



# UNIVERSITY OF NAIROBI

## SCHOOL OF THE ARTS AND DESIGN

DESIGN APPROACHES FOR COMMUNITY DEVELOPMENT IN KENYA.

A case study of Wamunyu Handicrafts Community in Machakos County.

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A research report submitted in partial fulfillment for the award of a Masters in Design degree, University of Nairobi, School of the arts and design.

AUGUST, 2018.

**Declaration**

Student declaration:

This research report is my original work and has not been presented for a degree in any other University.

Sign .....

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Registration number .....

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Supervisor declaration:

This research report has been submitted for examination with my approval as a University of Nairobi supervisor.

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I acknowledge the great input and guidance from my lecturers and my supervisor, Dr. Lilac Osanjo for her great knowledge and patience throughout this project.

## **Dedication**

To the Almighty God for His grace and might, May His Name be glorified.

I dedicate this work to the design fraternity, enthusiasts, researchers and mentors in the country, region and in Africa.

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**List of Abbreviations**

Fig.	Figure.
No.	Number.
Pic.	Picture.
Pg.	Page.

**List of Acronyms**

ADP.....	Annual Development Plan.
CBT .....	Community Based Tourism.
CBOs.....	Community Based Organizations.
CDF.....	Constituency/sub county Development Funds.
CIDP.....	County Integrated Development Plan.
DWSI.....	Design With Social Impact.
EPC.....	Export Promotion Council.
HCD.....	Human Centered Design.

IDP .....Integrated Design Processes.  
KFS.....Kenya Forest Service.  
LASDAP.....Local Authority Service Delivery Action Plan.  
LAT.....Linked Approaches Theory.  
MCU .....Machakos Co-operative Union.  
NGOs .....Non-Governmental Organizations.  
SDGs .....Sustainable Development Goals.  
UNCSD .....United Nations Commission on Sustainable Development.  
UNWTO .....United Nations World Tourism Organization.  
WDO.....World Design Organization.  
WHCS.....Wamunyu Handcraft Co-operative Society.

## **Abstract**

Design is increasingly becoming a very important vehicle for community development especially in the rural areas where resources are limited. This role is highly linked to the rich interaction between religion, art and culture in Africa. Africa thrives well through networks formed by different cultures, customs, history and people spirit of togetherness. It is in such setups that handicraft communities thrives well. Design approaches provide ways in which communities can develop socially, economically and environmentally using sustainable and creative methods. Sustainability in the process being achieved through the continued benefits to the communities. This paper is aimed at exploring ways in which design can play a key role in the process of developing sustainable communities from inception to full implementation. It also explores the barriers for the uptake of community development initiatives in the design profession in Africa. Qualitative analysis and case studies are the major research strategies used. Wamunyu area is used as the case study of a handicraft community existing in Machakos County. Wamunyu is a representative of a rural community in Kenya that have developed around craft production significant in the region. Data collected from archives, interviews and published reports for this purpose. This paper concludes that design plays an important role in the development of sustainable communities especially in the rural areas. The innovative use of design approaches today ensures a smooth transition for design use in Africa's problems tomorrow.

## **CHAPTER 1**

### **1. INTRODUCTION**

#### **1.1. Background of the study**

Africa thrives well through networks formed by different cultures, customs, history, practices and people's spirit of working together. It is in such setups that development activities thrive practiced at an informal or traditional level (local setups) in many rural areas in Africa today (Ndlovu, 2015).

Rural development has been a key subject dating back to the industrial growth in urban centers of the 1970s to date. Rural areas according to Limkriengkrai (2010) are key support of any development as they provide raw materials and skilled labor to the growing economy in urban areas though do survive alone by small economic activities apart from farming. The informal sector plays a key role in rural development especially in ecologically fragile areas. Small scale industries forming important occupational activities and source of income to the majority of the people. Rural areas open opportunities for the growth of handicrafts due to the availability of skills and raw materials. Mutinda (2014) points out that these activities can be grown from a traditional craft to a successful commercial industrial operation if well-organized with proper marketing channels, access to institutional credits and environmental preservation methods. This is in line with Vision 2030 development blue print, aimed at making the country a newly industrialized middle income nation providing high quality of life for all its citizens. The vision's pillars targeting to encourage development through investing in people with provision of equitable social development in a clean and secure environment aimed at issue based, people centered and results oriented policy approach. The foundations of the blue print contributing to the development agenda through wealth creation opportunities, infrastructure, innovations and developing human resources to be globally competitive through training and education (Kenya Vision 2030).

The nature and extent of these rural communities are short lived in the country as they do not meet and maintain basic elements of sustainability such as proper planning processes, public participation, infrastructure and opportunities. UNWTO (2005) attributes these development setbacks to the view of rural development as with less economic opportunities. Previous research and case studies in South Africa, Asia and South America indicates that the survival and sustainability of these communities can be achieved through product service approaches enshrined in community based practices and sustainable community

tools (UNWTO, 2005). Sustainable community tools suggested to tackle the challenges includes integrated design processes (IDP), post development monitoring and community dialogues allowing opportunities, innovation and continuity. The suggested approaches are custom to each community as observed by Richards (2013).

Example of more successful approach in Africa for community development is the community based tourism model which places the product at the center as a business model is practiced in Edo State Nigeria, Zambia, Uganda and in some parts of Kenya to boost tourism and informal industries. Despite the challenges of reduced natural resources, tough policies aimed at environmental sustainability, competition, poor marketing channels and lack of proper organization structures, the model contributes majorly in the protection of natural resources and job creation to the people in this areas (UNWTO, 2005; Mutinda, 2014). One such community is the Wamunyu wood carvers of the Akamba people in Machakos County.

The Wamunyu handicraft community is home to an estimated 8,000 people practicing wood carving, drums making, beadwork and weaving dating back since the introduction of carving in 1918 by Mutisya Munge. The community has seen the establishment of other smaller communities of wood carvers and other handicrafts in Kitui, Makueni, Malindi, Mombasa, Nanyuki and Nairobi. Artists apprentice others for continuity relying on tourists and other institutions for marketing and funding. Being a practice highly dependent on natural resources such as trees, the community has initiated a program for planting and selling trees for sustainability of the practice. Other initiatives are by the county government to promote the area as a cultural center, online marketing, value addition and proposition as a world heritage site.

## **1.2. Problem statement**

Community development provides economic opportunities, alternative development strategy for poverty alleviation and community empowerment in Africa. It also plays a critical role in value addition to existing biodiversity conservation and revitalizing intangible or tangible culture especially in rural areas. Community activities are important occupational elements in rural areas as many depend on it to supplement their income especially in ecologically fragile areas. Community development is faced with implementation process challenges which includes reduced participation by stakeholders, inadequate funding, poor management, scarcity of materials, environmental degradation

due to overdependence and dwindling market trends for services or products. Other challenges includes policies introduced at the national level on environment and resources use. As a result many such projects do not reach full cycles hence social, economic and environmental benefits are not achieved.

The study investigated the community activities, development approaches for the purpose of designing a community development process model that is suitable and sustainable in approach for effective development processes and practices in the country.

### **1.3. Research questions**

Main research question;

- i. Can the application of design approaches effectively promote community development in Kenya?

Specific research questions;

- ii. What are the processes of developing communities in Kenya?
- iii. Which design approach can be used effectively in community development processes in Kenya?
- iv. Which design approach model can be used effectively to promote community development in Kenya?

### **1.4. Research objectives**

Main research objective;

- i. To establish the application of design approaches in community development in Kenya.

Specific research objectives;

- ii. To determine the processes of developing communities in Kenya.
- iii. To examine the use of design approaches in community development processes.
- iv. To propose a design approach model for community development in Kenya.

### **1.5. Justification of the study**

Design approaches can facilitate the uptake and effective use of the community development opportunities in the country for steady and sustainable growth at the county as well as national level. The new approach assists the fully implementation of other models

and theories supporting the development of rural communities as they are conceptualized as methods for rural communities however not much research has been done on their sustainability. The study also boost the community involvement on their own development as the misconception has been that development is initiated by the authorities, funders or other stakeholders interested in the community's activities.

The study is in line with the country's Vision 2030 blueprint to make the country a middle income country. The study incorporated the three important pillars of development as cited by the proposed framework as economic, social and political founded on macroeconomic stability for long term development, enhanced equity and wealth creation opportunities and science, technology and innovation for development. The devolved function of the government has also brought new opportunities for exploitation and development especially for the rural communities' enterprises. Research in this areas offering great knowledge for the county government and investors attracted by the county's setups.

The study supports the global goals for sustainable development (SDGs) just to mention the eradication of poverty (SDG 1), good health and wellbeing (SDG 3), responsible consumption and production (SDG 12), climate action (SDG 13) and encourages partnerships (SDG 17).

The study undertook a case study of Wamunyu in Machakos County. Wamunyu selection was due to its key contribution to the start of the wood carving culture in Kenya among other handicrafts. The area celebrates the long cultural practice forming the largest group of wood carvers in Kenya and its contribution to other handicraft centers in Nairobi, Mombasa, Malindi, Kitui, Makueni and Nanyuki. The study contributes knowledge on the development processes used by the county and cooperative societies offering sustainable, affordable methods that can be adapted for community engagement across sectors in the county function. The study offers a stepping stone for other areas practicing handicrafts in Machakos County offering historical and current data.

### **1.6. Significance of the study**

Design approaches to create sustainability in community development has not been fully explored in research and practice. The research findings provide insights and information in this area both for community development and the design professions.

The study will be beneficial to tourism, environment, industrial sectors and the county government for devising strategies or policies for community development. The model

proposed will identify and determine areas of improvement to existing models as well as give way to new approaches to community development.

The study methods and techniques assists the community to acquire the much required design skills and critical thinking skills in the innovation, prototyping, production and promotion of the artifacts produced and solving complex community problems.

Research findings on sustainable development approaches aids in uncovering viable venues that communities can adopt to ensure maximum impact of developments invested upon. Academic researchers and students will gain empirical knowledge about the significance of incorporating design approaches in community and rural development in general. The dissertation published will serve as a source of primary data that can be stored and archived for benchmarking.

### **1.7. Assumptions of the study**

The study was based on the assumption that community development is practiced in Machakos County but it is not fully developed and is a similar case in many rural areas in the country. It was assumed that the uptake of the community setups approach for development will improve the livelihoods of the people in Machakos County.

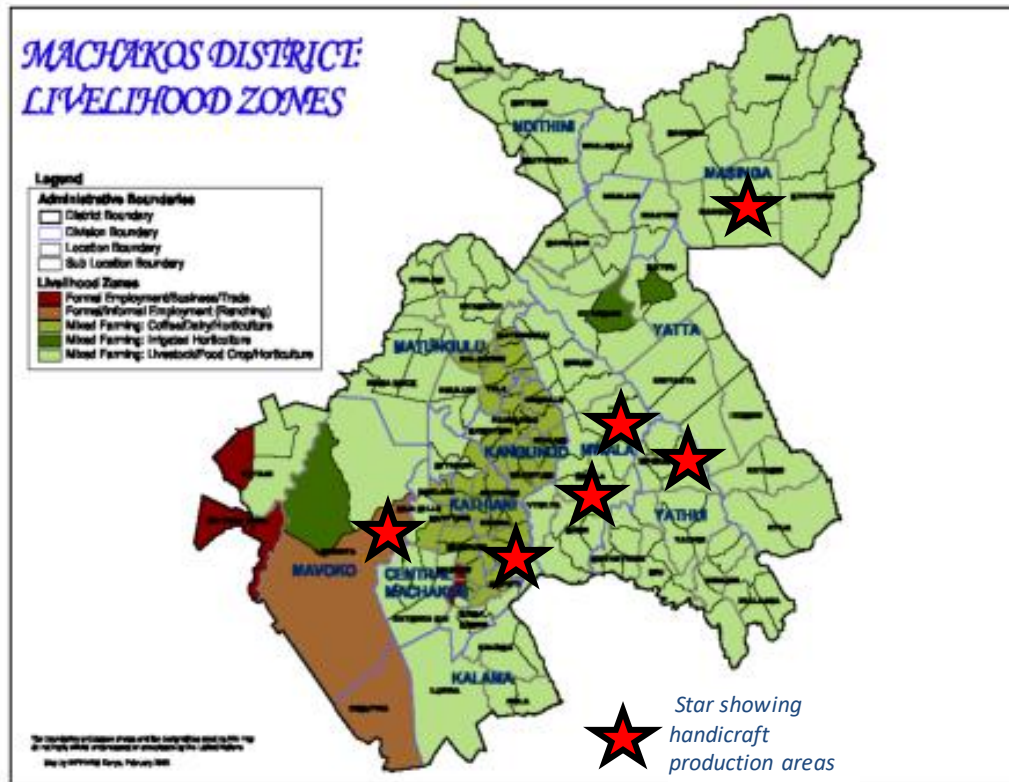
It was hypothesized that community development in Machakos County is based on a form of traditional craft and culture if promoted will revitalize the rural centers, provide a source of income to the community and promote the cultural practice. These in return increases the community activities directly influencing on the economy, social cultural and environment conservation in the county.

The involvement of design methods and techniques in the research process will assist the participants acquire designerly knowhow while producing concepts for their artifacts, packaging, promotion and development.

### **1.8. Scope and limitation of the study**

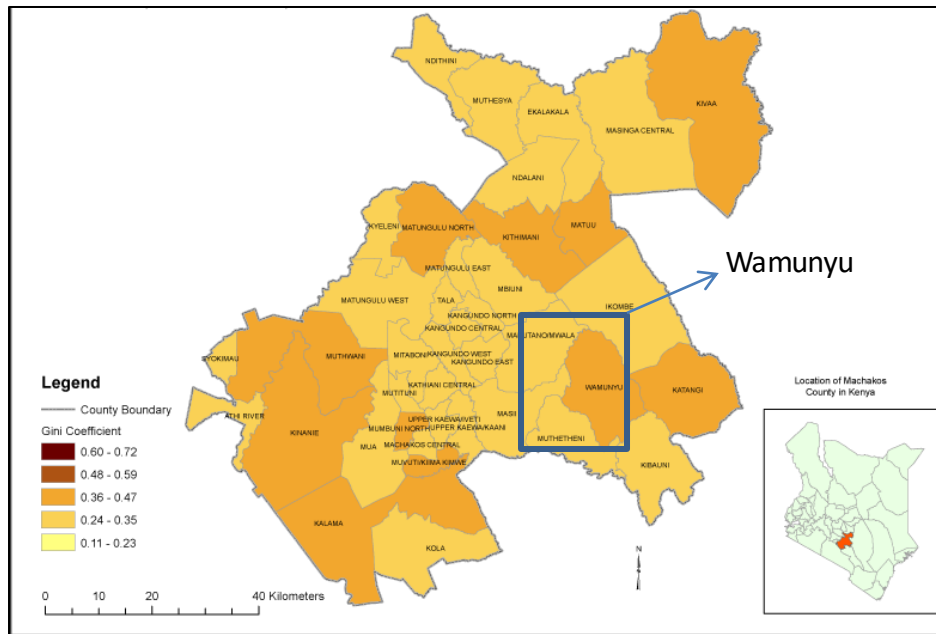
The study focuses on community development in the context of rural areas examining the processes used and challenges of adoption of sustainable approaches in Machakos County. The study was limited to handicrafts activities in Machakos County as a major livelihood practice within the local communities. Wamunyu, Masinga, Katangi, Kathiani and Kimutwa are areas well known for the production of handicrafts in Machakos County.





**Figure 1.1** Map showing handicraft production areas in Machakos County. Source; MCU, 2017.

The study was conducted in Wamunyu area in Mwala constituency limited by time and resources for the study. The area thrives as the largest handicraft town in the county offering environment for production and selling point for different local products mainly being wood carvings and woven baskets among others. The community considered may not represent the whole picture of the handicraft communities' products and services in Machakos County but cover the major recognized activities such as carving, weaving and beadwork.



**Figure 1.2** Map of Machakos County showing the location of Wamunyu. Source; IEBC boundaries, 2013.

The study will examine further the role handicrafts plays in community development in rural areas, promotion of traditional crafts, culture and preservation strategies of the natural environments.

The study's economic, sociological and environmental impact of the handicraft activities and development in the area was not detailed due to time and resources limitation. Due to this challenge the researcher will rely on previous documents and assessment made by different parties. The researcher also recognizes the limited available literature on handicraft community development and design approaches for development in the African setting or context.

Despite these limitations, it is hoped that the study will serve as an inspiration for more extensive studies on sustainable models for rural community development.

### 1.9. Definitions of terms

The study intends to use the following terms in the context of this study;-

**Artisans/Producers** - are people who make products manually (hand or using hand tools), usually work individually but can often be helped by family members, friends, apprentices or even a limited number of workers, with whom they are in close personal contact (ITC, WIPO, 2003).

**Community** – any existing or potential system of individuals, groups and organizations that possess common concerns, interests and goals in a certain geographical location (Bush et al., 2000).

**Design** – a strategic problem solving process that drives innovation, builds business success and leads to a better quality of life through innovative products, systems, services and experiences (WDO, 2017).

**Design ethnography** – design approach that repurposed ethnography in order to ground creative work and speculations in the field research for the conception, design and development of new products, service or systems (Nova, 2014).

**Design tools** – an approach or procedure aimed at framing, analyzing or generating concepts (Nova, 2014).

**Handicrafts** – products which are produced either completely by hand or with the help of tools made from raw materials (UNESCO, 2001).

**Integrated Design Process (IDP)** – a multidisciplinary team approach tackling development related issues to ensure high performance solutions are achieved (Urban strategies, 2008).

**Social design** - a design process that contributes to improving human well-being and livelihood. It involves going out to identify problems faced by the society and solving them using design (Holm, 2006).

**Sustainable development** – the development that meets the needs of the present without compromising the ability of future generations to meet their own needs (UNCSD, 2007).

## **CHAPTER 2**

### **2. LITERATURE REVIEW**

#### **2.1. Overview**

Community development are more geared towards sustainable practices and processes that are community friendly and yield more benefits and results. This chapter explores the changing trends and approaches used to ensure sustainability from a rural context in the first section. The second section discuss the role design plays as a vehicle for community development and social change. Primary and secondary literature were systematically reviewed primarily to summarize existing literature around the subject, identifying gaps in current research and provide a framework or background to position future research.

#### **2.2. Community Development**

A community is defined as an existing or potential system of individuals, groups and organizations that possess common concerns, interests and goals (Bush et al., 2000). Aref and others (2010) describe the community as a group of individuals residing a similar geographical area with common cultures. Development in this definitions is related to the area where these groups live and related directly to their activities economically or socially. The term development has regularly been towards the idea of good change established to exist when the wellbeing and quality of life is improved (Chambers, 1995).

Community development is introduced within an area for the purpose of the wellbeing of the people and the environment especially in rural settings. Key drivers being the provision of economic opportunities through meaningful employment for members, community revitalization, value addition to an existing system especially conservation projects, it is also a source of financing of other projects such as infrastructure and education (Kamau, 2016). Kamau also points out that community development is introduced as a means of revitalizing intangible or tangible culture such as cultural events, festivals, local handicrafts and traditional farming practices.

Community development takes place in urban settings as well as rural areas and are beneficial to the economy of this areas despite the challenges of sustainability of projects, lack or poor education, insufficient financial assistance and conflicting vested interests (Okazaki, 2008; Woodcraft et al., 2012). It creates employment to many people, ensures sustainable consumption of resources, provides raw materials to industries and encourages social structures.

### **2.2.1 Rural development**

Rural development referred to as meaningful growth economically, culturally and environmentally in the country side or non-urban settings. Development in rural settings are originally conceptualized as avenues for economic opportunities for undeveloped localities targeting groups rationally described as remote, rural, impoverished, marginalized, economically depressed, poor, indigenous, ethnic minority and people in small towns (Muganda, 2009). They are characterized by a traditional, participatory or agricultural economic system in which work, goods and services utilize available resources established in long traditional patterns (Ndlovu, 2015).

Rural development progress well when people work together towards similar goals. People act independently in their own interest thus unintentionally deplete resources contributing to the consumption of resources on a basis of continuous habits thus the need for unity of purpose fulfilled in a rural community setups (Turcu, 2012).

The availability or existence of communities' setups in rural areas greatly influences the destination of choice for investments, service and product industries (Mwathi & Kagiri, 2014). It is also a determinant of the type of infrastructure to be put in place hence its importance in rural economies. Mwathi and Kagiri (2014) emphasize the need for community types of setups for meaningful and sustainable development however recommends for further research on strategies that players employ to increase their attractiveness and sustainability. Markey et al. (2006) agrees that rural areas are perceived as with limited development opportunities hence a community oriented and territorial approach will be more successful than other approaches.

### **2.2.2 Development Approaches**

The most significant approach historically is the Brundtland approach of the 1987 World Commission on Environment and Development which merged development issues to the environment. The general approach cited the sustainability of development as highly dependable on the bridge concept of economics, ecology and ethics with the ownership of the concept spread across all sectors (Brundtland, 1987). Cases in Africa, many parts of Latin America, Asia and middle East indicates that the major causes of political unrest and international tension is related to environmental decline according to the Brundtland report findings. Critical survival issues were reported to relate to uneven development, poverty and population growth. Brundtland proposed an interdisciplinary and integrated approach to

be used for the development processes. The development concept was linked to environmental sustainability, economic and ecological policies under a cause and effect theory (UNCSD, 2007).

Development processes for the developing and developed nations have since followed the Bruntland model but adjusted to fit its cultural and economic context. The rationale of a sustainable development process being based on the assurance of renewable economic, social and cultural benefits to the community and its environment (Richards & Hall, 2000). More stakeholders are involved in the processes with gradual integration of the community, in some cases, they are driven by the community entirely (Limkriengkrai, 2010).

There are several approaches to community development. This includes top down approach, participatory development approach, sustainable development approach and a mix of the above. The approaches aimed at ensuring continued benefits to the community.

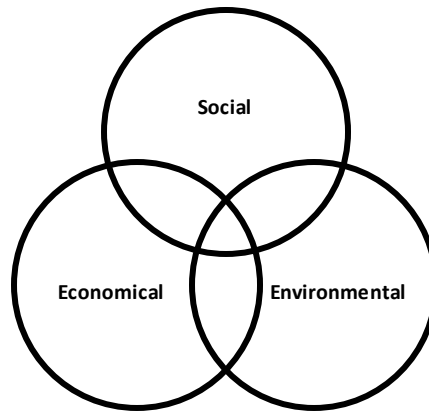
#### **2.2.2.1 Top Down Approach**

The top down approach is the most used approach. Ngayu (2011) affirms that the approach is policy or framework driven compiled by governments, organizations or key stakeholders. A good framework cited to embody principles of sustainable development such as integration of social, economic and environmental components, meeting current and future needs.

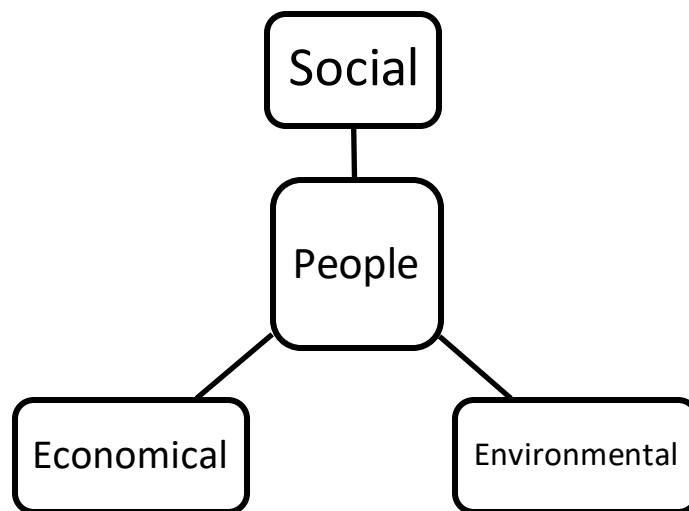
The approach is efficient in implementation as it is agenda driven with safeguarded empowerment, political and social good will. Limkriengkrai (2010) argues that the top down approach is to be interchanged with the bottom up approach which yields better results increasing ownership and participation by the communities in the policy development and implementation. She proposes cross sector cooperation, citizen participation channels and social innovation for the more efficient development and to combat possible uprising challenges.

Long term approach to development in this case is in reference to responsible living in environmental issues, economic equity and social justice as proposed by Walker (2006, pg. 17). Elkington agrees that the top down approach should be replaced successfully by the triple bottom to meet environmental, economic and social equity. He points the three factors of environment, society and economics in association with human activities ( Elkington, 1999; Bharna & Loffhouse, 2007; Van der Ryn & Cowan, 2007). Recent concepts also

include references to inner values and spirituality which Walker (2011) refers as personal (people) meaning in a quadruple bottom line approach.



**Figure 2.1** Triple bottom line approach. Source; Elkington, 1999.



**Figure 2.2** Quadruple Bottom Line approach. Source; Walker, 2011.

An example of top down approach is the National Poverty Eradication Programme in Nigeria established in 2002. The government established the programme to empower youths in rural communities through capacity acquisition, enterprise internships and credit delivery programs with contributions from development partners. Chigunta (2002) acknowledges that the development initiative was to grow rural enterprises and develop vocational skills crucial in fighting poverty in Nigeria.

Thailand is widely known for its strong policies that supports rural development done through the handicraft industry. Thailand rural industries grow through the top down

approach as observed by Shingetomi (1998). Similar to Nigeria, the Thai Government approach promotes entrepreneurship, improving market information, strengthening management and easing financial constraints. Thailand adopted the OTOP programme (One Tambon One Product Policy) aimed at enabling each community to develop and market its own local products based on traditional indigenous expertise and local know how. This is similar to the Japanese OVOP programme (One Village One Product). Limkriengkrai (2010) observed that the development focused on promoting environmental preservation, semi secondary industries, self-reliance and creativity. The role of the government to the community being building capacity through providing knowledge, skills and technology. The community development is implemented through public forums with tools such as community mappings being common.

The approach is cited to be beneficial in rural poverty alleviation, preservation of the environment and promotion of semi-secondary industries.

#### **2.2.2.2 Participatory Approach**

Participatory development approach involves stakeholders in the development processes, actively taking part in the design, implementation and evaluation of development interventions. Community participation is also cited as key for development of rural areas from inception to fulfillment through power redistribution, citizen participation, collaboration processes and social capital creation equitably distributed (Okazaki, 2008). Taylor (1995) had earlier criticized this process that it is not rooted in reality and time consuming as people take part in things that benefit them individually and thus conflicting vested interests by stakeholders. Felstead (2000) points out that participation should be based on the assets of the local community, including not only the local people but also the natural environment, infrastructure, facilities and special events or festivals. Public involvement, Felstead argues that it functions as a driving force to protect the community's natural environment and culture while simultaneously encouraging greater development related income. Anastas and Zimmerman (2003) emphasizes that participatory approach should be all-encompassing and interdisciplinary, valuing diverse perspectives and including multiple stakeholders throughout all stages of the process. Involving local communities in decisions that affect their lives throughout the stages of new developments is vital if public investments is to be effective (Woodcraft et al., 2012).



Examples of tools used in participatory approaches includes community hands on models, participatory 3D (three dimensional) models and multimedia internet based mapping. The approach and tools has been adopted as development plan in Kenya notably in the coastal Kaya forests, Maasai Mara, Ogiek community (Mau), Giitune Sacred forest (Meru), Got Ramogi, Kit Mikayi and Karima hill (Nyeri). Participatory workshops with different stakeholders are involved in the development of the plan. Table modeling is one technique that was adopted by the Ogiek community plan though the rest are not well documented as far as to the tools or techniques that were applied.

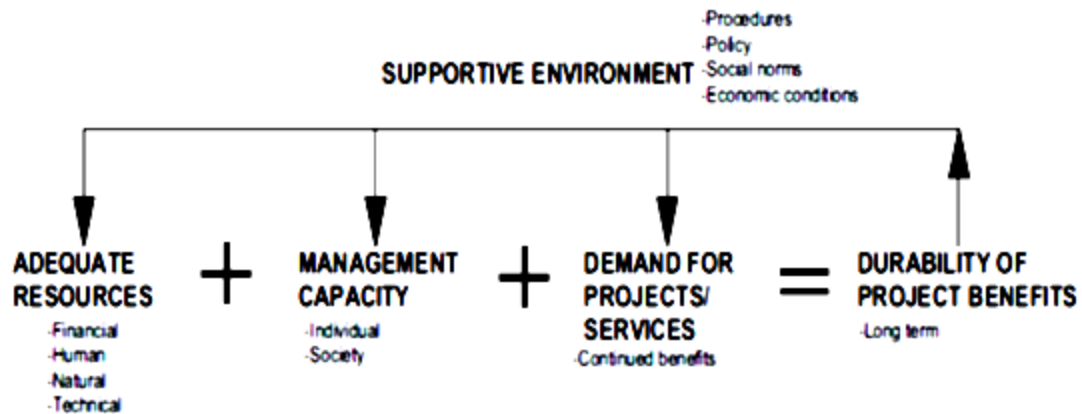


**Figure 2.3** Ogiek participatory community mapping activity. Source; Ambole, 2016.

Participatory approaches enhance collaborations for long term partnerships that result in sustainable changes. Ambole (2016) affirms that the approach captures the need of the community offering creative facilitation of development processes providing enriched data for better science and policy.

### **2.2.2.3 Sustainable Development Approach**

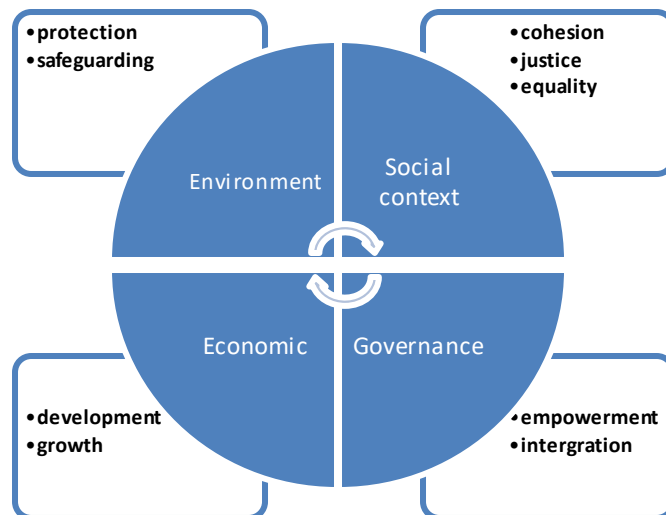
Sustainable development as a new approach is directly linked to an environment focus development agenda with economic and social benefits. Booz (2013) points out that sustainable development is through supportive environments for the community systems for services or products and the durability or sustainability is achieved by the continuous supply of this benefits socially, economically or environmentally.



**Figure 2.4** Dynamic Sustainability community development model. Source; Booz (2013).

Regeneration of projects or policies is proposed for sustainable development as opposed to planning new development according to Puppim and Baladan (2013). Agreeing to the fact that sustainability is achieved through the three pillars of environmental, economic and social, they cite that the problems still recur even with new development. Problems cited as environmental challenges, social inequality and institutional challenges in governance of development and geographical disparities. The factors supporting regeneration approach for development includes pressure from short or long term economic problems, deindustrialization, demographic changes, underinvestment, infrastructural obsolescence, cyclical employment issues, political disenfranchisement, ethnic or social tensions and physical deterioration.

Turcu (2012) proposed regeneration of existing development through leap frogging shifts from traditional localized society to advanced multilocal societies learning from past mistakes and providing rich concepts for the future. The community moves from being a possibly progressive society to a stepping up society. The concept according to Turcu, can be achieved through cross sector cooperation, citizen participation, social innovation and co-production.



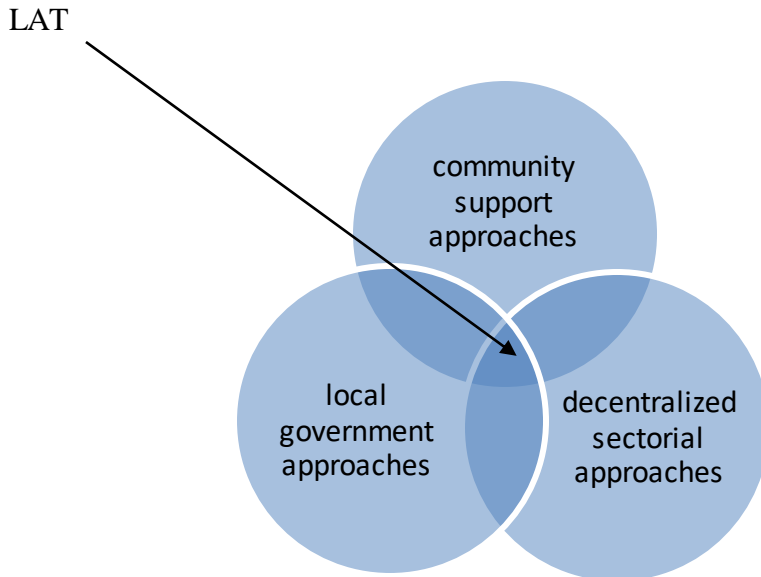
**Figure 2.5** Sustainable regeneration development system. Source; Turcu (2010) on the basis of Vatinin & Spangenberg (1999) Prism of urban sustainability.

Community based development (CBD) is an example of sustainable development approach aimed at introducing more strategic and future thinking or visioning to development according to Reid et al. (1993). CBD approach relies on residents and community leaders as their own experts about community needs and desirable influences. It provides opportunities to clarify community strengths, challenges, obstacles, opportunities for social, economic and ecological wellbeing. Assumptions made for the approach including local capacity building and organizational development guided using the knowledge and insights of stakeholders. Another assumption is that stakeholders can look beyond their immediate circumstances and identified community values that will move stakeholders' will towards acknowledged desires that respect local area and community wellbeing. Reisinger (1994) advocates for the implementation of CBD as a flexible and responsive process instead of as a quest for a rigid plan due to cycles of growth or decline which roles, influences and relationships of stakeholders change. An example in practice is the Community Based Tourism (CBT) which is described as tourism that is planned, developed, owned and managed by the community directed by cooperative decision making, responsibility, access, ownership and benefits (Ndlovu, 2016). CBT is based on the fact that most natural environments are culturally constructed and local communities and economic systems may hold the key to their survival or destruction (Richards & Hall, 2000).

#### 2.2.2.4 Mixed Approach

The approach includes the combination of two approaches or a combination of all in accordance with the structure of the community and the development agendas. The approach is also known as the Integrated Rural Development (IRD). Linkriengkrai (2010) defining the approach as area based development involving coordinated actions in the planning and implementation. Faulkner and others (2006; xv-xvi) propose the addition of culture in the definition to express the attached value of the approach.

Helling and others (2005) propose the Linked approaches theory (LAT) for effective implementation of participatory development. The LAT idea is based on achieving real participation from the community. It proposes linked stakeholders approach to improve accountability and technical support throughout the development agenda. This is with an aim to achieve sustainability. They propose the approach be based on specialized product or service that the community offers supported by institutional policy (local government approach) and acted upon by the community voluntarily or in social groupings. The linked approach merges three approaches which includes the local government approach, community support approach and the decentralized sectorial approach.



**Figure 2.6** Linked approaches theory (LAT). Source; Helling et al., 2005.

Akpomurie (2011) proposes the merge of traditional culture and imported cultural skills to attain sustainable development in the rural areas as a concept. This argument is based on the fact that knowledge is passed from generation to generation in a sustainable way over the years thus equals to development. Kothari (2007) agrees that people have their own

solutions from practice, traditions and cultures if utilized are sustainable. The merge of tradition and modern aspirations can be achieved through effective participation for sustainable development. Tacit knowledge based on local history and long cultures is said to be self-sufficient and such interventions in modern times leaves people better off than other approaches.

Richards points out that the development models used by the communities are similar resulting to a serial reproduction thus unattractive to stakeholders and developers which this communities target (Richards, 2013). He establishes that the trend should be towards creativity and embedded knowledge for competitive advantages. He advocates for the adoption of new technologies to facilitate new forms of mixed development processes and social change. The need for development should be established in relationships between the development and local residents, how this links are formed, experienced and maintained he emphasizes.

A good example of the mixed method approach is the case study of the snake kiln ceramics in Taipei, China. Sustainable development approach was incorporated with a key focus to save the cultural heritage dating back to the 17<sup>th</sup> century while providing a livelihood to the owners of the kilns and the handicraft community in the region. The development approach used was in a form of a business model merging traditional methods of manufacturing and the modern industrial methods as cited by Hatton (2002). The development successfully grew to include other cultural events from the region such as indigenous festivals, fairs, pottery contests and educational visits that show the traditional characteristics of the community in a bottom up approach. With the success of the Taipei ceramics community development, the government has since established policies and incentives for rural handicrafts communities in a top down approach to safe guard traditional methods of production and tourism for the areas. The policies also strengthen the community's development approach and boost rural industries.



**Figure 2.8** Traditional Snake Kiln, Cultural Park, Taipei. Source, Hatton (2002).

The success of the approaches used, as studied by Hatton (2002) is attributed to the active participation of the community and the ability to timely change approaches. It shows the importance of building networks and alliances within and without the community for sustainability.

### **2.2.3 Community Development approaches in Rural Kenya**

Rural setups in Kenya play a major role as pressure builds in urban populations with estimates projecting at 62.7 percent of the national population by 2030 (UN, 2003). The current lack of planning policies and frameworks pose further socio-economic, environmental and institutional challenges that could spill over to rural areas. Sustainable development of rural areas is argued could salvage the situation or provide an alternative as the scale of future urbanization will pose further socio-economic environmental and institutional challenges for Kenya if sustainable policy and planning frameworks are not put in place (Ngayu, 2011). Ngayu points out that rural development is key now than in future. She argues that the approached adapted for community development especially in rural Kenya should be efficient, innovative and community friendly so as to minimize future challenges and maximize opportunities. The common approaches in rural development in Kenya are purposely for conservation and industrial or enterprise development as cited by Mukoko (1987) in Kamau (2016).

Majority of the rural development is carried out by different stakeholders across different sectors with some implemented by the government initiatives for conservation or industrial growth through a Top down approach. Development in some cases in the country are carried out by the community for the purpose of income generation, environment protection or revitalization of cultural practices. This could be considered as a bottom up approach to development according to Mutinda (2014).

The devolved function of the current government has opened the rural areas of the country for development. The government's development blueprint Vision 2030 aims at making the country a newly industrialized middle income nation with provision of high quality life for all citizens based on economic, social and political pillars. The blueprint is still an opportunity to be explored for rural development however experts cite gaps and recommends the addition of an environmental pillar for sustainability under the quadruple bottom line approach (Ngayu, 2011; Makunda, 2017).

Participatory approaches are identified through the Local Authority Service Delivery Action Plan (LASDAP) whose mandate is to conduct participatory meetings with citizens and local authorities for provision of services and projects in their areas. Despite the challenges of weak financial capacity, lack of political goodwill, formal and informal development, planned and unplanned settlements among others, LASDAP through the Constituency Development Funds (CDF) has implemented projects crucial to rural Kenya through the decentralized funds as observed by Mbugua and others (2011). Mutinda (2013) observes that participation is carried out through local group meetings locally known as 'Baraza' where the ideas are presented and a budgets agreed upon. She observes that groups are also involved in some areas in the country notably through Community Based Organizations (CBOs).



**Figure 2.8** Example of a farmers' CBO in Makueni. Photo courtesy of DWSI, 2017.

Nyamweru (2014) acknowledge key importance of participatory approach in the development and protection of cultural and natural resources in the country. She identifies cultural, environmental and economic benefits with the approach as the community are directly responsible of their own development mainly in the tourism and ecological preservation. The concept is applied in Coast of Kenya, Central, Rift valley, Northern, Western and Nyanza regions to mention but a few. The approach is beneficial culturally in the preservation of indigenous elements, ethnic identity and educational value. The practices are known to protect catchment areas, shelter endangered species, revitalize ecosystems and offer environments for relaxation and recreation in some communities. The community benefits from income from ecotourism and cultural tourism as well as natural resources of food and medicine. Nyamweru (2014) suggests the preservation of this community and encouraging this approaches for sustainability identifying challenges in the current trend of change of titles from communal to private, demand for farm land, wood products and conflict of interests by stakeholders.

Integrated or mixed approach is used in the country especially in the development of rural enterprises through inter agency support systems. A good example is the handicraft sector in the country which are produced informally by local communities. Different government agencies are involved in the training and research for quality products output and are also involved in the marketing and promotion. Agencies involved includes Brand Kenya, Export Promotion Council (EPC), Handicrafts societies, Cooperatives unions, Ministry of tourism and culture, Ministry of Industrialization and Non-Governmental organizations (NGOs).





**Figure 2.9** Baskets produced for export through interagency and community collaboration in Machakos County. Source; Author, 2018.

Strategy development, education and awareness are seen as key factors that can influence development through the mixed approaches however, integration at the national, county, civic and business levels are recommended for sustainable development. The approach as applied in Kenya is to make rural enterprises into main industries producing high quality products, services and produce for local and export markets. The approach can be realized and sustained through capacity building, value additions, standardization and accessible financing through stakeholders' participation (Mwathi & Kagiri, 2014).

Mbugua et al. (2011) points out that the challenges in rural development are due to inadequate training of community members, less youth involvement and the relevance of the community projects to the locals and not in the approaches used. He proposes vocational systems or approaches based on practical activities and traditional non-academic related to a specific trade or occupation. Nyamweru (2014) disagrees and acknowledges that the approaches used in the country should be reviewed and proposes creative methods to be employed for sustainability proposal supported by Mwathi and Kagiri (2014). Kamau (2016) alleges that challenges can be addressed through personal attribution of the projects by the locals through education, improved economic status and behaviour change.

#### **2.2.4 Community Development processes**

The development process generally follows four key stages from inception to full maturity and up scaling though varies with population size, cultural context, local needs, development intensity and previous planning efforts (Reid et al., 1993; Okazaki, 2008). The process also varies with governments, organizations and from one approach to the other.

The development processes provide a way or a plan how the approaches could be executed systematically.

#### **2.2.4.1 Inception**

This is the ideation stage of community development also known as the design stage. The new idea or concept should be more strategic and future thinking or visionary in development approach (Reid et al., 1993). Initial community assessments are carried out to harness the experience, expertise, desire and support of the local residents together with stakeholders generating inventories of perceptions about development related changes depicting experiences, concerns, hopes, fears and dreams. Pinel (1998) cites this as crucial for making more informed decisions while building organization and infrastructure capacity. A good ideation is a flexible and responsive process due to cycles of growth or decline influenced by relationship, roles and changes of stakeholders as recommended by Woolcock & Narayan (2000).

#### **2.2.4.2 Capacity building**

The idea of the development is widely shared among stakeholders directly linked to the development or indirectly linked. Relevant training takes place with the community at different levels from members, management, policy makers, beneficiaries and stakeholders to arrive at a decision or best way forward to proceed. It provides support through knowledge, skills and technology.

Jillian Nzive, a tourism director in Machakos County Government in an interview points out that the process highlights the strengths and weaknesses of the development plan while establishing the resources required for implementation. She also responds that it builds the quality required for such development projects.

#### **2.2.4.3 Implementation**

The community project is initiated in an actual setting. The implementation is first done by the stakeholders or the funder then later gradually left to the community to own the project a common practice in many developing countries as observed by Limkriengkrai (2010). Experts point out that participation is very key for a community development project to succeed and that projects should be community driven from inception to implementation for sustainability to occur (Richards, 2013).

#### **2.2.4.4 Assessment and Up scaling**

Assessment allows the development system to be guided and massaged by the community, area and market conscious inputs. Feedback loops refines the community products and services towards success attributes of quality services, quality experiences, good value and allow necessary infrastructure around the community.

Up scaling should be compelling from adequate assessment of the community. According to Brooks (2008) this stage is more engaging and is built upon the authentic values of the community since inception.

### **2.3 Design Approaches**

Van Der Ryn and Cowan (2007) describe design as an idea and a process about user needs or wants becoming tangible. Design is further described as a strategic problem solving process that drives innovation, builds business success and leads to a better quality of life through innovative products, systems, services and experiences (WDO, 2017). Approaches in this case are described as techniques used in the process, a guide to the overall goal of the design (Cambridge Dictionary, 2018).

Some design approaches have been adopted for effective community development. This includes Human centered design (HCD), participatory design, service design, design thinking, empathic and immersions design among others. Design approaches used in community development in exploring possibilities, redefining specifications, managing the projects and prototyping solutions that significantly improve development agendas. The approaches have be used independently or combined for more effective results, Bharma and Lofthouse (2007, pg. 29) attributes the uptake of these approaches to the continued benefits the community gets from the development. The adoption of the approaches banked upon synergetic, contextual, holistic, empowering, eco-efficient, creative and visionary processes. The community benefits from the realistic approach and high level of participation offered by the design processes.

Design process ensures the production of more than one development concept ensuring that the idea is seen from a broad multidisciplinary point of view which is an added advantage as compared to other approaches. Taylor and others(1968) in Subic and others (2009) agrees that the larger the number of ideas produced, the greater probability of achieving an effective solution therefore the more creative we are when designing, the probability of good design increases.

### **2.3.1 Importance of design approaches in community development**

Salvador and others (1999) contends that design focuses on the broad patterns of everyday life that are relevant for the conception and development of systems, services and products in a community. They affirm that the important role of design is to inspire or frame future development projects with outputs being systems, services or products that benefit the community. Design according to Hegeman (2008) contributes in understanding the community's behavior and practices, solving their problems while protecting the environment that this communities exist in.

Nova (2014) identifies that there are some approaches that require scientific and analytical thinking with technical rationality. Nova points out that designers need to recognize the dominance of scientific approaches to solving problems and understand how design is different and appreciate the different perspectives. Bill Moggridge (2007) appreciates the important role played by design in development by stating that designers have the ability and training to harness the tacit knowledge of the unconscious mind, rather than being limited to working with explicit knowledge.

Design approaches are practical in nature using available materials to pass on concepts or imaginations of an individual. By involving an individual directly, they are able to comprehend, give feedback and contribute to the process which is key in communicating development agendas (Hegeman, 2008).

Some development approaches are similar to design approaches in concept, tools and techniques such as participatory approach and sustainable development approach. The difference as stated by Nova (2014) is that design approaches are led by designers or individuals with designerly know how. Approaches as used in design are research based with practical advice and recommendations which are key for the success of development projects.

Fieke Geerts (2016) in her presentation on community participation through design, affirms that the risk of failure existing in many community development projects is significantly reduced when approached from a design perspective. She attributes the reduced costs in design projects to the reduced risks, trust and ownership obtained from design processes. The community confidence and self-reliance is significantly increased as cited by Walter (2016) in Geerts (2016). Design approaches enable realistic expectations to form and lower

resistance to the change within the community members and the power distributions or representatives as explained by Geerts, echoed by Mugendi (2017).

### **2.3.2 Changing trends in design approaches and practice**

Traditional design approaches and practice were built around products that were mass produced to meet certain demands with considerations given to human standards, environment conservation and economic wellbeing. Design philosophies were fundamental guiding principles that dictated designer's approaches with consumerism running uncontested at the time according to Holm (2006). New trends challenged this approach by strongly expressing other perspectives that took responsibility of the environment, the user and resolved emerging issues around design. Victor Papanek in his book 'The green imperative; Ecology and ethics in design and architecture' agrees to this argument by stating that designers must be conscious of his social and moral responsibility. He continues to propose that design must analyze the past as well as the foreseeable future consequences of its act (Papanek, 1995).

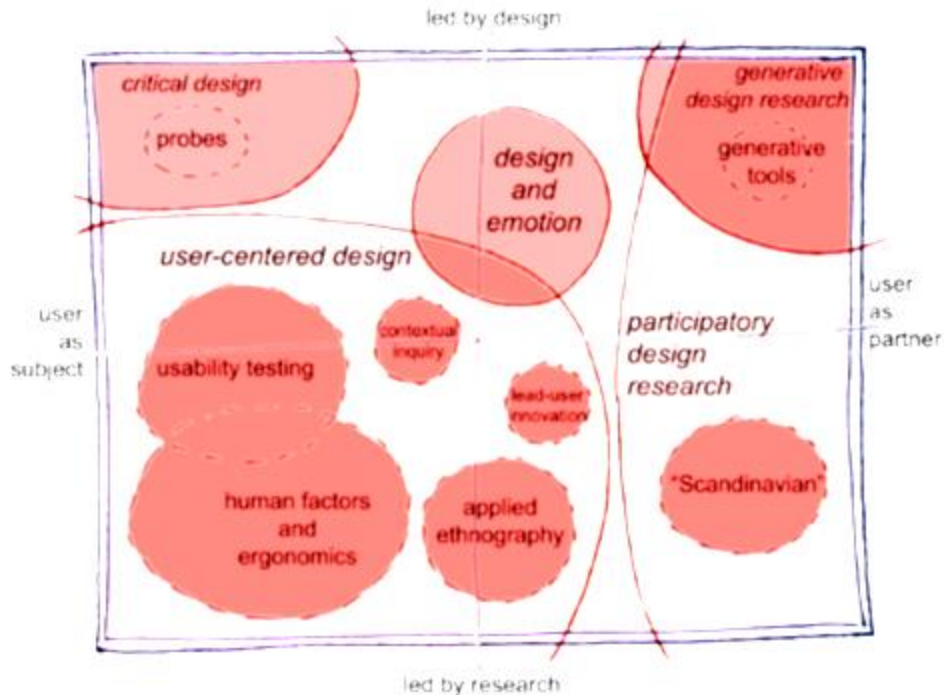
The changing world trends such as demographic shifts, accelerated urbanization, climate change and scarcity of resources, technological breakthroughs and global economic power shifts as cited by Mugendi (2017) has triggered strategies changes for the business world as well as design approaches. The new trends are more people driven and user focused than the older approaches. Interaction has been increased at individual levels as well as communal levels this is visible from the rapid growth of technology usage. The new approaches are social in nature as illustrated by Sanders and Stappers (2008) and cuts across many creative disciplines.

The traditional design disciplines focus on the designing of “products” .....	...while the emerging design disciplines focus on designing for a purpose
Visual communication design	Design for experiencing
Interior space design	Design for emotions
Product design	Design for interacting
Information design	Design for sustainability
Architecture	Design for serving
planning	Design for transformation

**Table 2.1** Changing trends in the design discipline. Source; Sanders & Stappers, 2008.

New design approaches are more driven by research as explained by Frayling (1993) in his paper ‘research in art and design’, identifies three types of design research useful in practice and in design education. The first is ‘research into design’ which he establishes as design as a subject of inquiry studied from outside. The understanding of creative production as a research method he explains as the second type ‘research through design’. The third type is ‘research for design’ which intends the end product or result to be an artifact within which the thinking that led to its making is embodied.

Sanders and Stappers agree that research forms the backbone and foundation of the social design approaches and development. They affirm that research approached design using a combination of aesthetics, ethics and reason are important in problem solving useful in the convergent and divergent of thoughts and creativity.



**Figure 2.10** An example of a design research landscape, human centered design. Source; Sanders & Stappers, 2008.

Odundo and others (2008) recognize the importance of research as design redefines its role in the society with issues having positive and negative design implications. The importance and responsibility of research, while being responsive, relevant and aware in determining ethical, wise, conscious and sensitive solutions is cited.

Design approaches are futuristic in application with focus being the creation of sustainable systems that meet current and future needs of the community in general as cited by Nelson and Stolterman (2003). Hegeman (2008) agrees that design should apply knowledge to foresee future problems and solve them creatively. He emphasizes that design approaches are expected to produce unexpected results thus invention, innovation and creative terms and techniques are should be encouraged.

### **2.3.3 Role of the designer in community development**

Salvador and others cite that designers play a key research role in community development, documenting the behaviors, habits and beliefs of the people and using this material to generate design concepts and prototypes. Dourish (2006) agrees that the designer's results from the field are crucial for framing design and development decisions. In her presentation on 'design with social impact', Ambole affirms that designers' research results provided enriched data for better science and policy as compared to others (Ambole, 2016). The

researcher's role played by the designer also inspires conversations critical for problem solving of complex situations or problems as observed by Nelson and Stolterman (2003).

The designer is also acknowledged as facilitator in the process, interacting with the community to enrich observations, get feedbacks and tests application in context using available tools and techniques (Nova, 2014). Geerts (2016) affirms that the role of the designer is to facilitate and not to prescribe solutions. She proposes that the community should be considered as experts as well.

#### **2.3.4 Common design approaches for community development**

Design approaches have been adopted through different sectors and discipline for planning, business models, marketing, social structures, construction, services, product production and environmental conservation among others, thus the existence of several approaches. Commonly used approaches for community development with a focus on rural areas fall under two broad design categories namely; social design and sustainable design.

Woodcraft and others (2012) supports the idea that social and sustainable designs are similar and contain similar tools and approaches thus should be considered same in practice. They argue that sustainability is achieved when systems and societies are well balanced. According to Woodcraft, social sustainability combines design in the physical realm with design of the social world.

Sassen (2011) had set out the two broad approaches as independent but can be mixed as an integrated approach. Sassen argues that social design is more focused on the satisfaction of the community while sustainable design is focused on the product or service approach. She suggests that the two however different work together to achieve sustainable community development especially in non-urban areas.

##### **2.3.4.1 Social design**

Holm (2006) defines social design as a creative process that is mindful of the designer's role and responsibility in the society and uses design process to bring about meaningful social change. Stakeholders are actively involved in the process. Commonly used approaches used in social design are participatory design approach and immersion design approach, the latter being a recent approach.



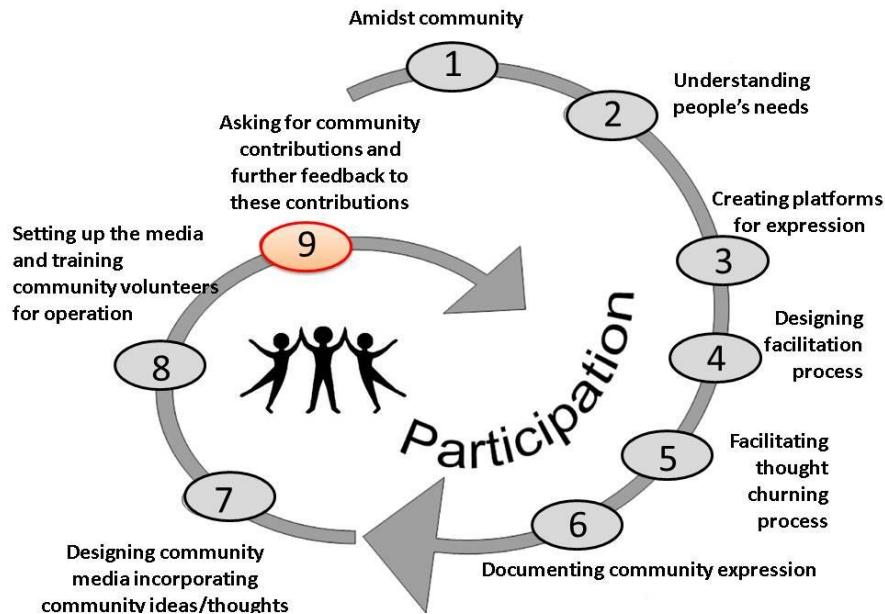
#### **2.3.4.1.1 Immersion design approach**

The design approach as a social approach involves getting involved in the communities' activities or problem situations by observing, asking and trying as key tools (Mijthab, 2016). The design approach referred to as *Empathic design* in some cases, uses analogous and scenarios settings to solve what is seen as complex problems and to seek inspirations. It is carried out as a form of design research or practice base research led by or with a designer. It focuses on the broad patterns of everyday life that are important and relevant specifically for the conception, design and development of new products or services or systems. Approach can also be used to orientate, frame and inspire a design or development project. Tools commonly used in this approach includes affinity diagrams, coding, contextual enquiries, cultural probes, storytelling, design ethnography and design thinking carried out by a designer in a field research format highlighting challenges and possible solutions (Salvador et al., 1999; Nova, 2014). Tools can be used interchangeable according to the actual situation on the ground for more realistic results and social impact.

#### **2.3.4.1.2 Participatory design approach**

The approach, also known as *Co-Design or Co-Creation*, attempts to actively involve all stakeholders in the design process to ensure the results are needs oriented and usable. Participation in design allows for opportunities, innovations and necessary decisions are not left out and are made by players or stakeholders in the early stages of design (Urban Strategies, 2008).

Communication and information sharing according to Meadows (2008) should be direct, open and effective. Honoring every voice in the design process ensures that the design team recognizes diverse and changing values encouraging decision makers to follow the design with appropriate actions (Ryn & Cowan, 2007).



**Figure 2.11** Representation of a Participatory Design process. Source; Geerts (2016).

The design process involves directly the people you are designing for. The participants are empowered to design and collaborate in the process. The mindset used is that people are experts and they know best about the problem and potential solutions. In community settings, people are far more likely to adopt a solution that they helped to create (Mijthab, 2016).

The steps applied in a co-design process involved identifying the people to participate. A stakeholder's analysis comes in handy at this stage as the relationships, interests and influences are established. An arranged space supplied with necessary instruments act as the creation space. The problems are then openly discussed, sketched out and concepts for possible solutions are built or designed. The people involved are treated like designers and experts. The feedback is captured and further processes are undertaken cooperatively.

Geerts (2016) sites limitations associated with participatory design as time consuming which also affects the costs of carrying out the project. Strong community dynamics and power beliefs were also cited as challenges. The literacy level of community members especially in rural areas was identified as a limitation in a study conducted by Geerts on community participation in Taita Taveta. In her study, she established that it took longer for the community to understand the participatory exercise the main contributor being the level of education of community members.

Participatory design tools commonly used includes Human centered design toolkit, story boards and community/stakeholders mapping.

#### **2.3.4.2 Sustainable design**

McLennan (2004) describes sustainable design as the philosophy of designing physical objects, the built environment and services to comply with principles of economic, social and ecological sustainability. Maliene and Malys (2008) coins the term to refer to skillful, sensitive design tool that supports long term changes. Maliene's description was aimed at accommodating development, product and services among others.

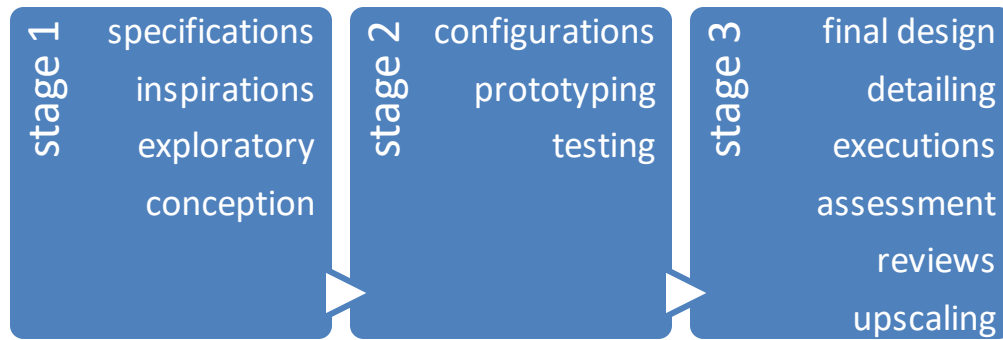
Sustainability represents a balanced interaction between the human, built environment and natural worlds often expressed as environment, social equity and economy. Phansey (2009) acknowledges that sustainability occurs when all three are thriving.

In community development, a sustainable society is one that continues to satisfy the current needs of its population without compromising quality of life for future generations. Sustainable enterprises continue to grow and adapt in order to meet the needs and expectations of its shareholders and stakeholders. Products and services sustainably develops with design modifications to meet the needs of its producers, distributors and customers.

Gladwin and others (1995) holds that sustainable development refers to a process of achieving human development in an inclusive, connected, equitable, prudent and secure manner. Starik and Rands (1995) are for the idea that the ability of one or more entities, either individually or collectively exist and flourish is sustainable development.

Kjaerheim (2013) points out that the definitions used for sustainable design and development are vague thus leading to confusion when researched, tried or implemented. He cites limited education on sustainable design or development as a contributor to the misunderstanding. He acknowledges that despite definitions challenges, there exists a well-defined thought process or design process.

The design process as described by Deng et al. (2002), is an activity that starts with specific requirements and ends with the product description which is termed as the final design. The three stages design process model by Zeng and Gu (1999) forming the current trend of problem solving and design of products that is sustainable. The models has also been adopted for the formulation of design tool kits that are user centered and environmentally friendly.



**Figure 2.12** Design process by Zeng and Gu based on Benchmark design model by Pahl & Beitz (1996). Source – Zeng & Gu (1999).

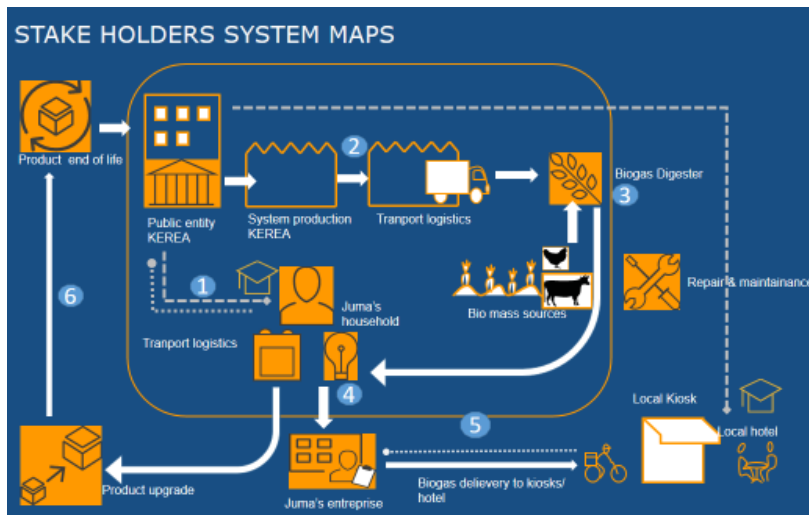
Design approaches adopted for sustainable design are based on systems that supports diversity, efficiency, adaptability and cohesion. Products or services from such systems form components of the overall socio-economic system as established by the National Research Council (1999). A common sustainable design approach used in community development is the product service system.

#### **2.3.4.2.1 Product Service Systems (PSS)**

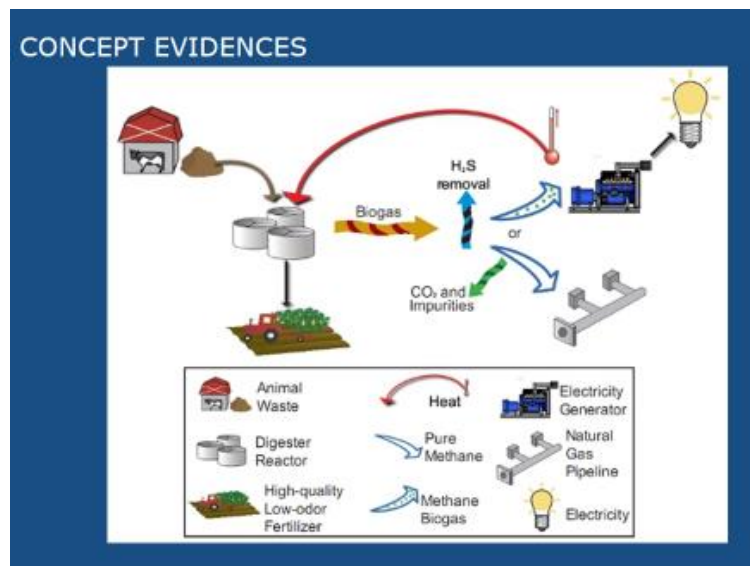
The early phase of a design or development is crucial to deal with its later damaging factors as more than 80 percent of the impact of products or services are decided upon within the design phase (Subic et al., 2009, Pg. 68). Sustainable development or sustainable design in the Product Service System (PSS) referring to controlled social costs, pollution and environmental protection through the use of more efficient consumption of resources, emissions and waste.

The product service systems design is based on the argument that the larger the number of ideas produced, the greater the probability of achieving effective solution subsequently the more creative we are, the probability of good design increases.

A product service design system is useful in development as it indicates or defines the product or service, the kind of enterprise system used and its consumer. The interlinking of the different components of the product or service key in advising or informing decisions during development. It also points out the role played by each stakeholder displayed in simplified diagrams and story boards that are easy to implement. The system also indicate evidences of the development outputs that are used to make key decisions before implementation of the project.



**Figure 2.13** Example of a PSS design. Source; Lenses toolkit, 2015.

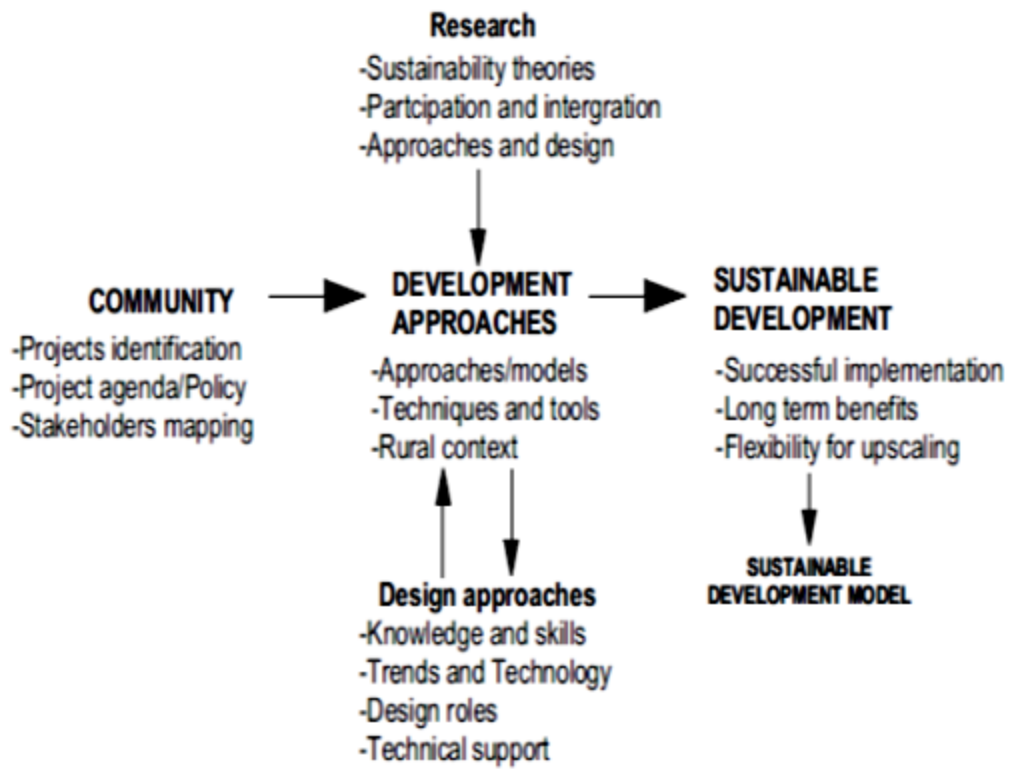


**Figure 2.14** Concept evidences map. Source; Lenses toolkit, 2015.

Greenwood (2012) points out that the system allows for technological driven management activities which captures external and internal considerations to the design process and advantage that are not easily identified in other approaches.

## 2.4 Summary

The literature review indicates they are several approaches used in community development both current and emerging trends. It also indicate that there is a relationship or similarity between development approaches as used in practice and design approaches as used in the design discipline.



**Figure 2.15** Conceptual framework. Source; Author, 2018.

## CHAPTER 3

### 3 RESEARCH METHODS

#### 3.1 Overview

The research used Wamunyu handicraft community in Wamunyu, Machakos County as the case study, the area representing an existing rural community involved in rural based development activities. The research involved 50 handicraft artisans who were involved in the production handicraft production specifically weaving and carving around Wamunyu area and members of the Wamunyu Handicraft Society. Expert advice was sort from County government officials, promoters and designers who practice social design. Extreme case was also selected to seek new possibility and to anticipate new attitude. Data was collected through photographs, videos, field notes, instrument administrations, document reviews and participatory diagrams. Data was later recorded and analyzed descriptively.

#### 3.2 Research Design

This was a *Design Research* which are mainly qualitative in nature though sometimes takes up quantitative methods to explain certain occurrences in the research. Creswell (2003) points out that qualitative approaches are suitable for exploratory, open ended contexts where little has been researched on or understood. Jacob (1988) had earlier pointed out that qualitative approaches use investigative methodologies described as ethnographic, naturalistic, anthropological, field or participant observer research. It emphasizes the importance of looking at variables in the natural setting in which they are found data gathered through open ended questions that provide direct quotations. This direct voice, according to Chambers (1985) in Mugenda and Mugenda (2003) empowers disadvantaged groups by giving them a chance to be heard. It means that the disadvantaged groups, though poor and voiceless are capable of authoring knowledge if given the chance. Mugenda and Mugenda (2003) supports the use of qualitative approaches by stating that knowledge is socially constructed, what we claim to know is influenced by our beliefs about reality and what we value as knowledge within social fabric. She attributes this to the emerging issues relating to social, political and economic development in Africa have influenced the use of qualitative approaches in search of sustainable solutions. Qualitative research emphasizes in oral communication and gives respondents a chance to state their problems the way they perceive them and participate in seeking solutions to these problems as well as in effecting

such solutions. The argument is based on the tendency of African communities to pass on information orally rather than in written form (Mugenda & Mugenda, 2003).

Design research is focused on methodologies, practice and development undertaken by people with design abilities for unexpected results are produced thus invention, innovation and creativity terms are used (Hegeman, 2008). The data collected is recorded as detailed field notes and is presented in narrative form (Nova, 2014).

### 3.3 Population

The researcher considered a population of 230 handicraft producers from Wamunyu area who are involved in carving and weaving. Maina (2012) defines a population as a complete set of individual cases or object with common observable characteristics. The producers were considered as they have common observable characteristics informing the research objectives. The producers work in workshops at the Wamunyu trading center with majority occupying workshops at the Wamunyu Handicraft Cooperative Society (WHCS). The producers have common markets and consumers for their products locally, in the region and internationally.

No.	Handicraft producers	Location	No. of Producers (Population)
1.	Registered society members	Wamunyu area	200
2.	Non registered community members	Wamunyu area	30
		<b>Total</b>	<b>230</b>

**Table 3.1** Population distribution summary. Source; Author, 2018.

### 3.4 Sampling

Cluster and purposive sampling techniques were used to identify the respondents. Selective cluster sampling was done to select the handicraft producers groups as it was not possible to obtain a sampling frame as the handicraft population in Machakos County was scattered over a large geographical area. Mugenda and Mugenda (2003, pg. 49) points out that a selective cluster sampling process involves a selection of an intact group. The Wamunyu Handicraft Co-operative Society (WHCS) formed an intact group with the largest number of producers in the society's workshops and rented workshops in the trading center.



Purposive sampling techniques were used to select the respondents that were informative to the study objectives. The Wamunyu handcraft co-operative society members were selected as the primary source of information as they were involved in the production of handicrafts and community development activities as members of the society. Intensity sampling was also used to include non-society members but handcraft producers in Wamunyu and the local community who provide services to the artisans or society members. Intensity sampling applied to select cases that offer in-depth information and are less extreme. Mugenda and Mugenda (2003) describe this technique as sampling that involves selection of cases that manifest the phenomenon of interest intensely but not extremely. Nova (2014) agrees that the respondents selected in this form give a better and bigger perspective of the phenomenon, in some cases they are used to compare and ground findings.

Information was also collected from the Machakos County government officials, Machakos Cooperative Union (MCU) officials, promoters and professional designers as key informants.

No.	Description	Person to interview	Population	Sample
1.	WHCS members	Men and women	200	30
2.	Non WHCS members	Men and women	30	5
3.	WHCS management	Chairman, Director, officials		5
4.	Community members	Local traders		5
5.	Machakos County officials	Tourism and culture officers		5
6.	Experts	Designers		3
7.	Promoters	MCU Bemos Craft		2
		<b>Total</b>		<b>55</b>

**Table 3.2** Sample distribution summary. Source; Author, 2018.

### **3.5 Data collection tools and techniques**

Community development approaches were investigated with the history, benefits and challenges looked at. The community opinions, experiences and feelings were sought through the interaction with individuals and handicraft community groups. Data collection methods included, participant observations, interviews, focused group discussions, key informants and participatory rural appraisals. Secondary data was gathered from examination of documents.

Data collection tools included photographs, mapping diagrams and sketches of the development approaches. Visual and audio recordings of the community activities was also done. Information gathered from observation interviews and focus groups was recorded as detailed field notes.

#### **3.5.1 Participant observation**

The researcher in the process does not controlling or manipulate the subject or the environment in any way as suggested by Mugenda and Mugenda (2003). The community behavior was recorded and studied as it normally occurred, approach termed as ‘fly on the wall observation’ where the researcher does not disturb the subject. The technique is only applied for a certain short period of time as Mijthab (2016) observed that the subject changes behavior in your presence. She also points out that when dealing with activity observation for longer periods, it is important for the researcher to participate in the activities by inquiring and trying out activities in context to learn by doing.

#### **3.5.2 Interviews**

Interviews as proposed by Desai and Porter (2006) are an excellent way to getting factual information, in this context, details of policies used, government and community initiatives as well as development agendas across stakeholders.

Unstructured interviews were used in the in-depth interviews applied to avoid giving leading questions that would have restricted the respondent’s answers. Maina (2012) points out that the interviewer uses an unstructured format, the subsequent direction of the interview being determined by the respondent’s initial reply. Oral history was also used in this format to highlight particular aspects of the community life. Suggested by Thompson (1998) oral history makes the understanding between generations and social classes easier. The interviews were used for the society management and the society members.

Semi structured interviews using interview guides were used to ask questions relevant to the research objectives applied to the design professionals, county officials and handicraft promoters. Interviews of this type are focused by asking certain questions but with scope for the respondent to express themselves at length (Maina, 2012).

### **3.5.3 Focused group discussions**

Focused group discussions involved selected small groups of respondents using question guides to lead the discussions. Focus groups included society management (4 officials), Machakos County government officials (4 officers) and the Wamunyu Handicraft Co-operative Society sales and marketing team (4 representatives).

### **3.5.4 Key informants**

Expert advice was sort from design professionals, promoters and the Machakos County officials through subject led interviews.

### **3.5.5 Participatory rural appraisal (PRA)**

Quick information about the community was collected within the area though not subjected to scientific measurements. The information was useful in mapping out the community's activities and stakeholders.

### **3.5.6 Examination of documents**

The researcher reviewed previous research, policy documents, plans and records available in the county and society offices in line with the research objectives.

## **3.6 Data analysis and presentations**

Data was analyzed and presented descriptively. Field notes, photographs, videos and sketches were arranged into various categories manually while establishing relationships among them (Appendix H). Data analysis methods applied included accurate transcribing of data, analogous and scenario mapping. An evaluation on the usefulness of information was done, missing or adequate information was sort from more field visits. From the established themes and concepts, theories and generalizations of subjects were formulated.

Data was presented in narrative forms describing the behavior and the context in which they occurred.

### **3.7 Summary**

The research method and techniques used by the researcher was to ensure a high rate of participation by the respondents which was important for the research objectives and outputs. The tools and techniques changed according to the field circumstances. For example, questionnaires were considered for the community to collect data and could have increased the sample size for more accurate analysis. The researcher established that most of the respondents were not able to read and write in formal languages such as English or Kiswahili thus there was need to adapt unstructured interviews. Video and audio recordings was used to collect this data. In some instances, visual aids were used to explain or understand thought lines. Challenges faced in the field research included time and limited resourceful translators.

<b>Objectives</b>	<b>Data need</b>	<b>Data source</b>	<b>Data collection</b>	<b>Analysis</b>	<b>Output</b>
<b>Extent to which design approaches are used in community development</b>	Past, present, future -approaches -benefits -challenges	County officials Society committee Promoters Designers	Semi structured Interviews, Documents review, Key informants	Analogous inspiration, Accurate transcribing	Narratives/inter subjective theories, Field study
<b>Processes used for community development</b>	Methods/system maps, approaches, best practices, standards	County officers Society members, Promoters(MCU, Bemosa craft)	Observations, Interviews ,Focus groups	Descriptive analysis	Process maps, Stakeholders mapping
<b>Design approaches application in community development</b>	Developing strategy, adoption criteria	County officers, society members, MCU	Semi structured Interviews, Focus groups Key informants	Descriptive analysis	Legitimacy theory (conceptual system, formative experiment)
<b>Propose a model for handicraft community development</b>	Model design	Focus group	HCD workshop	Scenario technique (model prediction to end extremes)	Sustainable handicraft community development model

**Table 3.3** Logical framework. Source; Author, 2017.

## **CHAPTER 4**

### **4 FINDINGS AND DISCUSSIONS**

#### **4.1 Overview**

Development approaches were carefully observed and recorded in detailed field notes. The various community activities were recorded in form of photographs and videos. Information gathered by the researcher was presented in detailed narrative form. A descriptive analysis of the data gathered from field notes taken during the participant and naturalistic observations was done. Photographs and sketches were sorted according to different themes. A guided co-design process was used to formulate possible solutions to the community's development challenges and was also used in the creation of a design approach model for community development. Financial information such as sales reports, county's allocation per project studied, community income and financial benefits were considered sensitive and could not be disclosed in the findings.

#### **4.2 Findings**

##### **4.2.1 Machakos County**

Machakos County forms one of the 47 county governments in Kenya, found in the former Eastern province. The county covers 5,952.9 square kilometers and is home to 1,098,584 million people as per the 2009 census. The county has a semi-arid climate with hilly terrain receiving an annual rainfall of 250-500mm. Subsistence farming is practiced in many areas as most are rural. The county apart from its economy being dependent on fruits and cereals farming, also boast of tourist related activities based on ecotourism, safaris, festivals and cultural practices.

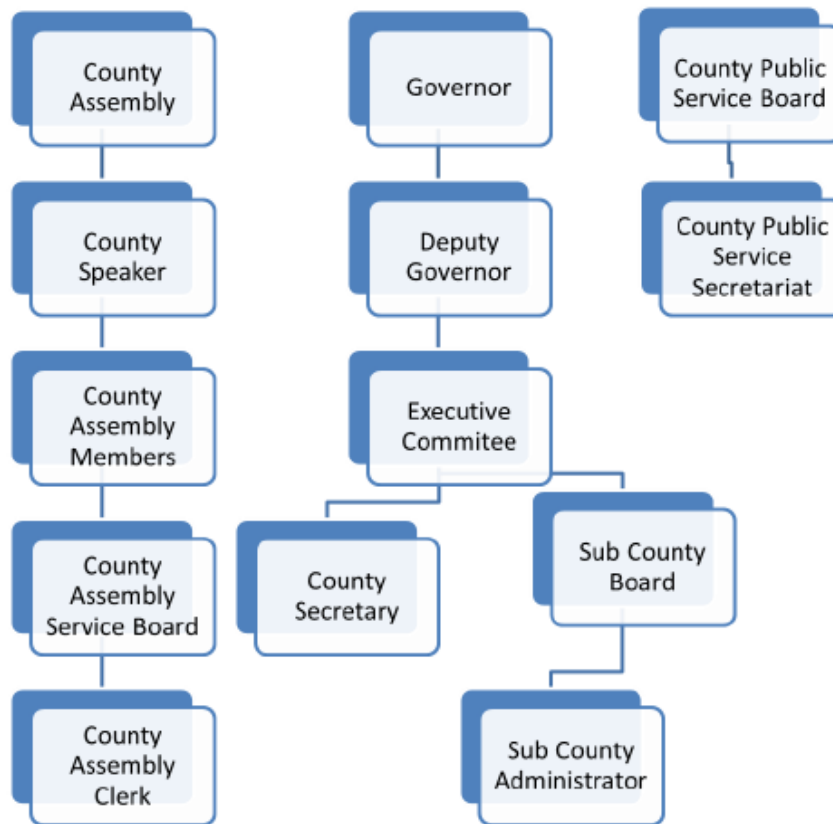
##### **4.2.1.1 Rural development**

The county constitutes of few urban areas documented as 6 (the number of urban areas as of 2015). The majority of the area covered is rural with a population of 569,314 which is 49 percent of the county's population. Reviewed documents reveal that rural poor stands at 59.6 percent with 54 percent facing food related poverty. The rural areas rely on agriculture for income standing at 70 percent while rural self-employment contributing to 12 percent to household income while waged employment contributing at 10 percent.

Rural development are done significantly through sub county funds, cooperatives and community based organizations.

#### 4.2.1.2 Development approaches

The Machakos County's approach is a top down development approach with policies drafted and implemented by the county administration which includes elected and appointed leaders across different government levels. The approach also constitutes the national government functions in different sectors and subsectors through governments' collaborations in accordance to the framework provided in the national constitution. Development projects undertaken by the county follows an implant structure constituted as illustrated below (Figure 2).



**Figure 4.1** Projects Implant Structure, Machakos County. Source, Machakos CIDP, 2015.

The county manifesto offers inspirations and proposals for the implementation of different development projects across key sectors usually structured by the county governor. The departments give details of the projects' objective and implementation activities as well as budgets through the County Integrated Development Plan (CIDP) which is approved by the county assembly for funding and action points. In an interview with the tourism director Jill Nzive, points out that the CIDP's vision is to make Machakos County globally competitive investment hub that ensures optimal utilization of resources, social and economic

sustainability based on the county's dream of prosperity of all and wealth creation to its citizens especially the marginalized groups.

The CIDP gives guidelines through stating the sector vision, role of stakeholders, priorities, constraints and strategies, proposals, projects and programs. Appendix D, E, F and G illustrate the guidelines used for economic, commercial and labor affairs which trade, tourism, industrialization, labor, research and development departments fall under. These departments form the backbone of rural development in Machakos County as identified by the county officials. The CIDP projects and proposals also reflect in the Annual Development Plan (ADP).

The general project approaches as applied by the county includes rural appraisal systems, citizen participation, capacity building and publicity including others that were mentioned by the respondents but not identified as significantly used across all sectors. The approaches are generally applied to achieve development objectives through proper project identification, inform decision making during planning, increase efficiency in service and provide information to partners and stakeholders. New proposals noted was the community based approach for tourism and culture promotion with the existence of community groupings around cultural activities and products as identified by the county officials.

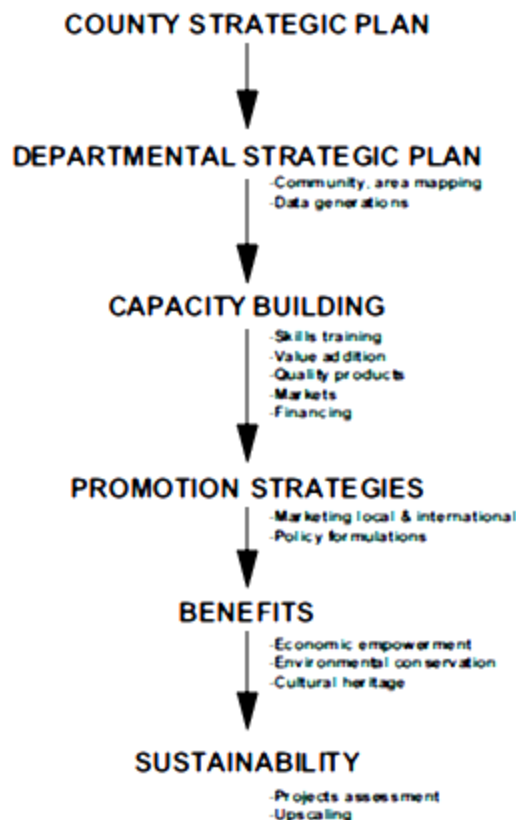
<b>NO.</b>	<b>APPROACH</b>	<b>OBJECTIVES</b>	<b>ACTIVITIES</b>
1.	Feasibility and Rural appraisal systems	To enhance proper project identification and management	Data collection, Mobilization
2.	Citizen participation and civic involvement	To inform decision making during planning of the various development activities, comply with statutory requirements.	Public forums, trainings, baseline surveys
3.	Capacity building and training	To increase efficiency in service delivery.  To promote team work.	Exchange visits, seminars, consultancy services



4.	Publicity	To provide information to development partners, stakeholders and all government departments and the community.	Documentation of development programs and projects
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**Table 4.1** Summary of project approaches guidelines. Source; County officials.

Upon approval, the departments implement the subsector plans over the stipulated timeline and budgets. Community based developments are majorly undertaken under the Ministry of Tourism and Culture. This is based on the fact that community activities in Machakos County are done for social economic benefits with environmental conscious approaches. Most activities are based on rural industries mainly the handicraft sector which is significantly recognized in the country. The department agenda heavily falls under promotion thus the plan and approaches applied are based on marketing, capacity building, financing and value additions being the most pronounced among others.



**Figure 4.2** Machakos development process, Sub Sector. Source; County Cultural Office, 2017.

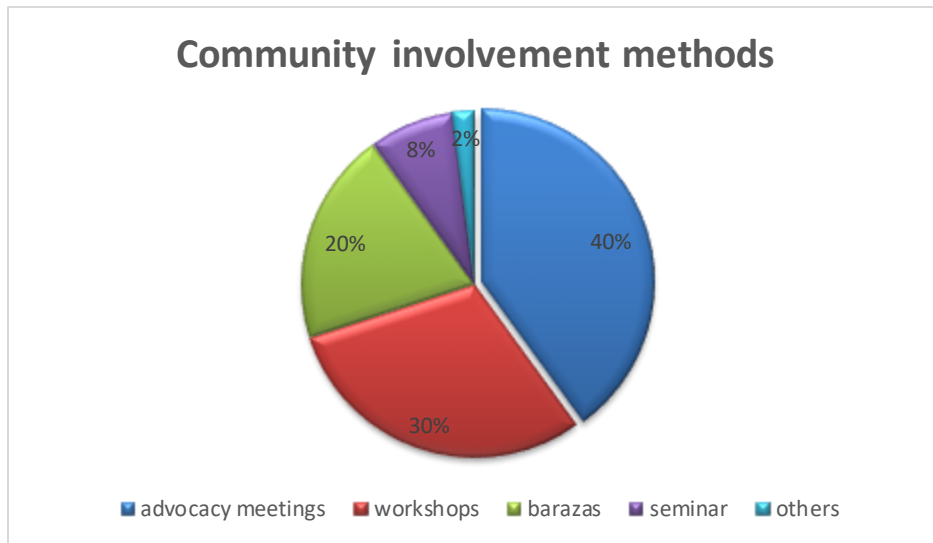
The Machakos county tourism and cultural department is responsible for the development of heritage sites, sports and culture promotion, preservation of national parks and natural

sites in the county and development of sustainable production of handicrafts for local and export markets.



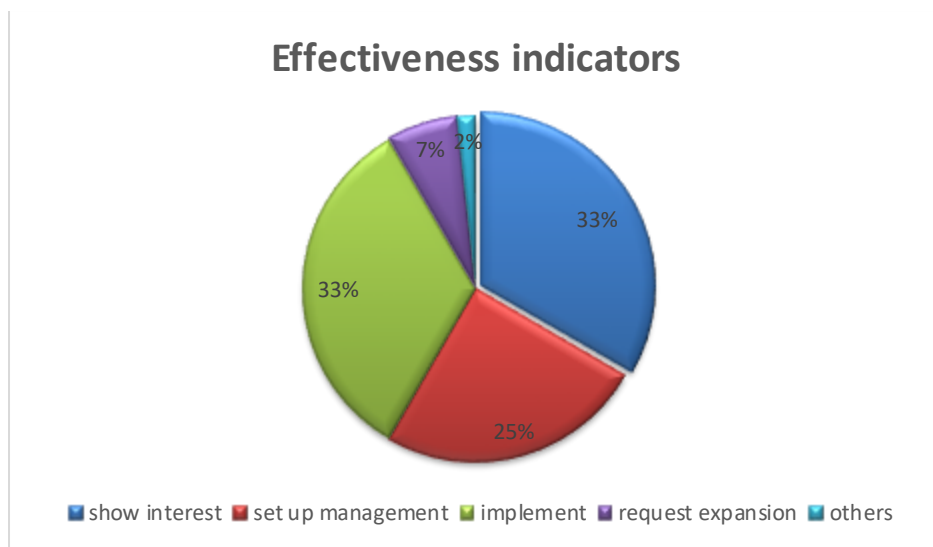
**Figure 4.3** Tourism and culture strategic plan summary. Source; Author, 2018.

The department focuses on the promotion of handicraft production through skills training, value addition, quality products certification, marketing and financing for economic empowerment, environment conservation and cultural heritage. Identified areas includes Wamunyu (main location), Katangi, Kathiani, Mililuni, Masii, Kithimani and Kimutwa. Methods used for community involvement in this areas include advocacy meetings, workshops and through barazas (community leaders meetings). Tools used include print documents and layout maps.



**Figure 4.4** Community involvement methods. Source; Author, 2018.

The county officials interviewed are 90% optimistic that the approaches used by the county are effective though cited challenges with the approaches such as lack of political good will, inadequate communication channels and misconception of development agendas by the community. Effectiveness indicators as identified by the officials includes the show of interest, setting up of management teams for the projects, implementation of the project by the community and follow up for assessment and expansion. In an interview, the tourism department communication officer stated that the lack of this indicators signify that the approach did not work or may need review or new assessment of the community needs.



**Figure 4.5** Effectiveness indicators for development approaches, summary. Source; Author, 2018.

The change of approach was supported by 5% of the respondents with the rest (95%) were opposed to the idea of change of approach for effective community engagement. the reason given was that it would take time to plan and implement projects as well consume more funds which are hardly available. The supporters identified with the proposal given by the Machakos Investment Promotion Board which proposed Community based tourism approach for sustainability (Appendix G). The respondents (70%) agreed to participate in a community co-design process workshop.

#### **4.2.2 Wamunyu Handicraft community**

Wamunyu area in Machakos County is known as the factory of wood carving and are now celebrating 100 years of this achievement of wood carving culture. The carving craft is practiced by over eight thousand artisans both men and women along other crafts such as basketry, beading and drum making. Rural development is highly dependent on this activities and revolves around the products and enterprise systems. The largest enterprise

system and well established is wood carving. The community is managed through the Wamunyu Handcraft Co-operative Society (WHCS) which is among the 120 active cooperatives in Machakos County. The number of registered cooperatives is 199 with 62 dormant and 17 collapsed due to poor management and lack of funds (Machakos cooperative union, 2018).



**Figure 4.6** Products at the Wamunyu Society showroom. Source- Author, 2018.



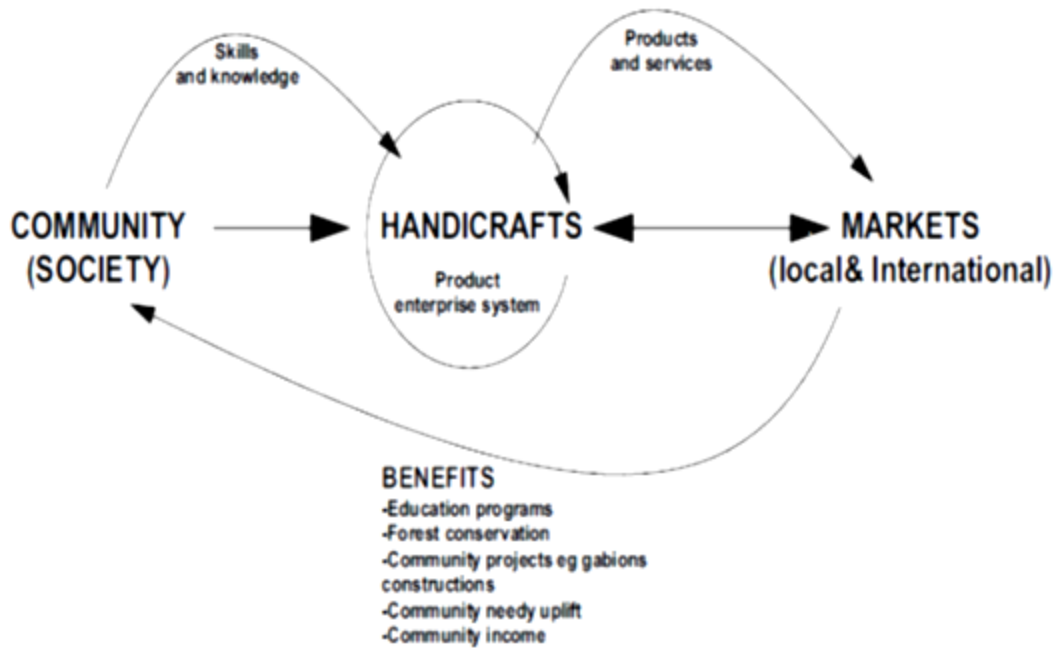
**Figure 4.7** Artisans working in the workshops. Source- Author, 2018.

Wamunyu Handcraft Co-operative Society is run by community members mainly artisans with a membership of 2300 artisans with a committee as the administrative function. It has employed five workers who are in charge of the daily running of the workshops and show room. The workers include sales and marketing who are tasked with the sales and promotion of the products. The workshops hosts 50 artisans in the production and finishing line while others are situated in nearby Wamunyu trade center occupying rented spaces.

#### **4.2.2.1 Wamunyu Development process**

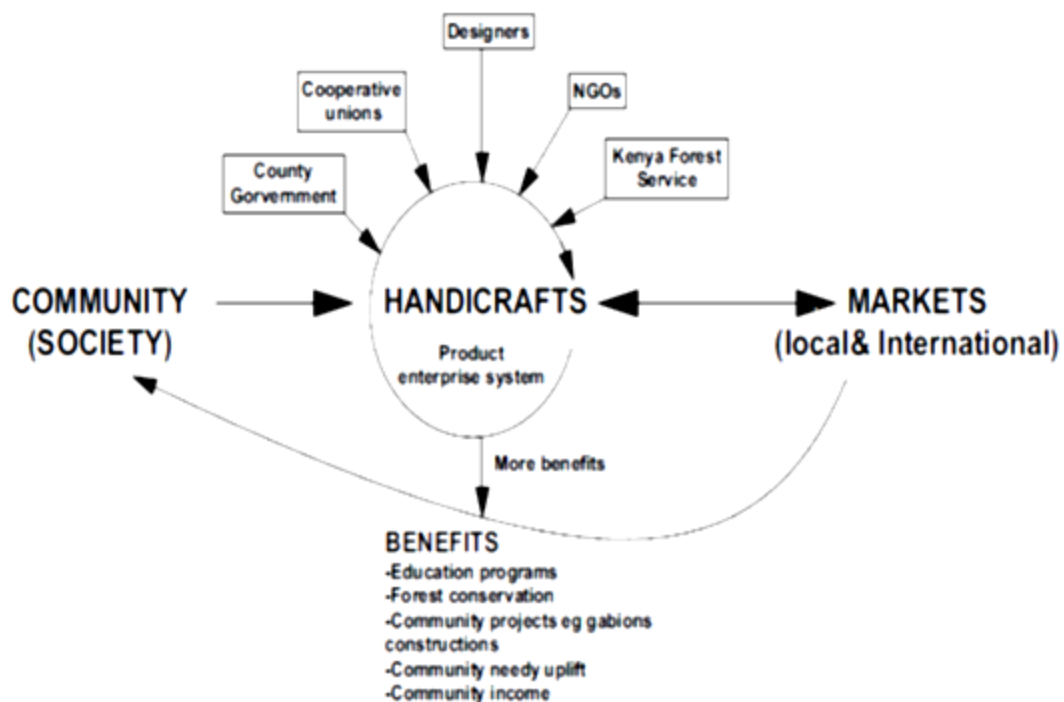
The approach adopted by the Wamunyu community is a top down approach with implementation done through communal systems under different settings as appropriate and convenience. The administrative arm (committee) make decisions on behalf of the members

on production and distribution, marketing and communal projects. Communal projects identified in the research includes social welfare for poverty reduction, education, building of dams and gabions, afforestation on members farms and selling of trees seedlings. The projects are funded through support funds and sales proceeds. The society is registered under the Machakos Cooperative Union (MCU) and the Handicraft Society of Kenya (HSK).



**Figure 4.8** Wamunyu Community development process. Source, Author, 2018.

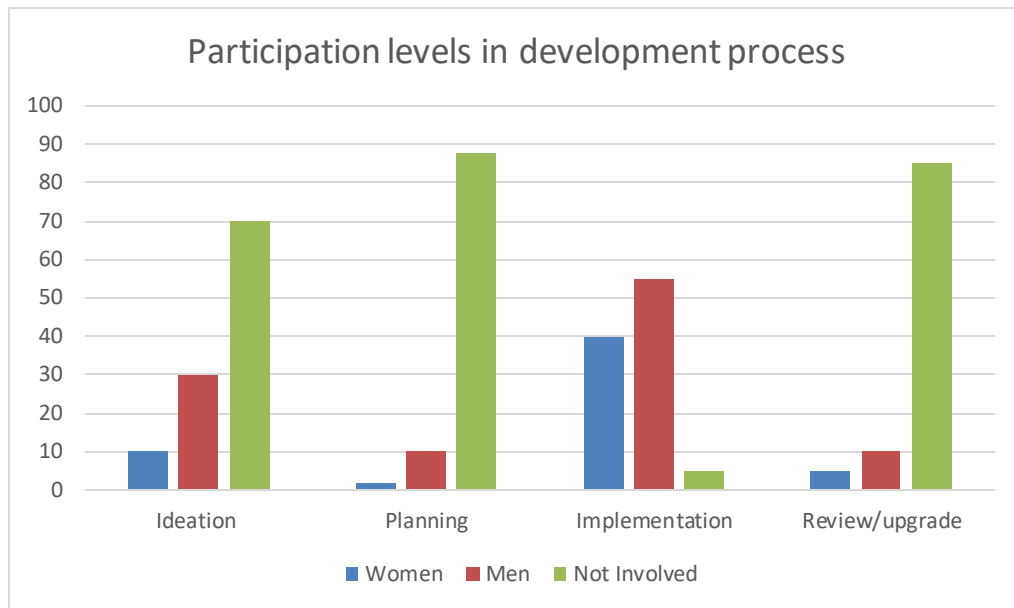
The sustainability of the process notably is through support from cross sector collaboration of different stakeholders such as the cooperative union (MCU), County government, Kenya Forest Service (KFS) and Non-Governmental Organizations (NGOs). The support is through skills training and value addition for quality production of products, provision of raw materials, infrastructure, financing, marketing locally and internationally. The role of the designer to the community being the provision of innovative product templates of functional products and the packaging design for marketing in the local and international market. The Kenya Forest Service (KFS) being a key partner in the provision of raw materials (wood), training on agroforestry and funding of the seedlings project. The input by this stakeholders according to the members results to the continued benefits for the community.



**Figure 4.9** Wamunyu sustainability development process. Source; Author, 2018.

The development processes are mainly carried out by the management of the society on behalf its members. The members' composition dominantly being men at 72% and women being 28%. The men are mainly carvers (86%) while the rest are finishers and a small percent involved in other crafts such as weaving. Women are involved dominantly in the wood finishing line (notably polishing and painting) and basket weaving. The dominant age group is between 30-60 years. 30% forming of the respondents forming the age above 60years. This group are considered as the teachers of the trade with the experience and skills they have in the trade. The youth (18-29) forms 10% of the respondents, girls forming 68% of the youth population.

A large number of the community members are not involved in the ideation and planning of the development agenda but significantly are involved when implementing the community projects and plans. 62% of the respondents trust the management with coming up of ideas and plans while 30% argue that the management need to be trained on the selection of projects and marketing skills for more realistic projects, release posts for innovative younger individuals and be fair in the distribution of orders and gains from orders. Poor marketing and mismanagement said to be the biggest challenge by the respondents (38 & 42% respectively) while others being materials, working conditions, transport and tools.



**Table 4.2** Participation levels results summary. Source; Author, 2018.

A good number of the respondents identified economic and environmental benefits of the handcraft activities in the area, 5% identified social benefits. The respondents acknowledged there is a significant change of handcrafts activities from a dominant activity to other economic activities such as farming. One respondent conceded, *“The products stopped selling a long time ago we had to find other sources of income or else we could perish in poverty. Check the sales record we have nothing. I am farming oranges, mangoes and avocados to sustain myself.”* A number of respondents (43%) are optimistic that the handcraft industry in Wamunyu will improve while the other respondents ask for drastic action from the government and stakeholders to save the industry. 87% of the respondents suggested that there is need for members participation at all stages for significant growth. 50% of the respondents complained of their ideas being suppressed by the society management. 91% of the respondents are willing to input ideas to positively change the craft and the area.

#### 4.2.2.2 Design approaches integration

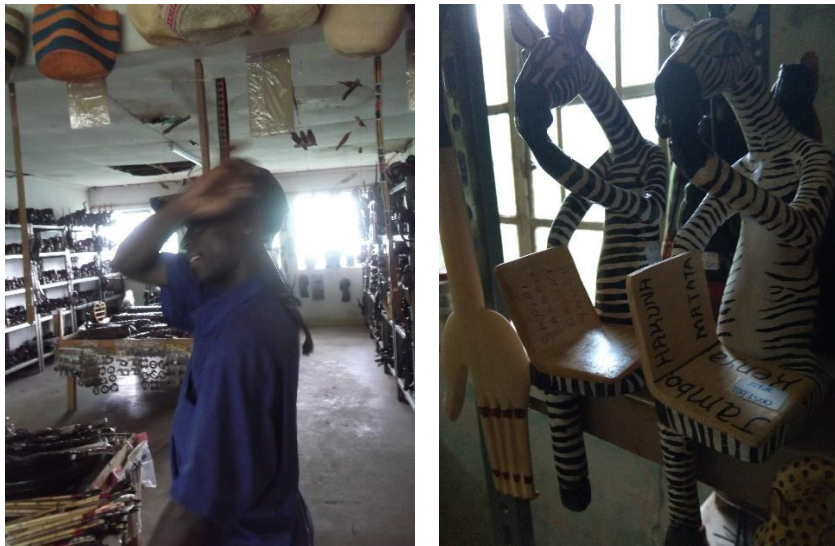
The research objectives were to identify and understand the community development processes and approaches. The third objective was to identify which design approach can be used effectively in the community process with Wamunyu community as the case study of a rural community in Kenya. The researcher identified ideation of projects, planning, implementation and marketing strategies as the major challenges pointed out by the respondents. The researcher used social design approaches to engage the community and

increase participation in the development of solutions to some challenges cited as well create a sustainable development model that can be adapted for Wamunyu.

#### 4.2.2.2.1 Immersion design approach

The field research was aimed at understanding the existing or expected product, service or systems around the community recorded through sketching, field notes, contextual interviews and photographic evidences. The focus was on the broad patterns of everyday life of the community an important activity for the design development of new services and systems. Participants were homogeneously selected corresponding to the same criteria to provide a better focus and safer conclusions, however, comparative, extreme and beyond users were also selected for study. The researcher participated in the daily activities of the community in an immersion process to speculate new ideas, ground theories, arguments and concepts.

Areas observed that the community are involved in included the acquisition of raw materials, design process for products, tools and techniques used, production, presentation at sales points, packaging and selling of the products. The types and styles of the products were as well recorded. The utilization of the community spaces was also observed.



**Figure 4.10** Types of products on display in the showroom. Source; Author,2018.





**Figure 4.11** Member of the Muuo Women Group with her products. Source; Author, 2018.



**Figure 4.12** Artisans working in the workshop shades. Source; Author, 2018.

Inspiration were sort from daily activities of the paricipants and the methods used to build the community. Anologous settings were used to experience the benefits from other members that are not related to the handicrafts production or marketing. The activity was used to forecast unseen challenges related to the community processes.



**Figure 4.13** Analogous inspiration (Hotel User experience). Source; Author, 2018.

#### 4.2.2.2.2 Co-design design process

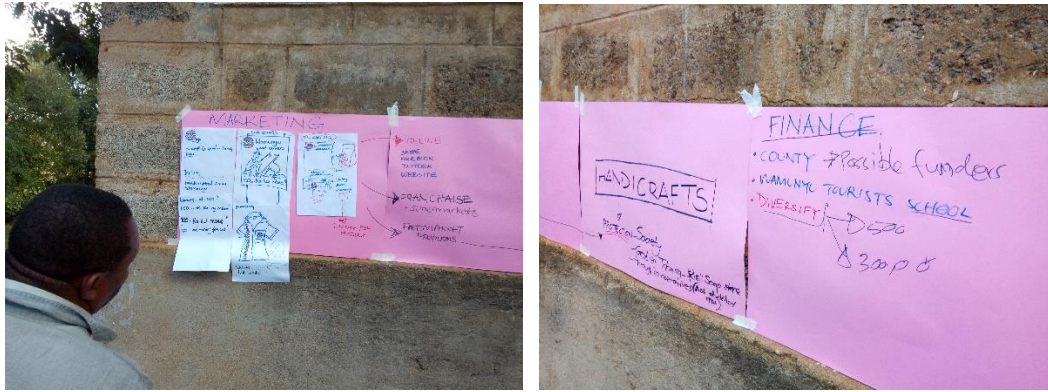
The co-design tool selected was the Human centered Design toolkit giving the community the chance to source inspiration, ideate new concepts, prototype and represent innovative solutions for their development agenda. Visual images and models were used to aid the design process considering the rural context where communication challenges were expressed. Participants were drawn from different stakeholders in the handicrafts sector directly involved in Wamunyu community activities. The location of the workshop was at the Wamunyu handicraft society compound as it was easily accessible by all and allowed for different settings of materials to be accessed by many participants at the same time. The workshop was carried out in two key stages for maximum input advantage into the possible solutions provided.



**Figure 4.14** Preparation of visual models and workshop materials. Source; Author, 2018.

### STAGE I

The participants were introduced to design techniques for problem solving and a simple design thinking process was agreed upon. The design thinking activities identified possible problems associated with the community development of the handicrafts and quick solutions as observed by the participants written on large sheets of paper pinned on the wall. Quick concepts were sketched out for better understanding of possible solutions agreed by the participants. The process was also used for stakeholders and process mapping.



**Figure 4.15** Participant taking part in the design thinking process. Source; Author,2018.

## STAGE II

The participants were involved in the design process developing more concrete concepts as to the problems identified in the design thinking process in the earlier stage. The concepts developed included making of drawings of the ideas, selection of working concepts and quick dirty prototyping.



**Figure 4.16** Co-designing process with the marketing team. Source; Author, 2018.

The participants sourced out inspiration from their experience in and out of the country, other communities and futuristic visions or expectations (design fiction). The discussions were around what works and what does not work, why it doesn't work and which is the best balance or compromise as the knowledge is shared between participants.



Figure 4.17 Concept developed for signage. Source; Author, 2018.

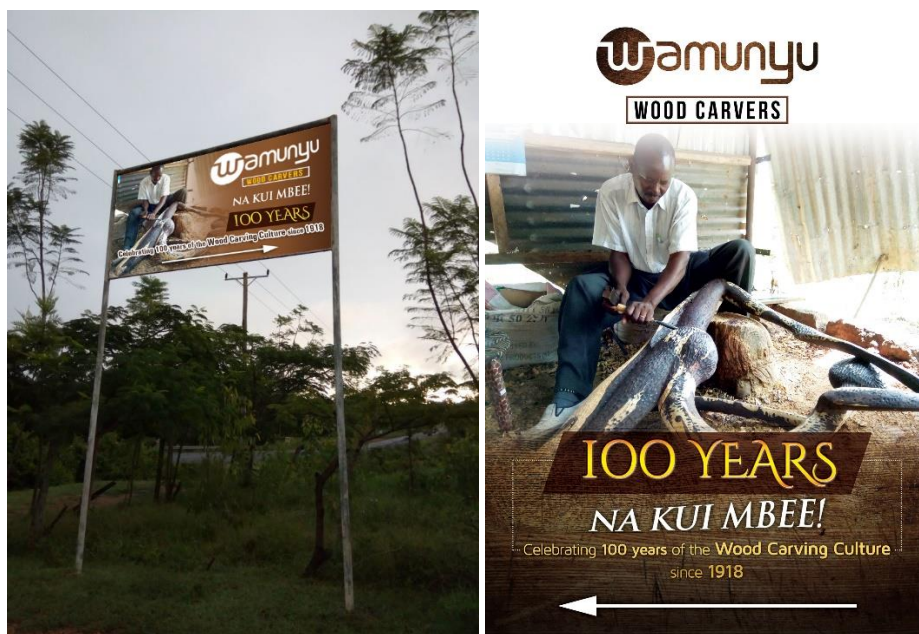


Figure 4.18 Design visualization of a possible signage and poster. Source; Author, 2018.



Figure 4.19 Concept developed for packaging of products. Source; Author, 2018.

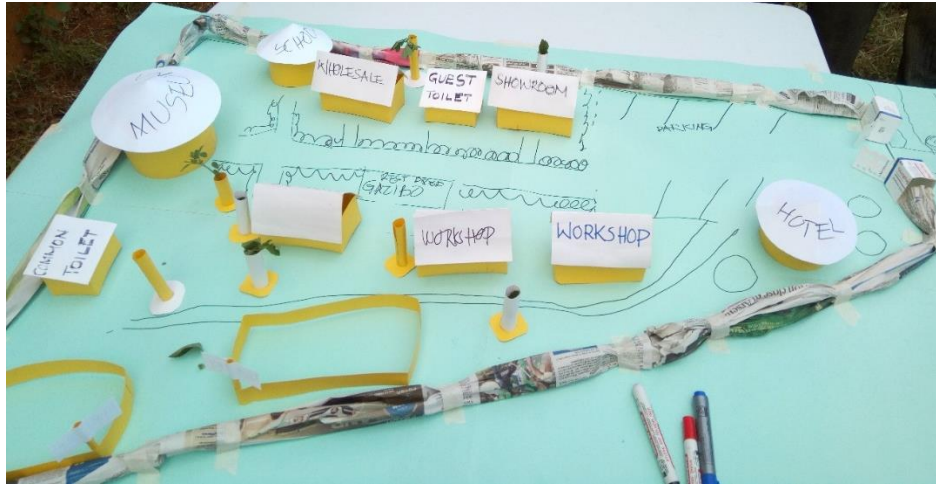
Participatory 3D (table) models were also used by participants for community space planning as the community handicrafts society existing land had no actual plan when constructing structures, shared spaces or common areas. The participants used the model to redesign the space to accommodate future additions of structures, parking spaces, walkways, maximize space and create scenic views of the area to market this space as a cultural destination of choice for researchers, learners, investors, local and international tourists.



**Figure 4.20** Images showing existing structures and space use. Source; Author, 2018.



**Figure 4.21** Participants taking part using a participatory 3D model. Source; Author, 2018.



**Figure 4.22** Resultant space plan concept. Source; Author, 2018.

### STAGE III

The final stage was to test the end results and refine for application or uptake as a proposal. The stage involved expert advice from a selected team of practitioners in the handicraft development sector and a designer. The team was introduced to design thinking as a method of assessment and evaluation of the community participants' outputs.



**Figure 4.23** Expert focus group inputs workshop materials. Source; Author, 2018.

Other cases were also looked at as comparative studies around Katangi area and Kathiani area in Machakos County for this assessment of outputs. The comparative inputs were used to refine the proposed processes and adopt successful scenarios.



**Figure 4.24** Images from other community processes. Source-; MCU, 2018.



**Figure 4.25** Products comparison from other handicrafts communities. Source; Author, 2018.



**Figure 4.26** Community products standardization tools. Source; Author, 2018.

The feedback derived from all the three stages were recorded and analyzed. The approach used inspired mindset change towards development processes and future aspirations with

80% of the participants indicating they were inspired. Participants expressed appreciation to be part of the team as they have always had and withheld ideas for lack of better channels to communicate them through. The feedback from the focus group of experts and the government representative identified this a good approach to implementing community based projects and bridging the gaps as many are initiated by organizations and not from the community.

Suggestions that were identified from workshops were time related. Longer durations for the stages were proposed with more participants tackling different issues with given scopes. Approaches were proposed to be used at the same time and not in stages as participants preferred one more than the other. It was also noted that participants are at different levels of understanding of the processes, more visual tools were suggested for this purpose.

It was also proposed that the younger generations to be involved more in such processes for continuity of the community. It was also observed that the visual tools attracted more young people. Men were more actively involved than women in all the design stages, experts attributing this to the cultural setting of the community and unequal education levels among the different genders. Separate workshops and activities were suggested.

### **4.3 Discussions**

Participation was established an important element for sustainable community development. Increased participation as viewed in the design approach experiment leads to an inspired community who view challenges as new opportunities for growth. Participation as noted in the study should be at different levels and stages of the development agenda. Information about the community prior can assist in making such decisions.

Expert input is important in streamlining the developed concepts so as to reach objectives as without a control measure, the ideas generated by the community could be endless. In some cases where the community knowledge might be limited, expert experience inputs other scenarios that have worked before. They also input gaps that might not have been identified by the community. For example, the expert on handicraft development involved identified the issue of product standards was not well or adequately addressed by the community. He suggested design inputs and capacity building by promotional bodies such as Export Promotion Council and design research institutions.

Visual tools in development approaches inspires thinking, creativity and innovation especially in the rural setting where communication challenges are imminent. The table



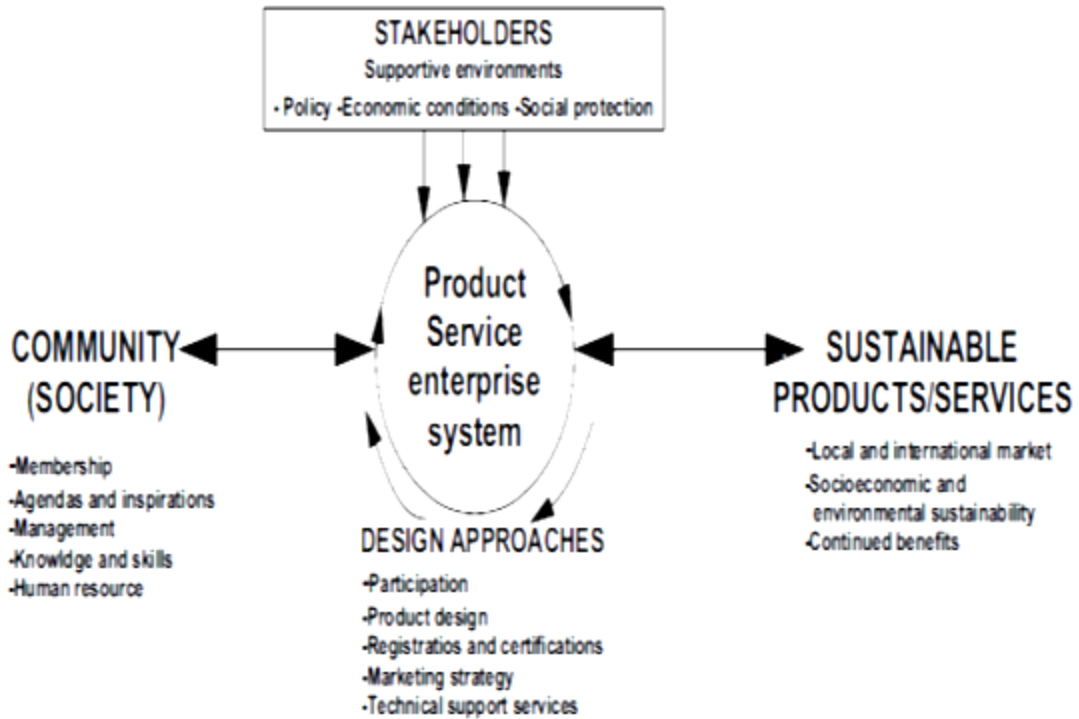
model process by participants was carried out without the facilitator's inputs indicating that the aid of visual models was well understood and exciting to participate in. Visual tools make the development process easier and cost effective as compared to other techniques. Visual presentations gives the direct representation of the community ideas, discussed and approved on site for implementation avoiding a lot of paper work and confusions that arise from back and forth processes.

Design approaches are people centered thus adopts a sustainable bottom up approach as people are experts in their own settings. It maximizes on tacit knowledge an important factor for sustainability of rural development.

#### **4.4 Ideal sustainable development model**

The community processes studied indicates that the community contributes to the product/service systems in their locality through the provision of knowledge and skills. The community members offer the much required human resource for development to take place. The indication of sustainability to be as a result of inputs from other stakeholders points to the need for integration of approaches and processes by the government, community and designers as enablers. The product being handicrafts, designers input both product oriented and systems know how ensuring all stakeholders are involved with feedback loops for improvements. Information at various stages are related in a back and forth manner.

Macro and micro factors that influence the overall development and production are considered throughout the entire process. Micro factors including the community structures, agendas, products or services and their skills. The macro environment including community training, regional and international standards and certifications. The various processes were combined to propose an ideal development process for community development.



**Figure 4.27** Sustainable Community Development Model for Kenya.

The community forms the first stage of the model identified by its membership composition. The uniqueness of each community is formed by its agendas and inspirations. This steers development in the community towards certain objectives and goals achieved to improve the members' quality of life and their environment. The community provide human resource with peculiar knowledge and skills that are used to achieve economic gains. The community forms also the consumers of the process benefits and income.

The product or service offered by the community forms the center of the process. Design processes assist the community to ideate the ideal product or service through a co-design process increasing participation, allowing for testing and prototyping. The approach ensures quality product or service is delivered by the community increasing marketing demand. Designers provide technical support through skills transfer and research. The community acquire skills through apprenticeship, others obtained through trial and error. Design skills refine this skills at this stage for standardized high quality production considering standards. The link between the process and design support can also be achieved through stakeholder's involvement and promoters such as the Export Promotion Council, Craft developers or the Cooperative unions as per other existing processes.

Stakeholders are the supporters of the process providing expertise, develop policies for the community, finance activities and provide economic and social environments for the community to develop.

The process benefits from continued demand for product or services in the market. Feedback is crucial in the process as it advises on the strategy to use currently, change of strategy for impact or define future strategies.

## **CHAPTER 5**

### **5 CONCLUSIONS AND RECOMMENDATIONS**

#### **5.1 Conclusions**

Development in the country are mostly top own approaches implemented by the national government or the county governments. Approaches adopted by other organizations follow participatory approaches and sustainability approaches depending with the community agenda and budgets. The technical team also playing a crucial role on the decision to be used for projects panning, capacity building and implementation.

Design approaches can effectively be used for community development though new in concept in most part of the country especially in rural setups. Design skills can be transferred for community use at local levels.

There exists similarities between development processes and design processes. Tacit knowledge is important in both processes and should be encouraged.

#### **5.2 Recommendations**

The researcher recommends the adoption of the sustainable community development model as an ideal mode for rural development.

Further research should be done on a wider scope as the research was limited to handicraft community. Rural areas have diverse communities across different sectors such as agriculture, education and mining among others. The research should be done on other sectors to establish if the same results, design methods and tools are effective. Research should also be done on the design and development of community involvement toolkits to assist in public participation approaches.

The government and the private sector should support institutions involved in handicraft community development as it works towards the recognition of the sector as a national asset that could sustainably develop rural areas and industries.

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## APENDIX A: Consent Form

### INFORMED CONSENT FORM (Author's construct, 2018)

**Study Title:** *Design approaches for Community Development in Kenya. A case study of Wamunyu Handicrafts Community, Machakos County.*

**Investigator:** *Michael K. Muiya, M.A. Candidate (University of Nairobi); B.A. Design (University of Nairobi).*

**Institution:** *School of the Arts and Design, College of Architecture and Engineering.*

**Supervisor:** *Dr. Lilac Osanjo, School of the Arts and Design, University of Nairobi.*

I, the undersigned, confirm that (please tick box as appropriate):



1	I have read and understood the information about the study, as explained by the Investigator.	
2	I have been given the opportunity to ask questions about the study and my participation.	
3	I voluntarily agree to participate in the study.	
4	I understand I can withdraw at any time without giving reasons and that I will not be penalized for withdrawing nor will I be questioned on why I have withdrawn.	
5	The procedures regarding confidentiality have been clearly explained (e.g. Use of names, pseudonyms, anonymisation of data, etc) to me.	
6	Where applicable, separate terms of consent for interviews, audio, video or other forms of data collection have been explained and provided to me.	
7	The use of the data in research, publications, sharing and archiving has been explained to me.	
8	I understand that other researchers will have access to this data only if they agree to preserve the confidentiality of the data and if they agree to the terms I have specified in this form.	
9	Select only <b>one</b> of the following; <ul style="list-style-type: none"> <li>• I would like my name used and understand what I have said or written as part of this study will be used in reports, publications and other research outputs so that anything I have contributed to this project can be recognized.</li> <li>• I do not want my name used in this project.</li> </ul>	
10	I, along with the researcher, agree to sign and date this informed consent form	

Participant:

\_\_\_\_\_

Name of participant

\_\_\_\_\_

Signature

\_\_\_\_\_

Date

Researcher:

\_\_\_\_\_

Name of researcher

\_\_\_\_\_

Signature

\_\_\_\_\_

Date

## APENDIX B: Interview guide (Management & County officials)

### Interview Guide Questions

1. What is your take on rural development?  
 What is your take on community development?  
 Which community development activities do you know of in your area?
2. Is your organization involved in community development?  
 If yes, in what way?  
 How long how long has your organization been involved?
3. Which are the main community activities that your organization is involved in?  
 Which areas/location does this activities take place in?
4. Who are the main stakeholders in the activities your organization is involved in?
5. What are the benefits of this community activities within this areas?
6. How do you benefit as an organization from the community development activities?
7. What are the challenges of the development activities?
8. What are your suggestions to overcome those challenges?
9. How can this community activities be improved within these area?
10. Has your organization ever participated in a community development making process?  
 If yes, how did the organization participate?  
 If no, would you like to participate if given the opportunity?  
 What are your organization's strengths in community involvement?
11. Any other comments you might have.....

Thank you for your time and valuable input.

Official use only	Interviewer's name; <i>Michael K. Muiya</i>		Signature;
Date		Start time;	End time;
Scrutinized	yes	no	By (name)      Signature;
Questionnaire serial number			

## APENDIX C: Interview guide (Community members)

1. Do you know what community development is?  
 If yes, please define
2. Are you involved in community development?  
 If yes, in what way?  
 How long have you been involved?

3. How does community development takes place within your area?
4. Which are the main community activities in your area?
5. Who are the main stakeholders in the activities within your area?
6. What are the benefits of this community activities to the area?
7. Are you involved in this community activities?  
If yes, how are you involved?
8. How do you benefit as an individual from the community activities?
9. What are the challenges of the activities?
10. What are your suggestions to overcome those challenges?
11. How can this community activities be improved within your area?
12. Have you ever participated in a community development making process?  
If yes, how did you participate?  
If no, would you like to participate if given the opportunity?  
What are your personal strengths in community involvement?
13. Any other comments you might have.....

Thank you for your time and valuable input.

Official use only	Interviewer's name; <i>Michael K. Muiya</i>		Signature;
Date		Start time;	End time;
Scrutinized	yes	no	By (name) Signature;
Questionnaire serial number			

**APENDIX D: Stakeholders role; Economic, commercial and labor affairs.**

<b>NO.</b>	<b>Stakeholder</b>	<b>Role</b>
1	Machakos Investment Promotion Board	Facilitate the implementation of new investment projects, providing After Care Services for new and existing investments.
2	Education and research institutions	Provide information to guide policy formulation, skills and knowledge, market intelligence, broaden product base, develop innovations and technologies for value addition.
3	Tourism and culture	Marketing tourists sites
4	NGOs	Capacity building in participatory development, financial support to development project.

Source; CIDP, 2015.

**APENDIX E: Small scale industries; Priorities, Constraints and Strategies.**

Priorities	Provision of land and infrastructure.
Constraints	No land and structures provided for the informal sector.
Strategies	Provision of infrastructure to existing Jua Kali sheds. Allocation of land and title deeds to Jua Kali Associations. Develop industrial and innovation parks.

Source; CIDP, 2015.

**APENDIX F: Trade and industrialization new projects.**

<b>Project name</b>	<b>Location</b>	<b>Objectives</b>	<b>Targets</b>	<b>Description of activities</b>
Tannery	Wamunyu	To undertake value addition on skins and hides which are readily available	To increase the processing of skins and hides	Construction of a factory
Export promotion services	Whole County	To promote the exportation of goods and services	Done by all sectors	Host and participate in international trade fairs, train exporters
Domestic trade promotion	Whole County	To promote domestic trade	All sectors	Loan disbursement, establishment of trade development offices

Source; CIDP, 2015.

**APENDIX G: Proposals Tourism Sub sector.**

<b>Project Name</b>	<b>Location</b>	<b>Objectives</b>	<b>Activities</b>
Baseline survey	All sub counties	Tourism strategy development in each constituency	Departmental tours. Develop inventory of tourism attractions sites in the county.



Marketing and events	All constituencies	Hyping and drawing tourist an investors numbers	Stakeholders' forum, package attractions sites, guide book development, hold tourism expos.
Refurbishment and upgrade of infrastructure.  Construct public toilets (eco-toilets)	Wamunyu		Upgrade Wamunyu handicrafts center to a word heritage site. Others, renovation of Macmilan Caste to a national museum.
Heritage preservation	Kyanzasu Kamba Museum	Preservation of people's memories and addition to urban design	Statues and monuments. Upgrading of Kyanzasu Kamba museum.
Community based tourism	Wamunyu handicrafts	Develop sustainable community projects	Afforesting of land for wood harvesting. Finance partnership with communities, training, creating and equipping of cultural museums.

Source; CIDP, 2015.

## APENDIX H: Data categorization process



Manual categorization of data from the field.