

**IMPACT OF CULTURAL INDUSTRIES ON URBAN DEVELOPMENT: A CASE  
OF WAMUNYU CENTRE, MACHAKOS COUNTY**

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**DECLARATION**

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

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## **DEDICATION**

*To my family, friends, all interested readers and above all the Woodcarvers/creative industry artisans in Kenya, this I dedicate....*

## **ACKNOWLEDGEMENT**

The completion of this work has come as a product of hard work and would not have been possible without the support received from many people who merit my appreciation.

Firstly, I thank the Almighty Father for granting me good health, strength and wisdom to undertake this study. Indeed through Him, all things are possible.

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## **ABSTRACT**

Kenya's cultural industries, particularly the woodcarving handicraft industry plays a pivotal role in the spatial growth and economic empowerment of both rural and urban populations. These cultural industries have huge development impacts in positive and negative ways to the towns they are accommodated in, and their immediate hinterlands.

The study investigated the impact of cultural industries on urban development, specifically, the woodcarving handicrafts among the Kamba community in Wamunyu urban centre, Mwala Constituency, Machakos County. Key objectives that guided the study included: understanding the structuring and functioning of the woodcarving industry in Wamunyu; investigating the operation of this woodcarving industry overtime and its impact on urban development of Wamunyu urban centre and proposing spatial planning interventions that can transform woodcarving activities into an effective industry in development of Wamunyu urban centre.

The centre was purposively sampled because it is popularly known as the cradle of woodcarving in Kenya. The study applied participatory methodologies including in-depth desktop reviews, structured questionnaires and key informant interviews. A total of 160 woodcarvers were randomly selected from Wamunyu Handicraft Society, as it is currently the oldest woodcarving association in Kenya, dating back to 1965 and has the largest woodcarvers' membership in Kenya. 15 area residents were randomly sampled as a control group to triangulate their findings with those of the woodcarvers. Other study key respondents included cooperative management officials and the County Government of Machakos officers of various departments; Physical Planning Department of Culture, Tourism and Sports; Ministry of Agriculture, Livestock and Co-operative Development and Department of Decentralised Urban Units; urban areas and municipalities. Questionnaires, in-depth interview guides, sketching, observation and photography were used in collecting data, which revealed certain significant aspects of the study.

The findings indicated that the woodcarving industry was among the pioneer vectors of development within the urban centre. However, this activity had since declined over the years due to low investment and poor spatial planning of the woodcarving value chain and poor value chain management. The study recommended that spatial planning principles of urban design could revitalise the industry, promote sustainability of the industry and give the area a cultural identity.

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## ACRONYMS

ACD	-	Arts and Culture District
CLG	-	Certified Local Government
DPAC	-	Design and Planning Assistance Centre
GDP	-	Gross Domestic Product
ICT	-	Information and Communication Technology
KII	-	Key Informant Interviews
SME	-	Small and Medium Enterprises
TCEDSP	-	Taos Economic Development Strategic Plan
UNESCO	-	United Nations Educational, Scientific and Cultural Organisation
VCA	-	Value Chain Analysis

## CHAPTER ONE: INTRODUCTION

### 1.1 Background to the Research Problem

Globally, the cultural impacts of cities like Australia, Athens, Amsterdam, Barcelona, Madrid, Rome, Vienna just to mention a few, still resonate in our present world culture. These and other cities worldwide are using culture as a central component of urban development strategies that are designed to capitalise on the economic benefits of globalisation (Zukini, 1995). Through detailed planning and traditional cultural architecture, these cities have heavily invested in streetscapes, and cultural restaurants that have a cultural focus. Culture involves visiting museums, artistic activities, galleries, cultural heritage zones or traditional culture. It also includes the lifestyles formed by beliefs, languages, nutritional habits, dressing styles of people, architectural buildings, handworks and related atmosphere (WTO, 2005). Thus, in recent years culture has taken on a more instrumental meaning in cities. It now represents the ideas and practices, sites and symbols of what has been called the “symbolic economy” that is, the process through which wealth is created from cultural activities, including art, music, dance, handcrafts, museums, exhibitions, sports and creative designs in various fields. (Bassett, 2005)

Capitalising on cultural assets is now perceived as a key strategy in inter-urban competition (Bassett, 2005). One of the most striking aspects of urban planning and policy development over the last few decades has been the increasing attention given to the role of culture and cultural development in the growth of cities as well as the quality of life of city dwellers (Francioni, 2004). Culture boosts the economic dimension by generating income and employment. It is the engine of many development processes and it has impact on entrepreneurship, new technologies and tourism. Culture brings creativity and innovation to the economy. It is also the accelerator of resilience and rootedness. It facilitates participation of citizens as well as intercultural cohesion. Some of such African countries that have attempted and effectively succeeded in incorporating culture in their towns and cities are: Tanzania’s renowned woodcarving culture by the Makonde people found in Zanzibar, Durban in South Africa which accommodates the

Zulu cultural practices, Egypt's city of Alexandria which is known for the Great Pyramids and the Sphinx among others.

Cultural industries have become a source of commerce and trade for many individuals locally and internationally. These industries produce tangible or intangible artistic and creative outputs that have a potential for wealth creation and income generation. In recent years, urbanisation in many emerging economies has been rapid, incessant, excessive, and often uncontrolled. This has thus been destructive to local resources that have caused: destruction of local natural resources (land and water bodies); stunted growth, of cultural resources including (built heritage, building crafts, traditional knowledge and creative industries such as the handcrafted artefacts). Current urbanisation and physical planning policies often ignore the importance of cultural heritage planning, preservation, promotion and this great potential of creativity in addressing social, environmental and economic urbanisation challenges.

The study paid keen interest in the woodcarving industry as a creative industry that directly contributed to the urbanisation and urban development of Wamunyu centre within Machakos County. It delved into this study area as an example of a town, which initially grew due to the woodcarving industry, but has since stagnated both in terms of its functional growth as well as its spatial organisation, resulting from the deteriorating/dwindling woodcarving activities.

This research therefore focused on cultural industries as the creative cultural sector of the economy. It specifically assessed the woodcarving industry, its immense potential to spur urban growth and development through its related activities, networks, and products. It sought to see how they could be translated in space within an urban setting towards a unique and attractive cultural spatial layout, such as the woodcarving industry in Wamunyu Town, Machakos County.

## **1.2 Problem Statement**

The decline of the woodcarving industry as a vector of urban development has been a setback facing the cultural industry for the last two decades. In 1992, President Moi banned logging of trees in Wamunyu urban centre that were the major contribution

driving the industry. This furthered the decline of the woodcarving activities. It then led to poor woodcarving value chain management.

Overexploitation of specific tree species like Ebony, Mahogany and Rosewood, which produced the highest quality of woodcarvings in the country, has resulted in extinction of these and other similar tree species.

The woodcarving industry faces a few challenges enlisted as follows: Low investment, unplanned, disorganised and dilapidated spaces of operation of the woodcarving value chain that have led to informal running of the business. The quality of processing of the carvings has decreased with poor standardisation of prices, high infiltration of the industry by brokers that has led to poor access to external market linkages. The once lucrative business that earned direct foreign currency with multiplier effect on the development of the town is chiefly dependent on local currency, which now lacks potential to drive the once thriving economy. There is also poor on-site handling and management of woodcarving waste products within the working space and site of operation therefore portraying poor resource management.

The cultural industry of Wamunyu has inadequate complimentary cultural activities that can be used to attract tourists to the centre. These challenges within the area have hindered full development of the area's asset and weighed down the strong growth potential of this node to the surrounding human settlement. All these challenges have seen a decline of Wamunyu as an important cultural town. Several interventions have been undertaken in order to combat these challenges. The most popular measures that have been implemented include re-forestation and afforestation programmes of the extinct hardwood trees, use of alternative trees such as *terminally brownie*, jacaranda and mango have been considered as good wood trees which grow for a shorter period of time.

This study therefore assessed the operations of the woodcarving industry in Wamunyu centre, Machakos County overtime and the factors that have led to its decline in operation, its impacts on spatial, economic, social and environmental urban development. It also proposed incorporation of spatial planning and urban design principles as a development tool. The tool as part and parcel of integrating the cultural industry related

activities, networks and products into the overall Wamunyu urban fabric. This was in order to restore the area by establishing a uniquely defined cultural destination centre. It also sought to suggest means of making the woodcarving industry a vibrant and sustainable sector.

This study purposed to fill an information gap on how spatial planning interventions can enhance better operation of the woodcarving value chain within an urban setting.

### **1.3 Purpose of the Study**

The study sought to assess the development of the woodcarving industry from its inception to date. This was done to identify the positive and negative impacts that this industry has had on the growth of the town overtime. It established contributing factors that led to the dwindling operation of the woodcarving industry in Wamunyu town and further potential that was yet to be harnessed for optimal and sustainable operation of the woodcarving industry.

The study was mainly geared towards:

- Injecting commercial and industrial momentum in Wamunyu towards urban growth and development of the area
- Developing and maintaining an integrated, sustainable and efficient land use plan for the woodcarving industry in Wamunyu Town

### **1.4 Scope of the Study**

#### **1.4.1 Theoretical Scope**

The study substantively focused on examining the woodcarving industry as a cultural industry, concentrating on the woodcarving value chain management, its resultant networks, products and impacts on urban space. Also existing culture related policy and legal framework were assessed.

#### **1.4.2 Spatial Scope**

Spatially, the study looked at entire woodcarving industry within Wamunyu urban centre at the micro level and regionally, Machakos County at the macro level.

## **1.5 Research Questions**

The study sought to answer the following questions:

1. How is the woodcarving industry in Wamunyu Town structured?
2. How has the woodcarving industry operated overtime and what impact does it have on urban development of Wamunyu urban centre?
3. What spatial planning interventions can transform woodcarving activities into an effective industry in development of Wamunyu Town?

## **1.6 Research Objectives**

The following were the research objectives:

1. To understand the structuring and functioning of the woodcarving industry in Wamunyu
2. To investigate the operation of this woodcarving industry overtime and its impact on urban development of Wamunyu urban centre
3. To propose spatial planning interventions that can transform woodcarving activities into an effective industry in development of Wamunyu urban centre.

## **1.7 Research Assumptions**

Based on the above objectives, the study assumes that:

1. Woodcarving as a cultural industry remains the prime mover of the development potential of Wamunyu Town
2. Spatial planning can affect the value chain of the woodcarving cultural industry in Wamunyu Town

## **1.8 Justification and Significance of the Study**

Culture-related activities are powerful tools for urban redevelopment and revitalisation. Many city authorities and urban development agencies globally, are increasingly using culture-related activities for redevelopment. This strategy has been used to promote the civic identity of cities, to market cities internationally and, in particular, to boost the economic fortunes of cities experiencing industrial decline. Current trends, all over the world, suggest that culture will play an increasingly important role in the future of cities. Important trends have been the following: culture-based redevelopment of urban space

and global branding of cities; cultural heritage preservation, including, as a means of marketing cities abroad; and the development of urban cultural industries and districts.

Developing countries are increasingly using various facets of culture to attract investment and promote growth. Through the use of creative industries especially traditional handcrafts, which is an important dimension of the local traditional culture; more emphasis on increased government investment on cultural tourism has begun to emerge.

Being the cradle of woodcarving activities in Kenya, Wamunyu urban centre offers a strategic location for culmination of a uniquely identified cultural destination. The rich local cultures of woodcarving, which have not formally been explored, can be manifested in the handcraft industry of woodcarving. It aims at contributing to the urban planning discourse through establishing spatial planning interventions that integrate woodcarving activities within the urban fabric of Wamunyu and planning profession development.

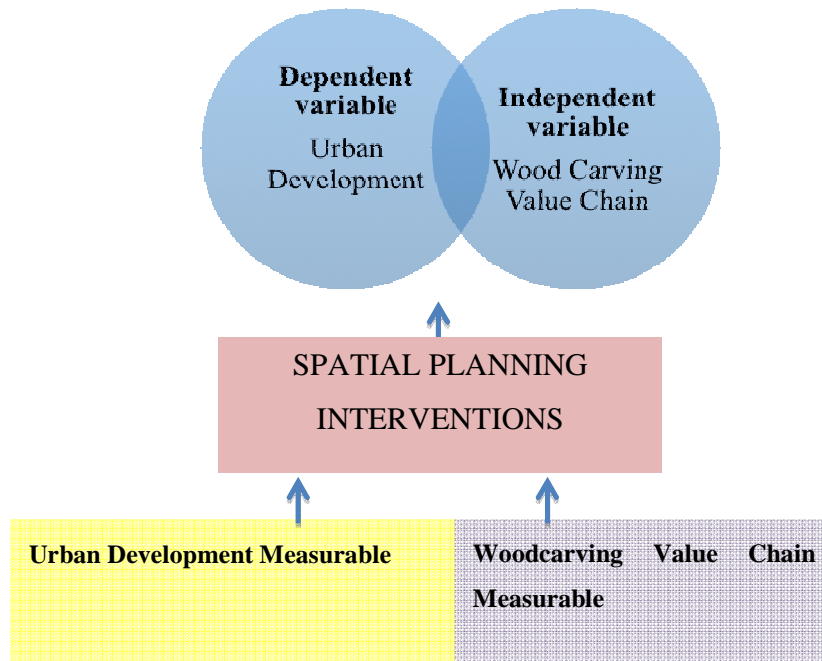
With regards to place identity (cultural node), through application of urban design principles, the study established a distinguishable functional cultural destination of Wamunyu urban centre. It also sought to create job opportunities for Wamunyu residents as well as attract investors to capitalise on culture related industry goods and services (hotel, museum, tourist attraction centres).

The idea of using culture as a mechanism of urban economic growth in Wamunyu enables design and knowledge based production, reflects cities' transition from manufacturing to more flexible, design and knowledge-based production. It enhances cultural tourism niche product within the county and the country as a whole.

The woodcarving industry is located in a fairly densely populated area. The concentration of skills in this area, allows it to draw up tangible human resource, local historic heritage, social diversity and intangible cultural components, in the form of traditional Kamba song and dance.

The study also provided a methodology on planning for creative cultural industry components, design standards and key complimentary spaces to accommodate such activities.

**Figure 1.1: Relationship between Urban Planning and Cultural Industries, Reference to Wamunyu Woodcarving Industry**



*Source: Author, 2014*

## 1.9 Definition of Terms and Variables

### a. Cultural Industries

The National Policy on Culture and Heritage of 2009 defines cultural industries as industries which produce tangible or intangible artistic and creative outputs, which have a potential for wealth creation and income generation through the exploitation of cultural assets and production of knowledge-based goods and services (traditional and contemporary). What cultural industries have in common is that they all use creativity, cultural knowledge, and intellectual property to produce products and services with social and cultural meaning.

**Working definition:** For purposes of this study, cultural industry refers to the woodcarving handcraft industry within Wamunyu Town, Machakos County, and its entire value chain from the production and processing to the branding and consumption patterns.

### b. Urban Development

Urban development is the social, cultural, economic and physical development of cities, as well as the underlying causes of these processes. It may also be defined as: ‘the development or improvement of an urban area by building’. In order to ensure a sustainable urban area, this development will have to be carefully planned. (Hessing, 2006)

**Working definition:** For purposes of this study, urban development refers to the extent of level of service provision, settlement distribution, infrastructure development, percentage of population and GDP growth contribution by woodcarving activity.

#### **c. Craft**

The National Policy on Culture and Heritage of 2009 defines crafts as the works of artistic expression using tangible materials such as wood, stone, metal, plastics, wax, clay etc. created individually or collectively in a modern and traditional setup. It forms the basis of cultural industries. Section 2.1.1 reiterates that the craft sector provides an entry point into the economy for industries.

#### **d. Cultural Districts**

Cultural economist, (Santagata, 2002) defines a metropolitan cultural district as “a spatial agglomeration of buildings dedicated to performing arts, museums, and organisations which produce culture and related goods, services and facilities.” Cultural districts are sites where planning creates conditions primarily for economic activity and may cover vast swaths of a city or a just a few city blocks.

This study thus assessed a cultural district as an aggregate of various cultural activities and events organised within a particular area/region for increased economic gain and to form a larger cultural identity. This was the desired end state of this study, which sought to aggregate complimentary cultural activities with the woodcarving industry to create a distinct node of uniquely observable cultural services and products in Wamunyu Town.

#### **e. Human Development**

The process that increase opportunities extending from the physical environment to economic, social, political freedoms, the development of human capabilities and productive use in order to contribute to growth and employment for the purpose of achieving sustenance of oneself or the surrounding community (Human Development Report, UNDP, 2013).

#### **f. Impact**

An impact is defined as a marked effect or influence of something or someone on another. It can either be positive or negative (Oxford Dictionary, 2010).

#### **g. Participation**

Participation can be defined as the action of taking part or being actively involved in working towards resolutions of problems either at individual or group level (Soubbotinna, 2004).

#### **h. Poverty**

Poverty is a multi-dimensional phenomenon that results in the inability to fend for oneself, family or community in achieving and attaining the basic necessities such as finances, food, clothing and education just to mention a few.

#### **i. Sustainable Development**

"Development that meets the needs of the present without compromising the ability of future generations to meet their own needs."(Brundtland Commission report Our Common Future; Oxford: Oxford University Press, 1987).

#### **j. Urban Regeneration/Redevelopment**

Urban regeneration is defined as the rehabilitation of impoverished urban neighbourhoods by large-scale renovation or reconstruction of housing and public works (Oxford Dictionary, 2010).

#### **k. Woodcarving**

It is an action or skill of carving wood to make functional or ornamental objects (Oxford Dictionary, 2010). Woodcarving can also be defined as the art of working with wood to produce an artistic impression. In this study, it is referred to as a cultural industry.

### **1.10 Organisation of Study**

The study was organized into six major chapters addressing various aspects of the study as follows:

**Chapter 1: Introduction** - This chapter covered the study introduction and proposal which included the introduction, problem statement, study purpose, assumption and questions. It also elaborated on the study objectives, justification, scope and organization of the study.

**Chapter 2: Literature Review** - This chapter reviewed various ideas, theories and concepts of cultural industries, particularly the woodcarving industry and their contribution urban development. It also sought to identify and review policies and planning guidelines that attempt to give the woodcarving industry and its related activities. The chapter concludes with a working case study of a successfully implemented cultural district Plan of 2012 for Taos Town, New Mexico. This provided a strategic approach that informed the proposed interventions of the study.

**Chapter 3: Study Area and Methodology** - This gave background information on the study area and the study methodology applied. Such information included: the physical location, geographical, vegetation cover of the area land-use analysis and spatial issues synthesis. Also sampling methods applied and sample size were detailed out in this chapter.

**Chapter 4: Research Findings** - It mainly addressed the field survey of the research. It covered the research field discussions, observations and overall field experiences and findings. This chapter was then organised and tailored in line with the study objectives.

**Chapter 5: Planning Implications** - This looked at the planning implication, evaluated and critically discussed the findings from chapter two, three and four in relation to the objectives and assumption, highlighting problems identified during the field work and policy implications of recommendations and alternative policy suggestions were made.

**Chapter 6: Conclusions and Recommendations** - This summarised the findings and conclusions of this research and thus made recommendations and proposals that may revitalize and sustainably accommodate the woodcarving industry in Wamunyu Town, Machakos County.

## CHAPTER TWO: LITERATURE REVIEW

### 2.0 Overview

This chapter reviewed cultural industries, aspects surrounding it and the historical development of the woodcarving industry in Wamunyu Town, Machakos County. It began with a brief definition of culture and cultural industries. The study elaborated on urban development indicators as well as highlighted woodcarving value chain in general, production spaces for woodcarving, policy and legal framework that may be used to guide the design and establishment of the enterprise as a lucrative activity for urban development and revitalisation. The chapter concluded with a case study from a successful cultural district in Taos Town, New Mexico and a conceptual framework built on the lessons learnt from the case study. The chapter also included the researcher's view on suggested approaches in reinstating cultural industries in urban centres with reference to Wamunyu woodcarving industry, as a tool for urban regeneration borrowed from other scholars in the field of cultural planning.

### 2.1 Definitions of Culture and Cultural Industries

#### 2.1.1 Culture

Most definitions describe culture as a way of life of a certain group of people in a particular society. Culture is the totality of a people's way of living as deduced from material and non-material aspects of their life such as clothing, values, beliefs, thoughts, feelings and customs (Ukeje, 1992). UNESCO's definition of culture is "that whole complex of distinctive, spiritual, material, intellectual and emotional features characterising a society or social group. This definition encompasses, in addition to art and literature, lifestyles, ways of living together, value accepted systems, traditions and beliefs".

Andah, (1982) presented a more elaborate definition of culture which embraces all the material and non-material expressions of a people as well as the processes with which the expressions are communicated and passed on to generations. It encompasses social, ethical, intellectual, scientific, artistic and technological expressions and processes of a people usually ethically and/or nationally or supra-nationally related, and usually living

in a geographically contiguous area. Thus, culture depicts glaring similarities between people within the same territorial space that fosters a feeling of oneness that they would wish to preserve for future generations.

### **2.1.2 Cultural Industries**

According to the Convention on the Protection and Promotion of the Diversity of Cultural Expressions Adopted by UNESCO in 2005, cultural industries are seen to produce and distribute cultural goods or services that are considered for a specific attribute, use or purpose, represent or convey cultural expressions, irrespective of their commercial value. Cultural industries are defined as industries that produce tangible or intangible artistic and creative outputs, and have a potential for wealth creation and income generation through the exploitation of cultural assets and production of goods and services (both traditional and contemporary). Cultural industries are highly competitive, yet all countries have their particular competence and experience based on each country's history, culture, and environment. Furthermore, through collective action and cooperation, countries can realise significant regional comparative advantages to create global economic impacts. (Barillet, 2006)

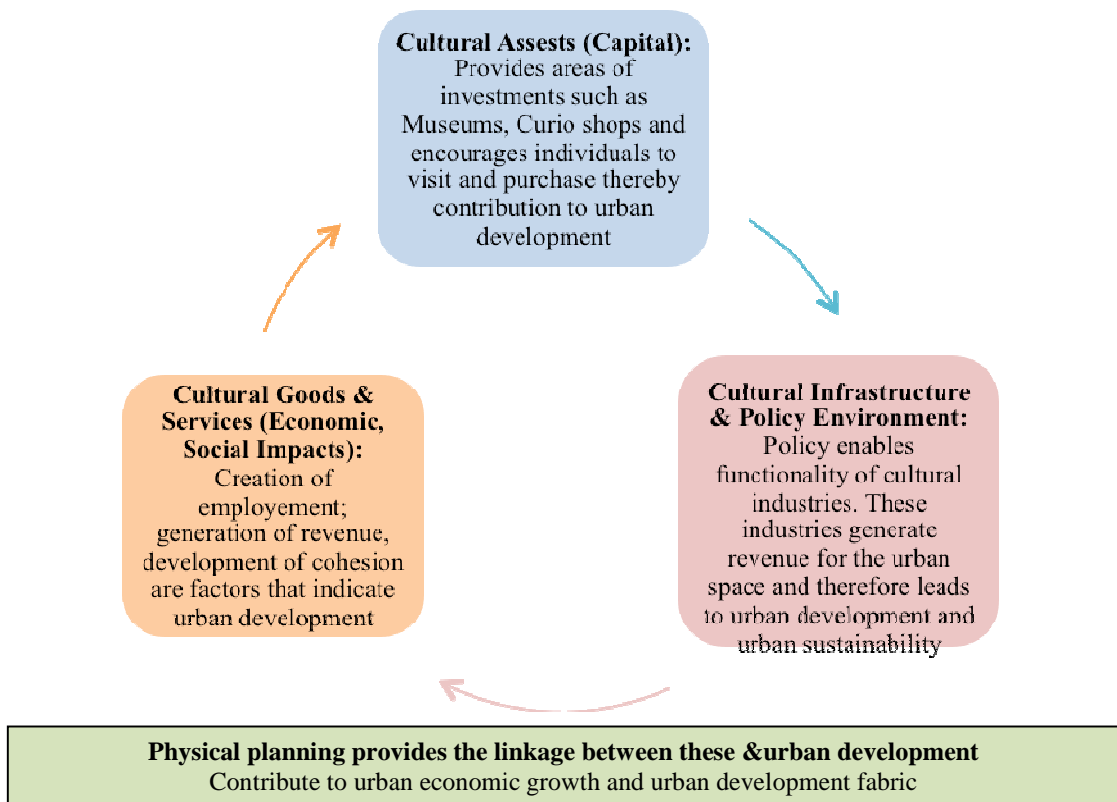
Governments in the fastest-growing economies purposefully invest in mapping-studies and promote policy measures that support and facilitate the development of cultural and creative industries. In many developing countries, however, the creative or cultural industries are less incorporated into national planning frameworks and development strategies. Part of the reason is these industries, to a great extent, are part of the non-formal sector. Another reason is the general absence of data information on the cultural industries and creative enterprise that could indicate the scope and potential of these industries. These industries have particular potential for participatory and community-based development and change.

The strengthening of cultural industries requires integrated policy support and development (inclusion in overall national development goals and cohesive policy intervention that benefit all of the various cultural industries). This facilitates bridging of gaps between industrialised and developing countries and regions, and ensures increased equal participation in societies, creativity and creative/cultural industries needed to be

developed everywhere, as well as encouraging growth of the surrounding area and country in totality. Barillet (2006) asserts that unless conscious efforts are directed towards ensuring the national capacity needed to include the cultural industries sector in national planning in developing countries, there is a danger that the creative economy may lead to even greater disparities between rich and poor.

Cultural industries can be summarised by three dimensions of the socio-economic environment in which these industries exist that entail: the cultural assets (or capital), the cultural infrastructure and policy environment, and the impact cultural industries themselves have in terms of cultural goods and services. The strength of each of these dimensions is interdependent, driving sector development or growth forward in a spiral-like movement.

**Figure 2.2: Dimensions of Socio-economic Environment in which Cultural Industries Exist**



*Source: UNESCO Bangkok, 2007*

For this study, an important aspect of cultural industries is the development and incorporation of this enterprise as a strategy for poverty reduction and local area spatial

development. This therefore forms the basis and foundation for which the study is mainly focused on the impacts of such industries on urban development. It sought to utilise the woodcarving industry as a major strategy for enhancing urban regeneration in Wamunyu Town.

### **2.1.2.1 Planning for Cultural Industries**

Cultural planning is the strategic and integral use of cultural resources in urban and rural community development. It has to make connections with physical and town planning, economic and industry development objectives, social justice initiatives, recreational planning, housing and public works (Mercer, 2006). The essentials of cultural planning include: a cultural framework; an action plan; and a budget.

## **2.2 Cultural Planning Theories**

Cultural planning takes different forms in different countries and, despite the growing exchange of ideas, it has a variety of configurations (Curson et al., 2007). Several authors describe cultural planning as a policy process for cultural development (Adams & Goldbard, 2001; Grodach, 2001; Grodach & Loukaitou-Sideris, 2007; Rosentein, 2009; Sonn, Drew & Kasat, 2002). Whereas Ghilardi and Bianchini (1997) state that it is important to clarify that cultural planning is not the “planning of culture”, but a cultural approach to urban planning and policy.

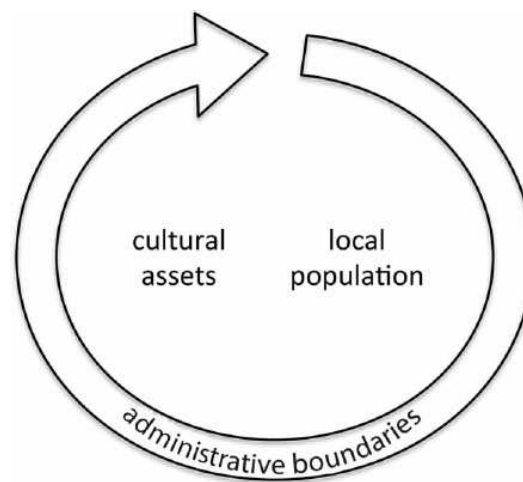
Moreover, Stevenson (2004) explains that cultural planning has been promoted to reach several goals: fostering community development, promoting partnership between private and public sectors, and positioning the arts as an industry. Finally, Borrup (2006) and Dreeszen (1997) define cultural planning as a process necessary to assess the community needs and develop a plan of action that uses arts and culture to address these needs. “ The beauty of the term cultural planning lies in the fact that it can assume multiple meanings and can be applied to different contexts” (Sirayi, 2008).

As stated by Ghilardi (2001), “by linking culture and other aspects of economic and social life, cultural planning can be instrumental in creating development opportunities for the whole of local communities. In other words, while cultural policies tend to have a sectoral focus, cultural planning adopts a territorial remit”

Attention to place emerges as a key factor in cultural planning. However, in Kenya, and particularly Machakos County, neither the handbooks nor the academic literature explain how to define a place in its empirical dimensions, including spatial, cultural and social aspects.

Cultural planning considers that arts and culture are intertwined with a specific place and its people (Stevenson, 2005), three main facets have been chosen to enable the collection of empirical data: administrative boundaries, cultural assets and local population

**Figure 2.3: A Framework for Identifying Cultural Places**



*Source: Redaelli, 2013*

### **2.3 Indicators used to Measure Urban Development**

According to the UN-Habitat in its journal on Urban Indicators Guidelines, 2004, the following are indicators of urban development:

**Table 2.1: Measures of Indicators**

INDICATOR	MEASURE
<b>Durable structures</b>	<ul style="list-style-type: none"> <li>• Number of households living in a house considered as ‘durable’ and compliant with local building codes</li> </ul>

<b>Overcrowding</b>	<ul style="list-style-type: none"> <li>• Low number of square meters per person, high occupancy rates - number of persons sharing one room - and a high number of single room units</li> <li>• Proportion of households with more than three persons per room</li> </ul>
<b>Access to safe water</b>	<ul style="list-style-type: none"> <li>• Proportion of the population with sustainable access to an improved water source</li> <li>• Affordability of water per household</li> <li>• Sufficient quantity: water should be available at a quantity of at least 20 litres per person per day</li> <li>• Without excessive efforts and time: less than one hour a day for the minimum sufficient quantity of at least 20 litres per person per day</li> </ul>
<b>Access to improved sanitation</b>	<ul style="list-style-type: none"> <li>• Ratio of the number of people in urban areas with access to improved excreta-disposal facilities to the total urban population</li> </ul>
<b>Literacy rate</b>	<ul style="list-style-type: none"> <li>• Percentage of the population, male and female, aged 15 years-old and over who can both read and write with understanding a short simple statement on everyday life</li> </ul>
<b>School enrolment</b>	<ul style="list-style-type: none"> <li>• Percentage of female and male enrolled at primary, secondary and tertiary levels in public and private schools</li> </ul>

<b>Urban population growth</b>	<ul style="list-style-type: none"> <li>• Average annual growth rate of population in the urban agglomeration or in national urban areas during the last five years</li> </ul>
<b>Unemployment</b>	<ul style="list-style-type: none"> <li>• Average proportion of unemployed (men and women) during the year, as a fraction of the (formal) workforce</li> </ul>

*Source: UN-Habitat, 2004*

### 2.3.1 Wamunyu Urban Development Parameters considered for the Study

In Wamunyu urban centre, the study considered the urban development parameters below:

**Table 2.2: Parameters Considered for the Study**

PARAMETER	MEASURE	STATUS
<b>Economic empowerment</b>	<ul style="list-style-type: none"> <li>• GDP contribution of the woodcarving industry to the overall economy of Wamunyu over specific periods of time (47% as per 2014)</li> </ul>	✓
<b>Job creation</b>	<ul style="list-style-type: none"> <li>• Number of livelihoods created by the industry (Total membership of woodcarving society representing individual household- 2043 member therefore 2043 household supported)</li> </ul>	✓
<b>Level of services</b>	<ul style="list-style-type: none"> <li>• Percentage of population who access services such as education, health, clean water, proper</li> </ul>	✓

	sanitation	
<b>Gender equality and women empowerment</b>	<ul style="list-style-type: none"> <li>Percentage of women compared to men in the study who undertake woodcarving activities (Male-1617, Female-326)</li> </ul>	✓
<b>Economic investment</b>	<ul style="list-style-type: none"> <li>Monetary allocation invested in woodcarving industry in the year 2013/2014 (Kshs. 30 Million)</li> </ul>	✓
<b>Settlement</b>	<ul style="list-style-type: none"> <li>Population of the sub-county Wamunyu is located</li> <li>Settlement Pattern and distribution over specific duration of time</li> <li>Increase of settlements in space and number overtime</li> </ul>	✓

*Source: Author, 2014*

## **2.4 Global Recognition of Culture and Sustainable Development**

The Agenda 21 (UCLG Committee on Culture, 2012) further reiterates that indeed, culture is and should be a major component of sustainable development agenda at international, regional and local levels. This Agenda is based on the international community's effort to cause for a new paradigm that will define development policies geared towards cultural inclusion in development. It is convinced that culture must be brought to stage by mainstreaming and integrating culture within development efforts. Furthermore, it asserts that culture is about creativity, knowledge and diversity. Culture boosts the economic dimension as it generates employment (seen as an engine of entrepreneurship, new technology and tourism). Culture is linked to the social dimension (facilitates participation of citizens, intercultural dialogue and equality rights). It

embraces environmental dimension as it explains the identities and raises awareness on ecological responsibility. It therefore urges that key values for development such as creativity, heritage, knowledge and diversity must shape culture as a fourth pillar in addition to the social, economic and environmental pillar of sustainable development.

(Hosograhar & Hayashi, 2013), additionally argue that the cultural sector can offer various approaches towards poverty alleviation. This sector encompassing cultural and creative industries, cultural tourism and culture-led urban revitalisation has immense potential to effectively drive economic development and job creation as well as address various challenges of poverty (urbanisation and migration, limited access to income and employment, poor housing and slums, social conflicts and biases, vulnerability of environmental risks and climate change) through urgent and different planning interventions. They propose the cultural industry as an economic driver of growth through economic empowerment and job creation, an enabler of poverty alleviation and social inclusion as it recognises and preserves diverse cultural assets as valuable resources. Social inclusion is fostered as it promotes gender equality and women empowerment thus a more inclusive approach to development. Culture builds on place-based capabilities by emphasising on place-based solutions and local resources (local indigenous knowledge) as a major tool towards sustainable development, culture led development increases economic investment while revitalising an economy's tangible and intangible, cultural resources and also provides green jobs.

## **2.5 Culture, the Economy and Development**

(Bandarin, Hosograhar & Albernaz, 2011) in their journal, *Why Development needs Culture* compellingly supports the idea that culture, creative industries and cultural heritage contribute immensely to development, not only in terms of quantitative economic growth (income, employment) but also of qualitative standards of equity and well-being. They reiterate that the UN's recent appeal to all organisations of the United Nations System and Non-governmental Organisations to ensure a more visible and effective integration and mainstreaming of culture in development policies and strategies at all levels. Thus, there is rising international awareness of the issues of cultural resources towards safeguarding of world heritage and cultural diversity. This has

therefore led to the establishment of specific international standards that call for sustainable, integrated approaches to development. Moreover, (Sorrentino, 2012), in his presentation on Culture and Development at the cultural inclusion conference in Paris, France, placed culture at the heart of development. He emphasised that culture is a strong driver and vector of development and when invested in protecting heritage, cultural diversity and intercultural dialogue on the ground, one can expect to measure the effects on the people and regions concerned in terms of human development, governance, democracy and inclusiveness and shared growth.

To help their states realise the full potential and economic benefits of the arts and culture sector, governors must identify the pivotal creative industries or clusters in the state, measure and develop plans to capitalise on the benefits of the arts and culture sector they can adopt strategies that support and strengthen these industries. These creative industries offer numerous benefits to state economies and states have an opportunity to improve both liveability and boost state and local economies by investing in the arts and culture. (Walker, Jackson & Rosenstein, 2003), emphasises that traditional arts, present an opportunity for areas that have lagged behind such as rural areas among others, to capture a share of national growth, while preserving the cultural vitality essential to community quality of life. Cultural industries can be used in future to aid regional planning, develop markets for traditional arts and connect these markets to regional promotion efforts.

From the above literature it is evident that culture is indeed a vector of development. It can be used to reduce and alleviate poverty, create employment, foster greater place and self identity and promote further economic growth of a given place or region by using the creative industries as an instrument for urban regeneration and reinvention. This is concept has been tried, tested and successfully adopted through various global partnerships and initiatives. One such example is the CITIES initiative. CITIES (Creative Industries in Traditional Intercultural Spaces) is a joint initiative generated by 9 partners from 6 countries: Lithuania, Italy, Spain, Portugal, Hungary and Slovenia. The project also identified interventions that aim to stimulate the creative and cultural industries, or aim to deepen their effect on the wider economy through establishing programmes such

as: developing clusters of activity (in terms of exchange, trust, skills and infrastructure); fostering business opportunities; developing cultural identity and creating cultural assets.

This section clearly demonstrated that Wamunyu Town could highly benefit socio-economically, environmentally, fiscally and transportation-wise through integration and development of the cultural sector.

## **2.6 Culture and the Environment: A Bio-Rights Approach**

Bio-rights was founded on the recognition that local communities are the rightful resource owners of the natural resources in their environment.

### **a) Rationale behind the Approach**

Rising population pressures, linked to decreased availability of land, have decreased development opportunities for rural communities throughout the developing world. Many of the rural poor are caught in a ‘poverty trap’ and are forced to meet short-term livelihood needs by unsustainably exploiting the natural environment. The exploitation itself leads to increased vulnerability and further constrains their development opportunities.

Bio-rights approach is driven by the urgent need to address this negative spiral of increased poverty and severe environmental degradation in order to successfully meet the major conservation and development challenges of our age.

### **b) History of Bio-rights**

The Bio-rights approach was developed by Wetlands International, Alterra Green World Research (Wageningen University, Netherlands) and a number of partner organisations in the late 1990s. The approach was formulated as a response to complex social, environmental and economic issues encountered in the field, which proved to be difficult to solve through conventional natural resource management approaches. Following the success of initial pilots, the mechanism has been further fine-tuned through a number of small- and medium-scale projects in South-east Asia and Africa by Wetlands International. Since its implementation, the approach has been significantly up-scaled under Wetlands International’s Green Coast project and the Wetlands and Poverty

Reduction Programme (WPRP), in which several conservation, development and micro-credit institutions have become involved in implementing the approach.

### **c) Methodology**

Based on three simple but powerful steps, the approach accomplishes community involvement in the preservation of environmental assets that are of global importance:

***Step 1: Local communities receive micro-credits to develop sustainable income generating activities.*** Micro-credits are usually disbursed at the group level rather than to individuals, to enhance cooperation among community members and create a feeling of project ownership within the group. In addition, by making the community-group responsible for individual behaviour, the risk of project failure is significantly mitigated. To ensure sustainability and the optimal usage of the micro-credits provided, beneficiaries receive active support on selected development activities. This includes technical training; study visits to other communities and interactive workshops to share ideas and plans.

***Step 2: Implementation of environmental conservation and restoration activities*** Communities repay their loan and the associated interest in the form of conservation services, such as reforestation, habitat protection and refraining from unsustainable land use practices. Community contributions can, depending on local conditions, restrict to refraining from unsustainable practices (e.g., hunting or deforestation), and also preservation of the environment against external impacts or active restoration of services that have been degraded in the past. Community obligations for conservation are formally registered in a multi-year contract and measurable indicators for success - e.g., seedling survival rates, degradation rates or a decrease in hunting pressure - are agreed upon and monitored.

***Step 3: Micro-credits are converted into definitive payments*** and subsequently into community-based revolving funds for sustainable development, once the conservation measures prove successful and sustainable. If conservation measures do not meet certain predefined standards, the beneficiaries are required to repay part or all of the funding provided.

#### **d) Factors to Consider for Successful Implementation**

*A sound framework for project implementation* – The framework should incorporate extensive investigation before piloting to ensure full assessment of the approach's potential and to further enhance its efficiency under different circumstances. It should also provide local communities with the means to escape from the poverty trap. Furthermore, it should consider involving scientists, development workers and the private sector to help establish rigorous monitoring frameworks, incorporate multi-sectoral knowledge and ensure appropriate embedding in other processes that link conservation and development.

*Sufficient availability of resources* - The main means for helping local communities escape from the poverty trap is to provide them with support for developing sustainable alternatives to harmful practices and this requires considerable financial resources. This can be accomplished by sourcing funding from those who benefit from the sustainable management of environmental resources e.g. the global community as a whole, or specific groups in the private sector which have interests in maintaining the eco-system and (local) governmental agencies.

*Appropriate pricing of ecosystem services* – This would lead to the delivery of a significant source of finance, provided by resource users, which can be used to incentivise communities to manage their environment in a sustainable manner.

#### **e) Actors Involved**

In order for the successful implementation of this approach, the following key players must be part and parcel of the process:

**Bio-rights Project Manager** – usually, this is a representative of a governmental institution or NGO. In small-scale projects an individual fulfills this task, whereas larger projects might require a project coordination team.

Acts as intermediary between an investing party (e.g. donor agency) and the local community.

Oversees overall project progress and facilitate project development.

Serves as a ‘buying party representative’, by ensuring that investors’ needs are well communicated to local communities and incorporated within the project design and contract formulation.

**Local Programme Manager** – This is usually is a local NGO or CBO with strong working experience in the region and extensive knowledge of local ecological and socio-economic conditions. Its main task is to:

Guide day-to-day Bio-rights implementation by building capacity and raising awareness among local communities.

Acts as a community representative, by communicating local needs and priorities to other stakeholders in the process of project development and contract negotiation and during actual implementation of conservation and development activities

**Local communities**- who often are the ‘owners’ of certain ecosystem services are among the most crucial stakeholders in a Bio-rights scheme. In many areas they determine how resources are managed or exploited.

**Conservation and development-oriented NGOs**- The approach can contribute to solving complex issues such as forest degradation or climate change, which require a multidisciplinary approach to address the socio-economic drivers of environmental degradation.

**National and international government bodies**- Bio-rights can also enhance economic performance at a national level through improved production of goods, improved markets for products and sustained ecosystem services, all of which contribute to macro-level economic development.

**Corporate and finance sector**- Some stakeholders in this sector have a direct interest in the sustained provision of specific ecosystem services. The approach can also contribute to accomplishing Corporate Social Responsibility objectives, which have become increasingly important in the private sector’s day-to-day business.

## **f) Expected Results of this approach for Woodcarvers in Wamunyu**

The approach will unite the conservation and development aspirations of NGOs, governments, the private sector and local communities of Wamunyu.

The conservation actions such as planting of trees through bio-rights will have economic and environmental benefits: creating micro-climates and increasing carbon sinks not only for local people but at the global level as well.

The town level, bio-rights improves livelihoods and solves environmental issues that hamper sustainable community development.

For global stakeholders, the mechanism ensures the future existence of environmental goods and services considered crucial for future generations or for the sustenance of long-term business objectives. Bio-rights are thus able to bridge the gap between local (Wamunyu), regional (Machakos), national (Kenya) and global interests.

## **2.7 Woodcarving among the Akamba**

Craftsmanship is an indigenous disposition among the Akamba, taking many forms to meet the changing needs of the community. Traditionally, it was chiefly utilitarian and performed with a high sense of appreciation and excellence. In addition, it was environmental inspired. Over the years, this craftsmanship has evolved to take a new orientation, one incorporating contemporary life and with a commercial dimension. Further, it is no longer a monopoly of the community: other groups have joined in at various levels, e.g. distribution of finished products.

One of the most important arts identified with the Akamba is woodcarving. Debates have been documented as to whether woodcarving among the Akamba was introduced into the community after World War I. Some anthropologists such as (Obunga, 1995) and (Ndeti, 1972) argue that woodcarving among the Akamba “predates colonialism in Kenya;” that whatever diffused from elsewhere found an already established artistic tradition but perhaps aided in the evolution of a new thematic orientation (Ndeti, 1972). Iterating this, oral narratives acquired by *People and Plants Initiative* in 1995, reveal that the interaction between the Akamba and Makonde artisans of Tanzania between 1914-1918

as carrier groups, brought a commercial orientation to woodcarving among the Akamba. Woodcarving among the Akamba supported life on a day-to-day basis. The products included walking sticks, headrests, wooden snuffboxes, stools, beehives, bows and arrow handles (Ndeti, 1972).

The interaction of communities during and after the colonial era heralded a commercial dimension to the industry among the Akamba community. After the World War I, mass production of wood crafts and sculptures among this group began. The colonial administration supported this commercial aspect by buying souvenirs such as ornate walking sticks from indigenous woodcarvers. Furthermore, between 1920 and 1940, the woodcrafts trade received an indirect boost from the colonial government when middlemen were cut-off from the small-scale enterprises. This coupled with increasing search for souvenirs by the World War II soldiers in East Africa provided an incentive for woodcarvers to explore markets in other places. At independence, woodcraft trade had become international and cross-cultural. The Asians and Europeans had set curio shops (Obunga, 1995). Today, though intense in Wamunyu, woodcarving is no longer a monopoly of the Akamba community; it is a lucrative industry for the country. It is a big tourist attraction and earns the government substantial foreign exchange revenue. In addition, it supports a significant number of Kenyans. For example, from a woodcarving conference organised by *People and Plants Initiative* in the year 2000, it was established that the industry, by 1997, was worth more than 1.5 billion Kenya Shillings and, by the year 2000, supported approximately 80,000 carvers with an estimated 500,000 dependants. However, the carvers and buyers are oblivious of the impact of this trade on the urban development/establishment of Wamunyu Town and thus the resource base and ecological footprint of the industry.

## **2.8 Impact of Woodcarving Industry on Development**

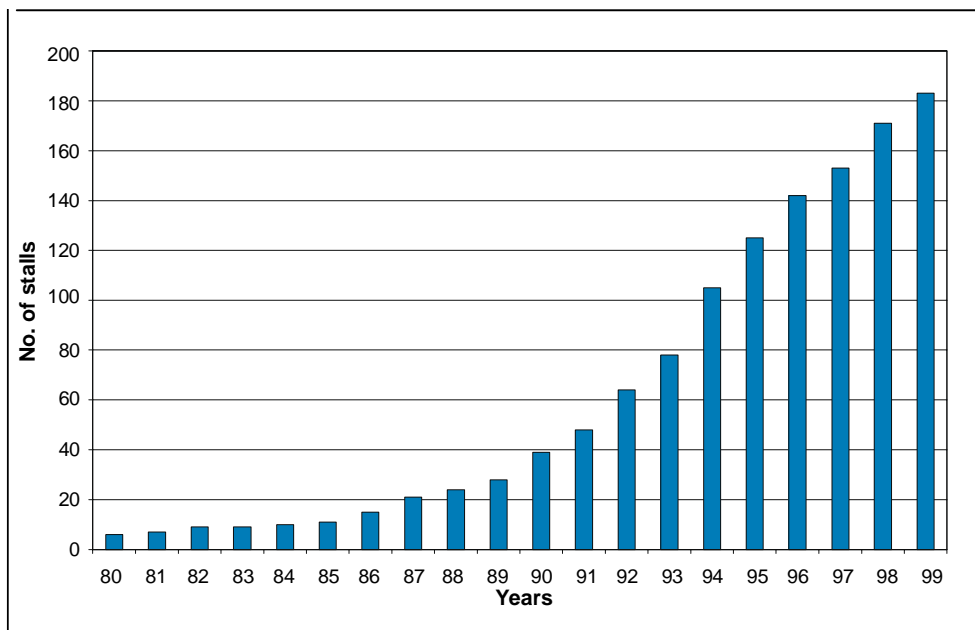
### **2.8.1 Positive Impacts**

Woodcarving contributes significantly to income generation. Bali, Indonesia, exports US\$ 100 million of carvings per year. India has a US\$ 65 million industry with 50,000 people involved in a single centre alone (Saharanpur). In South Africa, woodcarving provides household income of around US\$ 500-2,000 per year, or around 80% of the

household cash. Woodcarving is often closely linked to tourism. The woodcarving sector gives positive feedback to tourism, as it enriches tourism by attracting visitors to places with unique local cultures. In most countries the development of the woodcarving sector was initially driven by tourism (CIFOR, 2002).

In Zimbabwe, the number of markets offering handicrafts, mainly made out of wood, rose from only five at the beginning of the 1980's to over 200 in 1999, coinciding with the tourism boom (Graph 2.1 below).

**Graph 2.1: Cumulative Woodcarving Stall Growth in Zimbabwe since Independence**



*Source: CIFOR, 2002*

### 2.8.2 Negative Impacts

Where harvesting from wild populations occurs, overexploitation of favoured carved wood species is leading to local scarcity and depletion in many countries (e.g. Kenya, Uganda, South Africa, Zimbabwe, Mexico and India). Other negative impacts include threats to biodiversity, forest degradation and the loss of nesting sites and shelter for rare forest dependent species (e.g. the Sokoke Scops Owl in Kenya). The continued growth and economic success of the carving sector is placing increased pressure on an already limited resource base and is resulting in an expansion into new harvesting areas. In some countries selected carving species have been listed as threatened under national

conservation legislation. African ebony (*Dalbergiamelanoxylon*) has been proposed for CITES listing (to restrict international trade). Similarly, negative impacts of this extractive industry on livelihoods include the loss of raw material that has direct consequences for the livelihood security of local producers.

Based on the CIFOR Information brief No. 1, 2002, the impact of the woodcarving industry can be summarised as follows:

<p><b>WOODCARVING KEY POINTS</b></p> <p><b>Pros</b></p> <ul style="list-style-type: none"><li>• A safety net where other opportunities are limited</li><li>• Links closely with tourism</li><li>• Adds considerable value to wood compared to other uses</li></ul> <p><b>Cons</b></p> <ul style="list-style-type: none"><li>• Depletes raw materials and can affect biodiversity of indigenous forest</li><li>• Impacts negatively on livelihoods of some non-carver households</li></ul> <p><b>Challenges</b></p> <ul style="list-style-type: none"><li>• Inequitable distribution of profits</li><li>• Lack of support to woodcarving by governments</li><li>• Wood resource access and trade barriers</li><li>• Competition with local users</li><li>• Forestry policy drives carvers to get wood from illegal sources</li><li>• Trade barriers</li><li>• Inefficient use of raw material</li></ul> <p><b>Answers</b></p> <ul style="list-style-type: none"><li>• Reformulate policy</li><li>• Provide incentives to local communities to manage forests and supply wood</li><li>• Create market information system</li></ul>
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Source: CIFOR, 2002

## 2.9 Environment Relative to the Akamba

(Mbiti, 1969) articulates that “to the African peoples, the earth is a religious universe. Nature in its broadest sense of the word is not an empty impersonal object or phenomenon: it is filled with religious significance. Man gives life even where natural objects and phenomena have no biological life. Thus, to the African peoples, this

religious universe is not an academic proposition: it is an empirical experience, which reaches its height in acts of worship.” Touching on the similarities, traditions and with respect to the environment, he explains: “within this traditional African culture and its relationship with the environment, there were codes governing functions and existence and breaking them resulted into serious consequences. Interpretation of the codes today serves to illustrate the adaptive mechanisms the African used in exploiting the environment for optimal benefits both in the present and future”.

An African tribe has in its social structure several major subdivisions known as clans. These, depending on the tribe, are either patriarchal or matriarchal and are founded by either a man or woman. In some cases, they may have evolved in response to particular historical circumstances. These African clans are normally totemic, with one or more totems that could be: an animal or part of it, a plant, a stone or mineral. Members of a particular clan observed special care in treating or handling their totem(s), so that for example, they would not kill or eat one for fear of experiencing serious consequences (Mbiti, 1969; Ndeti, 1972; Huntingford, 1944; Kipkoriret *al.*, 1973; Kenyatta, 1961). With regards to the Akamba, this African tribe has over ten clans, each having its totem. For one of the clans the totem is an antelope *ssp*. The members of this clan are urged not to eat this antelope. Doing so would result in itching, irritation and swelling of the body. In addition, one would be considered contaminated (Ndeti, 1972). In interpreting the clan system today, it served as an adaptive mechanism whereby, a tribe observed careful exploitation of its natural resources for optimal benefits both in the present and future. Otherwise, if all the members of a tribe exploited the same natural resource from an environment, they would find themselves without resources to sustain themselves, leading probably to the extinction of the tribe.

Gender in the traditional African culture too played a role in a tribe utilising resources from nature. Superimposing this on the present, it illustrates an adaptive mechanism whereby, a tribe observed the division of labour between the males and females. Accordingly, women and men are different biologically but culture interprets and elaborates these innate biological differences into a set of social expectations about what

behaviours and activities are appropriate, and what rights, resources, and power they possess.

## **2.10 Gender Aspects to Woodcarving among the Akamba**

Traditionally among the Akamba, woodcarving had gender dimensions. Today, this traditional approach to division of labour at the production level of woodcarving still persists. Men manage the greater woodcarving activities with women being limited to lighter aspects of the finishing line such as sand papering and decoration of the carved items. Nevertheless, as (Obunga, 1995) expresses: “Recent trends indicate that the boundaries separating the men’s tasks from that of woman’s are breaking up or overlapping as socio-economic circumstances shift”.

## **2.11 Traditional Woodcarving: Materials used and their Source**

(Leuzinger, 1969) identifies wood as the most popular material in the production of traditional African art. He attributes the popularity to a traditional African belief that wood, even when dry, was a living matter with a soul. Traditionally, African art produced wooden artefacts that included: walking sticks, stools, wooden utensils, water troughs and containers, headrests, dug-out canoes, musical instruments such as the harp and drums, clogs worn on feet to enhance height and status and, religious carvings. Both soft and hard woods were used in the production of the artefacts. The choice of the wood determined the kind of object to be made. Further traditional African art was, to a great extent, similar across African communities. Distinctions, where discerned, were basically defined by a community’s physical and mystical environment. For example, walking sticks and wooden utensils were common across the communities; but dugout canoes were to be found among communities living close to large water bodies (Fedderset *al.*, 1979; Mohammed *et al.*, 1983; Cunningham, 1996; Hodge, 1982).

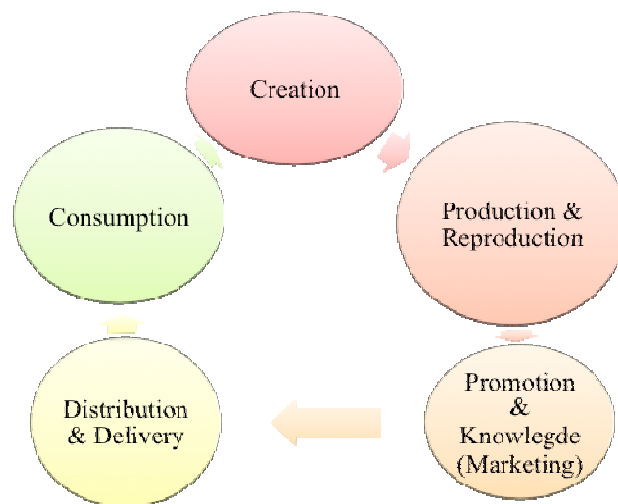
Much of the traditional wooden crafts have successfully been incorporated into the modern world. These include walking sticks, wooden utensils, stools, musical instruments such as the hollowed log drum and beehives. Others, such as religious carvings and wooden plugs worn on and in addition used to elongate pierced earlobes as a sign of beauty, are either dying or not practised at all in the various communities. Of the

surviving traditional wooden handicrafts, value has been added to them and their demand has increased over the years. The value is in the finishing, through product design and development but inspired by the African traditions and environment. For example, (Hodge, 1982) reports that in some communities in Nigeria, “masks and religious carvings were often painted with natural colours-white from kaolin, black from charcoal, terracotta from clay, blue from indigo-and decorated with cowry shells, pieces of glass, beads or metal stuck on with beeswax or gum and, vegetable fibres”.

## 2.12 Woodcarving Value Chain

The value production chain is a model for assessing strengths, weaknesses, opportunities and threats at every stage of the woodcarving chain or cycle from creation to consumption of finished products. It is made up of the factors or ‘inputs’ identified in the flow diagram below. Each of these factors needs to be evaluated in mapping, planning and policy, and is discussed in more detail below.

**Figure 2.4: Factors of Value Production Chain Model**



*Source: Author, 2014*

**A) Creation** is about:

- Education and training for creative practitioners funding and investment, including venture capital, for creative practitioners, both public and private

- Business planning support and advice for creative practitioners encouraging participation in creation by traditionally excluded groups
- Knowledge and cultural skills passed down to younger generations

**B) Production and reproduction** are about:

- Infrastructure needs (physical and digital) for production and reproduction
- Education and training needs for production and reproduction
- Funding and investment needs in these areas
- Intellectual property issues

**C) Promotion and knowledge (marketing)** are about:

- The ‘branding’ and marketing of the place/destination
- The adequacy of marketing of existing and new cultural products
- The development and consolidation of networking and communication capacity
- Education and training needs in these areas

**D) Distribution and delivery** are about:

- The adequacy of existing distribution/exhibition venues and mechanisms
- The appeal to and potential for the establishment of local, national and overseas markets
- Provision of access to traditionally excluded groups
- Education and training needs in these areas
- Funding and investment needs in these areas

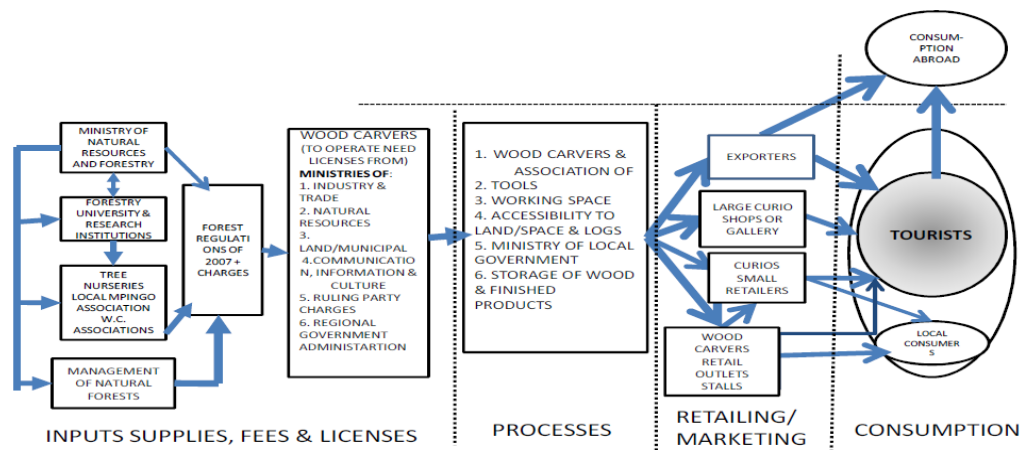
**E) Consumption** is about:

- The adequacy of understanding of the cultural marketplace and various taste cultures locally, regionally, nationally and internationally
- Cultural tourism
- The efficacy of demand stimulation and marketing strategies
- Strategies for extending both local and wider audiences, especially to excluded groups and ‘non- users’
- Education and training needs in these areas

Value chain analysis (VCA) defined by (Schmitz, 2005) as a set of stages (activities) needed to manufacture a product or catering a service. This refers to the step-by step actions followed in production of wood related products from the production of raw materials as inputs to the final stage of branded and consumed products. Woodcarving is a form of working wood by means of a cutting tool (knife) in one hand or a chisel by two hands or with one hand on a chisel and one hand on a mallet, resulting in a wooden figure or figurine, or in the sculptural ornamentation of a wooden object. The phrase may also refer to the finished product, from individual sculptures, to hand-worked mouldings composing part of a tracery. The supply chain can be complex (Kaplinsky& Morris, 2002), with players such as producers, middlemen and traders undertaking multiple activities along the chain. Producers of woodcarvings are not rewarded for their effort because middlemen pay low prices for goods purchased (Shackleton & Shackleton 2003; 2004). Thus, carving activities are seen as low-income sources, especially in rural areas.

According to (Kerenge, 2009), the woodcarving value chain can be summarised as per the diagram below:

**Figure 2.5: Stakeholders in the Woodcarving Supply at Different Stages**



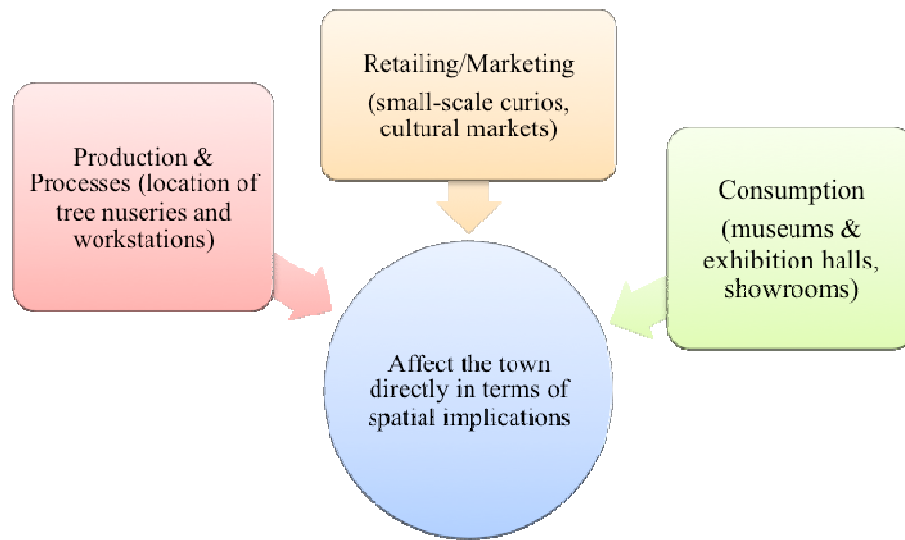
Source: Kerenge, A. (2009)

### 2.12.1 Spatial Element of the Woodcarving Value Chain

This model represents the woodcarving value chain from the initial raw material to the finished end product. Within the context of this study in Wamunyu Town, the diagram

above symbolises a comparable flow process of the particular stages of production trees, processing of logs/timber, retailing/marketing and consumption of finished woodcarving products. For planning purposes, this is the spatial translation of the processing stage, retailing/marketing stage and consumption was key to this study.

**Figure 2.6: Spatial Element of Woodcarving**



*Source: Author, 2014*

## **2.13 Policy Framework**

### **2.13.1 Constitution of Kenya, 2010**

The new Constitution declares Kenya as a sovereign republic that shall be a multi-party democratic state founded on the national values and principles of governance (Art.4). This identifies culture as part of integrated planning in Kenya.

### **2.13.2 National Policy on Culture and Heritage, 2009**

The policy guideline is based on the centrality of culture and national heritage in that the socio-economic and sustainable development needs of a country can neither be over-emphasised nor opposed. The government recognises the vital role culture plays in sustainable development. In its policy statement on crafts and creative industries section 2.1.1, the government shall take steps for: protection, promotion and to ensure cultural diversity and national heritage. In particular, cultural diversity widens the range of

options open to every citizen; it is one of the roots of development, understood not simply in terms of economic growth but also as a means of achieving a more satisfactory intellectual, emotional, moral and spiritual existence. The government in collaboration with local and international agencies shall assist in: Sustainable management of genetic resources; Preservation and conservation of the environment; Using indigenous knowledge and modern techniques. This provides a window for promotion of the woodcarving industry as a development instrument.

### **2.13.3 Machakos County Strategic Plan 2013-2017 (From Third World to First World Generation)**

In the economic pillar, the strategy thus seeks to promote authentic cultural experiences and acknowledges Machakos County for its beautiful hilly scenery that is perfect for camping and hiking. It places highly the woodcarving industry and recognizes it as the hometown of some of the world's most beautiful sculptures made in Wamunyu. It thus seeks to revamp the woodcarving industry in Wamunyu Town through improved value chain management towards a more competitive economic sector.

## **2.14 Legal Framework**

### **2.14.1 Physical Planning Act Cap 286 of the Laws**

This is a legislation that that guides preparation and implementation of either long term or short term physical development plans in regions and local areas. The Act also makes provisions for principles of urban redevelopment and urban renewal as a tool for land use planning and regulation. Thus this study of Wamunyu Town will apply these planning principles towards urban revitalisation and renewal of Wamunyu Town as a woodcarving cultural centre.

### **2.14.2 Tourism Act No. 28, 2011**

In the Ninth Schedule of the Act, tourist activities that form part of cultural tourism identified include; Class E enterprises-Curio shops and vendors and Class A enterprises-Cultural homes and centres. All of these cultural tourism facilities as per the schedule are resultant features of the impact of the woodcarving industry to urban development of Wamunyu town. There are and remain pertinent to the study as they will assess the

potential cultural tourist attractions that can be explored in the rebranding and re-establishment of Wamunyu woodcarving centre as a cultural District/Node of Activities.

### **2.14.3 Public Health Act Cap 242 of the Laws of Kenya**

The act is aimed at securing and maintaining public health. Section 115 of the Act states, "no person shall cause to exist on any land or premises owned or occupied by him/her any nuisance or other conditions liable to be injurious or dangerous to health". In Wamunyu woodcarving centre, the study seeks to foster production of finished products from wood without long-range environmental damage. The harvesting of trees can be done in such a manner that new growth can replace what is cut. Major deforestation in rain forests can be discouraged. Waste products from the machining of wood (i.e., sawdust, wood chips) can be used in chip-core or as fuel.

### **2.14.4 MSE Act, 2012**

The new SME Act gives direction to among others, key issues such as: the legal and regulatory environment, markets and marketing, business linkages, the tax regime, skills and technology and financial services all of which are key sectors in the operation of the woodcarving activity as a cultural enterprise. Therefore, the woodcarving industry will benefit from this as woodcarvers in Wamunyu mainly operate as informal sector activities and as Small and Medium Enterprises that have latent potential to be harnessed into a lucrative industry.

### **2.14.5 Forests Act, 2005 chapter 385**

Wamunyu being an extractive industry and being heavily dependent on the natural resource base; forests will be directly affected by the forestry Act which provides a guiding framework for exploitation of forests in Kenya.

Section 41(1) says that all indigenous forests and woodlands shall be managed on a sustainable basis for purposes of cultural use and heritage.

The act is concerned with forest resource management, administration and conservation for socio-economic development. Part IV section 45 (1), provides for community

participation in forestry and woodlot conservation. The Forest act states the benefit-sharing model of forest resources for sustainable exploitation.

#### **2.14.6 Environmental Management and Co-ordination Act (EMCA), No. 7, 1999**

Environmental Management and Co-ordination Act focuses on the impact industries may have on the environment, the mitigation measures, the authorities responsible for the enforcement of the Law and Environmental Monitoring. It also stipulates the penalties involved for failure to comply with the standards put in place under the principles of: Polluter Pays Principle, sustainability, prevention and precaution.

Application for an Environmental Impact Assessment License precedes any industrial activity as stated in Section 58 (1), (2) and (7): *Environmental impact assessment shall be conducted in accordance with the environmental impact assessment regulations, guidelines and procedures issued under this Act.* EMCA has subsidiary legislation under it.

#### **2.14.7 Environmental Impact Assessment/Environmental Audit Regulations, 2003**

Under Legal Notice 101: Environment (Impact Assessment and Audit) Regulations, 2003 as provided for under section 147 of the EMCA. These regulations provide the framework for undertaking out EIA's and EA's in Kenya by NEMA licensed Lead Experts and Firm of Experts. The EIA/EA Regulations also provide information to project proponents on the requirements of either an EIA or EA as required by the EMCA.

#### **2.14.8 The Urban Areas and Cities Act, 2011**

An Act of Parliament to give effect to Article 184 of the Constitution; to provide for the identification, classification, governance and management of urban areas and cities; to provide for the criteria of establishing urban areas and cities, and for connected purposes.

The Act repealed the Local government Act Cap 265.

The following Sections give provision for planning:

- Section 37 (1) indicates that planning under this Act must align to County development plan and strategies
- Section 39 provides for the adoption of integrated development plan. It will be the basis for formulation of environmental management plans, GIS database, disaster management etc

### **2.14.9 The County Governments Act, 2012**

Wamunyu falls under the management and jurisdiction of the Machakos County Government. It is thus the duty of this county among others, to plan for and guide development within this county. The County Government Act of 2012 stipulates that culture is a function of the county government.

The Act gives effect to Chapter Eleven of the Constitution; to provide for county governments' powers, functions and responsibilities to deliver services and for connected purposes. It identifies the county governments as corporate bodies with perpetual succession and shall have all the powers of corporate bodies.

Planning Under this Act is detailed out in the following Sections:

- Section 102 provides the principles that the aspects of planning within the County Level must take into consideration including: Integration, protection and development of national resources

### **2.15 Case Study**

**Case Study:** Taos Arts and Cultural District Plan, January 2012

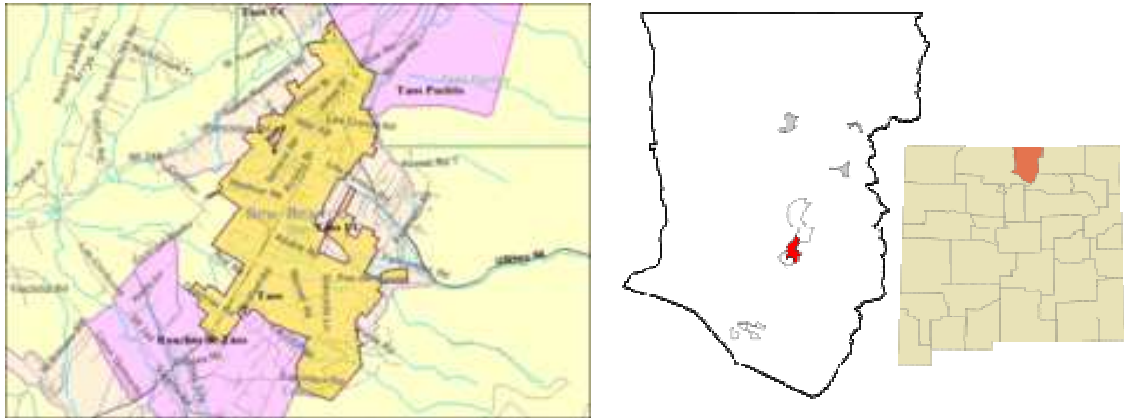
**Theme:** Proposed strategies and projects in Physical Infrastructure, Planning and Urban Design, Financing, Marketing and Promotion, Cultural Programming, and Community Outreach

**Country:** Taos County, New Mexico

**Stakeholders:** Taos Arts and Cultural District Steering Committee, by Quixote Productions Las Vegas, NM Elmo Baca and Ian Sansom

**Funding:** Funded through a grant from the Economic Development Department's New Mexico Main Street Program

**Map 2.1: Taos Town, Mexico City**



*Source: Restoration and Connection (DPAC concept plans for Ledoux and Quesnel)*

### **2.15.1 Background of Case Study and Relevance to Wamunyu**

Taos is a fast-growing outlier in northern New Mexico, a region where most towns have seen very little population growth or have lost population in recent decades. As of the 2010 Census, the population for the town of Taos is 5,716 - a growth rate of 17.8% since 2000.

#### **2.15.1.1 Rich Cultural Resource Base**

In the new medieval era, 1300's, a utilitarian form of Micaceous pottery artisans were developed in Northern New Mexico. This was the backbone of the economy in the area with emerging employment activities being generated by this cultural industry. 200 years later weaving emerged as the second major economic driver in the region - typically to create beautiful and functional clothing for export to the near-by Spain.

#### **2.15.1.2 Significant Contribution to Regional GDP**

A street survey conducted in June 2011 of the Taos economic status, proposed that 50% of the arts and cultural activities are business related. This implies that the region is a culture driven economy.

### **2.15.1.3 Low Value Addition to the Cultural Related Products**

The town was popular for its traditional cultural pottery and weaving. However, there was minimal use of technology in processing and manufacturing finished good.

### **2.15.1.4 Geographic Isolation**

Small urban centre located on outskirts of a major town. The Taos town was located in the peri-urban zone adjacent to the larger Mexico City. This provided a strategic location ease of accessing market.

### **2.15.1.5 Dependence on an Extractive Industry**

The cultural industry of Taos was largely dependent on the naturally occurring raw materials of clay for pottery and tree for weaving.

### **2.15.1.6 Sparse Settlement Pattern**

Due to the peri-urban location of the town, settlements are generally sparsely distributed around the town and densely populated within the town. Major settlement facilities within the town are enterprises, commercial activities, and recreational activities.

### **2.15.1.7 Road Linkages**

The town is well networked with planned road activities to and from the town. However within the town, road linkages were poorly developed.

### **2.15.1.8 High Poverty Level**

Because of wealth inequality, Taos defies standard analysis and descriptions and in fact is a dense, complex, fascinating, and highly nuanced cultural landscape.

### **2.15.1.9 Similarities between Wamunyu and Taos Cultural Towns**

The following similarities were drawn between Wamunyu Urban Centre, study area and Taos Town, case study:

**Table 2.3: Similarities between Wamunyu and Taos**

<b>WAMUNYU TOWN, KENYA</b>	<b>TAOS TOWN, MEXICO</b>
Rich cultural resource base-the cradle of woodcarving handicraft in Kenya	Rich cultural resource base-economy is largely driven by the pottery and weaving industries
Significant contribution to regional GDP-contributes to about 47% of the area's economy	Significant contribution to regional GDP-contributes to about 50% of the area's economy
Low value addition to the cultural related products as there is heavy dependence on handmade wood products	Low value addition to the cultural related products-minimal usage of technology in production and processing of the pottery and weaving products
Strategic location-Wamunyu urban centre is located on the peri-urban areas of Machakos Town which provides market for product	Strategic location-Taos town is located in peri-urban areas of Mexico City which provides market for finished products
Dependence on an extractive industry-Woodcarving industry depends on Timber as a raw material	Dependence on an extractive industry-the pottery industry mainly depended on the clay as a raw material

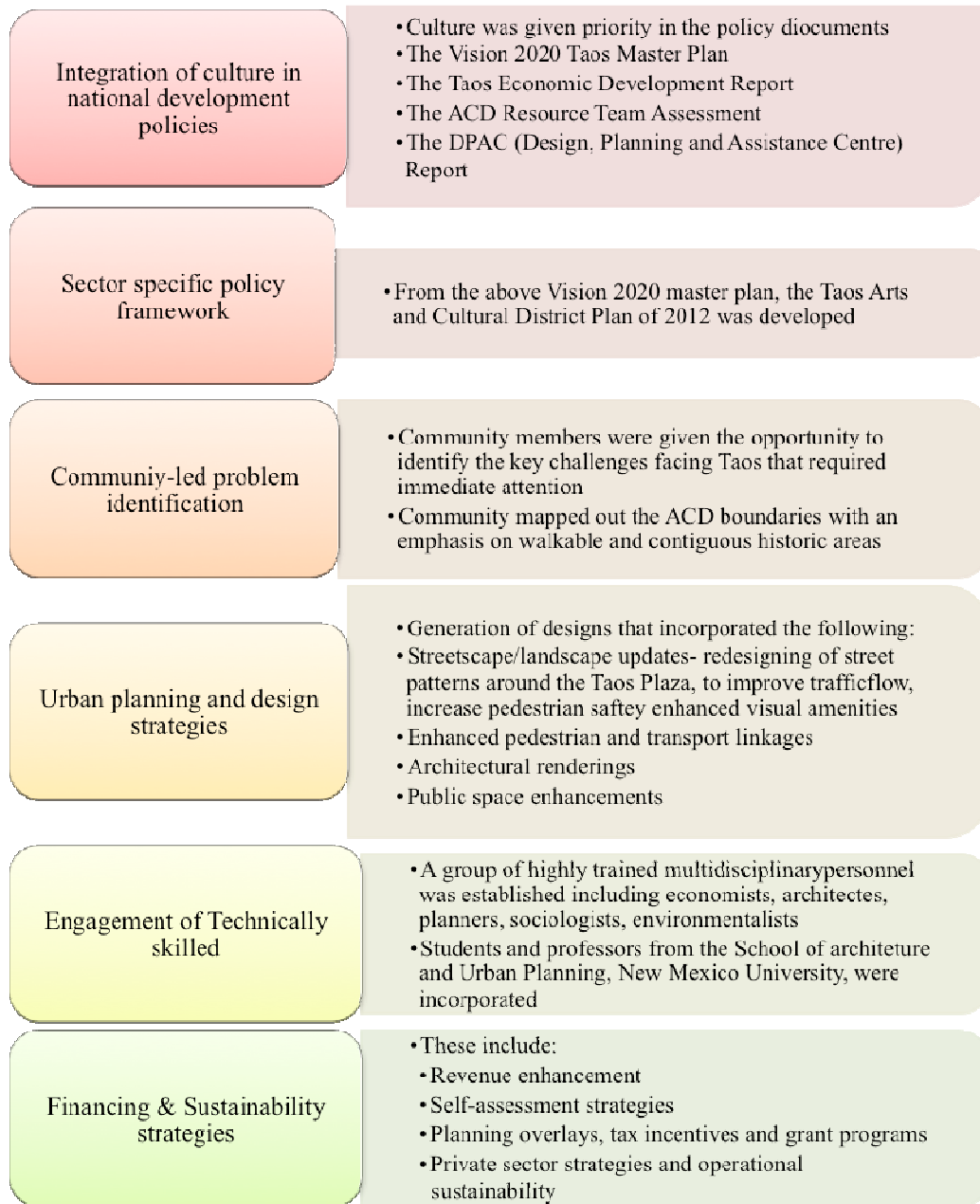
*Source: Author, 2014*

### **2.15.2 Planning Approaches used in the Case Study**

Despite the rich cultural resource base, Taos begun to experience a significant decline in the extent of investment in cultural infrastructure. This was mainly because of the dilapidated status of the cultural assets; historical buildings and streets, in the whole South-East region of Mexico, which was detrimental to the urban development of the town. This required immediate intervention.

The Mexican Government thus decided to establish a sector-specific Taos Arts and Cultural District Plan to mitigate further destruction of the cultural industry as Mexico plays a major role as a producer and supplier rich cultural experiences in the international cultural markets. The strategies emphasised in the Arts and Cultural District priorities on low-impact approaches such as:

**Figure 2.9: Summary of Strategies on Low-income Approaches**

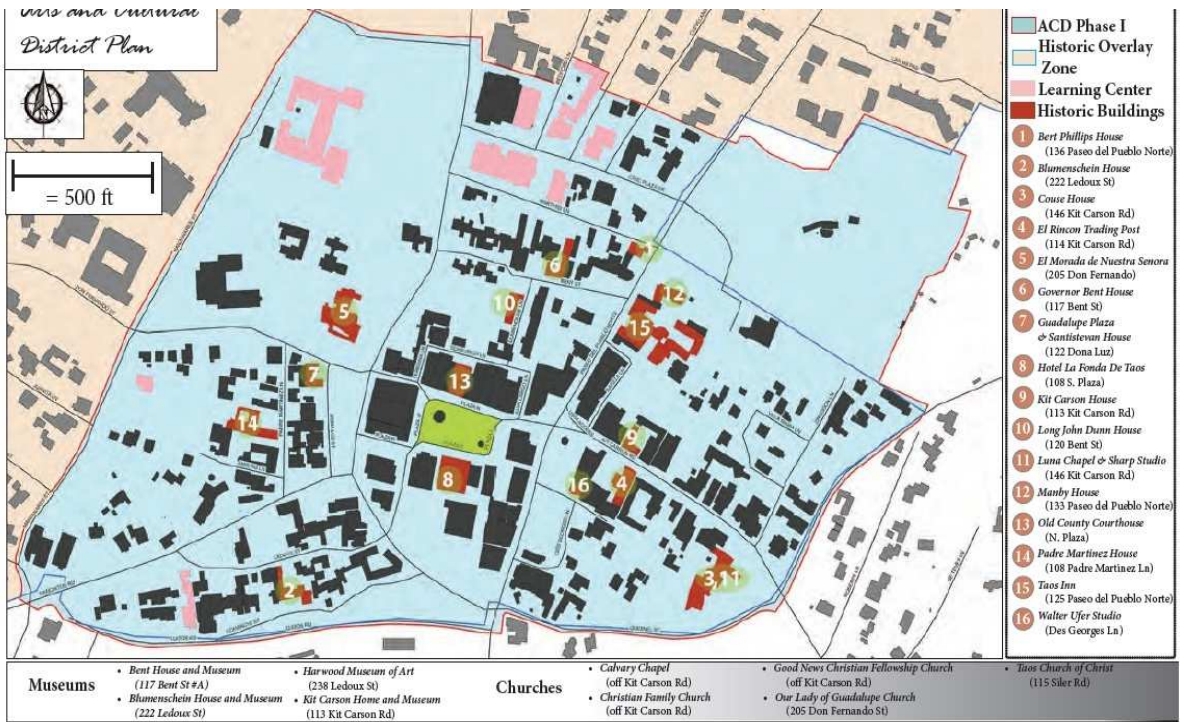


Source: Author, 2014

**Plate 2.1: Illustrations from Taos Town**



**Map 2.2: Representation of Planning Interventions, Taos Town**



**Figure 2.10: Enhanced Pedestrian Linkages of Town**



*Source: Restoration and Connection (DPAC concept plans for Ledoux and Quesnel)*

### **2.15.3 Results of the Methodology Applied**

- Increased revenue for the area locals and local government of Taos
- Enhanced place identity through an enriched and distinct cultural experience and visual cultural arts and products
- Increased transportation linkages for the Town of Taos
- Enhanced employment creation for the area locals of Taos
- Increased commercial activities and investments in the town
- Increased number of tourist visits to the area and thus increased earnings from foreign exchange
- Enhanced community participation and ownership of the development process of the town

### **2.15.4 Lessons Learnt/Success Factors**

The following lessons learnt/success factors were borrowed and applied in proposing planning interventions to reposition the woodcarving industry of Wamunyu.

- **Participatory approaches-** The involvement of the community in problem mapping/identification and solution implementation of the cultural strategy fostered ownership of the Cultural Plan. The plan proposed programs such as the Participatory Development Initiatives, which involved the participation of local people interested reconstruction of run down community recreational spaces. Similarly, community members of Wamunyu should be involved in planning, redesigning and implementation of the proposed urban planning framework.
- **Institutional coordination framework for implementation-** Through the use of a deliberately assigned Resource team. Work in Taos was undertaken as a Resource Team for the New Mexico Arts and Cultural Districts program. The team's individual skills were applied to evaluating downtown Taos, including places adjacent to the boundaries of the proposed Arts and Cultural District. A special committee should borrow a leaf from the case study by constituting a resource team to oversee the running of all culture related projects. This resource team should consist of, including policymakers, technical team and other key

stakeholders including the woodcarvers and community representatives as well as partners from the private sector.

- **Enabling environment for investment in the extractive industry-** Enabling environment for business was created through favourable policy/guidelines and tax incentives Example: Tax credits for cultural industry investors. Similarly, the Machakos County Government should create an enabling environment for the cultural industry, through policy, legal framework and tax incentives.
- **Urban design as a tool for urban regeneration-** Urban planning principles was the core of cultural planning and integration. Through urban design concepts of that were incorporated; streetscape/landscape updates; enhanced pedestrian and transport linkages; architectural renderings and public space enhancements, Taos Town was able to restore its urban form while maintaining its rich cultural identity. Machakos County Government should incorporate urban planning and design guidelines such as streetscape design, pedestrian linkages and public space enhancement to improve the urban regeneration of Wamunyu urban centre.
- **Highly pedestrianised zones-** The Cultural District Plan heavily invested in urban pedestrianised linkages like pedestrian corridors and cycling lanes to increase level of interaction of citizens and tourists visiting the town. Pedestrian linkages such as street corridors and walkways within Wamunyu should be part of the proposed new design.
- **Sector specific policy framework-** By formulation of the Taos Arts and Cultural District Plan, detailed areas of intervention were established for direct problem solving and implementation. Policy makers of Machakos County should establish a sector specific policy framework for culture and its related activities.
- **Incorporation of academia in development agenda-** Students and professors were tasked with developing plans for the Town of Taos. Students and professors from University of New Mexico's School of Architecture and Planning were assigned the task of assisting New Mexico communities in identifying planning and design issues and articulating a redevelopment vision. The Machakos County Government should engage urban planning academia/scholars in the implementation of the redevelopment plan for Wamunyu urban centre.

- **Financial sustainability strategies-**The project incorporated a long-term, sustainable funding strategy for the ACD such as revenue enhancement, self-assessment strategies, planning overlays, tax incentives and grant programs and private sector strategies and operational sustainability. Wamunyu should employ similar initiatives.
- **M & E frameworks-** Through the use of explicit annual monitoring reports to measure the performance of the implementation plan, the Taos project was successful. Likewise, the County Government of Machakos should consider such.

## **2.16 Identified Gaps of Existing Research**

Various scholars have studied woodcarving handicraft. In their research on household farming and income, (Tiffen, Mortimer & Gichuki, 1991) identified the woodcarving industry as some of the main non-farm income activities in the former, Mwala District. Nyamongo & Mutoro, (1990) note that woodcarvers should ensure sustainable harvesting of forest resources for carving. Kangethe, (1991) studied the woodcarving industry in greater Machakos District. He tried to catalogue the tree species preferred for woodcarving in the area. However, these studies, like many others, did not conversely examine the development impact of this cultural industry and its implications on urban land-use within Wamunyu Town.

It is important to note that the above scholars handled other aspects of woodcarving except its spatial planning and development implications. The inherent gaps in existing body of knowledge include: limited knowledge on development impacts of the woodcarving industry in Wamunyu area; no knowledge of the related cultural (both tangible and intangible) industries that emanated as a result of the woodcarving industry and integration of this within the spatial planning framework of Wamunyu town in future; limited knowledge on the potential cultural industries have on sustainable development and growth of Wamunyu Town. It is these gaps that this study sought to fill.

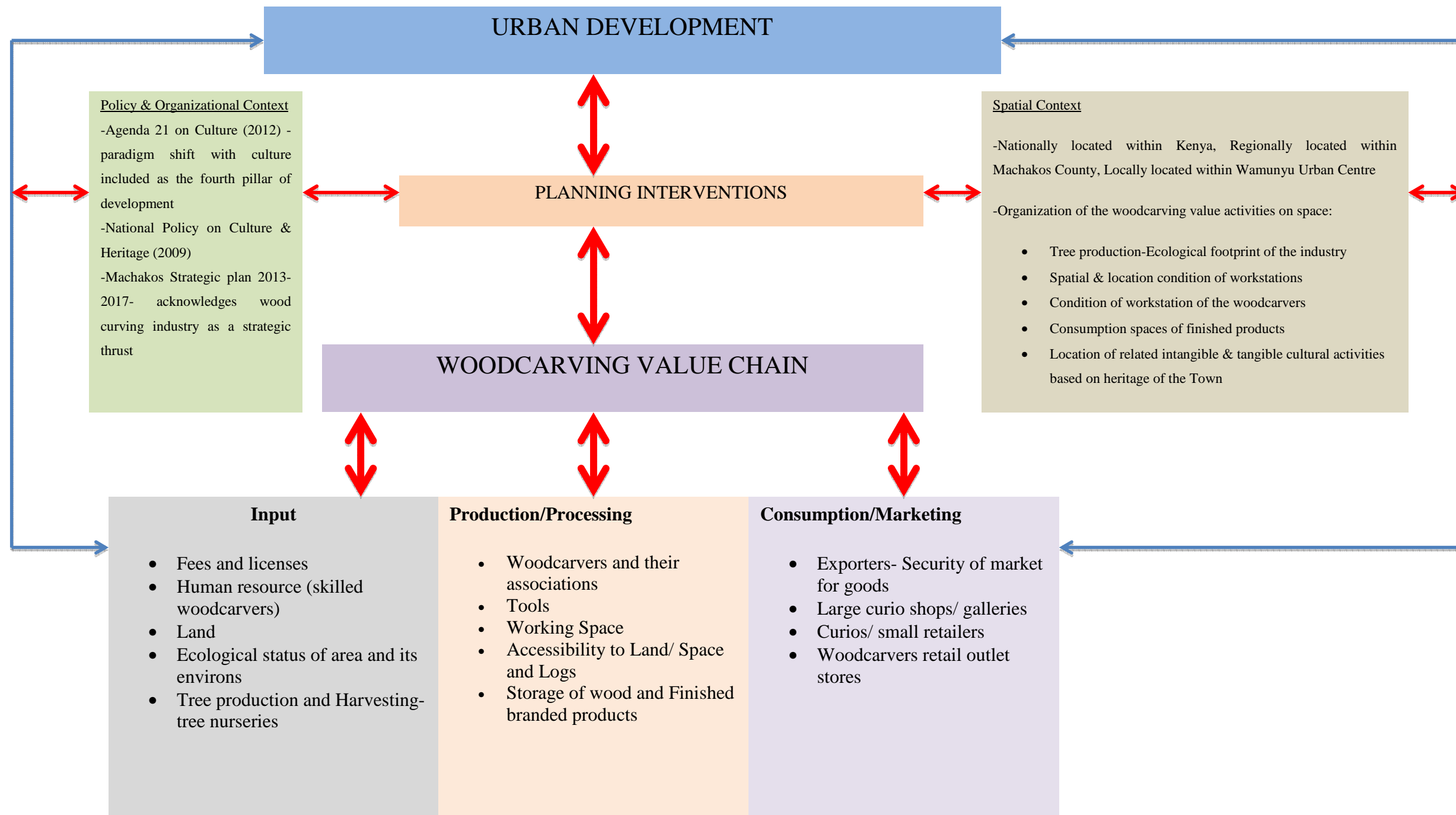
## **2.17 Conceptual Framework**

This conceptual framework is anchored on the interaction of the urban economy key aspects of cultural industries:

- The Contributing factors to this cultural industry, that is: woodcarving industry in Wamunyu
- The enterprise value-chain, its resultant impacts on development, the enterprise challenges and possible way to integrate this activity

The major contributing factor to this study is the massive presence of the woodcarving industry.

Figure 2.11: Conceptual Framework on Relationship between Woodcarving and Urban Development



Source: Author 2014

## **CHAPTER 3: STUDY AREA AND METHODOLOGY**

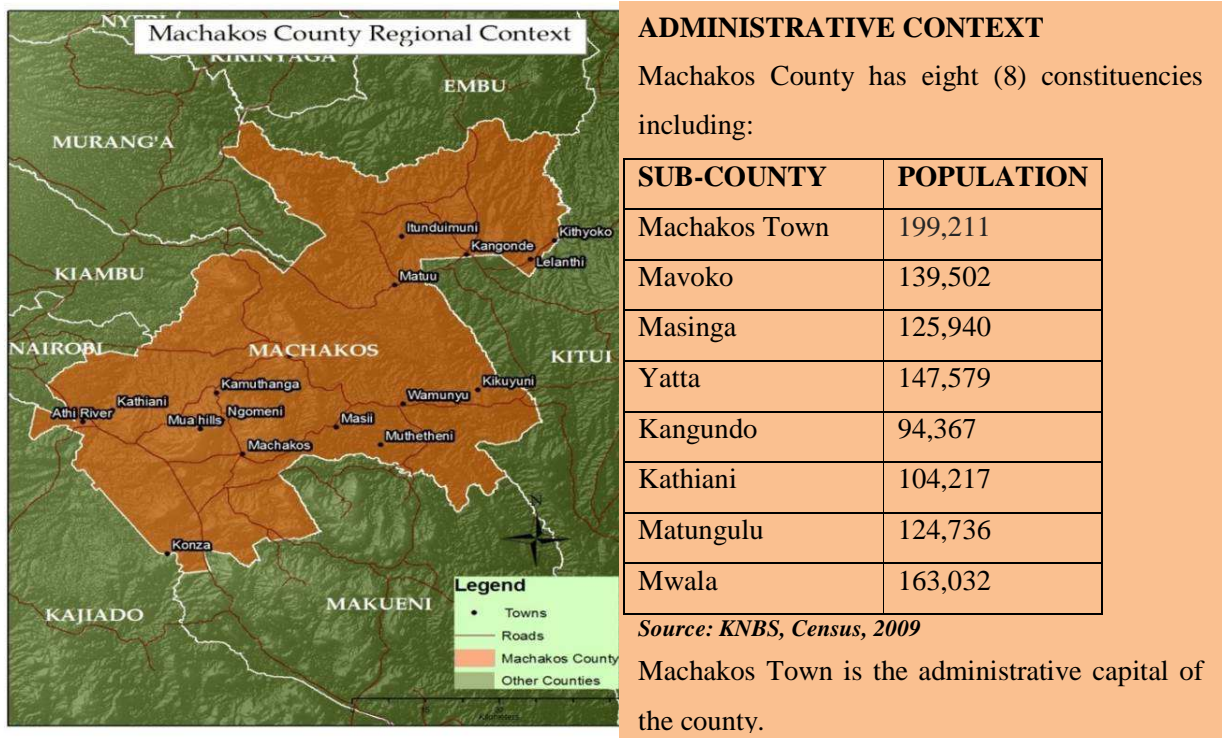
### **3.0 Overview**

This section of the study provided a detailed methodology that was utilised throughout the study. It specified the data types and needs, data collection methods, instruments, process, analysis and presentation techniques. A summary of the research methodology has been presented through the use of a comprehensive data needs matrix as well as possible limitations of the study are discussed.

### **3.1 Location of the Study Area**

Machakos County borders Nairobi and Kiambu counties to the West, Embu to the North, Kitui to the East, Makueni to the South, Kajiado to the South West, and Murang'a and Kirinyaga to the North West. Machakos County stretches from latitudes 0° 45' South to 1° 31' South and longitudes 36° 45' East to 37° 45' East. The county has an altitude of 1000 - 1600 meters above sea level. It has a Total Population of 1,098,584 people, 264,500 Households and covers an area of 6,208 SQ. KM. The Population density is 177 persons per SQ. KM.

**Map 3.3: Machakos County, Regional Context**



*Source: Google Maps, 2014*

### 3.1.1 Context of Study Area

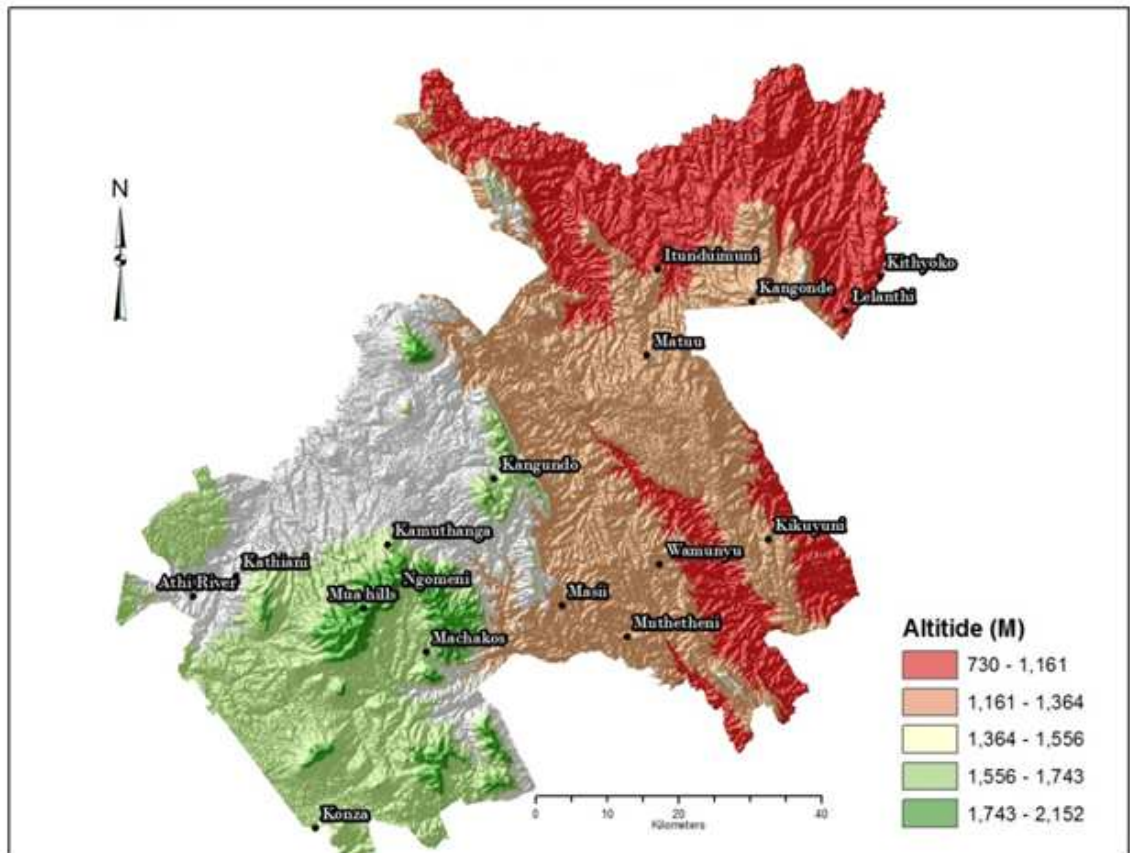
Wamunyu Town meaning, “a place of salt” in Kamba is about 120 kilometres South of Nairobi, located in Kyawango Sub-Location, Wamunyu Location, Yathui Division, and Mwala District, of the famous Machakos County in the former Eastern Province.

The study mainly dwelt on Wamunyu Town as a whole, situated within Wamunyu Location because it is the origin and heart of the woodcarving industry within the region. It thus has the highest concentration of woodcarvers in Kenya.

### 3.1.2 Topography of Study Area

The district has a variety of topographical features. The landscape is largely a plateau that rises from 700m to 1700m above sea level and is interrupted by an escarpment and a series of hill masses, the highest of which is Kilimambogo or Ol Donyo Sabuk, which rises to 2,144m above sea level.

Map 3.4: Topography, Machakos County



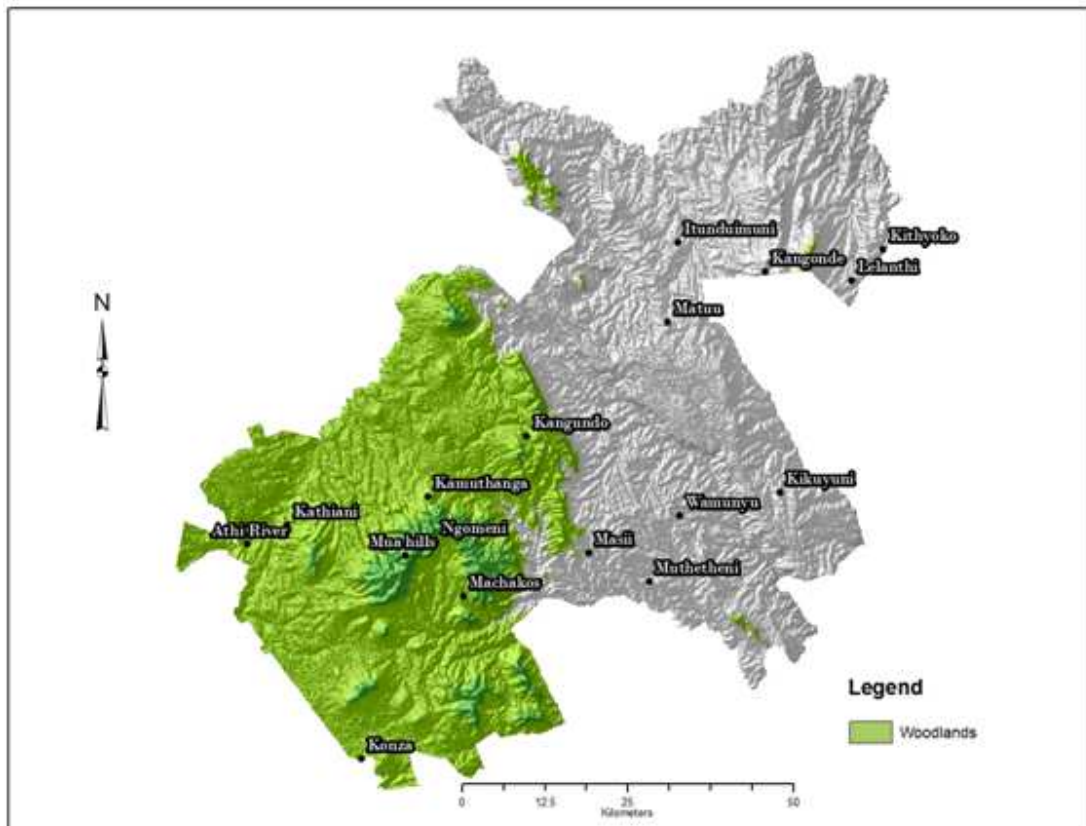
Source: Author, 2014

### 3.1.3 Woodlands of Machakos County

The trees are usually 10 - 20 m tall with a canopy of between 50 - 79% and a well developed herbaceous cover of dwarf shrub understory. *Combretun* species are common in wetter areas on ridges while *Commiphora* species are found in drier areas. Other species include *Encheaspp*, *Croton macrostachus*, *Ravetateifana*, *Vanguewaspp*, *Terminalia spp*. These are common in Kangundo, Mwala, Kathiani and some parts of Katangi in areas between 150m and 1500m above sea level.

The woodcarving industry is located in the North Eastern region of Machakos County and majorly relies on trees planted within the homestead of household within Wamunyu town and its immediate periphery.

**Map 3.5: Woody Vegetation, Machakos County**



*Source: Author, 2014*

### **3.1.3.1 Wood Production in Machakos County**

Timber and wood poles are among the major wood products harvested within the County. In 2006, timber produced was valued Kshs. 2,483,375 while poles were valued at Kshs. 2,904,570 as show in table 3.1 below, being the highest revenue earners for the industry. Describes wood produce harvested from farms in the first half of 2006 in Machakos District.

**Table 3.4: Wood Produce Harvested from Farms, Machakos County**

Produce	Species	Units	Quantity	Jan	Feb	March	April	May	June	Unit Cost (Kshs)	Total (Kshs)
Timber	Eucalyptus	Feet	147,165	26,045	18,700	31,580	32,820	20,820	17,200	15	2,207,475
	Cypress	Feet	900	-	700	-	-	-	200	17	15,700
	Grevillea	Feet	14,600	-	3,300	700	400	3000	7,200	12	175,200
	Pine	Feet	10,000	-	1,000	4,000	5,000	-	-	17	85,000
Poles	Eucalyptus	No.	77,789	15,830	12,672	14,007	14,390	11,150	97,150	30	2,333,670
	Acacia M.	No.	19,030	2,870	5,200	2,450	3,950	2,150	2,410	30	570,900
Posts	Eucalyptus	No.	19,712	2,312	3,370	3,090	6,140	2,300	2,500	50	985,600
Withies	Eucalyptus	No.	3,140	-	-	580	2,560	-	-	5	15,700
	Acacia M.	No.	3,000	-	-	500	-	2000	500	5	15,000
Offcuts	Eucalyptus	No.	2,945	230	495	960	540	510	210	30	88,350
Firewood	Stacks	No.	31	3	3	6	9	7	3	1200	37,200
Total											6,529,395

*Source: Machakos District Environmental Action Plan 2009-2013, 2012*

### 3.1.3.2 Wood Consumption

The woodcarving industry is one of the major exploiters of forest-based resources in the district and is relatively well developed. The most preferred species are *Dalbergiamelanoxylon*, *Brachylaenahuillensis*, *Meliavolkensii*, *Terminalia brownie*, *Jacaranda mimosifolia* among others. Wood fuel is major consumer of wood products of the County, followed by timber and poles as shown in table 3.2 below:

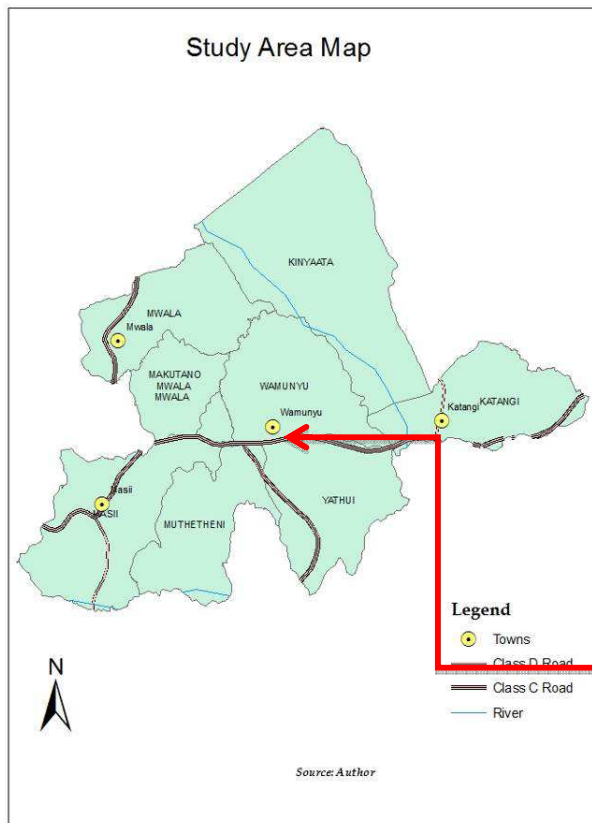
**Table 3.5: Consumers of Wood Produce**

Division	Fuel wood	Poles	Timber	Total
Athi River	12,397	1,106	1,512	15,015
Central	65,087	5,508	15,456	86,457
Kalama	13,784	1,693	NA	15,477
Kangundo	36,600	4,151	3,780	44,531
Katangi	17,412	2,139	NA	19,551
Kathiani	34,573	4,246	NA	38,819
Masinga	26,276	3,227	8,904	38,408
Matungulu	36,462	4,478	NA	40,941
Mwala	32,857	4,035	NA	36,892
Ndithini	11,167	1,372	NA	
Yathui	24,879	3,056	7,539	35,473
Yatta	28,469	3,406	6,594	38,469

*Source: Machakos District Environmental Action Plan 2009-2013, 2012*

### 3.1.4 Study Area-Wamunyu Centre

Map 3.6: Study Area, Machakos County



#### ABOUT THE STUDY AREA

- Located in Mwala constituency Yathui Division, Kyawango Sub-location
- **Constituency population:** is 163,032 people and 39,593 households (KNBS, 2009)
- **Population density:** 160 people/km<sup>2</sup>
- **Climate:** High temperature throughout the year (predominantly arid and semi-arid area)
- **Livelihood system:** mainly practice dairy farming, mango/horticulture farming with woodcarving as an alternative source of livelihood
- **Poverty index:** 63% of the population is estimated to be poor, contributing to about 4.4% to the national poverty

#### WAMUNYU URBAN CENTRE

Source: Author, 2014

Plate 3.2: Men at Work



Source: Field Survey, 2014

**Map 3.7: Wamunyu Woodcarving Centre**



Cluster pattern  
of development  
in Wamunyu  
Urban Centre

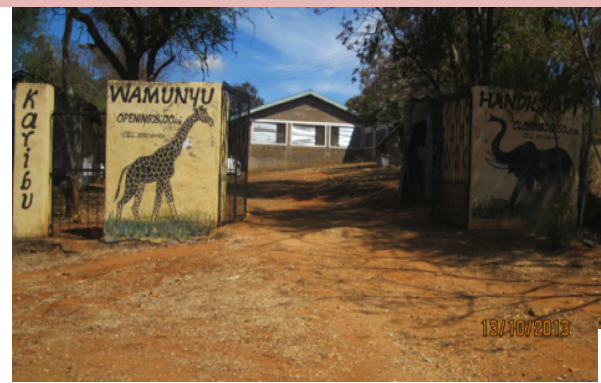
*Source: Adapted  
from Google Maps,  
2014*

**SETTLEMENT DISTRIBUTION**

**Cluster Settlement:** The core of Wamunyu Town is densely populated with people settling around commercial activities and services

**Linear Settlement:** Structures and settlement along the C97 transport corridor- KwaVonza-Kitui Road

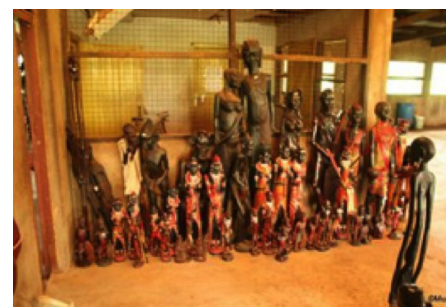
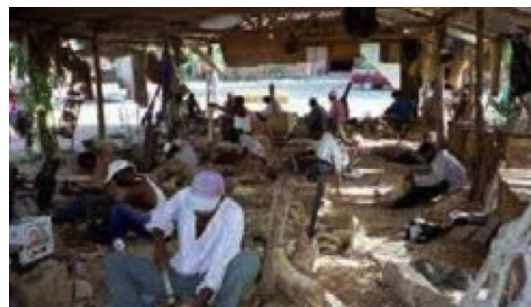
Figure 3.1: Wamunyu Urban Centre Land Use Analysis



**WOODCARVING SITE & SAMPLING SITE- THE WAMUNYU HANDICRAFT SOCIETY**

The Wamnyu town was established in 1919. The Society was founded in 1965 and serves as the cultural node of the entire Wamunyu Town

**WOODCARVERS AT WORK**



FINISHED WOODCARVING



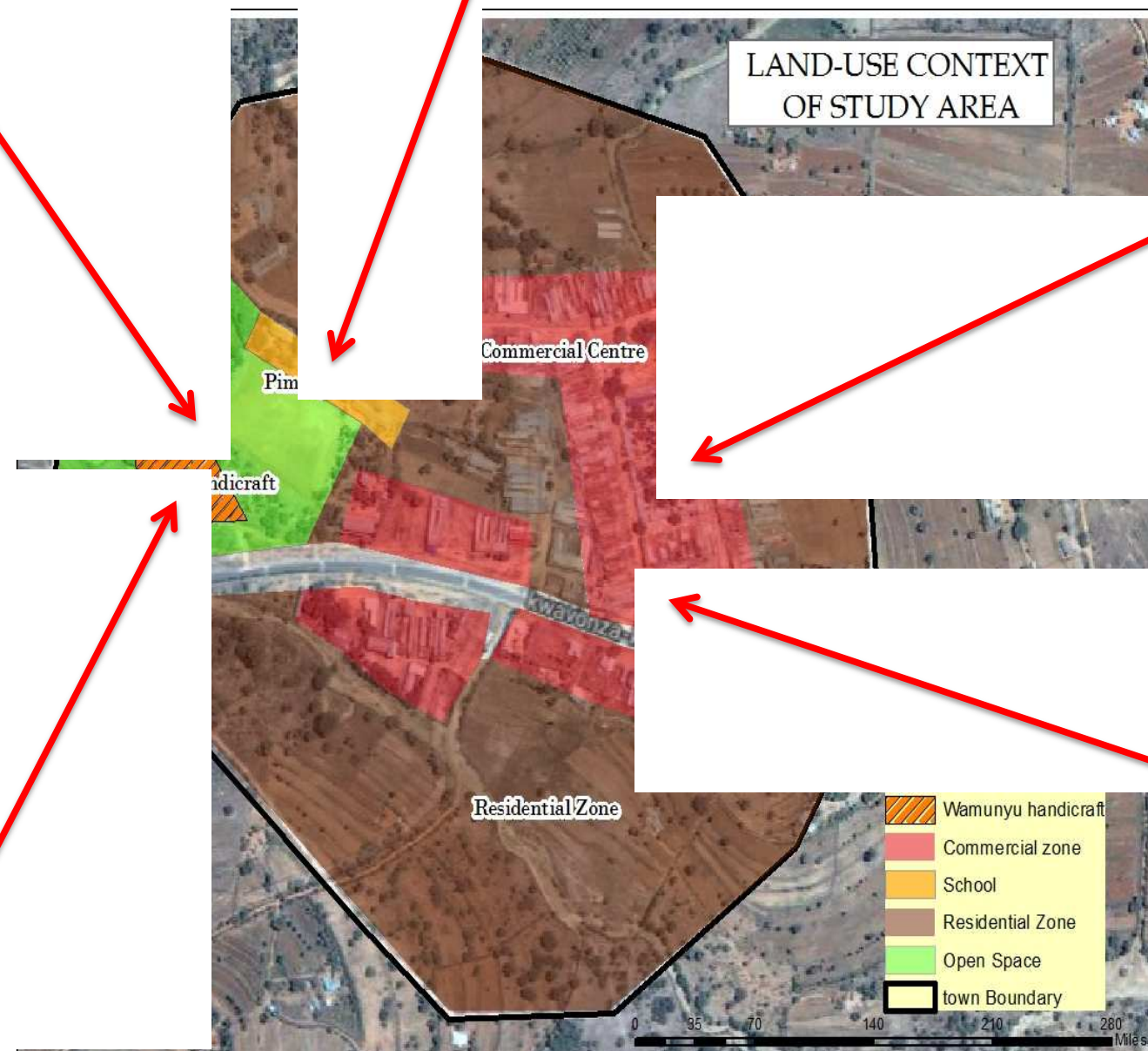
**EDUCATION LAND-USE**

The Wamunyu A.B.C Primary School is located behind the Wamunyu Handicraft Society. This is a missionary school supported by Global



**COMMERCIAL LAND-USE**

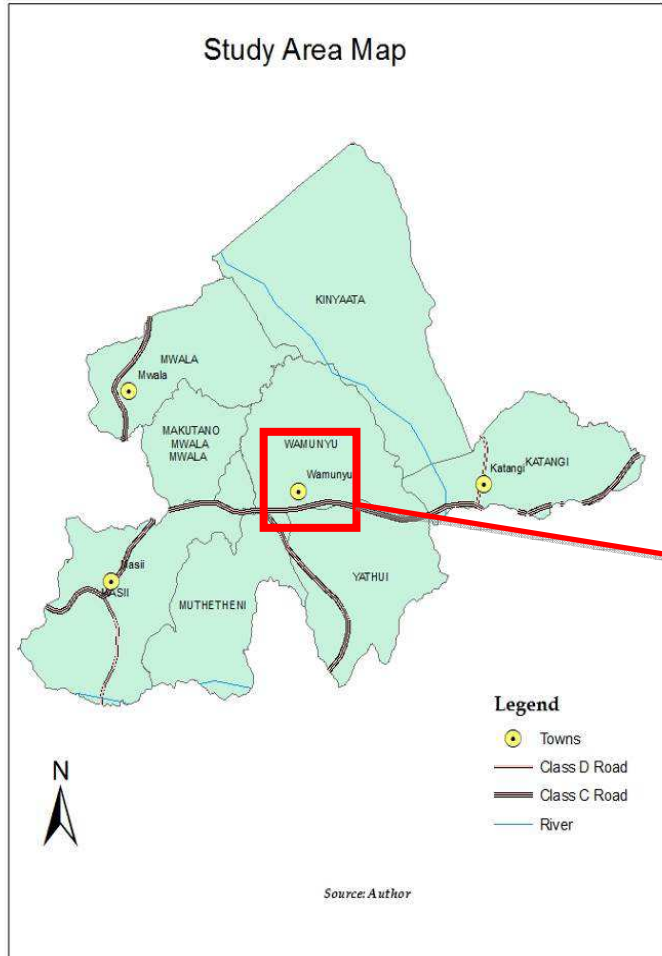
The core of the Wamunyu Centre that is adjacent to the Handicraft Society is made up of commercial activities like banks, restaurants, service stations. Structures within the town are permanent



COMMERCIAL BLOCK OF OFFICES AT WAMUNYU TOWN

Source: Author, 2014

STREETSCAPE ANALYSIS OF WAMUNYU TOWN



### *Spatial Synthesis of Wamunyu Town's Urban Land-Use*

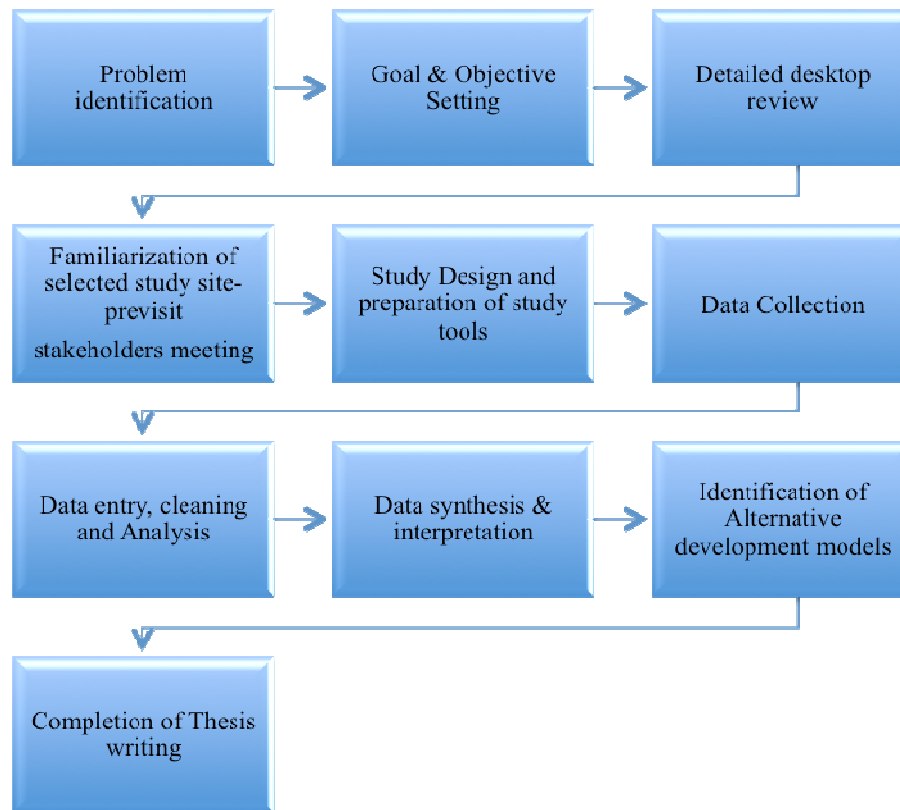
The following are key spatial issues of Wamunyu's Urban Fabric:

- Fast growing urban centre
- No sewer line
- No designated dumping site
- Solid/Liquid waste not properly managed
- The streetscape of Wamunyu urban centre is characterized by commercial activities which are compatible with the small scale woodcarving activities in the Wamunyu Handicraft Society, a prime location for creating a cultural node/street
- The town is located along a major spine; the C97 Kwa-Vonza Kitui road and is thus a linear settlement which is easy to access
- Strategic location of the Town; The urban centre is located strategically between two major towns, Machakos and Kitui Town which provide a strong market base for the cultural products
- The woodcarving node is the Wamunyu handcraft society, which is compatibly located as it is adjacent to the Wamunyu ABC Primary school from the back, and a commercial building from the front
- Commercial activities are serviced by the C97 road and are found at the core of the town, these include, banks, service stations and residential areas

### **3.2 Research Design and Methodology**

The stages of the research entailed:

**Figure 3.2: Methodology**



*Source: Author, 2014*

### **3.2.1 Uniqueness of the Methodology**

The study mainly focused on participatory methodology which entailed: Key Informant Interviews with policy makers like the Machakos County Government officials, Wamunyu woodcarvers and society management officials as well as area residents. This is because of their direct relationship to the woodcarving industry through:

**a) Work relation:** They have administrative and job responsibility of managing the sector.

**b) Life trajectories:** They are resident of the area, their response reflects their life trajectories spanning over a period of 20 to 30 years. This communication provided an opportunity to interrogate and understand the critical changes that have occurred in Wamunyu over this period. The changes involved: spatial, demographic, socio-economic and environmental changes over this period.

The area residents' questionnaires were important to corroborate information obtained from the woodcarvers' interviews, hence its uniqueness.

The study adopted a non-experimental research design/ social economic research design, which is a survey. A total of four questionnaires were designed for data collection. It was envisaged that, this study design provided both the breadth and depth of data required to address the goal and the objectives of the study.

The survey, therefore, adopted both qualitative and quantitative approaches to data collection, analysis and presentation. It also adopted both descriptive and explanatory research techniques; hence both probability and non-probability sampling methods were applied. Utilisation of the two research techniques was justified by the fact that the former allows for description of a given phenomenon, while the latter allows testing of relationships (Fielding *et al.*, 1986).

Consequently, this combination of techniques enabled the study to elucidate the relationship(s) between the woodcarving industry in Wamunyu urban centre and its subsequent impact on urban development as illustrated by the conceptual framework. A total of 140 woodcarvers and 15 area residents were randomly selected. Several Key Informant Interviews were also purposively sampled based on their relation to the urban development of the town.

### **3.3 Research Population**

The research population included all the Wamunyu Handicraft Society members within the Wamunyu urban centre.

Other targeted subjects of study included:

#### **a) Woodcarvers/Craftsmen**

They are among the major stakeholders in this study as they define our concept of cultural industry. They provided information about the challenges they face as an industry trying to establish itself and shared their vision for this activity.

#### **b) Customers/Clients**

They shape the cultural industry as they provide a market and audience for the various artefacts and traditional products sold within this Centre. They included both local and international clients. They provided information about their perceptions and challenges if any, in accessing the service.

#### **c) Area Residents**

This refers to those working and living in the area. They were selected to give information on their perception about this cultural industry in the area, their frequency of use, possible challenges they face and any vision for the industry as an urban space user within the larger Machakos County.

#### **d) County Officials**

They formed another key component of the affected stakeholders, as they were the policy-making and implementing agents of this study. They included representatives from planners at the County Government, Ministry of Culture and Social Services and Ministry of Co-operatives based in Machakos County. They provided information on how planning policies and regulations affected the spatial implications of cultural activities over the years. They also gave insights on their future plans, if any, for this woodcarving industry.

### **3.4 Sampling Frame and Size**

The sampling frame was list of all registered woodcarving co-operative societies attained from the Ministry of Cooperative Development. In the list, there were two woodcarving societies presented according to their memberships (Refer to Appendix 6). From this list, Wamunyu Handicraft Society had the largest membership registered wood carver members in the urban centre. This formed the basis for its selection. The target population of the study was 2043, which is the total number of woodcarver in the co-operative society of Wamunyu Handicraft. This was because the study needed a high number of woodcarvers to interview and thus conveniently choose to assess a woodcarving society, as this was idle and cost effective.

### **3.4.1 Why Wamunyu Town and Wamunyu Handicraft Society?**

#### **3.4.1.1 Wamunyu Town**

The Akamba community of Wamunyu area have a long- standing history in Kenya within the handicraft industry of woodcarving, therefore, Cradle of the woodcarving industry in Kenya. It has the highest concentration of woodcarvers in Kenya and therefore the largest number of people who virtually depend on woodcarving for a living.

#### **3.4.1.2 Wamunyu Handicraft Society**

The society was registered in 1965 and is the oldest woodcarving society in Kenya. It has the highest number of woodcarvers in County and currently stands at 2043. Out of which, 1617 are male and 326 are female. It is also the most active non-farm co-operative with the highest revenue generator at Kshs. 4,334,888, in its category.

In order to understand the woodcarving value chain operations and how it translates on space, the study categories the sampling units into 3 major groups.

### **3.5 Sample Size Determination**

Sample size determination was guided by (Mugenda O. and A. Mugenda, 1999) formula. The sample size required was determined by the formula below.

$$n = \frac{t^2 \times p (1-p)}{m^2}$$

Where n = required sample size, t = confidence level at 95% (standard value of 1.96), p = Standard deviation of 0.5 and m = margin of error at 7% (standard value of 0.07). Below are the calculations for the sample size n.

$$n = \frac{1.96^2 \times 0.5 (1-0.5)}{0.07^2}$$

$$n = 196$$

However since the size of target population of the study in Wamunyu is known i. e: 2043 woodcarvers, corrections are made in order to determine the exact sample size. The formula below does the correction.

$$nn = \frac{N}{1 + [(n-1) / N]}$$

Where nn = the new sample size and N = the target population. Below are the calculations of the corrected sample size nn.

$$nn = \frac{196}{1 + [(196-1) / 2043]}$$

nn = 178.996 thus 179  
questionnaires  
required

With the target population of the study being 2043, the above-recommended formula applies to this study. 160 questionnaires were used in the study, out of which 140 respondents participated in the study with 20 questionnaires being invalid. Due to the relative homogeneity of all woodcarvers sampled, a sample size of 140 was applicable for this study. This is further justified by (Gay, 1981) proposes that for descriptive studies and correlation research, thirty -30 cases or more are sufficient. Similarly (Mugenda O. and A. Mugenda, 1999) echoes this. Kerlinger, (1973) recommends that a sample size of 10% of the target population is enough as long as it allows for reliable data analysis, provides adequate level of accuracy in cases of the large population and permits for testing of significance of differences between estimates.

A total of 15 area residents where sampled as a control group for triangulating the woodcarvers responses. This figure is justified by the idea that, there is no scientific measure for a control group; rather it is used to validate responses.

Also key to the study are the policy makers and implementers, thus a total of 3 County Government officials were approached. 1 senior physical planner from the County Government office, 1 director of Ministry of Co-operatives, 1 director from the Ministry of Sports, Culture and Tourism in Machakos County. Additionally, 2 management officials from the Wamunyu Handcraft Society were interviewed.

### 3.6 Unit of Analysis

The woodcarvers in Wamunyu, Machakos County were the major unit of analysis. This helped have a deeper understanding of what culture means, how it resonates in their artefacts, what challenges they experience through their form of art to enable a holistic and comprehensive evaluation of the development of the town as well as eradicate the stagnant development in this region.

Below is a summarised sample size table used for the study:

**Table 3.6: Sampling Units**

<b>ADMINISTRATIVE AREA</b>	<b>SAMPLING UNIT</b>	<b>REGISTERED MEMBERS</b>	<b>NUMBER OF INTERVIEWED</b>
Wamunyu Centre	Woodcarvers	2043	160
	Cooperative Officials	2	2
	County Government Officers: Ministry of Cooperatives	1	1
	Ministry of Urban Planning and Development (Planner)	1	1
	Ministry of Culture and Tourism (Director)	1	1
	Area Residents	15	15

*Source: Author, 2014*

### 3.7 Sampling Method

The study purposively sampled Wamunyu urban centre as the cradle of mankind. It also purposively sampled the Wamunyu Handicraft society and the oldest and largest woodcarving society in Kenya. Woodcarvers were randomly selected.

### **3.7.1 Data Collection Tools**

**Observation Checklist:** An observation checklist was prepared as a reminder to help the research team take note issues like value chain management issues, structures of the workstations, homestead layout of wood/timber suppliers among others.

**Key Informant interview:** These were administered to ministry and county government officials and well as the Wamunyu Handcraft society Management officials

**Interview Schedule:** This was formulated to have an in-depth discussion

**Photography:** A digital camera was used visual capture real life situations that would aid the study

**Note- taking:** This was undertaken at every stage of data collection

## **3.8 Data Collection Process and Methods**

### **3.8.1 Literature Review**

A literature review was conducted to determine the findings of other similar or related studies that have been carried out by other researchers on the role of cultural industries in development, urbanisation and place branding. Factors that were highlighted in the literature review include the history of the woodcarving industry as a cultural industry, and its development over the years, value supply chain that have either promoted or hindered its development, and key steps currently being taken to improve it and by who, towards a more operational, bold and vibrant economic giant within the larger Machakos County and Kenya as whole. The literature review also aimed at determining the role played by policy issues either positively or negatively towards the integration of cultural industries in spatial policies in Kenya and the world. The findings of the literature review assisted in comparing what other researchers established with regards to cultural industries and their impacts on urban development

### **3.8.2 Pilot Study**

After designing and before using the questionnaires for data collection, the questionnaires were pilot-tested with a small number of respondents (20 woodcarvers) before conducting the actual interviews. The tests done revealed problems that were not anticipated during the development of the tools which included question wording, instructions and interpretations. The changes from the pilot study were then incorporated

into the final questionnaire.

### **3.8.3 Sampling of Respondents and Conducting the Questionnaire Interviews**

Questionnaire interviews were administered among woodcarvers who are members of the Wamunyu Handcraft Society, in the study area. The respondents were selected randomly based on availability in the Wamunyu Handcraft Society Site. Each research assistant was assigned a total of 40 questionnaires to administer within the study period in order to achieve the maximum sample size of respondents.

### **3.8.4 Key Informant Interviews**

In order to find out more in-depth information with regard to the study subject and to help in verifying/complementing results from the questionnaire interviews conducted among the Wamunyu woodcarvers; key informant interviews (KII) were conducted. Interviews were directed to strategic county government officials and management of Wamunyu Handcraft Society.

## **3.9 Data Analysis**

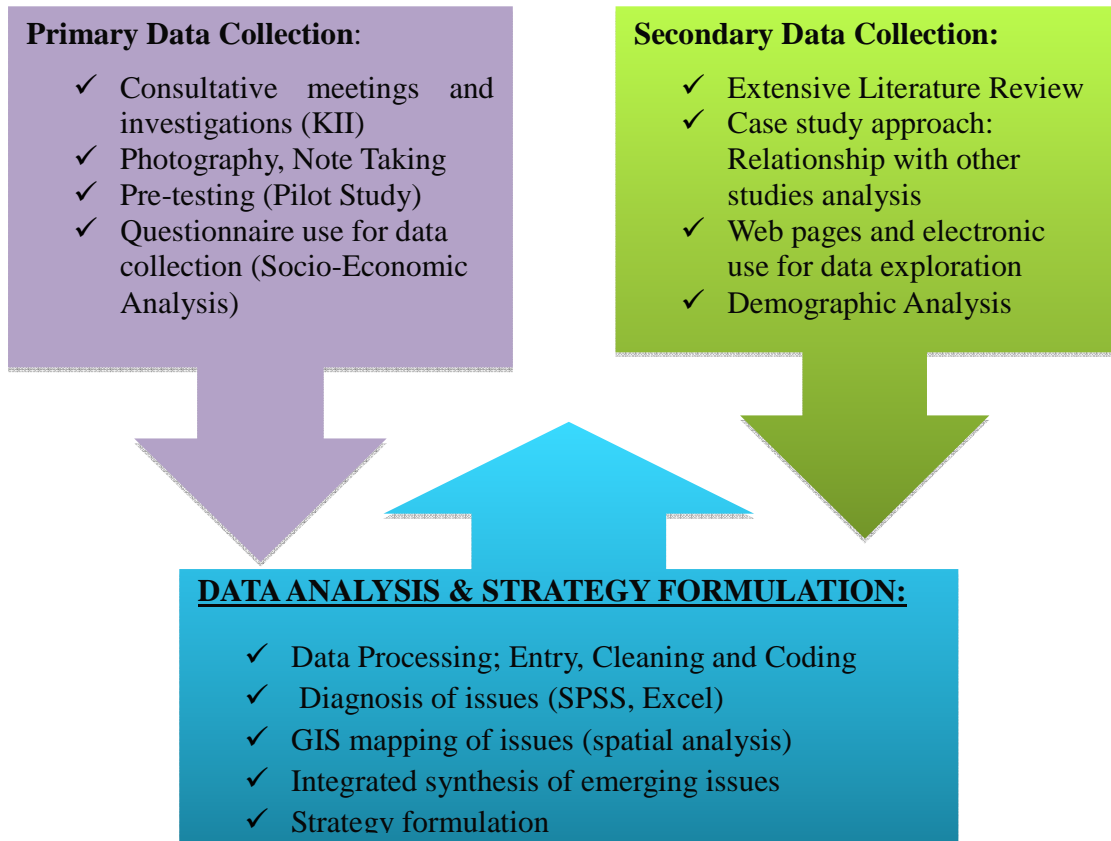
At the end of the fieldwork all data collected from the structured questionnaires were entered, coded, cleaned and analysed using the Statistical Package for Social Science (SPSS) and Excel. The analysis of both the qualitative and quantitative data collected was presented using simple frequency distribution and analytical tables. The analysis of the quantitative data collected was presented by the use of maps, plans, sketches, illustrations and photographs.

Sketches and photographs were used to illustrate data, which was discussed in descriptive analysis. The in-depth interviews, reviews of policies and regulations dealing with cultural industries was analysed and organized as well. The overall information and findings was finally interpreted and synthesised to facilitate the writing and composition of this research thesis.

### 3.10 Data Presentation

All the gathered information was synthesised and presented using simple tables, scanned sketches, pie charts, bar graphs, maps and photographs into an integrated planning research report. Figure 3.3 below provides a summary of methodology used.

**Figure 3.12: Summary of Data Collection Approaches**



*Source: Author, 2014*

**Table 3.7: Summary of Data Needs Matrix**

<b>RESEARCH OBJECTIVE</b>	<b>DATA NEEDS</b>	<b>DATA SOURCE</b>	<b>DATA COLLECTION METHOD</b>	<b>ANALYSIS</b>	<b>PRESENTATION</b>	<b>EXPECTED OUTCOME</b>
<p><b><u>Objective 1:</u></b> To examine the structuring and functioning of the woodcarving industry in Wamunyu</p>	<p>Segments/Components of the woodcarving value chain Types of cultural products Surrounding land uses operational space Physical and spatial data e.g.: inputs and actors related to space</p>	<p>Carvers Field survey Documentation County Government</p>	<p>Sketching Photography Note taking</p>	<p>Computation Comparative analysis</p>	<p>Maps Photographs descriptive notes</p>	<p>Structure of the value-chain Sourcing of raw materials Processing Retail/Marketing and Consumption patterns</p>
<p><b><u>Objective 2:</u></b> To investigate the operation of this woodcarving industry overtime and its impact on</p>	<p>History of woodcarving industry Development influence overtime Growth of level of production and number of woodcarvers</p>	<p>Carvers Journals Internet UN publications Interviews Documentation</p>	<p>Photographs Observation Notes and sketches interviews, Mapping Questionnaires Literature</p>	<p>Descriptive analysis, spatial analysis through GIS Statistical figures measuring</p>	<p>Maps, photographs reports</p>	<p>Trend analysis of the operation of the industry overtime Genesis of the woodcarving industry problem</p>

urban development of Wamunyu Urban Centre	GDP contribution of industry to economy of Wamunyu Number of Cultural related spaces Percentage of livelihood created by the industry Percentage of level of access to social-services		review	impact of development Percentages of GDP Percentage of destruction of forest cover Number of transport corridors established and upgraded		
<u>Objective 3:</u> To propose spatial planning interventions	Urban Planning principles of urban development guidelines and standards	Case studies of cultural related urban interventions	Sketching Photography	Descriptive analysis, spatial analysis through	Maps, photographs, descriptive notes,	<b>Bold</b> Recommendations by the woodcarvers on desired end state

that can transform woodcarving activities to be effective in development of Wamunyu		Woodcarvers  Internet sources  National development plans		ArchiCAD		of Woodcarving industry  Planning and design strategies for a desirable Wamunyu Town
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*Source: Field Survey, 2014*

### **3.11 Ethical Implications**

Sensitive issues including probing for personal information that is not relevant to the study and any other issues that might make the respondents reluctant to speak or hurt their feelings were avoided during the study. The culture of the target group was also taken into account and questions that may conflict with their beliefs were eliminated from the study or rephrased to avoid rejection by the respondents. Questions were chosen and put across sensibly, with sensitivity and common sense. This fostered cooperation from the respondents and also improved quality of the results.

### **3.12 Limitations of the study**

This research restriction due to:

- Time limitations to carry out the study
- The data required for planning for cultural industries is quite extensive. However, since there are not many similar studies in Kenya, no concrete point of reference is available locally hence, international case studies were used as a basis for comparison for the study
- Lack of data on tree production capacities within the county
- Lack of substantive information on growth and physical development of Wamunyu Town

## **CHAPTER FOUR: DATA ANALYSIS AND INTERPRETATION OF RESULTS**

### **4.0 Overview**

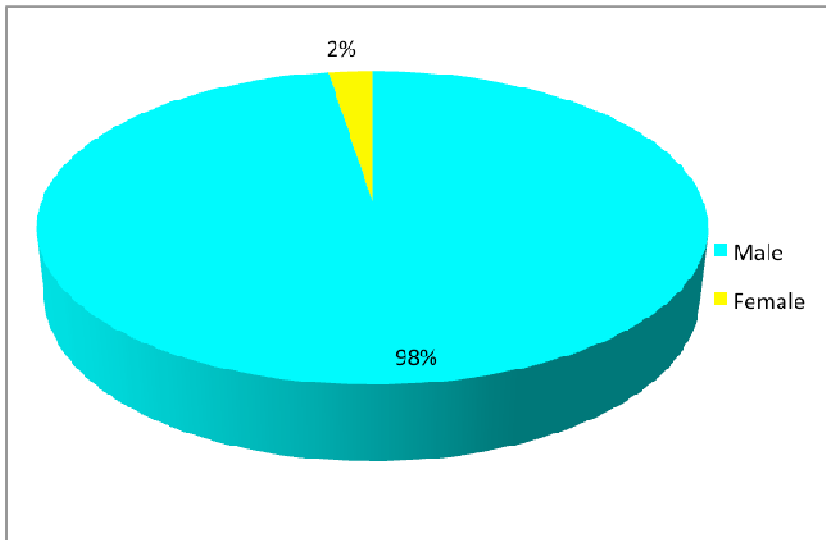
The study mainly focused on the woodcarving activity within Wamunyu Town, Machakos County. In particular, it was keen on the operations and structuring of the woodcarving value-chain, the operation of the industry overtime and the significant contributions in this industry has made to the development of the town and the consequent impacts (socio-economic, fiscal and environmental) of this industry on development of the town. The study also focused on assessing the impacts of the woodcarving industry on the urban growth and development of the town. The drive towards the study was the stagnation and decline in the operation of the woodcarving activities within Wamunyu Town as the cradle of woodcarving activities in Kenya, and the resultant effect it has had on the rate of development of the town and the Akamba community within this area. Further, the study sought to identify untapped potentials of the industry that can be used to spur sustainable development in the area.

This chapter presents results and statistical analyses of qualitative and quantitative data collected from 160 woodcarvers, sampled from the Wamunyu Urban Centre and Mbililuni Area (Makutano Town) of Machakos District.

### **4.1 Background Information and Bio-data on Woodcarvers**

From the field survey, 98% of the woodcarvers interviewed were male while 2% of the respondents' female. It was explained that culturally woodcarving was a man's job and thus a male dominated industry while women mainly engaged in basketry and weaving related activities. The 2% of women interviewed only engaged in filing, sand papering and vanishing of woodcarvings towards creation of a finished product.

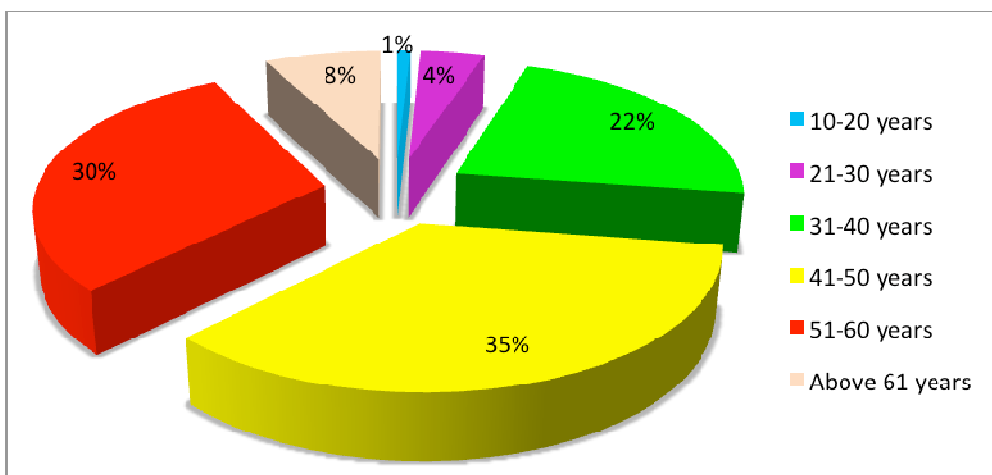
**Chart 4.1: Gender of Woodcarvers**



*Source: Field Survey, 2014*

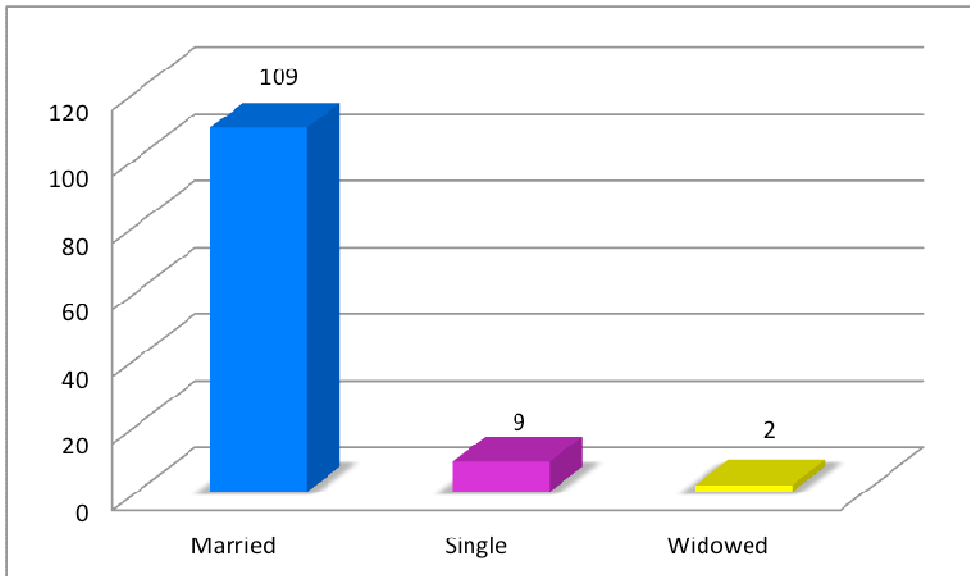
Majority of woodcarvers are within the age bracket of 31 years of age to 60 years of age. This is attributed to the low woodcarving skills transfer between the older generation of woodcarvers and the current younger generations. From discussions engaged with the some of the Youth's within the town, it emerged that the youth generally felt that woodcarving was not a lucrative business rather a shady activity.

**Chart 4.2: Age of Woodcarvers**



*Source: Field Survey, 2014*

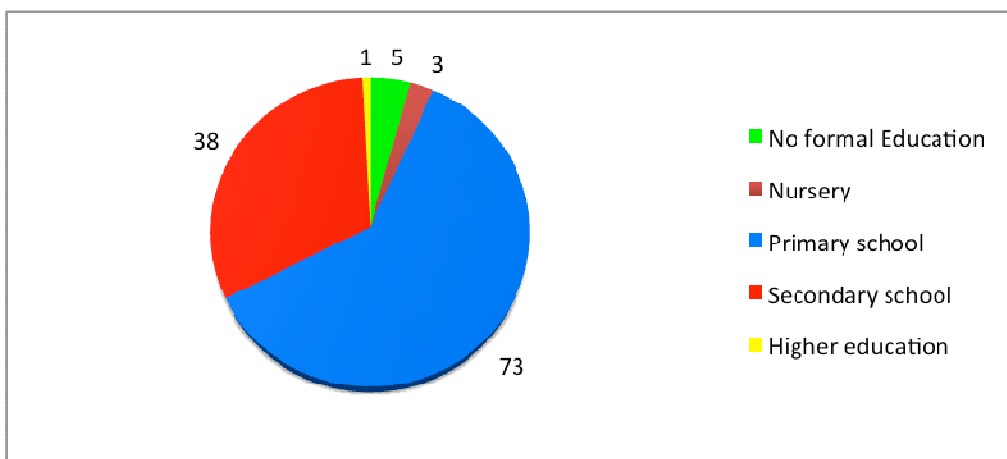
**Graph 4.2: Marital Status**



*Source: Field Survey, 2014*

A large number of the older woodcarvers are married with children while some of the younger generation carvers, who have recently inherited the trade, are single with a small number being widowed.

**Chart 4.3: Education Level of Woodcarvers**



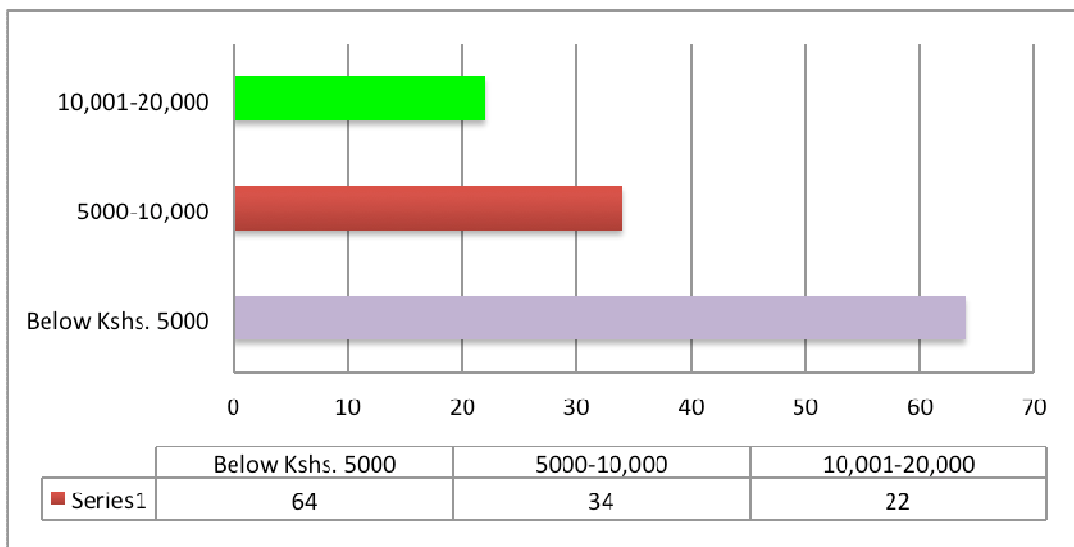
*Source: Field Survey, 2014*

Of the respondents sampled, 61% have attained primary school level, 32% of the carvers have reached secondary school level and only 4% have advanced to higher learning institutions. Most carvers have attained primary school as the highest education level. This is because woodcarving is an activity that is a hands on job, skills/talent based, not much training is required.

## 4.2 Economic Profile of Woodcarvers

Most carvers earn below Kshs. 5000 per month while others earn Kshs. 5000-10,000 a month and a few earn Kshs.10, 001 to 20,000. This shows that the woodcarving industry is a source of livelihood (Green jobs) for the Wamunyu community members that support families.

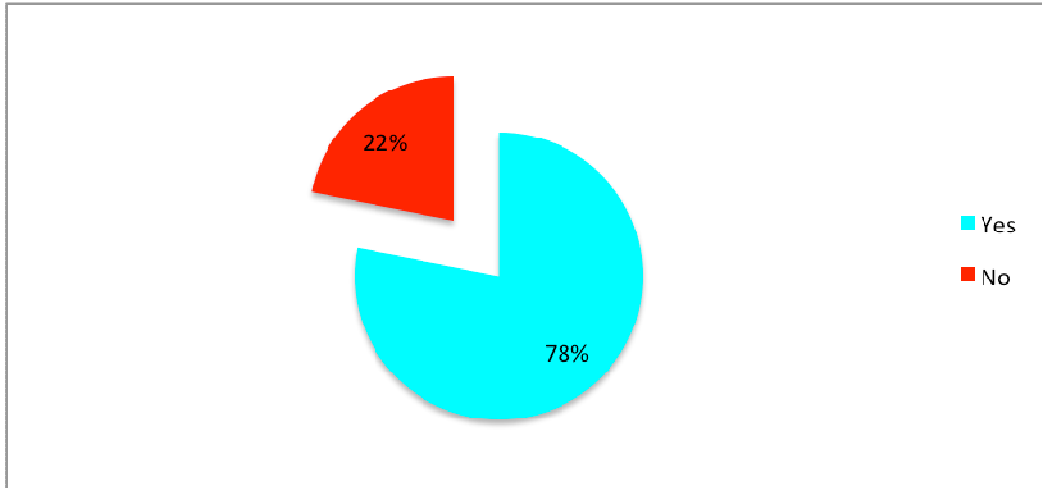
**Graph 4.3: Income of Woodcarvers per Month**



*Source: Field Survey, 2014*

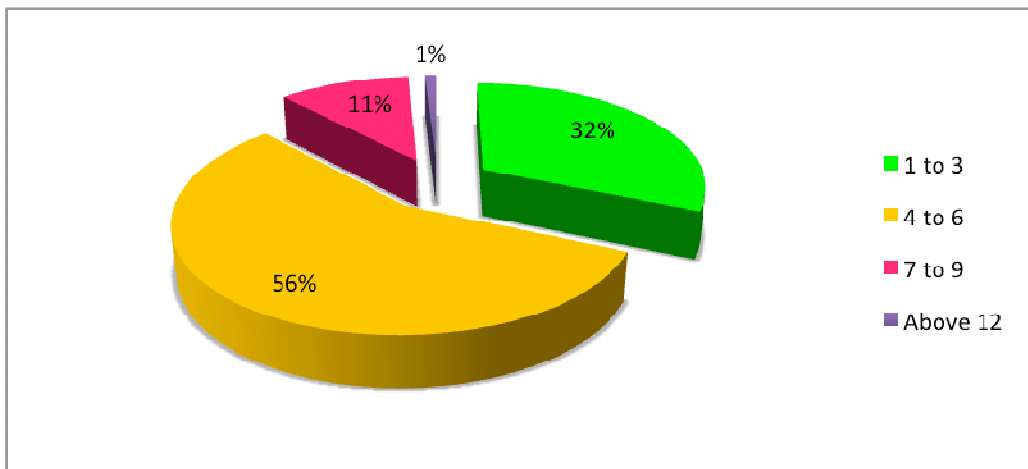
However, despite woodcarving as a source of livelihood and an income for members of the community, it is not the only economic activity the carvers engage in. 78% of the carvers engages in alternative economic activities to supplement their income while 22% strictly practice woodcarving.

**Chart 4.4: Engagement in other Economic Activities**



*Source: Field Survey, 2014*

**Chart 4.5: Number of Children of Woodcarvers**

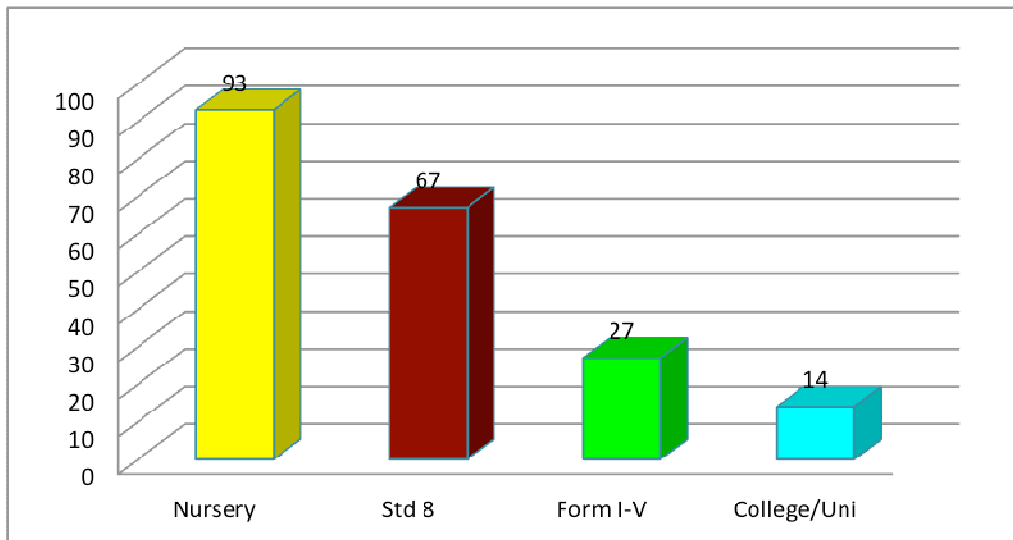


*Source: Field Survey, 2014*

Most woodcarvers have an average household size of 6 to 8 children with most woodcarvers having between 4 to 6 children.

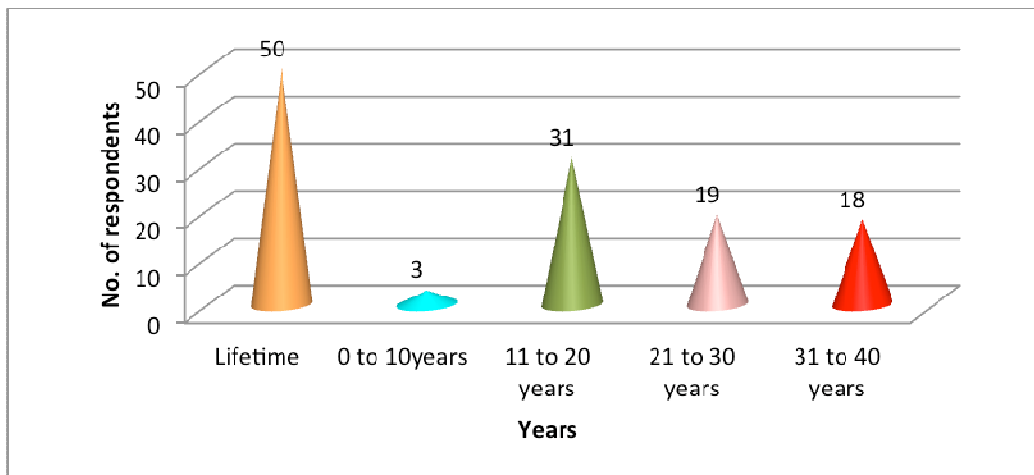
Majority of the woodcarvers have educated their children up to nursery and Class 8 level. However others have gone up to form 4 with a few being able to attend higher learning institutions.

**Graph 4.4: Educational Level of Wood Carver’s Children**



*Source: Field Survey, 2014*

**Graph 4.5: Period of Time lived in Wamunyu Town**

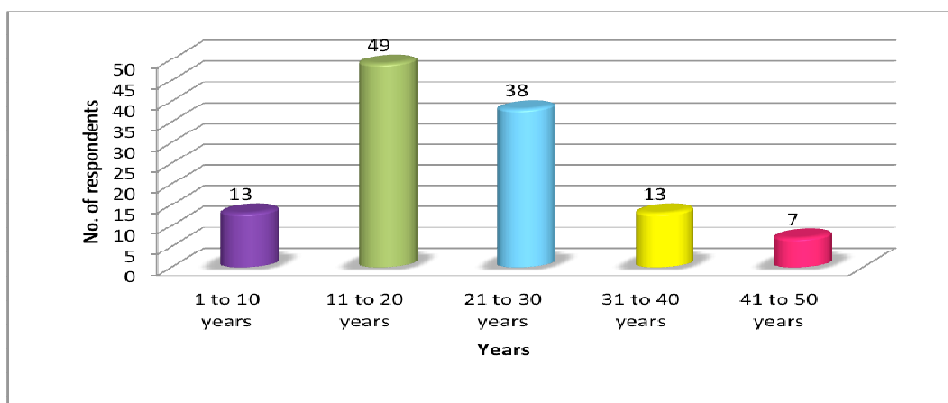


*Source: Field Survey, 2014*

Of the respondents interviewed, most of them being wood carver, have lived in Wamunyu Town for their whole life while others have stayed for 11 to 40 years. They have thus witnessed the trend of development of the town over the years.

These woodcarvers have also been in the industry for over 20 to 30 years and thus provided information about the historical background, operation and development of the industry within the house. Further, information from the Ministry of co-operatives indicates the returns of the woodcarving industry in Wamunyu have been diminishing over the last two decades.

**Graph 4.6: Period of Service in Woodcarving Industry**

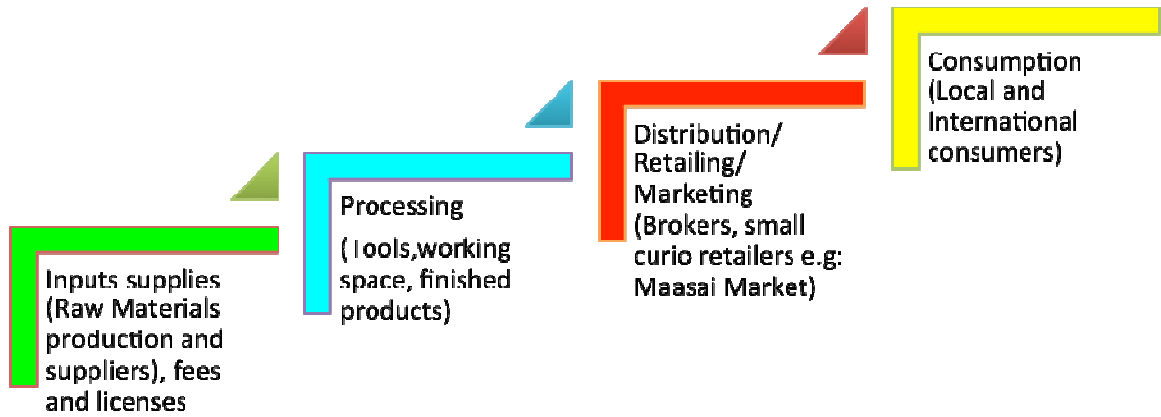


*Source: Field Survey, 2014*

### **4.3 Structure and Organization of Woodcarving Activities (Value Chain Management)**

Based on the Key Informant Interviews with both the manager and marketing/production manager of Wamunyu woodcarving society, a summary of the value chain of the woodcarving industry in Wamunyu Urban Centre was presented as follows:

**Figure 4.1: Woodcarving Structure and Value Chain**



*Source: Author, 2014*

**Plate 4.3: Analysis of Woodcarving Spatial Framework**



*Source: Field Survey, 2014*

### 4.3.1 Sourcing of Raw Materials

Tree planting and harvesting is mainly done at the household level. The trees are planted around the perimeter fence or scattered the in home (refer to fig 4.2). The mature logs are then transported by bicycle to Wamunyu woodcarving centre and sold to the woodcarvers individually.

**Figure 4.1: Scattered tree planting done at the household level of wood farmers**



*Source: Field, Survey, 2014*

Tree logs for carving are also sourced from the Wamunyu Handicraft Society. They allocated land for putting up a tree nursery upon which they plant seedlings for three months. After which some seedlings are replanted on allocated land for maturity, while some other trees are sold to the interested woodcarvers

All respondents sampled said that they source their raw materials from local wood traders, local farms and their member co-operatives which they purchase at a fee of Kshs. 50 -80 per foot depending on the level of maturity.

Moreover, the Wamunyu co-operative society gives carvers young seedlings to plant in their “shambas” in a bid to sustain a continuous supply of trees for harvesting and woodcarving.

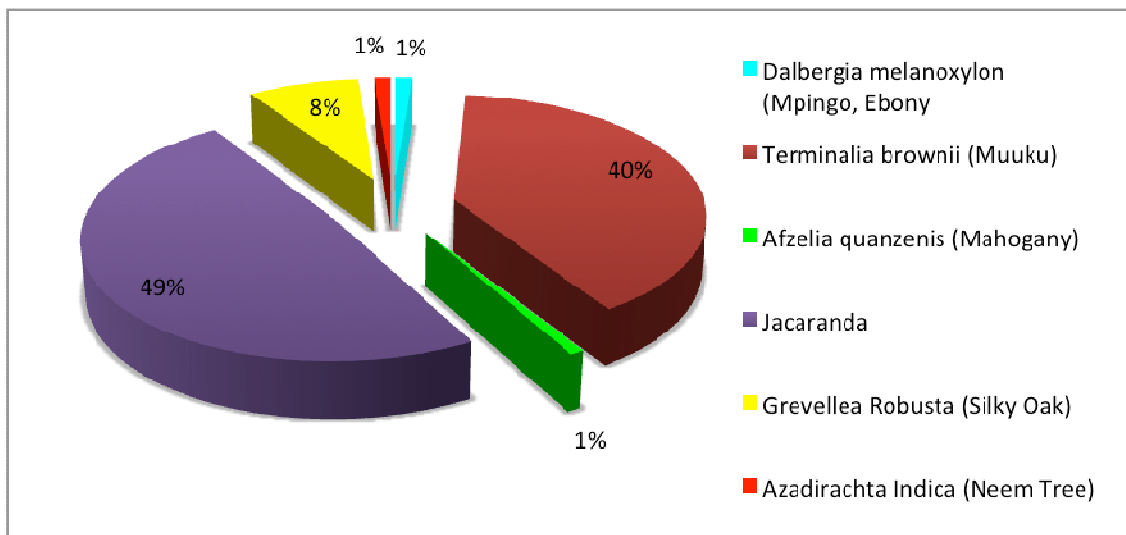
**Plate 4.4: Scattered Trees Planted around the Compound and Harvested Trees by a Wood carver who Plants Trees for Carving**



*Source: Field Survey, 2014*

Most wood suppliers reside on 0.8Ha and 1/4 acres plots and either plant the trees around the perimeter fence or dotted haphazardly within the compound. It was noted that there is need to provide guidance on site planning and organization at the household level to ensure maximum utilization of available land.

**Chart 4.6: Common Tree Species used for Carving**



*Source: Field Survey, 2014*

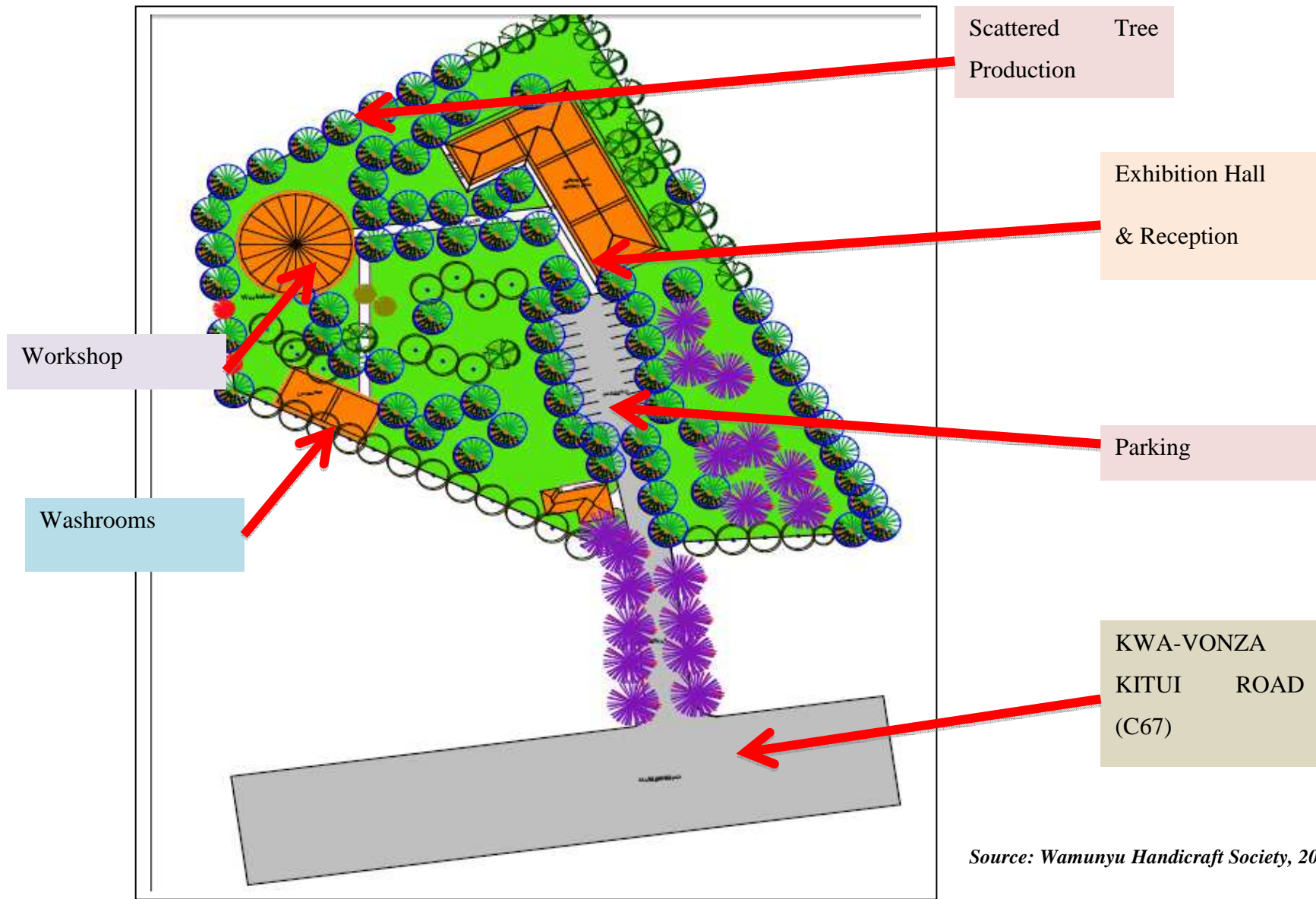
**Plate 4.5: Jacaranda Tree logs for Carving at the Society**



*Source: Field Survey, 2014*

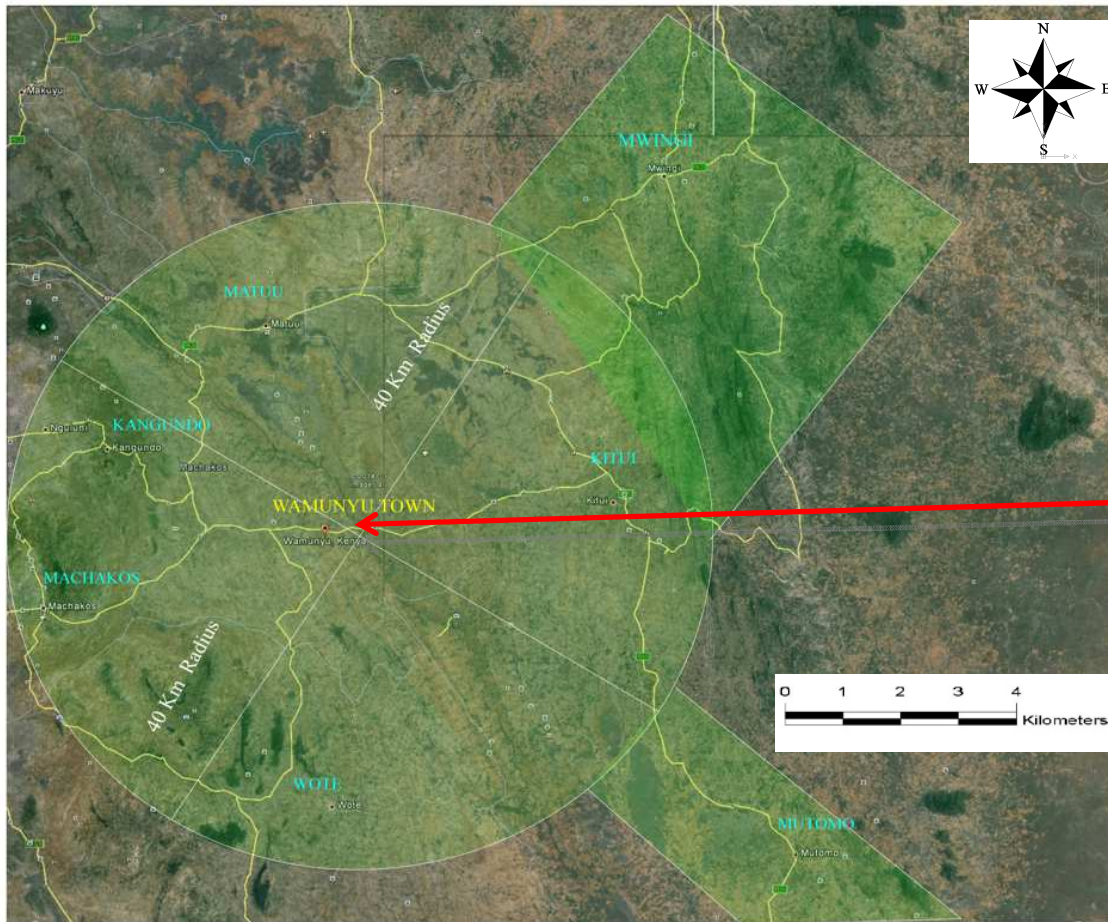
The Wamunyu Handicraft Society woodcarving center hosts the major woodcarving industry of Wamunyu Town and is located on a triangular shaped plot. This initially started out as a woodcarving showroom and gallery and was later proposed as a small cultural tourist Centre inclusive of a canteen area. (Refer to Appendix 7)

Plate 4.6: Site Layout Plan of Existing Wamunyu Handicraft Society woodcarving centre



Source: Wamunyu Handicraft Society, 2014

**Map 4.8: Regional Ecological Footprint of the Woodcarving Industry within Machakos**



*Source: image from googleearth.com, modified by author, 2014*

**REGIONAL ECOLOGICAL FOOTPRINT OF THE WOODCARVING INDUSTRY**

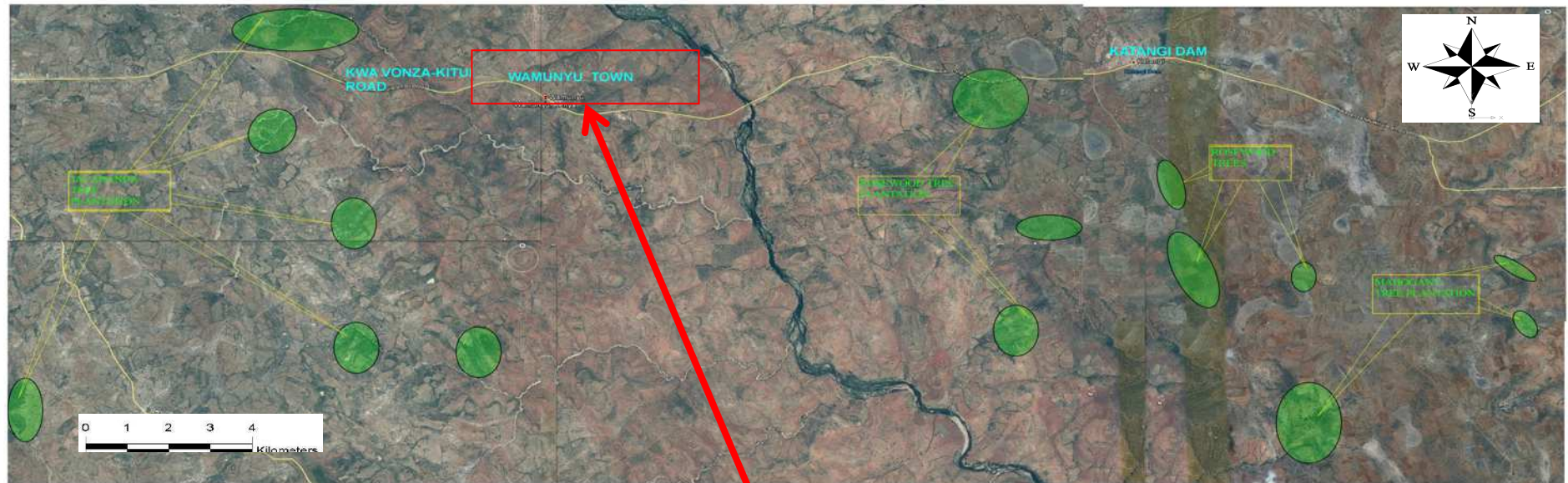
For purposes of the study, a 40Km radius was created as a buffer to assess the internal and external tree production zones of the woodcarving industry within and around

**STUDY AREA: WAMUNYU**

External Ecological zones to Wamunyu Town within the larger Machakos County include:

Matuu, Kangundo, Machakos, Wote, Kitui, Mwingi and Mui Town

**Map 4. 9: Tree production zones in the immediate environs of Wamunyu town**



Pockets of Jacaranda Tree plantations located to the South-West immediate environs of Wamunyu Town

**STUDY AREA:  
WAMUNYU TOWN**

Pockets of Rosewood, Grevalia and Terminalia Brownii Tree plantations located to the South-East immediate environs of Wamunyu Town

*Source: image from googleearth.com, modified by Author, 2014*

### 4.3.2 Wood Species and Quality of Carvings

The popularity of the Jacaranda Tree among others grew on the realization of the extinction of the high quality hardwood trees like Mahogany, Ebony, Rosewood trees, which grew for long periods of time of between 10 and 20 years but produced the highest quality of woodcarving. The 'good wood' trees like Jacaranda are mainly grow for 3 years and are thus easy to replenish but are normally wet inside and thus wood farmers and carvers have to further process them through drying them in a kiln.

**Plate 4.7: Marketing/Production Manger discussing the use of a Kiln to dry the trees for carving**

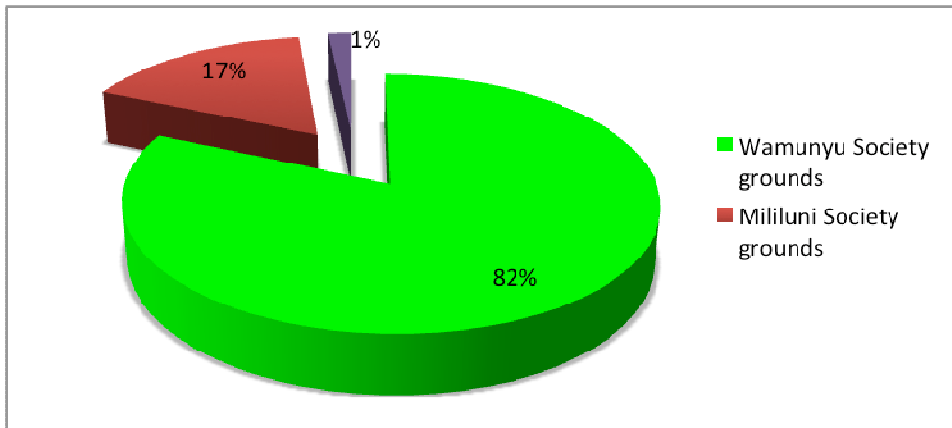


*Source: Field Survey, 2014*

### 4.3.3 Processing of Woodcarvings

Most processing of wood products is done on site as in, within the handicraft society workstations as there is ease and diversity of tools access, high level of socialization and peer learning. About 82 % of carvers sampled carry out their woodcarving activities within the Wamunyu Handicraft Society while others (17%), preferred to carve at Mililuni Handicraft Society grounds. A small percentage (1%) carved at home but admitted that they had difficulty in accessing markets.

**Chart 4.7: Location of Woodcarving Activities**



*Source: Field Survey, 2014*

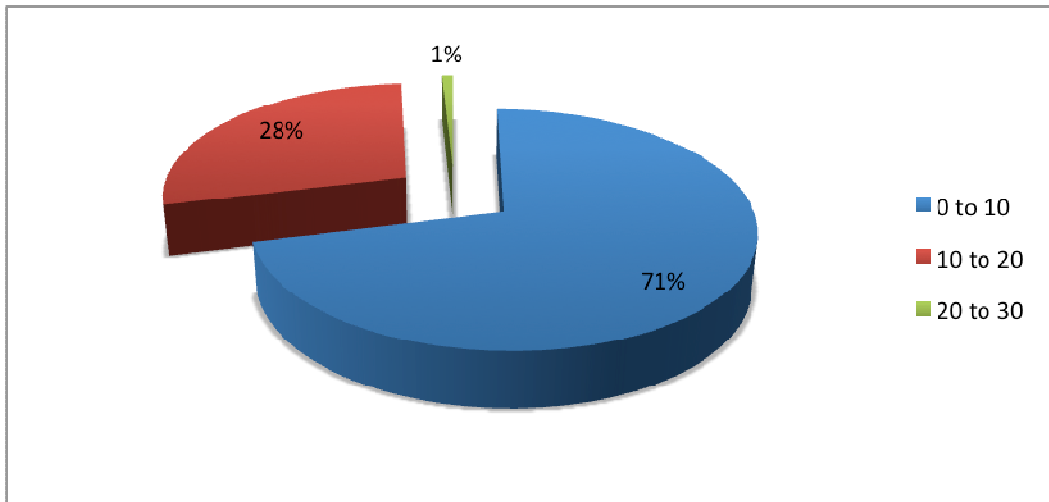
**Plate 4.8: Woodcarvers working on Site at the Wamunyu Handicraft Society**



*Source: Field Survey, 2014*

From the KII discussion with the Handcraft Society Production/Marketing Manager, the most popular carvings produced are utility items such as salad bowls, stools, spoons, handbags, plates and coasters. However, variety of production can be based on order.

**Chart 4.8: Number of Units Produced per Day**



*Source: Field Survey, 2014*

Most carvers (71%) produce none to 10 pieces per day depending on order put in. 28% produce 10-20 units and about 1% produce 20-30 units.

#### **4.3.4 Condition of the work spaces**

Processing spaces of the woodcarving are done in dilapidated, disorganized and unplanned workstations that are not durable and permanent. Also, in some woodcarver process their goods at home. Marketing is done within the handcraft society's showroom.

**Plate 4.9: Woodcarver at workstation in Wamunyu Handicraft Society**



*Source: Field Survey, 2014*

**Plate 4.10: Workstation of the woodcarvers**



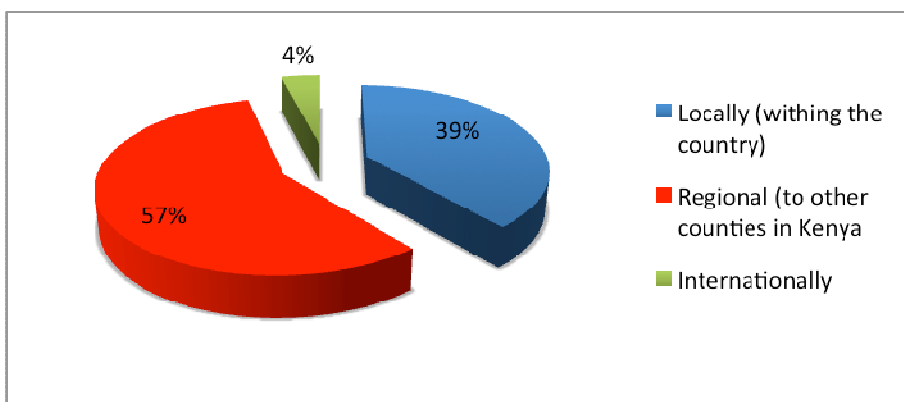
*Source: Field Survey, 2014*

#### **4.3.5 Consumption of finished goods (Marketing)**

Most goods are consumed regionally within Kenya, 57%; this is mainly because brokers come from other parts of the country like Nairobi to Wamunyu to specifically purchase these woodcarvings.

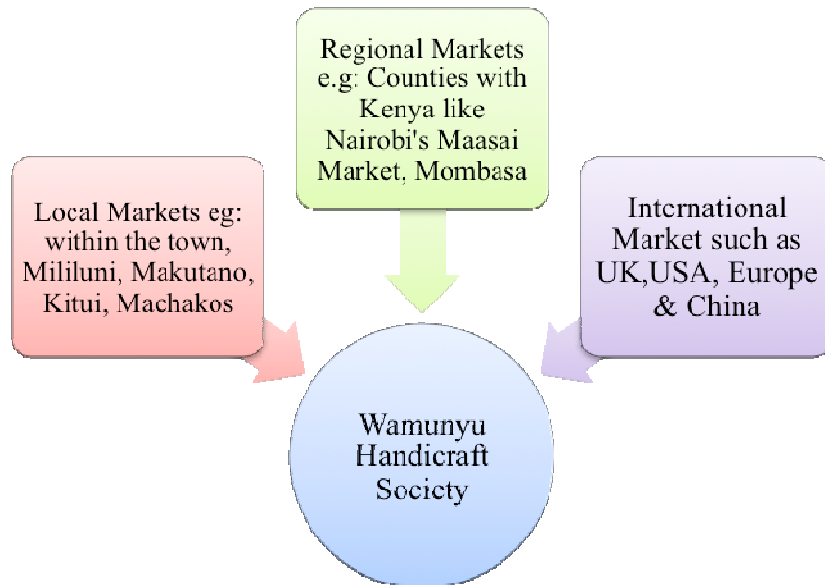
Internationally, the society exports to countries like: UK, USA, Europe (Germany) and China. Export earnings Kshs. 1.2 Million in 2012, which contributes to the overall GDP of the woodcarving industry, in Wamunyu, which stood at 45% in the same year.

**Chart 4.9: Consumers of woodcarvings**



*Source: Field Survey, 2014*

**Figure 4.2: External and Internal Market Linkages**



*Source: Author, 2014*

**Plate 4.11: Guests and Customers Purchasing Woodcarvings**

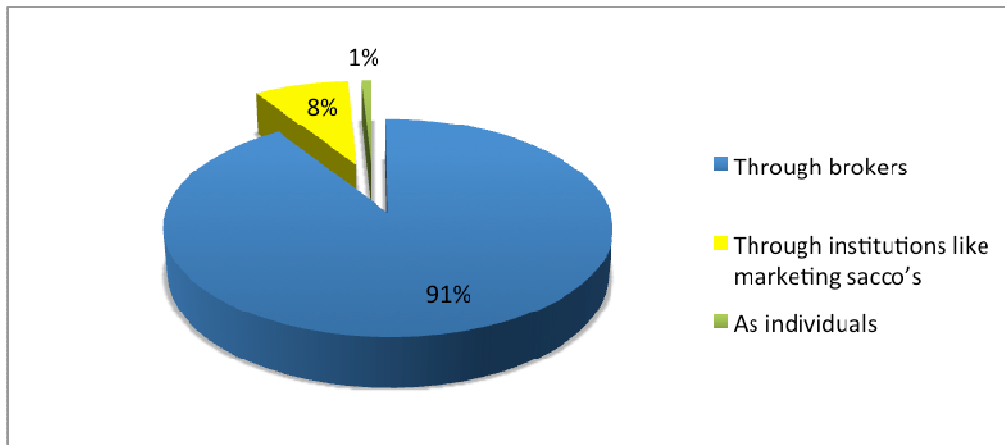


*Source: Field Survey, 2014*

Woodcarving goods and related products are mainly (91%) marketed through brokers and marketing institutions and SACCO's (8%). The brokers provide a quick and direct

linkage to large markets while marketing institutions regulate the market prices and increases sales chances of products.

**Chart 4.10: How Woodcarvings and Related Goods are marketed**

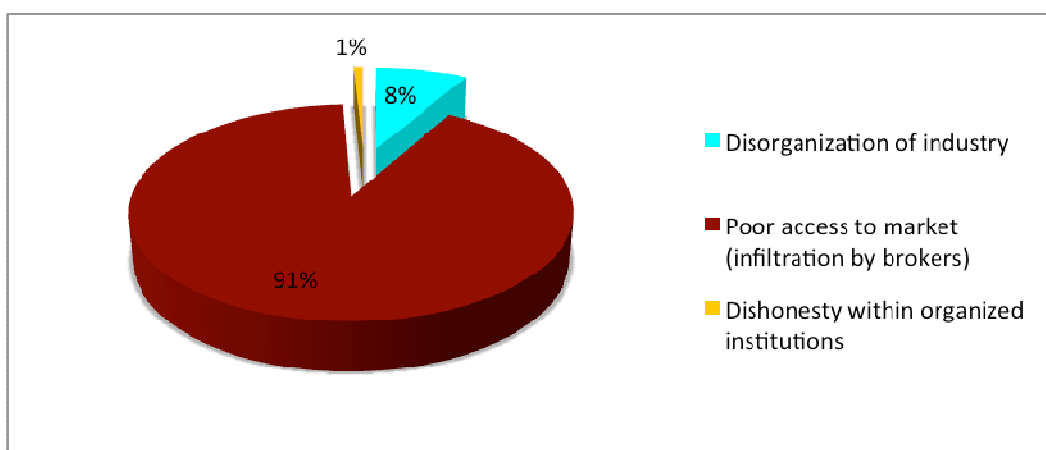


*Source: Field Survey, 2014*

#### **4.3.6 Marketing Challenges**

About 91% of woodcarvers sampled accepted that a key impediment to the marketing of their finished goods was the poor direct access to markets that was mainly attributed to the high infiltration by brokers. 8% said that the industry is disorganized, as there is no standardization of prices.

**Chart 4.11: Marketing Challenges of the Woodcarving Industry**

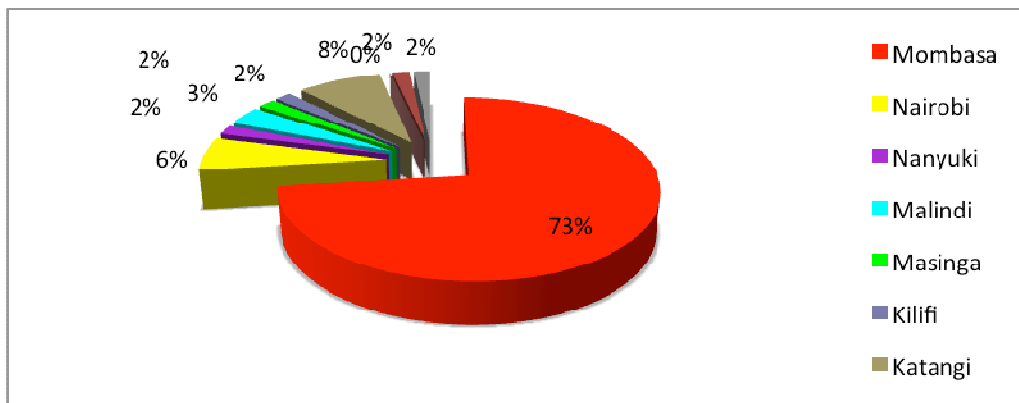


*Source: Field Survey, 2014*

### 4.3.7 Competition in the Woodcarving Industry in Wamunyu Urban Centre

Major competitors of the woodcarving industry are woodcarvers in Mombasa and Katangi areas with 73% and 8% respectively. Other minor competitors are located in Nairobi, Masinga, Kilifi and Kibwezi among others.

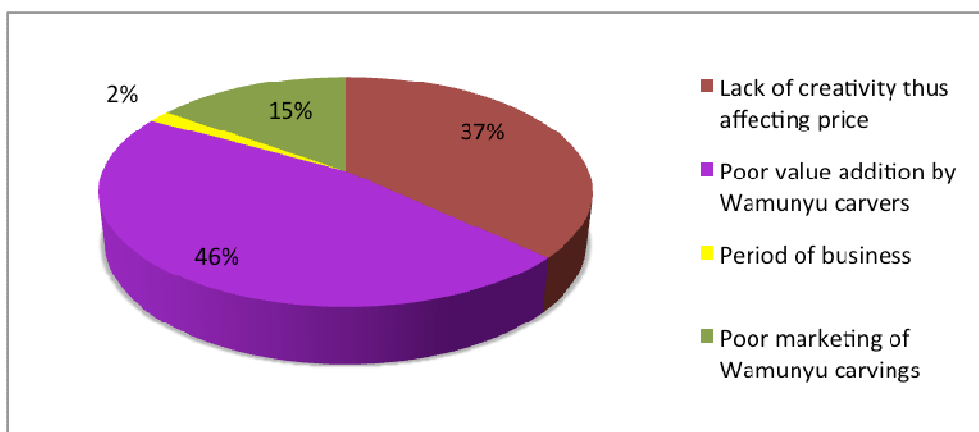
**Chart 4.12: Competitors in the Industry**



*Source: Field Survey, 2014*

Competition is mainly due to poor value addition by the Wamunyu woodcarvers (46%) followed by lack of creativity that consequently affects price (37%), poor marketing of Wamunyu carvings.

**Chart 4.13: Causes of Competition in the Woodcarving Industry**



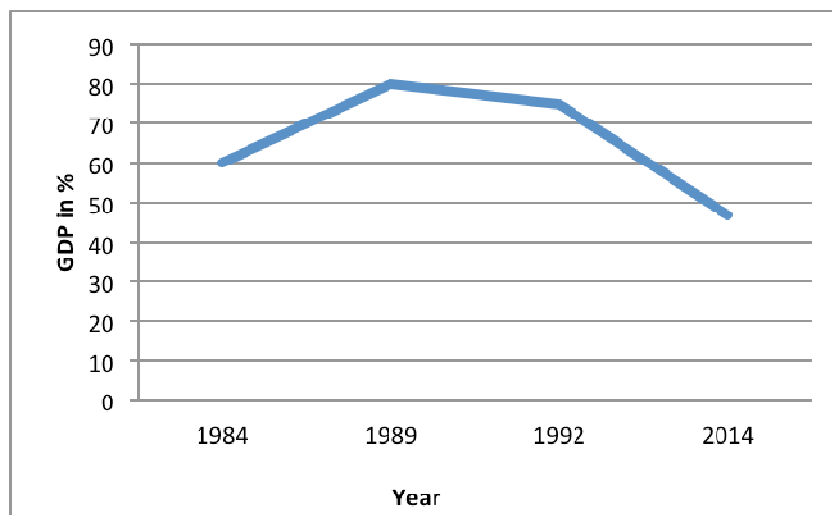
*Source: Field Survey, 2014*

#### 4.4 Operation of Industry Overtime

The study was keen on a trend analysis of the woodcarving industry within Wamunyu town. In particular, it focused on assessing the operation of woodcarving activities within Wamunyu Town, from its hay days as a lucrative and booming industry, which was the driver of development in the town, to its current status. From the Key Informant Interview with the Director of Tourism and Culture for Machakos Town, a brief synopsis of the industry was given.

During the booming period of woodcarving in 1984, the GDP productivity level was measured at 60%. Between 1984 and 1989 the export of woodcarving related materials rose to tremendously. This led to an increase in the GDP Productivity of the industry from 60% to 80% in 1989. However, introduction of the multiparty opened Wamunyu to security by the then president Moi who banned the sell of wood logs for carvings. Subsequently, woodcarvers had to find a way of using cheaper trees that compromised the quality of the woodcarving, these included trees like Terminalia Brownie and Jacaranda for woodcarvings. This facilitated the decline of the woodcarving GDP to 75%. From the year 2000, woodcarvers opted to undertake dairy farming and mango faming as sources of alternative livelihood. As of 2014, the woodcarving GDP stands at 47%

**Graph 4.7: Returns of Woodcarving Industry Overtime**



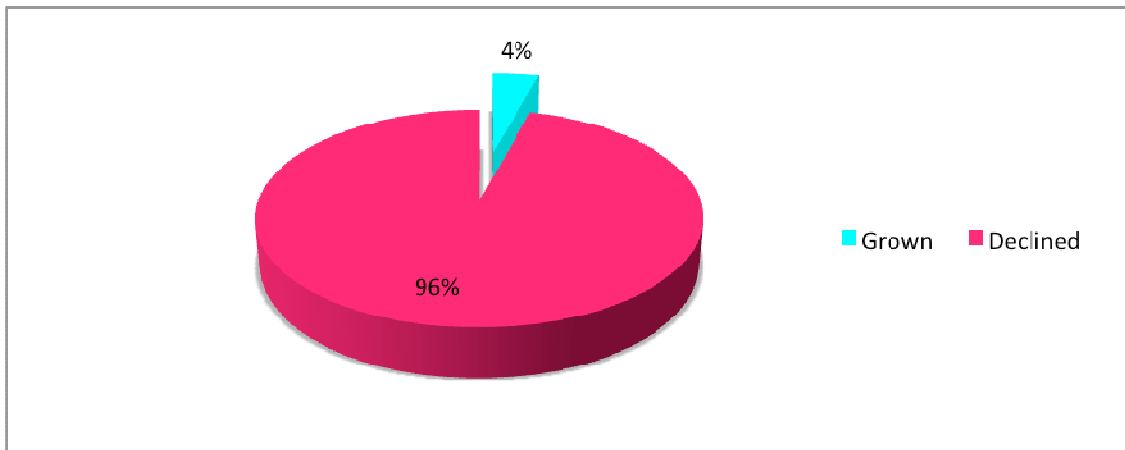
*Source: Director of Ministry of Co-operatives, 2014*

Notably, there was a huge drop between 1992 and 2014 that may be attributed to shift from woodcarving as a livelihood, to milk production and mango farming as an alternative. The two records show a big leap in GDP in a period of 20 years.

#### 4.4.1 Growth of Industry

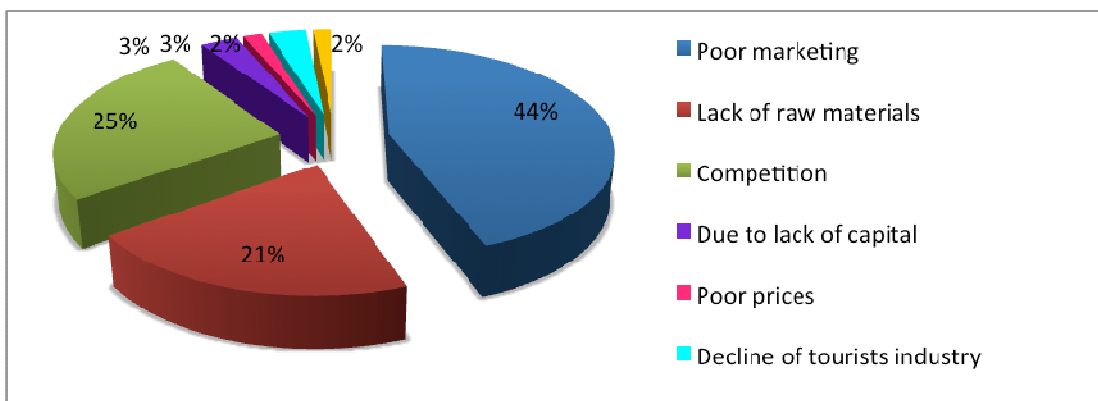
From the data in graph 4.6 (above), the study area residents and the woodcarvers interviewed admitted that the woodcarving industry within Wamunyu Town had declined in operations over the years. About 96% of the respondents felt it had declined while only 4% felt that it had grown.

**Chart 4.14: Area Residents and Woodcarvers Perception on Growth Trend of the Woodcarving Industry**



*Source: Field Survey, 2014*

**Chart 4.15: Causes of Decline of the Woodcarving Industry in Wamunyu Urban Centre**



*Source: Field Survey, 2014*

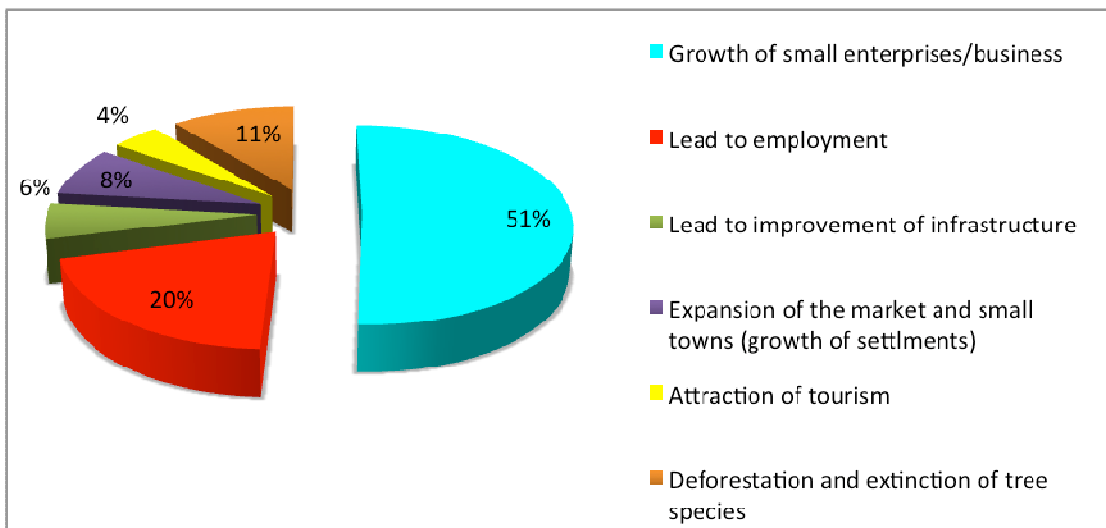
About 44% attributed the decline of the industry to poor marketing, 25% was due to competition and 21% was due to lack of raw materials as there was a decline in the logs of tree species like Rose wood and Ebony which enabled creation of high quality woodcarvings.

## 4.5 Impact of the Industry

### 4.5.1 Positive Impacts

According to the woodcarvers, some of the development influences that resulted from the industry overtime and are still evident today include: growth of small and medium enterprises (51%), creation of jobs (20%), led to improvement of infrastructure (6%), growth of settlements (8%), attraction of tourism (4%) and extinction.

**Chart 4.16: Opinion of Woodcarvers on Impact of the Industry on Development of Town**



*Source: Field Survey, 2014*

### 4.5.2 Urban Development Impact Measurable Assessed

#### 4.5.2.1 Growth of Settlements and Business Enterprises

During the fieldwork, there was a data gap in accessing maps and google earth images that documented the level of development of the town throughout the years of booming business of woodcarving (1982 to 1991). Google earth images of Wamunyu Urban Centre in 2003 to 2014 were used to assess the level of permanent structures within the

seven-year period. The maps provided reasonable reflection of settlement changes overtime. This observation was verified by an increase in structures both spatially and numerically (in space and in number) Refer to Map 3.4 and 3.5.

**Plate 4.12: Development of Wamunyu Town in 2014**



*Source: Google Earth, 2014*

*(Not to Scale)*

**Plate 4.13: Development of Wamunyu Town in 2003**



*Source: Google Earth, 2014*

*(Not to Scale)*

Wamunyu is not a planned settlement as structures grew sporadically without guidance from physical planning. However, from Google earth satellite image on Wamunyu (1994-2014)

#### 4.5.2.2 Job/Employment Creation

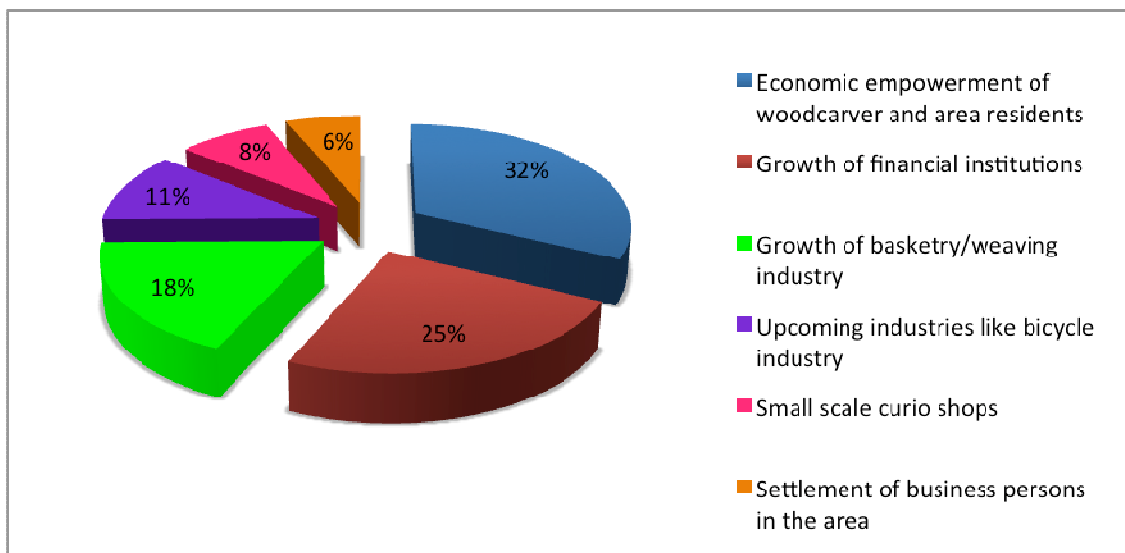
Direct level of employment was measured by the membership of the Wamunyu handicraft society, which currently stands at 2043. This was based on the assumption that all members derive their livelihood solely on woodcarving activities.

Indirect dependent of the industry was measured by the membership of the Wamunyu handicraft society multiplied by the average household size (4 members per household). This therefore created 8172 indirect employment for the region. This was based on the assumption that the woodcarver is the key income earner of the household.

#### 4.5.2.3 Deforestation

According to key informants, there was deforestation and extinction of hard wood species like ebony and mahogany due to overtime.

**Chart 4.17: Opinion of Area Residents on Impact of the Industry on Development on the Town**



*Source: Field Survey, 2014*

**Plate 4.14: Communication Mast and Petrol Service Station located within Wamunyu Town**



*Source: Field Survey, 2014*

**Plate 4.15: Restaurant in Wamunyu Town that is branded with the Big Five Animal Prints**



*Source: Field Survey, 2014*

Area residents felt that the industry majorly impacted on economic empowerment (32%), growth of financial institutions like K-Rep bank and Wamunyu Financial Association, (25%). Based on the survey, the financial institutions invested in Wamunyu area to the rapid development of the then high potential industry and also because of the lucrative dairy and mango farming activities. Furthermore, area residence felt that the industry

impacted on the growth of weaving industry (18%) as weaver were targeting tourists who came to visit the woodcarvers, upcoming industries like the bicycle industry (11%), small-scale curio shops (8%) and settlement of businesspersons in the area (6%).

***Economic Contribution to the GDP of the area***

*The annual turnover of Wamunyu Handicraft Society was Kshs. 4,334,888 in 2012 with Wamunyu Handicraft being most active co-operative in the non-farm category. Mililuni Handicraft Society whose annual turnover was Kshs. 120,742 in 2012 closely follows this.*

**Table 4.8: Activity Contributions to GDP of Wamunyu Urban Centre**

<b>ACTIVITY CONTRIBUTION</b>	<b>GDP</b>
<b>Dairy Farming</b>	50%
<b>Woodcarving</b>	47%
<b>Mango Production</b>	3%

*Source: Field Survey, 2014*

### **4.5.3 Negative Impacts**

However, despite the numerous positive impacts the industry makes to the development of the town, there some negative impacts as well.

High illiteracy as woodcarving is an activity that does not require skilled labour, deforestation and extinction of tree species as the industry is an extractive industry that heavily relies on the natural resources, forests, for sustenance.

### **4.5.4 Exceptional Findings on Development Impact Analysis**

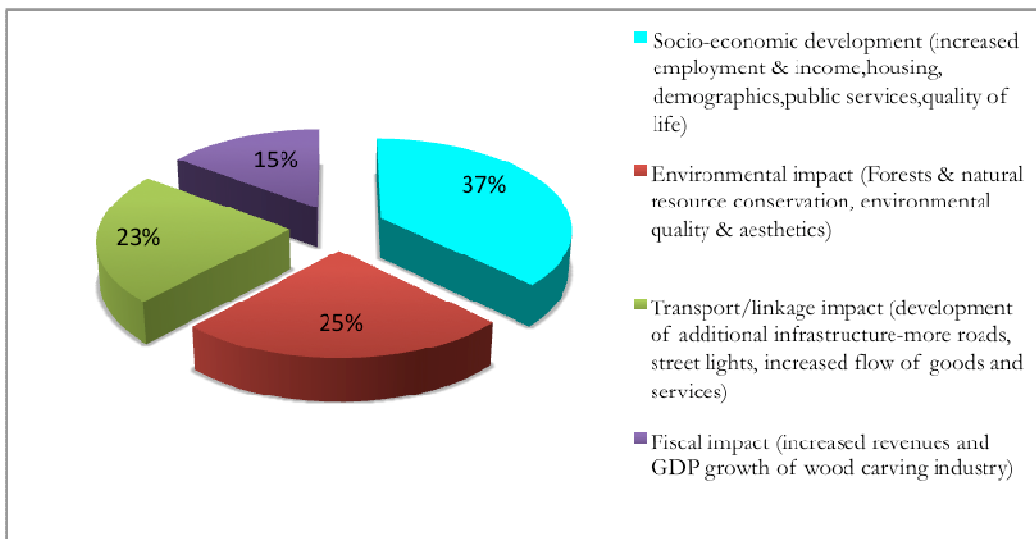
Of interest to the study and key to note was that the impact of the woodcarving cultural industry on other related cultural activities both intangible and tangible cultural activities was significantly minimal. Apart from the presence of few small-scale curio shops and basket weavers who targeted the client base of the woodcarving activities, and small

curio shops, there were no significant observable cultural spaces or related cultural activities/developments visible within the town.

#### 4.5.5 Potential Impacts of the Industry (Area Residents Sentiments)

When asked about the potential of a well planned sustainable woodcarving cultural industry for Wamunyu Town, there are residents said the industry had a huge development potential with great impact for the community and larger Machakos County. About 37% said it would spur socio-economic development for area residents, 25% environmental impacts of forests and natural resource management of the ecological footprint of Wamunyu Town, 23% transportation impacts through enhanced internal roads and street lighting and 15% fiscal impacts through increased revenue and GDP for the woodcarving industry.

**Chart 4.18: Area Residents Opinion on Potential Impacts of a Well-planned Woodcarving Industry**



*Source: Field Survey, 2014*

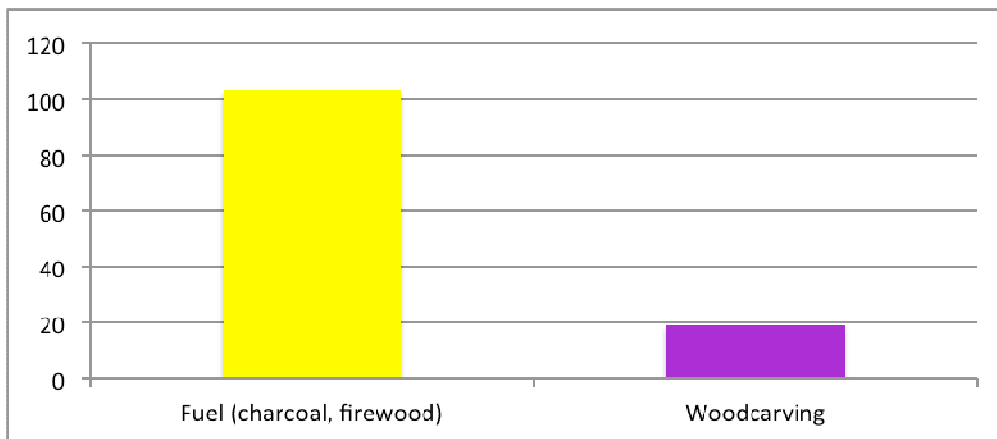
#### 4.6 Sustainability of the Activity and Future Plans for the Industry

The study was keen on the sustainability of the activity and future plans that the county government had put in place for the woodcarving industry.

### 4.6.1 Wood Consumption Pattern

Most of the wood consumed in the area is mainly for fuel (charcoal and firewood) while woodcarvings consume lesser wood.

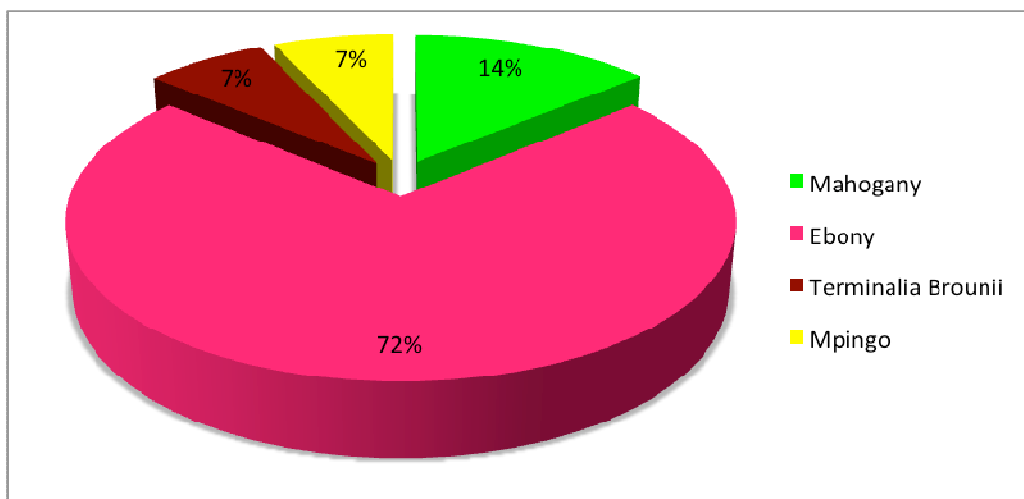
**Graph 4.8: Wood Consumption in Wamunyu**



*Source: Field Survey, 2014*

### 4.6.2 Extinct Tree Species

**Chart 4.19: Extinct Tree Species**



*Source: Field Survey, 2014*

All woodcarvers interviewed admitted that there were some tree species that had declined and were non-existent. Ebony and Mahogany emerged with 72% and 14% respectively.

However effort of re-afforestation were being made to restore them as the Wamunyu Woodcarving Society has embarked on planting of seedlings of these species and other fast growing species like Jacarnda and the Neem Tree for future use. Extension officer of the County pay regular visits to wood farmers so that trees planted at homestead level do not wither or dry up.

**Plate 4.16: Tree Nursery of the Society**

Manager of the society said, “As a result of over utilization of the hardwoods, many woodcarvers had changed the type of woods they used. They had moved from using the traditional slow growing hardwoods, to utilizing faster growing woods, termed as “good woods” like *Grevillia robusta* (Silky Oak).”

Joseph Mutuku,

Manger of the Wamunyu Hancraft Cooperative Society

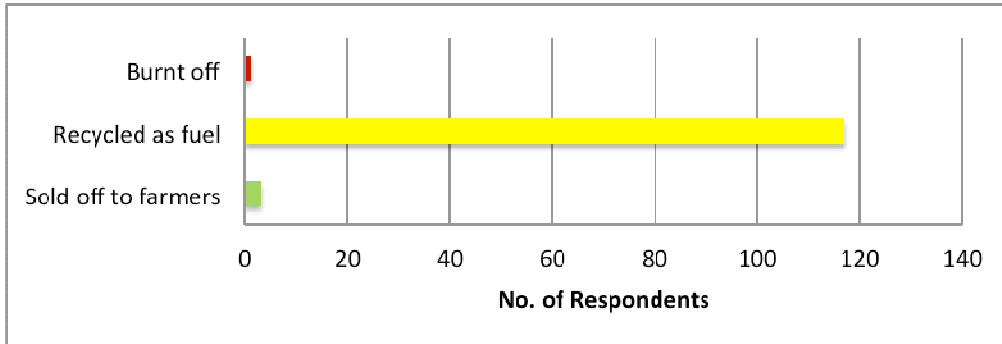


*Source: Field Survey, 2014*

**4.6.3 Disposal of off-cuts from Woodcarvings as a Sustainable Practice**

The woodcarvers dispose of the woodcarving off-cuts and chippings through reuse and recycling as fuel, sold to farmers as fertilizer and some are burnt off.

**Graph 4.9: Disposal of woodcarving Off-cuts**

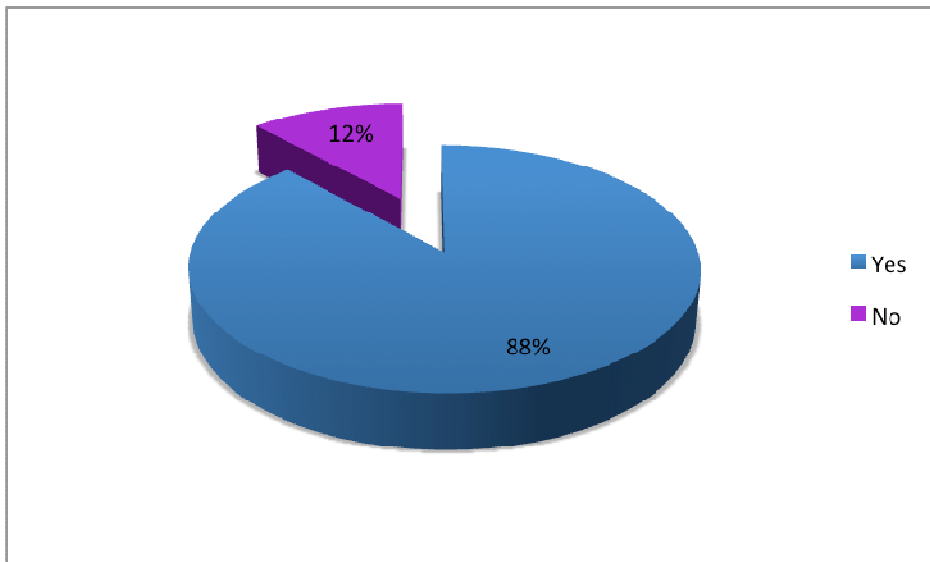


*Source: Field Survey, 2014*

#### **4.6.4 Tree Planting Activities**

88% of the woodcarvers engage in tree planting activities while 12% do not. This is part of the plan towards recovering the tree species lost to the activity and creating a continuous supply of trees for sustaining future woodcarving activities.

**Chart 4.20: Woodcarvers Engaging in Tree Planting Activities**



*Source: Field Survey, 2014*

## **4.7 Evaluation of Machakos County Government input in the Industry**

Towards understanding the operations of the woodcarving industry, the study sought to evaluate the capacity and performance of Machakos County Government in realizing the full potential of the woodcarving industry.

### **4.7.1 Institutional structure**

The woodcarving industry within Wamunyu Urban Centre is organized within co-operative societies for ease of management. It thus falls under the Department of Agriculture, Livestock and Co-operative, Machakos County. However, due to its dependence on the natural resource base of forests, the Department of Natural Resources within the county is also responsible for monitoring this industry. Further, the woodcarving industry has a direct bearing on tourism in the County and thus is also part of the Department of Tourism.

## **4.8 Institutional Interventions and County Government Plans**

### **4.8.1 Ministry of Planning and Urban Development**

Through a Key Informant Interview with the Director of Planning for Machakos County, Wamunyu was only documented as a plot on a cadastral map that was prepared in 1974. There were no active plans to guide development plans and there were no future plans to do so.

### **4.8.2 Ministry of Tourism, Sports and Culture**

However, the Key Informant Interview with the Director for the Ministry of Tourism, Sports and Culture revealed recognition of the industry with current investments in the industry standing at Kshs. 30 million. There was also a planned visit to Germany for an exhibition and another in Pretoria's Belforntain Town and Durban on 30<sup>th</sup> March to 4<sup>th</sup> April 2014 for a road-show to showcase Wamunyu as a centre for woodcarving activities.

There is also an active plan to revamp the Woodcarving industry through the refurbishment and rebranding of the Wamunyu Handcraft Society site as a cultural centre. Renovation plans of the Society site entail:

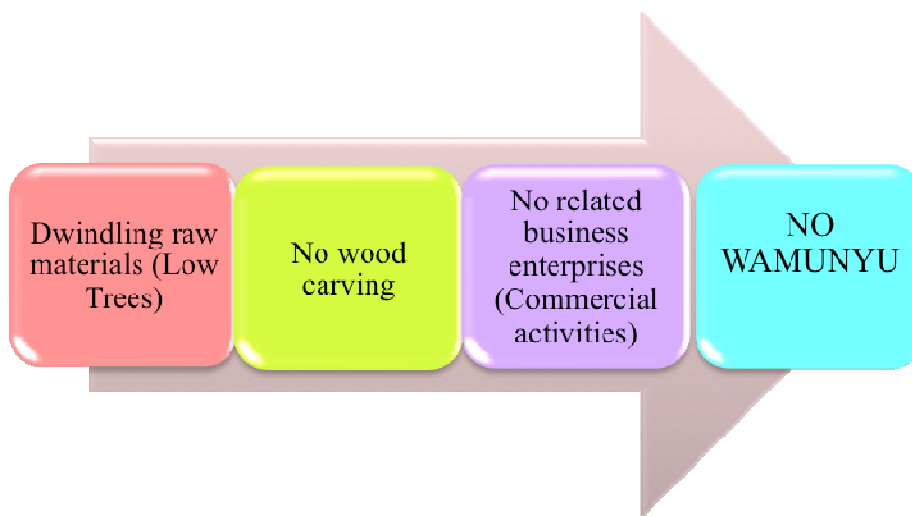
### 4.8.3 Sustainability Activities Practiced

- Awareness of the dwindling natural resource base
- Society has embarked on planting seedlings of extinct trees (Ebony, Rosewood)
- Co-operative society buy wood and bring to members
- Reuse of off-cuts as fuel
- Give carvers young seedlings to plant in their “shambas”
- Kenya Forestry Services Extension officers ensure trees do not wither

### 4.9 Unique Findings

These findings are based on the overall data analysis and field surveys carried out and the Key Informant Interviews, it emerged that there can be two scenarios of cultural industry and development within Wamunyu Town.

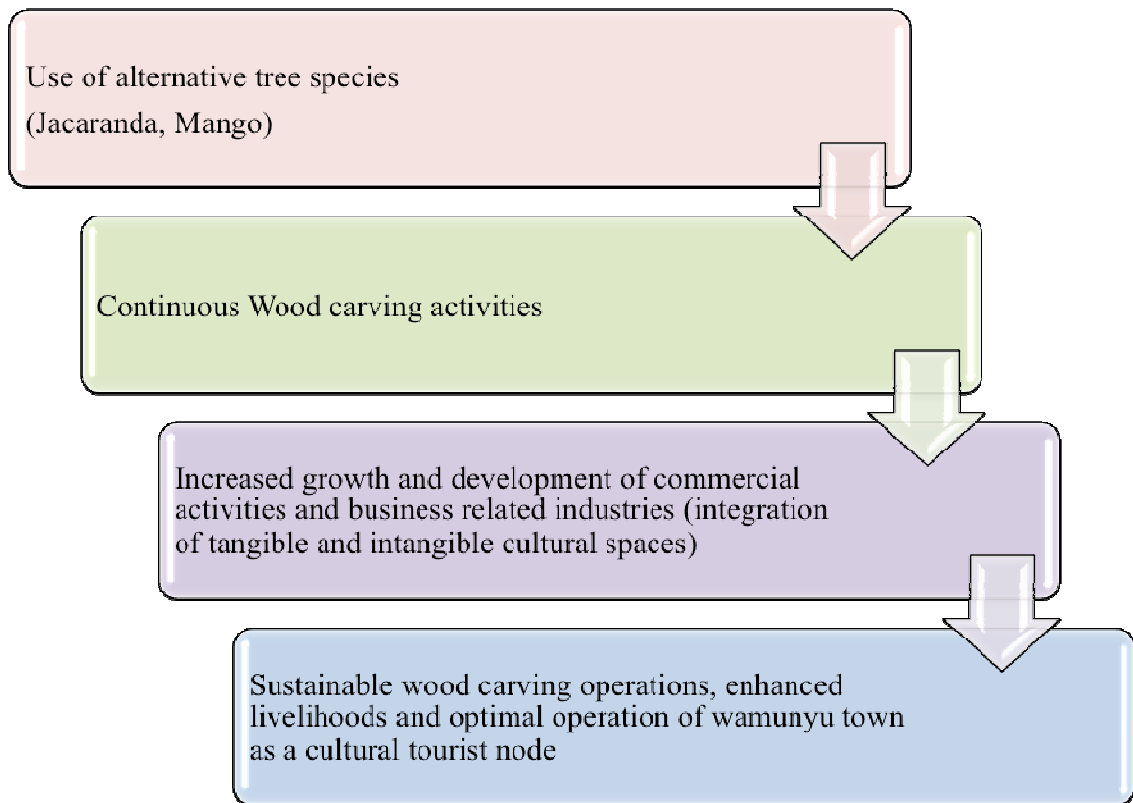
#### Scenario 1: No woodcarving Activities



*Source: Field Survey, 2014*

If the cultural industry is not planned for there will be a low supply or continuous dwindling natural resource base of trees, this will consequently reduce or eventually eradicate woodcarving activities and thus there will be reduced urban development and a reduction in related business enterprises and commercial activities, reduced revenues from woodcarving activities, no livelihoods and thus NO WAMUNYU.

## Scenario 2: Controlled and Sustained Woodcarving Activity



*Source: Field Survey, 2014*

However, a planned woodcarving industry will ensure controlled and sustained woodcarving activities which would utilize the “good wood” alternative tree species that grow faster. This would ensure a continuous supply of woodcarving activities which would induce other intangible and tangible cultural related activities and spaces thus stimulating urban development of the Wamunyu with enhanced and distinct cultural and tourism related enterprises which is the desired end state of this project.

### 4.10 Chapter Summary

From the foregoing, it emerged that woodcarving activities are among the major drivers of development in the community and area of Wamunyu Town. As an industry, it contributes both positive and negative impact to the development of the town. Furthermore, some of the overall significant impacts are socio-economic development of woodcarvers through employment/income generation activities, enhanced access to

public services like banks and financial institutions like K-Rep bank and Wamunyu Financial Association, and overall improved quality of life. However, negative impacts related to this activity include: degradation of the environment and the scattered ecological footprint of the area, disorganization of the industry and poor value chain management of the industry leading to dwindling supply of raw materials high infiltration of industry by brokers among others. All of which require planning interventions.

#### **4.11 Emerging Issues**

From the above-mentioned, the following summaries were deduced per study objective:

##### **Structuring and Functioning of the wood value chain**

- Woodcarving has declined over the years due to poor value chain management, low investment in industry and high infiltration by brokers
- Woodcarving is a major informal industry in Wamunyu, which provides a source of livelihood for many families residing in this semi-arid zone
- Overexploitation of natural resource based has led to uptake of alternative good-tree species which grow for a shorter period (3 years)

##### **Operation of the woodcarving industry overtime**

- The industry once contributed to the urban growth and development of Wamunyu and its surrounding hinterland but has since declined and also now depend on other sources of income (mango and diary farming)
- There are no significant tangible and intangible cultural developments related to the woodcarving industry
- There exists no deliberate physical planning efforts to spatially accommodate and integrate woodcarving activities and its related industries with the urban development of the town
- Wamunyu grew sporadically as unplanned urban settlement that was mainly established due to woodcarving activities

##### **Spatial Planning Interventions that can transform the industry**

- The industry once contributed directly to the development of the town
- The industry heavily depends on the natural resource base and if well managed, can operate through establishment of a sustainable product strategy

- Trees are produced at the household level, therefore the homestead layout should be improved for optimum production of trees
- Processing woodcarving is done in a disorganized manner and dilapidated spaces. The area of processing woodcarving lacks complimentary cultural spaces

## **CHAPTER FIVE: PLANNING IMPLICATIONS**

### **5.0 Overview**

This chapter briefly summarised the strategic aggregate findings from chapters: 2, 3 and 4. It provided a critical discussion of all findings and emerging issues from these chapters in relation to their causes, effects, planning and policy implications for future improvement of the woodcarving industry and other similar cultural industries.

### **5.1 Strategic Aggregate Findings**

The strategic findings that were key to spatial planning arose from the foregoing chapters. Major contributing factors that favour the presence of this industry within an urban setting include:

#### **5.1.1 Rich Cultural Resource Base as a Vector of Development**

Wamunyu Urban Center boasts of a rich intrinsic cultural heritage background with the areas being the cradle of woodcarving in Kenya. The indigenous woodcarving skills and strong Kamba culture of the areas people evidenced this. This activity's immense potential to spur urban development was also witnessed within the study, through the extent it attracted services like electricity, water, telecommunication, service stations and financial institutions (K-Rep Bank), settlements and investments by business persons.

#### **5.1.2 Cultural Industry Value Chain as the Missing Link Between Culture and Spatial Planning**

The woodcarving value chain consists of inputs, processes and retail markets/consumption activities that have a direct bearing on the spaces in which these individual value chain components occur. These translate to both positive and negative development impacts such as fiscal impacts which were measured by the increased revenue from the industry, spatial impacts through growth of the built from settlements and workspaces for woodcarvers. Also, transportation linkages, social interactions, economic development through growth of related industries like hospitality and tourism, increased presence financial institutions, social amenities and services as well as

environmental impacts, as the industry heavily relies on the natural resource base of forests as raw materials.

### **5.1.3 Poor Spatial Planning and Integration of Culture in to the Urban Fabric**

Wamunyu urban centre grew sporadically as an aftermath of the booming woodcarving activities that were taking place during the 1980's. As a result, the activity acted as a pull factor for the people of Wamunyu and its immediate hinterland leading to the establishment of a linear settlement as urban centre was located along the transport corridor C97. Today, the town still continuous to exist without any guided spatial development framework. Further, there is no future intention to prepare an urban spatial plan for Wamunyu Town.

### **5.1.4 Functional Space Elements**

Wamunyu is strategically located between two larger core towns of Kitui and Machakos and the larger metro region (regionally within the County). The C97 Kwa Vonza-Kitui road linearly links all the three towns. Also at the national scale, it has a direct linkage proximity to Nairobi.

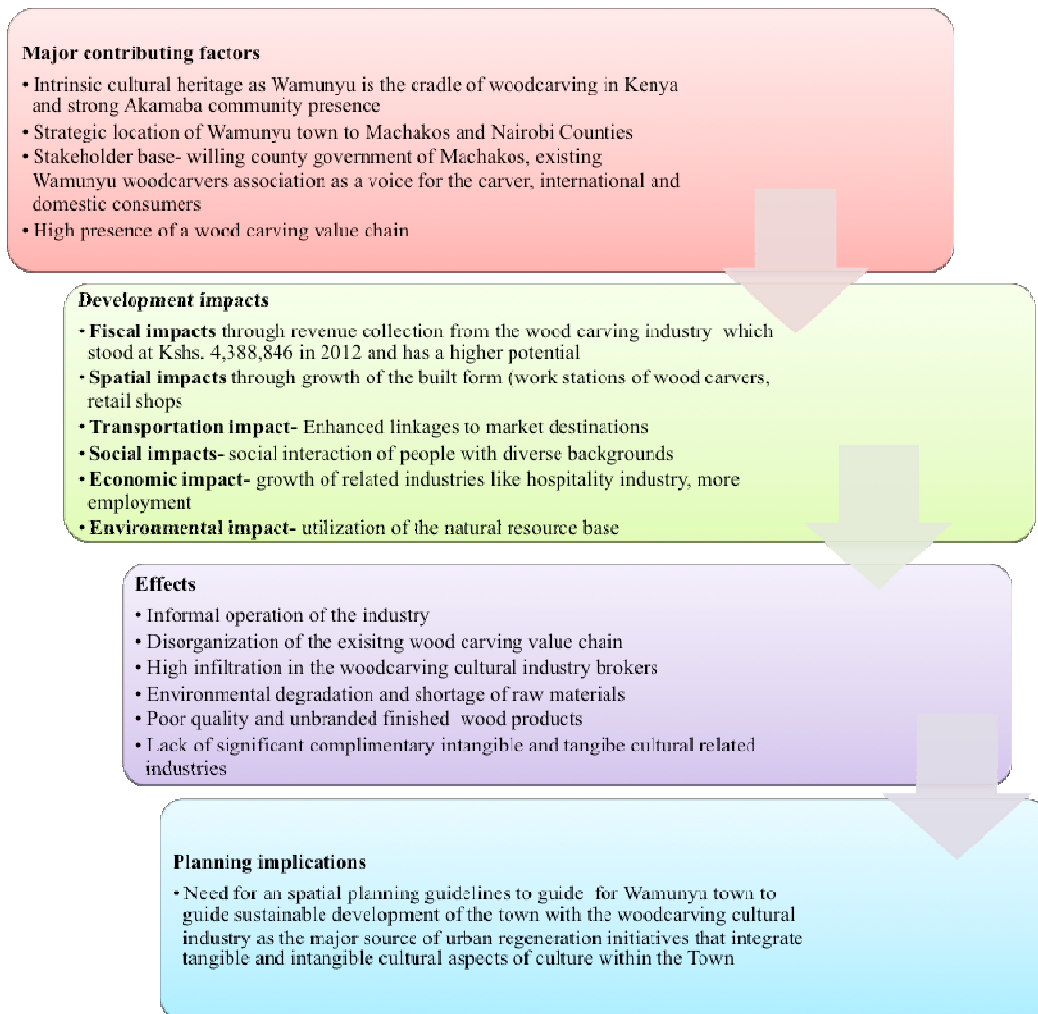
### **5.1.5 Stakeholders Participation**

A supportive Machakos County Government that recognizes the potential of the cultural industry and is willing to invest in it. The existing woodcarvers association provides a structured platform and acts as the voice of the people and the international and domestic consumers of the industry.

## **5.3 Causes and Effects of Issues Identified in Chapters Two, Three and Four**

Based on chapters 2, 3 and 4, it appeared that indeed, the woodcarving industry is a prime mover of the urbanization and urban development of Wamunyu Town. The major contributing factors, development impacts and effects have been synthesized in the flow diagram below.

**Figure 5.1: Synthesised Summary of Contributing Factors, Impacts and Planning Implication**



*Source: Author, 2014*

### **5.1.6 Recognising Sector Specific Policy**

In line with the National Policy on Culture and Heritage, 2009, Machakos County Government prepared a five year Strategic Plan (2012-2017). This plan included culture in its development agenda by acknowledging the potential of the industry and having plans to invest in it.

However the industry is bogged down by spatial and business challenges like: poor value chain management thus the industry operates as an informal activity, poor organization of

the woodcarving workstations, environmental degradation and extinction of tree species, lack of modernized woodcarving techniques, resulting to higher production time and overall underperformance of the industry as compared to its initial times of operation in the 1980's where its GDP was as high as 80%.

In chapter two, a case-study approach (Refer to chapter 2 figure 2.4) was used as a benchmark to assess global best practice working example that have integrated culture into the planning for urban areas. The synthesis of the Taos Arts and Cultural District Plan of 2012 located in Taos Town, New Mexico revealed significant planning methodologies and lessons considered in providing spatial planning interventions to rejuvenate the vibrancy of Wamunyu urban centre through effective operations of the woodcarving industry. The Taos Arts and Cultural District Steering Committee established a Taos Arts and Cultural District plan and utilized key urban planning design principles, specifically urban rejuvenation and urban renewal, to develop innovative economic development concept that emphasizes the quality of a place. This included cultural assets. Through the use of the community mapping out cultural historic areas, was successful. Utilization of planning and architectural academia is another success factor of the case study. Key outcomes of this plan were: revenue enhancement from the cultural assets as the tourists visit double within the first year of the plan, unique identity of the Taos town which was well planned with high quality living standards, enhanced connectivity within and around the town.

## **5.2 Summary of Findings According to Study Objectives**

From the above-mentioned, the following summaries were deduced as per objective:

### **Objective 1: To understand the structuring and functioning of the woodcarving industry in Wamunyu**

- Individuals and some woodcarvers in their homesteads largely undertake planting, production and harvesting of trees
- Cultural industry value chain is the missing link between culture and spatial planning as each of the woodcarving related value chain activities undertaken translate to some spatial component example; Production is done in a tree nursery

which must be deliberately allocated, processing is done in a workshop and marketing is done in a show room. Marketing of curio-shops must also be planned

- Woodcarving has declined over the years due to poor value chain management, low investment in industry and high infiltration by brokers
- Overexploitation of natural resource base has led to extinction of certain hardwood tree species like Ebony, Mahogany and Rosewood. However, the woodcarver are undertaking alternative good-tree species which grow for a shorter period (3years)

**Objective 2: To investigate the operation of this woodcarving industry overtime and its impact on urban development of Wamunyu Urban Centre**

- Woodcarving is a major formal industry in Wamunyu, which provides a source of livelihood for many families residing in this semi-arid zone
- The industry once contributed to the urban growth and development of Wamunyu and its surrounding hinterland but has since declined and also now depend on other sources of income (mango and diary farming)
- There are no significant tangible and intangible cultural developments related to the woodcarving industry
- There exists no deliberate physical planning efforts to spatially accommodate and integrate woodcarving activities and its related industries with the urban development of the town
- Wamunyu grew sporadically as unplanned urban settlement that was mainly established due to woodcarving activities

**Objective 3: To propose spatial planning interventions that can transform woodcarving activities into an effective industry in development of Wamunyu Urban Centre**

- The industry contributed directly to the development of the town
- The industry heavily depends on the natural resource base and if well managed, can operate through establishment of a sustainable product strategy
- Trees are produced at the household level, therefore the homestead layout should

be improved for optimum production of trees

- Processing Woodcarving is done in a disorganized manner and dilapidated spaces. The area of processing woodcarving lacks complimentary cultural spaces

#### **5.4 Planning and Policy Implications in terms of Alternative Future Policy Approaches for Planning Wamunyu Town**

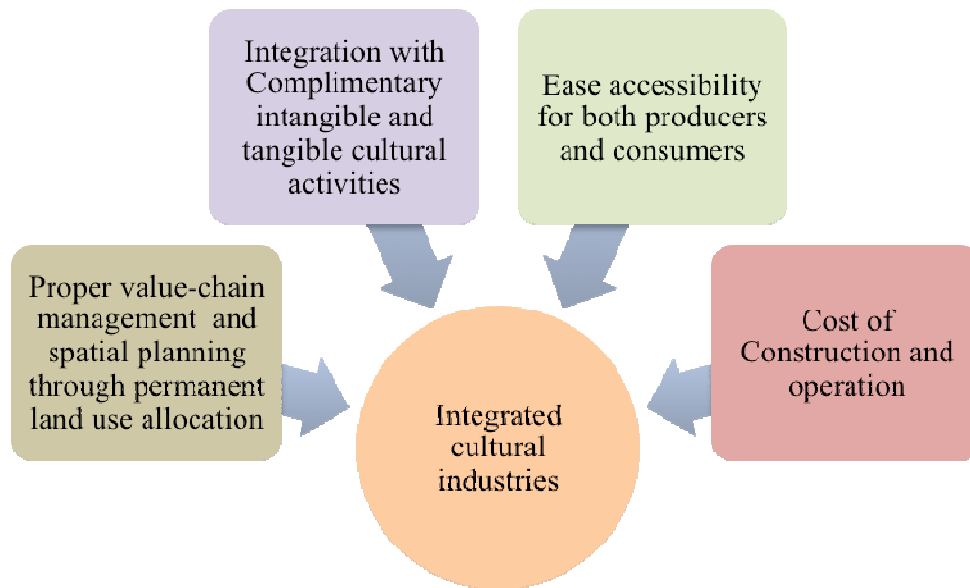
After assessing the major contributing factors to development of Wamunyu Town, the development impacts and their effects on urban development of the area, it is evident that the major issue affecting the town is underperformance of the initial heartbeat of the town. This is evidenced by poor accommodation and integration of the woodcarving cultural industry with other cultural activities and its entire value chain within Wamunyu town. Accordingly, planning for the integration and upgrading of the woodcarving cultural industry is paramount.

#### **5.5 Factors Considered in Planning for Cultural Industries**

Based on the case study in chapter 2 (refer to section 2.14), it appeared that in order to integrate cultural industries within urban spaces, it is of paramount importance to ensure that proper value-chain management and spatial planning of the particular cultural industry, in this case, woodcarving industry are adequately accommodated. This can be achieved through deliberately allocating a small-scale industrial complex that caters for all levels of the value chain. Through permanent land-use allocation of the specific stages of the value-chain, which could foster proper value-chain management and sustainable resource use.

Incorporating complimentary intangible and tangible culture related activities, would compliment the woodcarving industry and attract investors as well as the public. Further, integration of these cultural industries is best suited for highly pedestrianized corridors and interactive streetscapes that attract passers-by. There is also need to ensure that sustainable funding mechanisms are included in the integration plan for realization of friendly construction and operational costs

**Figure 5:2: Key factors considered For Integration of Cultural Industries in Urban Development**



*Source: Field Survey, 2014*

## **5.6 Alternative Cultural Integration Approaches**

On the basis of the above factors for integration, the following options were suggested as possibilities towards integration of the woodcarving cultural activity within the urban design and development framework for Wamunyu Town in both the short term and long term.

### 5.6.1 Ensure sustainable and consistent tree production through a Bio-Rights Approach (Community-led Environmental Conservation)

#### ABOUT BIO-RIGHTS

**Bio-rights approach is a microcredit finance mechanism that combines poverty reduction and environmental improvement. Funding is provided to local communities and they undertake nature conservation activities in return for this support.** Instead of paying interest, the communities undertake environmental actions e.g.: undertaking smart agriculture, replanting a degraded forest, restoring abandoned ponds or patrolling national parks to prevent illegal activities. When the conservation action turns out to be a long-term success, the microcredits are converted into an ultimate payment to the communities. In some cases this payment is managed as a revolving fund providing long-term capital for sustainable development.

Informed by the detailed analysis of the ecological footprint of the industry in chapter 3 (Refer to Map 3.9), this approach pursued a model of outsourcing tree production through encouraging agro-forestry. The model envisioned a scenario where the community and neighbouring populations of Wamunyu Town would be incentivized to grow trees and sell to the proposed woodcarving complex.

#### Equation 5.1: Working formula of the tree sustainable tree production

**Transportation cost + Raw materials cost+ other inputs (labour, technology) = Input Cost of the Industry**

Therefore towards optimally achieving this equation, the following tree production options were proposed:

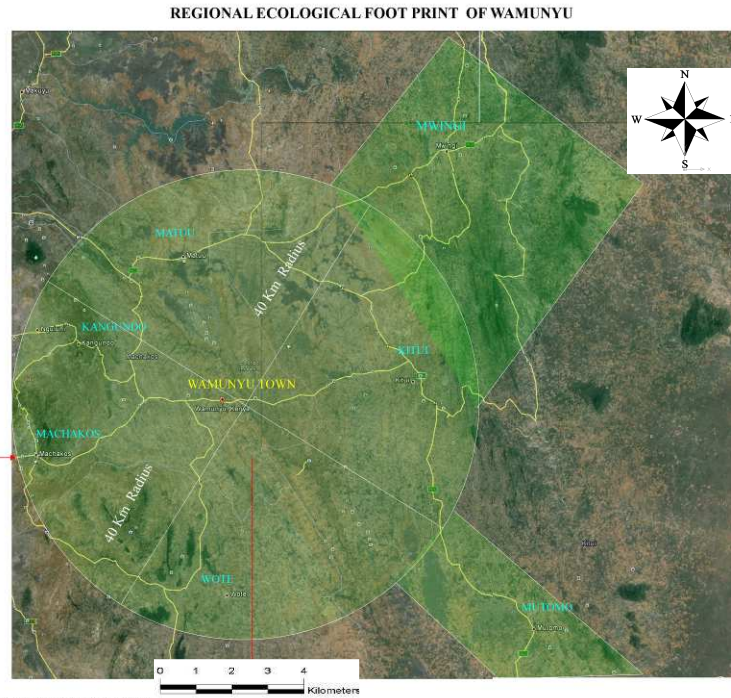
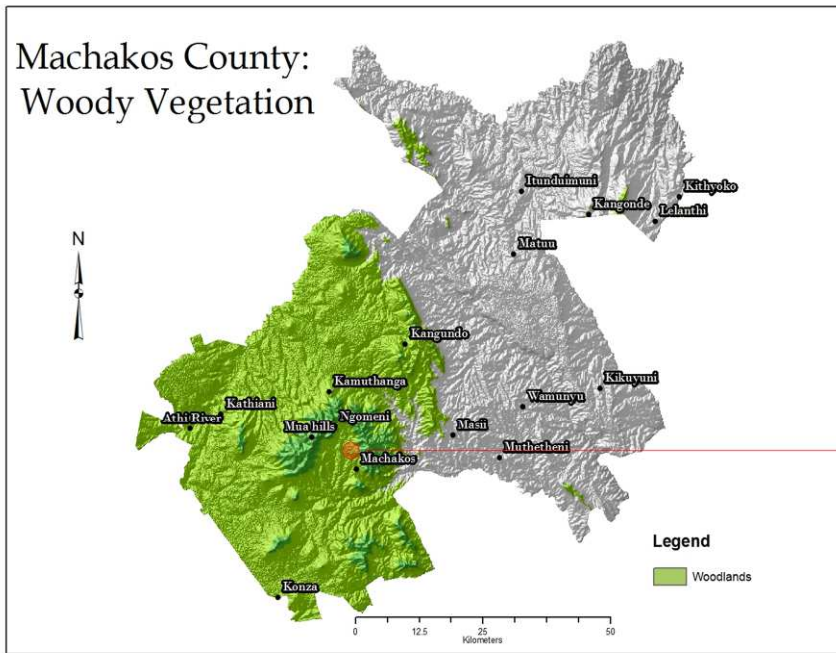
**Table 5:9: Tree production Options for Machakos County**

<b>Tree Production Options</b>	<b>Pros</b>	<b>Cons</b>
<b>Option 1:</b> Renting/leasing of land for tree production (Complex rents from individuals)	<ul style="list-style-type: none"> <li>• No need to purchase land</li> </ul>	<ul style="list-style-type: none"> <li>• Renting costs will be incurred</li> <li>• Based on availability of land</li> <li>• Limited by time</li> </ul>
<b>Option 2:</b> Outsourcing form external growers	<ul style="list-style-type: none"> <li>• No input costs (transport, land)</li> </ul>	<ul style="list-style-type: none"> <li>• None</li> </ul>

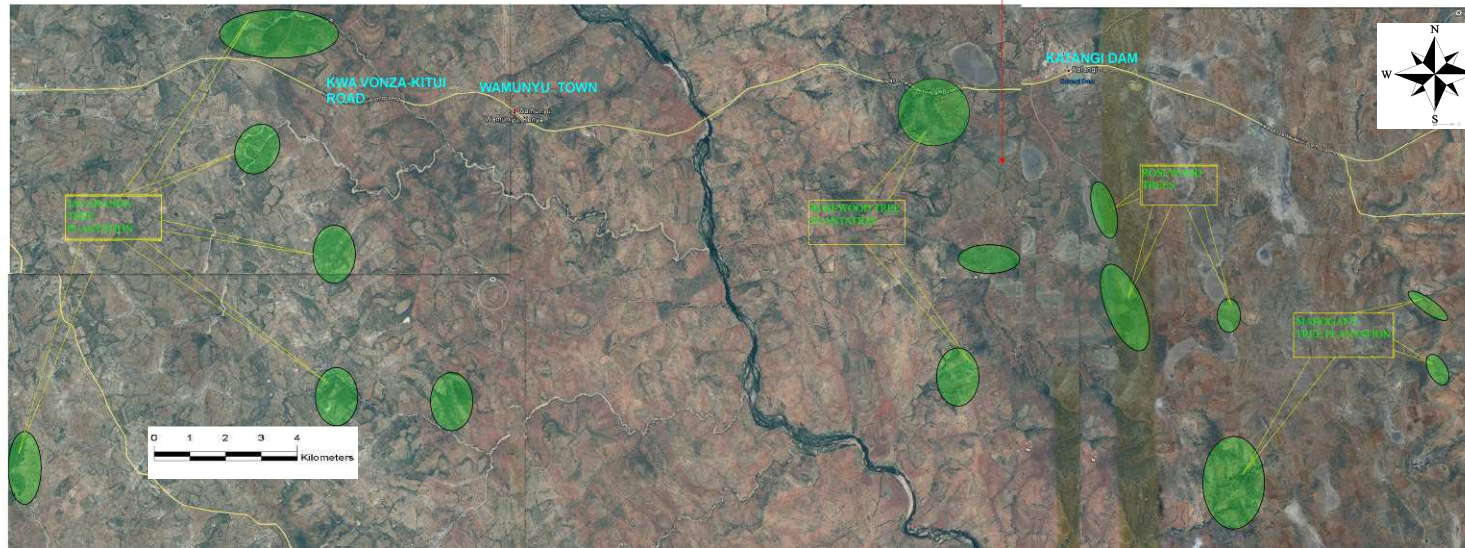
located within Wamunyu and the larger Machakos County	<ul style="list-style-type: none"> <li>• Community development region distribution of development and wealth, external markets</li> </ul>	
<b>Option 3:</b> Purchase of land (production site) and growing of trees for self (company)	<ul style="list-style-type: none"> <li>• Land will be owned</li> </ul>	Soil degradation

*Source: Author, 2014*

**Figure 5.3: Proposed Tree Production Sites**



TREE PRODUCTION AREAS WITHIN WAMUNYU TOWN



**PROPOSED TREE PRODUCTION SITES**

Considerations:

- Cost of transport within a radius
- Cost of buying land
- Cost of renting land (per acre)
- Total input costs (refer to equation 1 above)

The area highlighted in Green indicates a 40 Km radius zone where raw materials sourcing may be undertaken within optimal production level and minimal costs. This include regional centers surrounding Wamunyu Town, that is: **Kangondo, Matuu, Mwingi, Kitui, Mutomo, Wote and Machakos**

## **5.6.2 Agglomeration of All Woodcarving Activities And Integrated Small-Scale Industry Complex, Using Urban Planning Principles to Create Unique Cultural Node**

This proposed the implementation of a cultural node in two phases:

### **Phase 1: Wamunyu Handicraft Society as the Core of the industry due to its Strategic Location (Entry Point to Wamunyu Town)**

The construction of a proper woodcarving industrial complex with well-organized working spaces for each and every stage of the woodcarving value-chain. This will have a section of the complex dedicated to creation of woodlots for initial processing within planting of trees for harvesting, highly modern and industry workstation for the carvers complete with all necessary amenities such as sanitary facilities, galleries and exhibition halls, reception area, parking areas and loading bays, well landscaped exteriors and marketing offices and recreational facilities. The facility will be constructed at the current location of the Wamunyu Handicraft Society Site (refer to land-use map 3.6 in chapter 3), as it is the original location in which the industry became fully fledged. It is easy to locate due to its strategic location along the major C97 highway to Kitui. It is also integrated with other commercial, residential activities and requisite services within the town. The small scale processing industry will look similar to the image below:

**Plate 5.17: Images of a wood processing industrial Complex, Grays Harbour, Washington USA**



Source: <http://www.graysharbor.org/business/manufacturing-resources.php>, 2014, retrieved on 3<sup>rd</sup> April 2014

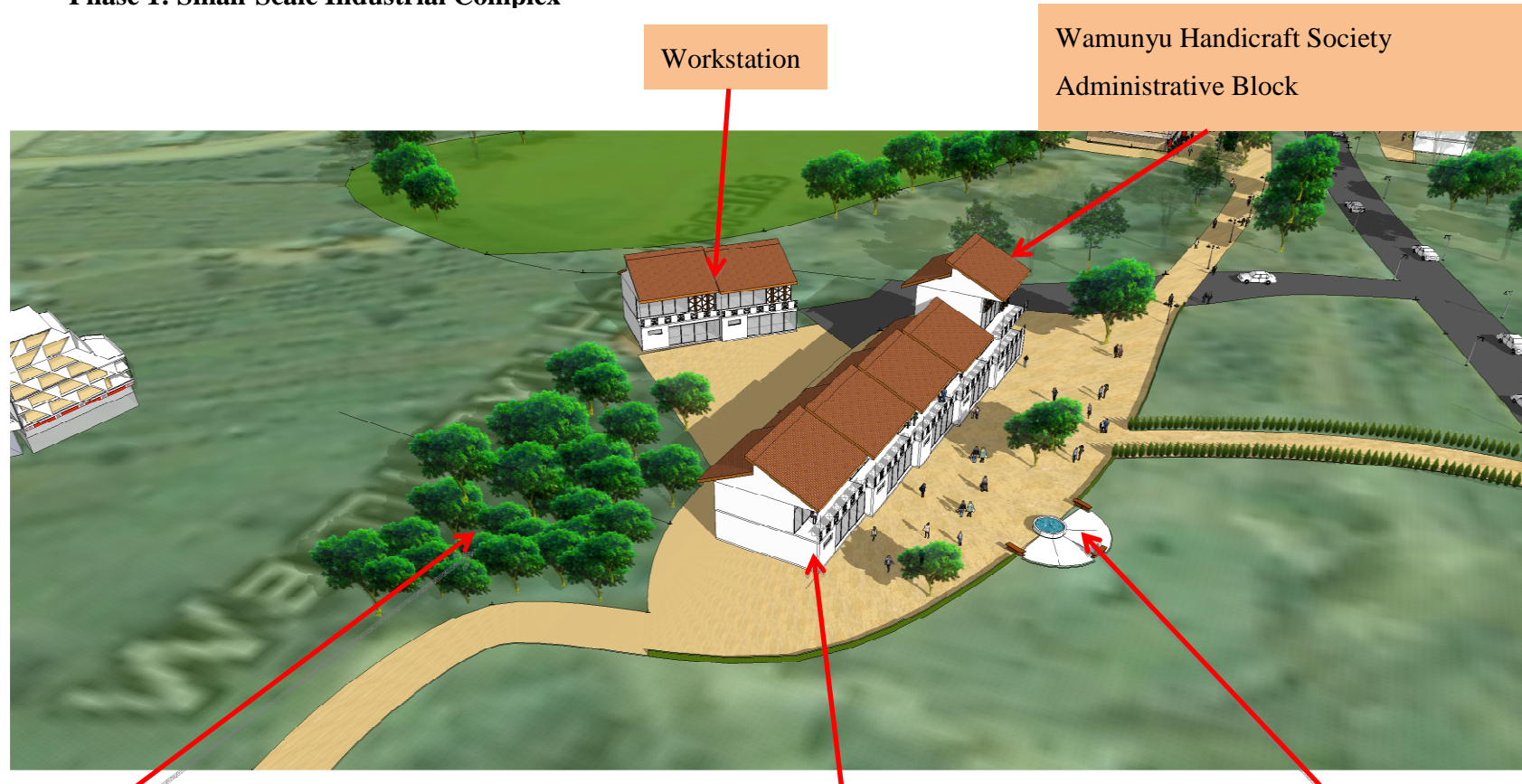
**Phase 2: The second phase of this intervention, will entail creating a cultural character streetscape design along Kwa-Vonza Kitui road (C97).**

It will also include upgrading and rehabilitation of the existing structures of Wamunyu town along the Kwa-Vonza Kitui stretch to increase cultural edge and outlook as well as cultural activities.

**a) Key Features- Street with a Heritage Cultural Character**

Some of the key features will include: Increased pedestrianisation of streets through deliberately planned for pedestrian corridor with cultural related commercial activities on the frontage of the corridor services like restaurant, curio-shops, cultural markets and art galleries and auditoriums will be included; Investment in culturally oriented architecture and building designs that have heavily printed cultural patterns.

## Phase 1: Small-Scale Industrial Complex



Workstation

Wamunyu Handicraft Society  
Administrative Block

On-site Tree Nursery (seedlings for sale by society) supplemented by outsourced trees from Wamunyu and its rural community members

Mixed Use Development Block with Curios and retail shops, conference facilities, traditional restaurants, entertainment, Cinema, communication center

Green Space- landscaped with focal water point, surrounded by street

### Key Components (Value Chain Spaces)

- Tree Nursery for sale of raw materials to community
- Ultra-modern workstations for the woodcarvers with well equipped sanitary facilities
- Consumption spaces; Curios, stalls, heritage

*Source: Author, 2014*

## Phase 2: Proposed Pedestrianized Cultural Streetscape Along Kwa Vonza-Kitui Road (C97)



### Key Components

Wamunyu Handicraft Society as heart beat of the town. With highly pedestrianized corridors closely passing by the Society to increase level of interaction with culture related activities



Source: Author, 2012

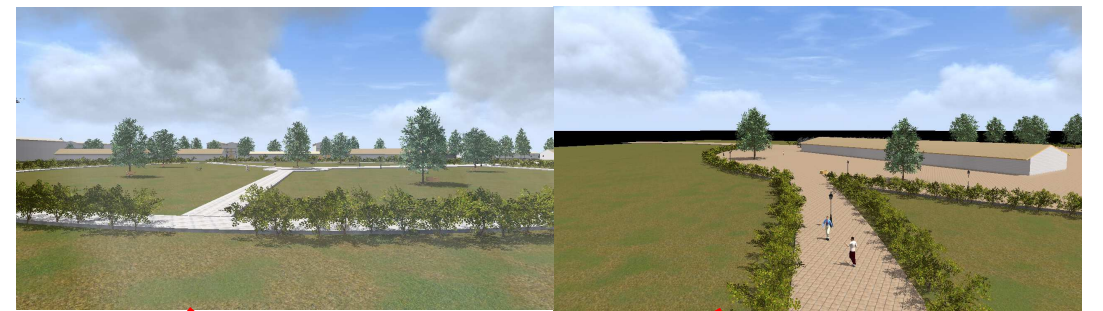
**PROPOSED STREETScape FOR WAMUNYU TOWN CULTURAL CORRIDOR**



**PEDESTRIAN FRIENDLY KWA-VONZA KITUI STREET CORRIDOR**

Designated pedestrian lanes and cycling lanes

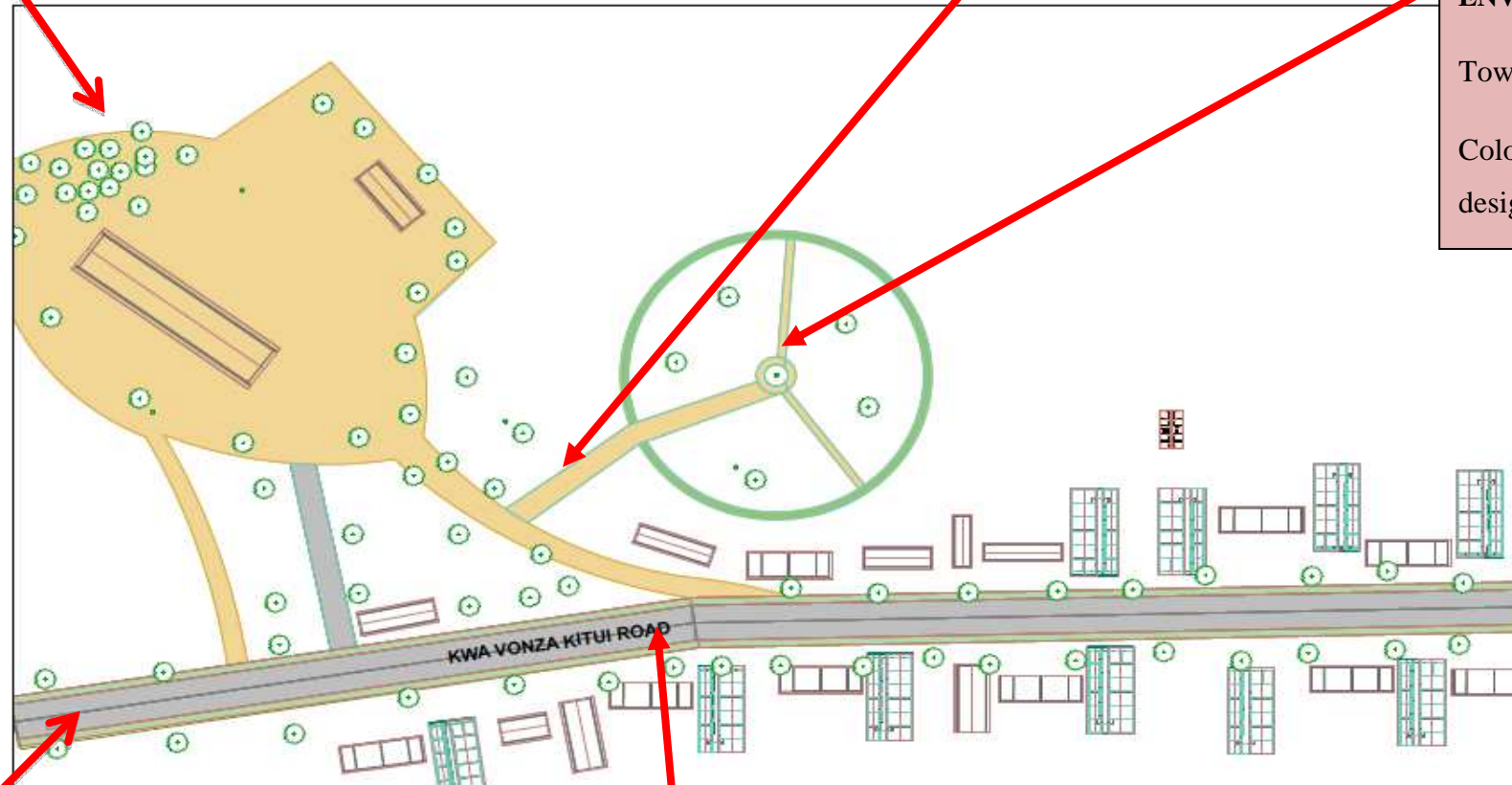
Pedestrian friendly corridors which are fully furnished with street benches and street lights



**ENVIRONMENT-FRIENDLY**

Town green space

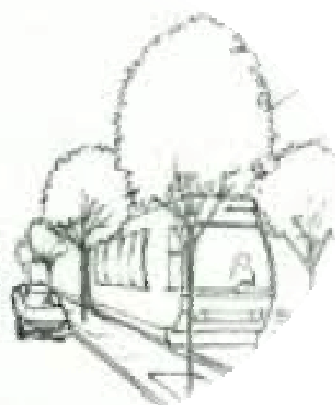
Colourful landscapes with beautifully designed street greenery



**WELL-SERVICED STREETS**

Paved lanes with clear signage and accommodation for the disabled members of society & safety for children

Serviced with litter-bins, drainage channels



### 5.6.3 Spatial Integration of the Industry-Woodcarving Industry Integrated as a Market Function with a Mix-user Urban Development Approach

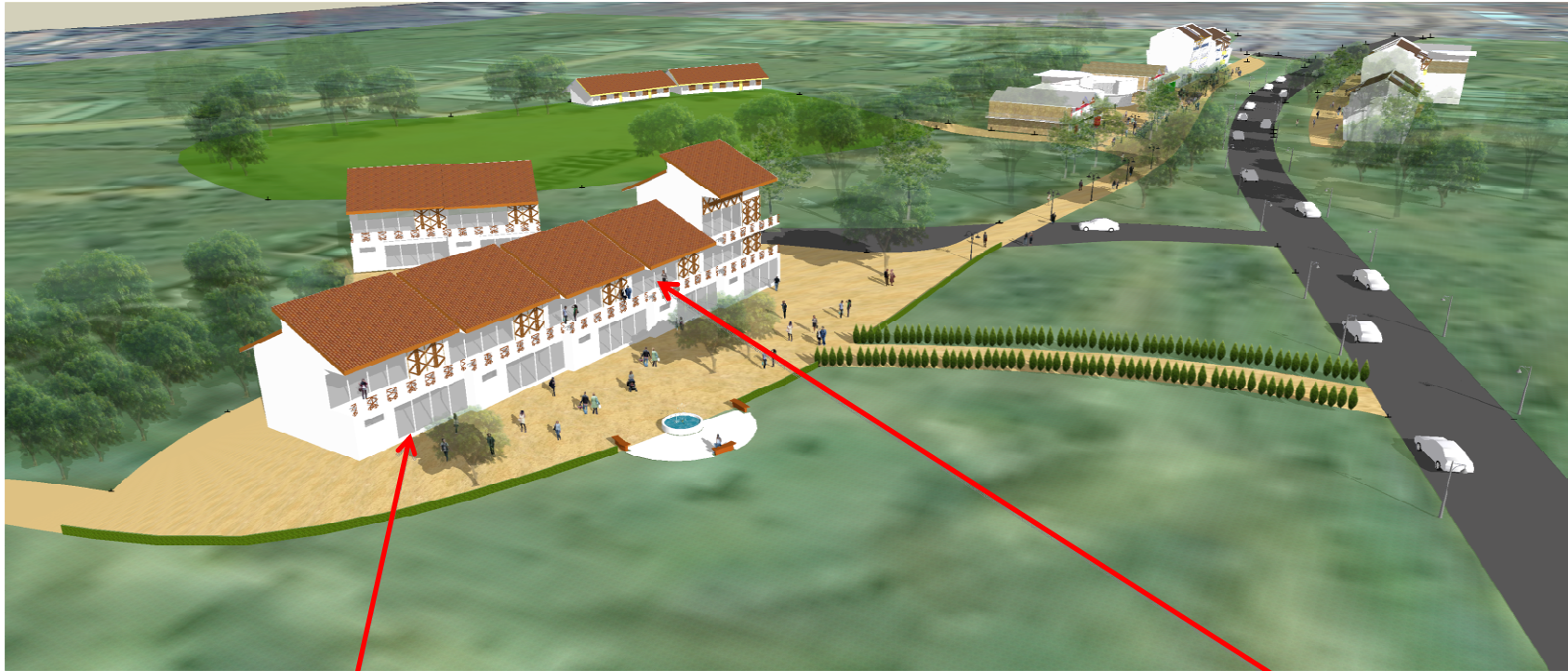
According to the proposal by the Ministry of Culture, Sports and Tourism for Machakos County, which has planned to establish an additional cultural woodcarving market around the Namanga Road Fly over area, as it targets the opening of the East gate of the Nairobi National Park so as to capture the tourists travelling along the Namanga-Amboseli-Circuit through Wamunyu so as to capture revenue from the National Park. Similarly, in addition to this, the study also recommends that the woodcarving cultural industry be incorporate into the urban functions of Wamunyu Town as a vibrant market activity in which production and supply activities run concurrently and alongside other cultural related activities within this market. This will enable consumers to interact with a diversity of land-uses concurrently including both tangible and intangible cultural experiences like local foods in cultural restaurants, local dance and songs within in built auditoriums, galleries showcasing the genesis of the woodcarving industry today and other touristic experiences the county has to offer, while woodcarving remains the focal point of all these activities. The table below proposes the land-use planning translation of the woodcarving industry within Wamunyu Town:

**Table 5.10: Land-use interpretation of the Woodcarving value-chain when integrated within Wamunyu Town**

Value-Chain Phase	Proposed Land -Use	Planning Colour
Tree/Timber Production	Green Spaces	
Processing/Work Stations	Industrial sites/areas	
Selling/Marketing Points	Commercial zones	
Distribution Linkages	Transport corridors	
Intangible Cultural Consumption spaces	Public purpose	

*Source: Author, 2014*

**Plate 5.2: Mixed Use Development- (One-Stop-Shop)**



**Key Components**  
Mixed Use Development Block with Curios and retail shops, conference facilities, traditional restaurants, entertainment, communication centre



**Plate 5.3:** The picture below shows a sketch of the Market function to be used as part of the mix-use development approach



*Source: Author, 2014*

**Table 5.11: Advantages and Disadvantages of each Alternative**

<b>OPTIONS</b>	<b>PLANNING FEATURES</b>	<b>ADVANTAGES</b>	<b>DISADVANTAGES</b>
1: Permanent Industry Node with streetscape having a cultural identity	<p>Small-scale industrial woodcarving complex in Wamunyu Handicraft Society which will be complimented by other land-uses along the Kwa-Vonza-Kitui (C97) Street, such land-uses:</p> <ul style="list-style-type: none"> <li>• Pedestrianized walk ways and corridors with street furniture</li> <li>• Well-equipped sanitary facilities</li> <li>• Restaurant and recreational facilities</li> </ul>	<p>Better organized woodcarving value-chain</p> <p>Increased commercial activity and investment in are development</p> <p>Ensures sustainability of raw materials</p> <p>Less land space is occupied</p> <p>Maximum accessibility because of proximity to Wamunyu Town which is well connected</p>	<p>Difficult to construct</p> <p>Environmental Pollution</p> <p>Expensive on initial capital required</p> <p>Concentration of development in one area at expense of other regional peripheral areas</p>
2: Mixed –Use Development where woodcarving industry is integrated with other	<p>Compact land-uses</p> <p>Integration of woodcarving value chain activities with other cultural and recreational amenities within a storied</p>	<p>Convenient as diversity of uses are available within walking distance</p> <p>Likely to attract more</p>	<p>Environmental pollution may occur</p>

land uses within the Wamunyu Handicraft Society (One-Stop-Shop Concept)	building located in the Wamunyu Handicraft Society	client base Much easier to implement More sustainable	
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*Source: Field Survey, 2014*

#### **5.6.4 Preferred Planning Intervention- Merger of 2 frameworks**

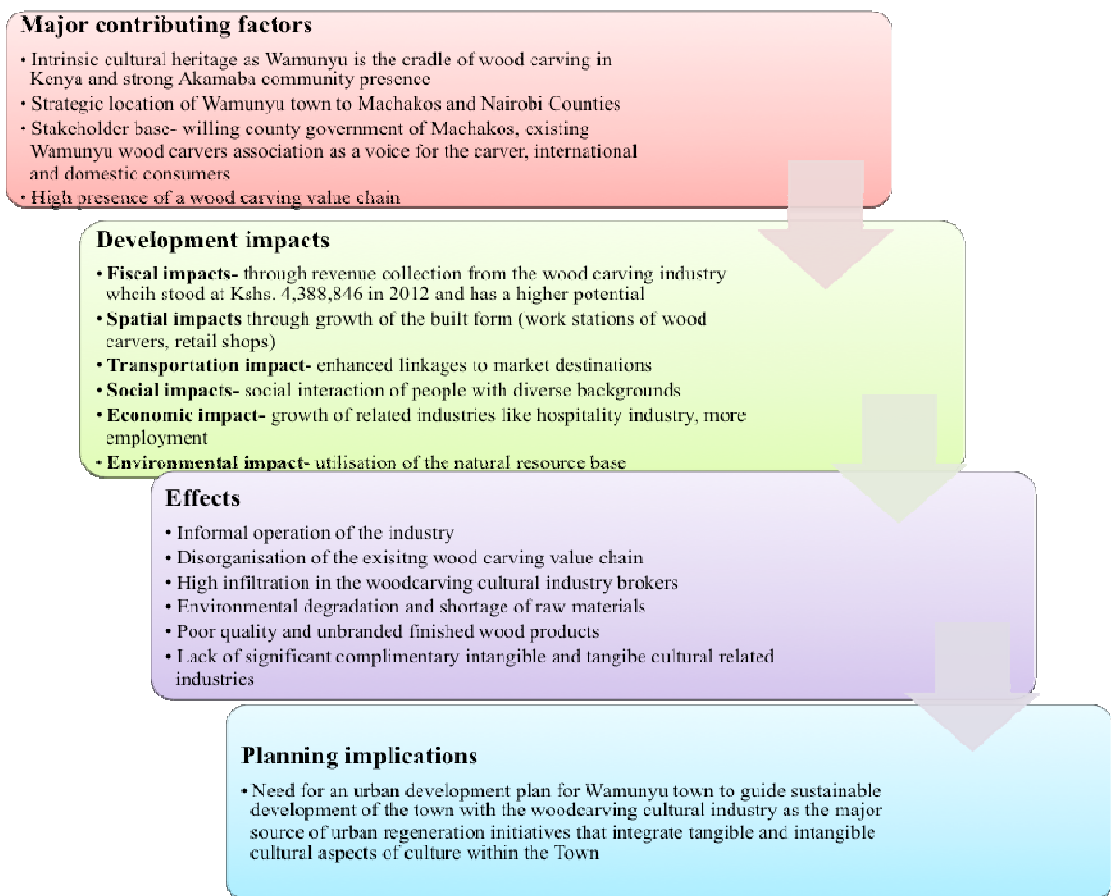
Option 1 on the sustainable tree production through a bio-rights approach and Option 2 on permanent small-scale industrial complex ensures a more sustainable approach for the woodcarving value chain. Option 2, provides a more compact and flexible planning intervention to development. Therefore a merger of elements of the two approaches would be most ideal. They may also provide a more suitable option to solve the problem sustainably.

## CHAPTER SIX: CONCLUSION AND RECOMMENDATIONS

### 6.0 Overview

Based on the assessment and findings in the previous chapters, the study has revealed how cultural industries; particularly the woodcarving industry in Wamunyu Town can contribute to the growth and development of an area. It demonstrated some of the key impacts and their consequent effects on the overall growth of the area. This chapter will thus provide a graphical summary of the issues synthesised, recommendations and a conclusion to the study.

### 6.1 Synthesis of Development Impact of Cultural Industries on Urban Development



## 6.2 Recommendations

The study recommends the following:

- a) **Agglomeration of all woodcarving activities and integrated small-scale industry complex using urban planning principles to create unique cultural node**

This recommendation is **two-fold**: Agglomeration of all woodcarving activities through the **establishment of a small-scale industrial complex** within Wamunyu Handicraft Society site will maximise on the economies of scale particularly of raw materials and transportation of goods to and from the homesteads to the industry. This will encourage the development of a facility where raw materials in form of the good woods identified in the study, will be produced for harvesting. By preparing woodlots of such species like Jacaranda, these will ensure a continuous supply of trees for the industry, without degrading the rest of the natural resource base. Processing of the wood and carving will be done to the acceptable international standards, after which there will be a marketing office which will have a gallery space for display of finished goods and a website to market the goods both locally and internationally. This industry will have a growth pole effect that will generate other smaller industries thus enhancing investments and commercial activities in the town.

**Streetscape design:** Creation of a highly pedestrianised corridor along the Kwa-Vonza Kitui Road that passes in front of the small-scale industry created at the Wamunyu Handicraft Society site will give Wamunyu Centre an Urban Identity. By creating detailed cultural and African print on the existing structures and building of the Town, this will be further enhanced.

- b) **Incorporate and integrated as a woodcarving market function within a mix-user urban development framework (One-Stop Shop Concept)**

Through the integration of the proposed well organised small-scale woodcarving industry in section (a) above, other cultural related tangible and intangible aspects like song and dance, commercial (retail and wholesale) and recreational activities and where possible 1 activities within a common space. This will maximise space use and minimise travel costs for users and area residents.

**c) Provision of urban design and policy guidelines to integrate cultural industries such as the woodcarving industry within the larger town development**

The Machakos County Government should embark on providing a spatial plan that extends up to the Wamunyu Town, with specific space guidelines for the various uses within the market. Specific focus should be given to the different space requirements of the various wares sold within the market. This should be coupled with policy guidelines and regulations that can enable replication of the design in other areas and counties with similar cultural industries. Integration of the market design into the urban framework is paramount.

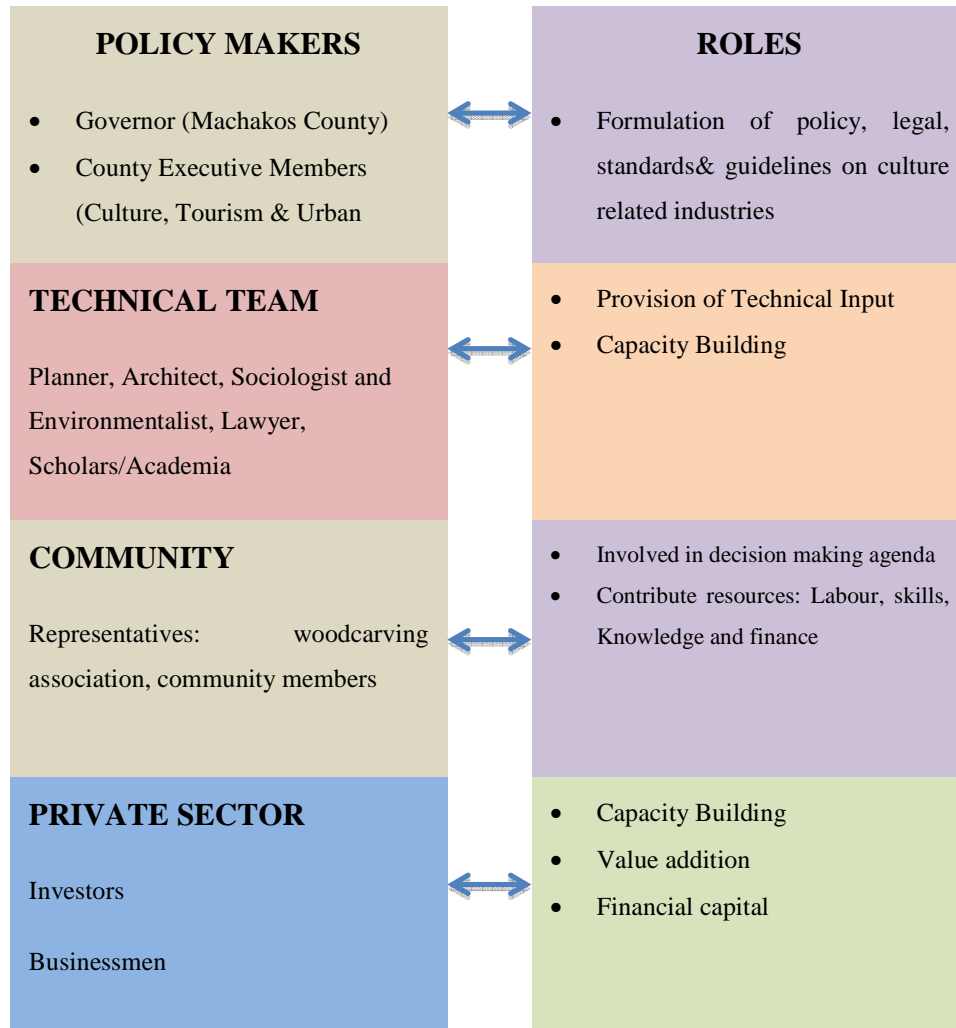
**d) On-site waste management project: provision of biomass recycling plant as an alternative for disposal of the waste products of wood chippings and off-cuts**

There should also be a designated area within the small-scale industrial processing complex in Wamunyu Handicraft Society Site for a biomass recycling plant that will reuse the wood chippings and off-cuts to provide alternative source of energy to power the complex.

**e) Development of an independent body to oversee the smooth running of this and other similar cultural markets**

After the successful establishment of this cultural industries, a team consisting of county government officials from relevant government departments, a planner, investors and most importantly woodcarving association members to steer this cultural industry and any other similar functions within the county.

**Figure 6.13: Proposed Institutional Arrangement to Foster Participatory Development Approach**



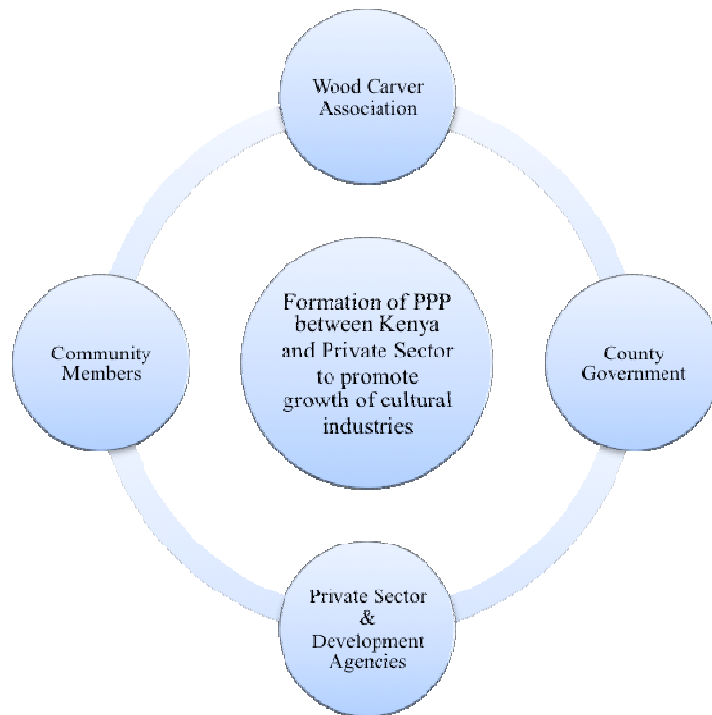
*Source: Author, 2014*

**f) Participatory development approaches through integration of the woodcarvers and their associations in development and redevelopment efforts**

A participative planning approach should be utilised where by the woodcarvers through their association are involved in the site design process through provision of labour and indigenous technical knowledge. This will ensure a more comprehensive and sustainable solution to the woodcarvers, as they will take responsibility for the woodcarving industry

collectively. There are many ways to approach this, however, it is envisaged that PPP approach will be most suitable

**Figure 6.2: Synergy of Efforts**



*Source: Author 2014*

**Table 6.1: Summary of implementation matrix for the main study recommendations**

Recommendation	Short Term	Long Term
Sustainable and consistent tree production through a Bio-Rights Approach	▲	
○ Allocation of government land for tree planting activities	▲	
○ Organize tree planting drives (publicizing information through use of print media)		
○ Organizing community into green groups per location or per wards which will compete for active participation and be rewarded inform of a county grant	▲	
○ Organizing tree planting clubs in	▲	

schools		
<ul style="list-style-type: none"> <li>○ Providing tree seedlings biannually to institutions to plant and manage</li> </ul>		
Provision of urban design and policy guidelines to integrate cultural industries such as the woodcarving industry within the larger town development		▲
Agglomeration of All Woodcarving Activities And Integrated Small-Scale Industry Complex, Using Urban Planning Principles to Create Unique Cultural Node	▲	▲
<ul style="list-style-type: none"> <li>○ Phase 1: Wamunyu Handicraft Society as the Core of the industry due to its Strategic Location (Entry Point to Wamunyu Town)</li> <li>○ Phase 2: creating a cultural character streetscape design along Kwa-Vonza Kitui road (C97)</li> </ul>		▲
Spatial Marketing Strategy-Integrated as a woodcarving Market function within a mix-user urban development framework (One-Stop Shop Concept)		▲
Develop a marketing strategy policy document for the woodcarving industry	▲	
Push for a National Cultural Industry policy document that has regional linkages to counties		▲
Sector Specific policy document for cultural related industries of the county	▲	
Urban design and policy guidelines to integrate cultural industries such as the woodcarving industry within the larger town development		▲
On-site waste management project: Provision of biomass recycling plant as an alternative for disposal of the waste products of wood chippings and off-cuts	▲	
Development of an independent body to oversee the smooth running of this and other similar cultural industries	▲	
Participatory Development approaches through	▲	▲

Integration of the woodcarvers and their associations in development and redevelopment efforts		
--	--	--

*Source: Author, 2014*

### **6.3 Conclusion**

Today cultural industries form an integral aspect of the urban economy and urban spatial fabric for it has indeed become the fourth pillar of sustainable development. Such industries like the woodcarving industry in Wamunyu Town, Machakos County have proven to directly influence development resultantly spurring economic growth and development in the areas they occupy and their immediate environs. Informal sector activities, such as cultural handicrafts markets, provide sustenance for many citizens and contribute substantially to the economy.

However due to poor planning and design considerations, such functions perform unsustainably and do not operate to their optimal potential, rather they are often ignored and left to sporadically come up as an afterthought of other land-uses activities.

Thus there is need for inclusive decision making of urban development policy aimed at spatially assimilating such industries within the larger planning frameworks. Also through the principles of urban and regional planning, an inclusive urban management policy can restore Wamunyu town to the economically efficient state it was in once upon a time. Additionally, through the active involvement of all key stakeholders and the establishment of community-driven initiatives that propose ideas and strategies for implementation, this can be achieved.

Based on the findings in this study, the woodcarving industry within Wamunyu Urban Centre, Machakos County, was once a prime mover of development. This dwindled overtime due to poor spatial planning and poor value chain management of the activity, however, the industry still holds a strong potential to significantly influence the growth and development of Wamunyu urban centre. This potential can only be realised if the woodcarving industry is organised sustainably to ensure a continuous supply of raw

materials for processing. Furthermore, a proper marketing strategy should be established to ensure that goods produced and pushed to international, regional and local levels.

#### **6.4 Areas for Further Research**

Due to the challenge of accessing data on current capacity of trees produced at the household level and growth trends of existing structures including other development related infrastructure, it is important to establish a composite natural resource base and human settlement GIS-based database of past and current growth trends of structures of the Town. This should include records of households that produce tree species for woodcarving, recreational facilities, social amenities and infrastructural trends. Furthermore, a culturally sensitive development of GIS software and other new technologies for ‘cultural mapping’ provides one catalyst for collaboration. Such collaboration should be pursued and encouraged, especially with agencies operating at local levels.

The study has therefore opened a Pandora’s box on investigation of how planning should best incorporate cultural industries within the broader national spatial planning framework. It should also look at how planning can be undertaken to try and focus on specifically creating a model that is suitable for replication of similar cultural industries in other towns and cities in various counties within Kenya and beyond.

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## APPENDICES

### Appendix 1: Guiding Observation Checklist of Study

Date.....

UNIVERSITY OF NAIROBI

DEPARTMENT OF URBAN AND REGIONAL PLANNING

M.A. PLANNING (2012-2014)

#### IMPACT OF CULTURAL INDUSTRIES ON URBAN DEVELOPMENT: CASE OF WAMUNYU WOODCARVING INDUSTRY, MACHKOS COUNTY

*Confidential:* This is a voluntary interview. The respondent will not be coerced to give information. The information provided under the survey shall be used for the study (Research) only and not for any other purpose.

Researcher's Name \_\_\_\_\_

Action: Take photos, notes and sketches under each observation item

#### **Physical Planning**

1. Define the planning area (area in Km<sup>2</sup>) of the planning area
2. Surrounding land-uses of the woodcarving industry (Residential, Industrial, Commercial, Public Purpose, Public Amenities etc)
3. Condition and status of the physical character of the town, or the land-uses
4. SWOT analysis of the town
5. Approximate land-use coverage (in Km<sup>2</sup>)
6. Existing local physical development plan of Wamunyu Town, if any
7. Existing culture related land uses located within Wamunyu Town
8. Proposed local physical development plan for the Town

9. No. of proposed culture-related land uses of the proposed town plan

## **Value Chain**

### **Tree Production Information**

1. No of green spaces within the planning area
2. Location of tree production sites at 2 levels: Household; County natural resource base (forests)
3. Species of trees most used and why
4. Existing area for planting and raw material production and who is in charge of this (quantities of timber produced per unit area)
5. Approximate production levels and carrying capacities of tree production areas
6. Production and selling costs
7. Mode and cost of transportation

### **Work Station**

1. Location of wood processing and carving sites
2. No. of such sites
3. Condition of sites for work
4. Cost of maintaining work station
5. Mode of transportation and delivery to site
6. Units produced per day
7. Approximate earning and monetary contribution of industry

### **Marketing and Consumption Spaces**

1. Location of woodcarving retail shops
2. Distribution and transportation of goods
3. Major consumers of goods

## Appendix 2: Interview Guide for Co-operative Officials

Date.....

Name of department:.....

Designation:.....

Contact:.....

### UNIVERSITY OF NAIROBI

### DEPARTMENT OF URBAN AND REGIONAL PLANNING

### M.A. PLANNING (2012-2014)

#### **IMPACT OF CULTURAL INDUSTRIES ON URBAN DEVELOPMENT: CASE OF WAMUNYU WOODCARVING INDUSTRY, MACHKOS COUNTY**

*Confidential:* This is a voluntary interview. The respondent will not be coerced to give information. The information provided under the survey shall be used for the study (Research) only and not for any other purpose.

Group Name.....

Geographical Area.....

Group/Cooperative Affiliation.....

Name of Respondent.....

Position Held.....

1. When was this group formed? \_\_\_\_\_

2. For what purpose was the group formed?

\_\_\_\_\_

3. How many registered members do you have in your group?

---

4. What was your annual turnover (Kshs) for the year 2013

---

5. What are the most popular carvings by tree species?

---

6. How do you source for raw materials for carving?

Communally \_\_\_\_\_ Individually

From where do you source them?

---

7. What other commodities do you sell/export besides the ones above?

---

8. Do you sell any of your products locally? \_\_\_\_\_

If so, who are your customers? \_\_\_\_\_

9. In what quantities do you export them per week? \_\_\_\_\_ Month? \_\_\_\_\_

Year? \_\_\_\_\_

10. Who are your external customers?

---

11. From what tree species are the most popular carvings made of?

---

12. Are there any low sale seasons in your trade? \_\_\_\_\_

If so, when?

---

13. How does the individual woodcarver benefit from the society?

---

14. What has your group done to ensure continuous supply of raw materials?

---

15. What challenges do you face as a group/cooperative society?

---

16. Do you work in conjunction with any organization e.g., NGOs?

---

b) If so, which ones? \_\_\_\_\_

c) What kind of support are you given? \_\_\_\_\_

d) Has this been successful? \_\_\_\_\_

17. What contribution does the woodcarving industry make to the Economy of Wamunyu Town? (*Give figures from a recent report*)

---

18. How can the woodcarving industry contribute to the growth and development of Wamunyu town?

---

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**THANK YOU FOR YOUR CONTRIBUTIONS**

**Appendix 3: Interview Guide for Development Agencies**

Date.....

**UNIVERSITY OF NAIROBI**

**DEPARTMENT OF URBAN AND REGIONAL PLANNING**

**M.A. PLANNING (2012-2014)**

**IMPACT OF CULTURAL INDUSTRIES ON URBAN DEVELOPMENT: CASE OF WAMUNYU WOODCARVING INDUSTRY, MACHKOS COUNTY**

*Confidential:* This is a voluntary interview. The respondent will not be coerced to give information. The information provided under the survey shall be used for the study (Research) only and not for any other purpose.

Name of Organisation: .....

Name of Respondent (Optional) .....

Geographical Area of operation.....

Name of Interviewer.....

1. How long have you been operating in this area?

\_\_\_\_\_  
\_\_\_\_\_

2. What are your core programmes? (List- Name of Programme, Area of coverage, your role in the region)

\_\_\_\_\_  
\_\_\_\_\_

3. a) Are your activities concerned with the popular community activity of woodcarving?

1) Yes \_\_\_\_\_ 2) No \_\_\_\_\_

b) If yes, in what aspects (explain in detail)

---

---

---

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a) If no, why?

---

---

---

4. What particular challenges do you face in implementing your programmes in this area?

---

5. What success stories do you have concerning your activities in this area?

---

---

---

6. In your opinion, what is impact of the woodcarving industry in the development of the Wamunyu town?

---

---

7. Does this industry have potential to spur development in the County? Yes or No

---

8. Any other relevant issues related to the study?

---

---

**THANK YOU FOR YOUR CONTRIBUTIONS**

## Appendix 4: Woodcarvers Questionnaires

Date.....

UNIVERSITY OF NAIROBI

DEPARTMENT OF URBAN AND REGIONAL PLANNING

M.A. PLANNING (2012-2014)

### IMPACT OF CULTURAL INDUSTRIES ON URBAN DEVELOPMENT: CASE OF WAMUNYU WOODCARVING INDUSTRY, MACHKOS COUNTY

*Confidential:* This is a voluntary interview. The respondent will not be coerced to give information. The information provided under the survey shall be used for the study (Research) only and not for any other purpose.

Name of Respondent (Optional) .....

Geographical Area.....

Questionnaire No.....

Name of Interviewer.....

SECTION A: Background Information (Tick where appropriate)		
1.	Co-operative membership:  1) Yes _____  2) No _____	(1)  (2)

	If yes, how Many institutions: _____	
2.	Group/Co-operative Affiliation (deals with): _____	
3.	Carving Site: _____	
4.	Sex: 1) Male _____ 2) Female _____	(1) (2)
5.	Age: _____ Date of birth? [dd/mm/yy] _____  1) 10-20 years 2) 21-30 years 3) 31-40 years 4) 41-50 years 5) 51-60 years 6) Above 61 years	(1) (2) (3) (4) (5) (6)
6.	Highest completed level of Education (wood-carver):  1) No formal Education 2) Nursery 3) Primary school 4) Secondary school 5) Higher education	(1) (2) (3) (4) (5)
7.	Marital Status: 1) Married 2) Single 3) Widowed	

8.	<p>Spouses Occupation:</p> <p>1) Farming                      2) Self- employed</p> <p>3) Informal                      4) Formal Employment</p>	<p>(1)</p> <p>(2)</p> <p>(3)</p> <p>(4)</p>
9.	<p>Level of Education of Spouse:</p> <p>1) No formal Education</p> <p>2) Nursery</p> <p>3) Primary school</p> <p>4) Secondary school</p> <p>5) Higher education</p>	<p>(1)</p> <p>(2)</p> <p>(3)</p> <p>(4)</p> <p>(5)</p>
10.	<p>Number of Children: 1) Male: ____ 2) Female ____</p>	
11.	<p>Ages of Children: 1) 0-12: _____ 2) 13-24: _____</p> <p>3) 25 and Above: _____</p>	<p>(1)</p> <p>(2)</p> <p>(3)</p>
12.	<p>Level of Education of Children:</p> <p>1) Nursery: _____</p> <p>2) Standard 8: _____</p> <p>3) Form I – IV: _____</p> <p>4) College/University: _____</p>	<p>(1)</p> <p>(2)</p> <p>(3)</p> <p>(4)</p>

<b>SECTION B: WOODCARVING AND TOWN DEVELOPMENT</b>		
1.	For how many years have you lived in Wamunyu town? _____	
2.	For how many years have you been in the woodcarving business? _____  Has this industry grown or declined over the years? 1) Grown 2) Declined  Why? _____ _____	(1)  (2)
3.	In your opinion, has this industry contributed to the growth/development of this town? 1) Yes _____ 2) No _____	(1)  (2)
4.	If yes, how? (Specify) _____ _____	
<b>SECTION C: STRUCTURING OF WOODCARVING ACTIVITIES (VALUE CHAIN)</b>		
1.	a) Where do you get your raw materials (wood)?  1) From a specific place (locally) (Local wood traders, local forests, local co-operatives)  2) Scattered suppliers all over the county and beyond (Direct external sourcing: Forests outside the county)	(1)  (2)
2.	b) What parcel of land do wood suppliers live on?  1) ¼ Acre	(1)  (2)

	2) ½ Acre	(3)
	3) 1/8 Acre	(4)
	4) 1- 2 Acres	(5)
	5) Above 3 Acres	
3.	a) Has the source changed over the years?	
	1) Yes _____ 2) No_____	(1)
		(2)
	b) If so why?	
	1) Government restrictions	(1)
	2) Exhaustion of raw materials from indigenous forests	(2)
	3) Scarcity of raw materials	(3)
	4) Expensive raw materials	(4)
		(1)
	c) How do you ensure continuous supply of raw materials?	(2)
	1) Direct purchasing of raw materials from dealers	(3)
	2) Planting trees through a society	(4)
	3) Formulation of co-operatives to pool resources	
	4) Other (specify)	

4.	<p>Which are the common tree species are used carvings?</p> <p>1) <i>Dalbergiamelanoxylon</i> (Mpingo, Ebony)</p> <p>2) <i>Terminaliabrownii</i> (Muuku)</p> <p>3) <i>Afzeliaquanzenis</i> (Mahogany)</p> <p>4) Jacaranda</p> <p>5) <i>Combretum schumannii</i> (rosewood, mwaawausi)</p> <p>6) <i>Grevillea robusta</i> (Silky Oak)</p> <p>7) <i>AzadirachtaIndica</i> (Neem Tree)</p> <p>8) Any other (specify)</p> <p>b) Where do they grow? _____</p>	<p>(1)</p> <p>(2)</p> <p>(3)</p> <p>(4)</p> <p>(5)</p> <p>(6)</p> <p>(7)</p> <p>(8)</p>
5.	<p>a) Are there some trees that were used for carving purposes in the past, which are now not readily available? 1) Yes      2) No _____</p> <p>b) If yes, which ones? _____</p> <p>c) Why are they not readily available?</p> <p>_____</p>	<p>(1)</p> <p>(2)</p>
6.	<p>What do you do with the off-cuts after you have got the right size of wood for carving?</p> <p>1) Sold off to farmers</p> <p>2) Recycled as fuel</p> <p>3) Burnt off</p>	<p>(1)</p> <p>(2)</p> <p>(3)</p> <p>(4)</p>

	4) Other (Specify)	
7.	<p>a) Where do you sell the finished products?</p> <p>1) Locally (within the County)</p> <p>2) Regional (to other counties in Kenya)</p> <p>3) Internationally</p> <p>4) Both local and international markets</p> <p>b) In what quantities (No. of carving units/day or per month)?</p> <p>1) 0-10</p> <p>2) 10-20</p> <p>3) 20-30</p> <p>4) 31 and above</p>	<p>(1)</p> <p>(2)</p> <p>(3)</p> <p>(4)</p> <p>(1)</p> <p>(2)</p> <p>(3)</p> <p>(4)</p>
8.	<p>How are your goods/materials transported to the business site?</p> <p>1) Public Service Vehicle (PSV)</p> <p>2) Self (on foot)</p> <p>3) Rickshaw (Mukokoteni)</p> <p>4) Personal means</p>	<p>(1)</p> <p>(2)</p> <p>(3)</p> <p>(4)</p>
9.	<p>Where do you store your finished goods before they are sold?</p> <p>1) Have own storage facility</p> <p>2) Rented storage facility (not shared)</p>	<p>(1)</p> <p>(2)</p>

	<p>3) Shared rented space storage facility</p> <p>4) Keep in my house (4)</p>	<p>(3)</p> <p>(4)</p>
10.	<p>How do you market your carvings?</p> <p>1) Through brokers</p> <p>2) Through institutions like marketing sacco's</p> <p>3) As individuals</p> <p>4) Through media (Internet, Facebook. Newspapers)</p> <p>5) Other (specify)</p>	<p>(1)</p> <p>(2)</p> <p>(3)</p> <p>(4)</p>
11.	<p>What marketing challenges do you face?</p> <p>1) Disorganization of industry</p> <p>2) Poor access to market</p> <p>3) Dishonesty within organized institutions</p> <p>4) Others (specify)</p>	<p>(1)</p> <p>(2)</p> <p>(3)</p> <p>(4)</p>
12.	<p>Where else do you find carving sites in Kenya?</p> <p>(Specify)_____</p>	
13.	<p>Do you have competitors?</p> <p>a) Yes _____ b) No _____</p> <p>Who are your competitors?</p> <p>1) Local carvers    2) International carvers (Tanzania)</p>	<p>(1)</p> <p>(2)</p> <p>(1)</p>

		(2)
14.	<p>Causes of competition?</p> <p>1) Lack of creativity thus affecting price</p> <p>2) Poor value addition by Wamunyu carvers</p> <p>3) Period of business</p> <p>4) Location of business</p> <p>5) Poor marketing of Wamunyu carvings</p> <p>6) Other (specify)</p>	<p>(1)</p> <p>(2)</p> <p>(3)</p> <p>(4)</p> <p>(5)</p> <p>(6)</p>
15.	<p>Who is allowed to be a woodcarver?</p> <p>1) Anybody</p> <p>2) Experienced persons of the industry</p> <p>3) Man's job</p> <p>4) Women's job only</p> <p>5) Unemployed</p> <p>6) No women allowed</p> <p>b) Why? _____</p>	<p>(1)</p> <p>(2)</p> <p>(3)</p> <p>(4)</p> <p>(5)</p> <p>(6)</p>
16.	<p>Do you receive any support on business development from support institutions, e.g. NGOs, Government bodies etc? 1) Yes _____ 2) No _____</p> <p>b) If so, who are they?</p> <p>1) International institutions (UNESCO) (specify)</p>	<p>(1)</p> <p>(2)</p>

	2) Government bodies (line ministries- culture and co-operatives) (specify)	(1)
	3) NGOs, FBOs and CBOs (specify)	(2)
	4) Credit institutions (specify)	(3)
	5) Other (specify)	(4)
	c) Type of support:	(5)
	1) Finance	
	2) Skills development on value addition and new technologies	(1)
	3) Environmental awareness	(2)
	4) Marketing	(3)
	5) Other (specify)	(4)
		(5)
<b>SECTION D: ECONOMIC CONTRIBUTION OF INDUSTRY</b>		
1.	a) Is woodcarving your only occupation?	
	1) Yes _____ 2) No _____	(1)
	b) If no, what else do you do?	(2)
	1) Farming	
	2) Self-employed	
	3) Informal employment	(1)
	4) Formal Employment	(2)
		(3)
		(4)

2.	<p>How much income do you earn from this activity per month? (Kshs./ Month)</p> <p>1) Below Kshs. 5000</p> <p>2) 5000-10,000</p> <p>3) 10,001-20,000</p> <p>4) Above 20,000</p>	<p>(1)</p> <p>(2)</p> <p>(3)</p> <p>(4)</p>
<b>SECTION E: SUSTAINABILITY OF WOODCARVING INDUSTRY</b>		
1.	<p>What are the other uses of trees in this area?</p> <p>1) Fuel (charcoal, firewood)</p> <p>2) Woodcarving</p> <p>3) Building timber (construction)</p> <p>4) Carpentry</p> <p>5) Others (specify)</p> <p>In your opinion, what do you think consumes more wood?</p> <hr/>	<p>(1)</p> <p>(2)</p> <p>(3)</p> <p>(4)</p> <p>(5)</p>
2.	<p>Do you undertake tree-planting exercises in your farm?</p> <p>1) Yes _____ 2) No _____</p> <p>b) If yes, what tree species have you planted?</p> <hr/> <p>c) What other tree species would you want to plant?</p> <p>1) <i>Dalbergiamelanoxylon</i> (Mpingo, Ebony)</p>	<p>(1)</p> <p>(2)</p>

2) <i>Terminalia brownii</i> (Muuku)	(1)
3) <i>Azelaquanzensis</i> (Mahogany)	(2)
4) Jacaranda	(3)
5) <i>Combretum schumannii</i> (rosewood, mwaawausi)	(4)
6) <i>Grevellea robusta</i> (Silky Oak)	(5)
7) <i>Azadirachta Indica</i> (Neem Tree)	(6)
8) Any other	(7)
(specify) _____	(8)
d) What problems have you encountered in tree planting on your farm? (Tick where applicable)	(1)
1) Soil type	(2)
2) Land sizes	(3)
3) Weather	(4)
4) Lack of seedlings	(5)
5) Pests and diseases (termites)	(6)
6) Lack of water	(7)
7) Technology of planting	
b) If no, why haven't you planted trees?	
_____	

3.	<p>Does this activity have a future?</p> <p>1) Yes _____ 2) No _____</p> <p>In your opinion, does this wood caring industry have potential to contribute to the growth of Wamunyu town?</p> <p>1) Yes _____ 2) No _____</p> <p>Explain?</p> <p>_____</p> <p>_____</p>	<p>(1)</p> <p>(2)</p> <p>(1)</p> <p>(2)</p>
4.	<p>How can the County Government facilitate the improvement and growth of this industry?</p> <p>_____</p> <p>_____</p>	

**THANK YOU FOR YOUR CONTRIBUTIONS**

**Appendix 5: Interview Guide for County Officials**

Date.....

Name of department:.....

Designation:.....

Contact:.....

**UNIVERSITY OF NAIROBI**

**DEPARTMENT OF URBAN AND REGIONAL PLANNING**

**M.A. PLANNING (2012-2014)**

**IMPACT OF CULTURAL INDUSTRIES ON URBAN DEVELOPMENT: CASE OF WAMUNYU WOODCARVING INDUSTRY, MACHKOS COUNTY**

*Confidential:* This is a voluntary interview. The respondent will not be coerced to give information. The information provided under the survey shall be used for the study (Research) only and not for any other purpose.

Name of Interviewer: \_\_\_\_\_

Name of Respondent: \_\_\_\_\_

Position Held: \_\_\_\_\_

1. Historical background of Wamunyu town? (When was it formed) (Provide a map where possible)
2. What factors have led to this growth and development?  
\_\_\_\_\_
3. What has been the growth trend of Wamunyu town OVER THE YEARS? (Give detailed area and direction of development)

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4. What has been the contribution of the Woodcarving industry to the development of Wamunyu Town?(Provide source of data by map/plan of the town)

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5. What is the impact of this woodcarving industry on urban development of Wamunyu Town?

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6. In your opinion, does this woodcarving industry have a future?

Yes \_\_\_\_\_ No \_\_\_\_\_

Why? \_\_\_\_\_

7. What contribution does the woodcarving industry make to the Economy of Wamunyu Town? (*Give figures from a recent report*)

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8. What plans does your sector/office have for the woodcarving industry?

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9. Any other comments on the study or project?

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**THANK YOUR FOR YOUR CONTRIBUTIONS**

**Appendix 6: Sampling Frame of All woodcarving Co-operatives in Wamunyu Town, Wamunyu Ward**

Date.....

Name of Co-operative	Category	Membership		Annual Turnover for 2012 (Kshs.)
		Male	Female	
Wamunyu Handicraft Society	Wood-carving Industry	1617	326	4,334,888
Mililuni Handicraft Society	Wood-carving Industry	203	54	120,742

*Source: Department of Livestock, Agriculture and Co-operative Development, 2014*

## Appendix 7: Site Plan of Wamunyu Handicraft Society Woodcarving Centre

