social sustainability outcomes

	Social capital	Social networks	Community participation	Social cohesion
N	212	211	212	212
Mean	3.8425	3.6986	3.9666	3.4352
Median	3.9000	3.6667	4.0000	3.4545
Mode	4.00	3.53	4.00	3.45
Std. Deviation	.49182	.40386	.54419	.45586
Variance	.242	.163	.296	.208

4.5.2 Participatory Monitoring and Evaluation Indicators

For the purposes of this study, PM&E was conceptualized to constitute four processes which formed the indicators, namely: participation in the project design process; participation in reflection during implementation; participation in the implementation of activities; and participation in the M&E of activities. The mean, median, mode and standard deviations for the indicators of PM&E are shown in Table 4.13. The highest mean score was obtained by participation in programme design at 3.48 and the lowest mean score was by participation in monitoring and evaluation. Participation in reflection and feedback and participation in the implementation recorded the mean of 3.47 and 3.44 respectively.

Table 4.13: Descriptive statistics for PM&E indicators

	Participation in programme design	Participation in reflection and feedback	Participation in the implementation	Participation in M and E
N	212	212	212	212
Mean	3.4827	3.4670	3.4434	3.0047
Median	3.6667	3.6667	3.5000	3.0000
Mode	4.00	4.00	4.00	2.00
Std. Deviation	1.00615	.92217	1.05381	1.07975
Variance	1.012	.850	1.111	1.166

4.5.3 Citizen Empowerment Outcomes

The quantitative analysis also included the examination of the mediating influence of citizen empowerment. In this study, citizen empowerment was measured in terms of perception of self-efficacy, perception of increased control, decision making capacity, acquisition of new skills and increased information about the programme. The mean, median, mode and standard for the citizen empowerment sub-variables are shown in Table 4.14. The highest means score was obtained by acquisition of new skills at 4.1 followed by increased information about the programme, perception of increased control, perception of self-efficacy and decision making capacity as 4.0, 3.8, 3.7 and 3.5 respectively. The standard deviation ranged from 0.45 to 0.80 with perception of self-efficacy, perception of increased control, decision making capacity, acquisition of new skills and increased information about the programme having 0.45, 0.51, 0.59, 0.67 and 0.80 standard deviation respectively. Notably, two respondents did not complete items on decision making capacity, acquisition of skills and increased information about the programme.

Table 4.14: Descriptive statistics for citizen empowerment outcomes

	Perception of self-efficacy	Perception of increased control	Decision making capacity	Acquisition of new skills	Increased information about the programme
N	212	212	210	210	210
Mean	3.6845	3.7802	3.4789	4.1048	3.9990
Median	3.6667	3.8000	3.5238	4.1667	4.0000
Mode	3.56	4.00	3.52	4.00	4.00
Std. Deviation	.44632	.50961	.59386	.67351	.79724
Variance	.199	.260	.353	.454	.636

The composite forms of the descriptive statistics are shown in the Table 4.15, which describes social sustainability, citizen empowerment and PM&E by mean, mode, median and standard deviation. These were analysed and recorded in aggregates of individual responses across the various variables and their indicators. Each of the study main variables had 5-point Likert-type sub-variables describing them. There were 59 items for social sustainability; 36 items for citizen empowerment; and 15 items for PM&E. Table 4.15 shows the mean, mode, median and standard deviation for the predictor variables (PM&E and citizen empowerment), and the outcome variable (social sustainability). The mean for PM&E, citizen empowerment and social sustainability were 3.3, 3.7 and 3.8 respectively. The standard deviation ranged from 0.37 to 0.78 with PM&E, citizen empowerment and social sustainability having 0.78, 0.43 and 0.37 standard deviation respectively. This shows that, across the board there was minimal deviation from the mean. Similarly, the mode for PM&E, citizen empowerment and social sustainability were 4.00, 3.92 and 3.47 respectively. On the other hand the median for PM&E, citizen empowerment and social sustainability were 3.5, 3.7 and 3.8 respectively.

Table 4.15: Descriptive Statistics for the main study variables

	PM&E	Citizen Empowerment	Social Sustainability
Mean	3.3494	3.6978	3.7572
Median	3.4667	3.7255	3.7966
Mode	4.00	3.92	3.47
Std. Deviation	.77920	.43131	.37333

The quantitative results on participation in PM&E processes can be corroborated by some of the related themes explored from the qualitative dataset. Primary data were obtained from guided focus group discussions with 2 different groups of members of PFAs. The resultant data were analysed and summarized according to the themes explored. Through the study, the participants were guided to discuss various aspects of community participation, namely: participation in programme planning, implementation, monitoring and evaluation as well as participation in regular reflection meetings.

The study explored the level of participation in programme planning through FGDs with 2 PFAs. Data from the FGDs with starter group members indicate that most people understand the planning processes, and all were involved in the planning process at least a few times, especially during the design process. Members of the starter groups interviewed showed good understanding of development planning processes. They could clearly explain the meaning of planning and the attendant processes. For instance, one participant had this to say:

> *"You start by identifying the problems; rank the problems; prioritize; assess the amount of resources available to respond to the problems; then do proposal to solicit funds" (Participant, PFA 1 Starter Group).*

This individual was able to summarize all the stages of planning from problem identification, prioritization of needs, capacity analysis and resource mapping before seeking funding. In another case, the individual could also articulate her role and involvement in community development processes.

"I am a Community Health Worker (CHW) and have to be involved in any development around the households. I have to be involved because I have all the information about any such projects" (Participant, PFA 1 Starter Group).

For this category of participants, it was evident that their participation was sought. When asked about who was involved in the planning, and how; the participants could enumerate the various stakeholders involved and how they were involved with relevant examples to support the same.

"All projects start with the government; usually we invite the government leaders who are briefed on what is being planned. The community leaders then invite the community members who are involved and asked to elect their representatives" (Participant, PFA 1 Starter Group)

Notably, participants with positive narratives seem to have come from the same starter group. Their accounts were not consistent with the perspectives from the other starter groups, which in most cases had divergent views about how community members are involved. In Mulaha Starter group for instance, some participants indicated that they are only involved in the selection of representatives or coming up with the committees.

"We are only involved in the selection of representatives or coming up with the committees. Sometimes the committees are implementers, but in most cases the designing of the project/programme is done elsewhere. The development agencies are the people who come up with the initiatives, the community only watches" (Participant, PFA 2 Starter Group)

In contrast to the previous statements, this particular participant seems to suggest that the involvement of community members by the various development implementers is merely for meeting donor conditionality. There is no 'real involvement', as such the community do not feel they should own the project. This lack of substantive involvement is also expressed by another participant who argued that:

"Participation by the community is minimal – it has levels. For example, if you identify children to receive bursary, the Constituency Development Fund Bursary

Committee sometimes through the community representative. According to us this is guided participation (participant, PFA 2 Starter Group)

Thus although there is some level of involvement in community processes, PM&E included, these participants still think that the levels are not as substantive. This can also be confirmed by the scores in quantitative data which indicated that there is moderate involvement in PM&E processes with the mean of 3.3.

While overall participation in planning of programmes is important in understanding PM&E, there was need to also explore other processes. Participation in day-to-day implementation of development activities was explored as one of the PM&E processes. Although there was some evidence that those who were involved in the redesign/planning of the programme have continued to be engaged in the implementation of programme activities, the starter group members who participated in the FGDs argued that most activities are being implemented mostly by non-community members; including the management and supervision of the implementation process. The implementation and supervision is done by the agency and not the community members.

"The initiatives are usually announced in the 'barazas'. In most of the projects, the people are usually not involved. We are not considered learned enough to be involved. We do not even own the project. For instance, when the money comes, you do not know even how much is made available and how much is spent thereafter" (Participant, PFA 2 Starter Group).

Evidently, there is a general agreement that community members are involved, but not to the extent that they would have preferred. Apparently initiatives planning seem to come from the development agencies with minimal participation from the primary stakeholders. In some cases the primary beneficiaries are involved, but only through their representatives.

Questions to do with awareness of monitoring and evaluation of programmes and activities; extent of community ownership and management of monitoring and evaluation; and opportunities for community members input and involvement in programme and activity monitoring and evaluation were also explored. The study found out that majority of community people are aware of monitoring or evaluation of development programmes/activities, but that monitoring and evaluation activities are mostly done by non-community members. Community members have

sometimes been consulted for their views on the progress/success of programmes in their community. The community members' participation is very minimal. Sometimes the community is involved through community representatives. According to the participants who responded, there is need to lobby for more participatory mechanisms.

> *"There is nothing you can do…….sometimes there is a committee, but there is no M&E by the community……Most of the things are done just to tick the box; for the reports to the donor of the agency. Community members' participation is very minimal" (Participant, PFA 2 Starter Group)*

This again shows a general dissatisfaction with the level of involvement in the PM&E processes, from planning, to implementation, reflection and learning as well as in the monitoring and evaluation of activities. This notwithstanding, it is evident that this category of participants have had opportunities to participate in the programme's PM&E processes.

4.5.4 Correlation between PM&E, Citizen Empowerment and Social Sustainability

Each of the study main variables were correlated with the response variable, social sustainability. The Pearson correlations between the variables are shown in Table 4.16. The study found that PM&E was positively correlated with both citizen empowerment ($r = 0.707$, $p < .01$) and social sustainability ($r = 0.58$, $p < .01$). This implies that as the level of PM&E increases, the more is the experience of citizen empowerment and social sustainability. However, while PM&E is moderately correlated with social sustainability, it is strongly correlated with citizen empowerment.

Table 4.16: Correlation between PM&E, citizen empowerment and social sustainability

		Social Sustainability	PME	Citizen empowerment
Social Sustainability	Pearson Correlation	1	.579**	.727**
	Sig. (2-tailed)		.000	.000
	N	212	212	212
PME	Pearson Correlation	.579**	1	.707**
	Sig. (2-tailed)	.000		.000
	N	212	212	212
Citizen empowerment	Pearson Correlation	.727**	.707**	1
	Sig. (2-tailed)	.000	.000	
	N	212	212	212

**. Correlation is significant at the 0.01 level (2-tailed).

Preliminary analyses indicated that the data, to some extent, violated parametric assumptions of normality and homogeneity of variances. Consequently, Spearman's rank correlation coefficient was also conducted to establish the relationship between PM&E and the other variables (citizen empowerment and social sustainability). Table 4.17 indicates that only little difference was found between the Pearson coefficients: citizen empowerment (r = 0.707, n = 212, $p < .01$) and social sustainability (r = 0.58, n = 212, $p < .01$); and Spearman coefficients: for citizen empowerment (rho = .705, n = 212, p < .01) and social sustainability (*rho* = .567, n = 212, $p < .01$). Both indicated that PM&E correlates positively with citizen empowerment and social sustainability. However, in both instances, PM&E is strongly correlated to citizen empowerment than social sustainability.

Table 4.17: Spearman's correlation between PM&E, citizen empowerment and social sustainability

			Social Sustainability	PME	Citizen empowerment
Spearman's rho	Social Sustainability	Correlation Coefficient	1.000	.567**	.640**
		Sig. (2-tailed)	.	.000	.000
		N	212	212	212
	PME	Correlation Coefficient	.567**	1.000	.705**
		Sig. (2-tailed)	.000	.	.000
		N	212	212	212
	Citizen empowerment	Correlation Coefficient	.640**	.705**	1.000
		Sig. (2-tailed)	.000	.000	.
		N	212	212	212

**. Correlation is significant at the 0.01 level (2-tailed).

4.5.5 Partial Correlation between PM&E, Citizen Empowerment and Social Sustainability

When social sustainability was controlled for, the partial correlation coefficient between PM&E and citizen empowerment was reduced to .511. Table 4.18 shows that the estimated partial correlation was found to be smaller than the previous unadjusted correlation coefficient, .71, due to part of the relationship being attributed to social sustainability. Thus, the strength of the relationship between PM&E and citizen empowerment after adjusting for the effects of social sustainability was r = .51, $p < .05$ indicating that PM&E has a moderately strong correlation with citizen empowerment.

Table 4.18: Partial correlation between PM&E and citizen empowerment

Control Variables			Citizen empowerment	PME
Social Sustainability	Citizen empowerment	Correlation	1.000	.511
		Significance (2-tailed)	.	.000
		Df	0	209
	PME	Correlation	.511	1.000
		Significance (2-tailed)	.000	.
		Df	209	0

Conversely, when citizen empowerment was controlled for, the partial correlation coefficient between PM&E and social sustainability was not only reduced to .133, it was also non-significant. Table 4.19 shows that the estimated partial correlation was found to be smaller than the previous unadjusted correlation coefficient, .71, due to the fact that the major part of the relationship being attributed to citizen empowerment. Thus, the strength of the relationship between PM&E and social sustainability after controlling for the effects of citizen empowerment was r = .133, $p > .05$ indicating that PM&E does not significantly correlate with social sustainability.

Table 4.19: Partial correlation between PM&E and social sustainability

Control Variables			Social Sustainability	PME
Citizen empowerment	Social Sustainability	Correlation	1.000	.133
		Significance (2-tailed)	.	.053
		Df	0	209
	PME	Correlation	.133	1.000
		Significance (2-tailed)	.053	.
		Df	209	0

The results clearly indicate that individuals who participated in the design process continued to participate in the other PM&E processes even after the initial process was over. This is likely to translate in empowerment and later social sustainability as explored in the succeeding quantitative and qualitative analyses.

4.6 Test of Research Hypotheses

Hypotheses related to the research model were tested with both the quantitative and qualitative components of the research. In this section, the findings from both qualitative and quantitative phases of the study have been presented and discussed. For this research, focus group discussions were held with four CBOs and two starter groups to explore certain thematic areas related to PM&E, citizen empowerment and social sustainability. Note taking was used as the preferred method of data collection. This was necessary to avoid interference related to the operation of tape recorder or any other electronic devices. The qualitative data were later analysed to identify areas of convergence, divergence or even statements of interest giving impression related to study

outcomes. Verbatim quotes representing the general opinions of the various participants were also captured.

Whereas the quantitative phase of the study was preoccupied with testing hypotheses in a bid to establish the relationship between the various study variables, the qualitative component was mainly for triangulation. Findings from the qualitative phase were utilized to gain deeper understanding of the relationships tested as well as clarify the meanings behind the quantitative findings. Responses were organized by themes, just as they were presented during the focus group discussions so as to facilitate quick analysis and for the emerging conclusions to be easily drawn. Verbatim quotes have also been used to capture the attitude and impression of the participants to aid in the interpretation of the data. While statistical analyses were undertaken using SPSS 17.0 software, the qualitative phase involved summarizing the responses into themes and sub-themes.

The study hypothesized that there would be a positive relationship between the independent variables and the dependent (outcome) variable. The hypotheses were tested through simple linear regression and multiple regression analyses. Regression was considered appropriate since dependent, mediating and independent variables were all measured on interval scale. Similarly, the tests of independence and homogeneity of variance revealed that the variances were equal for social sustainability (dependent variable) when sex was considered. Also, since the visual representation of normality was symmetrical, the distribution was adjudged to be normal, hence amenable to regression tests. Moreover, Pearson *r* has been noted to be insensitive to extreme violation of the basic assumptions of normality and the type of scale (Norman, 2010). The hypotheses tested and the results thereof are presented and discussed as follows:

4.6.1 Relationship between PM&E and Social Sustainability

Hypothesis One: The first hypothesis sought to test the relationship between PM&E and social sustainability. A linear regression analysis was conducted to examine how well PM&E predicted social sustainability. Accordingly, Table 4.20 shows that PM&E was significantly related to social sustainability with $F(1, 210) = 105.774$, $p<0.05$. The study recorded a correlation coefficient of $r = 0.579$ as indicated in Table 4.20. This result shows that there is a moderate positive linear relationship between PM&E and social sustainability. With a coefficient of determination (R^2) of 0.335 as can be seen in Table 4.20, PM&E account for 33.5% of the variation in the level of social sustainability. This indicates that PM&E has a positive influence on social sustainability. The

regression model showing the influence of PM&E on social sustainability can be represented as follows:

Social sustainability = 2.828 + 0.277 PM&E.

Table 4.20: Summary of the Model (PM&E and Social Sustainability)

Model	R	R^2	Adjusted R^2	Std. Error	B	Predictor Variables
1	.579[a]	.335	.332	.093	2.828	Constant Term
				.027	.277	PM&E

a. Predictors: (Constant), PME
b. Dependent Variable: Social Sustainability
Model 1: F (1, 210) = 105.774; $p<.05$

Evidence of social sustainability was also explored through the qualitative component of the study. Social sustainability is a concept intended to measure social aspects of sustainable development. One of the pointers to social sustainability is the capacity of local community-based organisations (CBOs) (Valentin and Spangenberg, 2000; Bamley *et al*., 2006; Magis and Shinn, 2009). A community is considered to be socially sustainable when CBOs have capacity to sustain long term viability and impact of development processes. This is demonstrated through the character, functioning, resource mobilisation, and networking skills of community organisations. A number of themes were explored to develop impressions on the level of social sustainability through FGDs with 4 CBOs; one from each of the four locations where the members of the starter groups were drawn from. Qualitative data was collected, analysed as per the sub-themes identified and the results presented.

The first theme investigated was the representation and involvement of community members in the community-based organisations (CBOs). FGDs were conducted to explore the extent to which the community organisation represents the diversity of people in the community. From the responses it was apparent that most community people are well represented and involved in the organisations. Most social, economic, and age groups are represented among the memberships and some as office bearers at various levels of leadership. From the four organisations interviewed, all indicated to be having representatives from different community segments. Some of the community segments who are represented in the organisations include: People living with disabilities (PLWDs), people living with HIV (PLWHIV), orphans and vulnerable children

(OVC), the elderly, widows, women, and youth. Some of these segments were either direct or indirect beneficiaries.

> *"We have membership in terms of beneficiaries and group members. The beneficiaries include OVC, PLWHIV, older people and the farmers. Anybody more than 18 years can be a member without discrimination" (Participant, CBO 1)*

The statement from this participant shows clearly that this particular organisation has attempted to ensure that all interests, as represented by the different community segments are included. The membership in this case is not defined by one's level of education, gender, age, disability, HIV '*serostatus'*, level of vulnerability, other socio-economic predisposition among other definitions. There is therefore no discrimination in how one becomes a member.

> *"Management committee has 30 members. Seven are women and 23men. We do not have any person living with disability, but we have 5 youths represented in the committee" (Participant, CBO 2)*

In this case, the individual expresses the fact that in this CBO, there may be no people with special needs like people living with disability. However, he is quick to demonstrate that other segments of the community, as represented by the youth, are not discriminated against either. From a different CBO, yet another participant describing representation in their CBO had this to say:

> *"Members include People living with HIV (PLWHIV), orphans and vulnerable children (OVC), widows and guardians" (Participant, CBO 3)*

FGDs were further conducted to establish the leadership capacity among the four CBOs which participated in the study. Overall, there were indications from the discussions that the leaders' relationship with members was cordial, and that there is little socio-economic gap between them. In some cases the CBO membership even have powers to call their leaders to account, especially in cases of incompetence. Mistrust was also mentioned as a possible cause for change in the CBOs leadership.

> *"If the members are not satisfied with what a leader is doing especially where there is a breach of the constitution, members can call for elections. Leaders have*

been given some roles; if they are not able to execute, then they are replaced or dismissed or somebody gets employed out of the community"(Participant, CBO 1).

In this particular CBO, the members are empowered enough to know that they can play a critical role in deciding who governs them. The supremacy of their constitution is also implied, which shows that there is an attempt by this CBO to enforce its rules. Governance capacity is thus relatively good compared with an ordinary CBO. In some of the CBOs interviewed, the leadership was organized in such a way that the members represent certain regions.

"We have representatives from the various villages. The representatives are in the committee; these are the ones that relay information from either committee to the village and vice versa. Every village is represented by 3 members" (Participant, CBO 2).

With this arrangement, information from the management committee is relayed to the regions and vice versa. There was also clear process for selection of leaders, at least from the different constitutions that were reviewed from the CBOs. However, in some cases, even with clear rules on selection and election, some leaders still stayed on as leaders for long periods without being changed.

Gender representations and roles among the CBOs considered were also explored. From the discussions it was apparent that there is a deliberate attempt to have gender balance in the leadership and the membership. Incidentally, out of the four CBOs interviewed, three were female dominated given that they were all formed to respond to the lowly plight of the women in the community. The CBOs to a greater extent recognize the importance of including women in decision making processes.

"Women are actively involved. Currently there is a plan to buy a tractor for the members; it came from a lady, although we have not been able to accomplish it. This was subjected to a special AGM and it was approved" (Participant, CBO 2).

It is apparent from the quote above that the CBO under consideration involves women in decision making, and that their views are taken into account. Reflecting on the same theme, another respondent from a different CBO observed that empowerment of the women come from their organisational mandate of seeking women empowerment.

> *"Women are highly recognized because the organisation looks to empower women. Even if you look at the organisation structure, you will realize that they are doing a lot" (Participant, CBO 3)*

In this organisation, the representation of women seems to have been enshrined in their governing constitution and by-laws. This is further reflected in their management structure. Thus, enabling environment has been instituted by virtue of their mandate to facilitate women agency. In some instances better representation of women was occasioned by the composition of the CBOs considered. Three out of four CBOs interviewed had more female than male due to their formative agenda of empowering women.

> *"Women are the majority. We work together as much as there are more women in the group" (Participant, CBO 1)*

All the three quotes show that the level of engagement of women in the organisations is considerably high. While this is evident, not so many of women are holding critical positions in the different organisations interviewed. This notwithstanding, the level of inclusion across the different CBOs considered was commendable.

This gives an impression that, across the board, the organisations care for all groups in the community without any discrimination. Although not directly linked, the emergence of inclusivity in the community can partially be attributed to the influence of many development agencies that have promoted inclusivity in their practice of development. The PM&E processes as driven by World Vision were some of those initiatives aimed at promoting citizen participation in development. From the quantitative findings it is clear that people who participated in the PM&E processes as operationalized by the organisation attributed the level of social sustainability to their involvement in these processes. The quantitative findings suggest a moderate positive linear relationship between PM&E and social sustainability.

Evidence from qualitative analyses also reveals a moderate level of social sustainability. From the analyses it was evident that the CBOs interviewed are inclusive; the relationship between the leaders and the members is cordial; the level of participation in decision making processes by leaders and members is good; and there is a deliberate attempt to have a gender balance in the leadership and membership.

4.6.2 Relationship between PM&E and Citizen Empowerment

Hypothesis Two: The second hypothesis sought to test the relationship between PM&E and citizen empowerment. Linear regression analysis was conducted to assess the extent to which PM&E predicted citizen empowerment. Table 4.21 shows the results from the linear regression analysis. The analysis yielded F (1, 210) = 209.507, $p<.05$ indicating that PM&E is significantly related to citizen empowerment. The coefficient is also positive with .05. The correlation coefficient of r = .707, suggests a strong linear relationship between PM&E and citizen empowerment. Similarly R^2 = 0.499, shows that PM&E accounts for approximately 49.9% of the variation in the citizen empowerment. The regression model showing the influence of PM&E on citizen empowerment can be represented as follows:

Citizen Empowerment = 0.401 + 0.391 x PM&E

Table 4.21: Summary of the Model (PM&E and Citizen Empowerment)

Model	R	R^2	Adjusted R^2	Std. Error	B	Predictor Variables
1	.707[a]	.499	.497	.093	2.388	Constant Term
				.027	.391	PM&E

a. Predictors: (Constant), PME
b. Dependent Variable: Citizen Empowerment
Model 1: F (1, 210) = 209.507; *p<.05*

Indicators of citizen empowerment were also explored qualitatively. The first to be explored was the participants' level of knowledge and understanding of development programmes. There is good knowledge of development programmes or initiatives in the study area. The participants across the different focus group discussions could cite several examples of development programmes and activities, and could also explain the purpose of one or two of these. Some participants defined development as a positive transformational change in a community; things that cause change in the community. The examples in the study area were mentioned to include: people who tested with

HIV are no longer scared if tested positive; people moving from old systems of farming to current farming practices; improved school infrastructure; better health facilities – they are now more accessible than in the past.

> *"Development is moving from one state to another. For instance, if as a person I do not know the importance of putting up a kitchen garden. If I get knowledgeable on the same, then I can consider myself to have developed" (Participant, PFA 2 Starter Group)*

In their own words the participants could clearly describe their understanding of development and attendant activities within the study area. Judging from the many examples given, it is clear that their understanding of development is not just limited to hardware-based initiatives like building of schools, development of water infrastructure among others, but spans a spectrum ranging from hardware to acquisition of relevant skills imperative for community wellbeing.

> *"Community members have become aware of the benefits of initiating groups. Working through groups is easier. Information can then be passed to different forums". (Participant, PFA 1 Starter Group)*

Indeed, the respondents, who in this study also participated in the quantitative phase of the study, affirm the fact that they have up-to-date information about development activities in the area. By exploring this sub-theme, the study established that questions touching on participation in development programmes were well interpreted. The sub-theme also points to the existence of some level of empowerment among the respondents. In this study, knowledge of development programmes has been considered as one of the proxy indicators of citizen empowerment.

The other outcome of citizen empowerment is participation in decision making. The study explored the level of knowledge and understanding about decision making process in programme implementation; and the extent to which community members have opportunities to be involved in, and to influence, decision making. Respondents in the focus group discussions with starter groups could clearly articulate their understanding of decision making process in programme implementation. Some of the respondents appeared well informed, and as such could outline the ideal development planning and decision making processes; right from ideas generation, prioritization of needs and consensus building. Although they recognize the role of the donors in

the whole process, they feel that the community has the capacity to define their own development agenda. In which case the donor cannot dictate what needs to be done in the community. There has to be consensus between the donors and the community (beneficiaries).

> *"The ideas are shared in a group meeting; the options are weighed and prioritized; then by consensus the ideas are agreed; donors cannot come and dictate what needs to be done" (Participant, PFA 1 Starter Group)*

This mirrors the ideal development planning and decision making processes. Some of the participants also expressed their own individual level empowerment. They perceive themselves to have acquired pertinent skills that can be used to bring some transformation in the community. They feel that the skills they have acquired can be harnessed to influence certain things within the community. For them participation is an obligation motivated by the desire to change situations in the community. This is evidence to the existence of self-efficacy among the individuals.

> *"Being a trained person, I feel empowered to go and tell the community what needs to be done; I feel obliged to go and hear so as to support what is likely to happen afterwards" (Participant, PFA 1 Starter Group)*

Some participants were however, of contrary view. They argued that while it is true that community members are involved, the final decision is made by the implementing agency. Community members or beneficiaries are only involved at the point of ratifying the agency's decision. They do not think that their felt needs are considered in what ultimately becomes the development blue print for the agency.

> *"The final decision is made by the agency that is implementing the project. We only endorse. For instance, they are usually not concerned with community needs; they do not look at the priorities" (Participant, PFA 2 Starter Group)*

From the quotes, there is a general understanding that however limited; opportunities for involvement and/or influence have been accorded within the study area. Even in areas where the participants perceived their involvement as passive, for instance Mulaha, individual respondents themselves exhibit some level of self-efficacy. They see themselves to be having ability to influence given opportunity.

"We feel we have capacity to influence, but not given opportunity to do so" (Participant, PFA 2 Starter Group).

Finally, to respond to this question/hypothesis, the study also explored the level of knowledge about development programme budgets/resourcing; level of community resource contribution towards programme activities budget; and the extent of involvement in managing programme resource budget. The study established that the sources and rough levels of budget contributions are known. Most development activities include some community contribution (in-kind or even financial) as well as contribution from other governmental and non-governmental agencies.

"Always we contribute; for example in the construction of the dispensary, we gave out the land; we do 'harambee'(or communal fundraising) for construction of schools" (Participant, PFA 2 Starter Group)

It was apparent from the participants that they understand programme resourcing. Other than narrating instances where the community contributed to a development programme process, they argued that their contribution is equally significant, albeit in most cases it is not being quantified by the development agencies. In their opinion, the community contributes more to the development projects than the funding or implementing agencies.

"According to us the community usually gives more than the agency only that ours (the community's) is not quantified" (Participant, PFA 2 Starter Group)

While the respondents acknowledge that the projects are beneficial to the community, they feel that in most cases they are not involved as much by the different development agencies. Moreover, the development agencies are not accountable to them.

"We see the value of the projects but the initiatives usually do not engage us. For the dispensary we were told the cost afterwards, which was standing at Kenya Shillings 900,000" (Participant, PFA 2 Starter Group)

Other than individual level empowerment, the study also explored community level empowerment as reflected in the community-level organisations. The CBOs interviewed seem to suggest that the level of participation in decision making processes – by leaders and members is generally good. The processes of planning and budgeting are thus open to members' influence. Across the different

CBOs, members usually have to discuss things. These are then forwarded to the executive committee who approves the issue to be included in the next planning phase or implementation.

> *"When we have money to support OVC; we usually sit down as the members together with the management committee. The information is shared in the community who then send applications. The applicants are then subjected to a vetting process in a meeting where they are picked. The people allocated are then brought again to the members with reasons why their applications were considered" (Participant, CBO 1).*

Everything that comes up has to be put forward to the group membership before being considered. Most of the decision making process is however vested on the management or executive committee. In all the CBOs interviewed, the management committee is charged with the responsibility of approving plans, budgets and activities.

> *"Members generate the issues; issues come to the management committee; it is the management committee which makes decisions in the organisation" (Participant, CBO 2).*

While in most cases, the members first generate the issues before they are fronted for discussion and consideration by the management committee, in others it is the management committee that comes up with issues for discussion. The issues or plans are then subjected to members' approval. The plans or the issues are only adopted once they have been approved by the members, usually in the all members meetings; especially annual general meetings (AGMs).

> *"When there is something to be decided on or done, the management committee sits. They then look at what needs to be done, then invites the group members to come and have a discussion. If the members approve; the plan is implemented" (Participant, CBO 1).*

In some cases, however, members still perceive the chairperson to have the final decision making powers. Once elected as the chairperson, he/she is bestowed with responsibility to provide leadership within the parameters of responsibility and authority that the position attracts. They are

therefore expected, by virtue of the position, to have the final say about issues even when the issues have been put under discussions by the members or the committee.

> *"The activities are run through the chairperson; we have created some responsibility, so people have different roles and have authority over things. In meetings the chairman makes the final resolution" (Participant, CBO 3)*

Overall, the study revealed that people who participated in the PM&E process seem to know and understand who makes decision and how they do so in the implementation of development programmes and activities. Besides, there is emergence of empowerment as revealed by some members exhibiting a level of self-efficacy and understanding of development resourcing processes. Self-efficacy has been described in the study as the perceived competency by an individual to change a situation.

4.6.3 Relationship between Citizen Empowerment and Social Sustainability

Hypothesis Three: The third hypothesis sought to test the relationship between citizen empowerment and social sustainability. A linear regression was conducted to examine the influence of citizen empowerment on social sustainability. The linear regression of citizen empowerment on social sustainability was significantly related with F (1, 210) = 235.762, $p<.05$. The analysis also yielded a correlation coefficient of $R = .73$, indicating that there is a strong relationship between citizen empowerment and social sustainability. The model obtained $R^2 = .529$, showing that approximately 53% of the variance in social sustainability can be accounted for by citizen empowerment. The study results are shown in Table 4.22. The regression equation for predicting social sustainability can therefore be represented by the equation:

Social Sustainability = 1.429 + 0.629 x Citizen Empowerment.

Table 4.22: Summary of the Model (Citizen Empowerment and Social Sustainability)

Model	R	R^2	Adjusted R^2	Std. Error	B	Predictor Variables
1	.727[a]	.529	.527	.153	1.429	Constant Term
				.041	.629	Citizen Empowerment

a. Predictors: (Constant), Citizen Empowerment
b. Dependent Variable: Social Sustainability
Model 1: F (1, 210) = 235.762; $p<.05$

Additional primary data were obtained from guided focus group discussions with 2 different groups of members of PFAs/starter groups. The resultant data were analysed and summarized according to the themes explored. Through the study, the participants were guided to discuss various aspects of community participation. The key points and quotes from the analysis provide evidence that there is some level of participation by those who had been involved in the PM&E process.

> *"We are only involved in the selection of representatives or coming up with the committees. Sometimes the committees are implementers, but in most cases the designing of the project/programme is done elsewhere. The development agencies are the people who come up with the initiatives, the community only watches" (Participant, PFA 2 Starter Group)*

However, according to the starter group members, most activities have been implemented by non-community members including the management and supervision of the implementation process. The implementation and supervision is done by the agency and not the community members.

4.6.4 Moderating Influence of Demographic Variables on the Relationship between PM&E and Social Sustainability

Hypothesis Four: The fourth hypothesis sought to test the relationship between PM&E and social sustainability depends on demographic factors. The study hypothesized that demographic factors influence the direction and/or strength of the relationship between PM&E and social sustainability. The moderator effect was represented as an interaction term between the focal predictor variable and a moderating factor, in which case the factors considered were gender; age; level of education; level of literacy; occupation and level of income. The following model was applied in the analysis:

$$\text{Social Sustainability} = \beta_0 + \beta_1 PM\&E + \beta_2 M + \beta_3 PM\&E*M + e$$

Where: β_0, β_1, β_2 and β_3 are the correlation coefficients; social sustainability is the dependent variable; PM&E is the independent variable; M is the moderating variable; PM&E*M is the interaction factor between PM&E and moderating variable (M); and e is the error term. β_3 coefficient reflects the interaction between the predictor variable and the moderating variable only if the lower order terms, namely $\beta_1 PM\&E$ and $\beta_2 M$ are included in the equation. The results and discussions are presented as follows:

4.6.4.1 Moderating Influence of Gender on the Relationship between PM&E and Social Sustainability

Hypothesis Four (a): This sought to test the hypothesis that the strength of the relationship between PM&E and social sustainability depends on gender. The moderating influence of gender on the relationship between PM&E and social sustainability was explored by first computing the interaction term between PM&E and gender. A multiple regression involving the PM&E, gender and the interaction term between PM&E and gender was then conducted to establish the moderating influence of gender on the relationship. This yielded 2 models, namely: model 1 (without the interaction term) and model 2 (with the interaction term). Both model 1 and 2 were significant with F (2, 209) = 52.659, $p<.05$, F (1, 208) = 2.642 and $p<.05$ respectively. Model 2 with the interaction between PM&E and gender accounted for significantly more variance than only PM&E and social sustainability by themselves. However, with R^2 change = .008, p = .106, it indicates that gender does not significantly moderate the relationship between PM&E and social sustainability. Table 4.23 shows the results from the analysis. The regression model showing the moderating influence of gender on the relationship between PM&E and social sustainability can therefore be presented as follows:

Social Sustainability = 2.692 + .317PM&E+ .105Gender - .003PM&E*Gender

Table 4.23: Summary of the Model (Gender, PM&E and Social Sustainability)

Model	R	R^2	Adjusted R^2	R^2 Change	Sig. F Change	B	Predictor Variables
1	.579[a]	.335	.329	.335	.000	2.821	Constant Term
						.277	PM&E
						.011	Gender
2	.586[b]	.344	.334	.008	.106	2.692	Constant
						.317	PM&E
						.105	Gender
						-.003	PM&E*gender

a. Predictors: (Constant), Gender, PME

b. Predictors: (Constant), Gender, PME, PME*gender

c. Dependent Variable: Social Sustainability

Model 1: F (2, 209) = 52.689; $p<.05$

Model 2: F (3, 208) = 36.282; $p<.05$

4.6.4.2 Moderating Influence of Age on the Relationship between PM&E and Social Sustainability

Hypothesis Four (b): This sought to test the hypothesis that the strength of the relationship between PM&E and social sustainability depends on age. The moderating influence of age on the relationship between PM&E and social sustainability was examined by first computing the interaction term between PM&E and age. A multiple regression analysis involving the PM&E, age and the interaction term between PM&E and age was then conducted to determine the moderating effect of age in the relationship. Both Model 1(without the interaction term) and Model 2 (with the interaction term) were all significant with F (2, 209) = 54.398, $p<.05$ and F (3, 208) = 36.554, $p<.05$ respectively. Model 2 with the interaction between PM&E and age accounted for more variance than Model 1. However, R^2 change = .003, p = .341 suggests that age does not significantly moderate the relationship between PM&E and social sustainability. The results from the analysis are shown in Table 4.24. The regression model showing the moderating influence of age on the relationship between PM&E and social sustainability can be presented as follows:

Social Sustainability = 2.666 + .279PM&E+ .038Age + 4.554PM&E*Age

Table 4.24: Summary of the Model (Age, PM&E and Social Sustainability)

Model	R	R^2	Adjusted R^2	R^2 Change	Sig. F Change	B	Predictor Variables
1	.585[a]	.342	.336	.342	.000	2.607	Constant Term
						.286	PM&E
						.047	Age
2	.588[b]	.345	.336	.003	.341	2.666	Constant
						.279	PM&E
						.038	Age
						4.554E-11	PM&E*age

a. Predictors: (Constant), Age, PME

b. Predictors: (Constant), Age, PME, PME*age

c. Dependent Variable: Social Sustainability

Model 1: F (2, 209) = 54.398; $p<.05$

Model 2: F (3, 208) = 36.554; $p<.05$

Focus group discussions with the CBOs also seemed to corroborate the quantitative findings. The participants interviewed across all the groups did not think age should be a critical factor for one

to assume leadership. According to them, anybody can be a leader as long as he/she is able to lead people to realize their aspirations.

> *"Age does not matter as much, anybody can be a leader; we do not look at the socioeconomic status; what is important is whether a person is a people person – being able to lead people to the next level" (Participant, CBO 2).*

The study findings, therefore, suggest that age does not significantly moderate the relationship between PM&E and social sustainability. The hypothesis that age moderates the influence of PM&E on social sustainability was therefore rejected.

4.6.4.3 Moderating Influence of Level of Education on the Relationship between PM&E and Social Sustainability

Hypothesis Four (c): This sought to test the hypothesis that the strength of the relationship between PM&E and social sustainability depends on the level of education. The moderating influence of level of education on the relationship between PM&E and social sustainability was examined by first computing the interaction term between PM&E and level of education. To establish the moderating effect of the level of education, multiple regression analysis was conducted involving the PM&E, level of education and the interaction term between PM&E and level of education. Table 4.25 shows the results of the analysis. This yielded 2 models. Model 1 (without the interaction term) was significant with F (2, 209) = 53.715 and $p<.05$. Model 2 (with the interaction model) is also significant with F (3, 208) = 35.718 and $p<.05$. Model 2 with the interaction between PM&E and level of education accounted for the same variance as PM&E and social sustainability by themselves. R^2 change = .000, p = .693, indicating that the level of education does not significantly moderate the relationship between PM&E and social sustainability. The regression model showing the moderating influence of age on the relationship between PM&E and social sustainability can be as follows:

Social Sustainability = 2.777 + .269PM&E+ .030Level of Education + 7.517PM&E*Level of Education

Table 4.25: Summary of the Model (Education, PM&E and Social Sustainability)

Model	R	R^2	Adjusted R^2	R^2 Change	Sig. F Change	B	Predictor Variables
1	.583[a]	.340	.333	.340	.000	2.763	Constant Term
						.271	PM&E
						.034	Education
2	.583[b]	.340	.330	.000	.693	2.777	Constant
						.269	PM&E
						.030	Education
						7.517E-10	PM&E*education

a. Predictors: (Constant), Education, PME

b. Predictors: (Constant), Education, PME, PME*education

c. Dependent Variable: Social Sustainability

Model 1: F (2, 209) = 53.715; $p<.05$

Model 2: F (3, 208) = 35.718; $p<.05$

Likewise, qualitative analysis from the FGDs with CBOs pointed to a similar conclusion. The CBOs interviewed indicated that while education level is important in their choice of leaders, what matters most is one's ability towards the shared goal. According to them, education is auxiliary to other leadership competencies. This is also true for one's socioeconomic status. In the CBO's examined, one's socioeconomic status is not considered an important condition for one to be a leader.

> *"We look at somebody's level of education; we also look at capability in terms of their commitment to lead the team; somebody who likes his work; somebody who is committed to attending meetings; also look at skills" (Participant, CBO 3)*

It is therefore apparent from both the qualitative and the multiple regression analyses that the level of education does not moderate the relationship between PM&E and social sustainability.

4.6.4.4 Moderating Influence of Level of Literacy on the Relationship between PM&E and Social Sustainability

Hypothesis Four (d): This sought to test the hypothesis that the strength of the relationship between PM&E and social sustainability depends on the level of literacy. The study hypothesized that the level of literacy moderates the relationship between PM&E and social sustainability. The moderating influence of the level of literacy on the relationship between PM&E and social sustainability was examined by conducting a multiple regression. The analysis began by first

computing the interaction term between PM&E and the level of literacy. To establish the moderating effect of literacy in the relationship, multiple regression analysis was conducted involving the PM&E, level of literacy and the interaction term between PM&E and level of literacy. The analysis yielded two models with the results as shown in Table 4.26. Model 1 (without the interaction term) is significant with F (2, 209) = 52.636 and $p<0.05$. Model 2 (with the interaction model) is also significant with F (3, 208) = 35.519 and $p<0.05$. Model 2 with the interaction between PM&E and level of literacy accounted for the same variance as PM&E and social sustainability by themselves ($R^2 = .329$), and so no effect was observed. The model also had R^2 change = .004, $p = .277$, indicating that the level of literacy does not significantly moderate the relationship between PM&E and social sustainability. The multiple regression equation can be represented as follows:

Social Sustainability = 2.713 + .288PM&E+ .029Literacy – 3.833PM&E*Literacy

Table 4.26: Summary of the Model (Literacy, PM&E and Social Sustainability)

Model	R	R^2	Adjusted R^2	R^2 Change	Sig. F Change	B	Predictor Variables
1	.579[a]	.335	.329	.335	.000	2.821	Constant Term
						.277	PM&E
						.002	Literacy
2	.582[b]	.339	.329	.004	.277	2.713	Constant
						.288	PM&E
						.029	Literacy
						-3.833E-10	PM&E*literacy

a. Predictors: (Constant), Literacy, PME

b. Predictors: (Constant), Literacy, PME, PME*literacy

c. Dependent Variable: Social Sustainability

Model 1: F (2, 209) = 52.636; *p<.05*

Model 2: F (3, 208) = 35.519; *p<.05*

4.6.4.5 Moderating Influence of Occupation on the Relationship between PM&E and Social Sustainability

Hypothesis Four (e): This sought to test the hypothesis that the strength of the relationship between PM&E and social sustainability depends on the occupation. The study also undertook to explore the moderating influence of participant's occupation on the relationship between PM&E and social sustainability. To determine the level of influence that occupation has on the relationship

between the two variables, a multiple regression analysis was conducted involving the PM&E, occupation and the interaction term between PM&E and occupation. The interaction term was computed by multiplying PM&E index by occupation index. By running the multiple regressions, 2 models were obtained: one representing the influence of PM&E on social sustainability; and the other representing the influence when the interaction term is entered to the model. Table 4.27 shows the results from the analysis. Model 1 (without the interaction term) is significant with F (2, 209) = 52.763 and $p<.05$. Model 2 (with the interaction model) is also significant with F (3, 208) = 35.040 and $p<.05$. Model 2 with the interaction between PM&E and occupation accounted for the same variance as PM&E and social sustainability by themselves. The model also had R^2 change = .000, p = .796, indicating that the occupation does not significantly moderate the relationship between PM&E and social sustainability. The multiple regression equation can be represented as follows:

Social Sustainability = 2.824 + .275PM&E+ .005Occupation – 3.833PM&E*Occupation

Table 4.27: Summary of the Model (Occupation, PM&E and Social Sustainability)

Model	R	R^2	Adjusted R^2	R^2 Change	Sig. F Change	B	Predictor Variables
1	.579[a]	.336	.329	.336	.000	2.821	Constant Term
						.276	PM&E
						.007	Occupation
2	.579[b]	.336	.329	.000	.796	2.824	Constant
						.275	PM&E
						.005	Occupation
						3.991E-11	PM&E*occupation

a. Predictors: (Constant), Occupation, PME

b. Predictors: (Constant), Occupation, PME, PME*occupation

c. Dependent Variable: Social Sustainability

Model 1: F (2, 209) = 52.763; *p<.05*

Model 2: F (3, 208) = 35.040; *p<.05*

4.6.4.6 Moderating Influence of Level of Income on the Relationship between PM&E and Social Sustainability

Hypothesis Four (f): This sought to test the hypothesis that the strength of the relationship between PM&E and social sustainability depends on the level of income. The moderating influence of the level of income on the relationship between PM&E and social sustainability was

examined by first computing the interaction term between PM&E and level of income. A multiple regression involving the PM&E, level of income and the interaction term between PM&E and level of income was then conducted to establish the moderating effect of level of income in the relationship. However, only PM&E was produced in the model by the analysis since both level of income and the interaction term between PM&E and level of income were constant. Table 4.28 shows the summary of the model.

Table 4.28: Summary of the model (Income, PM&E and Social Sustainability)

				Std. Error	Change Statistics				
			Adjusted	of the		F			Sig. F
Model	R	R^2	R^2	Estimate	R^2 Change	Change	df1	df2	Change
1	.888[a]	.789	.683	.05950	.789	7.475	1	2	.112

a. Predictors: (Constant), PME

4.6.4.7 Joint Influence of PM&E and Citizen Empowerment on Social Sustainability

Hypothesis Five: This sought to test the hypothesis that there is a significant relationship between the joint influence of PM&E and citizen empowerment on social sustainability. A standard multiple regression analysis was conducted to assess how well PM&E and citizen empowerment predicted social sustainability. To test the hypothesis that the joint influence of PM&E and citizen empowerment on social sustainability is greater than PM&E and citizen empowerment independently, a multiple regression analysis was conducted involving the PM&E, citizen empowerment and social sustainability. Tests for multicollinearity indicated that a very low level of multicollinearity was present (VIF = 2.11 for PM&E, 2.04 for citizen empowerment, 2.04 for gender, 1.14 for age, 1.26 for education, 1.12 for literacy, 1.06 for occupation and 1.13 for income) as shown in Table 4.29. PM&E was the first variable to be entered, followed by citizen empowerment, and then finally demographic factors; one after another.

Table 4.29: Multicollinearity Test Statistics

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	.981	.311		3.149	.002		
	PME	.064	.033	.134	1.973	.050	.473	2.114
	Citizen empowerment	.559	.058	.645	9.678	.000	.491	2.035
	Gender	.041	.039	.055	1.059	.291	.815	1.227
	Age	.065	.027	.122	2.447	.015	.881	1.135
	Level of Education	.024	.026	.048	.923	.357	.795	1.258
	Literacy	.041	.067	.030	.605	.546	.891	1.123
	Primary Occupation	.000	.013	-.002	-.042	.967	.940	1.064
	Income	3.674E-6	.000	.057	1.153	.250	.882	1.134

a. Dependent Variable: Social Sustainability

The result of the multiple regression analysis is shown in Table 4.30. At step 1 of the analysis, PM&E was entered into the regression equation and was significantly related to social sustainability with F (1, 210) = 105.774, $p<.05$. The linear combination of participation in a PM&E process and citizen empowerment indicators were significantly related to social sustainability outcomes, F (2, 209) = 121.344, $p<.05$. The multiple correlation coefficient was r = .733, indicating that the combination of PM&E and citizen empowerment has high influence on social sustainability. R^2 was at .537, showing that approximately 53.7% of the variance in social sustainability can be accounted for by the linear combination of PM&E and citizen empowerment. This indicates that the combination of the two predictors increases the variation by 20.2%. . PM&E did not enter into the equation at step 2 of the analysis (t = 1.947 and $p>.05$), indicating that PM&E has no significant contribution in the variance shown in the social sustainability outcomes. The $p>.05$ was not significant for PM&E and significant for citizen empowerment. The model therefore predicts that for a unit increase in citizen empowerment, social sustainability increases by .55 units. Similarly Adjusted R Square at .533 shows that 53.3% of total variability in social sustainability is explained by the model. The ensuing regression equation for predicting the joint effect of PM&E and citizen empowerment on social sustainability can therefore be represented as:

Social Sustainability = 1.515 + .062PM&E + 0.55Citizen Empowerment

A further look at the model indicates that the model is very good given the difference between R^2 and adjusted R^2. In the model given in Table 4.25, the difference between R^2 and R^2 adjusted is .004 (.537 – .533), which is about 0.4% indicating that the model accounts for approximately 0.4% less variance in the outcome variable. It is also worth noting that when the joint relationship is considered, empowerment seems to be the dominant influence on social sustainability.

Table 4.30: Summary of the Model (PM&E, Citizen Empowerment and Social Sustainability)

Model	*R*	R^2	Adjusted R^2	R^2 Change	*t*	Sig.	B	Predictor Variables
1	.579[a]	.335	.332	.336	30.510	.000	2.828	Constant Term
					10.285	.000	.277	PM&E
2	.733[b]	.537	.533	.000	9.599	.000	1.515	Constant
					1.947	.053	.062	PM&E
					9.560	.000	.550	Citizen Empowerment

a. Predictors: (Constant), PM&E

b. Predictors: (Constant), PM&E, Citizen Empowerment

c. Dependent Variable: Social Sustainability

Model 1: F (1, 210) = 105.774; $p<.05$

Model 2: F (2, 209) = 121.344; $p<.05$

A multiple regression analysis was further conducted to investigate the influence of citizen empowerment when all the independent variables (including mediating and moderating) were put into the model. The result of the multiple regression analysis is shown in Table 4.31. At step 1 of the analysis, PM&E was entered into the regression equation and was significantly related to social sustainability with F (1, 210) = 105.774; $p<.05$. The joint linear combination of PM&E, citizen empowerment, gender, age, education, literacy, occupation and income was similarly significantly related to social sustainability with F (8, 203) = 32.471; $p<.05$. The multiple correlation coefficient was r = .749, indicating that the combination of PM&E, citizen empowerment and all the demographic variables under consideration (gender, age, education, literacy, occupation and income) has high influence on social sustainability. R^2 = .561, showing that approximately 56.1% of the variance in social sustainability can be accounted for by the linear combination of PM&E, citizen empowerment and demographic factors in combination. This indicates that the combination

of all the predictors (moderating variables included) increases the variation by 22.6%. PM&E was still significant with t = .066; $p<.05$). Citizen empowerment is also significant with $t = 9.845;$ $p<.05$. The model therefore predicts that for a unit increase in citizen empowerment, social sustainability increases by 4.384 units. The only demographic factor in the model is age with t = 2.108; p<.05. The other demographic variables are not significant. Similarly Adjusted R Square at .544 shows that 54.4% of total variability in social sustainability is explained by the model. The ensuing regression equation for predicting the joint effect of PM&E, citizen empowerment and demographic factors on social sustainability can therefore be represented as:

Social Sustainability = .589 + .066PM&E + 4.384Citizen Empowerment + .037Gender + .056Age + .029Education + .043Literacy - .002Occupation + 3.619Income

However, with PM&E, citizen empowerment and age being the only significant variables, the model can be represented as follows:

Social Sustainability = .589 + .066PM&E + 4.384Citizen Empowerment + .056Age

Table 4.31: Summary of the Model (PM&E, Citizen Empowerment, Gender, Age, Education, Literacy, Occupation, Income and Social Sustainability)

Model	R	R^2	Adjusted R^2	R^2 Change	T	Sig.	B	Predictor Variables
1	.579[a]	.335	.332	.335	30.510	.000	2.828	Constant Term
					10.285	.000	.277	PM&E
2	.749[b]	.561	.544	.226	1.787	.075	.589	Constant
					2.046	.042	.066	PM&E
					9.845	.000	4.384	Citizen Empowerment
					.947	.345	.037	Gender
					2.108	.036	.056	Age
					1.128	.261	.029	Education
					.642	.521	.043	Literacy
					-.120	.904	-.002	Occupation
					1.142	.255	3.619E-6	Income

a. Predictors: (Constant), PM&E

b. Predictors: (Constant), PM&E, Citizen Empowerment, Gender, Occupation, Literacy, Income, Age, Education

c. Dependent Variable: Social Sustainability

Model 1: F (1, 210) = 105.774; $p<.05;$ Model 2: F (8, 203) = 32.471; $p<.05$

The capacity of CBOs is one of the proxy indicators of social sustainability. The capacity of a CBO can be judged by the clarity existing in its purpose and objectives. The CBOs in interviewed had organisational purpose and objectives. Furthermore, the CBOs' objectives were focused and very comprehensive. However, it was apparent that the implementation of the same was inadequate; hence the objectives may not be realized. The strategies were also not clear. Nevertheless, in two out of the four CBOs interviewed, members were involved in coming up with the organisational objectives.

> *"We sat down as group members. Most of the objectives are some of the things that individual members were doing before the CBO was established. This started from the problems which we were seeing in the community; we had the vision of having children have enhanced living standards. We saw that the major problem that was affecting the community was HIV and AIDS. So many people were not responsive to the teaching of HIV and AIDS because of the cultural issues. We decided to start the group to address stigma. So we gave ourselves the name Okok Shida Agricultural Support Group……" (Participant, CBO 1).*

The respondents in the CBO above appeared to indicate that there was a formal process to coming up with their organisation's purpose and objectives. All have the vision to reduce poverty in the community. But, even with clear purpose and objectives, the research established that only the leaders can cite or paraphrase the organisational purpose and objectives.

> *"We identified the issues; brainstormed on the issues as a group; we looked at the different abilities among the group members and decided on what could be leveraged" (Participant, CBO 3).*

It is also apparent that in all the cases, the formation of the CBOs was informed by felt needs, shared across the populace. The purpose and objectives were then derived from these needs. Thus members perceived that the organisations were responding to their aspirations.

In terms of management the main areas explored include: the clarity of roles and responsibilities in the organisation; selection process for office bearers; and the financial procedures, including sound management of financial resources. All the CBOs interviewed reported to have a

constitution which governs them. The constitutions also highlight the roles and responsibilities of office holders. Moreover, they also seem to have good financial management systems.

> *"Finances are banked first of all; we sit down as an executive committee; prepare a work plan; go to the Annual General Meeting (AGM) and tell them what we intend to do. Sometimes partners bring along their own work plans/intentions. We have to align with their work plan and share with the members. We also have a financial policy which outlines and gives guidance on how finances are supposed to be utilized" (Participant, CBO 1).*

The respondents could clearly explain the financial procedures beginning with a work plan which goes to the AGM for approval. Sometimes, however, the CBO is forced to align with the donor's requirements. The policy for withdrawal and use of funds is clearly spelt out and members are aware of the attendant procedures.

> *"We use group's money if there is something that needs to be done. The procedure is that: the committee approves the money then the executive is given authority to withdraw the money. This process has to be captured in the minutes" (Participant, CBO 2).*

The other issue related to financial management was the documentation of the processes, where some of the CBOs indicated to be documenting the process. Minutes are taken as part documentation necessary for the withdrawal approval process. Once the money is withdrawn it is the chairman who has the authority to approve payments and expenses. However, in terms of accountability to members; there was no evidence that the leaderships were accountable to members.

> *"The money is banked. When there is need, the group decides in a meeting. Chairperson, secretary and treasurer are the signatories. The chairman approves the payments and expenses" (Participant, CBO 3).*

The study further investigated whether the organisations hold regular meetings; level of attendance and participation in meetings; the purpose, content and outcomes of the meetings; and whether records are kept and follow ups made to address the action points raised during such meetings. The

organisations interviewed all indicated to be having regular meetings, with agenda clearly defined. There was evidence that minutes are taken in all the different meetings organized by the CBOs interviewed. Some of the CBOs, however, do not adhere to the meetings schedule. A case in point is where a CBO indicated to be meeting monthly, but from the dates of the last meeting, it was obvious that they had not met 2 months after the last meeting.

> *"Group members meet after every 2 weeks; management committee meet once a month" (Participant, CBO 1).*

Most meetings are generally on activities implementation and follow up on the various action points previously indicated to require attention. The other categories of meetings are Annual General Meeting (AGM) and special AGM.

> *"The agenda depends on the plan and reports. Sometimes we also have special general meetings" (Participant, CBO 3).*

While in some cases attendance at meetings is poor, in most cases a significant proportion of members attend meetings, especially the CBO leaders. Moreover, there are rules governing the attendance of meetings. The rule across the different CBOs as expressed by different respondents is that one should not miss meetings for more than three consecutive meeting days.

> *"Executive members rarely miss; some miss with apology. The rules are tough; if you miss 3 times then you are separated from the CBO" (Participant, CBO 1).*

In some cases, penalties are imposed on members who do not attend meetings regularly. Penalties range from warnings, fines to dismissal from the CBO.

> *"According to our rules somebody should not be away for more than 3 days. On the fourth day, one should come and explain himself/herself, if not he will be given first warning" (Participant, CBO 4).*

The relationship between the programme and the organisations was also explored. This was aimed at establishing the level of organisations' dependency on, or autonomy from the sponsoring agency (WV or otherwise). Questions were asked to explore the organisations capacity to manage itself; manage their projects/activities; manage implementation of the initiatives, manage their own

meetings as well as engaging with the wider issues by themselves. Overall, the CBOs interviewed showed little to moderate capacity to manage development processes by themselves without external assistance.

> *"We have had a good relationship. World Vision (WV) has supported in many ways; helped our OVC with supplementary feeding; greenhouse; currently working with World Vision in the management of the registered children; WV are facilitators they are not the implementers. The group members are the implementers. They have taken us for exchange visits; capacity building in many ways……." (Participant, CBO 1).*

While some CBOs described Karemo Area Development Programme as just a 'facilitator', external organisations seemed to be the main source of a significant part of the CBOs' funding. CBOs with limited funding from an external source seemed to be struggling. There is generally high dependency on the programme and other external agencies for financial supporting in the day-to-day running of activities. There are, however, instances when the CBOs have had to support their initiatives from own sources.

> *"We have done outreaches on health when we received funding from National Aids Control Council….; we have also been farming water melon; but in a big way in many farming activities, World Vision has been our major supporter"(Participant, CBO 1).*

Whereas some CBOs have continued to enjoy on-going relationship with WV, some could only report past interaction. This is interesting because given WV's development approach, all the CBOs have equal chance of partnering with the organisation, especially where their mandates are consistent with the vision, mission and strategic direction as shared during the redesign process. In most cases past interaction with the organisation guarantees future relationship. For this CBO, the organisation last partnered with them two to three years ago. The current lack of relationship can also be explained by the fact that in the past (before the redesign), WV interacted with them through members who received hand outs from the organisation. This falls short of an empowering relationship. No wonder this CBO is struggling.

"They used to; but now they no longer support us. Most of the things that WV would give would be to the members" (Participant, CBO 2)

For some CBOs their interaction with WV seems to be partnership for skills enhancement. The members were able to cite instances where they have been supported and the nature of support.

"The friendship with WV is based on development; we partner with them, in certain occasions they call for meetings; for instance sometimes back, they called us and taught us how to do bee keeping; dairy farming; they give farm inputs; uniform; they train us on management; they have provided us with several trainings" (Participant, CBO 3)

The strength of the organisations relationship with local government and other NGOs was explored. The CBOs were asked to describe their relationship with local government organisations and other non-governmental organisations as well as the nature of their interactions. While all the organisations interviewed are legally registered, their relationships and networks with local government and non-governmental organisations are both informal and irregular. But, even with the informality, some of the CBOs memberships were noted to be part of certain local government committees/bodies.

"Ministry of Health (MoH) provides us with services and capacity building, stipend for Community Health Workers (CHWs); some are members of community health units." (Participant, CBO 1).

Their relationships with the government agencies were mostly for legalisation of the CBOs as well as general capacity building from the relevant ministries and other state agencies. The members could recount clearly their interaction with these agencies and how the group and members have benefitted.

"We had a relationship with NEMA – they gave us tree seedlings and our group benefitted seriously, some of the members were awarded with solar and cooking stoves; NEMA also gave us vativa grass – it helps prevent soil erosion" (Participant, CBO 2)

The study also explored the degree of dependence on external agencies for resources. Discussions revolved around the organisations' diversity of sources of resources, mobilisation of community resources, resource planning and management and their ability to undertake initiatives without depending on WV's resources. Overall, all the CBOs interviewed depends largely on donor funding for activities implementation and day to day management. Resources from own sources only represented less than 15% of their total funding. The internal sources of financial and material resources include members' contribution and own sources from farming or business activities. Even where donors demand community contribution, the contribution is usually in the form of labour or locally available raw materials like sand and ballast; especially where construction work is involved.

> *"We receive school fees, but not in cash. In most cases we only benefit in kind – supply of required materials….We usually do not share the needs it is them who decide what needs to come to the group or community" (Participant, CBO 3).*

However, the CBOs had irregular interaction with the local governments. Moreover, they all seemed to depend largely on donor funding for their programmes. This could undermine their level of social sustainability. Overall the CBOs interviewed have organisational purpose and objectives; are registered and have a constitution which governs them; conduct regular meetings with agenda clearly defined; and have moderate capacity to manage development processes by themselves without external assistance.

4.7 Discussion of the Findings

The study was undertaken to respond to five research questions and objectives. These were later formulated into hypotheses that were finally tested using various test statistics. Prior to the analysis, all the data (both quantitative and qualitative) were examined to ensure the variables of interest were appropriately computed and coded. No errors were found during the computation and coding process. The quantitative phase of the study began, first by establishing the response rate. Establishing the response rate was necessary as a measure to enhance external validity. According to Sivo *et al.* (2006), high response rate is one of the factors that enhance external validity. A response rate of more than 70% is usually considered very good (Babbie, 1990). The

response rate of 88.3% was therefore adjudged to be appropriate and so further analysis was considered plausible.

The quantitative data was further explored for various assumptions to determine whether the preferred test statistics would be appropriate. Before the analyses, the data was explored for normality of the distribution, homogeneity of variance, interval data and independence. The data satisfied the normality tests and the other three assumptions, especially in the case of dependent variable.

The study applied a mixed-methods approach in the examination of the research questions. Previous research on the influence of participatory processes on either empowerment or social sustainability tended to rely on the pure forms of either of the methods (qualitative or quantitative). The methods used in this study allow for the determination of the relationship between study variables. However, this being a cross-sectional study, it was not possible to make inferences of causality. As a result the word "influence" has been applied in examining how the dependent variable is predicted by the independent variables and the direction of that relationship. Whenever possible the quantitative findings have been corroborated with qualitative data.

The section discusses and interprets the findings of both quantitative and qualitative phases of the study. The discussions of the findings have been done along the research questions that have been explored: 1) to what extent does PM&E influence social sustainability?; 2) to what extent does PM&E influence citizen empowerment?; 3) to what extent does citizen empowerment influence social sustainability?; 4) in what way do demographic factors moderate the relationship between PM&E and social sustainability?; and 5) to what extent do PM&E and citizen empowerment jointly influence social sustainability?

For the purposes of this study, PM&E was conceptualized to constitute four processes, namely: participation in the project design process; participation in reflection during implementation; participation in the implementation of activities; and participation in the M&E of activities. Social sustainability on the other hand was operationalized as social capital, social networks, community participation and social cohesion. The quantitative analysis also included the examination of the mediating influence of citizen empowerment. In this study, citizen empowerment was measured

in terms of perception of self-efficacy, perception of increased control, decision making capacity, acquisition of new skills and increased information about the programme.

The descriptive analysis was conducted to help describe the main variables of the study, namely social sustainability, PM&E and citizen empowerment. The means for citizen empowerment and social sustainability showed that on average, respondents agreed with the statements describing the existence of empowerment and social sustainability outcomes. However, with the mean of PM&E at 3.3, it means that their level of participation in various PM&E processes was just moderate. Conversely, majority of the respondents indicated that they agreed with most of the questionnaire items with the mode at 4.0 and 3.9 for PM&E and citizen empowerment respectively. This could be attributed to the fact that the study exclusively targeted those who had participated in the PM&E processes as driven by World Vision Karemo Area Development Programme. This resonates with Hilhorst and Guijt (2006) assertion that empowerment builds the capacity of citizens and other partners to guide, manage, and implement development processes effectively. Besides, participation in the day-to-day community activities has been noted as one of the indicators of empowerment and social sustainability (Bramley *et al*., 2006; Abbot and Forward, 2000; Gigler, 2004; Pasteur and Blauert, 2000; Zimmerman, 1990; Zimmerman *et al*., 1992). Participation is therefore a proxy indicator of empowerment (Christens and Speer, 2011).

The findings are further discussed, according to the hypotheses tested as below:

i. The influence of PM&E on Social Sustainability

Both quantitative and qualitative analyses explored the extent to which PM&E Influences social sustainability. In responding to this objective, the study examined how well PM&E predicted social sustainability. The qualitative phase of the study was very useful in establishing whether the participants' interpretation of the questions and the responses thereof were indeed valid. Focus group discussions with the starter group members were especially very handy in that sense. Through the focus group discussions with starter group members, who all participated in the quantitative phase of the study; participants were guided to discuss various aspects of participation including participation in programme planning, implementation, reflection, monitoring and evaluation. The participants demonstrated good understanding of development processes. They also showed understanding of planning, implementation, monitoring and evaluation activities. Although opportunities to participate in these processes are minimal, some of the respondents

indicated to have had continuous interaction with the development programmes even after their initial participation in the redesign process.

A linear regression analysis was also conducted to test how well PM&E predicted social sustainability. The study revealed that there is a moderate positive linear relationship between PM&E and social sustainability, indicating that the greater the level of participation in monitoring and evaluation the greater the level of social sustainability. This is consistent with Fraser *et al*. (2006), who in a study conducted in British Columbia – Canada, observed that a participatory process helped defuse many of the tensions that led to resource-based conflicts as well as helping in building strong community networks. In Botswana, the same study noted that the capacities of communities were built by those participating in the identification of indicators (one of the operationalization of PM&E).

The aforementioned outcomes were utilized in this study as indicators of social sustainability. According to McKenzie (2004), social sustainability has been described as a life-enhancing condition within communities, and a process within communities that can achieve that condition. The same view is held by Ibrahim and Alkire (2007) who argue that encouraging poor communities to participate in development processes not only increases the sustainability of the development efforts but also promotes pro-poor growth and creates an environment for equitable income distribution. Similarly Perkins *et al*. (1990) also, in a study to understand the impact of participation in block associations, found participation in block associations positively associated with social cohesion, which is an aspect of social sustainability. PM&E thus provides the ingredients for achieving social sustainability outcomes. Higher level of participation is, therefore, associated with higher level of social sustainability. This makes PM&E to be an important factor in predicting social sustainability.

ii. The Influence of PM&E on Citizen Empowerment

The study explored the influence of PM&E on citizen empowerment. This was based on the premise that citizen empowerment mediates the relationship between PM&E and social sustainability. This is consistent with previous studies which have examined individual empowerment as a mediator to social sustainability (Zimmerman, 1990; Lennie, 2005). Zimmerman (1990) argues that participation in decision making enhances individual's sense of empowerment and that the empowered individuals are likely to be active in community

organisations. Capacity of local community based organisations has previously been considered an indicator of social sustainability (Valentin and Spangenberg, 2000; Bamley *et al*., 2006; Magis and Shinn, 2009).

Quantitative finding through a linear regression conducted to assess the extent to which PM&E predicted citizen empowerment revealed that there is a strong positive linear relationship between PM&E and citizen empowerment. The finding confirms most commentators' assertion that PM&E is empowering (Abbot and Forward, 2000; Codd, 2011; Fetterman, 2001; Fraser *et al*., 2006; Samah and Aref, 2011; Zimmerman, 1990; Papineua and Kiely, 1996). This is also consistent with previous research on the relationship between participation and empowerment. A study conducted by Butterfoss (2006) found that more time spent in activities geared toward affecting change is related to higher levels of empowerment. And as empowerment increases, so is the individual's satisfaction, which is also a proxy indicator for social sustainability. The findings by Butterfoss (2006) also confirm the mediating role of citizen empowerment on social sustainability. In consonant with the findings is Lennie (2005) argument that PM&E creates knowledge which is related to power and power gives birth to development. Similarly, Prestby and others cited in Zimmerman (1990) in their study, observed that the most highly involved individuals reported more benefits of participation as reflected in their levels of empowerment.

People who are involved also learn and gain knowledge, which are all indicators of empowerment (Samah and Aref, 2011). Abbot and Forward (2000) emphasizes the same when they argue that participation affirms dignity and self-respect (all outcomes of empowerment); as well as developing community cohesion and empowering communities to pursue their own interests and challenge their power structure (proxy indicators of both empowerment and social sustainability). This explains why the push for the adoption of participatory methodologies in evaluation has been argued mostly from the perspective of citizen's empowerment (Fetterman, 2001; Papineau and Kiely, 1996; Obure *et al*., 2008). Zimmerman *et al*. (1992), also in their study concluded that individuals who are involved in community activities (PM&E or otherwise) and organisations reported higher levels of empowerment outcomes. From the same study, Zimmerman and others further observed that participation in community groups and activities increases one's sense of control, which is one of the empowerment outcomes. Thus, higher level of participation in a PM&E process is associated with higher level of citizen empowerment.

The quantitative finding above is also consistent with the relevant indicators from the qualitative phase of the study. Findings on knowledge and understanding of development processes revealed that the participants were fairly knowledgeable. Although opportunities for participation in decision making are limited, they know and understand who makes decision and how they are made. Just like in the quantitative analysis, findings from the qualitative datasets suggest that participants who participated in the initial PM&E process have acquired some important skills, have self-efficacy and are involved in decision making processes. Acquisition of knowledge and skills; self-efficacy and participation in decision making are some of the indicators of empowerment (Papineau and Kiely, 1996); and have been considered in this study as such. PM&E is therefore an important factor in predicting citizen empowerment. This finding is also consistent with empowerment theory. The theory states that participation in decision making may enhance individual sense of empowerment (Zimmerman, 1990).

The quantitative finding above is also consistent with the relevant indicators from the qualitative phase of the study. Findings on knowledge and understanding of development processes revealed that the participants were fairly knowledgeable. Although opportunities for participation in decision making are limited, they know and understand who makes decision and how they are made. Acquisition of knowledge and skills; and participation in decision making are some of the indicators of empowerment (Papineau and Kiely, 1996). PM&E is therefore an important factor in predicting citizen empowerment. This finding is also consistent with empowerment theory. The theory states that participation in decision making may enhance individual sense of empowerment (Zimmerman, 1990)

iii. The Influence of Citizen Empowerment on Social Sustainability

Community participation is considered to be associated to both citizen empowerment and sustainability (Zimmerman *et al*. 1991; Florin and Wandersman, 1990; Christens and Speer, 2011). These observations provided the basis for exploring the extent to which members who participated in a PM&E process have been influenced to continue participating in community development processes. By this hypothesis, the study sought to examine the extent to which citizen empowerment influences social sustainability. The question was also based on the premise that citizen empowerment mediates the relationship between PM&E and social sustainability. The study findings suggest that there is a strong positive linear relationship between citizen

empowerment and social sustainability. Thus, citizen empowerment is a significant predictor of social sustainability. This finding is consistent with empowerment literatures that argue for a positive association between empowerment and sustainability (Alsop *et al*., 2006; Ibrahim and Alkire, 2007, Laverack and Labonte, 2000).

Similarly, according to Alsop *et al*. (2006), there is a positive linear relationship between empowerment and development outcomes, which in this study is defined in terms of social sustainability. On the same note, Ibrahim and Alkire (2007) argue that empowerment may be a more effective tool for stirring pro-poor growth and increasing sustainability (including social sustainability). The same argument is held by Laverack and Labonte (2000), who observes that achieving empowerment, has a bearing on social sustainability indicators such as social cohesion, social capital and social networks among others. Thus there is a mutually reinforcing relationship between empowerment and social sustainability. Empowerment according to Codd (2011) generates confidence, independence and greater social inclusion, which are all indicators of social sustainability. The finding also supports the mediating role of citizen empowerment in partially explaining the PM&E's influence on social sustainability.

iv. The Moderating Influence of Demographic Factors

The study sought to explore the extent to which demographic factors moderate the relationship between PM&E and social sustainability. The study thus, hypothesized that demographic variables would influence the direction and/or strength of the relationship between the predictor variable (PM&E) and the outcome variable (social sustainability). The moderator effect was represented as an interaction between the focal predictor variable and a moderating factor, in which case the factors considered were gender; age; level of education; level of literacy; occupation and level of income. The results of the analyses are discussed as follows:

a) The Moderating Influence of Gender

Previous studies have in the past argued for the importance of gender in the achievement of social sustainability outcomes (Munasib, *undated;* Smith, 2000). Smith (2000), for instance, argues that women and men differ in terms of the structure and composition of their networks. While women's networks are denser than men's, they lack occupational range, which seems to be present in men's networks. According to Smith (2000), women appear less likely than men to be embedded in

networks that can provide opportunities for status, income, and occupational advancement than men.

The same argument on gender differentials are advanced with reference to the attainment of social capital. Munoz-Goy (2013), for instance, found that gender differences is evident in the access, mobilization and type of social networks, as well as in the extent and type of social participation. Similarly, in a study to explore the explanations behind the vertical and horizontal membership segmentation between men and women in an association, Norris and Inglehart (2003) found that women participated less in associational life than men. Contrary to this finding is Westermann *et al.* (2005) who argue that collaboration, solidarity and conflict resolution all increase in groups where women are present. The findings by Westermann *et al.* (2005) has, however, been challenged by Migheli (2007), who observe that gender and trust are related and that women tend to trust less than men.

Notably, the aforementioned studies did not examine the moderating influence of gender in the relationship between a participatory process and any of the social sustainability outcomes. The current study sought to explore the moderating influence of gender in the relationship between PM&E and social sustainability. From the analysis, the study found that gender does not significantly moderate the relationship between PM&E and social sustainability. The finding was largely unexpected. According to Chua and Iyengar (2006), the effectiveness of participation depends on individual differences such as gender. In the current study, however, the fact that one is male or female did not influence their ultimate social sustainability outcomes even if they participated in the PM&E processes. This is consistent with the findings by Groot *et al*. (2006) who in a study to investigate the determinants of social capital found out that gender, ethnic origin and economic success have no statistically significant effects on the size of the social network or the extent of the social safety net. Social network has been employed in this study as one of the indicators of social sustainability. The hypothesis that the strength of the relationship between PM&E and social sustainability depends on gender was therefore rejected and the alternative accepted. Gender, therefore, does not moderate the relationship between PM&E and social sustainability.

b) The Moderating Influence of Age

The study hypothesized that age moderates the influence of PM&E on social sustainability. A multiple regression analysis was conducted between age, and the interaction term between age and PM&E; to determine the moderating influence of age in the relationship between PM&E and social sustainability. The study findings suggest that age does not significantly moderate the relationship between PM&E and social sustainability. This is contrary to previous studies that have suggested that demographic variables such as age influence social sustainability and empowerment outcomes (Lennon *et al*., 2012; Khan *et al*., 2010; Nasir *et al*., 2007; Spreitzer, 1996). A similar study by Glaeser *et al*. (2002) to test the hypothesis that age influences social capital also found out that social capital rises and then falls with age, indicating that age moderates any influence to social sustainability. The influence of age on various social sustainability outcomes such trust, social networks, social capital, participation and political interaction have been studied variously by different scholars, who have argued that age is a predictor of these social sustainability outcomes (Letki, *undated*; Ronald La Due Lake and Huckfeldt, 1998; Ziersch *et al*., 2004).

The current study however, indicates that age does not determine one's achievement of social sustainability, especially where PM&E is involved. Thus, both young and old alike have the capacity to experience social sustainability. The hypothesis that age moderates the influence of PM&E on social sustainability was therefore rejected. This result seems to agree with the findings by Veenstra *et al*. (2005) and Newton (2001), who argue that when social-economic variables such as age among others are controlled for, overall involvement retained a modest, but not significant effect on social sustainability outcomes.

c) The Moderating Influence of Education

The study examined the extent to which level of education moderates the relationship between PM&E and social sustainability. Result from the multiple regression analysis showed that the level of education does not moderate the relationship between PM&E and social sustainability. In a study to establish the determinants of women empowerment, Khan *et al*. (2010) conclude that education, political participation and working for paid job of women are important determinants of women empowerment; and social sustainability by extension. They also considered education as an important variable since it brings positive changes such as increased knowledge, awareness and confidence.

Education has also been described by OECD (2007) to have far reaching impact on health among many other social outcomes. The same perspective is advanced by Helliwell and Putnam (2007) who argue that education is one of the most important predictors of many forms of political and social engagement. Thus, individuals who are more educated are likely to be more engaged citizens than those with less education. Education has also been associated with greater skills that help the educated to participate more in development processes (Chiswick *et al.*, 2002). The same view is held by Ronald La Due Lake and Huckfeldt (1998), who argue that education and age do produce discernible effects on trust. However, contrary to these assertions, the study found out that education has no influence in the relationship between PM&E and social sustainability. This means that the fact that someone is educated or not does not make him/her experience more or less of social sustainability outcomes.

d) The Moderating Influence of Literacy

The study hypothesized that the level of literacy moderates the relationship between PM&E and social sustainability. A multiple regression analysis was conducted between level of literacy, and the interaction term between literacy and PM&E to determine the moderating influence of literacy in the relationship. The study result reveals that the level of literacy does not significantly moderate the relationship between PM&E and social sustainability. The study result reveals that the level of literacy does not significantly moderate the relationship between PM&E and social sustainability. The findings of this study are contrary to previous studies which argue for a positive relationship between literacy and social sustainability (Salomon, 2010). Literacy for instance has been related to social capital. According to Falk (2001), it is the role of literate interactions in the community that produces social capital. Literacy is therefore considered essential for the achievement of social sustainability. Thus, communities with the lowest literacy have been shown to have the lowest social capital and hence social sustainability (Dugdale, 2011). However, from the evidence of this study, one's literacy does not seem to have a statistically significant influence on the relationship between PM&E and social sustainability.

e) The Moderating Influence of Occupation

The moderating influence of occupation on the relationship between PM&E and social sustainability was examined by conducting a multiple regression. To establish the moderating influence of occupation in the relationship, multiple regression analysis was conducted involving

the PM&E, occupation and the interaction term between PM&E and occupation. The study result shows that occupation does not significantly moderate the relationship between PM&E and social sustainability. This finding is contrary to previous studies which seem to find the moderating effect of occupation to be significant. Glaeser *et al*. (2002) in their study to analyse the formation of social capital using a model of optimal individual investment decisions, argue that social capital rises in occupation with greater returns to social skills.

Similarly, in a study of how fishers cope and adapt to prospective changes in resource policy, Marshall and Marshall (2007) found that the ability of fishers to plan, learn, and reorganize was important in determining their resilience to policy change. Marshall and Marshall (2007) conclude that the way resource users such as fishers evaluate threats and opportunities is strongly influenced by their level of confidence in themselves and the institutions that govern their circumstances and prospects. The institutional effect is shaped by the nature of occupation. Bramley *et al.* (2009) also argue that people with mobile careers may display low place attachment, community engagement, or local social interaction and high mobility, which in a sense undermine social sustainability.

The foregoing findings, thus show that the level of social capital is dependent on the nature of occupation that one holds. While not directly linked, the moderating effect of occupation is implied. However, the current study found out that occupation does not significantly influence the relationship between PM&E and social sustainability.

f) The Moderating Influence of Level of Income

The moderating influence of income on the relationship between PM&E and social sustainability was also explored. Contrary to previous findings on this, the study found that income did not moderate the relationship between PM&E and social sustainability. A study conducted by Perkins *et al.* (1990) suggests that individuals with more resources are more likely to participate and hence better social sustainability. Ronald La Due Lake and Huckfeldt (1998) examined the influence of human capital and various other individual-level characteristics on organisational membership. In their study, Ronald La Due Lake and Huckfeldt (1998) found out that characteristics such as income, education, age, working for pay and minority status produced statistically discernible effects.

While these studies argue for the influence of income on social sustainability outcomes, the current study observed that income has no significant influence on this relationship. The findings of this study is however, consistent with a study conducted by Munasib (*undated*), which found that the effect of income on social capital, an indicator of social sustainability, ceases to matter once the fact that it can be endogenous is accounted for. Similarly, a study by Groot *et al*. (2006) also revealed that household income did not have a statistically significant effect on selected social sustainability outcomes. This study, therefore, rejects the hypothesis that income moderates the relationship between PM&E and social sustainability.

v. Joint Influence of PM&E and Citizen Empowerment on Social Sustainability

Community participation has variedly been considered to be associated to both citizen empowerment and sustainability (Zimmerman *et al*. 1991; Florin and Wandersman, 1990; Christens and Speer, 2011). These observations provided the basis for exploring the extent to which members who participated in a PM&E process have been influenced to continue participating in community development processes. To address this question, a stepwise multiple regression was conducted to evaluate whether both PM&E and citizen empowerment were necessary to predict social sustainability outcomes. The study shows that when a joint relationship is considered, citizen empowerment seems to be the dominant influence on social sustainability. Thus, PM&E has no significant contribution in the variance shown in the social sustainability outcomes especially when citizen empowerment is introduced to the model. This implies that citizen empowerment significantly explains the relationship between PM&E and social sustainability. Hence, without citizen empowerment in the model, there can never be any social sustainability.

4.7 Summary of the Chapter

The Chapter presented, interpreted and discussed the findings of both quantitative and qualitative phases of the study. The discussions of the findings have been done along the research questions that have been explored: to what extent does PM&E influence social sustainability?; to what extent does PM&E influence citizen empowerment?; to what extent does citizen empowerment influence social sustainability?; in what way do demographic factors moderate the relationship between PM&E and social sustainability?; and to what extent do PM&E and citizen empowerment jointly

influence social sustainability? The methods used in this study allowed for the determination of the relationship between study variables. However, this being a cross-sectional study, it was not possible to make inferences of causality. As a result the word “influence” has been applied in examining how the dependent variable is predicted by the independent variables and the direction of that relationship. Whenever possible the quantitative findings have been corroborated with qualitative data. Finally, the findings have been discussed based upon the overall purpose of the study, the objectives, the conceptual framework and the theoretical underpinning.

CHAPTER FIVE
SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The purpose of this study was to establish the influence of PM&E on social sustainability; and to establish the mediating influence of citizen empowerment on the relationship between PM&E and social sustainability. The objectives were as follows: to assess the extent to which PM&E influences social sustainability; to determine the extent to which PM&E influences citizen empowerment; to establish the extent to which citizen empowerment influences social sustainability; to determine the moderating influence of demographic factors on the relationship between PM&E and social sustainability; and to establish the joint influence of PM&E and citizen empowerment on social sustainability. Karemo Area Development Programme was selected for its being among the first programmes to have piloted the World Vision model of PM&E and therefore have had opportunity to implement the model for more than three years after the initial redesign process ended. The chapter summarizes the findings of the study in relation to its objectives, draws conclusions based on the statistical analyses as well as qualitative analysis carried out. The chapter further gives recommendations on how greater impact can be achieved with PM&E as well as the implications of the findings for policy, theory and practice of M&E. The section also covers limitations of the study and provides suggestions for further research.

5.2 Summary of Findings

The study sought to investigate the influence of PM&E on social sustainability and the mediating effect of citizen empowerment on the relationship between PM&E and social sustainability. This was explored by testing 5 main hypotheses, namely: there is a relationship between PM&E and social sustainability; there is a relationship between PM&E and citizen empowerment; there is a relationship between citizen empowerment and social sustainability; the strength of the relationship between PM&E and social sustainability depends on demographic factors; and finally, that the joint influence of PM&E and citizen empowerment on social sustainability is greater than PM&E or citizen empowerment independently. The objectives of the study was to: assess the extent to which PM&E influences social sustainability; determine the extent to which PM&E influences citizen empowerment; establish the extent to which citizen empowerment

influences social sustainability; determine the moderating influence of demographic factors on the relationship between PM&E and social sustainability; and establish the joint influence of PM&E and citizen empowerment on social sustainability.

This study employed a mixed-methods approach in examining the relationships between the predictor variables and the dependent variable. In measuring PM&E, the study sought to understand the extent to which respondents participated in the various PM&E processes from design, to implementation, reflection, as well as monitoring and evaluation. While the reviewed literature measured some of these factors, most did not focus on the four processes and their aggregates. This study has attempted to respond to Littig and GrieBler (2005) recommendation that some socio-scientific analyses of how a social process such as participation (which in this study is PM&E) among others, influence sustainable development should be instituted to provide some strong arguments in the debate around sustainability. The descriptive analysis pointed to a possible influence of PM&E on citizen empowerment and social sustainability. This was further clarified through linear and multiple regression analyses. The summary of the findings are presented for each of the objectives examined.

5.2.1 The Influence of PM&E on Social Sustainability

The study examined the extent to which PM&E influences social sustainability. PM&E was found to be significantly related to social sustainability with $F(1, 210) = 105.774$, $p<.05$ and a correlation efficient of .579. This shows that there is a moderate positive linear relationship between PM&E and social sustainability. Thus, the greater the level of participation in monitoring and evaluation, the greater the level of social sustainability. With R^2 of .335, PM&E accounts for 33.5% of the variation in social sustainability. The other 66.5% is explained by other factors not captured in the model. The finding confirms the hypothesis that there is a relationship between PM&E and social sustainability. PM&E therefore positively influences social sustainability.

5.2.2 The Influence of PM&E on Citizen Empowerment

To explore this objective, the study sought to examine the extent to which PM&E influences citizen empowerment. This was informed by a priori assumption that citizen empowerment mediates the relationship between PM&E and social sustainability. The analysis yielded $F(1, 210) = 198.25$, $p<.05$ and $r = .70$. The study findings suggest that there is a strong positive linear relationship between PM&E and citizen empowerment. Similarly, $R^2 = .486$ shows that PM&E accounts for

approximately 48.6% of the variation in citizen empowerment. The other 51.4% can be explained by other variables that were not considered in the model. PM&E is therefore an important factor in predicting citizen empowerment. This finding therefore confirms the hypothesis that there is a relationship between PM&E and citizen empowerment. PM&E therefore, positively influences citizen empowerment.

5.2.3 The Influence of Citizen Empowerment on Social Sustainability

The study examined the extent to which citizen empowerment influences social sustainability. The linear regression of citizen empowerment on social sustainability was significantly related with F, (1, 210) = 235.762, $p<.05$ and $r = .727$. This indicates a strong positive linear relationship between citizen empowerment and social sustainability. The model obtained $R^2 = .529$, showing that approximately 53% of the variance in social sustainability can be accounted for by citizen empowerment. Comparatively, citizen empowerment accounts for more variation in social sustainability than PM&E itself. This was also confirmed by a multiple regression analysis of PM&E and citizen empowerment, which shows that citizen empowerment significantly, influences social sustainability than PM&E. Thus, citizen empowerment is not only a significant predictor of social sustainability, it also significantly explains the relationship between PM&E and social sustainability. This finding confirms the hypothesis that there is a relationship between citizen empowerment and social sustainability; and that citizen empowerment mediates the relationship between PM&E and social sustainability. The influence of PM&E on social sustainability is thus being mediated by citizen empowerment; the influence ceases in the absence of citizen empowerment. The study, therefore, hypothesizes that citizen empowerment mediates the relationship between PM&E and social sustainability.

5.2.4 Moderating Influence of Demographic Factors on the Relationship between PM&E and Social Sustainability

The study hypothesized that demographic factors moderate the influence of PM&E on social sustainability. This implies that demographic factors (moderators) would influence the direction and/or strength of the relationship between the predictor variable and the dependent variable. The moderator effect was represented as an interaction between the focal predictor variable and a moderating factor, in which case the factors considered were gender; age; level of education; level of literacy; occupation and level of income. A multiple regression analysis involving the PM&E

and each of the mediators; and their respective interaction terms were all found not to be significant with $p>.05$. From the analysis, the study found out that all the variables under consideration do not significantly moderate the relationship between PM&E and social sustainability. Thus, the hypothesis that demographic factors moderate the relationship between PM&E and social sustainability was rejected and the alternative accepted. The study therefore concludes that demographic factors do not moderate the influence of PM&E on social sustainability.

5.2.5 The Joint Influence of PM&E and Citizen Empowerment on Social Sustainability

The study also examined the joint influence of PM&E and citizen empowerment on social sustainability. The linear combination of PM&E and citizen empowerment was significantly related to social sustainability outcomes, $F(2, 209) = 12.344$, $p< .05$. The multiple correlation coefficient was $r = .733$, showing that the combination of PM&E and citizen empowerment has high influence on social sustainability than each of the variables independently. R^2 at .537, shows that approximately 53.7% of the variance in social sustainability can be accounted for by the linear combination of PM&E and citizen empowerment. This indicates that the combination of the two predictors increases the variation by 20.2%. The study further shows that when the two variables are considered in combination, citizen empowerment seems to have a dominant influence on social sustainability than the PM&E itself. This also confirms the hypothesis that citizen empowerment mediates the relationship between PM&E and social sustainability. The importance of citizen empowerment in explaining the variation in social sustainability is unaffected by the individual or joint inclusion of the other variables. Thus a model with citizen empowerment provides a better fit than the one with PM&E. The findings confirm the hypothesis that the joint influence of PM&E and citizen empowerment on social sustainability is greater than PM&E or citizen empowerment acting independently.

The Summary of the hypotheses test results and findings are shown in Table 5.1.

Table 5.1: Summary of Hypotheses Test results and Findings

Objective	Hypothesis	Test Results	Table	Interpretation
1. To assess the extent to which PM&E influences social sustainability.	H1: There is a relationship between PM&E and social sustainability.	F (1, 210) = 105.774, $p<0.05$; r = 0.579 *Adjusted* R^2 = 0.332	Table 4.12	PM&E has a significant positive influence on social sustainability
2. To determine the extent to which PM&E influences citizen empowerment.	H2: There is a relationship between PM&E and citizen empowerment.	F (1, 210) = 209.507, $p<0.05$ r = 0.707 *Adjusted* R^2 =.497	Table 4.13	There is a significant linear relationship between PM&E and citizen empowerment
3. To establish the extent to which citizen empowerment influences social sustainability.	H3: There is a relationship between citizen empowerment and social sustainability.	F, (1, 210) = 235.762, $p<.05$ r = .727 *adjusted* R^2 = .527	Table 4.14	There is a significant relationship between citizen empowerment and social sustainability Citizen empowerment mediates (accounts) for the relationship between PM&E and social sustainability.
4. To establish the moderating influence of demographic factors on the relationship between PM&E and social sustainability	H4: The strength of the relationship between PM&E and social sustainability depends on demographic factors (moderators).	$p>.05$	Table 4.15 Table 4.16 Table 4.17 Table 4.18 Table 4.19 Table 4.20	Demographic factors do not moderate the influence of PM&E on social sustainability.
5. To establish the joint influence of PM&E and citizen empowerment	H5: The joint influence of PM&E and citizen empowerment on social sustainability is	M1: F (1, 210) = 105.774, $p< .05$ $r = .579$ *Adjusted* R^2 = .332	Table 4.22 Table 4.23	The joint influence of PM&E and citizen empowerment on social sustainability is

on social sustainability	greater than PM&E or Citizen Empowerment independently.	M2: F(2. 121.344), $p<.05$) $r = .733$ *Adjusted* $R^2 = .537$ Model 3: F (8, 203) = 32.471; $p<.05$ $r = .749$ $R^2 = .544$		significantly greater than PM&E or citizen empowerment independently When PM&E and citizen empowerment are considered together, citizen empowerment seems to have dominant influence on social sustainability. However, when all the independent variables are included in the model; PM&E, citizen empowerment and age become the only significant variables

5.3 Conclusions

The study responded to validate or refute the claims on the influence of PM&E on social sustainability; as well as the mediating role of citizen empowerment on the relationship between PM&E and social sustainability. PM&E and empowerment are argued to be important in achieving positive development outcomes, such as improved incomes, more equitable access to resources, better access to justice and strengthened poor people's organisation (Ibrahim and Alkire, 2007; Fraser *et al*., 2006; Hilhorst and Guijt, 2006, Kasmel and Tanggaard, 2011; Laverack, 2001; Laverack and Labonte, 2000; Lennie, 2005; Magis and Shinn, 2009; McKenzie, 2004). From the literature reviewed, it was apparent that these claims have not benefitted from an empirical

investigation (Abbot and Guijt, 1998; Ibrahim and Alkire, 2007; Burton *et al*. 2006; Fraser *et al*., 2006; Jones, 2001; Littig and GrieBler, 2005; Papineau and Kiely, 1996). Furthermore, while many agree that social sustainability have key issues with important relationships that can be explored, often research of sustainability has tended to concentrate on economic and environmental sustainability (Bramley *et al*., 2006; Magis and Shinn, 2009; McKenzie, 2004; Littig and GrieBler, 2005). These formed the bases for the study. The conclusions are made in line with the objectives and hypotheses of the study.

Objective one of the study investigated the extent to which PM&E influences social sustainability. The study shows that there is a moderate positive linear relationship between PM&E and social sustainability. Hence, the greater the level of participation in PM&E processes, (design, implementation, reflection, monitoring and evaluation) the greater the level of social sustainability. This was also corroborated by evidence from qualitative analyses, which seemed to confirm the quantitative outputs. PM&E is, therefore an important variable in predicting social sustainability. The finding confirms most commentators' assertion that PM&E is empowering, cost-effective and leading to sustainability outcomes (Abbot and Forward, 2000; Codd, 2011; Fetterman, 2001; Fraser et al., 2006; Samah and Aref, 2011; Zimmerman, 1990; Papineua and Kiely, 1996). The study therefore argues that participation in PM&E processes (design, implementation, reflection, monitoring and evaluation) influences attainment of social sustainability outcomes. This confirms the study hypothesis that, there is a relationship between PM&E and social sustainability. This gives credence to the utilization of PM&E processes in M&E.

Objective two of the study examined the relationship between PM&E and citizen empowerment. The study findings suggest that there is a strong positive linear relationship between PM&E and citizen empowerment. This is consistent with literature, which have argued that participation in PM&E processes increases one's sense of control, perception of self-efficacy, acquisition of new skills and increased decision making capacity (Codd, 2011; Fraser *et al.,* 2006; Laverack, 2001; Papineau and Kiely, 1996; Samah and Aref, 2011; Zimmerman et al., 1992). These are indicators of citizen empowerment and have all been considered in this study. PM&E is, therefore, an important predictor of citizen empowerment. Hence, the hypothesis that there is a relationship between PM&E and citizen empowerment is accepted.

Notably, PM&E has more influence on citizen empowerment than it has on social sustainability. This seems to confirm findings from other previous studies, which have argued for the role of PM&E in influencing individuals empowerment outcomes. Zimmerman *et al*. (1992), for instance, observe that there is an association between participation in community organisations or activities and individual empowerment. In their study, Zimmerman *et al*. (1992) used perceived control as one of the proxy indicators of individual empowerment. Perceived control has been applied in this study as one of the indicators of citizen empowerment. But, from the evidence of this study, citizen empowerment is a mediator between PM&E and social sustainability. Subsequently, the study argues that delivering citizen empowerment outcomes could be more worth of investment than social sustainability.

Objective three explored the extent to which citizen empowerment influences social sustainability. From the findings, it is evident that citizen empowerment is significantly related to social sustainability. Comparably from the findings, citizen empowerment accounts for more variation in social sustainability than PM&E itself. This also goes to confirm the mediating influence of citizen empowerment in the relationship between PM&E and social sustainability. Additionally, this was corroborated by a multiple regression analysis between PM&E and citizen empowerment, which showed that citizen empowerment significantly influences social sustainability more than PM&E. The findings confirm the hypothesis that there is a relationship between citizen empowerment and social sustainability. The study further argues that citizen empowerment mediates the relationship between PM&E and social sustainability. This is a significant finding as it empirically shows the importance of PM&E in the sustainability debate and particularly social sustainability. The findings show that PM&E is more important to the extent that it produces an empowered citizen who then contributes to a socially sustainable community. Thus, citizen empowerment mediates the relationship between PM&E and social sustainability; and as such explains the variation in the relationship.

In objective four, the study hypothesized that the strength of the relationship between PM&E and social sustainability depends on demographic factors. From the analyses, the study found out that all the variables considered, namely; gender, age, education, literacy, occupation and income do not moderate the relationship between PM&E and social sustainability. This finding was largely considered unexpected since many commentators have argued that demographic factors such as

the ones included in the study moderate the realization of social sustainability as well as empowerment (Bramley *et al.*, 2009; Chiswick *et al.,* 2002; Chua and Iyengar, 2006; Dugdale, 2011; Falk, 2001; Glaeser *et al*., 2002; Helliwell and Putnam, 2007; Khan *et al*., 2010; Lennon *et al*., 2012; Munoz-Goy, 2013; Nasir *et al*., 2007; Ronald La Due Lake and Huckfeldt, 1998; OECD, 2007; Perkins *et al.*, 1990; Salomon, 2010; Spreitzer, 1996). Lennon *et al*., (2012), for instance, observe that demographic variables account for the differences in beliefs about social networking, attitudes toward social networking, and reasons for choosing and using specific networks. These are indicators of social sustainability.

The findings of the current study is, however, consistent with those of Veenstra *et al*. (2005) and Newton (2001), who argue that when social-economic variables such as age among others are controlled for, overall involvement retained a modest, but not significant effect on social sustainability outcomes. This seems to suggest that PM&E is an effective M&E model that traverses gender, education, income levels, literacy levels, occupation and age among other demographic variables not considered in the analyses. The study, therefore, theorizes that demographic factors do not moderate the influence of PM&E and social sustainability. These findings thus give credence to the participation of primary stakeholders in the PM&E process whether community-driven or even agency-driven. More importantly, the study empirically shows that the experience of social sustainability by individuals is not determined by any of the demographic factors considered in the study. It can, therefore, be concluded that all people, regardless of their demographic characteristics have capacity to be empowered and to experience social sustainability outcomes. However, this conclusion is open to further investigations, since this may not be true in other contexts other than the context of the study.

Finally, the joint influence of PM&E and citizen empowerment on social sustainability was also considered. The linear combination of the two variables was found to be significantly related to social sustainability. The findings confirm the hypothesis that the joint influence of PM&E and citizen empowerment on social sustainability is greater than PM&E or citizen empowerment independently. The findings, however, further reveal that, when the two variables (PM&E and citizen empowerment) are considered in combination, citizen empowerment seems to have a dominant influence on social sustainability than the PM&E itself. This also confirms the hypothesis that citizen empowerment mediates the relationship between PM&E and social

sustainability. It is therefore important for policy makers and development practitioners to invest more on interventions that provide citizens opportunity for more empowerment, of which PM&E is one. It is only when the citizens are empowered that social sustainability outcomes will be realized.

In conclusion, the research findings generally indicate that there is moderate to high positive relationship between the predictor variables and outcome variable. The study therefore argues that participation in PM&E processes influences attainment of empowerment and social sustainability outcomes; and that citizen empowerment mediates the relationship between PM&E and social sustainability. The study further shows that when PM&E and citizen empowerment are considered in combination, citizen empowerment seems to be more dominant; and that the joint influence of PM&E and citizen empowerment on social sustainability is greater than each of them acting independently. However, contrary to other claims in literature, the study found out that demographic factors such as gender, age, level of education, literacy, occupation and income have no significant contribution in the relationship between PM&E and social sustainability.

5.4 Recommendations

The findings of this study have significant implications on the theory, policy and practice of monitoring and evaluation, and especially the application of PM&E. The findings have implications for researchers, M&E practitioners, civil society organisations and governments.

5.4.1 Recommendations for Theory

The study provides a documented analysis and answers questions critical for the credibility of PM&E. It also gives credence to the principle of user involvement in M&E and other programme activities, which has been put under scrutiny by many commentators for lack of documented evidence (Burton *et al*., 2006; Fraser *et al*., 2006; Jones, 2001; Abbot and Guijt, 1998; Papineau and Kiely, 1996). This lack of a documented study undermines the utilization of the approach across large populations; hence it becomes difficult to generalize about its impact or to predict with any accuracy what makes the impact what it is.

Furthermore, the findings of this study are consistent with the theories against which the study was underpinned. The study was framed within human development theory and related theories, namely; social capital theory, empowerment theory, social cognitive theory and complexity theory.

This consistency with these theories will go a long way in expanding the utility of these theories in the theory and practice of M&E.

The study utilized assumptions in the human development theory. According to human development theory, development is an expansion of capabilities, which advances the idea that the purpose of development is to improve human lives by expanding the range of things that a person can be and do (Fukukda-Parr, 2003; Chimni, 2008). The capabilities here can be expanded to encompass individual, organisational and community empowerment outcomes as described by empowerment theory, social cognitive theory and social capital theory. Accordingly, the study found out that participation in PM&E processes contributes to citizen empowerment, which itself has a significant influence on social sustainability outcomes. From the forgoing, the study theorizes that citizen empowerment mediates the relationship between PM&E and social sustainability. The study, therefore, advances a theory that integrates human development, social capital, empowerment and social cognitive theories. The study also resonates with the complexity theory to the extent it argues that the findings are context dependent due to the non-linear nature of the variables considered.

5.4.2 Recommendations for Policy

The study results provide an understanding of PM&E and its relationship with individual (citizen) empowerment and social sustainability. As shown in literature, participation in PM&E processes increases one's sense of control, perception of self-efficacy, acquisition of new skills and increased decision making capacity (Papineau and Kiely, 1996; Zimmerman *et al*., 1992). Similarly, the findings from the current study indicate that PM&E has a significant influence on empowerment. Besides, the study findings suggest that citizen empowerment mediates the relationship between PM&E and social sustainability. Policies that provide opportunity for citizens to participate in M&E processes are thus worthy of investment since they can not only lead to significant impact on empowerment outcomes, but can also influence social sustainability, which is an ingredient of sustainable development. Similarly, positioning PM&E and citizen empowerment within the sustainable development debate requires the government and practitioners to acknowledge the interconnected nature of PM&E and empowerment. It thus requires the government and practitioners to make investments in PM&E processes that empower citizen and hence encourage the development as well as the realization of social sustainability.

A finding that is particularly interesting is that demographic factors such gender, age, level of education, literacy, occupation and income do not influence the relationship between PM&E and social sustainability. This is contrary to prevailing understanding on the importance of demographic characteristics in the development of social sustainability outcomes such as social capital (Christens and Speer, 2011). This has the implication that PM&E will positively predict the attainment of a socially sustainable community regardless of gender, age, level of education, level of literacy, occupation and their income levels. This means that every community has the capacity to be socially sustainable and as such, governments and development practitioners should provide for participatory processes to enable them create socially sustainable communities. This could have a far reaching impact on the poor and the marginalized than those who are better off. PM&E therefore can be a tool for pacifying the effect of inequality. This is consistent with Hilhorst and Guijt (2006) assertion that a PM&E process can enhance the equity of outcomes.

5.4.3 Recommendations for Practice

Results from this study have shown that involvement of primary stakeholders in PM&E potentially has a positive influence on empowerment and social sustainability. It is therefore imperative that participation of development beneficiaries be promoted at all costs by the various development practitioners and researchers. Both this study and other literature reviewed have shown that inviting participation in all aspects of monitoring and evaluation, including the more technical data collection and analysis phases built up the beneficiaries' feelings of ownership and responsibility for the development process (Papineau and Kiely, 1996; Zimmerman *et al*., 1992). And as Lennie (2006) recommends, civil society organisations and government should develop strategies that can increase the effectiveness and inclusiveness of community participation and engagement processes. According to Lennie, the strategies could include: identifying relevant stakeholders and personally inviting them to participate, using multiple methods for ongoing communication and participation, building mutual trust and open communication, using processes that aim to be inclusive and empowering for a diversity of participants and gathering relevant quantitative demographic data about participants to enable more accurate assessment of the inclusiveness of the evaluation and the diversity of participants.

Although building awareness, skills, organisations, and networks that enable more inclusive and empowered forms of participation takes time, these are critical for longer-term success in the

PM&E process. These should be recognized and measured as intermediate outcomes of broader change. The outcome of the participatory evaluation is more effective when an agency and primary stakeholders plan together in the early stage and share key decisions which in turn are likely to increase the likelihood that the primary stakeholders' felt needs are addressed.

However, evidence from the study shows that the variable with the most significant influence is citizen empowerment and not PM&E, which was the main predictor variable in the study. But since, PM&E precedes empowerment, providing opportunity for citizen to be involved in the design, implementation, monitoring and evaluation of development processes can be a powerful tool for bringing lasting change to the disenfranchised in disparate communities.

The understanding of the relationship between PM&E and citizen empowerment may help improve the design and evaluation of community interventions. And as empowerment theory states, interventions that provide genuine opportunities for individuals to participate may help them develop a sense of empowerment (Zimmerman *et al*., 1992). Florin and Wandersman (1990) also suggest that research findings that provide insights on methods of promoting empowerment can be rapidly translated into programmes of action. The study has empirically revealed that PM&E can be integrated in development programming with the promise of influencing empowerment and social sustainability outcomes. The findings of this study may have relevance to other governmental or non-governmental organisations implementing participatory processes. But as Hilhorst and Guijt (2006) caution, PM&E only delivers results when certain basic conditions are met, such as the ability of the primary beneficiaries to act on the findings. This calls for an organisational culture that values innovation, openness and transparency.

5.5 Contribution to Knowledge

The study has empirically revealed that PM&E can be integrated in development programming with the promise of influencing empowerment and social sustainability outcomes. The findings of this study may have relevance to other governmental or non-governmental organisations implementing participatory processes. The study also helped to clarify the influence of PM&E on social sustainability; the mediating effect of citizen empowerment; as well as understanding the influences of the demographic characteristics on the relationship between PM&E and social sustainability. From the literature reviewed, it was apparent that previous studies have hardly

examined the mediating and moderating influence of citizen empowerment and demographic variables, respectively on the relationship between PM&E and social sustainability outcomes in whatever form.

5.6 Limitations

The study anticipated a number of limitations in its administration. While the study expected that there would be difficulties in the translation of some of the key terminologies into the local language, majority of the respondents turned out to be literate and having a good understanding of English. In cases where the respondents were not very literate or fluent, the study employed enumerators who were thoroughly taken through the questionnaire before being sent out to administer it to such respondents. Using enumerators from the community also helped to minimize the effect of community fatigue due to over-research in the target areas. This contributed to a low non-response rate, which was established to be less than 12%.

Although the study findings seem to agree with most of the previous research on empowerment and social sustainability, the generalizability of these results beyond the study population is still unknown. It might therefore be instructive to launch a new expansive investigation based on a quasi-experimental design to investigate the effectiveness of PM&E or its external validity.

Being cross-sectional, the study has limited capacity to document causality between the phenomena tested. A longitudinal study would have been more appropriate to discover the effect of the various variables on sustainability instead of ending at just testing the relationships. Hence, a study that tests causality would give a better picture.

One of the limitations of this research was the reliance on self-administration of the questionnaire to a larger extent, especially for the quantitative component of the study. While previous research point to the fact that this does not affect the integrity of the data provided, the study did not consider testing the data in this regard. This was, however, integrated with the use of interviews to collect data, especially in cases where the respondents had challenges reading, helping to reduce response biases that this might have introduced.

The other limitation of this study was that the study was based on a small population. Although the study involved a population, the size was not large enough for meaningful statistical analysis.

Similarly, since the study was based on a population data; it was not possible to test inferential statistics which could be generalized to other populations other than the study population. Many other statistics would have been possible to test if the study was based on a sample from a large population. It is likely that more understanding on the influence of PM&E on social sustainability and the mediating effect of citizen empowerment would have been clarified better if the study was based on a large population. Future research should, therefore, investigate these relationships using samples from a large population.

The other limitation concerns the alternative plausible interpretations of the findings. There are studies that suggest that participation precedes empowerment (Christens *et al*. in press, cited in Christens and Speer, 2011). It might, therefore, be instructive for future studies to explore the reciprocal relationship between empowerment and participation; as well as social sustainability and empowerment. Additionally, future studies should compare different ways of measuring PM&E, citizen empowerment and social sustainability. This study helped to clarify the influence of PM&E on social sustainability; the mediating effect of citizen empowerment; as well as understanding the influences of the demographic characteristics on the relationship between PM&E and social sustainability.

Measurement of the study variables was also a limitation. The main study variables, namely social sustainability, PM&E and citizen empowerment are all flow concepts. The inherent complexity in the concepts means that not all possible dimensions of the concepts may have been included in the study. None of the concepts considered in the study have one standard recognized measure. In addition, although the tools applied to determine how PM&E influences social sustainability and other relevant relationships examined could be considered adequate, the fact that this study was limited to a single context could also undermine the generalizability of the study.

Unlike the quantitative analysis where numbers and what they represent are the materials of analysis, qualitative analysis deals in words and is guided by fewer universal rules and standardized procedures than statistical analysis. This relative lack of standardization would ordinarily raise questions as to the validity of the findings based on qualitative data (Cho and Trent, 2006; Golafshani, 2003). However, by using mixed methods, the study has ensured that its findings can be dependable; and its validity as well as reliability are assured.

In addition, the focus group discussion participants for this study self-selected to participate. They were identified from among the starter group members (for FGDs with starter groups) and CBOs members. By self-selecting to participate, it is possible that their responses may not be representative of what those who did not self-select would have said about the different themes explored. This, therefore, means that the findings may not necessarily be generalizable to all the starter group members or members of the CBOs interviewed.

Finally, the other limitation of this study is that, while the measures used were meant to assess respondent's perception of empowerment looking at certain empowerment from literature, the community level or organisational level indicators/variables that may be related to empowerment may not have been exhaustively explored. Future studies should begin to study empowerment at multiple levels of analysis in order to understand the relationship between individual level empowerment with the larger social and political environment (Zimmerman *et al*., 1992).

The limitations notwithstanding, the findings of this research were by and large reliable. The reliability was also enhanced through pilot-testing the instruments to ensure internal consistency; as well as through the use of mixed-methods approach. Both testing and verification helped to increase the validity and reliability of the study. The study, therefore, provides valuable insights on the influence of PM&E on social sustainability and the mediating influence of citizen empowerment in the relationship; as well as the moderating influence of demographic factors on the relationship between PM&E and social sustainability.

5.7 Suggestions for Further Research

This study has attempted to investigate the influence of PM&E on social sustainability as mediated by citizen empowerment. Although the purpose of the study was achieved, in future research, it may be useful to identify PM&E contextual factors that enhance and inhibit the empowerment of primary stakeholders. Future research should establish what preconditions for PM&E can help it achieve this expectation of empowerment.

Because of cost and time, the study was based on a cross-sectional design. A longitudinal research might be necessary to help in understanding the complementary nature of PM&E and empowerment and how they influence social sustainability and the directionality of this influence.

For the purpose of this study, social sustainability was operationalized to include social capital, social networks, community participation and social cohesion. While these are considered as indicators of social sustainability in literature, there is need for future research to help in identifying suitable models for sustainability with a social angle. Similarly there is need to explore better ways of measuring social sustainability, PM&E and citizen empowerment.

The study found that all the selected demographic characteristics; all of which are often considered predictors of variance in the level of empowerment and social sustainability outcomes were not significant when demographic variables were added to the model. In the context of this study, it was clear that PM&E is an effective M&E model that traverses gender, education, income levels, literacy levels, occupation, age among other demographic characteristics not considered in the study. This finding indicates the need for more studies to explore the relationship between the demographic factors on both citizen empowerment and social sustainability. The findings about the influence of demographics might, therefore, benefit from future studies in other contexts.

Similarly, although the study attempted to examine the moderating influence of a few selected demographic factors on social sustainability, it did not consider contextual factors. A study should be instituted to determine the contextual factors predicting social sustainability; as well as a confirmatory study to establish whether indeed the demographic factors considered have no significant moderating influence on the relationship between PM&E and social sustainability. Future research could also focus on characteristics of contexts that may enhance or inhibit empowering processes, or address factors associated with empowered organisations or communities.

Finally, while the measures used were meant to assess respondent's perception of empowerment looking at certain empowerment from literature, the community level or organisational level indicators/variables that may be related to empowerment may not have been exhaustively explored. Future studies should begin to study empowerment at multiple levels of analysis in order to understand the relationship between individual level empowerment with community level or organisational level empowerment; as well examining the effect of community or organisational level empowerment on social sustainability outcomes.

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APPENDICES

Appendix I: Introductory Letter

Dearest Research Participant

My name is _____. I am a student. I am working with your community on a research project to develop better participatory approaches to Monitoring and Evaluation (M&E). This will contribute to my PhD with the University of Nairobi in Project Planning and Management. The findings of this research will not only contribute to new knowledge, but also new research-based evidence that will inform development agencies to intentionally create an environment that encourages the participation of primary beneficiaries in M&E, hence bringing about an understanding of inclusion of the beneficiaries in the M&E process. I would like to ask you some questions related to Participatory Programme design, implementation, monitoring and evaluation; and their influence on a number of key variables, especially citizen empowerment and social sustainability outcomes.

The information you provide will be useful in establishing whether PM&E indeed leads to citizens' empowerment and hence social sustainability. I will be trying to assess the extent to which PM&E influences social sustainability; establish the extent to which citizen empowerment influences social sustainability; determine the moderating influence of demographic factors on the relationship between PM&E and social sustainability; establish the joint influence of PM&E and citizen empowerment on social sustainability; and establish the joint influence of PM&E, citizen empowerment and demographic factors on social sustainability.

Participation in this research is voluntary, and you can choose not to take part.

All the information you give will be confidential. The information will be used to prepare study report, but will not include any specific names. There will be no way to identify that you are the one who gave this information.

If you have any questions about the research, you can ask me or my research assistants. At this time do you have any questions about the research?

Once again thank you for accepting to participate.

Appendix II: Questionnaires for PFA members

Firstly I would like to thank you for accepting to take part in this study. I would like to ask you some questions that will help me understand how you have participated in the design, implementation, monitoring and evaluation as well as how you have benefitted and what you have learnt and how much control you feel you have when you are making decisions.

A. Demographic Factors

Section I: Biodata

Date…….Interviewer…….

Location……Sub-location……Starter Group……

Household characteristics (to be asked at the end)

Questions	Codes	Response
Gender of the respondent	1=Female; 0=Male	
Age of the respondent	Less than 18 years 18-25 years 26-35 years 36-50 years More than 50 years	
What is your level of Education?	1=no formal education; 2=primary education (P1-P8); 3=secondary education (S1-S4); 4=diploma and degrees; 5=adult education; 6=other (specify)	
Literacy of respondent	1=Can read 2=Can write 3=Both 4=None	
What is your current primary occupation?	1=farming; 2=employed; 3=casual labour; 4=business; 5=others (specify)	
What is your average monthly income approximately?	Amount in Kenya Shillings (KSHS)	

B. Social Sustainability

This is reflected in the character, functioning, resource mobilization, networking skills of community institutions as well as participation in the case of individuals.

Section II: Social Capital

1. To what extent do you agree or disagree with the following statements:

	1 = Strongly Disagree	2 = Disagree	3 = Neutral	4 = Agree	5 = Strongly Agree
I am a member of a community based organisation (CBO)/group					
There has been an improvement in my group processes out of my/or group's participation in the ADP processes.					
My level of attendance to group meetings has improved from my participation in the ADP's processes.					
The level at which my group is able to enforce our constitution has improved over the last 2 years.					
The membership in our group has increased in the last 2 years.					

2. Please rate the level of improvement in the following areas of your group as a result of your participation in the ADP's design, monitoring, implementation and evaluation processes.

	1 = Poor	2 = Fair	3 = Neutral	4 = Good	5 = Excellent
Decision making					
Meetings					
Membership interaction					
Leadership and management					
Group identity					
Clarity of mission and vision					
Communication					
Collaboration and networking					
Group resources					

3. The following are things a community-based organisation (CBO) might try to do. For each one, indicate whether you think it is very likely, somewhat likely, not likely, or very unlikely that the CBO can accomplish that goal.

	Very unlikely = 1	Unlikely = 2	Neutral = 3	Likely = 4	Very likely = 5
Improve physical conditions in the community like cleanliness,					
Persuade the government or political leaders to provide better services to people in the community.					
Get people in the community to help each other more.					

Reduce crime in the community.					
Get people who live in the community to know each other better.					
Get information to residents about where to go for services they need.					

Section III: Social Networks

4. I am going to read some things that people might say about their community. For each one, please indicate to what extent you agree or disagree with the following statement:

	1 = Strongly Disagree	2 = Disagree	3 = Neutral	4 = Agree	5 = Strongly Agree
I can recognize most of the people who live in my community					
My neighbors and I want the same things from the community					
If there is a problem in this community, people who live here can get it solved.					
People in this community watch after each other and help out when they can.					
I feel a strong sense of community with others in my community.					
I often talk with friends and/or family about problems in my community.					
If I wanted to start a small business and need to borrow money, I know that there are funding opportunities available in this community.					
It is easy for people in this community to have different groups of friends.					

5. To what extent do you agree or disagree with the following statements:

	5 = Strongly Disagree	4 = Disagree	3 = Neutral	2 = Strongly	1 = Strongly Agree
*The concerns of certain groups of people in this community are heard more than those of other groups.					
*Outside of my family, I visit mostly with people of my age.					
*I find that different groups in this community don't mingle much with each other.					
*There are people in this community who I won't talk with, even if I need information or help.					
*Once people are part of a group in this community, they don't associate much with others outside of the group.					
*I only visit with people in this community that I have known for a long time.					
*Outside of my family, I don't feel comfortable dealing with people from this community who have more or much less money than me.					

*Reversed scoring for analyses.

Section IV: Community Participation

6. To what extent do you agree or disagree with the following statements

	1 = Strongly Disagree	2 = Disagree	3 = Neutral	4 = Agree	5 = Strongly Agree.
I am a member of a CBO/community group.					
I take part in activities sponsored by Karemo ADP or any other organisations.					
I have been asked about my opinion on Karemo ADP's development interventions.					
We are informed when major decisions concerning development activities in the community are being made.					
Major decisions concerning development in my community are made primarily by the whole community.					
I believe my community has control over development interventions in my community					
I often attend our group meetings					
I have spoken during a group meeting in the past year.					
I have done work for my organisation outside of meetings in the past year.					
I have served as a member of a committee in the past year.					
I have served as an officer or as a committee chair in the past year.					

7. Indicate how often you do the following activities.

	1 = To a very small extent	2 = To a small extent	3 = Neutral	4 = To a large extent	5 = To a very large extent
On average, how often do you participate in the activities of the groups to which you belong in a month?					
To what extent do you participate in the group(s)' decision making?					

Section V: Social Cohesion

8. To what extent do you agree or disagree with the following statements:

	1 = Strongly Disagree	2 = Disagree	3 = Neutral	4 = Agree	5 = Strongly Agree
Generally speaking, most people here try to be helpful to each other.					
Generally speaking, most people in this community can be trusted.					
People in this community are friendly to each other.					
I am proud of the community I live in.					
People in this community respect elders.					
There are no crime problems in our community.					

I am willing to help make my community better.					

9. On a scale from 1 to 5, where 1 is very unlikely and 5 is very likely

	1 = Very unlikely	2 = Unlikely	3 = Neutral	4 = Likely	5 = Very Likely
How likely is it that you would ask your neighbors to take care of your children for a few hours if you were sick?					
How likely is it that you would ask your neighbors for help if you were sick?					

10. How well do people in your community/village/neighborhood g*et al*ong these days? Using a five-point scale where 1 means not getting along at all and 5 means getting along very well.

	1 = Not getting along at all	2 = Not getting along very well	3 = Neutral	4 = Getting along quite well	5 = Getting along very well
How well are people in your community/village/neighborhood getting along?					
How would you rate the togetherness or feeling of belonging in your village/community?					

C. Participatory Monitoring and Evaluation (PM&E)

A process in which the project beneficiaries are active participants, involved in the design, implementation, monitoring and evaluation of project interventions.

11. Please indicate your level of participation in the following Karemo ADP activities:

	1 = Very Poor	**2 = Poor**	**3 = Fair**	**4 = Good**	**5 = Excellent**
Design/assessments					
Reflection Meetings					
Project monitoring					
Programme implementation					
Programme/Project evaluation					

Section VI: Participation in the programme design process

12. To what extent do you agree or disagree with the following statements

	1 = Strongly Disagree	2 = Disagree	3 = Neutral	4 = Agree	5 = Strongly Agree.
I participated in the Karemo ADP's design process.					
I was involved in the formulation of the projects in Karemo ADP					
There has been improvement in my household as a result of my participation in the design process.					

Section VII: Participation in reflection and Feedback Sessions

13. To what extent do you agree with the following statements?

	1 = Strongly Disagree	2 = Disagree	3 = Neutral	4 = Agree	5 = Strongly Agree
I have participated in meetings with project staff in order to receive feedback on how the project is progressing.					
There are decisions that have been made at the ADP level as a result of holding reflection meetings.					
I often participate in reflection meetings organized by Karemo ADP.					

Section VIII: Participation in the implementation of activities

14. To what extent do you agree or disagree with the following statements?

	1 = Strongly Disagree	2 = Disagree	3 = Neutral	4 = Agree	5 = Strongly Agree.
I have participated in the implementation of Karemo ADP's activities.					
I often participate in the implementation of activities of Karemo ADP.					

Section IX: Participation in the M&E of Activities

15. To what extent do you agree or disagree with the following statements?

	1 = Strongly Disagree	2 = Disagree	3 = Neutral	4 = Agree	5 = Strongly Agree.
I have participated in the monitoring of Karemo ADP's activities.					
I often participate in the day to day monitoring of activities of Karemo ADP.					

D. Citizen Empowerment

An individual's belief that it is possible to achieve what one is trying to accomplish.

Section X: Perception of Self-efficacy

16. To what extent do you agree or disagree with the following statements:

	1 = Strongly Disagree	2 = Disagree	3 = Neutral	4 = Agree	5 = Strongly Agree
Overall, I have some influence in making my community a better place to live.					
Since I am participating I have participated/I am participating in this Programme/project, other people look up to me.					
Through this project I now help other people.					
Through my involvement with this Programme/project I am now more productive.					

I am satisfied with my life.					
The things I do in my life are worthwhile					

17. The following questions ask how satisfied you feel, on a scale from 1 to 5. 1 means you feel not very satisfied and 5 means completely satisfied

	1 = Not very satisfied	2 = Not satisfied	3 = Neutral	4 = Satisfied	5 = Completely satisfied
Overall, how satisfied with your life were you 5 years ago?					
Overall, how satisfied are you with life as a whole these days?					
As your best guess, overall how satisfied with your life do you expect to feel in 5 years' time?					

Section XI: Perception of Increased Control/ Perception of self-confidence

18. To what extent do you agree with the following statements?

	1 = Strongly Disagree	2 = Disagree	3 = Neutral	4 = Agree	5 = Strongly Agree
I feel have much more control in making personal decisions that affect my everyday activities than before as a result of my participation in Karemo Design process					
I feel have much more control in making personal decisions that affect my everyday activities than before as a result of my continuous participation in Karemo ADP's reflection sessions.					
I feel have much more control in making personal decisions that affect my everyday activities than before as a result of my participation in the implementation of Karemo ADP's activities.					
I feel have much more control in making personal decisions that affect my everyday activities than before as a result of my participation in Karemo ADP's M&E activities.					
People like me can generally change things in my community if they want to.					
I believe that I personally have control over the kind of development interventions that are done in my community.					
Through my involvement with this programme/project I have gained more self-confidence					

19. Please rate the level of improvement in the following areas:

	1 = Poor	2 = Fair	3 = Neutral	4 = Good	5 = Excellent
Decision making at household level					
Family relationships					
Income					

Section XII: Decision-making capacity

20. To what extent do you feel you can make your own personal decisions regarding these issues if you want to?

Domains	Very small	2 = Small	3 = Neutral	4 = High	5 = Very High
Minor Household Expenditures					
What to do if you have a serious health problem					
How to protect yourself from violence					
Whether and how to express religious faith					
What kind of tasks you will do					

21. How true would it be to say that your actions with respect to _____ (*the domain*) are motivated by a desire to avoid punishment or to gain reward?

Domains	Completely False = 1	False = 2	Somewhat True = 3	True = 4	Completely True = 5
Minor Household Expenditures					
What to do if you have a serious health problem					
How to protect yourself from violence					
Whether and how to express religious faith					
What kind of tasks you will do					

Now I am going to describe two reasons why you do these activities, and ask you to tell me how true each one is.

22. How true would it be to say that your actions with respect to _____ (the domain) are motivated by a desire to avoid blame, or so that other people speak well of you?

Domains	Completely False = 1	False = 2	Somewhat True = 3	True = 4	Completely True = 5
Minor Household Expenditures					
What to do if you have a serious health problem					
How to protect yourself from violence					
Whether and how to express religious faith					
What kind of tasks you will do					

23. How true would it be to say that your actions with respect to _____ (the domain) are motivated by and reflect your own values and/or interests?

Domains	Completely False = 1	False = 2	Somewhat True = 3	True = 4	Completely True = 5
Minor Household Expenditures					
What to do if you have a serious health problem					
How to protect yourself from violence					
Whether and how to express religious faith					
What kind of tasks you will do					

24. To what extent do you agree or disagree with the following statements:

	1 = Strongly Disagree	2 = Disagree	3 = Neutral	4 = Agree	5 = Strongly Agree
Through my participation in Karemo ADP's development processes, I am more involved in decision making in my community.					

Section XIII: Acquisition of new skills

25. To what extent do you agree or disagree with the following statements:

	1 = Strongly Disagree	2 = Disagree	3 = Neutral	4 = Agree	5 = Strongly Agree
My skills in evaluation have increased since my participation in Karemo ADP's development processes.					
I have developed skills in planning as a result of my participation in Karemo ADP development processes.					
It is important to monitor and evaluate development programmes.					
Through my involvement with this Programme/project, I see opportunities for livelihoods that I had not seen before.					
My involvement with the Programme/project has broadened my horizon.					
Through this programme, I have gained more and better knowledge than I would have without this programme					

Section XIV: Increased information about the Programme

26. To what extent do you agree or disagree with the following statements:

	1 = Strongly Disagree	2 = Disagree	3 = Neutral	4 = Agree	5 = Strongly Agree
I clearly know and understand Karemo ADP's development priorities.					
My level of information about what Karemo ADP is doing has increased after participating in its development processes.					
The Programme/project has offered me an insight on how to improve on my standard of living.					
Through my involvement with this Programme/project I have gained useful life skills.					
Through my involvement with this project I have gained other skills'					

Once again thank you for accepting to participate in this study!!

Appendix III: Focus Group Discussion (FGD) GUIDE: Community Participation

Discussion Topic	Key Concepts to be Explored	Guide Questions
1. Knowledge and understanding of development programmes	a) Level of knowledge of what development initiatives exist in the village/neighbourhood b) Understanding of the purpose of different development initiatives	*i) What does the phrase 'community development' mean to you?* *ii) What community development initiatives are there in your village/neighbourhood?* *iii) Why are these development initiatives in your village/neighbourhood?*
2. Participation in programme planning	a) Extent of involvement of community people in development planning processes: - Who was involved (e.g., no one, few, many)? - Type of involvement (*e.g. responded to survey, IPM, PRA, attended meeting/s*) - Regularity of involvement (never, rarely, sometimes, often)	*i) How were these initiatives planned?* *ii) What processes were used and why?* *iii) Who was involved in this planning, and how?* *iv) What was your involvement? How often?*
3) Knowledge about programme implementation	a) Level of knowledge about how development activities are implemented. b) Means of communication in community about development activities (e.g., no communication, people informed informally before or during, people consulted before).	*i) How were the activities are the activities in these development programme implemented? Give examples.* *ii) How did/do you hear about these activities and their implementation? How was this communicated in your village?*
4) Decision making in programme implementation	a) Level of knowledge and understanding about decision making process in programme implementation (who decides, how). b) Extent to which community people have opportunities to be involved in, and to influence, decision making.	*i) Who makes decisions about implementation of development programmes and activities in your village/neighbourhood?* *ii) How do they arrive at those decisions?* *iii) What opportunities do you have to be involved in, or influence, those decisions?*

5. Mutual responsibility for programme resources and budget	a) Knowledge about development programme budgets/resourcing. b) Level of community resource contribution toward programme and activity budget (*type of resource – materials, labour, financial; size of contributions; diversity of sources).* c) Extent of involvement in managing programme resource budget.	*i) Who contributes the financial and material resources for development programmes and activities in your village/community?* *ii) What resources does the community contribute (e.g. financial, material, labour) for these development programmes and activities? Give examples.* *iii) What is the value of contributions from the community and other sources?* *iv) Who is responsible for budgeting and managing these resources*
6. Participation in, and management of, programme activities	a) Level of participation of community people in implementation of activities (*any involvement of and/or dependence on non-community members, e.g., Karemo ADP staff, contractors).* b) Extent of community involvement in supervision and management of activities (*any involvement of and/or dependence on non-community members, e.g., Karemo ADP staff, contractors).*	*i) Who actually implements/carries out the development activities in your village/community? Give examples. How have you been involved?* *ii) Who manages/supervises the implementation of these development activities? Are community members part of this? How?*
7. Monitoring and evaluation	a) Awareness of monitoring and evaluation (M&E) of programmes and activities. b) Extent of community ownership and management of M&E. c) Opportunities for community members to input and be involved in programme and activity M&E.	*i) How does your community monitor the progress of development activities undertaken?* *ii) Who is involved in carrying out the monitoring and evaluation of programme activities in your village/community? Who decides this?* *iii) What involvement have you, your friends/relatives had in monitoring the progress of development programmes in your village/community?*

Appendix IV: CBOs Questionnaire: Social Sustainability

Name of the Group:
Membership: No. of Women:_____ No. of Men: _____
Which year was your group/organisation formed?
Division: _____ Location _____ Sub-location_____
Interviewer: _____ Date:_____

1) Representation and involvement
a) Who are the members of the organisation?
b) What is involved in becoming and being a member?
c) Which different social, economic, ethnic, age, or other groups in your community are represented in the organisation? How? At what levels in the organisation?

2) Leadership
a) Who are the leaders of the organisation?
b) What are the processes and criteria for selecting and replacing leaders?
c) How does someone's social, economic status, age, or education level affect their chance of becoming a leader? Give examples.
d) Describe the relationship between leaders and members of the organisation? Give examples.

3) Decision Making
a) How are decisions made in the organisation? Give examples.
b) Who decides on the organisation's plans, budgets, and activities? How?

4) Gender profile and roles
a) What roles do women and men have at different levels of the organisation?
b) Are women represented in organisational leadership? Are women actively involved in the organisation's decision making? How? Give examples.

5) Organisational vision and purpose
a) What are your organisation's aims and objectives?
b) How were these arrived at? Who was involved and who knows about these?

c) What future dreams do you have for your community, and your organisation? *(e.g., in 10-15 years time)* How do you plan to realize these dreams?

6) Management of the organisation
a) Do you have a constitution for the group? How well are you able to enforce the constitution? Give some examples?
b) Describe how your organisation is managed.
c) What are the different roles and responsibilities? How are these assigned? To whom? How are these persons selected?
d) How are the finances managed? What procedures do you have? What records are kept? How are they maintained & checked?

7) Organisational meetings
a) Does your organisation have meetings? How often?
b) Who normally attends these meetings *(and how many)*? How are they conducted?
c) What is the purpose of these meetings? What are the outcomes?
d) Are any records/minutes of meetings taken?
e) What happens between meetings - how are they followed up and planned?

8) Relationship between the area development programme and the organisation
a) Describe the relationship between your organisation and the WV development programme.
b) On what topics/issues/activities do you work together? How? Who does what?
c) What is their role in relation to your organisation?
d) What initiatives and activities have you undertaken without the involvement of the WV development programme? Give examples

9) External linkages
a) Describe the relationship between your organisation and local government organisations.
b) Is your organisation registered with the government?
c) On what issues/activities do you interact? How? What government services do you utilize? Give examples.
d) Describe the relationship between your organisation and other local non-government organisations.
e) On what issues/activities do you interact? How? What NGO services do you utilize? Give examples.

10) Resource mobilization
a) What financial and material resources does your organisation have for its activities and day-to-day management?
b) Where are these resources from? How did you mobilize/access them? Give examples.
c) What proportion of resources is from the WV development programme?
d) What resources have you mobilised from the community and/or other organisations? Give examples.

Appendix V: Community-based Organisations (CBOs) in Karemo Division

Community-based Organisations (CBO) or Group	Location	Activities	Start and end dates
Community			
Nyangor Community	Programme Impact area	Water provision for households, Small scale kitchen gardening	Continuous
Udida Community	Programme Impact area	Water provision for households, Small scale kitchen gardening	Continuous
Jega Mala Community	Programme Impact area	Water provision for households, Small scale kitchen gardening	Continuous
E. Alego Bidii Youth Group	Programme Impact area	Water provision for households, Small scale kitchen gardening	Continuous
Kamagoye Community	Programme Impact area	Water provision for households, Small scale kitchen gardening	Continuous
Pap Nyadiel child development project		Provision of OVC care and support. Organizing farmers for agricultural activities.	Continuous
NYABARPAP CBO		Organizing farmers for agricultural and other income generating activities.	Continuous
Okok shida		Provision of OVC care and support.	Continuous
Sisase Community based organisation		Provision of OVC care and support.	Continuous
Olwa parents and guardians		Provision of OVC care and support.	Continuous
Widows Hope		Provision of OVC care and support.	Continuous
Yier Ngima		Provision of OVC care and support.	Continuous
EACODEP		Organizing farmers for agricultural and other income generating activities.	Continuous
SEAFU		Organizing farmers for agricultural and other income generating activities.	Continuous
Nguono Women group		Provision of OVC care and support.	Continuous

Appendix VI: Sample Size Determination

Table 1: Table for Determining Minimum Returned Sample Size for a Given Population Size for Continuous and Categorical Data

Population size	Sample size					
	Continuous data (margin of error = .03)			Categorical data (margin of error = .05)		
	alpha = .10 t = 1.65	alpha = .05 t = 1.96	alpha = .01 t = 2.58	p = .50 t = 1.65	p = .50 t = 1.96	p = .50 t = 2.58
100	46	55	68	74	80	87
200	59	75	102	116	132	154
300	65	85	123	143	169	207
400	69	92	137	162	196	250
500	72	96	147	176	218	286
600	73	100	155	187	235	316
700	75	102	161	196	249	341
800	76	104	166	203	260	363
900	76	105	170	209	270	382
1,000	77	106	173	213	278	399
1,500	79	110	183	230	306	461
2,000	83	112	189	239	323	499
4,000	83	119	198	254	351	570
6,000	83	119	209	259	362	598
8,000	83	119	209	262	367	613
10,000	83	119	209	264	370	623

NOTE: The margins of error used in the table were .03 for continuous data and .05 for categorical data. Researchers may use this table if the margin of error shown is appropriate for their study; however, the appropriate sample size must be calculated if these error rates are not appropriate. Table developed by Bartlett, Kotrlik, & Higgins.

Appendix VII: Tests of Normality

Figure A1.1: Histogram of Social Sustainability Responses

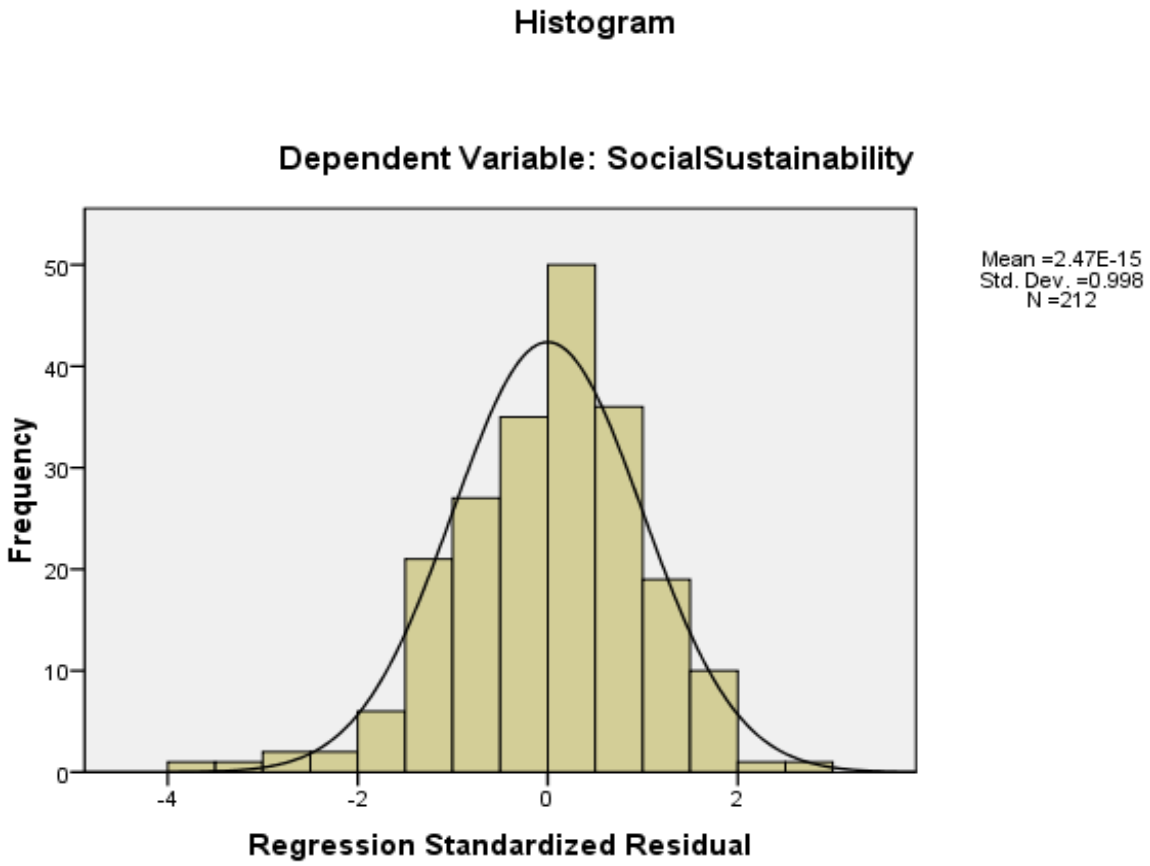


Figure A1.2: Normal P-P Plot of Regression standardized Residual.

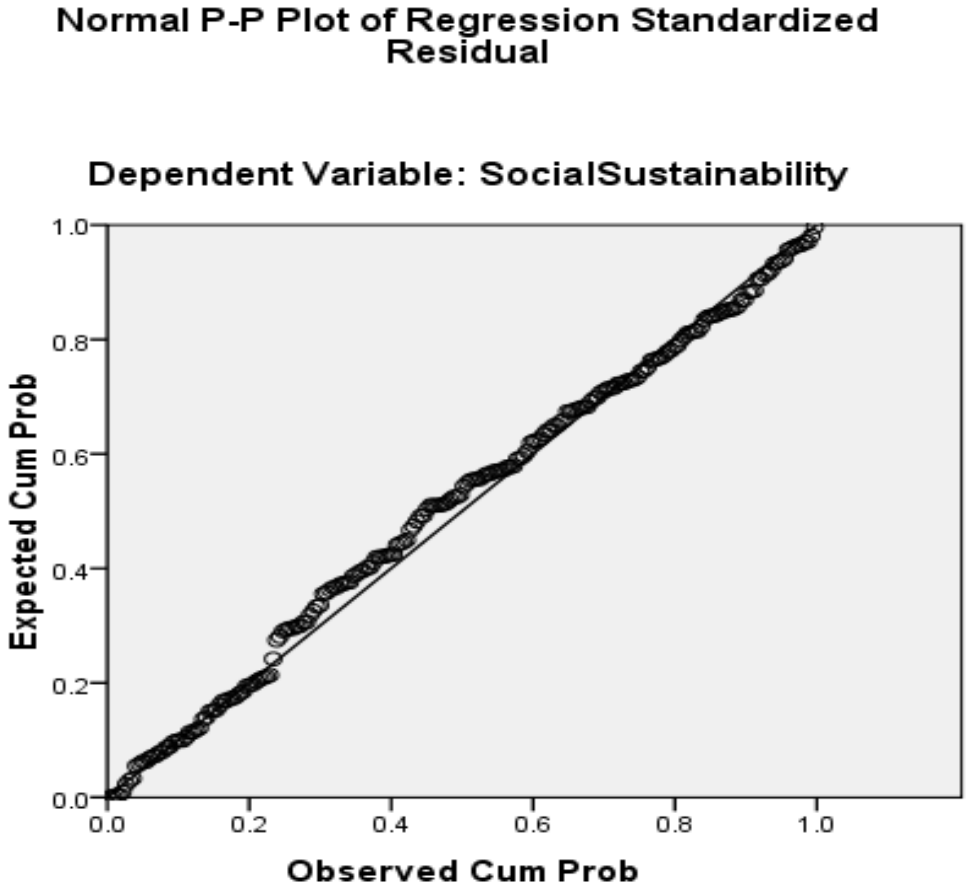


Figure A1.3: Normal Q-Q Plot of Social Sustainability (Female)

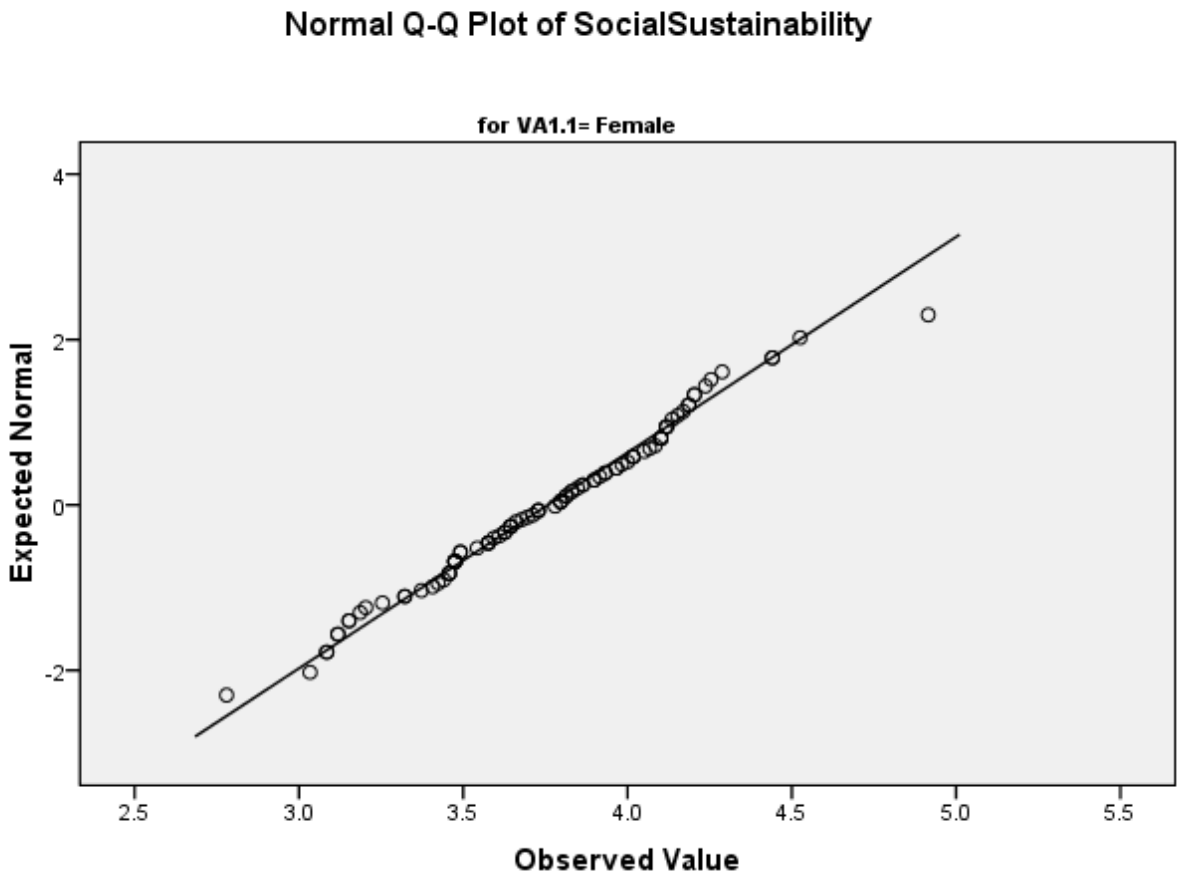


Figure A1.4: Normal Q-Q Plot of Social Sustainability (Male)

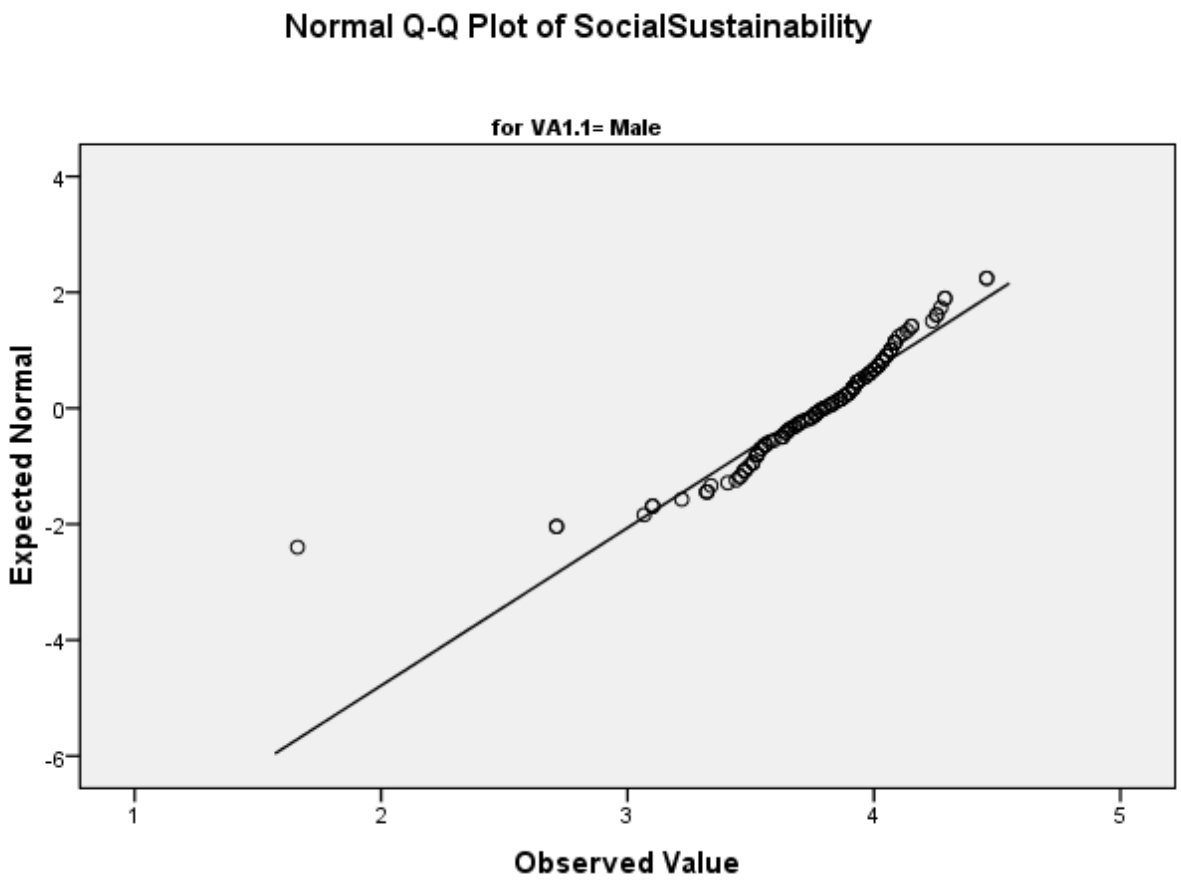
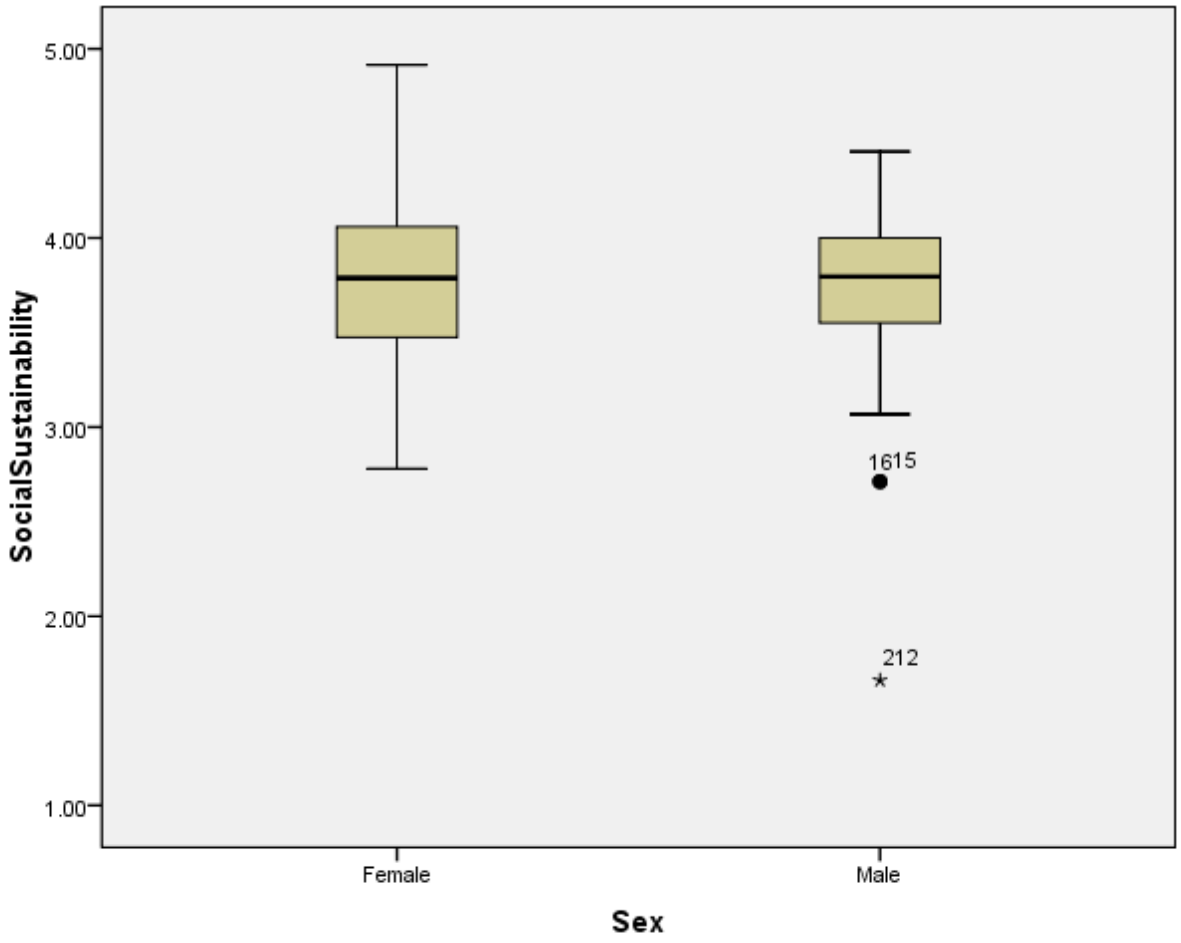


Figure A1.5: Boxplots of Social Sustainability by Gender



Appendix VIII: Linearity, Collinearity and Multicollinearity

Collinearity is usually considered an undesirable situation in which the correlations among the independent variables are strong. Collinearity increases the standard errors of the coefficients. This implies that coefficients for some independent variables may be found not to be significantly different from 0, while without multicollinearity (or collinearity) and with lower standard errors, the same coefficients might turn out to be significant and thus negating the findings. In other words multicollinearity overstates the standard errors, hence making some variables statistically insignificant when in the actual sense they should be significant.

A predictor is collinear with other predictors in the model if there are high (partial) correlations between them. Tests for multicollinearity indicated that a very low level of multicollinearity was present (VIF = 2.11 for PM&E, 2.04 for citizen empowerment, 1.23 for gender, 1.14 for age, 1.26 for level of education, 1.12 for literacy, 1.06 for occupation and 1.13 for income.

Table A8.1: Summary of the model with all the variables

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.746[a]	.557	.539	.25346

a. Predictors: (Constant), Income, Age, Literacy, Primary Occupation, Citizen empowerment, Gender, Level of Education, PME

Table A8.2: Analysis of the Variance in the model with all the variables

Model		Sum of Squares	*df*	Mean Square	F	Sig.
1	Regression	16.366	8	2.046	31.845	.000[a]
	Residual	13.041	203	.064		
	Total	29.408	211			

a. Predictors: (Constant), Income, Age, Literacy, Primary Occupation, Citizen empowerment, Gender, Level of Education, PME

b. Dependent Variable: Social Sustainability

Table A8.3: Correlation Coefficients in the model with all variables

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	*t*	Sig.	Tolerance	VIF
1	(Constant)	.981	.311		3.149	.002		
	PME	.064	.033	.134	1.973	.050	.473	2.114
	Citizen empowerment	.559	.058	.645	9.678	.000	.491	2.035
	Gender	.041	.039	.055	1.059	.291	.815	1.227
	Age	.065	.027	.122	2.447	.015	.881	1.135
	Level of Education	.024	.026	.048	.923	.357	.795	1.258
	Literacy	.041	.067	.030	.605	.546	.891	1.123
	Primary Occupation	.000	.013	-.002	-.042	.967	.940	1.064
	Income	3.674E-6	.000	.057	1.153	.250	.882	1.134
a. Dependent Variable: Social Sustainability								

Table A8.4: Collinearity Tests Statistics

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions								
				(Constant)	PME	Citizen empowerment	Gender	Age	Level of Education	Literacy	Primary Occupation	Income
1	1	7.729	1.000	.00	.00	.00	.00	.00	.00	.00	.00	.00
	2	.547	3.760	.00	.00	.00	.34	.00	.00	.00	.00	.33
	3	.298	5.090	.00	.00	.00	.26	.01	.01	.00	.24	.40
	4	.293	5.133	.00	.00	.00	.19	.00	.00	.00	.71	.23
	5	.060	11.322	.00	.02	.00	.07	.10	.61	.01	.02	.02
	6	.049	12.566	.00	.29	.01	.04	.06	.25	.00	.01	.00
	7	.015	22.466	.02	.13	.01	.10	.72	.01	.17	.01	.01
	8	.006	35.453	.00	.53	.69	.00	.00	.04	.24	.00	.01
	9	.002	58.452	.98	.03	.29	.00	.11	.07	.57	.00	.00
a. Dependent Variable: Social Sustainability												

Appendix IX: Homoscedasticity and Heteroscedasticity

The scatter plot shows the relationship between the residual (error variance) and the predicted value (social sustainability). You have homoscedasticity if there is a consistent relationship; and heteroscedasticity if the relationship is non-consistent. When a fit line is fitted, it looks like the fit line is pretty flat, indicating that we have homoscedasticity not heteroscedasticity. The error variance is constant with varying values in the predicted value (social sustainability).

Table A9.1: Summary of the model with the independent, moderating and outcome variables

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	15.800	2	7.900	121.344	.000[a]
	Residual	13.607	209	.065		
	Total	29.408	211			

a. Predictors: (Constant), Citizen empowerment, PME

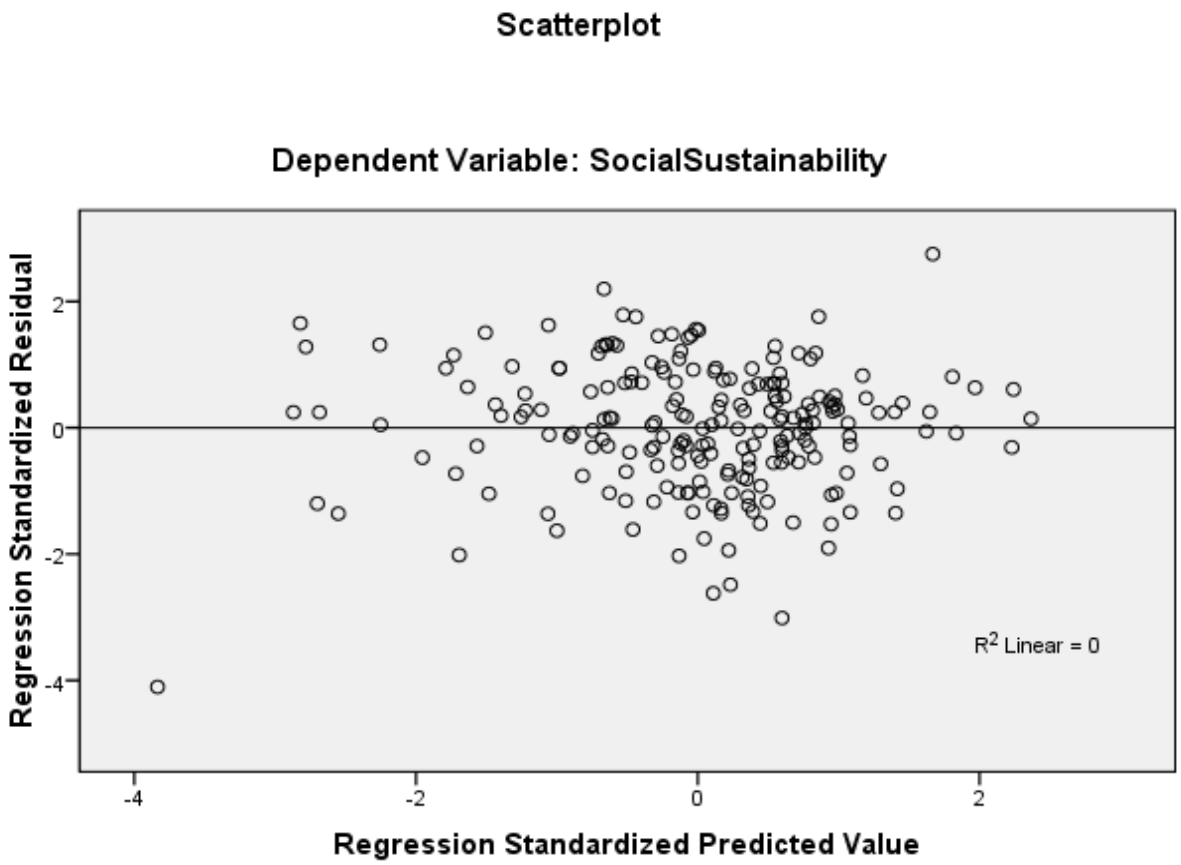
b. Dependent Variable: Social Sustainability

Table A9.2: Correlation Coefficients in the model with the independent, mediating and outcome variables

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	*t*	Sig.
1	(Constant)	1.515	.158		9.599	.000
	PME	.062	.032	.129	1.947	.053
	Citizen empowerment	.550	.058	.636	9.560	.000

a. Dependent Variable: Social Sustainability

Figure A1.6: Scatterplot for Homoscedasticity and Heteroscedasticity Tests



Appendix X: Reliability Tests

Table A10.1: Overall Reliability based on the independent, mediating and outcome variables

Cronbach's Alpha	N of Items
.894	110

Table A10.2: Reliability Test Statistics for PM&E

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.929	.932	15

Table A10.3: Item – Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
I participated in the Karemo ADP's design process.	28.53	47.596	.807	.917
I was involved in the formulation of the projects in Karemo ADP	28.58	46.480	.758	.920
There has been improvement in my household as a result of my participation in the design process.	28.95	46.830	.730	.922
I have participated in meetings with project staff in order to receive feedback on how the project is progressing.	28.42	50.813	.463	.936
There are decisions that have been made at the ADP level as a result of holding reflection meetings.	28.63	47.579	.838	.916
I often participate in reflection meetings organized by Karemo ADP.	28.79	46.731	.755	.920
I have participated in the implementation of Karemo ADP's activities.	28.32	50.339	.739	.922
I often participate in the implementation of activities of Karemo ADP.	28.58	48.035	.847	.916
I have participated in the monitoring of Karemo ADP's activities.	28.79	49.620	.619	.927
I often participate in the day to day monitoring of activities of Karemo ADP.	29.00	47.889	.771	.919

Table A10.4: Reliability Test Statistics for Citizen Empowerment

Cronbach's Alpha	N of Items
.911	36

Table A10.5: Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Overall, I have some influence in making my community a better place to live.	114.87	174.838	.527	.908
Since I am participating I have participated/I am participating in this Programme/project, other people look up to me.	114.73	176.210	.615	.907
Through this project I now help other people.	115.13	168.410	.830	.903
Through my involvement with this Programme/project I am now more productive.	115.20	170.171	.893	.903
I am satisfied with my life.	116.40	167.543	.557	.908
The things I do in my life are worthwhile	114.53	186.552	.001	.914
Overall, how satisfied with your life were you 5 years ago?	116.13	177.695	.390	.910
Overall, how satisfied are you with life as a whole these days?	115.87	164.124	.755	.903
As your best guess, overall how satisfied with your life do you expect to feel in 5 years' time?	114.40	178.114	.332	.911
I feel have much more control in making personal decisions that affect my everyday activities than before as a result of my participation in Karemo Design process	114.93	171.638	.690	.905

I feel have much more control in making personal decisions that affect my everyday activities than before as a result of my continuous participation in Karemo ADP's reflection sessions.	115.00	179.000	.308	.911
I feel have much more control in making personal decisions that affect my everyday activities than before as a result of my participation in the implementation of Karemo ADP's activities.	114.67	172.952	.700	.905
I feel have much more control in making personal decisions that affect my everyday activities than before as a result of my participation in Karemo ADP's M&E activities.	115.00	173.714	.540	.907
People like me can generally change things in my community if they want to.	114.80	174.171	.629	.906
I believe that I personally have control over the kind of development interventions that are done in my community.	115.13	175.552	.557	.907
Through my involvement with this programme/project I have gained more self-confidence	114.67	168.667	.824	.903
Decision making at household level	114.27	188.495	-.151	.914
Family relationships	114.27	185.067	.118	.912
Income	116.53	171.981	.690	.905
Minor Household Expenditures	114.33	187.810	-.067	.914

What to do if you have a serious health problem	114.20	186.457	.006	.914
How to protect yourself from violence	115.07	174.781	.458	.909
Whether and how to express religious faith	114.07	188.067	-.103	.913
What kind of tasks you will do	114.47	179.838	.373	.910
Through my participation in Karemo ADP's development processes, I am more involved in decision making in my community	115.27	176.067	.608	.907
My skills in evaluation have increased since my participation in Karemo ADP's development processes.	115.20	175.029	.539	.908
I have developed skills in planning as a result of my participation in Karemo ADP development processes.	115.20	172.457	.596	.907
It is important to monitor and evaluate development programmes.	114.27	190.210	-.198	.916
Through my involvement with this Programme/project, I see opportunities for livelihoods that I had not seen before.	114.80	172.171	.585	.907
My involvement with the Programme/project has broadened my horizon.	114.80	176.600	.441	.909
Through this programme, I have gained more and better knowledge than I would have without this programme	114.53	178.410	.301	.911

I clearly know and understand Karemo ADP's development priorities.	115.33	178.810	.412	.909
My level of information about what Karemo ADP is doing has increased after participating in its development processes.	115.47	175.981	.724	.906
The Programme/project has offered me an insight on how to improve on my standard of living.	115.27	179.781	.705	.908
Through my involvement with this Programme/project I have gained useful life skills.	115.20	180.743	.374	.910
Through my involvement with this project I have gained other skills'	115.33	183.524	.269	.911

Table A10.6: Reliability Test Statistics for Social Sustainability

Cronbach's Alpha	N of Items
.735	59

Table A10.7: Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
I am a member of a community based organisation (CBO)/group	196.62	260.256	-.172	.739
There has been an improvement in my group processes out of my/or group's participation in the ADP processes.	197.08	261.910	-.282	.741
My level of attendance to group meetings has improved from my participation in the ADP's processes.	197.54	254.269	.193	.732
The level at which my group is able to enforce our constitution has improved over the last 2 years.	197.08	253.910	.222	.732
The membership in our group has increased in the last 2 years.	197.15	254.641	.145	.733
Decision making	197.31	249.731	.342	.728
Meetings	197.15	246.808	.579	.724
Membership interaction	197.23	254.192	.204	.732
Leadership and management	197.77	261.526	-.165	.742
Group identity	198.31	236.731	.557	.716
Clarity of mission and vision	199.00	232.333	.742	.709
Communication	197.46	245.936	.473	.724
Collaboration and networking	198.92	244.744	.275	.727
Group resources	199.31	240.564	.445	.721
Improve physical conditions in the community like cleanliness,	198.15	259.974	-.190	.738
Persuade the government or political leaders to provide better services to people in the community.	198.08	254.744	.168	.733
Get people in the community to help each other more.	197.92	254.744	.133	.733
Reduce crime in the community.	198.08	259.244	-.188	.737

Get people who live in the community to know each other better.	198.15	263.808	-.221	.746
Get information to residents about where to go for services they need.	198.00	265.167	-.285	.746
I can recognize most of the people who live in my community	196.62	257.923	-.033	.736
My neighbors and I want the same things from the community	199.23	232.859	.692	.710
If there is a problem in this community, people who live here can get it solved.	197.85	246.474	.725	.723
People in this community watch after each other and help out when they can.	198.46	250.603	.272	.729
I feel a strong sense of community with others in my community.	197.77	245.692	.737	.722
I often talk with friends and/or family about problems in my community.	197.62	242.256	.612	.720
If I wanted to start a small business and need to borrow money, I know that there are funding opportunities available in this community.	196.85	260.974	-.183	.740
It is easy for people in this community to have different groups of friends.	196.77	255.859	.049	.735
The concerns of certain groups of people in this community are heard more than those of other groups.	198.77	251.859	.105	.735
Outside of my family, I visit mostly with people of my age.	197.85	259.808	-.105	.740
I find that different groups in this community don't mingle much with each other.	197.85	258.141	-.047	.740
There are people in this community who I won't talk with, even if I need information or help.	198.23	266.859	-.395	.747
Once people are part of a group in this community, they don't associate much with others outside of the group.	197.77	264.026	-.189	.749

I only visit with people in this community that I have known for a long time.	197.62	261.256	-.134	.744
Outside of my family, I don't feel comfortable dealing with people from this community who have more or much less money than me.	196.46	149.769	.505	.769
I am a member of a CBO/community group.	196.85	260.308	-.187	.739
I take part in activities sponsored by Karemo ADP or any other organisations.	197.08	252.410	.318	.730
I have been asked about my opinion on Karemo ADP's development interventions.	197.54	243.103	.454	.722
We are informed when major decisions concerning development activities in the community are being made.	197.77	238.026	.703	.715
Major decisions concerning development in my community are made primarily by the whole community.	198.31	238.064	.559	.717
I believe my community has control over development interventions in my community	198.15	237.308	.534	.717
I often attend our group meetings	196.69	249.731	.466	.727
I have spoken during a group meeting in the past year.	196.85	259.808	-.155	.738
I have done work for my organisation outside of meetings in the past year.	197.15	267.974	-.411	.749
I have served as a member of a committee in the past year.	197.23	247.859	.208	.730
I have served as an officer or as a committee chair in the past year.	197.46	256.603	-.019	.741
On average, how often do you participate in the activities of the groups to which you belong in a month?	197.15	254.474	.230	.732
To what extent do you participate in the group(s)' decision making?	197.15	254.474	.230	.732
Generally speaking, most people here try to be helpful to each other.	198.69	250.897	.394	.729

Generally speaking, most people in this community can be trusted.	199.08	254.577	.179	.733
People in this community are friendly to each other.	198.23	252.526	.231	.731
I am proud of the community I live in.	197.69	242.397	.720	.719
People in this community respect elders.	197.85	255.308	.137	.733
There are no crime problems in our community.	199.85	246.474	.725	.723
I am willing to help make my community better.	197.54	251.269	.288	.730
How likely is it that you would ask your neighbors to take care of your children for a few hours if you were sick?	197.38	247.590	.514	.725
How likely is it that you would ask your neighbors for help if you were sick?	197.69	243.731	.480	.722
How well are people in your community/village/neighborhood getting along?	197.77	249.859	.470	.727
How would you rate the togetherness or feeling of belonging in your village/community?	197.77	242.692	.717	.719

Appendix XI: Hypotheses Tests Statistics

a) Relationship between PM&E and social sustainability

Table A11.1: Summary of the Model (PM&E and Social Sustainability)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.579[a]	.335	.332	.30517

a. Predictors: (Constant), PME

Table A11.2: Analysis of Variance (PM&E and Social Sustainability)

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	9.851	1	9.851	105.774	.000[a]
	Residual	19.557	210	.093		
	Total	29.408	211			

a. Predictors: (Constant), PME

b. Dependent Variable: Social Sustainability

Table A11.3: Correlation Coefficients (PM&E and Social Sustainability)

		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	2.828	.093		30.510	.000
	PME	.277	.027	.579	10.285	.000

a. Dependent Variable: Social Sustainability

b) Relationship between PM&E and citizen empowerment

Table A11.4: Summary of the model (PM&E and Citizen Empowerment)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.707[a]	.499	.497	.30589

a. Predictors: (Constant), PME

Table A11.5: Correlation Coefficients (PM&E and Citizen Empowerment)

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	2.388	.093		25.694	.000
	PME	.0391	.027	.707	14.474	.000

a. Dependent Variable: Log transformed Citizen empowerment

Table A11.6: Analysis of Variance (PM&E and Citizen Empowerment)

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	19.603	1	19.603	209.507	.000[a]
	Residual	19.649	210	.094		
	Total	39.252	211			

a. Predictors: (Constant), PME

b. Dependent Variable: Citizen empowerment

c) Relationship between citizen empowerment and social sustainability

Table A11.7: Summary of the model (Citizen Empowerment and Social Sustainability)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.727[a]	.529	.527	.25685

a. Predictors: (Constant), Citizen empowerment

Table A11.8: Analysis of Variance (Citizen Empowerment and Social Sustainability)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	15.554	1	15.554	235.762	.000[a]
	Residual	13.854	210	.066		
	Total	29.408	211			

a. Predictors: (Constant), Citizen empowerment

b. Dependent Variable: Social Sustainability

Table A11.9: Correlation Coefficients (Citizen Empowerment and Social Sustainability)

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.429	.153		9.366	.000
	Citizen empowerment	.629	.041	.727	15.355	.000

a. Dependent Variable: Social Sustainability

d) Moderating Influence of Gender on the relationship between PM&E and social sustainability

Table A11.10: Summary of the model (Gender, PM&E and Social Sustainability)

Model	R	R^2	Adjusted R^2	Std. Error of the Estimate	Change Statistics				
					R^2 Change	F Change	df1	df2	Sig. F Change
1	.579[a]	.335	.329	.30585	.335	52.689	2	209	.000
2	.586[b]	.344	.334	.30465	.008	2.642	1	208	.106

a. Predictors: (Constant), Gender, PME

b. Predictors: (Constant), Gender, PME, PME*gender

Table A11.11: Analysis of Variance (Gender, PM&E and Social Sustainability)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9.857	2	4.929	52.689	.000[a]
	Residual	19.550	209	.094		
	Total	29.408	211			
2	Regression	10.102	3	3.367	36.282	.000[b]
	Residual	19.305	208	.093		
	Total	29.408	211			

a. Predictors: (Constant), Gender, PME

b. Predictors: (Constant), Gender, PME, PME*gender

c. Dependent Variable: Social Sustainability

Table A11.12: Correlation Coefficients (Gender, PM&E and Social Sustainability)

	Unstandardized Coefficients		Standardized Coefficients		
Model	B	Std. Error	Beta	t	Sig.
1 (Constant)	2.821	.097		29.214	.000
PME	.277	.027	.579	10.265	.000
Gender	.011	.042	.015	.266	.790
2 (Constant)	2.692	.125		21.538	.000
PME	.317	.036	.661	8.758	.000
Gender	.105	.071	.140	1.469	.143
PME*gender	-.003	.002	-.173	-1.625	.106

a. Dependent Variable: Social Sustainability

e) Moderating Influence of age on the relationship between PM&E and Social Sustainability

Table A11.13: Summary of the model (Age, PM&E and Social Sustainability)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.585[a]	.342	.336	.30420	.342	54.398	2	209	.000
2	.588[b]	.345	.336	.30426	.003	.911	1	208	.341

a. Predictors: (Constant), Age, PME

b. Predictors: (Constant), Age, PME, PME*age

Table A11.14: Analysis of Variance (Age, PM&E and Social Sustainability)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	10.068	2	5.034	54.398	.000[a]
	Residual	19.340	209	.093		
	Total	29.408	211			
2	Regression	10.152	3	3.384	36.554	.000[b]
	Residual	19.256	208	.093		
	Total	29.408	211			

a. Predictors: (Constant), Age, PME

b. Predictors: (Constant), Age, PME, PME*age

c. Dependent Variable: Social Sustainability

Table A11.15: Correlation Coefficients (Age, PM&E and Social Sustainability)

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	2.607	.172		15.172	.000
	PME	.286	.028	.598	10.404	.000
	Age	.047	.031	.088	1.531	.127
2	(Constant)	2.666	.183		14.584	.000
	PME	.279	.029	.581	9.688	.000
	Age	.038	.032	.071	1.178	.240
	PME*age	4.554E-11	.000	.058	.954	.341

a. Dependent Variable: Social Sustainability

f) Moderating Influence of Level of Education on the relationship between PM&E and Social Sustainability

Table A11.16: Summary of the model (Level of Education, PM&E and Social Sustainability)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.583[a]	.340	.333	.30485	.340	53.715	2	209	.000
2	.583[b]	.340	.330	.30547	.000	.157	1	208	.693

a. Predictors: (Constant), Level of Education, PME

b. Predictors: (Constant), Level of Education, PME, PME*Level of education

Table A11.17: Analysis of Variance (Level of Education, PM&E and Social Sustainability)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9.984	2	4.992	53.715	.000[a]
	Residual	19.423	209	.093		
	Total	29.408	211			
2	Regression	9.999	3	3.333	35.718	.000[b]
	Residual	19.409	208	.093		
	Total	29.408	211			

a. Predictors: (Constant), Level of Education, PME

b. Predictors: (Constant), Level of Education, PME, PME.*Level of education

c. Dependent Variable: Social Sustainability

Table A11.18: Correlation Coefficients (Level of Education, PM&E and Social Sustainability)

		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	2.763	.108		25.665	.000
	PME	.271	.028	.565	9.829	.000
	Level of Education	.034	.028	.069	1.198	.232
2	(Constant)	2.777	.113		24.480	.000
	PME	.269	.028	.562	9.683	.000
	Level of Education	.030	.030	.060	.984	.326
	PME*Level of education	7.517E-10	.000	.024	.396	.693

a. Dependent Variable: Social Sustainability

g) Moderating Influence of Literacy on the relationship between PM&E and Social Sustainability

Table A11.19: Summary of the model (Literacy, PM&E and Social Sustainability)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.579[a]	.335	.329	.30590	.335	52.636	2	209	.000
2	.582[b]	.339	.329	.30576	.004	1.189	1	208	.277

a. Predictors: (Constant), Literacy, PME

b. Predictors: (Constant), Literacy, PME, PME*Literacy

Table A11.20: Analysis of Variance (Literacy, PM&E and Social Sustainability)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9.851	2	4.925	52.636	.000[a]
	Residual	19.557	209	.094		
	Total	29.408	211			
2	Regression	9.962	3	3.321	35.519	.000[b]
	Residual	19.446	208	.093		
	Total	29.408	211			

a. Predictors: (Constant), Literacy, PME

b. Predictors: (Constant), Literacy, PME, PME*Literacy

c. Dependent Variable: Social Sustainability

Table A11.21: Correlation Coefficients (Literacy, PM&E and Social Sustainability)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.821	.266		10.597	.000
	PME	.277	.027	.579	10.129	.000
	Literacy	.002	.078	.002	.032	.975
2	(Constant)	2.713	.284		9.560	.000
	PME	.288	.029	.601	9.932	.000
	Literacy	.029	.081	.021	.354	.724
	PME*Literacy	-3.833E-8	.000	-.067	-1.090	.277

a. Dependent Variable: Social Sustainability

h) Moderating Influence of Occupation on the relationship between PM&E and Social Sustainability

Table A11.22: Summary of the model (Occupation, PM&E and Social Sustainability)

Model	R	R Square	Adjusted R^2	Std. Error of the Estimate	Change Statistics				
					R^2 Change	F Change	df1	df2	Sig. F Change
1	.579[a]	.336	.329	.30577	.336	52.763	2	209	.000
2	.579[b]	.336	.326	.30646	.000	.067	1	208	.796

a. Predictors: (Constant), Primary Occupation, PME

b. Predictors: (Constant), Primary Occupation, PME, PME*Occupation

Table A11.23: Analysis of Variance (Occupation, PM&E and Social Sustainability)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9.866	2	4.933	52.763	.000[a]
	Residual	19.541	209	.093		
	Total	29.408	211			
2	Regression	9.873	3	3.291	35.040	.000[b]
	Residual	19.535	208	.094		
	Total	29.408	211			

a. Predictors: (Constant), Primary Occupation, PME

b. Predictors: (Constant), Primary Occupation, PME, PME*Occupation

c. Dependent Variable: Social Sustainability

Table A11.24: Correlation Coefficients (Occupation, PM&E and Social Sustainability)

		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	2.821	.095		29.821	.000
	PME	.276	.027	.576	10.118	.000
	Primary Occupation	.007	.016	.023	.411	.681
2	(Constant)	2.824	.096		29.509	.000
	PME	.275	.027	.574	10.033	.000
	Primary Occupation	.005	.016	.020	.337	.737
	PME*Occupation	3.991E-11	.000	.015	.259	.796

a. Dependent Variable: Social Sustainability

i) The joint influence of PM&E and Citizen on Social Sustainability

Table A11.24: Summary of the model (PM&E, Citizen Empowerment and Social Sustainability)

Model	R	R^2	Adjusted R^2	Std. Error of the Estimate
1	.579[a]	.335	.332	.30517
2	.733[b]	.537	.533	.25516

a. Predictors: (Constant), PME

b. Predictors: (Constant), PME, Citizen Empowerment

Table A11.25: Correlations between Social Sustainability, PM&E and Citizen Empowerment

		Social Sustainability	PME	Citizen empowerment
Pearson Correlation	Social Sustainability	1.000	.579	.727
	PME	.579	1.000	.707
	Citizen empowerment	.727	.707	1.000
Sig. (1-tailed)	Social Sustainability	.	.000	.000
	PME	.000	.	.000
	Citizen empowerment	.000	.000	.

Table A11.26: Correlation Coefficients (PM&E, Citizen Empowerment and Social Sustainability)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.828	.093		30.510	.000
	PME	.277	.027	.579	10.285	.000
2	(Constant)	1.515	.158		9.599	.000
	PME	.062	.032	.129	1.947	.053
	Citizen empowerment	.550	.058	.636	9.560	.000

a. Dependent Variable: Social Sustainability

Table A11.27: Analysis of Variance (PM&E, Citizen Empowerment and Social Sustainability)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9.851	1	9.851	105.774	.000[a]
	Residual	19.557	210	.093		
	Total	29.408	211			
2	Regression	15.800	2	7.900	121.344	.000[b]
	Residual	13.607	209	.065		
	Total	29.408	211			

a. Predictors: (Constant), PME

b. Predictors: (Constant), PME, Citizen empowerment

c. Dependent Variable: Social Sustainability

j) The Joint Influence of all the independent variables on social sustainability

Table A11.28: Summary of the Model

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.579[a]	.335	.332	.30517	.335	105.774	1	210	.000
2	.749[b]	.561	.544	.25208	.226	14.965	7	203	.000

a. Predictors: (Constant), PME

b. Predictors: (Constant), PME, Gender, Primary Occupation, Literacy, Average monthly income, Age, Level of Education, Log-transformed Citizen empowerment

Table A11.29: Analysis of Variance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9.851	1	9.851	105.774	.000[a]
	Residual	19.557	210	.093		
	Total	29.408	211			
2	Regression	16.508	8	2.063	32.471	.000[b]
	Residual	12.900	203	.064		
	Total	29.408	211			

a. Predictors: (Constant), PME

b. Predictors: (Constant), PME, Gender, Primary Occupation, Literacy, Average monthly income, Age, Level of Education, Logtransformed Citizen empowerment

c. Dependent Variable: Social Sustainability

Table A11.30: Correlation Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	2.828	.093		30.510	.000
	PME	.277	.027	.579	10.285	.000
2	(Constant)	.589	.329		1.787	.075
	PME	.066	.032	.137	2.046	.042
	Log-transformed Citizen empowerment	4.384	.445	.643	9.845	.000
	Gender	.037	.039	.049	.947	.345
	Age	.056	.026	.104	2.108	.036
	Level of Education	.029	.026	.059	1.128	.261
	Literacy	.043	.067	.032	.642	.521
	Primary Occupation	-.002	.013	-.006	-.120	.904
	Average monthly income	3.619E-6	.000	.057	1.142	.255

a. Dependent Variable: Social Sustainability

Appendix XII: Research Permit

NACOSTI

NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

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NAIROBI-KENYA

Ref: No.

Date:

29th May, 2014

NACOSTI/P/14/5616/1099

Authorised

COUNTY DIRECTOR OF EDUCATION SIAYA COUNTY 30 JUN 2014 P.O Box 199-40600 SIAYA

3/6/2014

Kennedy Kibukho Odongo
University of Nairobi
P.O.Box 30197-00100
NAIROBI.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on ***"Influence of participatory Monitoring and Evaluation on social sustainability: Case of Siaya County, Kenya,"*** I am pleased to inform you that you have been authorized to undertake research in **Siaya County** for a period ending **31st July, 2014.**

You are advised to report to **the County Commissioner and the County Director of Education, Siaya County** before embarking on the research project.

On completion of the research, you are expected to submit **two hard copies and one soft copy in pdf** of the research report/thesis to our office.

SAID HUSSEIN
FOR: SECRETARY/CEO

COUNTY COMMISSIONER SIAYA COUNTY P. O. Box 83 SIAYA - 40600

REPORTED ON 30/6/2014

Copy to:

The County Commissioner
The County Director of Education
Siaya County.

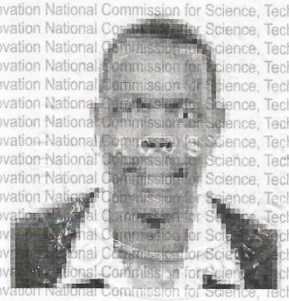
National Commission for Science, Technology and Innovation is ISO 9001:2008 Certified

THIS IS TO CERTIFY THAT:
MR. KENNEDY KIBUKHO ODONGO
of UNIVERSITY OF NAIROBI, 0-242
Nairobi, Kitengela,has been permitted
to conduct research in *Siaya County*

on the topic: *INFLUENCE OF PARTICIPATORY MONITORING AND EVALUATION ON SOCIAL SUSTAINABILITY: CASE OF SIAYA COUNTY KENYA*

for the period ending:
31st July,2014

Permit No : NACOSTI/P/14/5616/1099
Date Of Issue : 29th May,2014
Fee Recieved :Ksh 2,000



.....
Applicant's Signature

.....
Secretary
National Commission for Science, Technology & Innovation

CONDITIONS

1. You must report to the County Commissioner and the County Education Officer of the area before embarking on your research. Failure to do that may lead to the cancellation of your permit
2. Government Officers will not be interviewed without prior appointment.
3. No questionnaire will be used unless it has been approved.
4. Excavation, filming and collection of biological specimens are subject to further permission from the relevant Government Ministries.
5. You are required to submit at least two(2) hard copies and one(1) soft copy of your final report.
6. The Government of Kenya reserves the right to modify the conditions of this permit including its cancellation without notice

REPUBLIC OF KENYA

National Commission for Science, Technology and Innovation

RESEARCH CLEARANCE PERMIT

Serial No. A 1808

CONDITIONS: see back page