



**THE EFFECT NEEDS ASSESSMENT ON SUSTAINABILITY OF FOOD SECURITY PROJECTS IN  
CENTRAL KENYA: THE CASE OF GATANGA SUB-COUNTY**

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## THE EFFECT NEEDS ASSESSMENT ON SUSTAINABILITY OF FOOD SECURITY PROJECTS IN CENTRAL KENYA: THE CASE OF GATANGA SUB-COUNTY

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### ABSTRACT

This paper presents the results of a study which investigated the effect of needs assessment on the sustainability of food security projects. Food security is a condition that exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life. Household food security exists when all members, at all times, have access to enough food for an active, healthy life.

This study used cross section survey. The population includes farmer, producer groups, individual farmers, youth, farmers, agricultural extension officers and stakeholders in Gatanga Sub- County. Data was analyzed using Statistical Package for Social Sciences (SPSS) version 16. The instrument of data collection was structured questionnaires. Data was summarized and presented using descriptive statistics including figures and frequency distribution tables. The study found out that, thoroughness of the needs assessment within communities' was identified as a factor affecting the sustainability of food security projects in the area. It was established that need assessment on food security projects in Gatanga sub - county was not thoroughly done. The study recommends that in needs assessment study, all involved groups, including farmers and interested citizens should be invited and encouraged to participate. The broad representation of all members will enhance the credibility of the process, projects support and the success in the outcomes.

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**Keywords:** Agricultural extension officers, Need assessment, Project and Project sustainability.

## INTRODUCTION

There is broad agreement among agriculture economists that growth in agriculture produces the highest level of improvements for the poorest people, especially in agriculture-based economies. The World Bank notes that “Overall GDP growth originating in agriculture has proven to be, on average, two to four times as effective in raising incomes of the poor as growth generated in non-agricultural sectors” (ILO, 2002). To support broad-based poverty reduction and food security in Africa, smallholder agriculture must be a central investment focus. The majority of the poor and food insecurity in Africa lives in rural areas, and most of them depend on agriculture for their livelihoods. More than 30 percent of the people in Africa are chronically hungry and are small farmers. Experts tell us that the population in Africa is expected to double by 2050, and African nations will have to double their food production just to keep pace with population growth. For the last 20 years, however, food production in Africa has lagged behind population growth, and the source of the problem has been low productivity on Africa’s farms (Republic of Kenya, 2004).

All over the world attainment of food security for all is given a lot of emphasis because lack of sufficient food in quantity and quality leads to poor quality of live which undermines human development. Many food security projects,

projects and activities have been implemented especially in developing countries targeting the poor in an attempt to help them access adequate and high quality food in a sustainable manner (Smith & Karuga, 2004).The agricultural sector is the mainstay of the Kenya’s economy. The sector directly contributes 24% of the Gross Domestic Product (GDP) and 27% of GDP indirectly through linkages with manufacturing, distribution and other service related sectors. Approximately 45% of Government revenue is derived from agriculture and the sector contributes over 75% of industrial raw materials and more than 50% of the export earnings. The sector is the largest employer in the economy, accounting for 60 per cent of the total employment (Republic of Kenya, 2005).

Over 80% of the population, especially living in rural areas derives their livelihoods mainly from agricultural related activities. Due to these reasons the Government of Kenya (GoK) has continued to give agriculture a high priority as an important tool for promoting national development (Republic of Kenya, 2006).

In 2008, the Government of Kenya (GoK) launched Kenya Vision 2030 as the new long-term development blueprint for the country whose focus is to create a “Globally competitive and prosperous country with a high quality of life by 2030”. The Vision also aims at transforming Kenya into “a newly industrializing, middle

income country providing a high quality of life to all its citizens in a clean and secure environment". The Vision is anchored on the economic, social, and political pillars and will be supported on the foundations of macroeconomic stability; continuity in governance reforms; enhanced equity and wealth creation opportunities for the poor; infrastructure; energy; science, technology and innovation; land reform; human resources development; security; and public sector reforms (UNDP, 2010).

Given the central role the agricultural sector plays in the economy, the Government is in the process of finalizing the development of the Agricultural Sector Development Strategy (ASDS). The overall aim of this strategy is to strategically make the agricultural sector a key driver for achieving the 10 per cent annual economic growth rate expected under the economic pillar of the Vision 2030. Through the ASDS, the Government aims at transforming the agricultural sector into a profitable economic activity capable of attracting private investment and providing gainful employment for the people (Ministry of Agriculture, 2010).

The achievement of national food security is to be a key objective of the agricultural sector. Food security in this case is defined as "a situation in which all people, at all times, have physical, social and economic access to sufficient, safe and

nutritious food which meets their dietary needs and food preferences for an active and healthy life" (Ministry of Agriculture, 2010). In the recent years, and especially starting from 2008, the country has been facing severe food insecurity problems. These are depicted by a high proportion of the population having no access to food in the right amounts and quality.

Official estimates indicate over 10 million people are food insecure with majority of them living on food relief. Households are also incurring huge food bills due to the high food prices. Maize being staple food due to the food preferences is in short supply and most households have limited choices of other food stuffs. The current food insecurity problems are attributed to several factors, including the frequent droughts in most parts of the country, high costs of domestic food production due to high costs of inputs especially fertilizer, displacement of a large number of farmers in the high potential agricultural areas following the post-election violence which occurred in early 2008, encroachment of real estate on agricultural land and attendant sub-division of land, high global food prices and low purchasing power for large proportion of the population due to high level of poverty (Ministry of Agriculture, 2010).

Kenya is one of the countries in sub-Saharan Africa that is not able to feed its population sufficiently and it, therefore, relies on outside

assistance. Over the years, the government of Kenya has invested in community food security projects as a way of helping local people improve their own lives and livelihoods. A number of communities in Kenya have been given grants and technical support by both local and international donors, with the intention of helping them combat food insecurity and reduce poverty. Many food security projects have been funded by both the Kenyan government and other development partners in an effort to alleviate against food insecurity. Unfortunately, as revealed by assessment reports, such projects leave little impact after the end of funding (Ministry of State for Special Programs, 2010).

#### **LITERATURE REVIEW: Project**

According to Heerkens (2002), a project may be defined as an activity done to accomplish a certain objective(s) and usually has a beginning and an end. It involves a series of related jobs usually directed towards some output and requiring a significant period of time to perform. A project must have complex human endeavor, create change, make goal(s) and objectives especially of quality cost and time, involve people, is unique and have a life span.

Projects have been there since ancient time, for example, Noah building the Ark, the construction of the pillars in Ancient Egypt and Great Wall of China. Historically projects were viewed as large

complex techniques. The size, length and the scope of project varies according to the nature and purpose of project. All project must go through a life cycle which constitute of five phases which include; Conception, Feasibility Analysis, planning, implementation and Termination, (Armour, 2005).

According to Philips (2006), a project is a complex, no routine, one-time effort limited by time, budget, resources, and performance specifications design to meet customer needs. Project management is a set of tools, techniques, and knowledge that, when applied, helps to achieve the three main constraints of scope, cost and time. Charvat (2003) defines project in the simple economic terms of a positive Return on Investment (ROI), whereby returns from the product exceed the ongoing cost of production. This would tend to emphasize the importance of quality and cost above time and scope, whereby late delivery of fewer functions than were originally proposed is not critical provided the customer accepts this.

#### **Project Cycle Management**

According to Gray and Larson (2008), the size, length and the scope of project varies according to the nature and purpose of project. All projects must go through a life cycle which constitute of 5 phases; Conception phase, Definition/feasibility analysis, Planning,

Implementation/ execution and Project clean up/termination.

Conception Phase: This is the phase during which the project ideas germinate. The idea may first come to the mind when one is seriously trying to overcome certain problems. The problems may be non-utilization of the available funds, plans capacity, expertise or simply unfulfilled tasks. To stimulate the flow of ideas, the following methods/ways are used, SWOT Analysis is done to facilitate the generation of ideas by evaluating the environment. Sources of projects ideas may include, Media that is Electronic/print including newspapers, magazines, journals; Failed project; Current policies; Government policies; Competitors; Social conditions; Experience and Brain storming. Once ideas have been generated, they must be screened to eliminate ideas which are not viable. In screening the ideas, one considers the following: Cost effective, Market, availability of input and legal – acceptance.

Feasibility/Definition Analysis: It examines the expected cost, benefits and risk of undertaking the project. The idea generated during the conception phase is developed. This is where a document describing the project aspects necessary for the beneficiaries and sponsors to make up their minds on project idea e.g. Raw materials , Plans size /capacity, Location and site, Technology or a process selection, Plant and

machinery, Financial analysis and Implementation schedule etc is prepared.

Planning and organizing phase: It describes the work to be done and provides estimate of the necessary human resources, time and cost. This phase overlaps so much with the definition phase and also with implementation phases. Therefore, no formal recognition is given to this by most organization. Some-organization prepares project execution plan to make this phase.

Planning is making a decision in advance and if this is not done, there would be many crisis after crisis. Planning includes; Project infrastructure and enabling services, System design, Organization and manpower, Schedules and budget, Licensing, Finance and Identification of project manager.

Implementation/execution: It is during this period that something starts growing in the field and people from the first time can see the project. As far as the volume of work is concerned 80-85% of the project work is done in this phase only. People will always want this phase to be completed in as short a time as possible. All techniques of project management are applied in this phase. This phase itself being more or less the whole project, every attempt is made to fast track i.e. overlaps the various sub-phase such as engineering, procurement,

construction and commissioning to maximum excess.

Project clean up/termination: Termination involves reassigning personnel and dealing with any leftover materials, equipment and any other resources associated with a project. This is a transition phase in which hardware built with active involvement of various agencies, is physically handed over for production to different agency who was not so involved earlier.

### **Sustainability**

According to Wasileski (2005), sustainability can be defined as the ability of a project to maintain its operations, services and benefits during its projected life time. However, the issue of sustainability is seen within time and changing social, economic and political contexts. A project that is seen as worth sustaining today may not be so in future. For example, in case of Sri Lanka paddy production which formed the mainstay of the agricultural economy only a few years ago, it does not appear to be all that profitable nor is it sustainable, under the current market economic conditions. In general project sustainability is defined as the percentage of project initiated goods and services that are still being delivered and maintained after five years of termination of implementation of the project; the continuation of local action stimulated by the project and generation of successor services and initiatives as a result of project built initiatives (Charvat,

2003). This definition implies that sustainability concerns itself with: Level of continuation of delivery of project goods and services; Changes stimulated / caused by the project and new initiatives caused by the project.

According to Pinto and Kharbanda (1996), the multi-dimensional attributes of sustainability imply that to enhance project sustainability, a rigorous sustainability analysis is needed at the time of formulation of a project. It is expected that such an analysis which is to be followed up by development of a sustainability strategy assist in incorporating the elements of sustainability, right at the design stage of a project.

According to Elenbass (2000), Sustainability Analysis is the identification and analysis of degree of presence or absence of the factors that are likely to impact, either positively or negatively on the prospects of sustained delivery of project benefits. These analyses include the following: Relevancy, Acceptability, Economic and Financial Viability, Environmental Sustainability, Implementation and Monitoring Strategy, Post-implementation operation and maintenance.

Environmental Sustainability relates to project induced environmental impacts - both positive and negative. If negative impacts are foreseen and no mitigational measures are planned, then ultimately the project may yield benefits at a

reduced rate or worse still and depending on the extent of environmental costs, such negative impacts may in fact contribute to the net losses to the economy (Pinto & Mantel, 1990).

Implementation and Monitoring strategy refers to consideration of project management arrangements - e.g. is the implementation period realistic? Is there a well defined implementation plan with clearly defined functions and responsibilities and have necessary provisions been made thereof. Weak management and inadequate monitoring provisions contribute to implementation problems which then weakens the project sustainability, eventually (Khan *et al*, 1992).

Post implementation operation and maintenance (O&M) refers to management support (either by the executing agency or the community or both) required after implementation of a project. Projects tend to encounter sustainability problems due to weak or inadequate O&M support.

According to Bamberger & Cheema (1990), the sustainability analysis is to be followed by development of a sustainability strategy, so as to ensure that all sustainability enhancing elements are incorporated right at the design stage of a project. The sustainability strategy is a follow up activity of sustainability analysis and is expected to indicate the way various elements of

sustainability are to be identified, assessed and incorporated into a project or a programme, right at the design stage. The strategy is expected to specify various complements / constraints to sustainability and make provisions for their incorporation /tackling during: (i) formulation/design; (ii) implementation, and (iii) operation and maintenance stages of a project.

One needs to undertake necessary analytical research to define these variables and incorporate mitigating factors accordingly. Sometime it is also helpful to specify factors that constrain sustainability. Definition of constraining factors is also a useful way to determine a sustainability strategy. It is, therefore, important that the project planner becomes aware of these elements and develops a strategy for enhancing sustainability. For example, if a certain project envisages joint responsibility between the executing agency and the community to undertake post-implementation operation and maintenance, design stage to achieve this (Khan, 1993).

The Sustainability Monitoring indicators are signposts which reveal status of sustainability at a certain stage or point of time of a project. Since the issue of sustainability concerns a variety of factors and since these are multi-dimensional (e.g. 'economic', 'community', 'equity', 'institutional', 'logistics' and 'environment'), the monitoring indicators representing each of these



dimensions needs to be identified separating and measured; community (Frese, 2003).

### Theories of Project Management

A theory consists primarily from concepts and causal relationships that relate to these concepts (Koskela & Howell, 2002). It is possible to broadly characterize a target theory of production/operations management. This characterization applies also for project management, being a special type of production/operations management. A theory of project management is prescriptive: it reveals how action contributes to the goals set to it. On the most general level, there are three possible actions: design of the systems employed in designing and making; control of those systems in order to realize the production intended; improvement of those systems (Fondaul, 2000).

Project management, and indeed all production, has three kinds of goal. Firstly, the goal of getting intended products produced in general. Secondly, there are internal goals, such as cost minimization and level of utilization. Thirdly, there are external goals related to the needs of the customer, like quality, dependability and flexibility. Duncan (1996), divides project management processes into initiating, planning, execution, controlling and closing processes.

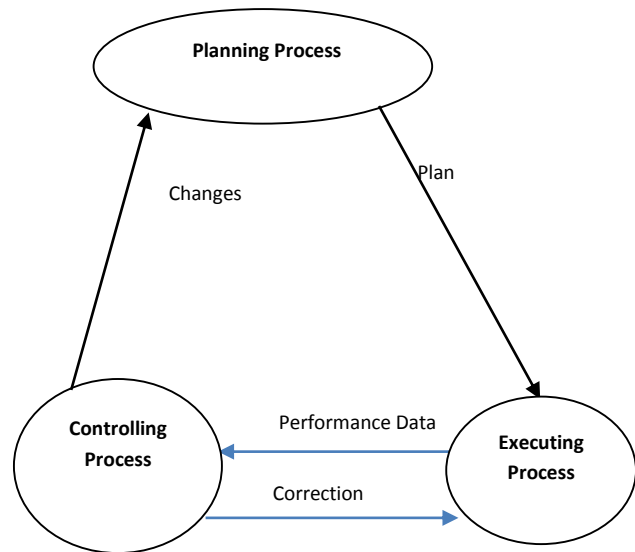


Figure 1 Managerial processes in project management

### Theory of planning

According to Giglioni & Bedeian (2004), the planning processes provide a plan, which is realized by the executing processes, and variances from the baseline or requests for change lead to corrections in execution or changes in further plans. The planning of projects is thoroughly described from the point of view of different knowledge areas. The planning processes are structured into core processes and facilitating processes. There are ten core processes: scope planning, scope definition, activity definition, resource planning, activity sequencing, activity duration estimating, cost estimating, and schedule development, cost budgeting and project plan development. The

output from these processes of the project plans, make up an input to the executing processes.

### **Theory of execution**

The underlying theory of execution turns out to be similar to the concept of job dispatching in manufacturing where it provides the interface between plan and work. The basic issue in dispatching is allocating or assignment of tasks or jobs to machines or work crews, usually by a central authority. According to a modern definition, job dispatching is a procedure that uses logical decision rules to select a job for processing on a machine that come available (Forsberg et al, 1996). Obviously, dispatching consists of two elements: decision (for selecting task for a workstation from those predefined tasks that are ready for execution), and communicating the assignment (or authorization) to the workstation. However, in the case of project management, that decision is largely taken care in planning, and thus dispatching is reduced to mere communication: written or oral authorization or notification to start work.

### **Theory of controlling**

The core process of controlling is divided into two sub-processes: performance reporting and overall change control. Based on the former,

corrections are prescribed for the executing processes, and based on the latter; changes are prescribed for the planning processes. Here what is considered is only performance reporting, based on performance baseline, and associated corrections to execution. These clearly correspond to the cybernetic model of management control (thermostat model) that consists of the following elements (Shrivastava, 1994): There is a standard of performance, performance is measured at the output (or input) and the possible variance between the standard and the measured value is used for correcting the process so that the standard can be reached. This thermostat model is identical to the feedback control model as defined in modern control theory (Koskela & Howell, 2002).

### **Need Assessment**

When governments want to take action, influence policy, change things around or shake things up, community needs assessment studies are an effective way to find out what people are thinking and how they feel. While information from a needs assessment study is valuable and useful, the process of gathering the information is valuable too. Community groups and interested citizens should be invited and encouraged to participate (Njuguna *et al*, 2004).

In the planning phase of the needs assessment study, broad representation of the community

will enhance the credibility of the process, and will contribute to a comprehensive survey questionnaire. In the planning phase, the cardinal rule is, "don't leave anyone out!" If you do, you may hear from them later when they criticize the process or the outcomes.

Some communities plan a public meeting to describe the process and solicit input -- some use other methods such as newspaper articles, speaking engagements or fliers. Citizens interested in conducting a need assessment survey need to identify a sponsoring group to manage the project and lend credibility. The sponsoring group may be organized for the needs assessment project only, or it may be an existing group or groups which assume responsibility for the needs assessment. Either way, the sponsoring group must contribute time, leadership, management and its good name and reputation to the project (O'Brochta, 2002).

Needs assessment studies allow government or a sponsoring agency to: Gather information about citizen attitudes and opinions regarding precisely defined issues, problems or opportunities; determine how citizens rank issues, problems and opportunities in order of importance and urgency; Give citizens a voice in determining policy, goals and priorities; Determine citizen support for initiatives; Evaluate current projects and policies and to end

speculation about "what people is thinking" or "what people really want."

### **Empirical Review on Projects Sustainability**

Ballard & Howell (1998), found that improvements in food production project occur through one or more of five mechanisms: intensification of a single component of farm system (with little change to the rest of the farm); addition of a new productive element to a farm system; better use of natural capital to increase total farm production, especially water (by water harvesting and irrigation scheduling), and land (by reclamation of degraded land); improvements in per hectare yields of staples through introduction of new regenerative elements into farm systems (eg legumes, integrated pest management); and improvements in per hectare yields through introduction of new and locally-appropriate crop varieties and animal breeds. Most sustainable agriculture projects and initiatives report significant increases in household food production, some as yield improvements, and some as increases in cropping intensity or diversity of produce.

Friedrich et al (2007), stated that sustainable agriculture projects successes have been founded mainly upon: appropriate technology adapted by farmers' experimentation; a social

learning and participatory approach between projects and farmers; good linkages between projects/initiatives and external agencies, together with the existence of working partnerships between agencies; and presence of social capital at local level.

The empirical evidence by Khan (1993) suggests that sustainable agriculture projects improvements have a variety of positive effects on people's livelihoods. A selection of the impacts reported in the SAFE-World projects and initiatives include: improvements to natural capital, including increased water retention in soils; improvements in water table (with more drinking water in the dry season); reduced soil erosion combined with improved organic matter in soils, leading to better carbon sequestration; and increased agro-biodiversity; improvements to social capital, including more and stronger social organizations at local level; new rules and norms for managing collective natural resources; and better connectedness to external policy institutions; improvements to human capital, including more local capacity to experiment and solve own problems; reduced incidence of malaria in rice-fish zones; increased self-esteem in formerly marginalized groups; increased status of women; better child health and nutrition, especially from more food in dry seasons; and reversed migration and more local employment.

According to Bamberger & Cheema (1990), sustainable agriculture Projects has had a significant impact on labour markets. Some practices result in increased on-farm demand for labour (eg water harvesting in Niger), whilst others actually reduce labour demand (eg zero-tillage in Brazil). Some result in the opening up of whole new seasons for agricultural production, particularly in dry land contexts, through improved harvesting of rainfall, leading to much greater demand for labour. Migration reversals can occur when wage labour opportunities increase as part of the project (eg watershed improvements), when more productive agriculture leads to higher wages and employment, when there are higher returns to agriculture, and when there are overall improvements in village conditions, such as infrastructure and services.

Sustainable agriculture projects has the potential directly and indirectly to influence the health of rural people. In the first instance, improved food supply throughout the year has a fundamental impact on health, which in turn allows adults to be more productive, and children to attend school and still be able to concentrate on learning. In many projects, for example, raised beds in kitchen gardens have improved domestic food supply by producing a

year-round supply of vegetables – and children are often the main beneficiaries. In some cases, a more sustainable agriculture project can also help to remove threats to health in the environment - such as consumption of mosquito larva by fish in rice fields in China (UNDP, 2010).

Sustainable agriculture project can also have an indirect effect on reproductive health. Where women are organized into groups, such as for microfinance delivery (credit and savings), livestock raising or watershed development, such social capital creation offers opportunities or 'entry points' for other sectors to interact closely with women. In certain circumstances, sustainable agriculture practices appear to be currently more accessible to larger farmers - particularly the zero-tillage systems in southern Latin America. However, evidence from Paraguay and Brazil also suggests that many small farmers adopt and adapt elements of these practices if the process of interaction is participatory. In Bangladesh, the rice-fish and rice-IPM technologies were adopted by very small farmers first, with larger farmers attracted only when success had been proven (UNDP, 2010).

### **Critique of the existing Literature relevant to the Study**

From the literature reviewed it's clear that trying to achieve project success while simultaneously avoiding failure is a task that constantly challenges many project managers and force them to draw on knowledge, skills and instinct in a diverse range of methodological and interpersonal areas. Most governments and organizations nowadays have also realized that sustainable project is one of the best future investments to undertake but there seems to be constraints that need to be addressed in order to minimize failure and capture maximum impact of project development for effective national/ organization performance.

Much wisdom has been contributed to the field of projects development over the last ten years, but from the study the researcher has noted that little has been done on assessing the factor that affect sustainability of food security projects. The researcher therefore carried out the research and recommended on better ways of designing and managing the food security projects. The researcher carried out the study with the hope that it would assist the food security project stakeholders in knowing which parameters to employ when deciding on the project development.

## **METHODOLOGY**

### **Research Design**

This study used cross section survey study to obtain numeric (quantitative) as well as non-numeric (qualitative) data. The design was considered appropriate due to its description of the state of affairs on the factors that affect sustainability of food security projects in Gatanga Sub- County at the time of the study. The researcher only reported what had happened and what was happening.

### **Area and Population of the Study**

Gatanga Sub County is an electoral constituency in Kenya. The constituency has seven wards and it is one of eight constituencies in Murang'a County. Gatanga Sub County border Kandara, Gatundu and Thika Sub Counties. The population of interest that was studied includes farmer producer groups, individual farmers, individual youth in agriculture, agricultural extension officers and stakeholders in Gatanga Sub-County. The members of a population from which samples was drawn from are farmers, agricultural extension officers and stakeholders (NGOs) involved in the implementation of the three projects namely National Accelerated Agriculture Input Access Project (NAAIAP), National Agriculture and Livestock Extension Project (NALEP) and Seed Multiplication Project (SMP) in Gatanga sub-county. The population

fairly represented other farming sub counties in Kenya.

### **Sample Size**

The sample was calculated using the Fischer's formula and sample size was 87 respondents. Simple random sampling technique was then used to sample farmers, agricultural extension officers and stakeholders involved in the implementation of the three projects.

### **Data Collection Instrument**

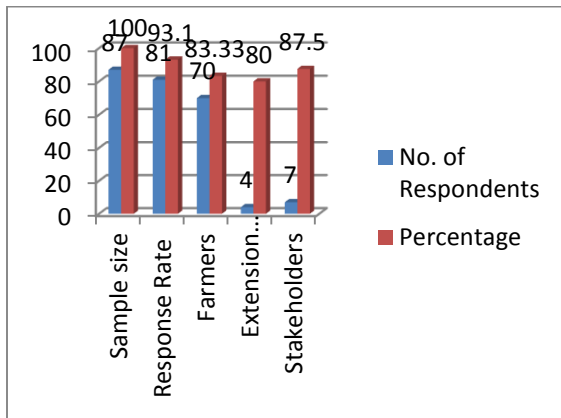
Primary data was collected by use of structured questionnaires that captures the various variables of the study. Secondary data was collected through review of published literature such as journals articles, published theses and textbooks. Under this method the researcher used already recorded data in order to come up with necessary information of the study.

### **Data Analysis**

The data was analyzed using the Statistical Package for the Social Sciences (SPSS) version 16. Data was presented using descriptive statistics including figures and frequency distribution tables. These tools helped to reduce information into understandable form. The qualitative data was presented through description that is, by explaining the findings in a narrative way as it was stated or explained by the respondents.

## RESULTS AND DISCUSSIONS

### 4.1 Response rate

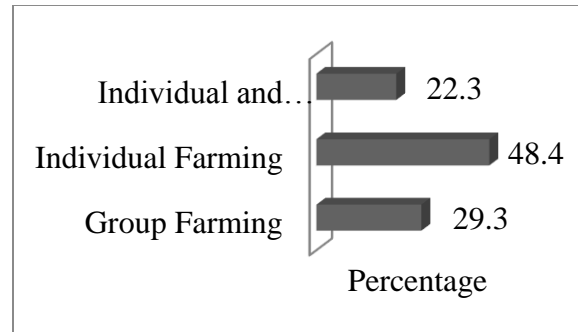


**Figure 2 Response Rate**

The study was conducted with a sample of 87 respondents who included; 74 farmers, 5 agricultural extension officers and 8 stakeholders. The response rate of all questionnaires returned was 97.7%. The total number of questionnaires returned fully filled by the respondents was 85 (74 for the farmers, 4 for the AES and 7 for the stakeholders). The results are shown in the figure 4.1.

### Kind of Farming Practiced in Gatanga

The study revealed that most farmers (48.4%) practiced individual farming, 29.3% practiced group farming while the rest 22.3% combined both group and individual farming. The results are represented in the figure 4.2.

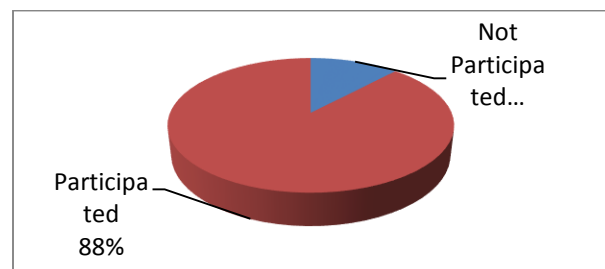


**Figure 3 Farming Practiced**

This is a clear indication that both group and individual farming was been practiced in the area where crop farming and livestock keeping were more important for the livelihood in the area. Major crops grown in the area were maize, cassava, beans, potatoes and fruits. Livestock kept are mainly cattle, goats and sheep.

### Those who participated in Food Security Project Farming

Eighty eight percent of all the respondents indicated that they had participated in food security projects in the area; while only (12%) said that they had not participated in food security projects in the area. This is illustrated by the figure 4.3.



**Figure 4.3 Those who participated in Food Security Project**

It was significant from the result that majority of the respondents were involved in food security projects. The projects in which the respondents participated as enumerated by the respondents were; National Accelerated Agriculture Input Access Project (NAAIAP), National Agriculture and Livestock Extension Project (NALEP) and Seed Multiplication Project (SMP). This indicated that all the three projects under the study were been represented.

**Thoroughness of Needs Assessment and Sustainability of Food Security Projects**

The researcher sought to know how the thoroughness of needs assessment affects the sustainability of food security projects. The data obtained showed that majority of the farmers (59.5%) disagreed that they understand the process of needs assessment. It was also evident that 64.2% of the respondents disagreed that needs assessment was done before the commencing of the project.

In regard to stakeholders’ involvement in needs assessment, only 37.1% of the respondents agreed while 58.5% disagreed that all stakeholders are involved in needs assessment. Majority (56.7%) also disagreed that all issues, problems and opportunities are considered. The

table below shows the summary of the data obtained.

**Table 1 Needs Assessment and Sustainability of Food Security Projects**

	SA	NO	SOD	SD	Total	
(In percentage - %)	SOA					
I understand the process of needs assessment	19.2	15.5	5.8	31.9	27.6	100
Need assessment is done before the commencement of project	17.8	18.7	9.3	31.6	22.6	100
All stakeholders are involved in needs assessment	21.4	15.7	4.4	24.8	33.7	100
All issues, problems and opportunities are considered	23.1	17.9	2.3	27.9	28.8	100



According to the study findings, it was established that need assessment on food security projects in Gatanga sub - county was not thoroughly done. This was clear from how majority of the respondents seemed to know very little about the process involved, stakeholders involved and issue considered during project need assessment. Majority of the farmers and stakeholders also complained that their views were not taken before the projects were initiated. Thoroughness of Needs Assessment was therefore revealed as one of the factor affecting the Sustainability of Food Security Projects in the area.

### **The Benefits, Challenges, Implementation Process and Factors that Influence Sustainability of Food Security Projects**

The benefits of the food security projects in the area were: the projects act as intermediaries between research and farmers; help farmers in their decision-making and ensuring that appropriate knowledge is implemented to obtain the best results; communicate to farmers agricultural information on how best to utilize the farmland like usage of improved seeds and chemical fertilizers; the projects often propagate new farming methods; encourage farmers using a variety of methods to reach farmers that is, conducts timely demonstrations and training of farmers and organizing study groups; and

improve the famers' livelihoods with the increase in production and productivity.

The challenges facing food security projects in Gatanga as stated by the respondents were inadequate resources followed by poor planning, poor risk management, unproven technology and inappropriate schedules in that order. This indicates that there were issues needed to be put in place in order to improve food security projects in the area.

On the major factors that influence sustainability of food security projects, respondents indicated effective planning and organization 22%; engaging experienced project officers/ team 19%; having good risk management process through monitoring and evaluation 14%; availing resources in right quality, quantity and on time 14%; using small milestones 11%; management support/ involvement 8% including others.

According to extension officers the size, length and the scope of project varies according to the nature and purpose of project. All projects must go through a life cycle which constitute of 5 phases: Conception phase (where the project ideas germinate); Definition/feasibility analysis (where the expected cost, benefits and risk of undertaking the project are examined); Planning (where the work of the project is described and estimates of the necessary human resources, time and cost are provided); Implementation/execution (where project work

is done) and Project clean up/termination (closure or transition phase).

According to the study, the suggestions given by the respondents on the ways to improve sustainability of food security projects were: Good planning where all stakeholders are involved in projects need analysis; extension officers are needed to be more committed/involved in food security project to make the projects successful; group farming should be encouraged and the group size ought to be manageable in order to boost cohesiveness; youth should be encouraged to join the agriculture sector for they are vital in improving sustainability of food security projects. This can be achieved through offering young people education in agriculture, giving them a voice at policy level, and in the media, and engaging them with agriculture innovations; the government and project sponsors should keep monitoring and evaluating the progress sustainability of food security projects; and farmers should be supplied with resources and effective technology in order to increase/improve production.

### **Conclusions**

According to the study findings, it was established that need assessment on food security projects in Gatanga sub - county was not thoroughly done. This was clear from how

majority of the respondents seemed to know very little about the process involved, stakeholders involved and issue considered during project need assessment. Majority of the farmers and stakeholders also complained that their views were not taken before the projects were initiated. Thoroughness of Needs Assessment was therefore revealed as one of the factor affecting the Sustainability of Food Security Projects in the area.

According to the study the extent to which thoroughness of the needs assessment within communities' affects sustainability of food security projects was considered to be positive. It was established that need assessment on food security projects in Gatanga sub - county was not thoroughly done. In the planning phase of the needs assessment study, broad representation of the community enhances the credibility of the process, and contributes to a comprehensive survey questionnaire. Need assessment studies allow citizen to give their attitudes and opinions regarding precisely defined issues, problems or opportunities and hence the citizen support the initiatives.

### **RECOMMENDATIONS**

Based on the findings of the study, the following are the researcher's recommendations:

In needs assessment study, all involved groups including farmers and interested citizens should be invited and encouraged to participate. The broad representation of all members will enhance the credibility of the process, projects support and the success in the outcomes.

Agricultural extension officers should be more committed/ involved in food security project to

make the projects successful. Reaching marginalized farmers or those who have little access to information and extension services would help farmers to become more self-reliant, independent hence improve the farmers' livelihoods with the increase in production and productivity.

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