

**RESOURCE MOBILIZATION FOR PROMOTION OF SUSTAINABLE AGRICULTURE
IN PUBLIC LIBRARIES: CASE OF THE PARTNERSHIP BETWEEN KENYA
NATIONAL LIBRARY SERVICE AND NATIONAL FARMERS INFORMATION
SERVICE**

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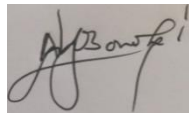
**A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILMENT OF THE
REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF LIBRARY
AND INFORMATION SCIENCE, DEPARTMENT OF LIBRARY AND INFORMATION
SCIENCE, UNIVERSITY OF NAIROBI**

FEBRUARY 2023

DECLARATION

This research project report is my original work and has not been presented to any university for any award or anywhere else for academic purposes.

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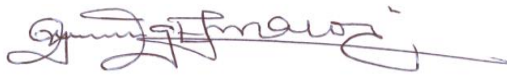
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DEDICATION

I dedicate this project to my Mother Rosa Kerubo Nyangwono who did not have formal education but was full of wisdom, tacit knowledge and loved education.

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It is customary at the end of any research project to thank everyone who contributed to its successful completion. As for me, I have been overwhelmed with assistance in one way or another by many; so many individuals have helped me in many ways during my study and research process. However, some played a more significant and consistent role: My supervisor Dr. Elisha Makori who guided me from the proposal stage, part of the data analysis process, and throughout the writing process. Indeed, without them, this work could not have been accomplished. Indeed, without them, this work could not have been accomplished.

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TABLE OF CONTENTS

Title Page	i
Declaration	ii
Dedication	iii
Acknowledgements	iv
Table of Contents	v
Abstract	x
List of Tables	xi
List of Figures	xii
List of Abbreviations and Acronyms	xiii
CHAPTER ONE	1
INTRODUCTION	1
1.1 Background to the Study	1
1.1.1 Public Libraries Global Perspective	2
1.1.2 Public Libraries in Africa	4
1.1.3 Public Libraries in Kenya	7
1.2 Kenya National Library Service	9
1.2.1 National Farmers' Information Service	11
1.3 Statement of the Problem	12
1.4 Purpose/Aim of the Study	13
1.4.1 Objectives of the Study	13
1.5 Research Questions	14
1.6 Assumptions of the Study	14

1.7	Significance of the Study	14
1.8	Scope of the Study	15
1.9	Limitations of the Study	15
1.10	Operational Terms and Concepts	16
1.11	Organization of the Study	17
1.12	Chapter One Summary	17
	CHAPTER TWO	18
	LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK	18
2.1	Introduction	18
2.2	Evolution of Agriculture	18
2.3	Libraries Awareness and Resource Mobilization	21
2.4	Library Familiarity and Usage of Information Resources	22
2.4.1	Library Competency in the Context of KNLS	23
2.5	Information Literacy	24
2.5.1	Computer Literacy	27
2.6	Electronic Resources	28
2.7	Conceptual Framework	29
2.8	Chapter Two Summary	30
	CHAPTER THREE	32
	RESEARCH METHODOLOGY	31
3.1	Introduction	31
3.2	Research Design	31
3.3	Area of Study	31

3.4	Target Population	32
3.5	Sampling Techniques	32
3.6	Sample Size	32
3.6	Data Collection Methods	33
3.6.1	Questionnaire	33
3.6.3	Document Review	33
3.6.2	Interview Schedule	34
3.7	Research Instruments	34
3.7.1	Pilot Study	34
3.7.2	Validity	34
3.7.3	Reliability	34
3.8	Ethical Considerations	35
3.9	Data Collection Procedures	35
3.10	Data Analysis and Presentation	36
3.11	Chapter Three Summary	36
	CHAPTER FOUR	37
	DATA PRESENTATION, ANALYSIS AND INTERPRETATION	37
4.1	Introduction	37
4.2	Response Rate of Respondents	37
4.3	Profile of Respondents	37
4.4	Collaboration Between KNLS and NAFIS in Promoting Sustainable Agriculture	39
4.5	Capacity of KNLS in Resource Information Provision in Reference to Sustainable Agriculture	43

4.6	Perception of KNLS Staff towards Collaboration and Partnership to Advance Sustainable Agriculture	45
4.7	Challenges Faced by KNLS and NAFIS in the Promotion of Sustainable Agriculture	48
4.8	Chapter Four Summary	51
	CHAPTER FIVE	52
	SUMMARY OF THE FINDINGS, CONCLUSION AND RECOMMENDATIONS	52
5.1	Introduction	52
5.2	Summary of the Findings	52
5.2.1	Collaboration between KNLS and NAFIS in Promotion of Sustainable Agriculture	52
5.2.2	Capacity of KNLS in Resource Information Provision in Reference to Sustainable Agriculture	53
4.2.3	Perception of KNLS Staff Towards Collaboration and Partnership to Advance Sustainable Agriculture	54
5.2.4	Challenges Faced by KNLS and NAFIS in the Promotion of Sustainable Agriculture	54
5.3	Conclusion	55
5.4	Recommendations	56
5.5	Suggested Areas for Further Study	56
5.5.1	Resource Mobilization	56
5.5.2	Comparative Research	57
	References	58
	Letter of Introduction	64
	Research Permit	65
	Questionnaire for KNLS Librarians and NAFIS staff	66

ABSTRACT

The study aimed at evaluating extent of resource mobilization for promotion of sustainable agriculture in public libraries in Kenya with a special focus on the partnership between Kenya National Library Service (KNLS) and National Farmers Information Service (NAFIS). The objectives included: examining the collaboration between KNLS and NAFIS in promoting sustainable agriculture, finding out the capacity of KNLS in providing the information resources required to advance sustainable agriculture, determining the perception of library staff on collaboration and provision of policy recommendations in harnessing structured partnership to advance sustainable agriculture and finding out challenges that faced KNLS and NAFIS in promoting sustainable agriculture. The study used a case study approach to establish the extent to which resource mobilization can promote sustainable agriculture. In addition, a descriptive study was used to narrate the features of the variables of interest in this case. The area of study was KNLS Buruburu, which hosts a national farmer's information service. It will also involve key stakeholders within the institutions as well as farmers. The key informants were the target population who were directly involved with the project including KNLS staff (librarians) in charge of NAFIS, NAFIS staff, and agricultural extension officers/field officers under the ministry of agriculture and farmers. The study was tiered and adopted purposive sampling for NAFIS, staff as well as agricultural extension officers/field officers under the ministry of agriculture whereas random sampling was adopted for farmers. The findings of the study are critical for the government in informing policy by availing existing gaps and viable ways of promoting sustainable agriculture through information provision. The public and key stakeholders in the information industry, as well as the agricultural sector, shall benefit through knowledge and awareness of the utilization of information resources as well as ways of harnessing agriculture in the journey towards the promotion of sustainable agriculture. In addition, scholars will identify gaps in the fields of agriculture, innovation and sustainable development and pursue further research.

LIST OF TABLES

Table 1: Sample Size.....	33
Table 2: Profile of Repodents.....	38
Table 3: Strategies to Advance Promotion of Sustainable Agriculture	42
Table 4: Provision Measures to Promote Sustainable Agriculture	44
Table 5: Perception of KNLS and NAFIS Staff on Collaboration and Partnership to Advance Sustnable Agriculture.....	47
Table 6: Extent of Impact on Promotion of Sustainable Agrciculture.....	50

LIST OF FIGURES

Figure 1: Conceptual Frameworkon Resource Mobilization	30
Figure 2: Extent of Resource Mobilization for Promotion of Sustainable Agriculture	40
Figure 3: Level of Collaboration that Promotes Sustainable Agriculture by KNLS and NAFIS..	41
Figure 4: State Factors Influencing Access to Information Resources	49

LIST OF ABBREVIATIONS AND ACRONYMS

EAIRO:	East African Industrial Research Organization
ICIPE:	International Centre of Insect Physiology and Ecology
ICT:	Information Communication Technology
IFLA:	International Federation of Library Association
KEBS:	Kenya Bureau of Standards
KEMRI:	Kenya Medical Research Institute
KENSIDOC:	Kenya National Scientific Information and Documentation Centre
KIE:	Kenya Institute of Education
KIRDI:	Kenya Industrial Research Institute
KNLS:	Kenya National Library Service
NAFIS:	National Farmers Information Service
NCST:	National Commission for Scheduled Tribes
SDG:	Sustainable Development Goals
SPSS:	Statistical Packages for Social Sciences
UNEP:	United Nations Environmental Programme
UNHCR:	United Nations High Commission for Refugees
UNESCO:	United Nations Education Science and Cultural Organization.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

In the agricultural industry, sustainability is multidimensional complex idea it includes the economical aspect, where, in essence, a sustainable agricultural engagement should be a profitable entity that contributes to a well-defined economy, and the social aspect which entails catering to the farm-hands and exhibiting a mutually beneficial relationship with the community, and the environmental aspect that entails ensuring proper balance in the utilization of the eco-system (Chirisa, 2021). To this end, sustainable agriculture can be achieved through an ineffective and efficient mix of key aspects that define its building blocks. Information is paramount in the journey towards sustainable agriculture. It is therefore understood that the pertinent role played by libraries in the attainment of sustainable agriculture cannot be wished away. As such to be able to determine to what extent libraries, and in this case public libraries, mobilise resources to attain sustainable development in the agricultural sector is critical (Jain & Shone, 2020).

The major instruments for mobilizing resources to enhance sustainable agricultural productivity are the use of available resources, donor funding, government funding as well as resource sharing. Libraries are important institutions that help in the achievement of sustainable development goals; they also offer support to sustainable development besides promoting access to information and contributing to improved results in agricultural development (Kamau & Owano, 2018). People can make better decisions for themselves by having access to knowledge. Communities that have access to timely and relevant information are better positioned to alleviate poverty and inequality, improve agriculture, provide quality education and support people's health, culture, research and innovation. "End hunger, achieve food security, improve nutrition, and advance sustainable agriculture" is the second SDG. IFLA

further cuts a niche and places an onus on the role of libraries including extension services and specialist agricultural libraries to offer accessible data and research on crops, market information and farming methods to support flexible and productive agriculture (Musacchio et al., 2021).

Libraries have evolved in leaps and bounds from the primary basic libraries that constitute documents of the oldest type of composing such as the clay tablets in cuneiform content found in Sumer, some tracing back to 2600 BC (Kisak, 2017). Individual or private libraries comprised composing books that existed in traditional Greece in the 5th century BC. In the 6th century, the Mediterranean world's extraordinary libraries remained those of Alexandria and Constantinople. Timbuktu libraries were additionally developed and pulled by researchers across the globe around this period. Current libraries on the other hand are progressively imagined as spots to get unhindered admittance to data in numerous configurations and from numerous sources (Jain & Shonhe, 2020). Libraries are expanding their services outside the real walls of a building by making material available electronically and by assisting caretakers in researching and analyzing vast amounts of data using variety of technological resources. Libraries are increasingly evolving into community hubs where projects are presented and people engage in deep learning (Ryholt, 2019). According to this author, libraries and information access go hand in hand and improve results for all of the sustainable development goals by promoting global literacy such as digital, media and information literacy and skills.

1.1.1 Public Libraries Global Perspective

Globally, 320,000 public libraries and more than a million national, legislative, university, school, research, and special libraries ensure that everyone has access to knowledge and skills (Nwaohiri, 2020). This thus makes libraries pertinent establishments for everyone, especially in the digital era. Libraries avail ICT sub structure and infrastructure, aid individualism progress the ability to successfully utilize information, and preserve data or information to facilitate continuing access by the next generations (Nwaohiri, 2020). Libraries are well-defined, trusted networks of local organizations that can reach out successfully to all portions of the people. Libraries without Borders in the world playing field provide access to resources as well as information in refugee camps via the Ideas Box that allows individuals to get information through satellite internet links, in addition to that which relates to books. In part, the boxes are supported by the United Nations High Commission for Refugees. Worldwide

libraries have cut a niche by playing a significant role in safeguarding in addition to preserving critical documentary heritage in a variety of forms for future generations. The culture of information reinforces local people and backs up inclusive and sustainable development of major cities within the entire Globe Thompson, (2019). According to Glope Thompson, the sustainable development goals are supported by worldwide libraries in the following ways:

- 1) Bridge access to information gaps in addition to helping civil society, government as well as businesses to appreciate local information needs better.
- 2) Enhance universal literacy such as digital media and information literacy and skills, supported by dedicated members of staff.
- 3) Provide a system of distribution sites for programs and services of the state.
- 4) Play the part at the heart of the academia and research community.
- 5) Propagate digital inclusion via access to ICT.
- 6) Conserve and provide access to the global culture and heritage.

A total of 250,000 individuals get jobs through their public library annually in the European Union. For instance, public libraries assisted 4.1 million Europeans with employment requests and further aided another 1.5 million Europeans in applying for jobs (Kamau & Owano, 2018). Public access to training as well as ICT facilitates persons to make library online job applications. In the United States, on the other hand, libraries such as the biodiversity heritage library is a continuous and ongoing open access digital libraries for literature that deals with biodiversity, this also includes over 46 million pages from more than 170,000 literature volumes on biodiversity nature (Hechavarria & Libraries, 2017). These have been published from the 15th - the 21st centuries in close to forty languages. Researchers are using the information to map the population, ecosystem development and identify new species, and inform future climate change models. Such information as well as data can be ideal for advice on conservation, responsible resource management and sustainable development policies. The collection guarantees that every individual can access needed data and information to study and save Earth's ecosystem and species (Kolodziejczy & Szykielewska, 2017).

1.1.2 Public Libraries in Africa

Africa is frequently viewed as a country instead of a continent composed of fifty-four nations, each with its character and predetermination (Kevane, 2019). The main advancement throughout the entire existence of contemporary Africa is that more than twenty of its nations have seen dramatic financial improvement, with development rates averaging 5-7 percent of yearly GDP. Such nations, notwithstanding, tend not to show up in the global media, which rather routinely sensationalizes the narrative of a landmass in hot water. The narrative of librarianship in Africa has regularly been written along the same lines. There are obviously a few nations in Africa where librarianship is faring inadequately monetary breakdown or common wars or were strict and ethnic oppression has overcome majority rule government. There is in any case, another side to the African story that is told less frequently. Right now, the financial environment of numerous African nations is exceptionally sure. Such states have encountered quick friendly, social, and financial turn of events. The narrative of librarianship has regularly reflected this improvement inside singular nations.

The understanding of the new history of African library improvement should not be built on missing data or an absence of assets; rather, knowledge must be acquired from what exists. The fate of librarianship in Africa, which is a luxuriously assorted mainland with numerous nations and types of librarianship, is promising. During the last part of the 1970s to mid-'90s African libraries battled as economies got stale and nations had to acquire monetary assets African culture/mchombu and beukes-not right 115 from global moneylenders, like the IMF, whose tough conditions included exacting underlying change programs. Southern Africa was under the shadow of politically sanctioned racial segregation, and war seethed in the sub-Saharan district during those many years, which implied that many of the nations in Southern Africa had to redirect whatever scant assets they needed to subsidize military powers on the side of the battles for freedom. The importance of the Eurocentric model of African librarianship was

truly tested by the rise of another age of curators. Significant number of libraries found in Africa during the time frame 1970 to 1990 had been made by the past pioneer governments. Probably the most dynamic offices in the advancement of public and scholastic libraries included UNESCO and the British Council, the two of which worked affected by Western reasoning. At the end of the day, the organizations worked under the supposition that libraries were something to be thankful for to have (Schlettwein, 2018).

ICTs are essential instruments for providing information with value to assist sustainable development. However, incorporating ICTs into their services presents several obstacles for many institutions and organizations, including libraries. However, the dissemination of knowledge is crucial to the development and expansion of any country. Efforts must be made to facilitate the use of ICTs in all sectors, as well as in the country's ICT and library services, Olise (2010) opined that ICTs are cutting-edge innovations that Africa cannot ignore. ICTs are important tools that must be used to achieve and sustain development, he continued. ICT-driven globalization is currently having a tremendous influence on library practices. In various areas and facets of our society, ICTSs are important and practical tools for sustainable development. ICTs offer ways to achieve developmental objectives in many areas like agriculture, business, education and health. According to Olise (2019), traditional materials including books, journals, newspapers, and other library resources have become computerized as a result of the introduction of ICTs into education. Additionally, because of this, there is now a virtual library. Using ICT, educational scholars may easily access current literature resources. ICTs foster cross-locational collaboration among scholars as well. The internet offers current information on any topic. The internet also makes it simple to obtain older study results. ICTs are being utilized in agriculture to give farmers information on their plants and animals, which will ultimately increase their output.

Knowledge is generated, arranged, and shared through libraries. It serves as a repository for information in both print and electronic modes. Libraries come in a variety of forms, including academic, school, public, national, and special libraries. No matter what sort of library it is, it serves a variety of purposes. Afolabi and Abidoeye (2019) indicate that the main function of a library is to promote people's pursuits of education, recreation, culture, economic development, and technology in their local communities. The library is without a doubt one of the institutions that can assist the country in achieving and maintaining growth. If the library continued to rely on conventional means of spreading knowledge, it would be unable to fulfil its mission. Therefore, to promote economic, social, and political sustainability, libraries must use trustworthy and potentially useful tools like the internet and other ICTs. Olise (2019) indicates that sustainable development is developing for the current and future. It is the process of ensuring that the current progress is preserved and perpetuated in the future.

Sustainable development focuses on the necessity to create a country for the future through the process of improving the lives of the population. According to Adejumo and Adejumo (2018), SD is the effectual resource management for the survival of humans by considering both the current and future generations. To attain sustainable development globally, it is vital to have in place timely information that leads to the correct decision-making and informed actions. The citizens ought to bridge the digital divide for easy information access. Bradley (2018) stated that libraries have been contributing to sustainable development by offering data and knowledge access in support of informed research vital for the achievement of sustainable development goals. The advent of ICT has introduced various avenues for libraries to creatively utilize ICT to enhance the delivery of services to end-users.

1.1.3 Public Libraries in Kenya

In Kenya, libraries have a recent history dating from the advent of western civilization. The only foreigners frequently spotted along the Kenyan coast up to the arrival of the Europeans in the second half of the 19th century were Arabs from the state of Oman. It was never known that the Arabs were considering building libraries there. Some European explorers and missionaries began visiting the East African region in the latter part of the 19th century (Mutungi, 2018). The Church Missionary Society (CMS) founded mission station in Frere Town, close to Mombasa, in 1887 for recently liberated slaves. According to reports, this station included a library devoted only to missionary activity (Rosenberg 2020). The colonial and post-independence centuries are covered by the historical development of libraries in Kenya.

During the post-independence era, rapid growth has been witnessed, for instance for special libraries, the nation saw fast progress. As soon as a new sovereign state gained its independence, a variety of research and development organizations were set up to help the nation develop its natural, human, and financial resources. Numerous special libraries were founded to help these organizations accomplish their goals. The Central Bank of Kenya library founded in 1967 helped the bank's workers with knowledge, while the International Centre for Insect Physiology and Ecology (ICIPE) established its library operating from 1973 to support the centre's research scientists (Mutungi, 2017). To assist the institute's research initiatives, the International Centre for Research into Animal Diseases library was established in 1977 while, the library of the United Nations Environmental Programme (UNEP) and its parent organization was founded in 1973 with the main aim of creating and maintaining a comprehensive collection of data on global environmental status.

As a resource for the parent body, the Kenya Institute of Education (KIE) library was created in 1974 with the Kenya Bureau of Standards (KEBS) being a government-mandated

organization that was founded in 1975. The library has a special mandate for gathering, collecting, preserving, and disseminating data on standards from domestic and international organizations. Established in 1977, the Industrial Research and Development Institute (KIRDI) and its library. The East African Industrial Research Organisation (EAIRO), an East African Community organization that failed in 1977, served as the inspiration for KIRDI. To assist the numerous research projects being conducted by the organization, the library offers scientific, technical, and industrial information. Following the failure of Innovation No.28, June 200, the Kenya Medical Research Institute (KEMRI) and the Kenya Marine and Fisheries Research Organization (KEMFRO) were created together with KIRDI in 1977, the East African Community (Otike, 1987). The responsibility of assisting the research programs being conducted at the parent organizations falls to the libraries. An Act of Parliament from 1977 established the National Council for Science and Technology (NCST), which is the parent organization of the Kenya National Scientific Information Documentation and Communication Centre (KENSIDOC).

NCST was assigned duties of establishing the priorities for scientific and technological activities; providing advice on a national science policy; providing advice on the organizational framework for scientific activities, including the creation of research councils, research communities, and research establishments; and conducting necessary research surveys and investigations. KENSIDOC, as an information division of NCST, is in charge of gathering, organizing, storing, and disseminating data related to research projects carried out in science and technology. On the other hand, public libraries opened their doors to everyone, regardless of their age, religion, ethnicity, or socioeconomic status. Africans now have access to all libraries that were previously only available to Asians and Europeans. According to Joute (2014), resource mobilization is a process of finding out, as well as how to acquire the needed resources to carry out various activities on library services. Its focus is on what is necessary to

be assessed and the type of resources that are currently available and how those resources are used and how additional ones can be identified and exploited.

Resource mobilization can be done in various ways. These ways are; endowment of the library and donor cultivation, resource sharing, government funding, local support, friends' groups and professional public relations programs. Using a strategy that is diversified for mobilizing resources is more advantageous in that it will make libraries have a resource base that is diversified which can enable the prevention of problems that arise due to the loss of any source (Lwoga& Chilimo, 2019). Comprehensive processes are involved in resource mobilization in which strategic planning is required for effective user-centric collections. Close communication, program funding, and efficient donor negotiations including effective resource management, image improvement and organizational credibility. The resource mobilization process identifies the essential resources for developing, implementing and continuing works targeted to achieving the library's set objectives (Joute, 2014).

1.2 Kenya National Library Service

The Kenya National Library Service board's mandate is to establish, promote, and equip Kenyan libraries with the board's operations being governed by the State Corporations Act, Cap. 446 of Kenyan law. In 1967, KNLS started providing services from temporary locations but has since been successful in establishing a purpose-built headquarters in Nairobi. The library has grown into a nationwide network of public libraries that includes the headquarters, provincial, district county libraries, and community library services from a small staff of under 10 and an initial collection of 25,000 books inherited from the EALB Library in Nairobi (Weche 2012: 40). To provide library remote services, a "camel" library service was introduced in 2011 in the arid North Eastern Province of Wajir. Additionally, efforts are being made to bring "bicycle" library services, popularly known as "boda-boda," to remote regions of western

Kenya where mobile vans cannot operate. KNLS was given a second duty as a national library in 1987 when it became a host of a national reference and bibliographic organization. Since that time, KNLS has served as Kenya's legal depository library. KNLS also published the Kenya National Bibliography, national bibliography. KNLS and the Carnegie Corporation of New York have partnered with KNLS to be recognized as an African public library service leader. Carnegie has already made a sizable financial commitment to this ambitious endeavour. Currently, KNLS and MacMillan Memorial Library are the two organizations in Kenya providing public library services.

Through its resource mobilization initiative, and in line with goal 4 of the SDGs that advocates for inclusive and impartial quality education and upholding lifelong learning opportunities for everyone, KNLS being the largest library in Kenya with several branches and a wide coverage seeks to make Libraries the heart of schools, universities and colleges countrywide. In doing so, KNLS seeks to facilitate support for literacy programmes, offer learning space, and support researchers to research and data reuse to generate new knowledge. By working with the University of Nairobi and the Ministry of Agriculture, KNLS can offer information services to 4.5 million farmers countrywide. Farmers are now able to obtain information online or by phone via NAFIS about various methods of farming, markets/market prices and the available government extension services. KNLS plays a role in transforming the agricultural sector and educating farmers to enable them to achieve sustainable development in the country. Sustainable agriculture should be given prominence considering that it is the backbone of the country. Public libraries should be supported in the process of resource mobilization to enable them to facilitate agricultural education, research and extension activities. Agricultural materials in libraries provide information to farmers, livestock producers, students, agricultural and business organizations, research personnel and specialist teachers on the subject in

anticipation to meet the food and hunger challenge that affects man and facilitating sustainable development (Musacchio et al., 2021).

KNLS is the only library in Kenya that has branches all over the country and can easily be accessed by all people living in Kenya. KNLS also acts as a fountain of resources for those seeking to promote sustainable agriculture and improve food security. It has some of the latest publications on sustainable agriculture, food production, value addition, food storage, as well as food processing. The production can be increased by reducing the technical assistance provided by extension officers because of the significance of agriculture to the national economy and the fact that it is practised by small-scale farmers. Technology may be utilized to extend the reach of extension services to the 4.5 million farmers as extension staff are now overwhelmed.

1.2.1 National Farmers' Information Service

The National Agriculture and Livestock Extension Programme created this information service so that farmers may get extension information by contacting the service or visiting the NAFIS website. It is a voice/web information service that disseminates information on agricultural extension. Field extension officers update a highly innovative system through the web and the updated information is accessible through its website. In that sense, NAFIS is a dynamic system created to take use of the internet and mobile technology by offering information via a comprehensive website and mobile devices. To reach as many farmers as possible, information is submitted locally over the internet by extension officers and accessed via this website or through mobile phones (Thompson 2019). With ICT in the libraries, the association of vegetable farmers has significantly enhanced their farming techniques by visiting the library each Friday to look for information, "Before, they used to plant only spinach and sukuma wiki (collard greens). Now they are also planting pumpkins after learning that pumpkins can do well

here in Taita-Taveta County,” (as attested by a librarian at KNLS Werugha Community Library in Taita Taveta) Sustainable Development Goals (SDG).

Libraries, especially specialized agricultural libraries and extension services provide access to research on crops, market data, and farming techniques that improve resiliency and productivity in agriculture (Thompson, 2019). Libraries provide opportunities for farmers and people, in general, to better their lives and enable informed decision-making by governments, communities, and others to offer services and support that alleviate poverty and increase the prosperity of people everywhere (Thompson, 2019). As a result, libraries help to advance every aspect of the UN 2030 agenda. Even though the SDGs are global objectives, Kenya will be in charge of creating and carrying out national plans to accomplish these goals as well as monitoring and reporting progress. The Kenyan library community, coordinated by KNLS, is tasked with demonstrating how libraries may work as partners to accomplish the country’s development goals. This is because KNLS has the most branches, making it the largest library in Kenya in terms of coverage.

1.3 Statement of the Problem

Most people think that eradicating hunger within the next generation is achievable and that by cooperating, this objective may be accomplished. The right of everyone to access safe and nourishing food, along with the right to adequate food and the basic right of everyone to be free from hunger, was reaffirmed by world leaders at the 2012 Conference on Sustainable Development (Rio+20). Despite all of this, there has been no study on the measures that can be put in place to help determine the role played by public libraries which are upholders of information, particularly KNLS. KNLS plays vital role in availing information services to the consumers to help alleviate poverty and inequality, improve agriculture and provide quality education considering resource mobilization towards sustainable agriculture.

Sustainable Agriculture is critical for the promotion of a food secure and stable country. However, farmers in Kenya continue to face numerous challenges occasioned by lack of information, the inadequate collaboration between farmers and the government, inadequate capacity by state structures such as public libraries and lack of initiative by farmers. More work and innovation were urgently required as the population of the country continues to sustainably increase agricultural production in order to enhance the supply chain, reduce food losses and waste, and guarantee that hungry and people with malnutrition have access to nutritious food (Adewale & Oloruntola, 2019). Hence, this research seeks to establish and explore the role, which the partnership between KNLS on the one side and NAFIS on the other plays in providing access and dissemination of information for promoting sustainable agriculture and improved food security.

1.4 Purpose/Aim of the Study

The study aimed at evaluating extent of resource mobilization for promotion of sustainable agriculture in Kenya with special focus on the partnership between Kenya National Library Service and National Farmers Information Service.

1.4.1 Objectives of the Study

Objectives for this research include to:

- 1) Examine the collaboration between KNLS and NAFIS in promoting sustainable agriculture.
- 2) Find out the capacity of KNLS in providing the information resources required to advance sustainable agriculture.
- 3) Determine the perception of library staff on collaboration and provision of policy recommendations in harnessing structured partnership to advance sustainable agriculture.
- 4) Find out challenges that faced KNLS and NAFIS in promoting sustainable agriculture.

1.5 Research Questions

- 1) What is the importance of collaboration between KNLS AND NAFIS in promoting sustainable agriculture?
- 2) What capacity does KNLS exhibit in providing the required resources to promote sustainable agriculture?
- 3) What is perception of KNLS staff towards collaboration between KNLS and NAFIS?
- 4) What are the challenges facing KNLS and NAFIS in promoting sustainable agriculture?

1.6 Assumptions of the Study

This research assumed different levels of partnership between the KNLS and the National Farmers Information Service, from its nascent stages to well-defined and structured stages.

1.7 Significance of the Study

The following categories will benefit from the study findings:

Government and Agencies: The government of Kenya will benefit since the findings will give information on the evaluation of resource mobilization by public libraries for the promotion of sustainable agriculture addressing issues of the KNLS that has posted a significant effect on the agricultural function in the country in terms of provision of reading materials as well as facilitating research on agricultural activities.

Public and other Stakeholders: Results will enable the public and other shareholders to comprehend more about the utilization of resource mobilization by the KNLS because through access to reading materials and other literature resources, they will be equipped with knowledge and skills for sustainable agricultural development hence gaining more confidence in ending hunger and poverty.

Scholars and Researchers: Scholars in the fields of agriculture, research and innovation as well as sustainable development will also find the study's findings significant by identifying the gaps in the study to enable them to pursue further research on related issues, which will assist

the government in improving its performance through resource mobilization by public libraries on sustainable development of agriculture.

1.8 Scope of the Study

The study was conducted to evaluate resource mobilization by public libraries for the promotion of sustainable agriculture focusing on KNLS (Buru Buru) targeting a total population of 3 library staff. The target population was thus be stakeholders at KNLS and NAFIS as well as farmers, with the key variables being resource mobilization, measured by the quantum and change in information resources, availability of resources and utilization of the same. Several countries have incorporated library services into their development agenda by trying to promote information literacy, provide free access to information, safe libraries and welcoming spaces at the heart of communities. These services come with essential support from highly dedicated members of staff with a deep understanding of the needs of the local community. By providing people with access to ICT, internet connection and skills, libraries promote digital inclusion. For both present and future generations, access to information is fundamental.

1.9 Limitations of the Study

It was probable that the study was to be derailed by a few factors such as slow responses from a selected class of respondents in addition to the large sample size and uncooperative farmers (the key beneficiaries of the initiative). We mitigated this by sending daily reminders to the respondents to bring their attention to the survey, and where necessary Computer Assisted Personal Interviewing (CAPI) will substitute Computer Assisted Web Interviewing (CAWI) where the respondents face challenges in submitting responses via the online platform.

1.10 Operational Terms and Concepts

E-resources: Accessible information resources using computers.

Induction: The process of describing resources to consumers, including their structure and ways of access.

Orientation: Process of making people aware of the services and resources that is accessible.

Integrated Library System: Library that makes both print and digital resources accessible online to facilitate learning and acquisition of knowledge.

Library-enabled Access: Information resources are solely accessible through the library website. To access the information resources, users must first visit the library website.

Library Skills: Skills required locating and identifying library materials.

Peer-reviewed Information Resources: Sources of information deemed reliable by experts in the field. In contrast to other internet sites, these resources are authenticated.

Services: Providing space and comfortable setting, together with assistance-ready staff.

Utilisation: Extent to which people use a system or product to complete the task that it was intended to handle.

Resource Mobilization: Process of attaining resources from diverse resource providers for the purpose of achieving the organizational goals.

Information Resources: This is the data and information used by an organization.

Kenya National Library Service: National library that provides information sources and services to her citizens for the purpose of alleviating illiteracy in the society.

National Farmers' Information Service: Program implemented by the government of Kenya to enable farmers to obtain relevant farming information for their own benefits.

Sustainable Agriculture: Blended system of production for plants and animals with a site-specific application that provides long term solutions for human needs.

1.11 Organization of the Study

Chapter One covers background, problem statement, purpose of the study, objectives, research questions, study justification, significance of the study, basic assumptions, limitations and

delimitations as well as the operational definition of significant terms. Chapter Two consists of reviewed literature works based on research objectives and questions. Chapter Three provides outline of the methodology, research design, target and sample population, research instruments, data collection methods, analysis of data and ethical considerations. Chapter Four comprises data analysis, presentations and interpretations/discussion on descriptive analysis using tables, frequencies and percentiles. Chapter Five highlights findings, conclusion, recommendations and suggestions for further research.

1.12 Chapter One Summary

This first chapter of this research project report opens with introduction and background and further describes the libraries and their involvement in agriculture from global level to international. In addition, the chapter focuses on KNLS and its collaboration with NAFIS. This is then followed by stating out study objectives, research questions, limitations, definition of concepts and aim of the research.

CHAPTER TWO

LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

2.1 Introduction

This chapter offers a review of relevant works on the utilization of library resources and services with the objective of the study in mind, and it primarily focuses on the characteristics of library users who are seeking information. Dominic (2018) indicates that information explosion and ICT integration in library services have improved the complexity of libraries hence making it hard for users to obtain the required information in support of learning activities. Library's role in promoting sustainable agriculture cannot be adequately underscored. This thus paints a positive picture of the efficacy of the partnership between KNLS and NAFIS. According to Richardson (2019), the hiccups faced by information seekers rotate around user features of unawareness of information sources, organizational familiarity, and diverse techniques and tools used to obtain information. They recommend that librarians be open to instructing users on how to assess information sources independently.

2.2 Evolution of Agriculture

Hanson (2018) highlights that Agriculture has extensively evolved in the United States, further identifying key trends and future challenges to effectively reignite sustainable agriculture. The main trends that Hanson identified in the United States include increased land degradation, emphasis on a single ecosystem service, contending land use, increase in farm size, global markets, the transition toward commercialization, genetic engineering and shifting social structure. Key challenges in the future that the author notes include: diminished government involvement in food regulation, information provision gaps, diminishing and increasingly unpredictable farm incomes, sustained transition towards agribusiness from farming, increased public input on practices in the production of livestock, land use, collective animal protein consumption in the US, and increasing urbanization of traditionally rural US counties.

Gahukar (2019) notes that 65% of the Indian population is either indirectly or directly reliant on farming activities with sustainable agriculture often constrained to traditional/conventional farming which creates confusion. This is against the background that sustainable development means providing factors that necessitate national food security, upgrading farmers' standards of living, and natural resource conservation. Consequently, various modern and traditional methods of cultivation are comprised of sustainable agriculture. Nonetheless, unless scientific agriculture is integrated, average per capita income will not reach a desirable level and the disparity between the poor and rich would further widen. The author further notes that sustainable agriculture is sometimes hindered by several factors such as gaps between utilization of information that is essential for the promotion of sustainable agriculture, low crop productivity, overuse of land, market imperfection, lack of capital and industrialization, the imbalance between prices of farm inputs and the market sale, Lack of extension at a grass root level and inadequate loan facilities. The author further alludes to future needs including the need for information coupled with essential collaboration between farmers and public and private libraries, diversification in agriculture, use of appropriate technologies and market-driven production.

In Sri Lanka, numerous attempts made at enhancing sustainable agriculture were scarcely accomplished due to diminished acceptance levels by farmers. Senaratne (2017) notes that the key features that led to the poor receipt of sustainable agriculture by farmers can be generally characterised as system-related factors and general factors commonly affecting all systems. The author further goes on to add that the factors that have constrained the main adjustments in the general agriculture system in Sri Lanka are unavoidable if the benefits of sustainable agriculture are to be fully obtained by society. The key amendments include harnessing farmer involvement at all stages by availing useful information that would result in enhancing

sustainable agriculture vis a vis agricultural productivity, adjustment of research as well as extension systems and altering their main concern; better use of land and planning and screening of current policies for their irregularities. The author notes that the challenge, in this case, is to re-orient existing policies and structures to create incentives to assist in promoting sustainable agriculture as well as adoption among farmers.

According to Baig (2018), despite Egypt being an agricultural-based country, with a great significant contribution to food security and supply, economy, export earnings, and ecological balance, the agricultural sector of the country face numerous challenges. The major challenges include lack of information, water and land issues; natural resource degradation; poverty; environmental challenges; population growth; insufficient support services; and poor agricultural development policies. The author further made some effort to determine the limitations experienced by the agricultural sector and discussed options that are available for sustainable agriculture, not communicating on the measures that can be put in place for resource mobilization more so by public libraries that offer vital information on sustainable agriculture.

According to Mkumbo (2017), for any nation or society to succeed, it must lay directly on the capacity of its information service collections and libraries. This is because the libraries and information centres act as discovery, findings, innovation, and vocational skills repositories and research agencies. The author further notes that the role of information in the promotion of sustainable agriculture cannot be adequately underscored, since access to information happens to be an important permitting aspect of state organs to convey inclusive and quality services. The author notes that the aim of libraries for the 21-century is in considerable support they can offer in knowledge and information-based society by promoting sustainable

agriculture, inclusiveness, democracy, lifelong learning, public information, economic growth knowledge creation business success and innovation.

2.3 Libraries Awareness and Resource Mobilization

Awareness is gained through the library orientation program to familiarize customers with the library's physical infrastructure, policies, and resources(Kumaran, 2017). Users need library orientation and instruction to find their way independently through the information network. According to Richardson (2019), library orientation is the introduction of users to the library to independently enable them to locate vital resources and areas, essentials for library use as well as diverse available services. By emphasizing the distinct library features to our end users, information professionals create interest which in long run serves as a factor that motivates use. Venkat (2016) asserts that library orientation should be provided as a form of introduction to the library that motivates users for prospect instructions. The program should be supposed to be welcoming to new users and try to offset fears of going to the library to ask questions. The program's goal is to make users aware that the library has both people and books and to demonstrate to them that the staff members are not too busy to assist them. The purpose of the program is to show how approachable and amiable library staff members are. Users are presented with a few reference book titles and indexes during orientation to help them become aware of the plethora of resources available to them. The program also provides a platform for the announcement of upcoming opportunities to learn more about the library. Such orientation exercise is anticipated to inspire a demand for more help when utilizing the library. Venkat (2020) indicates that users have a clear understanding of the library's ideals, and library orientation can be more relevant. Emphasis should be placed on the benefits of using the library to save time and effort while conducting research for or writing tasks. During orientation, users get the chance to learn about the wide range of resources at their disposal. Even if they do not live in the library, orientation raises users' knowledge of the breadth of information and library

resources offered by the facility. For instance, during library orientation, new users are informed about the available networked electronic resources through an institution's library and information system.

2.4 Library Familiarity and Usage of Information Resources

It's paramount for users to familiarize themselves with library and information resources using an induction program to enable them focus on their information enquiries. Induction is the primary librarian-users contact session that excludes training on information skills. According to Webster's Dictionary, 'induction' is an early experience of introducing one to anything mysterious or unfamiliar. Hence, the main task in library induction is to demystify since it offers users the basic introductory information required to begin using library services independently. The main challenge to librarians is ensuring that the program is conducted in a stimulating, engaging and enjoyable for all. Morgan (2020), adds that induction is the best opportunity that can be utilized by library staff in promoting their services by making an impression and impact and if executed properly, the program can provide participants with access to a whole new universe of knowledge. Library induction at the Kenya National Library Services involves demonstration of the use of using overhead projection on the use of subject gateways; a variety of e-database formats available via the library and information service; using the V-link to access the internet; using OPAC in identifying and locating the physical library materials; and formulating Web searching strategies. The program of induction aims to emphasize the significant role that the library plays to support the learning of users in learning institutions (Gadd, 2019) to familiarize them with available library resources and services.

2.4.1 Library Competency in the Context of KNLS

The main purpose of any information centre is to meet the immediate information needs of its users (Eisenberg, 2018). Meet the information needs of given users is achieved using an instruction programme also known as bibliographic instruction. Diverse studies on user education in academic libraries have shown that orientation and bibliographic instruction remain the main activities of library user education (Kernan, 2017). Library instruction is characterized by a higher probability of high student motivation to help them attain accurate expectations of library resources and underlining the fact that information professionals are willing and available to assist. Loftin, Long, and Rouge (2017: 208) report that this program presents a chance for librarians to clarify a given source on site using “point of use” as well as to help college users attain library competency and skills like using various search systems to obtain various forms of information, locate information within the library, and be able to differentiate between the primary and secondary information sources (Kernan, 2019). This approach leads to saving time for library staff time and is known to be a more effective method of instruction for groups of users. (James, 2017) is for the idea that too much dependence of the user on the librarians is displeasing to the librarian and humiliating to the users. It is, therefore, asserted that library instructions are aimed at:

- 1) Teaching uses the simplest search strategies used to search, identify and find information.
- 2) Instruct users on how to interpret the symbols and signs found in the catalogue records.

The achievement of the specified learning objectives for the library will guarantee that users acquire the necessary skills for locating, identifying, and effectively utilizing the library's contents. These skills enable users to utilize libraries and informational resources with the least effort while allowing them to become more innovative in their information-seeking

approaches. Users should learn how to utilize the OPAC to obtain the information they need, use the class number to find the materials on the shelf as well as use the back of the book index to find the topic they need. These skills are all part of a successful library teaching program. Those with good library skills should be able to recognize pertinent databases when it comes to journal articles, create a search strategy, select relevant information and use it to expand their knowledge base. Library instruction aids users to overcome shyness, self-consciousness and reluctance to seek assistance. Kernan (2019) suggests that advanced user courses on literature searches should be given in the second, third or fourth years to be in line with the course-integrated library instruction programs supported by Gelder, 2020, p 95).Curriculum-integrated library instruction provides opportunities for users to acquaint themselves with their relevant resources and tools, train them in real use and prepare them to conduct searches independently. Such programs make users familiar with study domain terminologies by employing course-related terminology. In addition to laying the groundwork for users to build the information literacy skills required for autonomous and self-directed learning, Lloyd (2019) also helps users get ready for lifelong learning.

2.5 Information Literacy

Library skills lay an information literacy foundation. Lloyd (2017), indicates that people who are information literate can recognize an information need, find out the level of needed information for a given task, be able to critically and efficiently access information evaluate information and its sources, be able to classify, store, manipulate and redraft generated information as well as integrate certain information in their base of knowledge. Additionally, they possess the capacity to effectively use the information for problem-solving, decision-making, learning, and creating new knowledge. The information literates can use knowledge and information for active citizenship and social responsibility. Users learn about information literacy as part of autonomous learning and lifelong learning in educational settings like

universities. Information literates can quickly and accurately recognize, locate, assess, and use information resources for their process of learning. Information literacy studies claim that computer operating skills are a major component of information literacy (Lloyd, 2019, pp. 36). Information literacy empowers library users to develop abilities and skills that enable them to assess search results for quality and relevance, evaluating the reliability, validity, authority and timeliness of retrieved information (Maughan, 2020).

It is a much broader idea that encompasses skills like analytical thinking, synthesis, communication, and research techniques. Virkus (2017), adds that information literacy constitutes a set of skills that are related to the acquisition of knowledge, in addition to the technical skills gained beyond schools and university libraries. In addition to enabling users to become self-directed learners, information literacy programs in universities also provide students with skills that are transferrable to the workplace. Olen (2017) advises that most of the conventional library skills as well as extra information skills will be necessary to use the virtual library successfully. Information skills are the capacity to choose appropriate search topics to find needed material as opposed to traditional library skills that identify and locate information required to support learning activities. Efficient and effective utilization of electronic information environments necessitates that users acquire the ability to apply sophisticated search techniques, such as proximity, truncation, and Boolean operators to enable them specific searches that meets specific needs.

Information literacy plays a role in empowering and educating information consumers to become information knowledgeable. People can utilize this knowledge to evaluate the information for informed decision-making. Increasing evidence indicates that less information-literate people are more likely to experience learning challenges (Yu & Young, 2018). Yu and Young (2020) also assert that information literacy enables users to better manage their

information demands while utilizing information services and resources more efficiently. Additionally, it lessens one's susceptibility to unreliable and dishonest information services. They emphasize the information literacy need in raising the effectiveness and efficiency of information services. To access and analyse information sources including reference materials, texts, databases, and websites. Information searchers need to have a particular degree of comprehension of information sources information literacy enables users to better manage their information demands while utilizing information services and resources more efficiently. Johnson (2019) asserts that information literacy is connected to fundamental library skills, information technology, and information technology (IT). Users must first define fundamental library skills, which are ingrained in information technology and serve as the foundation of information literacy skills, to acquire them. According to Loveless, DeVogd, and Bohlin (2018: 67), users must develop knowledge, skills, and understanding of the information environment they are in as well as ideas for using ICT tools to improve the quality of their work if they are to be able to find information about a topic from a variety of sources. While understanding ICT will improve the quality of their job by enabling direct and indirect information sharing and exchange through electronic media, knowledge of the information environment will help users concentrate on the appropriate information source to contact for future demand.

Lack of collaboration between librarians, instructors, and administration may be the cause of users' unwillingness to use library resources and services this is according to earlier research (Chacha, 2020). Collaboration amongst the involved parties will guarantee a comprehensive approach to this problem. Jucker (2017) outlines skills within the context of the process of assignment by indicating that users ought to firstly do the following activities to successfully and efficiently use library and information resources: formulate and analyse required information, identify and appraise probable information sources, trace and locate the distinct

information resources, and examine, select and reject distinct information resources. These are the standard activities that every information seeker in the information and knowledge society must do. Users must have acquired the necessary information literacy abilities for every individual stage to be able to fulfil their information demands for literacy skills. Information searchers should have mastered appropriate computer abilities in addition to these methods.

2.5.1 Computer Literacy

In recent years, we have witnessed the rapid development of digital information networks that have greatly helped to expand the role played by academic libraries. The usage of computers can significantly improve individuals' academic performance and their future job market success. However, the networked library and information environment's resources for information and representations of knowledge are not well understood by library users (Shannon, 2020). To produce deeper and more engaging learning outcomes than would be the case in traditional learning environments, users must gain deeper understandings, motives, or the ability to guide their own and others' learning. Many college students suffer library anxiety, according to studies on computers in libraries (Jiao & Onwuegbuzie, 2016, p 139). Such experiences hurt the success of searches. According to Shannon (2020), the electronic library resources and the Internet intensify the need for information skills in academic research in three categories: judgment, knowledge and resource operations, and logic and linguistic skills. Library users ought to be motivated to learn effective ways of manipulating the computer keyboard and apply technology ethically by adhering to the systems and use policy of the institution.

2.6 Electronic Resources

E-resources offer access to various types of information sources such as personal papers, web pages, electronic journal articles, local content and conference papers reports. (Herring, 2017, p. 335), they also provide diverse opportunities unlike print material (Jalloh, 2019). Studies have shown that they surpass information discovery beyond traditional sources of information. (Jewell, 2017, p.7), noted that amid the distinguished improvements in library e-resources include the following: most e-resources are equipped with search-and-retrieval tools that allow end-users to carry out literature searches effectively and efficiently, available twenty-four hours a day and seven days a week, end user has an option of navigating directly from indexing databases to the full text, and additional links are provided for end users.

Customers or users can link to Internet information items relevant to the recognized items using the unique V-Link function that is supplied to electronic resources, including the OPAC records of the Jomo Kenyatta Memorial University Library system. In the absence of the recognized items, this function enables information searchers to interact with a wide range of content on interesting themes. Users get access to a variety of information sources through worldwide databases, thanks to the Jomo Kenyatta Memorial University Library system. To enhance the value of the services, users should design and possess advanced information skills. E-resources are offered on the standard of interoperability hence, end users ought to be motivated at all times to continue searching for the subject-disciplinary approach (Kakai, Ikoja-Odongo and Kigongo Bukenya, 2020). Whereas this approach allows users to obtain more exact sources, it limits interesting work and appearing in the literature of many other areas. According to Ingutia-Oyieke (2018), in the e-resource setting, IL training empowers those seeking for information to come up with skills to evaluate so that they can apply it appropriately.

2.7 Conceptual Framework

This research intended to improve a conceptual framework by considering that library services area source of information and advancement in socio-economic development. The findings are simply an attempt of trying to develop a framework. The drive is both logical and pragmatic. Intellectual curiosity is a desire to understand the nature of things as well as how and why they function. On a more practical level, there is the incentive that a better theoretical grasp might result in improved efficacy in the practice of librarianship. Though theory can provide insights, its value in actual practice is not always guaranteed. In this regard, the researcher examined theories that support the idea that a variety of intellectual and practical issues related to library services are brought on by or at least made worse by a lack of understanding of what is involved by inadequate theory. This analysis focused on aspects of the provision and use of library services.

INDEPENDENT VARIABLES DEPENDENT VARIABLES OUTCOMES

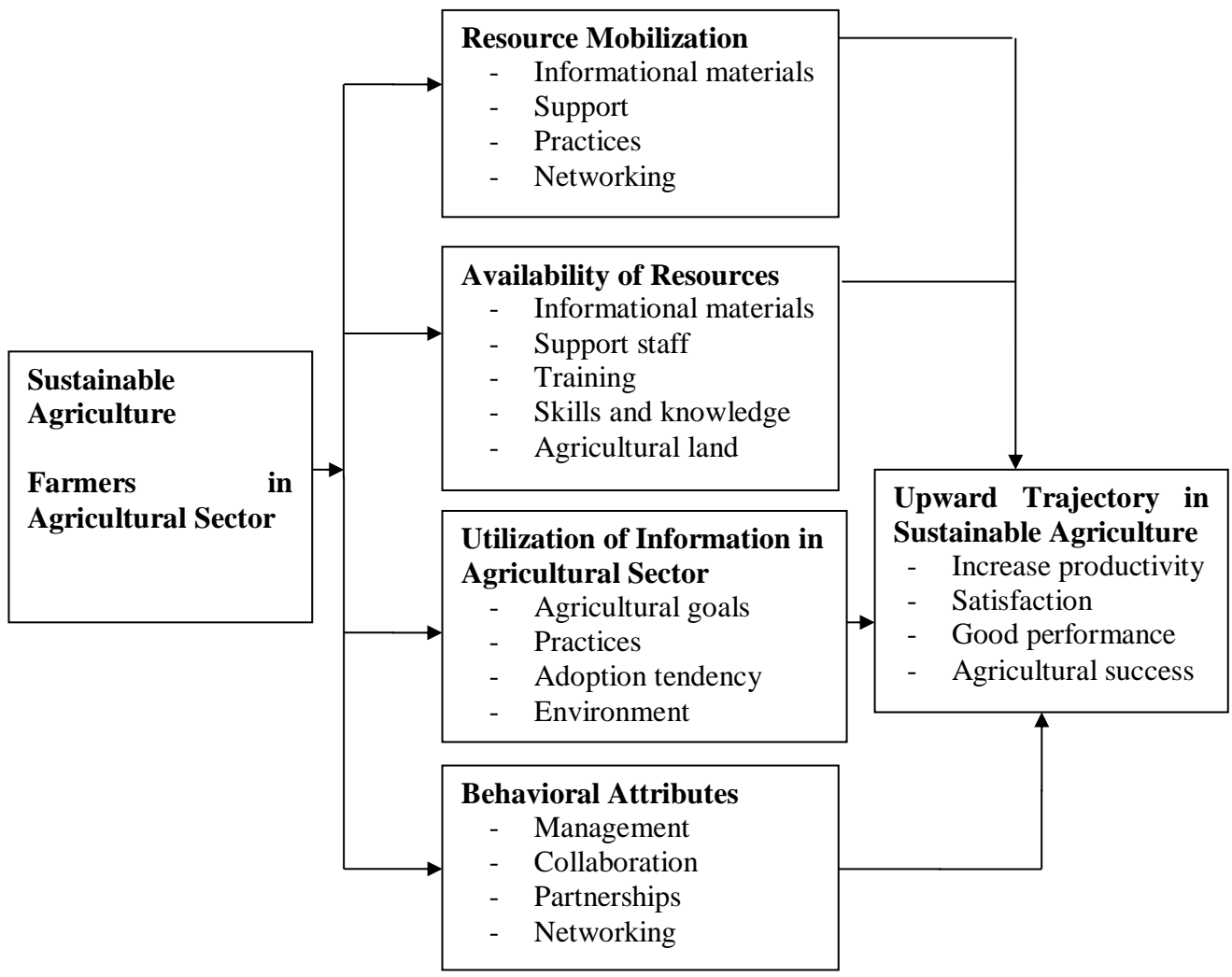


Figure 1: Conceptual Framework on Resource Mobilization

2.8 Chapter Two Summary

This chapter has highlighted the review of literature and conceptual framework used in the research. Literature has been organized based on the framework of the research objectives and questions. Aspects of evolution of agriculture and provision of information in libraries were discussed. Information and knowledge of resource mobilization and libraries across the world have been reviewed. Information literacy and associated elements within the context of national libraries were explored. Conceptual framework in this research has been discussed.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The chapter covers the research method used and the analysis of collected data. A descriptive survey design was used with the study population comprising KNLS staff, NAFIS staff, extension and field officers under the Ministry of Agriculture as well as all beneficiary farmers.

3.2 Research Design

This was a case study of the collaboration between KNLS Buruburu and NAFIS on promoting sustainable agriculture in Kenya. A descriptive study was used to determine and describe the features of the variables of interest. Yin (2019) indicates that a descriptive study explores causation by finding the fundamental principles while, Mugenda and Mugenda (2018), indicate that it describes features of current occurrence as well as offering insights into the research problem by describing interesting variables. Qualitative approach was also adopted and complemented by quantitative research methods. The study used a structured questionnaire to collect data from the various categories of respondents. Under secondary data, the research relied on literature as well as document review. The data obtained was critical in informing on information needs towards the attainment of sustainable agriculture. The approach offers pertinent and precise information that helps in answering questions on who, what, when and how (Kombo & Tromp, 2017).

3.3 Area of Study

The study was done at KNLS Buruburu which hosts National Farmers Information Service (NAFIS) which additionally involved key stakeholders within the institutions as well as farmers.

3.4 Target Population

This is a whole group of people, events or objects with shared features that adapt a particular description (Mugenda & Mugenda, 2017). Selected KNLS staff, NAFIS staff, extension and field officers under the Ministry of Agriculture as well as some of the beneficiary farmers formed the population of the research. Key informants who were directly involved with the project included KNLS staff (librarians) in charge of NAFIS, NAFIS staff, and agricultural extension officers/field officers under the ministry of agriculture and farmers.

3.5 Sampling Techniques

This is the process of picking an adequate number of the right elements from the entire population offering the framework of choosing the right as well as a representative sample from the cumulative, total population in the survey (Groves, 2018). Research adopted purposive sampling for NAFIS, NAFIS staff as well as agricultural extension officers/field officers under the ministry of agriculture whereas random sampling was adopted for farmers.

3.6 Sample Size

Survey respondents were drawn from the population; purposive as well as systemic random sampling techniques were utilized to arrive at the sample. For KNLS and NAFIS staff purposive sampling method was applied, whereas for farmers systemic random sampling techniques were adopted. This method was used due to the big number of beneficiary farmers. Respondents included the librarians from KNLS, NAFIS staff, agricultural extension or field officers and farmers. The sample size was 100 for this research. The sample was structured as follows:

Table 1: Sample Size

Organization Name and Participants	Population Size	Sample Size
KNLS Staff (Librarians)	30	30
NAFIS Staff (Based at Buruburu)	10	10
Agricultural Extension/Field Officers	30	30
Farmers	30	30
Total		100

3.6 Data Collection Methods

These are approaches used to gather empirical evidence to gain new insights about a situation and respond to questions that prompt research undertaking (Flick, 2019).

3.6.1 Questionnaire

A semi-structured questionnaire with closed and open-ended questions was used to gather data from various respondents. The semi-structured questionnaire was standardized to allow the respondents to respond to the same questions clearly and give them the freedom to respond. The researcher used to drop and pick strategy to administer questionnaires which were firstly pretested before data was collected. The use of questionnaires for this survey was validated by the fact that questionnaires allow for the resolution of issues in a standardized way and allow for easy comparison of results in a structured way.

3.6.2 Interview Schedule

Interview schedule was also used to gather qualitative data and information from the farmers. Data collection process was facilitated through structured and open ended interviews. However, this qualitative data gathering method was for concerns that needed more or additional information.

3.6.3 Document Review

Secondary data was gathered qualitatively with the help of research assistant to save time. It also offers bigger and higher quality data bases that would be unfeasible for any researcher to

collect on their own (Bishop, 2017). The quantitative phase entailed the use of raw secondary data collected from the KNLS, Ministry of Agriculture, and Government Projects under the Ministry of Agriculture, for example, the Kenya National Agriculture Research Project and Sustainable Agriculture Community Programme, Kenya Agricultural Research Institute, Kenya National Bureau of Statistics, annual reports and journals.

3.7 Research Instruments

3.7.1 Pilot Study

A pre-test study involving KNLS library staff was conducted at the KNLS headquarters ahead of the main exercise that was conducted at the Buruburu Branch in Nairobi by putting to test the reliability as well as the validity of the data collection tools. The main aim was to assess the questionnaire's effectiveness while collecting data and note in the research findings.

3.7.2 Validity

Validity testing implies the data correctness and significance obtained according to variables of a particular study (Wagner reliability, 2018). The study used a designed structured questionnaire to collect data and information guided by the study objectives and research questions. The process of designing the questionnaire involved the incorporation of feedback and recommendations from supervisors, stakeholders in the agriculture sector and information professional experts.

3.7.3 Reliability

Theatre (2018), indicates that reliability is the extent to which the results can be reproduced research method produces constant and reliable results. Pretesting the data collection tool will also help in assessing the reliability of the questionnaire in addressing some of the issues that may potentially affect the data collection process.

3.8 Ethical Considerations

Michael (2018), points out that the process of carrying out research demands that one plans carefully since it is a very costly task that takes a lot of time, money and human resources. It thus calls for cautious planning before one starts the process of research, minimising the challenges mainly researchers face. Introductory and authorization letter was issued to the respondents by the University informing them that the shared information was confidential and solely for academic research and that respondents' voluntary participation in the study and without any reward either in momentary terms or in kind. Acknowledging of all sources of information has been done to ensure intellectual honesty and avoid any forms of plagiarism. Bloor (2016) notes that ethical approval allows for:

- 1) Informed consent done by availing the necessary information to the participants ahead of the evaluation being conducted.
- 2) Voluntary participation of the target respondents without making them feel coerced, and allow them to freely withdraw at any time without negatively influencing their involvement in their future livelihood.
- 3) No harm to guarantee protection through elimination of any physical or psychological harm to respondents, by ensuring the process is not harmful to participants.
- 4) Confidentiality confirmation that any information identified will not be availed, or made accessible to anyone but the program coordinator especially as per the data protection act.
- 5) Anonymity to ensure that unless consented, the identity of the participant is kept anonymous
- 6) Only assess relevant components to allow for assessment of components that are of relevance to the program/initiative being conducted.

3.9 Data Collection Procedures

Catherine (2016) adds that qualitative researchers normally rely on 4 main ways of collecting information: (1) taking part in the setting, (2) direct observation, (3) profound interview and (4) document analysis. The study used both questionnaires as well as interviews to collect data

from the respondents. Qualitative data was collected from key informants by use of interviews while quantitative data was collected by allowing respondents to fill in structured questionnaires which were later picked from the field. This research adopted both qualitative and quantitative research procedures with KNLS staff, NAFIS staff and extension and field officers in the Ministry of Agriculture. Literature was obtained through various sources mainly from the KNLS library and its branches. Certain data especially statistical information on utilization of KNLS facilities was collected from the relevant government institutions (Ministries of Agriculture, Livestock, Fisheries and Irrigation) and agricultural research institutions. Time series data was analyzed using methods such as the regression formula or other statistical tools.

3.10 Data Analysis and Presentation

Descriptive statistics was collected, analyzed and represented in the form of tables guided by the study objectives and research questions. Collected data was processed, coded, analyzed and organized into study subthemes and themes.

3.11 Chapter Three Summary

The chapter has reviewed the research methods that were used in this research problem and process. Research design and related aspects have been discussed. Elements that usually form this part of the chapter have equally been elaborated such as sampling techniques and sample size, data collection methods, research instruments and ethical considerations.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.1 Introduction

This chapter covers study findings, which sought to investigate how to promote sustainable agriculture. The study specifically focused on a focus group of farmers, investigating how the partnership between KNLS and NAFIS has been used to achieve sustainable agriculture. It also discusses analyzed data. The findings are organized and presented in relation to research objectives and questions.

4.2 Response Rate of Respondents

Institutions that participated in this research were the Kenya National Library Service and the National Farmers Information Service. Sample size consisted of librarians' staff, field officers and farmers. In total, 100 participants were incorporated in the process of data and information collection as shown in Chapter Three, Table 1 on Sample Size. From the table, 30 and 10, 30 and 30 respondents represented KNLS, NAFIS, field officers and framers respectively. Questionnaires were administered and distributed to all participants and later on returned for analysis. Response rate reported for the questionnaires was 70%, while the interviews had 100% success. This response was considered adequate for analysis and conclusions.

4.3 Profile of Respondents

Respondents who participated provided background information based on name of organization, gender, profession, years of service and level of education. This was to determine the appropriateness of the respondents in answering the questions. These data and information details are indicated in Table 2.

Table 2: Profiles of Respondents

Respondents	Response	Percentage (%)
Gender		
Male	47	67.1
Female	23	32.9
Total	70	100
Years of Service		
1-10 Years	14	20
11-20 Years	17	24.3
21-30 Years	35	50
Over 31 Years	4	5.7
Total	70	100
Level of Education		
Certificate	13	18.6
Diploma	20	28.6
Bachelor's Degree	37	52.8
Total	70	100

From Table 2, the gender of the respondents was 70, 47 (67.1%) being male while 23 (32.9%), with 2:1 male to female ratio. This provided balanced indication regarding this question of gender sensitivity as covered in the constitution of Kenya 2010. However, the males were more than the females. Regarding the years of service, 35 (50%) of the respondents reported having worked for a period of between 21-30 years, 17 (24.3%) had been in service between 11-20 years, 14 (20%) had 1-10 years, and 4 (5.7%) had more than 31 years. Interestingly, 35 (50%) of the respondents had professional working experience of more than 20 years. Respondents were well experienced in accessing and using of agricultural information. Hence, respondents provide accurate and reliable information and answers for the research. The level of education aimed at gauging their technical capacities and competencies in public agricultural extension service delivery and information dissemination. In terms of the level of education of the respondents, 37(52.9%) were undergraduate degree holders. However, 20 (28.6%) and 13 (18.6%) respondents constituted diploma and certificate holders respectively. Finally, 13 (18.6%) respondents were having postgraduate education. Respondents were well educated and informed in information wok, and therefore were able to provide reliable information.

4.4 Collaboration Between KNLS and NAFIS in Promoting Sustainable Agriculture

The research problem sought to examine the collaboration between KNLS and NAFIS in promoting sustainable agriculture. The purpose was to understand the factors contributing to the partnership between KNLS and NAFIS. This objective helped in identifying the extent of resource mobilization for promotion of sustainable agriculture, level of collaboration that promotes sustainable agriculture by KNLS and NAFIS, role of KNLS and NAFIS in promoting sustainable agriculture, and strategies used to advance promotion of sustainable agriculture. The study insights could aid in improving the efficacy of information provision and partnership of KNLS and NAFIS, while ensuring that farmers obtained sufficient and appropriate agricultural information for use. First, state the extent of resource mobilization for promotion of sustainable agriculture between KNLS and NAFIS, had four responses of excellent, good, fair and poor. As indicated in Figure 2, 30 (42.9%) respondents agreed that resource mobilization for promotion of sustainable agriculture between KNLS and NAFIS was excellent. Respondents who noted that the extent of resource mobilization for promotion of sustainable agriculture was good were 25 (35.7%). The rest of the responses attracted 10 (14.3%) and 5 (7.1%) for fair and none respectively.

Respondents also provided useful opinions about the level of collaboration that promotes sustainable agriculture by KNLS and NAFIS. These single responses are essential in improving collaboration and promoting sustainable agriculture as in Figure 3. Overall, the level of collaboration that promotes sustainable agriculture by KNLS and NAFIS was very high with 25 (35.7%). Respondents also identified high level with 20 (28.6%), moderate being 15 (21.4%) and low attracted 10 (14.3%). Interviews also provide qualitative data on the state the role of KNLS and NAFIS in promoting sustainable agriculture. Ten of the interviewees (10) noted that the *partnership ensures that the end users (farmers) are the biggest beneficiary of*

this collaboration in terms of information needs and thus greater knowledge in advancing agriculture. KNLS and NAFIS collaborate and support the farmers to access knowledge.

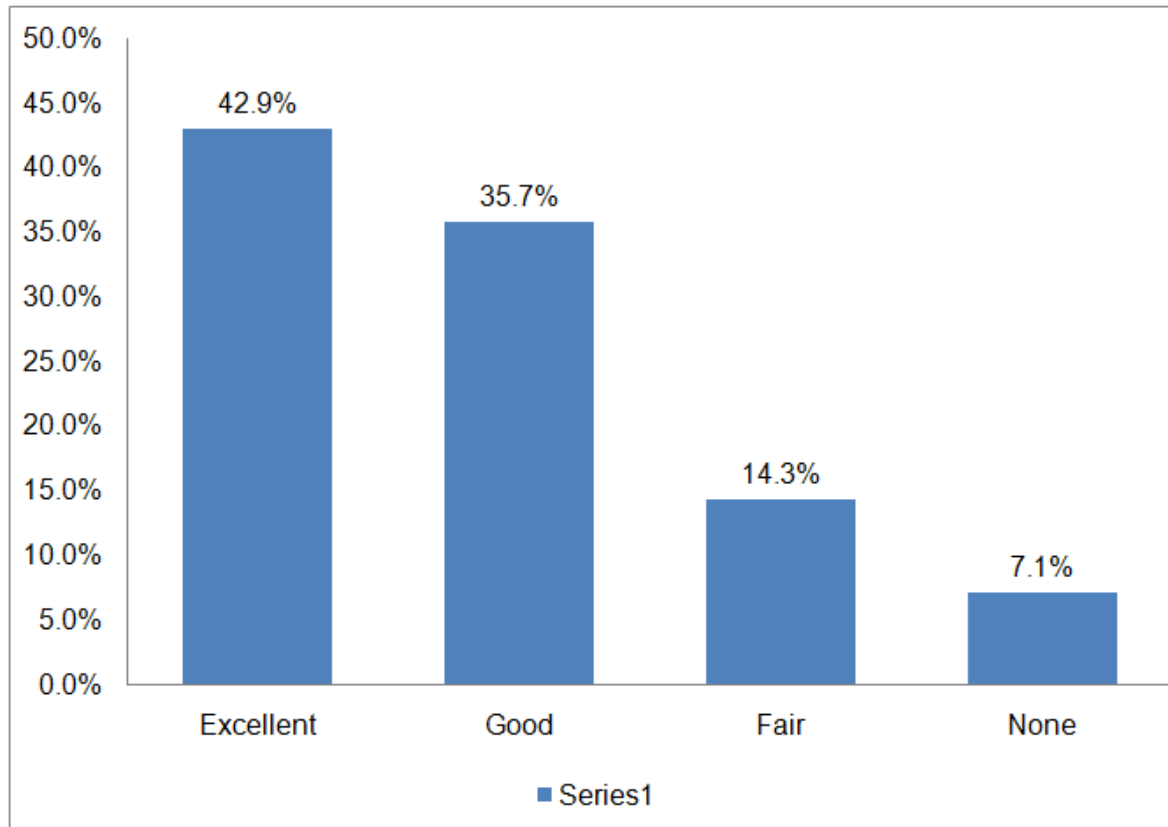


Figure 2: Extent of Resource Mobilization for Promotion of Sustainable Agriculture

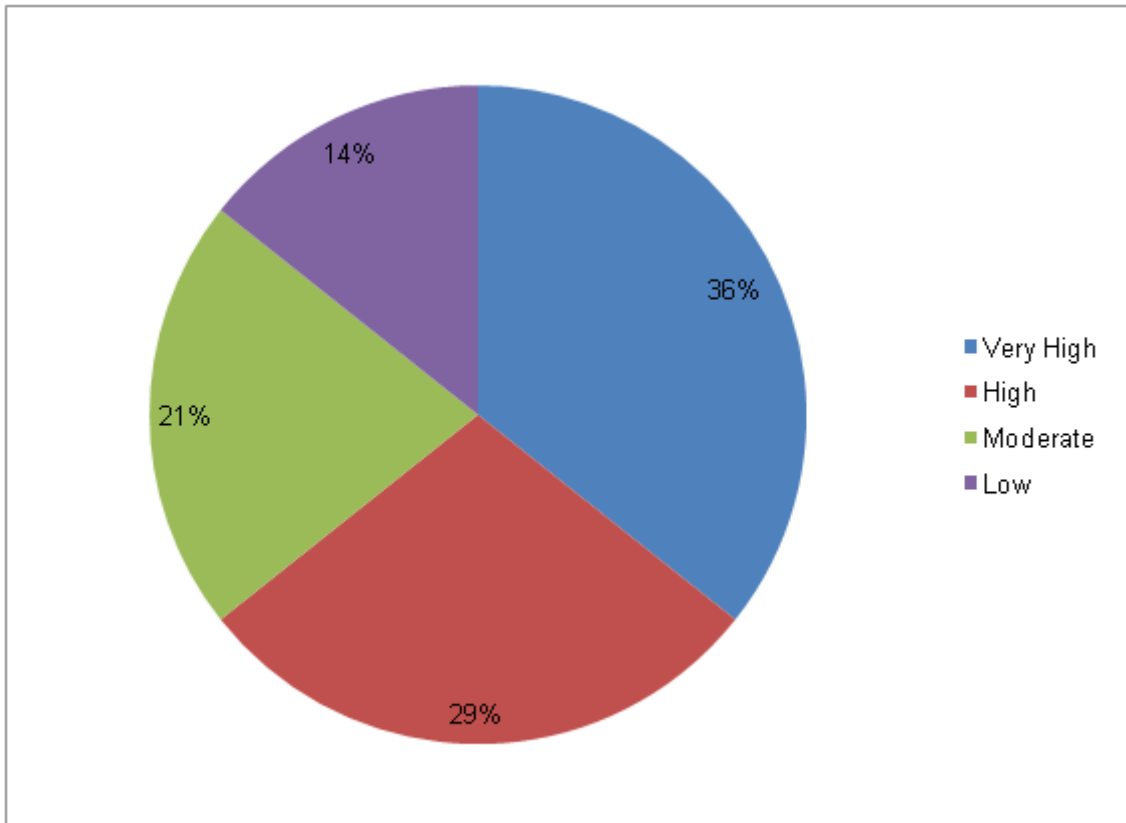


Figure 3: Level of Collaboration that Promotes Sustainable Agriculture by KNLS and NAFIS

This research identified the strategies used to advance promotion of sustainable agriculture. Multiple responses from the respondents were noted based on strongly important, very important, important, somewhat important, not important and I don't know. Table 3 indicates the responses from the respondents. The respondents noted various strategies to advance promotion of sustainable agriculture. Based on the combined elements of strongly important, very important and important, majority 67 (95.7%) of the respondents agreed that agricultural extension officers input to farmers advanced promotion of sustainable agriculture. Consequently, the strategy on advising on best animal bleeds by NAFIS attracted 65 (92.8%) responses. With similar responses of 63 (90%), the strategies on provision of good farming methods by NAFIS and advising on best fertilizers for different soils and crops were mentioned by the respondents. The respondents noted that agricultural extension officers input to farmers formed the basis of promotion of sustainable agriculture. Additionally, five (5) interviewees noted that; *the KNLS staff have advanced and promoted sustainable agriculture to farmers*

through provision of information programmes. Indeed, KNLS collaboration with NAFIS eventually has benefitted and improved farming techniques. One farmer remarked that, the necessary close collaboration and partnerships on information sharing among these two institutions has assisted farmers with current and timely information.

Table 3: Strategies to Advance Promotion of Sustainable Agriculture

Strategies to Advance Promotion	Strongly Important	Very Important	Important	Somewhat Important	Not Important	Total
Provision of good farming methods by NAFIS	25 (35.7%)	20 (28.6%)	18 (25.7%)	4 (5.7%)	3 (4.3%)	70
Advising on best animal bleeds by NAFIS	28 (40%)	26 (37.1%)	11 (15.7%)	3 (4.3%)	2 (2.9%)	70
Agricultural extension officers input to famers	30 (42.9%)	25 (35.7%)	12 (17.1%)	2 (2.9%)	1 (1.4%)	70
Advising on best fertilizers for different soils and crops	29 (41.4%)	25 (35.7%)	9 (12.9%)	4 (5.7%)	3 (4.3%)	70

As indicated elsewhere in the literature, sustainable agriculture can be achieved through ineffective and efficient mix of key aspects that define its building blocks. Information is paramount in the journey towards sustainable agriculture. It is therefore essential to determine to what extent libraries, and in this case public libraries, mobilise resources to attain sustainable development in the agricultural sector is critical (Jain & Shone, 2020). Libraries are important institutions that help in the achievement of goals besides promoting access to information and contributing to improved results in agricultural development (Kamau & Owano, 2018). Libraries are increasingly evolving into community hubs where projects are presented and people engage in deep learning (Ryholt, 2019). Lack of collaboration between librarians, instructors, and administration may be the cause of users' unwillingness to use library resources

and services this is according to earlier research (Chacha, 2020). Collaboration amongst the involved parties guarantees comprehensive approach to this problem.

4.5 Capacity of KNLS in Providing Information Resources Required to Advance Sustainable Agriculture

The research sought to determine the perception of KNLS staff on collaboration and provision of policy recommendations in harnessing structured partnership to advance sustainable agriculture. The purpose was to understand the factors contributing to the partnership between KNLS and NAFIS in the process of identifying and providing information resources in the library. First, the respondents identified the provision measures or criteria used in access and use of information resources. Table 4 highlights the responses from the respondents. Based on strongly agree and agree variables, the respondents ranked the provision measures using strongly agree, agree, neutral, disagree and strongly disagree. Trainings done on sustainable agriculture and relevant resources was ranked first with 62 (88.6%) responses. Access to information resources on agriculture in the library had 60 (78.6%). Similar responses were noted for both objectives of the resources provided are always met, and increased numbers of patrons seeking information on sustainable agriculture with 54 (77.1%). Conduct research on new resources available on agriculture sustainability was noted with responses of 50 (71.5%). In addition, the respondents stated the factors that influenced access to information resources with change of priorities 35 (50%) being the leading one, followed with insufficient knowledge 20 (28.57) and finally, insufficient technical skills 15 (21.4).

Table 4: Provision Measures to Promote Sustainable Agriculture

Provision Measures or Criteria	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	TOTAL
Access to information resources on agriculture in the library	40 (50%)	20 (28.6%)	5 (7.1%)	4 (5.7%)	1 (1.4%)	70
Trainings done on sustainable agriculture and relevant resources	37 (52.9%)	25 (35.7%)	7 (10%)	4 (5.7%)	4 (5.7%)	70
Conduct research on new resources available on agriculture sustainability	30 (42.9%)	20 (28.6%)	10 (14.3%)	7 (10%)	3 (4.3%)	70
Objectives of the resources provided are always met	30 (42.9%)	24 (34.2%)	11 (10%)	3 (4.3%)	2 (2.9%)	70
Increased numbers of patrons seeking information on sustainable agriculture	29 (41.4%)	25 (35.7%)	13 (18.6%)	2 (2.9%)	1 (1.4%)	70

All of the respondents 70 (100%) indicated of having achieved some measures in access and use of information resources on agriculture at the library. In addition, the respondents had received training on sustainable agriculture and relevant resource. It was also evident that most of respondents agreed to research new resources available on agriculture sustainability. Interestingly, the respondents noted that changes in priorities influenced access to information resources compared to technical skills and insufficient knowledge. This further proved that the responses and information provided in this research were credible and reliable. Provision measures were put in place to make information available for use in the libraries. This increased accessibility for users seeking information in reference to sustainable agricultural projects. This shows the capacity of KNLS in resource information provision and promoting sustainable agriculture in the country.

Resource mobilization is a process of finding out, as well as how to acquire the needed resources to carry out various activities on library services(Joute (2014). According to this

author, it focuses on what is necessary to be assessed and the type of resources that are currently available and how those resources are used and how additional ones can be identified and exploited. Using strategies in mobilizing resources is more advantageous in libraries (Lwoga& Chilimo, 2019), and identifies the essential resources for developing, implementing and continuing works targeted to achieving the library's set objectives (Joute, 2014). Traditional materials including books, journals, newspapers, and other library resources have computerized services provide the much needed resources (Olise, 2019). According to Adejumo and Adejumo (2018), SD is the effectual resource management for the survival of humans by considering both the current and future generations. According to Baig (2018), determined the limitations experienced by the agricultural sector and discussed options that are available for sustainable agriculture, not communicating on the measures that can be put in place for resource mobilization more so by public libraries that offer vital information on sustainable agriculture. Both the Kenya National Library Service and the National Farmers Information Service are information organizations that provide and manage information resource mobilization.

4.6 Perception of Library Staff on Collaboration and Provision of Policy Recommendations to Advance Sustainable Agriculture

In the quest to objective three, this research determined the perception of KNLS staff on collaboration and provision of policy recommendations in harnessing structured partnership to advance sustainable agriculture. One of the questions focused on sustainability factors that contribute to the partnership between KNLS and NAFIS. In addition, the other question highlighted the rate of perception or satisfaction of the KNLS staff towards collaboration and partnership to advance sustainable agriculture. The question had multiple responses as indicated in Table 5. Respondents indicated sustainability factors based strongly agree, agree, neutral, disagree and strongly disagree. Based on strongly agree and agree combined responses,

the leading sustainability factors were access to information resources on agriculture in the library 60 (85.7%), satisfied with information resources provided in the library 55 (78.6%), development partners and other stakeholders support the library 51 (72.8%), adequate financial resources and other support are offered 43 (61.4%), growth in agricultural projects due to information resources provided 39 (55.7%), enough information to exploit agricultural benefits 13 (18.6%). In order of sustainability priority, access to information resources on agriculture in the library was identified as the leading factors.

In addition, the respondents rated the perception of the KNLS staff towards collaboration and partnership to advance sustainable agriculture. Question had single responses where majority indicated very satisfied with 35 (50%), satisfied attracted 20 (28.6%), moderate 15 (21.4%) while not satisfies and none had nil. Respondents had favourable responses on the perception of the staff KNLS staff towards collaboration and partnership on sustainable agriculture. Key informant interview was conducted among the KNLS staff regarding perception on collaboration with NAFIS. Majority of the interviews were positive that the *collaboration because NAFIS was able to share cutting edge information on modern livestock farming techniques especially from developed countries such as United States of America, Denmark and Switzerland through the KNLS*. In addition, the *perception on policy issues between KNLS and NAFIS had enhanced and improved farming techniques among the farmers*, according to two interviews.

Table 5: Perception of KNLS and NAFIS Staff on Collaboration and Partnership to Advance Sustainable Agriculture

Sustainability Factors	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	TOTAL
Access to information resources on agriculture in the library	35 (50%)	25 (35.7%)	4 (5.7%)	4 (5.7%)	2 (2.9%)	70
Satisfied with information resources provided in the library	25 (35.7%)	30 (42.9%)	7 (10%)	4 (5.7%)	4 (5.7%)	70
Growth in agricultural projects due to information resources provided	19 (27.1%)	20 (28.6%)	17 (24.3%)	9 (12.9%)	5 (7.1%)	70
Enough information to exploit agricultural benefits	2 (2.9%)	11 (15.7%)	28 (40%)	26 (37.1%)	3 (4.3%)	70
Adequate financial resources and other support are offered	15 (21.4%)	28 (40%)	21 (30%)	4 (5.7%)	2 (2.9%)	70
Development partners and other stakeholders support the library	22 (31.4%)	29 (41.4%)	13 (18.6%)	3 (4.3%)	3 (4.3%)	70

Perceptions of KNLS staff towards promoting sustainable agriculture are indeed important. Collaboration and partnership to advance sustainable agriculture are well discussed in the review of literature. Agricultural materials in libraries provide information to farmers, livestock producers, students, agricultural and business organizations, research personnel and specialist teachers on the subject in anticipation to meet the food and hunger challenge that affects man and facilitating sustainable development (Musacchio et al., 2021). Dominic (2018) indicates that information explosion and ICT integration in library services have improved the complexity of libraries hence making it hard for users to obtain the required information in support of learning activities. According to Richardson (2019), the hiccups faced by information seekers rotate around user features of unawareness of information sources, organizational familiarity, and diverse techniques and tools used to obtain information.

Awareness is gained through the library orientation program to familiarize customers with the library's physical infrastructure, policies, and resources (Kumaran, 2017). Users need library orientation and instruction to find their way independently through the information network. Perception of KNLS staff paints a positive picture towards collaboration and partnership to advance sustainable agriculture.

4.7 Challenges that Faced KNLS and NAFIS in Promoting Sustainable Agriculture

The research assessed challenges faced by KNLS and NAFIS in promoting sustainable agriculture. In this regard respondents were expected to state factors that influence access to information resources, impact on promotion of sustainable agriculture, solutions to advance and promote sustainable agriculture, and initiatives to improve resource mobilization. Respondents stated factors that influenced access to information resources as depicted in Figure 4. Respondents were expected to select only one factor. Financing challenge had the highest responses of 30% while multistakeholder issues, interference by other state organs, and lack of initiative by farmers shared similar sentiments of 20% each. Inadequate participation by farmers had the least response of 10%.

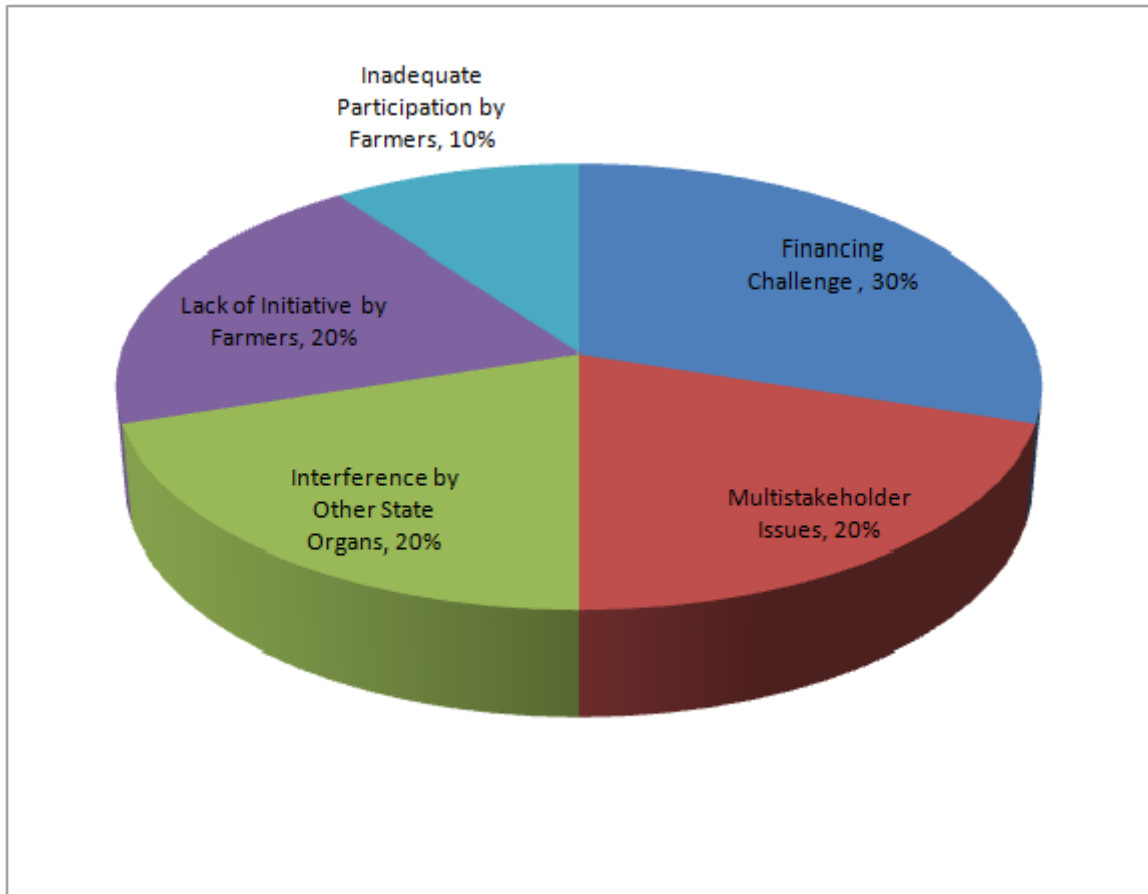


Figure 4: State Factors Influencing Access to Information Resources

The question to what extent does this affect promotion of sustainable agriculture had multiple responses based on very large extent, large extent, moderate extent, small extent and very small extent. As shown in the Table 6, the respondents gave interesting responses. However, taken cumulatively based on very large extent and large extent, mapping of KNLS staff and NAFIS has led to sustainable agricultural resources had the highest results (60; 85.7%). In the same order of ranking, community participation has led to sustainability of information projects, acquisition of reference and information resources has led to sustainability of agriculture, and resource mobilization and continuous update has led to promotion of sustainable projects registered similar responses of 55 (79.6%). Patrons seeking information on agriculture has led to sustainability of agriculture had 50 (71.5%) respondents. All the interviewees noted that the two organizations should work together for the betterment of farmers with guided framework on information sharing and delivery. *There is need to advance and promote sustainable*

agriculture among stakeholders. Resource mobilization improves promotion of sustainable agriculture in information agencies, noted four farmers.

Table 6: Extent of Impact on Promotion of Sustainable Agriculture

Promotion of Sustainable Agriculture	Very Large Extent	Large Extent	Moderate Extent	Small Extent	Very Small Extent	TOTAL
Community participation has led to sustainability of information projects	35 (50%)	20 (28.6%)	8 (11.4%)	5 (7.1%)	2 (2.9%)	70
Acquisition of reference and information resources has led to sustainability of agriculture	30 (42.9%)	25 (35.7%)	7 (10%)	5 (7.1%)	3 (4.3%)	70
Mapping of KNLS staff and NAFIS has led to sustainable agricultural resources	40 (57.1%)	20 (28.6%)	5 (24.3%)	3 (4.3%)	2 (2.9%)	70
Resource mobilization and continuous update has led to promotion of sustainable projects	30 (43.9%)	25 (35.7%)	6 (8.6%)	4 (5.7%)	5 (24.3%)	70
Patrons seeking information on agriculture has led to sustainability of agriculture	20 (28.6%)	30 (42.9%)	10 (14.3%)	8 (11.4%)	2 (2.9%)	70

Numerous challenges faced KNLS and NAFIS in the promotion of sustainable agriculture. Across the globe, these include: diminished government involvement in food regulation, information provision gaps, diminishing and increasingly unpredictable farm incomes and sustained transition towards agribusiness from farming (Hanson (2018). In addition, less information-literate people are more likely to experience learning challenges (Yu & Young, 2018). Information literacy enables users to better manage their information demands while

utilizing information services and resources more efficiently (Yu & Young, 2020). According to Gahukar (2019) sustainable agriculture is hindered by several factors such as gaps between utilization of information that is essential for the promotion of sustainable agriculture, low crop productivity, overuse of land, market imperfection, lack of capital and industrialization, the imbalance between prices of farm inputs and the market sale, Lack of extension at a grass root level and inadequate loan facilities. The author further alludes to future needs including the need for information coupled with essential collaboration between farmers and public and private libraries, diversification in agriculture, use of appropriate technologies and market-driven production.

4.8 Chapter Four Summary

In this chapter, the presentations and analysis of the findings are based on the research objectives and questions. These include collaboration between KNLS and NAFIS in promoting sustainable agriculture, capacity of KNLS in resource information provision in reference to sustainable agriculture, perception of KNLS staff towards collaboration and partnership to advance sustainable agriculture, and challenges faced by KNLS and NAFIS in the promotion of sustainable agriculture. Interpretations are aligned with these objectives together with the research questions. Findings indicate that KNLS and NAFIS are important in promotion of sustainable agriculture.

CHAPTER FIVE

SUMMARY OF THE FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter highlights the summary of the findings together with the conclusion and recommendations. Additionally, the research makes recommendations on planning, policy and other pertinent matters about promoting access and use of agricultural information. The conclusion part of this chapter offers some recommendations on topics that need further research. Purpose was to evaluate the extent of resource mobilization for the promotion of sustainable agriculture in Kenya with special focus on the partnership between Kenya National Library Service and the National Farmer's Information Service. Objectives included to:

- 1) Examine the collaboration between KNLS and NAFIS in promoting sustainable agriculture.
- 2) Find out the capacity of KNLS in providing the information resources required to advance sustainable agriculture
- 3) Determine the perception of library staff on collaboration and provision of policy recommendations in harnessing structured partnership to advance sustainable agriculture.
- 4) Find out challenges that faced KNLS and NAFIS in promoting sustainable agriculture.

5.2 Summary of the Findings

Findings and results are explained as follows.

5.2.1 Collaboration Between KNLS and NAFIS in Promoting Sustainable Agriculture

The first objective examined the collaboration between KNLS and NAFIS in promoting sustainable agriculture. Findings revealed the extent of resource mobilization for promotion of sustainable agriculture between KNLS and NAFIS the information as indicated in Figure 2 pg. 41. Many respondents 30 (42.9%) agreed that resource mobilization for promotion of sustainable agriculture between KNLS and NAFIS was excellent. Respondents also provided useful opinions about the level of collaboration that promotes sustainable agriculture by KNLS

and NAFIS in Figure 3 pg. 42. Level of collaboration that promotes sustainable agriculture by KNLS and NAFIS was very high with 25 (35.7%) and high 20 (28.6%). This research identified the strategies used to advance promotion of sustainable agriculture as indicated in Table 3 pg. 43. Sustainable agriculture can be achieved through collaboration between KNLS and NAFIS. This is strong indication since many respondents supported the collaboration between these two institutions. There was reported collaboration between KNLS and NAFIS in trying to promote the use of information services for sustainable agriculture with majority of users indicating that they obtain information from the library. There was also reported increased accessibility of users seeking information from libraries. The findings also indicated growth in agricultural projects due to a strong collaboration on information sharing between the two institutions.

5.2.2 Capacity of KNLS in Providing Information Resources Required to Sustainable Agriculture

The second objective assessed the capacity of KNLS in resource information provision on sustainable agriculture. Research results are indicated in Table 4 pg.45. The results demonstrate clearly provision measures to promote sustainable agriculture. Trainings done on sustainable agriculture and relevant resources was ranked with 62 (88.6%) responses, while access to information resources on agriculture in the library had 60 (78.6%). Respondents also stated the factors that influenced access to information resources, namely; change of priorities 35 (50%), insufficient knowledge 20 (28.57), and insufficient technical skills 15 (21.4). All of the respondents 70 (100%) had achieved some measures in access of information resources on agriculture in the library. KNLS capacity in resource information provision in reference to sustainable agriculture was essential in promotion of sustainable agriculture. It is vital to put in place sustainable means and ways to enable those libraries with limitless use of advancing

agricultural information mainly officers in the low cadre to supplement the elementary training and avail agricultural information advances.

5.2.3 Perception of KNLS Staff on Collaboration and Provision of Policy Recommendations to Advance Sustainable Agriculture

The third objective determined the perception of KNLS staff on collaboration and provision of policy recommendations in harnessing structured partnership to advance sustainable agriculture. Perception of KNLS and NAFIS staff on collaboration and partnership to advance sustainable agriculture is indicated in Table 5 pg. 47. Leading sustainability factors in the library were access to information resources on agriculture 60 (85.7%) and satisfied with information resources provided 55 (78.6%). In addition, the respondents rated the perception of the KNLS staff towards collaboration and partnership to advance sustainable agriculture as very satisfied 35 (50%), satisfied 20 (28.6%), and moderate 15 (21.4%). It is vital to put in place sustainable means and ways to enable those libraries with limitless use of advancing agricultural information mainly officers in the low cadre to supplement the elementary training and avail agricultural information advances

5.2.4 Challenges that Face KNLS and NAFIS in Promoting Sustainable Agriculture

The fourth assessed challenges faced by KNLS and NAFIS in promoting sustainable agriculture. First, respondents identified various challenges as depicted in Figure 4 pg. 49. Financing challenge had highest responses of 30%, multistakeholder issues, interference by other state organs, and lack of initiative by farmers shared similar sentiments of 20% each, while inadequate participation by farmers had the least response of 10%. Respondents also shared the extent to which this affected promotion of sustainable agriculture as shown in Table 6 pg. 50. Mapping of KNLS staff and NAFIS has led to sustainable agricultural resources had the highest results (60; 85.7%). Community participation has led to sustainability of information projects, acquisition of reference and information resources has led to

sustainability of agriculture, and resource mobilization and continuous update has led to promotion of sustainable projects registered similar responses of 55 (79.6%). The research indicated challenges that have been met in the implementation of this partnership. The lack of appropriate leadership and management of the project has led to failure. In its implementation, it was to provide enhanced outreach with appropriate information using printed media to farmers.

5.3 Conclusion

The collaboration between Kenya National Library Service and National Farmers Information Services has brought a cross-section of services to help bring information services closer to farming communities. The KNLS collaborates with the Ministry of Agriculture to empower farmers with pertinent and appropriate information. This information focuses on raising agricultural productivity with increased output resulting in more jobs being created in the agriculture industry and less food being scarce. The initiative, known as the National Farmers Information Services, was tested at the Buruburu Branch of the Kenya National Library Services. Joseck K. Olala, KNLS ICT Officer, described the functions of the Kenya National Library Service and the Ministry of Agriculture such as offering space at KNLS for the construction of an information desk, regularly updating NAFIS with pertinent material, and making printed documents available to consumers, offer more details about the prioritized value chains, provide space, dependable network servers and information at KNLS Buruburu branch. Both staff of KNLS and NAFIS, customers and other partners have really enhanced and promoted sustainable agriculture. KNLS staff manage and support the Information Desk, promote library and information services through marketing and branding initiatives and information projects, publicize the partnership through conferences and public meetings, and contribute to agricultural knowledge management (sharing).

5.4 Recommendations

- Knowledge, skilled and initiatives to promote and encourage better cooperation and exchange of agricultural data between agricultural sector groups and library service representatives should be supported. This strategy would encourage food insecurity by using agricultural information to address actual client needs.
- There is need to develop additional sustainable methods to enable the national library to expand access and use of better agricultural information within and beyond the borders. Information staff and customers should also be encouraged to use new agricultural information transmission techniques.
- Fostering cooperation in the creation of techniques and measures for evaluating the outcomes of improving library staff, information professionals and customers to access and use of agricultural information must be supported.
- There is need for funding to support research emerging trends in agricultural productivity in order to improve access and utilization of agricultural information.

5.5 Further Areas for Study

5.5.1 Resource Mobilization

The researcher identified resource mobilization as an area that needs further research. Resource mobilization is fundamental area for any organization in ensuring that the necessary resources are put in place for the purpose of achieving the goal and objectives. It is important for organizations to allocate sufficient funds that would facilitate this process. Collaboration is also important between organization for seamless flow and use of information for the benefit of the end user.

5.5.2 Comparative Research

This research covered only two institutions. Therefore, there is need to enlarge the scope of the research so as to cover other institutions for the purpose of obtaining clear picture on resource mobilization in promoting sustainable agriculture in Kenya and the entire globe. This will help to broaden the knowledge of farmers from other developed countries as well as helping in identifying the existing gaps in resource mobilization and agricultural information services.

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APPENDICES AND ANNEXES

APPENDIX I: INTRODUCTION LETTER



UNIVERSITY OF NAIROBI

FACULTY OF ARTS

DEPARTMENT OF LIBRARY AND INFORMATION SCIENCE

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Our Ref: C54/7683/2017

26th October 2021

Director General,
National Commission for science, Technology & Innovation
P. O. Box 30623-00100, Nairobi

Dear Sir/Madam,

**RE: RECOMMENDATION FOR AKAMA YOBAN NYANGWONO, REG NO:
C54/7683/2017**

The above named is a bonafide student at the University of Nairobi undertaking a Master of Library and Information Science (MLIS). He is currently in the process of collecting data as part of the requirements for the course.

His topic is **“Evaluating Resource Mobilization for Promotion of Sustainable Agriculture: Case of the Partnership between Kenya National Library Services (Buruburu) and National Farmers Information Service”.**

Any assistance accorded to him will highly be appreciated.

Regards,

A handwritten signature in black ink, appearing to be 'D. Njiraine'.

Dr. Dorothy Njiraine
Chairperson, Department of Library & Information Science (DLIS)

APPENDIX II: RESEARCH PERMIT

 REPUBLIC OF KENYA	 NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION
Ref No: 444901	Date of Issue: 11/November/2021
RESEARCH LICENSE	
	
<p>This is to Certify that Mr. YORAN AKAMA NYANGWOND of University of Nairobi, has been licensed to conduct research in Nairobi on the topic: EVALUATION OF RESOURCE MOBILIZATION FOR PROMOTION OF SUSTAINABLE AGRICULTURE: CASE OF THE PARTNERSHIP BETWEEN KENYA NATIONAL LIBRARY SERVICES (BURUBURI) AND NATIONAL FARMERS INFORMATION SERVICE for the period ending : 11/November/2022.</p>	
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APPENDIX III

QUESTIONNAIRE FOR KNLS LIBRARIANS AND NAFIS STAFF

Instructions

Please respond by ticking (✓) against your preferred response for questions with options. For questions that require suggestions or comments, please use the provided space.

Background Information

1. Best description of the public library and the organization _____
2. Gender _____
3. Years of service in the library/organization _____
4. Level of education _____

Collaboration Between KNLS and NAFIS in Promotion of Sustainable Agriculture

5. State the extent of resource mobilization for promotion of sustainable agriculture between KNLS and NAFIS. Use 4 = Excellent, 3 = Good, 2 = Fair and 1 = Poor.
6. Rank the level of collaboration that promotes sustainable agriculture KNLS and NAFIS. Mark the appropriate response, where, 5 = Very High, 4 = High, 3 = Moderate, 2 = Low and 1 = None.
7. State the role of KNLS and NAFIS in promoting sustainable agriculture.
8. Select the strategies used to advance promotion of sustainable agriculture. Use 6 = Strongly Important, 5 = Very Important, 4 = Important, 3 = Somewhat Important, 2 = Not Important, 1 = Don't Know.

Strategies to Advance Promotion	Multiple Response
Provision of good farming methods by NAFIS	
Advising on best animal bleeds by NAFIS	
Agricultural extension officers input to famers	
Advising on best fertilizers for different soils and crops	
Any other factor	

Capacity of KNLS in Providing Information Resources Required to Advance Sustainable Agriculture

9. To what extent are the following provision measures or criteria been achieved. Tick the appropriate using 5 = Strongly Agree, 4 = Agree, 3 = Neutral, 2 = Disagree, 1- Strongly Disagree.

Provision Measures or Criteria	Multiple Response
--------------------------------	-------------------

	5	4	4	2	2
Access to information resources on agriculture in the library					
Trainings done on sustainable agriculture and relevant resources.					
Conduct research on new resources available on agriculture sustainability					
Objectives of the resources provided are always met					
Increased numbers of patrons seeking information on sustainable agriculture					

10. State factors that influence access to information resources.

- a) Insufficient technical skills
- b) Change of priorities
- c) Insufficient knowledge
- d) Any other

11. Comment on any other factors that influence accessibility of information resources.

Perception of KNLS Staff on Collaboration and Provision of Policy Recommendations in Harnessing Structured Partnership to Advance Sustainable Agriculture

12. Mention the sustainability factors that contribute to the partnership between KNLS and NAFIS. Select the appropriate option, where 5 = Strongly Agree 4 = Agree 3 = Neutral 2 = Disagree 1= Strongly Disagree.

Sustainability Factors	Multiple Response				
	5	4	4	2	2
Access to information resources on agriculture in the library					
Satisfied with information resources provided in the library					
Growth in agricultural projects due to information resources provided					
Enough information to exploit agricultural benefits					
Adequate financial resources and other support are offered					
Development partners and other stakeholders support the library					

13. Rate the perception or satisfaction of the KNLS staff towards collaboration and partnership to advance sustainable agriculture. Use, where 5 = Very Satisfied, 4 = Satisfied, 3 = Moderate, 2 = Not Satisfied 1 = None.

Challenges that Faced KNLS and NAFIS in Promoting Sustainable Agriculture

14. State factors that influence access to information resources.

- a) Financing challenge
- b) Multistakeholder issues
- c) Interference by other state organs
- d) Lack of initiative by farmers
- e) Inadequate participation by farmers
- f) Any other

15. To what extent does this affect promotion of sustainable agriculture. Use 5 = Very Large Extent, 4 = Large Extent, 3 = Moderate Extent, 2 = Small Extent, 1 = Very Small Extent.

Promotion of Sustainable Agriculture	Multiple Response				
	5	4	4	2	2
Community participation has led to sustainability of information projects					
Acquisition of reference and information resources has led to sustainability of agriculture					
Mapping of KNLS staff and NAFIS has led to sustainable agricultural resources					
Resource mobilization and continuous update has led to promotion of sustainable projects					
Patrons seeking information on agriculture has led to sustainability of agriculture.					

16. Mention possible solutions to advance and promote sustainable agriculture among stakeholders.

17. Comment on any initiatives to improve resource mobilization for promotion of sustainable agriculture in information agencies.

INTERVIEW SCHEDULE FOR FARMERS

Background Information

1. Best description of the public library and the organization _____
2. Gender _____
3. Years of service in the library/organization _____
4. Level of education _____

MAIN SURVEY

5. Tell me about yourself and what you do?
6. What is your understanding of sustainable agriculture?
7. How is resource mobilization important in the promotion of sustainable agriculture?
8. How is the collaboration between KNLS and NAFIS structured?
9. How does the collaboration between KNLS and NAFIS work? How does it promote sustainable agriculture?
10. What resources are provided under the collaboration between KNLS and NAFIS?
11. Does KNLS exhibit the necessary capacity to provide the resources required to promote sustainable agriculture?
12. What are the perceptions of KNLS staff towards the partnership between KNLS and NAFIS?
13. What are the perceptions of the beneficiaries of NAFIS towards the partnership between KNLS and NAFIS?
14. What challenges are faced by KNLS and NAFIS in the promotion of sustainable agriculture?