FACTORS INFLUENCING SUSTAINABILITY OF TREE NURSERY PROJECTS IN PUBLIC PRIMARY SCHOOLS IN MATUGA CONSTITUENCY KWALE COUNTY, KENYA

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A Research Project Report Submitted in Partial Fulfillment of The Requirement for The Award of The Degree of Master of Arts Degree in Project Planning and Management of The University of Nairobi

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DECLARATION

This research project is my original work and has never been presented for any award in any university.

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DEDICATION

This research project is dedicated to my dear husband Wycliffe Munyalo, my lovely children Benedicto and Cece who have been a great source of inspiration and support during my entire master program.

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LIST OF ABBREVIATIONS AND ACRONYMS

ESP Economic Stimulus Programme

FAO Food and Agricultural Organization

GFRA Global Forest Resources Assessment

KESSP Kenya Education Sector Support Programme

KFS Kenya Forestry Services

MOE Ministry of Education

NGO Non-governmental Organization

TNA Training needs assessment

UNEP United Nations Environmental Programme

ABSTRACT

The study sought to examine the factors influencing sustainability of nursery tree projects in primary schools in Kwale County. The objectives of the study was: to assess influence of community participation on sustainability of tree nursery projects; to establish influence of training on sustainability of tree nursery projects; to determine financial administration practices influence on sustainability of tree nursery projects as well as evaluate how marketing strategies influence sustainability of the tree nursery projects in primary schools in Matuga constituency, Kwale county. The study used descriptive survey research design. The target population total being 500 people who benefitted from tree nursery fund in public primary schools in matuga constituency, kwale county. The sample size was 50 determined from a blend of stratified and systematic random sampling techniques while; data was collected by use of questionnaires. Data obtained from the field was sorted, edited and organized using statistical package of social sciences and the results presented using tables, frequencies, and percentages followed by a brief explanation. The study revealed that level of community participation in Matuga constituency was generally low. Training of tree nursery project team was generally low which could have affected ability to manage nursery tree projects effectively. Financial practices and general handling of tree nursery project finances was wanting. The study found out that minimal marketing was carried out and prices were relatively low. The study recommends sensitization of the community to participate in such projects since they uplift the people's lives and change the environment they live in for their own good. Training that meets the specific needs of the people ought to be conducted before other similar programs are rolled out so as to thorough equip the community with the appropriate skills and gain confidence to tackle such projectss. There is need to be equipped with financial skills and that schools ought to intensify marketing for their products. There is also need to vary tree species in order to cater for varied needs of their clients. The findings of this study may be of benefit to the county government of Kwale as well as the national government in policy formulation in areas of implementing tree projects in schools.

CHAPTER ONE
INTRODUCTION

1.1 Background of the study

Tree nurseries are vital to the existence and well-being of our environment to live in. Not only do tree nurseries aid in improving the quality of life through income generating projects but they also through trees aid in improving the air we breathe, provide food and shelter for human beings and wildlife not to mention climate control (Steiner 2011). By establishing tree nurseries around our communities and planting them, we make up for our living and the loss we have caused the planet through the destruction of forest areas over the centuries. Tree nurseries are essential to the eco-system in which we reside, both above and below the ground (Gregersn and Draper 2015). Far reaching roots hold soil in place and fight erosion. Through tree nurseries we increase tree cover which has been recognized as important storage site for carbon dioxide the primary greenhouse gas thus helping in stabilizing the global temperatures that have been increased since the late 19th century(Hamburg et al,2000).

All over the world forests are being decimated due to population growth demand. For example, in south America forests are being decimated at a rate of 4million hectares per year, the highest in the world (FAO 2005, FAO 2012).

Local forests and on farming provide people with fresh air, food (fruits, nuts, roots, meat), fuel wood, pollinators for their crops and protection from soil erosion due to wind and water. Forested watersheds can regulate water flow by reducing floods and draughts, provide clean drinking water and serve as refuge for local plants and animals (Dalle and Potvin2004, Knoke et al 2009).Through tree nurseries, forests can increase precipitation by capturing water from passing clouds (Bruijnzeel et al.2010). Tree nurseries and hence trees help in stabilizing yields, diversify production, sustain soils and provide revenue in rural communities (Garen 2009).

In developing countries, wood fuel is the major source of cooking and heating where about 2billion people rely solely on fuel wood for cooking (FAO, 2005).Forest cover in East Africa had dropped by 9.3 percent from 2001-2009 (Pfeifer, 2012).

Kenya has been classified among countries with lowest forest cover and requires 4.5mha of tree cover to achieve the 10% threshold of forest cover. The country needs 7.6 billion to reach the10% forest cover by the year 2030 according to the Kenya Forest Service (KWS) (2012). Kenya has 3.467 million ha of forest cover which is equivalent to 5.9% of land area out of which 1.417 comprises of indigenous closed canopy forests, mangroves and plantations (Kenya Forest Service Strategic Plan, 2009).) In Kenya, wood energy provides 70% of Kenya's national energy needs and it is expected to continue as the country's main source of energy for the foreseeable future (Republic of Kenya, 2002a).Much of the canopy has been depleted and the losses of forests and associated resources have had far reaching negative effects on the country's economy and welfare of Kenyans. Some of the consequences include continued inadequate supply, of wood fuel and timber which lead to over harvesting of trees leading to environmental degradation and loss of biodiversity among others (Nellie and Githiomi, 2009).

UNEP recognizes the universal importance of tree nursery projects as both a practical means to conserving the environment and as an effective awareness activity, therefore it engages in spearheading a number of tree planting activities in schools and communities around the globe. For instance, in the United Kingdom such projects involving school children and the local the community have been undertaken through the Woodland Trust's Tree for All projects. Involving schools and the communities around the schools has a great influence in tree nursery project success (Baker and Bridgeman, (1994). Successful tree nursery projects have been carried out in Cameroon with Community Action for Development in conjunction with Administration of schools in the Bakossi national Park area. A study carried out in Jimma zone in south West Ethiopia on tree nursery project performance on communal farms and schools concluded that community in planning, conserving and resource mobilization is critical and a great number expressed interest in involvement in tree planting project (Urgessa, 2003).

The objectives of the tree nursery projects in schools are not only to improve the school environment but also to improve the surrounding environment, impart knowledge on importance of environmental conservation through learning and create an income

generating activity for the school through sale of seedlings. The implementing agency being the ministry of education while the schools management committee is to oversee the implementation (Ministry of Education, 2009). Kwale County is located in the south coast of Kenya, it borders the Republic of Tanzania to the west. It borders the following counties; Taita Taveta to the west Kilifi to the North Mombasa to the north coast.

1.2 Statement of the problem

Tree nursery projects are critical in arresting the global warming phenomenon which has been a challenge to many countries around the world including Kenya. Prolonged dry seasons, water shortages and low food production are vexing problems across the world due to reduced tree cover (UN FAO, 2010).The government of Kenya in recognition of the need to increase forest cover and reduction of environmental degradation initiated tree nursery projects in public primary schools through the ministry of Education. This is an economic stimulus program (ESP) where twenty schools in a constituency were selected and each given 60,000kenya shillings to establish tree nurseries (Ministry of education, 2009). Tree seedlings were to be planted in the schools land and the surplus sold to the school community and other neighboring schools in the aim of improving and conserving the environment. The projects were meant to be self-sustaining through establishment of funds generated from sales proceeds of tree seedlings. Funds raised from sales were to be deposited to an ESP tree planting account forming a revolving fund. Accumulated profits were to be used in activities with high multiplier effect in the schools and for sustenance of nursery tree projects (ministry of education 2009). The Kwale County Education Board report has established that nursery tree projects in the schools have not been successful. Despite the government giving guidelines on how to manage the tree projects, provision funds and training manuals, the tree nursery projects in schools in the county did not perform as expected. Despite these concerns few studies have been conducted to ascertain factors that influence sustainability of nursery tree projects. This study therefore; sought to investigate factors influencing sustainability of tree nursery projects in Matuga constituency, Kwale county.

1.3 Purpose of the study

The study investigated the factors that influence the sustainability of tree nursery projects in public primary schools in Matuga constituency, Kwale County.

1.4 Objectives of the study

1. To assess the influence of community participation on sustainability of tree nursery projects in schools in Matuga constituency, Kwale County.
2. To establish influence of training in tree nursery management on sustainability of tree nursery projects in Matuga constituency, Kwale County.
3. To determine influence of financial administration practices on sustainability of tree nursery projects in schools in Matuga constituency, Kwale County.
4. To evaluate marketing strategies influence on sustainability of the tree nursery projects in public primary schools in Matuga constituency, Kwale County.

1.5 Research questions

The research study attempted to answer the following questions:

1. How does community participation influence sustainability of tree nursery projects in schools in Matuga constituency, Kwale County?
2. How does training on tree nursery management influence sustainability of tree nursery projects in Matuga constituency, Kwale County?
3. How does financial administration practice influence sustainability of tree nursery projects in Matuga constituency, Kwale county?
4. How do marketing strategies influence the sustainability of tree nursery projects in Matuga constituency of Kwale County?

1.6 Significance of the study

This study examined why tree nursery projects have failed to achieve high yields. The findings and recommendations of this study is of help to the county government of Kwale in planning before rolling out tree nursery projects. The school community is able to generate income and create employment opportunities thus improving their living standards. The findings may also be of use to other tree nursery implementing agencies and stakeholders in the county to develop sustainable tree nursery projects in Kenya. The

findings contribute towards body of new knowledge on factors influencing sustainability of tree nursery projects as this is of value to academicians and future researchers in this field.

1.7 Delimitations of the study

The study was delimited to factors influencing sustainability of tree nursery projects in Matuga constituency, Kwale County. The study specifically focused on community participation, training, financial administration practices and marketing strategies influence on tree nursery projects. It was delimited to the use of questionnaires in the data collection.

1.8 Limitations of the study

The researcher encountered a few uncooperative respondents who were withdrawn to give voluntary information concerning the research study. To mitigate this problem the researcher with the help of village elders continued making a good rapport that enabled access of the required information from the respondents. Very high temperatures were also experienced as a challenge. This was countered by making sure that the questionnaires are distributed early in the morning when the temperatures are a bit low and before the sun rises high.

1.9 Assumptions of the study

This study assumed respondent's availability within the limited time period and that they provide feedback that enabled realization of the objectives under the study of which this was the case. It was also an assumption that to a big extend the respondents had a good understanding on factors influencing sustainability of tree nursery projects of which this was the case since 86.1% of the respondents had acquired extra post-secondary education. This implies that the respondents had adverse knowledge to comprehend the questions put across by the researcher through the questionnaire.

1.10 Definition of significant terms

Community participation in tree nursery project: This means that school management committee members, parents and teachers get involved in management of the tree nursery project.

Financial administration practices of tree nursery project: Refers to financial handling procedures of accounting in book keeping and maintenance of financial records.

Marketing strategy of tree nursery project: Steps taken by project planners in the schools to ensure quick disposal and sale of mature seedlings to the neighboring schools and community.

Sustainability of tree nursery project: Refers to continuous production of tree seedlings to generate income and re-invest back to nursery tree project for continuity.

Training in tree nursery management:-This refers to imparting of knowledge, skills, attitudes, values and competencies to the project team members to carry out nursery tree projects.

1.11 Organization of the Study

The study is organized systematically in five chapters. Chapter one contains the background that introduces the problem under study. The statement of the problem, the purpose of study, objectives of the study, research questions, significance of the study, delimitations, limitations, assumptions and definitions of significant terms used in the study. Chapter two of the study reviewed relevant literature related to the study on factors that influence sustainability of tree nursery projects. That is from global, Africa, and other local perspectives. The chapter also presents theoretical and conceptual frameworks that guide the study. Chapter three describes the research methodology that was used in the study. Research design, target population, sampling procedure as well as data collection and data analysis method that the study utilized are also discussed in chapter three. The operational definitions of variables and measurement of various indicators are elaborated. Ethical issues considerations are also found in this chapter. Chapter four shows data analysis, presentation and interpretation of the results. Chapter five presents

summary of findings, discussions, conclusions and recommendations based on stipulated objectives in attempt to answer the research questions.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

This Chapter, reviews literature from academic work of other scholars that describe the issues of influence of tree nursery projects. The literature focuses on community participation, training, financial administration practices and marketing strategies influence and sustainability. This chapter provides theoretical and conceptual framework of the study. The chapter winds up by presenting the relationship between variables used in the study.

2.2 Sustainability of nursery tree projects

Sustainability is mainly related to environmental resources and has been defined in ecology as the degree to which the earth's resources may be exploited and replaced without damage to the environment (Constanza, 1995).Under sustainability of nursery tree projects, the aim is to encourage people to plant trees in locations where they live and work, and also apply good practices in planting and management of trees (Taylor &Francis, 2006).

Sustainability of tree nursery projects is influenced by the level of community participation and ownership of the projects. Citizens and community leader's participation in planning and implementing tree care projects as well as understanding of tree conditions will influence attainment of project goals (Brager et al., 2002).Tree nursery projects in agricultural landscape should be regarded as a valuable resource since tree replacement provide direct financial benefits and they contribute to ecological sustainability by improving catchment health and biodiversity conservation, hence the need to tree nursery project sustainability.(Reid,2000).

Tree nurseries through tree planting and nurturing contribute to the environment by providing oxygen, improving air quality, climate amelioration, conserving water, preserving soil and supporting wildlife. (McPherson, 2006).During the process of photosynthesis trees use carbon dioxide and produce the oxygen we breathe in. One acre of forest absorbs six tons of carbon dioxide and puts out four tons of oxygen.

Furthermore, trees can reduce bothersome noise by up to 50% and musk unwanted noises with pleasant, natural sounds. United Nations Environmental Programme (UNEP), recognizes the universal importance of tree nurseries as both a practical means to conserving the environment and as an effective awareness of spear-heading a number of tree nursery projects around the world through community participation in order to address the global diminishing forest cover (UNEP, 2012).

World forest area stands at 39,000,000km2 or 26.19% of land masses. Africa has a forest area of 6,500,000km2 or just about 21.80%. Forest cover in Africa has had dropped by 9.3 percent from 2001-2009. Large areas of evergreen forests have been lost from East Africa during the 20^{th} century resulting in carbon emissions, reduced habitat for forest dependent biodiversity and reduced availability of essential ecosystem services (Pfeifer, 2012). Kenya has been classified among countries with lowest forest cover. According to Kenya Forest Service (2012), the country needs kshs.7.6 billion to reach the 10% threshold of forest cover by 2030.Towards mitigating this challenge the, government in collaboration with Non-governmental organizations has initiated tree nursery projects aimed at promoting tree planting in communities around the country in a sustainable manner.

2.3 Community participation and sustainability of nursery tree projects.

Participation is defined as a means of educating citizens and to increase their competence (Brager et el, 2002).It is a vehicle for influencing the decisions that affects the lives of community and an avenue for transferring power to enable community design its future through control of resources. Participation is a collective effort to increase ownership and exercise control over resources and institutions on the part of groups and commitments of those excluded from control (Westergaard, 2013).Alternatively participation can be viewed as a way of empowering people and communities, building social capital and redistributing power from central authorities to communities; participation as an end in itself, rather than a means to an end. These definitions agree that participation is collective effort that enables a community to make decisions, own and design its future through increased control of resources.

Community participation leads to empowerment which provides opportunities and experiences that allow the people to be actively involved in decision making about the projects which involves them. It consists of a locally organized and planned community intervention, individual stakeholders and other development workers collaborate on a range of complementary interventions in order to achieve set project development objectives (Rifkin, 2011).

Successful tree nursery projects often encourage the participation of a variety of people because a mixed group will provide a better representation of the widespread community interests. Getting the community involved should be an objective of the project and even if people are not interested in participating, they should be kept well informed of any progress (Frank and Smith 1999).

Studies carried out in Costa Rica have shown that the participation of the community members in nursery tree and planting projects can be achieved by stressing a sense of ownership of trees, using their strengths and skills, increasing the opportunity for social interactions to unite the community and creating partnerships with the uninvolved stakeholders. Community participation in tree nursery projects while delivering instrumental benefits in the form of increasing tree cover, also encourage community interaction and improve community spirit, fostering a sense of ownership in communities and empowering them to change their neighborhoods for the better(Sims and Sinclair,2008).

People participate in tree nursery activities if they are able to get important livelihood sustaining products from the forests such as fuel wood (Victor and Bakare, 2004).Further the study reveals that majority of farmers participate in tree planting projects because of anticipated economic benefits, environmental benefits and social status benefits. They also observe that poor socio-economic backgrounds of farmers in terms of occupation and level of income influences the extent of their participation in tree planting projects. People's level of education also influences their participation in tree planting projects.

Most young farmers participate in tree planting activities because they are able to plant trees and harvest them within their lifetime (Victor and Bakare 2004).Older people tend to participate more in tree planting than younger people because they are retired and have free time to participate in meetings(Maskey et al 2003).

There are aspects to consider towards meaningful community participation for example, under consideration, who participates and how participation occurs (Nag-Chowdhury (1998). Peck and Scott (1998) identified various characteristic that participating communities share in common. Among them are: participating communities are open to involvement by all groups and responsibilities are divided up so that the special talents and interests of contributing towards the project.

Community participation in tree nursery projects promotes ownership of the project within the community. People are likely to be committed to carry something through if they have a stake in the idea. One of the biggest barriers to action is lack of ownership. Thus, it is vital to allow people to have a say in the projects. In practice that means running brainstorming, workshops, helping people think through the practicality of ideas and negotiating with others a result which is acceptable to as many people as possible (McPherson and Simpson,2000).

2.4 . Training in tree nursery management and sustainability of nursery projects

Training is the systematic development of attitudes, knowledge, skills and behavior patterns required by an individual in order to perform a given task adequately or a job which results in improved performance. (Patrick, 1992). It is the process by which people skills, knowledge and attributes are enhanced to enable them to carry out specific responsibilities to the required standards. The focus of training is the job or task thus its, specific to the needs of the individual and organization (Fillipo, 2014).

Training is a learning process that involves the acquisition of knowledge, skills, concepts, rules or changing of attitudes and behaviors to enhance performance of tasks. Training should result in improved job performance and other positive changes like acquisition of new skills. In addition, training enables consistency in performance across conditions

(Kraiger et al; 2004). Training efforts produce improvements in the quality of the labor force, which in turn is one of the most important contributors to national economic growth. Training of people enables them to participate effectively in tree planting projects in a community. It is also critical to create public awareness and involvement at all stages of the project. More importantly it is essential to involve school children in tree planting projects (Ssembajjiwe, 1998). Training requires project planners to learn about the local community socio and economic unit of organization and incentives for local participation and for social forestry. Training is a powerful tool for improving individual and team support in a project. Nursery tree projects require training in leadership qualities such as commitment, organization and ability to attend to details and navigate obstacles. Important aspect of training for a tree nursery project include nursery types, how to set a nursery, steps in nursery establishment, tools and equipment, sources of seeds, management and pest and disease common in a nursery and their control.

Tree nursery managers need to be equipped with not only the knowledge on the popular image of a nursery as that of a supplier of garden plants, but also on the wider range of nursery functions like propagation, growing out or retail sales and on their importance to many branches of agriculture, forestry and conservation biology. Training should also focus on tree seeds and seedlings relevant to a specific geographical location, soil type and on nursery establishment and care (Simmon, 2012).Establishment of successful tree nurseries and planting projects are constrained by the lack of technical skills among the potential nursery operators and the inadequacy of extension services to facilitate acquisition of such skills. Therefore, planning and implementation of effective training program is requisite to sustainable tree nursery projects (Taylor and Francis, 2006)

There are different aspects of trainer's competencies requisite for effective training program. Among them includes delivery of content in a logical way from beginning to the end, use of visual aid to reinforce learning, ensuring audience participation by involving them and providing clear instruction. Further to these are the technical competencies by teaching technically accurate content, gauging audience level of technical knowledge and adjusting presentation accordingly. This competence on the part of a trainer will ensure

that participation in tree nursery projects to carry out sustainable projects. The training program should focus on the unskilled staffs in the nurseries that need to undergo necessary training to improve their performance and the quality of the seedlings produced(Mailuma et al.,2006).It should likewise address to trainee characteristic and ability level necessary to learn the project content.

A study carried out in Philippines on tree nursery establishment revealed that tree nursery establishment were constrained by the lack of technical skills among the potential nursery operators and the inadequacy of extension services to facilitate acquisition of such skills besides limited marketing arrangement for tree products (Taylor and Francis,2006).Provision of tree seed of a good quality as well as training and extension have been seen as important means to achieve this objective (Nathan,2000).

Training in a project is mainly concerned that people become competent to carry out their duties effectively and not that they will do things in a certain way. To train someone to do a job skillfully, reliably and with confidence entails a range of phases and learning activities. This includes teaching basic skills and knowledge; providing opportunity to practice in a safe environment; providing opportunities to work closely under the guidance of an experienced colleague; providing the person being trained with opportunities for independent work where the trainee can call on or review process with an experienced colleague; or encouraging group working where team members can learn to work together and help one another overcome difficulties and adapt to norms of the group(Garavan,1994).

Any project training should ultimately generate expected outcome as defined as the amount of original learning that occur during the training program and the retention of acquired knowledge and its application in the real life situation(Vaughan et al.2003). In the case of nursery tree planting training course, this is manifested by the effectiveness of how well schools manage the tree nurseries and the level of sustainability of the project as envisioned in goals and objectives. An effective project training should be relevant to needs of beneficiaries and ensure element of communication with nursery tree planters where they are integrated in the training course. It should also aim at increasing

awareness about ultimate beneficiary of tree nurseries and should seek to focus on training needs assessment.

2.5 Financial administration practices and sustainability of nursery tree projects.

Financial administration in tree nursery projects requires keeping of all financial records, administrative documents and other books important in assessing the projects performance at regular intervals (David 2005).Proper record of all financial documents produces feedback to project stakeholders and management right to information from which to assess the sustainability of nursery tree project. Also, keeping information records sourced from buyers will provide the basis for decision making based on clear and accurate information on market requirements and needs. Proper record keeping will ensure transparency and accountability and hence enhance confidence and trust from stakeholders and school community.

Financial administration and management is critical for project success and sustainability. Financial administration requires management skills to be imparted to project members and project leaders for a widespread support. Financial administration calls for effective evaluation tools. Project leaders and managers should be equipped with basic skills in financial management such as book keeping and cash management. This must be done according to certain financial controls to ensure integrity in the bookkeeping process. Generating financial statements is also important and analysis of the statements so as to understand the financial conditions of the projects (Fridson and Alvarez, 2011).

Tree nursery and projects require careful assessment of expenditures on tree care and management. Functional benefits and associated economic value of nursery tree planting should be described. This is a necessary process for creating cost effective projects. Production of quality seedlings is neither cost free nor sustainable unless costs are recovered. Such costs include purchase of seeds, seedbed preparation, labor, irrigation, weeding among others. (Briscoe, 1996). To ensure project sustainability income generated from the sales must be sufficient to operate the project, expansion and replace worn out infrastructure. The infrastructures in the nurseries need appropriate renovation and upgrading, also there is need for the provision of appropriate nursery inputs such as

chemicals, equipment and implements; standard humidity propagators and constant power supply and back-up in case of power failure (Larbi et al.,2005).

Although costs are still of concern, the administration provides a nursery budget that is adequate to meet the project needs and propel it to perpetuity. The administration is required to provide incentives and financial support in form of proper remuneration to tree nursery handlers. Nursery management can affect gains from the tree project. Budgeting is a pre-requisite for proper management and implementation of any tree nursery project. A budget depicts what you expect to spend (expenses) and earnings (revenue) over a time period. Budgets are useful for planning finances and also tracking if one is operating a according to the plan. They are also useful for projecting how much is needed for a major initiative for instance; in tree nursery project buying of seeds, payment of labor, water storage tanks, potting, fencing etc. A budget as a financial administration tool is important in identifying what financial resources are required. Financial administration management typically, results in very relevant and realistic budgets hence achievement of project goals (Campsey et al., 1995).

For new projects, such as establishing of tree nursery projects in schools, the biggest challenge is likely to be managing cash flow from sale of seedlings. The overall purpose of managing cash flow is to make sure that there is enough cash to pay current bills. A business can manage cash flow by examining cash flow statements. The cash flow includes total cash received minus total cash spent getting started in the plant production business involves financial investment; controlling risk and many hours of time. Therefore; the need for sound business management skill practices is very key (Flanney, 2009).Strong interests in tree nursery and sound business management skills are essential to operate an economically successful nursery business. (Ajayi, 2002).

2.6 Marketing strategies and sustainability of nursery tree projects

Marketing is the process of communicating the value of a product or service to the customer. This is the art of promoting a product or service to the customer (Kotler 2012). Marketing is the process of allowing an organization to concentrate resources on the optimal opportunities with the goal of increasing sales and achieving sustainable

competitiveness of the organization. (Homburg et al,2009).It involves designing a market plan designed to fill market needs and reach market objectives. Marketing strategies involve careful analysis of external and internal environment bearing in mind the goals and objectives of the organization.

Marketing for tree seedlings from tree nurseries should focus reaching small scale farmers since the future of trees is on farm (Simmons, 2012). Developmental trends indicate that tree planting on farm is increasing and because of the growing awareness of the need to grow trees on farm in the future. It has been estimated that small farmers actually constitute a majority of tree planters that the number of trees on farm exceeds the number of trees in plantations and this gap tends to increase. Many rural people depend on products from trees. Marginal improvements in productivity can be important to livelihood hence the need to aggressively market tree seedlings to the rural farmers (Kjaer and Nathan, 2000).Applying high quality planting material is one way to improving stability and productivity thus the need to supply high quality tree seedling to farmers and other small-scale tree farmers which can be achieved through sales from tree nurseries as established in schools or community (Aalback, 1997).

The nursery business is a highly competitive pursuit; there will always be a place for enthusiastic, well organized individuals who will always find a niche market for the plants. (Mailuma et al,2006).Holding too few stock of seedling as it is usually the case with the private nurseries means frequent ordering of goods and there is the danger of seedling running out of stock which could lead to loss of production and profit. Public nurseries like school nurseries can build large stock of seedlings with proper care and this can lead to increased sales with intense marketing and therefore increased profit. However it might be costly to hold large seedlings stock in terms of storage space, irrigation and labor among others. Therefore; there is need to strike a balance between raising too little or too much seedlings stocks in tree school nurseries. (Garcia and Jayasuriya,1997).

A study conducted in Nepal on commercial distribution of tree seedlings in small bags showed that there is improved seedling distribution when appropriate marketing

guidelines are developed especially for group tree nurseries (Nathan et al 2005). For sustainability of such projects focus should be on need to increase cost effectiveness and turnover, seek a more diversified market, seed quality control and brand name for each nursery project (Nicholson, 2001). Marketing through advertisement for seeds can be done at a low cost by linking with forest extension programs. All stakeholders should be consulted on the species selection. Pricing of tree seedlings should cover cost including commission and profits.

Marketing strategies by the management of tree nursery projects in schools should always strive for collective marketing whereby each stakeholder and member is involved. Collective marketing facilitates meeting market demand, reduce cost of getting products to the market and improves the bargaining power of farmers (Agarwal, 1994). This implies competitive advantage for participants but collective marketing is not likely to be enough to allow small-holders to take full advantage of market opportunities. One of the important conditions to link farmers to wider economic networks is being attentive to the market signals and to opportunities (swallow et al,2001).Success and sustainability of collective marketing is a function of not only the supply and demand of product, but also coordinated action of individual members and support from external organization (Stockridge and Doward, 2003).Marketing for tree nursery seedlings should look at possibility for retail sales of small quantities of tree seedlings to smallholders through private enterprises already dealing with horticultural and agricultural seed (Nathan, 2001).

2.7 Theoretical Framework

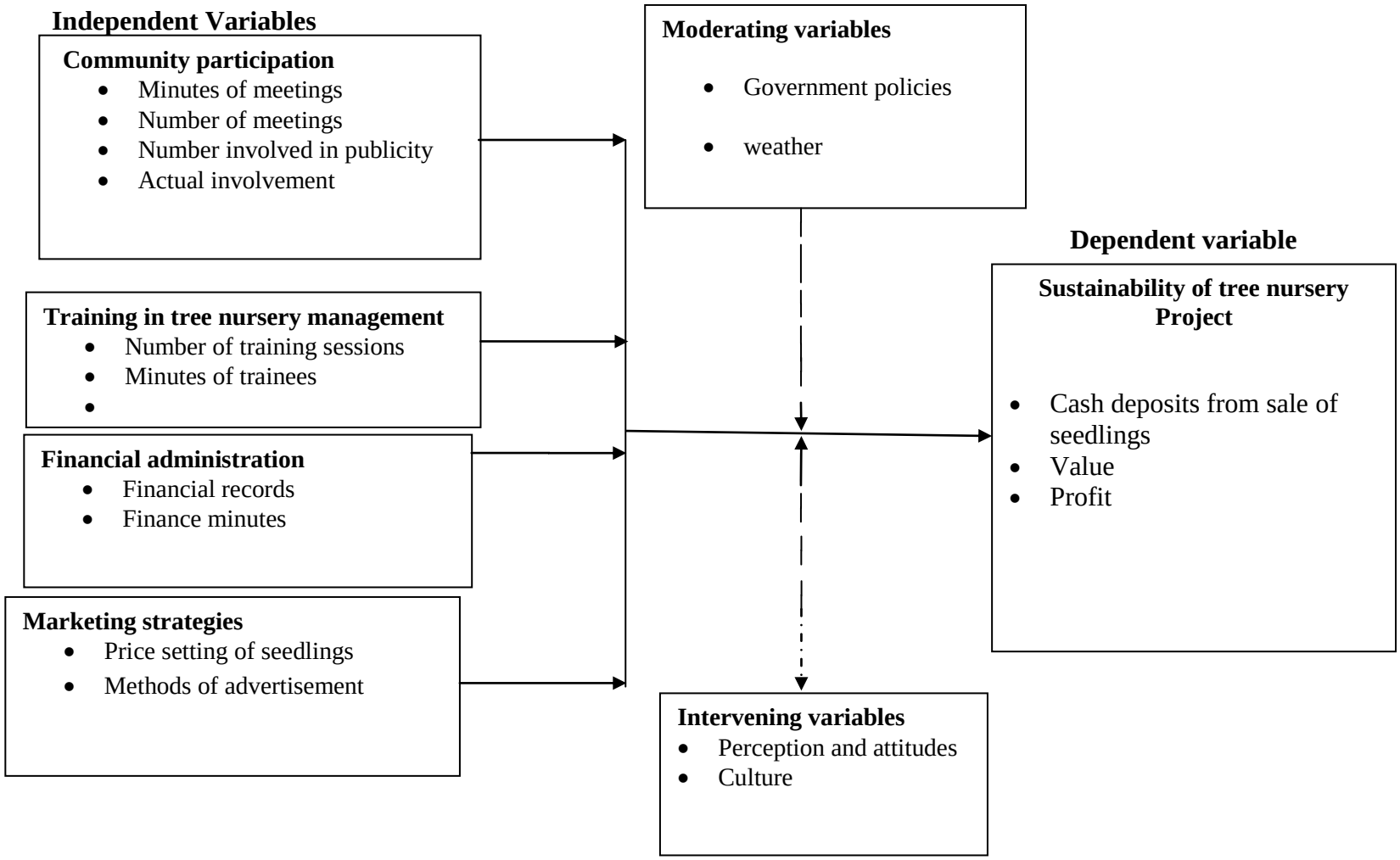
This study has been modeled on the theory of participation. The theory was advanced by Oakley(1991).The approach is mainly concerned with the role of the ‘people’ particularly in terms of power and control over their own lives and resources. A key element of the approach is community mobilization and involvement seen as a process through which action is stimulated by a community itself or by others, that is planned carried out, and evaluated by a community’s, individuals, groups and organizations on a participatory and sustained basis to improve and enhance the overall standard of living in the community.

The theory assumes that participation has a real influence on decision. For instance, greater community participation has a real influence on decision. The participatory approach postulates that community participation and involvement at various stages of a project is one key element to performance, ensures that outcomes suit local circumstances, ensures community ownership and increases sustainability. As adopted in this study, participatory theory holds that community participation influence training, financial administration practices and sustainability of tree nursery projects.

2.8: Conceptual Framework

The interrelationship between the key variables identified for the investigation in this study is shown.

Figure 1: The Conceptual Framework



2.9 Knowledge gap

To have sustainable tree nursery projects, it is important for the community to have a clear understanding of the factors that influence sustainability of tree nurseries. To bridge the gap between the factors that influence sustainability of tree nurseries in Kwale County, there has been need for comprehensive research. While, there is evidence from literature review and comparative studies on factors that influence sustainability of tree nurseries, there is need to understanding involvement of the community in planning and implementing tree nursery projects (Brager et al, 2013). Training leads to consistency of results and improved performance of the tree projects (Kraiger et al, 2004).There is still inadequate studies on these factors and more so on the factors that influence tree nursery projects sustainability in kwale county. This study therefore; sought to specifically find out the factors that influence sustainability of tree nursery projects in Matuga kwale county, Kenya.

2.10 Summary of the Chapter

This chapter has given an overview of the concept of sustainability of tree nursery projects and also addressed the variables that influence sustainability such as participation, training, financial management practices as well as marketing strategies. This chapter has also included theoretical framework that has been used to model and guide the study. Lastly, chapter two shows relationship of variables under the study through a Conceptual framework.

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

This chapter describes the research design selected for the study. It outlines the target population, sampling procedure as well as the data collection method used. It explains how validity and reliability was established and data analysis method that the study used. The operationalization of variables table is also presented. The chapter also presents data analysis and ethical issues of the study.

3.2 Research design

Research design is a plan of action that enables the researcher to answer research questions and achieve the study objectives (Grrbich, 2007). The research design used in the study is descriptive survey research design. Descriptive survey research design was appropriate for this study since it allowed the researcher to describe various aspects of the phenomenon. In its popular format it has been used to describe characteristics and behavior of sample population. It has also allowed the study to be conducted in its natural phenomenon.

3.3 Target population

Target population is defined as a group of individuals, objects or items from which samples are taken for measurement (Mugenda and Mugenda 2009). This consists of the school management committee members, head teachers and teachers. The target total population being 500 people from schools that benefitted from the tree fund in matuga constituency kwale county.

Table 3.1 The target population

Category	No. of schools	Total No. per school	Target Population
School management committee	20	20	400
Head teachers	20	1	20
Teachers	20	8	80
Total			**500**

3.4 Sample and sampling procedure

Sampling is the process of selecting appropriate number of subject from a defined population (Kothari, 2004). The researcher had the school management committee, head teachers and teachers as the Stratus. Krejcie and Morgan (2013) in their theory of determining sample size, noted that a population of 500 would require 50 as sample size. The sample is a representative of target population. The researcher had the school management committee, head teachers and teachers as the Stratus. Systematic random sampling method was then applied; which is a statistical method involving the selection of elements from an ordered sampling frame. The study applied equal probability method where, progression through the list was treated circularly with a return to the top once the end of the list is passed. K=N/n Where k is the sampling interval, n is the sample size and N is the population size.Therefore;500/50=10.Hence;every 10th item in the frame was selected.

Table 3.2 Sample Size

Category	Population	Sample size
School management committee	400	40
Head teachers	20	2
Teachers	80	8
Total	**500**	**50**

3.5 Data collection instrument

These are tools used in collection of data on the phenomenon of the study (Creswel, 20 Couper (2008). Data was collected by use 50 self administered questionnaires. This is a se printed questions with a choice of answers, devised for the purpose of a survey or statis study. This research instrument was based on the objectives of the study. The questionn covered factors are: community participation, training, financial administration practices marketing strategies. This tool of data collection was selected because it is practical, alot information could be collected from a large number of people in short period of time and relatively cost effective way. Moreover; the questionnaire maintains the anonymityym honesty of the respondent (Kasomo, 2007).

3.6 Piloting of the questionnaire

Pre-testing allowed ascertaining the sustainability of the tool before actual administration and this is backed up by Mugenda, 2003.Before administering the instrument to the sample representing the target population a pilot study was conducted to four schools in constituency with the aim of testing the instrument. After the pilot study the researcher made necessary adjustments and amendments to ensure appropriateness as well and eliminate ambiguity in the instrument.

3.7 Validity of the instrument

Validity refers to the degree to which a statistical instrument accurately measure or predicts a value. It is the strength of our conclusions, inferences or propositions. Validity determines whether the research truly measures that which it was intended to measure or how truthful the research results are (Joppe, 2000). Internal validity was considered by checking the

questions and ascertaining that they provided the type of responses expected. Content validity was ensured through the researcher consulting experts in research beginning with the supervisor. This ensured that the instrument content is comprehensive and adequate to measure what it is supposed to measure while the sample representativeness of the target population ensured external validity.

3.8 Reliability of the questionnaire

Reliability of an instrument is the degree to which same result is repeated over a number of repeated trials (Mugenda and Mugenda 2009). Reliability in research is influenced by random error which is the deviation from a true measurement due to factors that have not effectively been addressed by the researcher. According to Berge (2001), the use of consistence and systematic line of questions is important for reliability and for possible replication of the study.

Split-half method was used as a measure of reliability (Nachmias and Nachmias, 2008).During the pilot survey the instrument was split into two sets. One consisting of odd numbered items while, the other comprising of all even numbered items. Scores of odd numbered items and even numbered items of the responses of the pilot survey were computed separately. The odd numbered scores for all items was then correlated with the even numbered scores with the use of the Pearson's Product moment of correlation coefficient. This correlation obtained presented reliability of only one half (1/2) of the instrument. That is Re=2r/1+r.Whereby; Re=reliability of Scores on total and r=reliability for half test. Which resulted in a value of 0.765which is greater than 0.7thus the questionnaire tool was reliable and hence adoptable.

3.9 Data analysis

Data analysis involves organizing data into patterns, categories and basic descriptive units (Kasomo, 2007) data analysis implied examining the collected data making discussions, inferences and conclusions (Kothari, 2004). Qualitative data collected from respondents using open-ended questions has been analyzed using qualitative methods which involved

establishing the categories, themes, patterns and conclusions in line with the objectives of the study. The Statistical package for social sciences was used to analyze the quantitative collected data. Information from the analyzed data has been summarized using tables, frequencies and percentages followed by brief explanation.

3.10 Ethical considerations

Caution was ensured that the rights and privacy of the respondents are respected. The purpose of the study was clearly explained before the administration of the questionnaire instrument. The researcher did in no way coerce the respondents to give information. Confidentiality was observed by ensuring that the questionnaires had numerical codes instead of the respondents indicating their real names. Respondents were also assured anonymity and that all the information given will be used for the specific purpose of the intended study. The researcher will presents the findings of the study as it is without any manipulation of data.

3.11 Operational definition of variables.

The operational of variables table explicitly shows variables involved and their operational indicators. Table 3.3 describes the variables that were used as indicators in the study and the corresponding measurement scales.

Table 3.3 Operational definition of the variables

Objectives	Variable	Indicator	Measurement	Measurement scale	Tools of data collection	Data analysis
To assess the influence of community participation on sustainability of tree nursery projects.	Independent variable: community participation	Attendance to meetings number of members buying and selling seedlings	Minutes of meetings number of time meetings held List of members Buyers and sellers records	Ordinal Nominal	Document analysis Questionnaire	Descriptive Analysis
To determine how training in tree nursery management influence the sustainability of tree nursery project	Independent variable: Training of project team	Attendance to trainings No. of trainings	Number of sessions Minutes of meetings	Ordinal Nominal	Questionnaire Document analysis Questionnaire	Descriptive Analysis

To determine how financial administration influence tree nursery project sustainability.	Independent variable: Financial administration	Financial records Financial minutes	Financial records Bank account records Sales and stock records	Ordinal nominal	Questionnaire Document review Questionnaire	Descriptive analysis
To Evaluate how marketing strategies influence tree nursery project sustainability	Independent variable: marketing strategies	Prices of seedlings Method of advertisement	Price setting Number of fliers, barazas, parents meetings held	Ordinal nominal	Questionnaire Document analysis Questionnaire	Descriptive Analysis
To determine factors influencing sustainability of tree nursery project	Dependent Variable: Sustainability of tree nurseries	Cash deposits from sale of seedlings Value Profit	Cash deposits from sales Bank statements	Nominal Ordinal	Questionnaire Document analysis Questionnaire	Descriptive analysis

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Introduction

This chapter reports on the main findings from the data collected and analyzed on the study, guided by the objectives and research questions of the study on factors influencing sustainability of tree nursery projects in a Matuga constituency, Kwale county, Kenya. The respondents were sampled from public primary schools which schools which participated in the tree nursery projects. Data collected from this study was mainly quantitative and was analyzed using frequencies and percentages. Presentation was done using tables and their implications discussed.

4.2 Questionnaire return rate

A total of 50 questionnaires were administered to the respondents who were sampled from public primary schools that participated in the tree nursery projects in Matuga constituency, Kwale County. The questionnaire return rate is presented in Table 4.1

Table 4.1: Questionnaire return rate

Category	**Frequency**	**Percentage**
Responded	43	86
Failed to respond	7	14
Total	**50**	**100**

As shown in Table 4.1,There was 86% return rate which the researcher found sufficient to proceed with data analysis. For generalization, a return rate of 50% is adequate for data analysis, 60% is good and a response of 70% and above is excellent (Mugenda and Mugenda2003).The high questionnaire return rate is attributed to the fact that the researcher personally administered the questionnaires to the respondents and also engaged two assistants. Follow ups were made through mobile phone calls.

4.3 Demographic information of the respondents

The study sought to establish the demographic data of the respondents and looked at age, gender, education level and position held in schools.

4.3.1 Gender of the Respondents.

Table 4.2 Gender of the respondents

Frequency	Frequency	Percentage
No response	2	4.6
Females	22	51.2
Males	19	44.2
Total	**43**	**100**

Table 4.2 indicates that there was a small gender disparity in the responses of respondents. This gives an implication that gender was well represented in the tree nursery projects and therefore; there was no gender bias.

4.3.2 Age of Respondents

Table 4.3 Shows data on the age of the respondents

Table 4.3: Age of respondents

Category	Frequency	Percentage
No response	1	2.32
Below 30 years	0	0
31years to 40 years	8	18.60
41 years to 50 years	21	48.83
Above 50 years	13	30.23
Total	**43**	**99.9**

Table 4.3 Shows that all the respondents were mature and above 30years.They ought to be conversant on tree nurseries and therefore; able to respond on the subject matter.

4.3.3 Level of education

Table 4.4 Shows data on the level of education of the respondents

Table 4.4 Level of education

Category	Frequency	Percentage
No response	1	2.3
Primary level	0	0
Secondary level	5	11.6
Certificate	10	23.3
Diploma	15	34.9
Degree	11	25.6
Other	1	2.3
Total	**43**	**100**

Table 4.4 indicates that 86.1% of the respondents had acquired extra post-secondary education. This implies that the respondents had adverse knowledge to comprehend the questions put across by the researcher through the questionnaire.

4.3.4 Position held in school

Table 4.5 Shows data on the position held in the school by the respondents.

Table 4.5 Position held in school

Category	Frequency	Percentage
Chairman	07	16.3
Secretary	12	27.9
Treasurer	10	23.2
SMC member	14	32.6
Total	**43**	**100**

Table 4.5 Indicates that all key positions in the schools were well represented in the study. At least all respondents were involved in the general running of the school in one

way or another and hence; tree nursey project. They could provide relevant information needed for the study.

4.4 Operational status of tree nursery project

In this section the study sought to establish operation of tree nursery projects , range of seedlings grown in most schools, their level of performance in most schools.

4.4.1 Operational status of tree nursery projects in schools

The respondents were asked to indicate if the tree nursery projects were operational. Responses are shown in Table 4.6.

Table 4.6: Operational school tree nursery projects

Category	Frequency	Percentage
Yes	33	76.7
No	9	21
Don't know	1	2.3
Total	43	100

Table 4.6 shows that most schools had indeed embarked on the tree nursery projects with 76.7% of the respondents indicating that tree nursery projects were operational.

4.4.2 Response as to if the tree nursery project is performing well

Respondents were asked if they agree that the tree nursery project was performing well in their respective schools. The responses are shown in Table 4.7

Table 4.7: Response as to if the tree nursery project is performing well

Category	Frequency	Percentage
Strongly agree	0	0
Agree	4	9.3
Neutral	5	11.6
Disagree	14	32.6
Strongly disagree	20	46.5
Total	**43**	**100**

Table 4.7 Shows that 79.1% of the respondents cumulatively disagreed that the tree nursery projects were performing well while 9.3% were of the view that tree nursery projects were performing well in their schools.11.6% neither agreed nor disagreed as they remained neutral to the question posed. This is an implication that tree nursery projects were generally operational but far below expected level.

4.4.3 Range of seedlings grown in the tree nursery projects

Respondents were asked to indicate the range of seedlings grown in their school tree nursery. Response is shown in Table 4.8.

Table 4.8: Range of seedlings grown in the project

Category	Frequency	Percentage
No response	12	27.9
1---2	9	20.9
3---4	12	27.9
5---6	8	18.6
Above 7	2	4.7
Total	**43**	**100**

27.9% of the respondents indicated that they grew 3-4 varieties of seedlings.18.6%of the respondents grew 5-6 varieties of seedlings,20.9 of the respondents grew 1-2 varieties of

seedlings.4.7 %of the respondents grew 7and above varieties of seedlings.27.9% of the respondents did not respond the question. This means that most schools grew less variety of seedlings resulting to lack of meeting varied needs of different buyers and hence hindering sustainability.

4.5 Community participation and sustainability of tree nursery projects

To tackle the first objective that sought to assess the influence of community participation on sustainability of tree nursery projects in Matuga constituency Kwale county,the respondents were asked questions on how they rated community participation in the tree nursery project, attendance to meetings, their level of publicity and participation in buying and selling of tree seedlings.

4.5.1 Rating of overall community participation in sustainability of tree nursery projects

Table 4.9: Shows rating of the overall level of school community participation in tree nursery projects in schools.

Table 4.9 Rating of overall community participation in sustainability of tree nursery projects in schools

Category	frequency	percentage
Not at all	12	28
Low	13	30.2
Moderate	10	23.2
High	8	18.6
very high	0	0
Total	**43**	**100**

Table 4.9 indicates that majority of the respondents rated the level of community participation in Matuga constituency to be generally low with only 18.6% respondents

rated to be high. This indicates that majority of school community members didn't participate in the school tree nursery projects.

4.5.2 Attendance of meetings to discuss tree nursery projects

Respondents were asked to indicate if they had ever attended any meeting to discuss tree nursery projects in their school. Responses are shown in Table 4.10.

Table 4.10: Attendance of meetings to discuss tree nursery projects in the school

Category	frequency	percentage
Yes	25	58.1
No	18	41.9
Total	**43**	**100**

Table 4.10 shows that community participation by attendance of meetings in their schools to discuss tree nursery projects was somehow low.

4.5.3 Frequency of attending meetings to discuss tree nursery project

Table 4.11 shows the frequency of attending meetings to discuss tree nursery project in schools

Table 4.11: Frequency of attending meetings to discuss tree nursery project

Category	frequency	percentage
Not at all	8	18.6
Rarely	24	55.8
Somehow frequently	9	20.9
Frequently	2	4.7
Very frequently	0	0
Total	**43**	**100**

Table 4.11 Shows that 74.4% of the respondents had cumulatively rarely attended meetings to discuss tree nursery projects in their schools. This gives an implication that

there was limited community participation in discussion on tree nursery projects in schools due to low numbers in meetings.

4.5.4 Participation in publicizing tree seedlings to local community and nearby schools

Table 4:12 shows data on participation of respondents in publicizing the tree seedlings to local community and neighboring schools.

Table 4.12 Participation in publicizing tree seedlings

Category	frequency	percentage
Yes	18	41.9
No	25	58.1
Total	43	100

Table 4.12 indicates that majority of the respondents didn't publicize the tree seedlings to the local community and the neighboring schools. Lack of publicizing the tree nursery seedlings contributed to low chances of project sustainability.

4.5.5 Level of publicity of tree seedlings

Table 4.13 Presents data of the respondents rating on the level of publicity of tree seedlings.

Table: 4.13: Level of publicity of tree seedlings

Category	frequency	percentage
No response	11	25.6
Very poor	10	23.3
Poor	10	23.3
Fair	9	20.9
Good	3	6.9
Total	**43**	**100**

Table 4.13 indicates that the level of publicity of tree nursery project to the neighboring community and schools was generally poor with about 46.6% while 6.9% rated it to be good and 25.6% of the respondents gave no response.

4.6 Training project on nursery management

The second objective sought to establish the influence of training in management of tree nursery projects and sustainability of nursery projects in matuga constituency kwale county. To address this objective the respondents were asked if they were ever trained on tree nursery management. They were also asked if they availed themselves for training, whether the training was relevant and if they agree that indeed training influenced sustainability of tree nursery projects in their schools.

4.6.1 Training on tree nursery project management

Respondents were asked to indicate if they had been trained on tree nursery management. Their responses are shown in Table 4.14.

Table 4.14 Training on tree nursery management

Category	frequency	percentage
Yes	13	30.2
No	30	69.8
Total	43	100

Table 4.14 shows that training in management of tree nursery project was generally low with 69.8% of the respondents having not been trained which could have affected their ability to manage tree nursery projects effectively hence low chances of sustainability.

4.6.2 Frequency of attending training on tree nursery management

Table 4.15 shows data on the frequency of training attendance on tree nursery management.

Table 4.15: Frequency of attending training on tree nursery management.

Category	frequency	percentage
Don't know	9	20.9
Never	19	44.2
Rarely	8	18.6
Often	5	11.6
Quite often	2	4.7
Total	**43**	**100**

Table 4.15 indicates that cumulatively, 62.8% of the respondents rarely attended training in tree nursery management. Rare attendance to training could have attributed to poor tree nursery management skills and hence negatively affected sustainability.

4.6.3 Relevance of the training

Respondents were asked to indicate if the training had been relevant. Responses are shown in Table 4.16.

Table 4.16 Relevance of Training

Category	frequency	percentage
Not applicable	7	16.3
Not relevant	19	44.2
Somewhat relevant	8	18.6
Relevant	7	16.3
Very relevant	2	4.6
Total	**43**	**100**

Table 4.16 Shows that 60.5% of the respondents cumulatively indicated that the training was not applicable or relevant. There is an implication that the tree nursery project teams might not have been equipped with skills required to manage the tree nursery and therefore reducing the tree nursery projects chances of sustainability.

4.6.4 Influence of training on tree nursery management and sustainability

The respondents were asked if they agreed that training on tree management influences sustainability of tree nursery projects in the schools. Their responses are shown in Table 4.17.

Table 4.17: Influence of training in tree nursery management and sustainability of tree nursery projects

Category	frequency	percentage
Don't agree	8	18.6
Don't know	11	25.6
Agree	9	20.9
Somewhat agree	7	16.3
Strongly agree	8	18.6
Total	**43**	**100**

Table 4.17 shows that 55.8% of the respondents cumulatively agreed with the statement that training on tree nursery management had an influence on sustainability of tree nursery projects.

4.7. Financial administration practices

To address the third objective that sought to determine how financial administration practices influenced sustainability of nursery tree projects in matuga constituency kwale county, respondents were asked questions on who was handling tree nursery projects funds, if they had an account for the tree nursery projects and if they maintained financial records.

4.7.1 Tree nursery project fund handling

Respondents were asked who handles funds from the tree nursery projects in their schools. Responses are presented in Table 4.18

Table 4.18: Tree nursery projects funds handling

Category	frequency	percentage
Don't know	12	27.9
Committee member	7	16.3
Secretary	6	13.9
Treasurer	10	23.3
Chairman	8	18.6
Total	**43**	**100**

Table 4.18 points out that funds were being handled by various individuals such as chairman, treasurer, secretary and committee members accumulatively indicating 72.1%.About 28% of the respondent had no idea as who handled the tree nursery project funds. This gives an implication of lack of coordination in handling tree nursery projects finances.

4.7.2 Account for tree nursery project

Respondents were asked if they had opened an account for tree nursery project. The response is presented in Table 4.19.

Table 4.19 Account for tree nursery project

Category	frequency	percentage
Yes	20	46.5
No	23	53.5
Total	43	100

53..5% of the respondents said that they did not open an account for their tree nursery project while 46.5% response indicated that they had opened an account for tree nursery project. Failure by the majority to open a bank account could have led to misuse of finances and lack of accountability and therefore low chances of sustainability.

4.7.3 Deposits from sale of seedlings

Respondents were asked if they did regular deposits of money from sale of tree seedlings. The results are presented in Table 4.20.

Table 4.20: Regular deposits from sale of tree nursery seedlings.

Category	frequency	percentage
Not at all	22	51.1
Irregularly	8	18.6
Somehow regularly	7	16.3
Regularly	4	9.3
Very regularly	2	4.7
Total	**43**	**100**

Table 4.20 Indicates that deposits from tree nursery sales were not made by most schools with 51.1% of the respondents indicating that that didn't make any deposits at all while 18.6% of the respondents indicated irregular deposits which accumulative total is 69.7%.This is an indication that most schools did not successively manage to create revolving funds in their accounts through regular cash deposits and therefore affecting tree nursery project sustainability.

4.7.4 Tree nursery project presence of financial records

Respondents were asked if they had financial records on tree nursery project in their school. The results are presented in Table 4.21.

Table 4.21 Tree nursery project presence of financial records

Category	frequency	percentage
Yes	23	53.5
No	20	46.5
Total	**43**	**100**

53.5% indicated that they had financial records on tree nursery project in their schools while 46.5% of the respondents said they did not. Financial records were kept by the

majority. However; this may not necessarily translate that the financial records were properly managed.

4.7.5 How money from sale of seedlings is spent

Respondents were asked how they spent money from sale of seedlings. The results of the response are shown in Table 4.22.

Table 4.22: How money from sale of seedlings is spent

Category	frequency	percentage
Don't know	10	23.3
Paying school debts	8	18.6
Paying committee allowances	7	16.3
Buying exercise books	6	13.9
Buying extra seeds and other nursery inputs	12	27.9
Total	**43**	**100**

Table 4.22 shows that 27.9% of the respondents indicated that they spent money they got from sales of seedlings on buying extra seeds and other nursery inputs,13.9%was spent on buying exercise books,16.3% spent on paying committee allowances, 18.6% spent on paying debts while 23.3 of the respondents didn't know. This gives an implication that only 27.8% was pumped back to the tree nursery project to be spent on items of higher multiplier effects and hence negatively affecting sustainability of the tree nursery projects.

4.7.6 Influence of financial practices on sustainability of tree nursery project

Respondents were asked if they agreed with the statement that financial practices influence sustainability of tree nursery project in their school. Results of the responses are shown in Table 4.23.

Table 4.23: Influence of financial practices on sustainability of tree nursery project

Category	frequency	percentage
Don't know	2	4.7
Disagree	10	23.3
Strongly disagree	6	13.9
Agree	17	39.5
Strongly agree	8	18.6
Total	**43**	**100**

Table 4.23 Indicates that 58.1% of the respondents agreed with the statement that financial practices influence sustainability of tree nursery project in their schools, of which 18.6% of the respondents strongly agreed. 13.9% of the respondents disagreed with the statement that financial practices influence sustainability of tree nursery project with 13.9 strongly disagreeing.4.7 of the respondents did not know. Therefore; the majority were in opinion that financial administration practices do influence sustainability of tree nursery projects.

4.8 Marketing strategies and sustainability of tree nursery project

The fourth objective sought to establish how marketing strategies influence the sustainability of tree nursery project in public primary schools in matuga constituency kwale county.To address this objective the respondents were asked if they had been selling seedlings from their school tree nursery project, methods were frequently used to market tree seedlings, average selling prices of the seedlings and if they agreed with the statement that price setting influence marketing of tree nursery seedlings.

4.8.1: Sale of seedlings from their tree nursery project

Respondents were asked if they had been selling seedlings from their school tree nursery project. The results are presented in Table 4.24

Table 4.24: Sale of seedlings from tree nursery project

Category	frequency	percentage
Yes	19	44.2
No	24	55.8
Total	**43**	**100**

Table 4.24 shows that 55.8% of the respondents said No while; 44.2% gave their response as Yes. This implies that less respondents were involved in selling of the seedlings and therefore less marketing hence lowering the levels of project sustainability.

4.8.2. Marketing by word of mouth

Respondents were asked to rate the frequency of marketing tree nursery seedlings by word of mouth. The results of the responses are shown in Table 4.25.

Table 4.25: Marketing by word of mouth

Category	frequency	percentage
Not at all	22	51.2
Least frequent	15	34.9
Somehow frequent	5	11.6
Frequent	1	2.32
Most frequent	0	0
Total	**43**	**100**

Table 4.25 shows that about 51.2% of the respondents didn't at all use the word of mouth to market tree nursery seedlings. Accumulatively only 13.9%of the respondents marketed through mouth word. Therefore marketing by word of mouth was below average.

4.8.3 Marketing during parent meeting

Respondents were asked to indicate the frequency of marketing of sale of tree seedlings during parent meetings. The results are shown in Table 4.26

Table 4.26: Marketing during parent meeting

Category	frequency	percentage
Not at all	9	20.9
Least frequent	16	37.2
Somehow frequent	0	0
Frequent	10	23.3
Most frequent	8	18.6
Total	**43**	**100**

Table 4.26 reveals that 58.1% of the respondents cumulatively indicated that they least marketed the tree nursery seedlings during their parents meeting while 41.9% of the respondents frequently did market the seedlings.

4.8.4 Marketing during chief barazas

Respondents were asked to indicate the frequency of marketing tree nursery seedlings during chief barazas. Results of the responses are shown in Table 4.27.

Table 4.27 Marketing during chief barazas

Category	frequency	percentage
Not at all	9	20.9
Least frequent	13	30.2
Somehow frequent	2	4.7
Frequent	11	25.6
Most frequent	8	18.6
Total	43	100

Table 4.27 Indicates that cumulatively 51.1% of the respondents least used the chief barazas to market the tree nursery seedlings. Least marketing could have led to diminishing sustainability chances.

4.8.5 Marketing through religious gatherings

Respondents were asked to indicate the frequency of marketing of sale of tree nursery seedlings in religious gatherings. Results are indicated in Table 4.28.

Table 4.28 Marketing through religious gatherings

Category	Frequency	Percentage
Not at all	12	27.9
Least frequent	11	25.6
Somehow frequent	4	9.3
Frequent	8	18.6
Most frequent	8	18.6
Total	**43**	**100**

Table 4.28 shows that 25.6% of the respondents least frequently advertised tree nursery seedlings through religious gatherings while 27.9% did not at all advertise. cumulatively only 46.5 of the respondents marketed through religious gatherings.

4.8.6 Marketing through use of posters

Respondents were asked to indicate the frequency of marketing tree seedlings by use of posters. Responses are presented in Table 4.29.

Table 4.29 Marketing through use of posters

Category	frequency	percentage
Not at all	27	62
Least frequent	4	9.3
Somehow frequent	5	11.6
Frequent	7	16.3
Most frequent	0	0
Total	43	100

Table 4.29 reveals that 62.8% of the respondents did not market the seedlings using posters, 9.3% of the respondents did so least frequently,16.3% of the respondents

frequently used posters while none of them most frequently advertised by use of posters. Therefore; there was poor marketing of nursery tree seedling by use of posters.

4.8.7 Average selling price per seedling

Respondents were asked to indicate the average selling price per seedling. Responses are shown in Table 4.30.

Table 4.30: Average selling price per seedling

Category	frequency	percentage
No response	19	44.2
1-------5kshs	17	39.5
6------10kshs	5	11.6
11-----20kshs	2	4.7
Above 20kshs	0	0
Total	43	100

Table 4.30 Shows that accumulatively 51.1% of the seedlings were sold on average for less than 10 kenya shillings per seedling indicating that average prices were relatively low. This may have meant selling seedlings at throw away price that affects profitability and hence negatively affected tree nursery project sustainability.

4.8.8 Price setting influence on marketing of tree nursery project

Respondents were asked agree if they agree with the statement that price setting influence marketing of the tree seedlings. The results are shown in Table 4.31

Table 4.31 Price setting influence on marketing of tree nursery project

Category	frequency	percentage
Don't know	7	16.3
Strongly disagree	4	9.3
Disagree	5	11.6
Agree	17	39.5
Strongly agree	10	23.3
Total	**43**	**100**

Table 4.31 reveals that 62.8% cumulatively agree that price setting influence marketing of tree nursery seedlings since price setting influence sales depending on the market demand and supply.

4.8.9 Level of competition from other tree nursery owners

The respondents were asked to rate the level of competition from other tree nursery owners. Results are indicated in Table 4.32.

Table 4.32 Level of competition from other tree nursery owners

Category	frequency	percentage
Very low	5	11.6
Low	2	4.7
Moderate	7	16.3
High	16	37.2
Very high	13	30.2
Total	**43**	**100**

Table 4.32 indicates that 67.4% of the respondents said that the level of competition from other tree nursery owners was high, 37.2% of the respondents indicated that the level of competition was high and again 16.3% indicated that the level of competition was moderate.

4.8.10 Influence of marketing on sustainability of tree nursery project

Respondents were asked if they agreed with the statement that marketing influence sustainability of tree nursery project in their school. The results of the responses are presented in Table 4.33.

Table 4.33: Influence of marketing on sustainability of tree nursery project

Category	frequency	percentage
Don't know	6	13.9
Disagree	7	16.3
Strongly disagree	4	9.3
Agree	18	41.9
Strongly agree	8	18.6
Total	**43**	**100**

Table 4.33 Indicates that 60.5% of the respondents cumulatively agreed that marketing influence sustainability of tree nursery projects. Methods employed in marketing the nursery tree seedlings affected the general performance of the nursery tree projects.

4.9 Sustainability of tree nursery project

Respondents were asked if they made cash deposits from sale of tree nursery seedlings, if they made profits, rate sustainability and value tree nursery project.

4.9.1 Cash deposit from sale of seedlings

Respondents were asked if they frequently made cash deposits from sale of tree seedlings. The responses are presented in Table 4.34

Table 4.34 Cash deposits from sale of seedlings

Category	frequency	percentage
Yes	23	53.5
No	20	46.5
Total	**43**	**100**

Table 4.34 shows that 53.5% of the respondents indicated that they made cash deposits from their school seedling projects while 46.5% said that they did not. Therefore; it gives an implication that there was average cash deposit from sell of seedlings.

4.9.2 Frequency of cash deposits

Respondents were asked to indicate how frequent they made deposits from sale of seedlings. Results of responses are indicated in table 4.35.

Table 4.35: Frequency of cash deposits

Category	frequency	percentage
No response	2	4.7
Rarely	20	46.5
Less frequently	9	20.9
Frequently	7	16.3
Most frequently	5	11.6
Total	**43**	**100**

Table 4.35 reveals that accumulatively 67.4% of the respondents did not frequently make deposits while, cumulatively 27.9% frequently made deposits. Less frequencies in bank deposits could have affected the nursery tree project since this also implies less revolving funds.

4.9.3 Making of profit

Respondents were asked if they made profits from the sale of tree nursery seedlings. Responses are shown in Table 4.36.

Table 4.36 Making of profit

Category	Frequency	Percentage
No response	9	20.9
Don't know	6	13.9
Never	22	51.2
Sometimes	2	4.7
Always	4	9.3
Total	**43**	**100**

Table 4.36 shows that 4.7% of the respondents indicated that they made profit from the tree nursery project while 9.3% of the respondents always did make profit from the tree nursery project. 51.2% of the respondents never made profit from sale of tree nursery. Hence; the tree nursery project profits were low which lowered levels of revolving funds and hence sustainability.

4.9.4 Value rating of the tree nursery project

Respondents were asked to rate the value level of their schools tree nursery project. Responses are shown in Table 4.37.

Table 4.37 Value rating of the tree nursery project

Category	frequency	percentage
Very low	18	41.9
Low	10	23.2
Moderate	12	27.9
High	2	4.7
Very high	1	2.3
Total	**43**	**100**

Table 4.37reveals 27.9% of the respondents rating the nursery tree project value moderate while; cumulatively only 7% of the respondents rated the value of the tree nursery project as high. 65.1% of the respondents rated the tree nursery project value to be low and hence negatively affected sustainability.

CHAPTER FIVE

SUMMARY OF FINDINGS, DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The chapter presents a summary of the major findings from the results of the study and discusses the findings against what is known on the subject matter from literature. Conclusions based on the discussions and relevant recommendations are also offered in this chapter.

5.2 Summary of the findings

5.2.1 Community participation and sustainability of tree nursery projects in matuga constituency, Kwale county.

The study revealed that majority of the respondents rated the level of community participation in Matuga constituency to be generally low. Only 18.6% respondents rated to be high. This indicates that majority of school community members didn't participate in the school tree nursery projects. Community participation by attendance of meetings in their schools to discuss tree nursery projects was somehow low.74.4% of the respondents had cumulatively rarely attended meetings to discuss tree nursery projects in their schools. This gives an implication that there was limited community participation in discussion on nursery tree projects in schools due to low numbers in meetings. Majority of the respondents didn't publicize the tree seedlings to the local community and the neighboring schools. The level of publicity of tree nursery project to the neighboring community and schools was poor.

5.2.2 Training of project team and sustainability of tree nursery projects in matuga constituency kwale county.

Training in tree nursery management was generally low with 69.8% of the respondents having not been trained which could have affected their ability to manage tree nursery projects effectively hence sustainability.62.8% of the respondents rarely attended training on tree nursery management. Rare attendance to training could have attributed to poor tree nursery management skills and hence negatively affected sustainability.60.5% of the

respondents who attended the training cumulatively indicated that the training was not applicable or relevant. There is an implication that the tree nursery project team might not have been equipped with skills required to manage the tree nursery and therefore reducing the tree nursery projects degree of sustainability.55.8% of the respondents cumulatively agreed with the statement that training on tree nursery management had an influence on sustainability of tree nursery projects.

5.2.3 Financial administration practices and sustainability of tree nursery projects in matuga constituency kwale county.

The study points out that funds were being handled by various individuals such as chairman, treasurer, secretary and committee members accumulatively indicating 72.1%.About 28% of the respondent had no idea as who handled the tree nursery project funds. This gives an implication of lack of coordination in handling tree nursery projects finances.46.5% of the respondents said that they did not open an account for their tree nursery project while 53.5% response indicated that they had opened an account for tree nursery project. Deposits from tree nursery sales were not made by most schools with 51.1% of the respondents indicating that that didn't make any deposits at all while 18.6% of the respondents indicated irregular deposits which accumulative total is 69.7%.This is an indication that most schools did not manage to create revolving funds in their accounts through regular cash deposits and therefore affecting tree nursery projects sustainability.53.5% indicated that they had financial records on tree nursery project in their schools while 46.5% of the respondents said they did not. 27.9% of the respondents indicated that they spent money they got from sales of seedlings on buying extra seeds and other nursery inputs,13.9%was spent on buying exercise books,16.3% spent on paying committee allowances, 18.6% spent on paying debts while 23.3 of the respondents didn't know. This gives an implication that only 27.8% was pumped back to the tree nursery project to be spent on items of higher multiplier effects and hence affecting sustainability.62.8% of the respondents agreed with the statement that financial practices influence sustainability of tree nursery project in their schools, of which 23.3% of the respondents strongly agreed. 32.5% of the respondents disagreed with the statement that

financial practices influence sustainability of tree nursery project with 13.9 strongly disagreeing.4.7 of the respondents did not know.

5.2.4 Marketing strategies and sustainability of tree nursery projects in matuga constituency.

The study revealed that 55.8% of the respondents had not been selling seedlings from their school tree nursery project. Minimal marketing was carried out with about 58.2% of the respondents cumulatively having not used the word of mouth to market nursery seedlings , 58.1% of the respondents least marketed the tree nursery seedlings during parents meeting, 51.1% of the respondents least used the chief barazas while,62.8% of the respondents did not market the seedlings using posters. Accumulatively 51.1% of the seedlings were sold on average for less than 10 kenya shillings per seedling indicating that average prices were relatively low. This may have negatively affected tree nursery project sustainability. The study further reveals that 23.3% and 39.5% of the respondents strongly agree and agree respectively that price setting influence marketing of tree nursery seedlings. 67.4% of the respondents said that the level of competition from other tree nursery owners was high. This implies selling seedling cheaply or at a throw away prize and hence affecting sustainability. 60.5% of the respondents cumulatively agreed that marketing influenced sustainability of tree nursery projects in their schools. Methods employed in marketing the nursery seedlings were not effective hence affected sustainability of the tree nursery projects.

5.3 Discussion of findings

In this section the study seek to discuss the research findings based on the objectives of the study and subjecting the findings to relevant literature and further concluding on each of them.

5.3.1 Community participation and sustainability of tree nursery project in matuga constituency.

The study indicates that majority of the community members never attended meetings to discuss the tree nursery project and those who attended did that less frequently. Publicity of tree seedlings to the neighboring schools and communities was not carried out by the

majority. Generally ,the study reveals that community participation in tree nursery project in matuga constituency was wanting. A locally organized and planned community intervention, individual stakeholders and other development workers collaborate on a range of complementary interventions in order to achieve set project development objectives (Rifkin 2011). Success of projects in a community depends on the level of involvement and participation of community members (Kaplan and Kaplan, 1989). Participation in management of projects can further be used instrumentally to improve tree nursery project outcomes, remove or ease conflict, increase acceptance and achieve greater sustainability of the project (Sims, Sinclair 2008). The project could have probably produced good returns and sustainable if the community participated actively.

5.3.2 Training on tree nursery management and sustainability of tree nursery projects in matuga constituency.

Majority of the respondents never attended any training and the frequency of attendance to meeting was very low for those few who attended. Tree nursery project training was indicated as not applicable or relevant to sustainability of tree nursery projects. Therefore; the study revealed tree nursery management had limited training. Planning and implementation of effective training program is requisite to sustainable tree nursery projects (Taylor and Francis,2006). Training of people enables them to participate in tree nursery projects in a community. It is critical in creating public awareness and involvement at all stages of the project. (Ssembijiwe 1998). Training should focus on tree seeds and seedlings relevant, to a specific geographical location, soil type, nursery establishment and care (Simmon, 2012). If proper training was conducted on the tree nursery management team, performance could have been attained and hence the project sustainability.

5.3.3 Financial management practices and sustainability of tree nursery projects

The study further revealed that financial management practices were poor by the fact that the majority did not maintain proper records of finances which is an indication of lack of skills and competencies in financial management. Project leaders and managers should be equipped with basic skills in financial management such as bookkeeping and cash

management and must be done according to certain financial controls to ensure integrity in bookkeeping process. Generating financial statements and analyzing them is important so as to understand the financial conditions of the project (Fridson and Alvarez, 2011). Financial management and administration typically results in very relevant and realistic budgets and therefore achievement of project goals (Campsey et al 1995). Sound business management skills are essential to operate an economically successful nursery business (Ajayi,2002).

5.3.4 Marketing strategies and sustainability of tree nursery project in matuga constituency kwale county.

The study found out that minimal marketing was carried out through word mouth, during schools parent meetings, chief barazas and through posters. Therefore the marketing strategies employed were ineffective and hence affected sustainability of nursery tree projects in matuga constituency kwale, county. Many rural people depend on products from trees. Marginal improvements from trees can be important to livelihood hence the need to aggressively market the tree seedlings to the rural farmers (Kjaer and Nathan, 2000). The nursery tree venture is a highly competitive pursuit; there will always be a place for enthusiastic, well organized individuals who will always find a niche place market for the plants (Mailuma et al, 2006). Success and sustainability of collective marketing is a function of not only the supply and demand of product, but also coordinated action of individual members and support from external organization (Stockridge and Doward,2003). Appropriate marketing and networking strategy leads to increased sales, distribution of tree seedlings and increased cost effectiveness and sales turnover.(Nicholson 2001). Due to ineffective and minimal marketing strategies most of the tree nursery projects in matuga constituency were unprofitable hence affecting the sustainability of the projects.

5.4 Conclusions

In assessing community participation on the sustainability of tree nursery projects in schools in Matuga constituency, Kwale County**.** There is an implication that majority of school community members didn't participate in the school tree nursery projects .This was due to the fact that community participation by attendance of meetings in their schools to discuss tree nursery projects was somehow low. There was rare attendance to meetings to discuss tree nursery projects in their schools. There was limited community participation in discussion on tree nursery projects in schools due to low numbers in meetings. Though respondents did publicize the tree seedlings, the level of publicity of tree nursery project turned out to be below average.

On the part of training in management of tree nursery projects in Matuga constituency, Kwale County,the study revealed that training in nursery tree management was a bit wanting with 69.8% of the respondents having not been trained which could have affected their ability to manage tree nursery projects . Rare attendance to training could have attributed to poor nursery tree management skills and hence negatively affected sustainability. Training was not applicable or relevant. There is an implication that the nursery tree project teams were not well equipped with necessary skills required to manage nursery trees and therefore reducing the tree nursery projects degree of sustainability.

In determining financial administration practices influence on sustainability of tree nursery projects in schools in matuga constituency kwale county, the study points out that poor handling of tree nursery project's finance was evident due to the fact that funds were being handled by various individuals, bank deposits from tree nursery sales were not made by most schools and those who managed to do it was however irregular. Money gotten from sale of seedlings was not spent on buying extra seeds and other nursery inputs, an implication that little was pumped back to the nursery tree project to be spent on items of higher multiplier effects and hence affecting sustainability.

Further the study revealed that Marketing strategies influence on sustainability of the tree nursery projects in schools in Matuga constituency, Kwale County did not influence sustainability of tree nursery projects. This was due to the fact that there was least marketing of the tree nursery seedlings by word of mouth, during parents meetings as well as in chief baraza and use of posters. Seedlings selling prices were relatively low due to high level of competition from other tree nursery owners. Methods employed in marketing the tree nursery seedlings project were not effective hence affected sustainability of the tree nursery projects.

5.5 Recommendations for the study

The study recommendations are:

i. To enhance community participation in the tree nursery projects in schools there is need to mobilize and sensitize the community on the importance of participating in such projects since they uplift the people's lives and change the environment they live in for their own good.
ii. Adequate and relevant training that meets the specific needs of the people ought to be conducted before other similar programs are rolled out so as to thorough equip the community with the appropriate skills and gain confidence to tackle such projects.
iii. The team expected to implement such programs should also be equipped with financial management skills and practices so as to be able to carry out such mandate and to avoid misappropriation of funds which could in one way improve to strike a balance between inputs and outputs.
iv. The specific schools need to come up with appropriate marketing techniques so as to ensure proper and timely disposal of their products which in turn bear profit to re-invest back and increase the tree nursery chances of sustainability.

5.6 Recommendation for further studies

The study recommends silvi cultural practices and nursery indigenous tree species variables as other areas for investigation which may influence sustainability of tree nursery projects.

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APPENDICES

APPENDIX I: LETTER OF INTRODUCTION

REGINA KUTUTA
P.O BOX 5699-00200
NAIROBI, KENYA.

Dear respondents,

I am a master's student at the University of Nairobi and collecting data on the factors influencing the sustainability of tree nursery projects in Matuga constituency,Kwale county. You have been selected to provide the desired information. This is a request for your participation in responding to the attached questionnaire. Your identity will be treated with utmost confidentiality and the information provided will be used purely for the purpose of the study and no other reason whatsoever. Your response will be highly appreciated.

Thank you for your cooperation.

Yours faithfully,

Regina Kututa

APPENDIX II: QUESTIONNAIRE

This questionnaire is intended to collect data that will be used in a study to assess the factors influencing the sustainability of tree nursery projects in Matuga, Kwale County. In answering questions please remember that there are no correct or wrong answers and that your honest opinion is the most important. Your contribution towards this study is highly appreciated. I look forward to your response.

PART A**: Demographic characteristics**

Please, mark with a tick where appropriate.

1.(i)Gender : male [ ] female [ ]

(ii)Age in years: below 30[ ] 31-- -40[ ] 41---50[ ] above 50[ ]

2. Level of education

Primary level: secondary level [ ] certificate [ ] diploma [ ] others [ ]

3. Position held in school

Chairman [ ] secretary [ ] treasurer [ ] Smc member[ ] Teacher[ ]

4. PART B**: Tree nursery project**

Is your school tree nursery project operating? Yes [ ] No [ ] don't know [ ]

5. Do you agree that the tree nursery project is performing well in your school? (In a likert scale of 1—5) whereby,

5 = strongly agree [ ]

4 = agree [ ]

3 =Neutral [ ]

2 = disagree [ ]

1= strongly disagree [ ]

6. Tick according to the appropriate range of seedling grown in your project.

No response [ ]

1---2 [ ]

3---4 [ ]

5---6 [ ]

Above 7 --- [ ]

PART C: **Community participation of nursery tree project**

7. How would you rate the overall level of schools community participation in your tree nursery project? (In a scale of 1--5)Whereby;

5= very high [ ]

4=high [ ]

3=moderate [ ]

2=low [ ]

1=not at all [ ]

8. (i)Have you ever attended any meeting to discuss the tree nursery project in your school?

Yes [ ] No [ ]

(ii)If yes, how often have you been attending the meetings? (In a scale of 1—5) Whereby;

5=Very frequently [ ]

4=Frequently [ ]

3=Somehow frequently [ ]

2=Rarely [ ]

1=Not at all [ ]

9. (i)Do you participate in publicizing the tree seedlings to your local community?

Yes [ ] No[ ]

(ii)If yes, how would you rate the publicity level of tree seedlings to neighboring schools and community? (In a scale of 1—5)

5=Good [ ]

4=Fair [ ]

3=Poor [ ]

2=Very poor [ ]

1= No response [ ]

PART D: **Training in tree nursery management**

10. (i)Have you ever been trained on tree nursery management? Yes [ ] No [ ]

If yes, how frequent are the training sessions ?

(In a scale of 1-5)Whereby

5=Very frequently

4=Frequently

3=somehow frequently

2=rarely

1=don't know

11.(i)In your opinion, how relevant has the training been?(in a scale of 1—5)

5=very relevant [ ]

4=relevant [ ]

3=somewhat relevant [ ]

2=not relevant [ ]

1=not applicable [ ]

12. In your opinion, do you agree that training in tree management influence sustainability of tree nursery projects in schools? .(Answer in a scale of 1—5)Whereby;

5=strongly agree [ ]

4=somewhat agree [ ]

3=agree [ ]

2=don't know [ ]

1=don't agree [ ]

PART E: **Financial administration practices**

13. Who is the handler of funds for your school tree nursery project? (In a scale of 1-5)Whereby;

5= The school chairman [ ]

4= The school treasurer [ ]

3= The secretary [ ]

2=School committee member [ ]

1= Don't know [ ]

14. (i)Do you have a bank account for the tree nursery project ?Yes[ ] No[ ]

(ii)If yes, how regularly do you deposit money from sale of seedlings? (In a scale of 1-5) whereby;

5=Very regularly [ ]

4=Regularly [ ]

3=Somehow regularly [ ]

2=Irregularly [ ]

1=Not at All [ ]

15. (i) Do you have financial records on tree nursery project in your school.

Yes [ ] No [ ]

(ii)If yes, how often are they updated? (In a scale of 1--5)Whereby;

5=quite often [ ]

4=often [ ]

3=Rarely [ ]

2=never [ ]

1=don't know [ ]

16. How do you spend money from the sale of seedlings?

5=Don't know [ ]

4=Purchasing sports equipments [ ]

3=paying allowances for committee members [ ]

2=paying school debts [ ]

1=Buying exercise books [ ]

17. In your opinion, do you agree that financial practices influence sustainability of the tree nursery project in your school nursery?

5= strongly agree [ ]

4=agree [ ]

3=strongly disagree [ ]

2= disagree [ ]

1=dont know [ ]

PART F**: Marketing of tree nursery project**

18. Have you been selling seedlings from your school tree nursery project? Yes [ ] No [ ]

19. Which of the following methods have been used to market the tree seedlings? (Using a scale of 1-5, rate the following methods)Whereby 5 is the most frequently used method and 1 Not at all.

	Most frequent	frequent	somehow frequent	least frequent	Not at all
Word of mouth	[5]	[4]	[3]	[2]	[1]
During parent meeting	[5]	[4]	[3]	[2]	[1]
Chief barazas	[5]	[4]	[3]	[2]	[1]
Religious gatherings	[5]	[4]	[3]	[2]	[1]
Posters/banners	[5]	[4]	[3]	[2]	[1]

20. What is the average selling price per seedling?

No response [ ]

1-------5 shillings [ ]

5------10 shillings [ ]

10-----20 shillings [ ]

Above 20 shillings [ ]

21. Do you agree that price setting influence marketing of tree seedlings?

5=strongly agree [ ]

4=agree [ ]

3= disagree [ ]

2=strongly disagree [ ]

1=don't know [ ]

22. How do you rate the level of competition from other tree nursery owners?

5=very high [ ]

4=high [ ]

3=moderate [ ]

2=low [ ]

1=very low [ ]

23. In your opinion, do you agree that marketing strongly influence the sustainability of tree nursery project in your school?

5=strongly agree

4=agree

3=strongly disagree

2=disagree

1=don't know

PART E: **Sustainability of tree nursery project**

24.(i)Do you make cash deposits from sale of tree nursery seedlings?

Yes [ ] No [ ]

(ii)How frequent do you make the deposits?

5=Always

4=Sometimes

3=Never

2=Don’t know

1=No response

25.(i)Do you make profit from sale of seedlings from your school tree nursery?

5=no response [ ]

4=don’t know [ ]

3=never [ ]

2=low [ ]

1=very low [ ]

28. How do you rate the level of tree nursery project sustainability in your school? (In a scale of 1-5)Whereby;

5=very high [ ]

4=high [ ]

3=moderate [ ]

2=low [ ]

1=very low [ ]

26.(i) Do you attach any value to your tree nursery project? Yes [ ] No [ ]

(ii) If yes, how do you rate the value?

5=Very high [ ]

4=High [ ]

3=Moderate [ ]

2=Low [ ]

1=Very low [ ]

27.(i) In your opinion, do you agree that tree nursery projects are sustainable?

Yes [ ] No [ ]

(ii)If yes explain,----------

End of Questionnaire: THANKYOU FOR RESPONSE.

APPENDIX III: RESEARCH PERMIT