Market Places

Experiences from Kisumu City

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Preface

The Triple Helix Model (Academicians, Practitioners and Private Sectors) has informed the development of this text. The emphasis has been on having an easy to use text that allows the various players in the Market Places to have a reference text on Kisumu that is easy to ready but based on basic scientific processes in its preparation. Visual presentation is supported with text and other illustrations to present the position of Market Places in Kisumu and its hinterland.

This text is based on ongoing researches on market places in Kisumu and its hinterland. It is appreciated that cities as market places have a strategic linkage with the hinterland. Kisumu city is no exception. The hinterland of Kisumu covers most of the highlands West of the Great Rift Valley stretching from the Mara river to slopes of Mt. Elgon on the border with Uganda. This large region provides the bulk of the goods that see their way into the markets in Kisumu.

The research is providing an opportunity for developing an analytical framework and common understanding of the impact of changing market place linkages on inequality and wellbeing in Kisumu. It also provides a glimpse on issues of livelihoods, land use and property rights, access to social services and infrastructure, social relations, living conditions and job security from a more inclusive development perspective.

Knowledge Clusters

Research team identified the following knowledge clusters to guide the achievement the project goal:

- Spatial Growth of Markets
- Market Access
- Institutional Framework

The study was undertaken in Kisumu city and its hinterland. The research team was made up of professionals including experts on urban planning, sociology and environment working with practitioners and private sector players in markets. The methodology focused on approaches incorporating collection of both quantitative and qualitative data and in which participation of the institutional stakeholders in the generation of information was critical. Consultation was conducted with staff members, and key actors including council staff, community leaders, relevant line government ministry staff and partner NGO collaborators among others.

Key Features of Methodology

- Qualitative, but quantified
- Systematic, but flexible
- Action oriented
- Targeted to decision makers

Table of Content

Acknowledgement iii

Preface iv

1.0 1

INTRODUCTION 1

1.1 Cities and Markets 2

1.2 City of Kisumu 3

1.3 Major parameters used to guide the planning process in the city 6

2.0 7

SPATIAL GROWTH OF MARKETS 7

2.1 Urbanization 8

2.2 Spatial Planning 10

2.3 Spatial Planning and Land-Use 12

2.4 Addressing Inequalities through Planning 15

2.5 Slum Re-Development 17

2.6. Periodic Markets. 19

2.7 Market Operations 24

2.7.1 Revenue Collection: 24
2.7.2 Transportation and Access 24
2.7.3 Electricity: 25
2.7.4 Solid Waste Management: 25
2.7.5 Water and Sanitation: 25
2.7.6 Storage and Visibility: 26

3.0 27

THE KISUMU MARKETS 27
3.1 METROPOLITAN URBAN DAILY MARKETS 28
3.2 URBAN DAILY DISTRICT MARKETS 32
3.3 RURAL DAILY OPEN-AIR MARKETS 37
3.4 VILLAGE OR ROADSIDE MARKETS: 41
3.5 WEEKLY MARKETS 44

4.0 45

ENERGY AND SOLID WASTE IN MARKETS 45
4.1 Solar Power: 46
4.2 Solid Waste 47
4.3 Biogas 49

5.0 51

TECHNOLOGY INNOVATIONS FOR MARKETS 51
5.1 Solid Waste Management in Markets 52
5.2 Information Technology and Market Environments 58

6.0 69

DISASTER MANAGEMENT WITHIN THE MARKETPLACE; 69
6.1 Types of Disasters 70
6.2 Impact on Urban areas and markets 72
6.4 New approach to flood disaster management 74

7.0 77

INSTITUTIONAL AND REGULATORY FRAMEWORKS. 77
7.1 Organization Structure 78
7.2 Management of the Markets 79
7.3 Desired Improvements on the Management 81

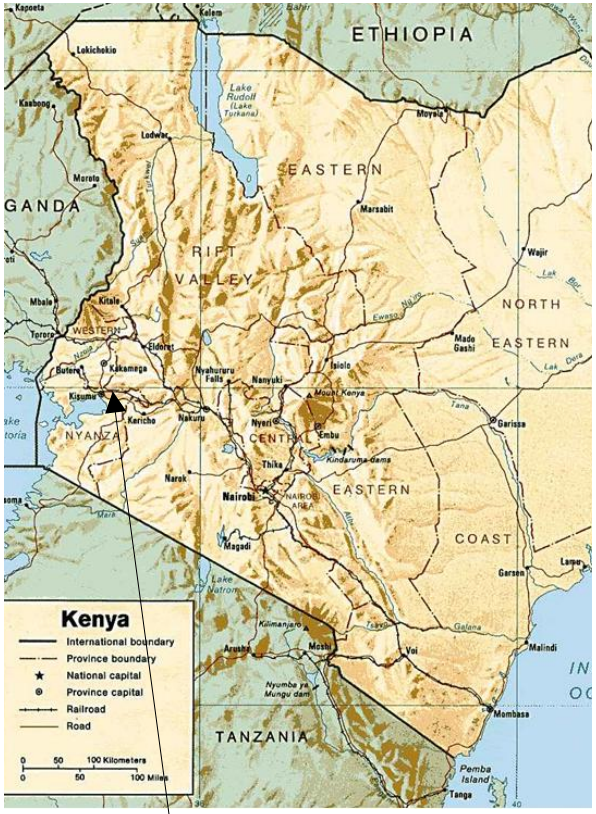
References 82

1.0
INTRODUCTION

1.1 Cities and Markets

Growth of cities is basically the growth of markets. Cities are market places that serve a given hinterland. We therefore find small urban areas operating as a market or large cities which are an amalgam of market places. Marketplaces are locations where vendors gather periodically go to sell merchandise; indoors or outdoors they have been central to historical political, economic, and social revolution in cities around the world and remain central to the political, economic, and social prospects for people (Morales, 2011). Marketplaces are of various types' .i.e. public markets, farmers' markets. They manifest people's purposes and perceptions, in them purposes, old and emergent, are rediscovered and realized. Ostensibly, some are periodic and place-based events hosting small businesses and consumers (Morales, ibid) Common names of marketplaces include public markets, municipal markets, farmers' markets, street markets, flea markets, craft markets, and swap meets. Globally among the functions performed in the markets are sales, tourism promotion, encouraging business formation, socializing and integrating the youth or the immigrant, and enlivening places (Morales, ibid). Kisumu is no exception.

Kenya is one of the fastest growing economies in Africa with a commensurate increase in urban population. While the current urban population is estimated at 35% of the total, at the current urbanization rate of 8% per annum, it is estimated that upto 60% of the



Kisumu City

total population will be urban (Kwedho et al, 2012). There are 178 urban centres in Kenya. The urban population is mainly concentrated in the larger cities of Nairobi, Mombasa, Nakuru, Kisumu with Nairobi, Mombasa and Kisumu leading the pack of the large urban areas followed by Nakuru, Eldoret and Nyeri.

1.2 City of Kisumu

The City of Kisumu owes its origin to a site where the local communities bartered their surplus produce at the head of Winam Gulf, long before the colonial period, an activity from which it derived its original name, “kisuma”. In July 1899, the first development plan was done for the township. This development plan included landing places and wharves along the northern lakeshore of the

gulf. Another plan was drawn in May 1900 when plots were allocated to a few European firms as well as Indian traders who had traveled to Kisumu on contracts to construct the Kenya Uganda railway and had decided to settle at the expanding terminus. The plan included a flying boat jetty (now used by the fisheries department).

In 1903, the township boundaries were gazetted and some 12,000 acres including water set aside for the town's development. Subsequent boundary changes saw the expansion of the city with the last major change in 1972 expanding the city to its current 417km^2 Kisumu city serves as the county headquarters and is the largest city in the entire Lake Victoria basin, a region forming about 5% of Kenya's land area. The City has developed progressively from a railway terminus and internal port in 1901, to become the leading regional commercial/trading, industrial, communication and administrative hub in the Great Lakes region - Tanzania, Uganda, Rwanda and Burundi. The City population growth rate is currently estimated at 2.8% p.a. The city covers 417Km^2 (the lake takes up 120Km^2) lying between 00^{0}06' South of the Equator and 34^{0}45' East of Greenwich, with an elevation of 1140m. on the lake shore to about 1800m at the Nandi escarpment. It is drained by River Kibos, Nyamasaria, Luado and Lie-Lango besides a host of drains (Kisumu City Development Strategy, 2004).

It is estimated that about 60% of the urban population live in the slum areas. A large part of the town is subject to flooding during the rainy season. Due to the destruction of the vegetation on the northern escarpment and increase in the impervious ground as a result of buildings and roads, the city is subjected to these regular episodes of flooding, more so in the informal settlements.

Rural-Urban Interface

1.3 Major parameters used to guide the planning process in the city

Planning in the local authorities is generally independent of the central government and mainly done through assessment of the local context. As part of the engagement in the Public Sector Reform program the city has developed a Strategic Plan to guide its institutional management.

The Director of Planning in Kisumu insisted that Planning takes a bottom-up approach where a context analysis is done of the needs of the people and then strategies are developed to address the said needs. The Cities and Urban Areas Act has come into vogue in the preparation of Integrated Strategic Urban Development Plan for the City and the County to guide the growth of market places within the overall framework of the city.

2.0

SPATIAL GROWTH OF MARKETS

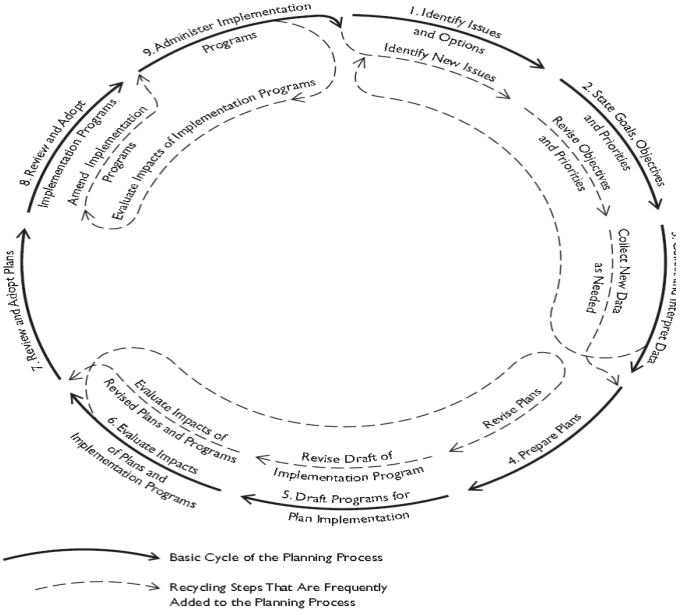
2.1 Urbanization

Although there is rapid urbanization in Africa there is no commensurate increase in the opportunities for sustaining their livelihood as well as planning for the provision of the basic services they need. The bulk of the urban population in Africa is poor. Poverty is highly related with place of residence in most of the developing world cities. (USAID, 2011). The urban poor take on some of the riskiest forms of economic activities as well as living in the most unsafe environments (UN Habitat, 2003). It is estimated that 35% of the Kenyan population live in urban areas. However, this is expected to rise to 60% by 2030 based on the current urbanization rate estimated at 8% per annum (Kwedho *et al* 2012). The provision of services including handling wastes associated with the urbanization processes, clean water, energy, markets and housing amongst others, pauses a challenge to these urban authorities. The people in the towns across the country are confronted daily with problems associated with these inadequate services. Paradoxically, the major urban areas still act as magnets for the rural population, further increasing the pressure on these services with significant environmental impacts (NCAP, 2009, Kwedho et al 2012).

The rapid urbanization experienced in the developing countries has seen a growth in the number of people living in substandard and overcrowded conditions. (Cheserek *et al,* 2011). Over half of the urban population are in low income category and are condemned

to these substandard neighborhoods, popularly referred to as the slums (Satterthwaitte, 1993).

Markets and market activities are influenced by the places in which people live, learn, work, and play. Lewis (1965) notes that over 80% of the urban poor was due to the absence of infrastructural services, and more recently Cheserek *et al* (2011) note that up to 50% of the urban poor was due to lack of infrastructure services. These factors have direct impact in the nature and function of urban markets.



A Planning or Plan-Making Process Cycle
(American Planning Association, 1995)

2.2 Spatial Planning

Spatial planning is "coordination or integration of the spatial dimension of sectoral policies through a territorial based strategy", by establishing better coordination on territorial impacts "horizontally across different sectors, vertically among different levels of jurisdiction, and geographically across administrative boundaries" (Cullingworth and Nadin 2006).

Spatial Planning goes beyond traditional land use planning to bring together and integrate policies for the development and use of land with other policies and programmes which influence the nature of places and how they function. That includes policies which can impact on land use, for example by influencing the demands on, or needs for, development, but which are not capable of being delivered solely or mainly through the granting or refusal of planning permission and which may be implemented by other means." (Planning Policy Statement No 1; ODPM 2005)

Urban spatial planning not only addresses a large number of themes but also involves a process of integrating a variety of interests and ensuring some form of balance with the aim of enhancing potential for sustainability. Cities vary in terms of their population size, structure, topography, economy, socio-cultural aspects and functional context. These all go to determine how policies and regulations are implemented. Urban planning systems are essential for developing and

implementing city-wide policies for sustainable development in which environmental, health and socioeconomic objectives are increasingly linked (Erkan, 2009).

UN-Habitat (2006), emphasizes that lack of clear planning process for markets as a critical issue in Kisumu city. A key failure of the Master Plans has been their inability to deal with the phenomenon of informal development. Traditional planning takes place within the realm of the formal sector, but various aspects of informal urban development such as informal housing (squatter settlements), housing construction, allocation of land, commercial activities take place outside the formal processes of planning and development. The report further adds that experience has shown that lack of spatial frameworks in the form of up-to-date urban development plans clearly indicating the pattern of land use, land ownership, land tenure, and the planned urban expansion for the towns in which interventions are taking place, can lead to unsustainable location of facilities and services. In particular, (FAO, 2009) states that there is low administrative efficiency of public service departments or state-owned utility companies, leading to poorly planned, designed and financed capital infrastructure projects, poor cost recovery rates, and inadequate maintenance and user tariffs set too low to cover operational costs or payback capital investments, for either political reasons or reasons to do with

inaccurate assessments of risk and also mismanagement and corruption, especially in the process of procurement of infrastructure engineering, construction and maintenance services. This aptly describes the situational analysis of municipal solid waste management systems in markets in many municipalities locally and globally.

2.3 Spatial Planning and Land-Use

Strategic spatial planning is distinguished by a concern to provide a framework for the coordination of sectoral policies and in particular of the spatial impact of those policies. From this perspective planning policy and practice may be seen as a central element of cross-sectoral spatial governance within an increasingly complex and fragmented governance context. (Walsh 2010)

Walsh (*ibid*) defines the three levels of planning as;

- ***Spatial***: to ensure consistency across the different levels and scales of policy-making and implementation;
- ***Functional***: the linking of land-uses and activities and their complex interactions: e.g. housing, transport infrastructure, health and education facilities;
- ***Sectoral***: between public, semi-state, private and voluntary sectors.

Spatial planning is about creating sustainable communities. Specifically, it involves integrating the policies and processes of different sectors, such as housing and transport, to improve people's wellbeing.

In many urban localities, the municipal units responsible for commerce, transport, energy, water, housing, food and health do not coincide, and it makes it difficult to pursue effective planning objectives. Systems of urban planning and management in most countries tend to rely on specialist agencies pursuing their particular remits largely in isolation.

For example, there are often separate agencies for markets, transport, pollution control, energy, water, health and land development. According to Barton & Tsourou (2000), these systems have been failing as they are based on an overly simplistic linear view of cause and effect and a competitive ideology. One key to consistency is a shared planning approach whereby settlements and their hinterlands are seen as ecosystems – different groups and activities are seen as interdependent and the relationship with the resource base of land, air, water, energy, food and materials is made explicit. The shared objective, which overrides specific agency responsibilities, is to create a human habitat functioning to create opportunities and a high quality of environment for people irrespective of socioeconomic position and in a manner that is ecologically sustainable.

A national spatial strategy should explicitly place the concept of strategic spatial planning within a sustainable development policy framework. The specific implications of sustainable development for spatial planning policy and practice are outlined in terms of seven principles which should be viewed in relation to market places in the city:

1. Maximizing access to and encouraging use of public transport, cycling and walking;
2. Developing sustainable urban and rural settlement patterns and communities to reduce distance from employment, services and leisure facilities and to make better use of existing and future investments in public services, including public transport;
3. Promoting cost-effective provision of public services like roads, drainage, waste management facilities, lighting, public amenities and schools;
4. Contributing to the evolution of socially integrated communities in both urban and rural areas;
5. Minimizing the consumption of non-renewable resources like soils, groundwater and agricultural land;
6. Avoiding adverse impacts on environmental features such as landscapes, habitats and protected species, river catchments, the maritime environment and the cultural heritage;

7. Ensuring that construction design is of high quality and appropriate to the scale and context of its surroundings. (DoELG, 2002; Walsh 2010)

2.4 Addressing Inequalities through Planning

Women

Women's lives connect to geography and space in many different ways. Among these are women's relationships with their homes, with their kitchens and with their places of work and the immediate spaces surrounding them. Although women have been influential in the design of private spaces, their influence on public spaces has been relatively absent (Women's Health and the Worlds Cities 2011). There is therefore a need to develop cities with women's needs in mind. Women should be key players in the policies and plans used for the development of communities .

Urban planners must consider five forces in planning and developing urban market places in order to improve women's lives.

- The first condition is that there is momentum for improving the status and situation of women through empowering them by providing access to education and resources in urban areas and designing urban areas that are responsive to women's needs.
- The second important condition; women want to live in safe environments with better lighting,

lower population density and spaces that permit connections and allow them to provide the care that their roles demand to meet the needs of their children, friends, partners, elders and other family members. This means providing access to resources for their children as well as elders' needs.

- The third condition is to pay attention to the socio-cultural context and religious mores that drive and often dictate women's movements, educational and working options and housing needs.
- The fourth vital condition is to seek and include women's voices in planning decisions.
- The fifth and most important condition is to develop a conceptual framework that provides a structure for systematically investigating gender and its impact or lack of it, on urban environments as well as on well being (Meleis, 2011).

Urban Poor

It is clear that developmental disadvantages are unfairly burdened on the poorer members of society, and in the poorer areas within cities. Social isolation is progressively more likely and community participation less likely. These factors are shaped and at least partially created by the development and implementation of design decisions. In 2000, 189 nations made a promise to free people

from extreme poverty and multiple deprivations. This pledge became the eight Millennium Development Goals to be achieved by 2015. In September 2010, the world recommitted itself to accelerate progress towards these goals (UNDP). Often, inequalities in cities develop and expand, particularly when expansion is due to an inflow of already disadvantaged groups such as immigrants, migrants, rural people, women and minorities (UNHABITAT 2006). Therefore, in order for spatial planning to have an impact on poverty reduction through market place development it is important to have planning processes that are pro-poor.

2.5 Slum Re-Development

The definition of a slum has usually been associated with overcrowding. A slum may be an area overcrowded with buildings, buildings overcrowded with people or both. But density is really not the only criteria for defining a slum. We note that neighborhood facilities such as access to water, quality of housing,

Nyalenda Unplanned Settlement

poor sanitation and markets are also of importance. Security of tenure is also a cardinal consideration. Also of importance however is the aspect of apathy and social isolation.

It is possible to summarize the causes of slum formation as follows

- Slums are formed largely due to changes in urban land use patterns. The slum develops into an area of *high land value but cheap rents*.
- Slum formation is a factor of housing shortage and maintenance. Slums are ''urban villages'' which function as ''entry area'' to the cities,. Their inhabitants cannot afford good housing, because private enterprise will not supply it at prices they can *afford*.
- At another level we have the psychological attitude toward success through acculturation. It is the contention here that such barriers are reinforced by the low levels of accessibility to the rest of the town for the slum residents and thus the *psychological barriers begin from the physical separation*.

The slum environments are far from static. The peripheral slum and squatter settlements improve noticeably over time, others seem to stagnate. And all the time people are moving in and out of the slums. However the movement out of the slum areas is not

significant. An image of impermanence is created by the decrepit appearance of many of the shantytown's dwellings. However the slum areas are to a large extent permanent as a feature within the urban mosaic and must be integrated in the development of the town if the overall healthy living environments are to be achieved and well-being maintained.

The markets in these slum areas have unique dynamics that are determined by the socio-cultural parameters that they attain as they metamorphose within the city's fabric. The markets tend to be informal and periodic to respond to the shopping needs of the fluid slum area populations.

2.6. Periodic Markets.

Periodic markets must be viewed as an ethnic organization pattern that runs through the clan hierarchy to the village level. This lower level central-place sub-system then forms the core of the daily livelihood of the people both in urban and rural areas. According to Obudho (1976), in addition to the economic value and functions the periodic markets in Kenya perform very important political functions The markets are used as centers for the dissemination of information relating to local and central government administration. During market day local residents go to the market in order to buy produce as well as to meet local administration officials with the hope of exchanging current social information. The administration used to take

the opportunity for weekly sessions to meet on the market days for the market people and as a means of pushing the government agenda to wider audience. Markets were also important as religious centers where various sects could meet for the sole purpose of propagation of the gospel with the establishment of churches during the colonial era; although this function has diminished over the years it still forms the character of the market places in Kisumu.

Obudho (1976) further adds that in Kenya the markets are organized in a cyclic system. Each of the circles is composed of complete and intertwined sequence of markets taking place over seven-day-week period. By concentrating the markets into circles it is possible to contact more varied sections of people and also different products both in time and in space because the cost of overcoming distance is high and profit margins are low. Hence we find a symbiotic relationship between the markets in the inner core of the City and the rural hinterland market places. Obudho (*ibid*) classifies markets as:-

(a) Grade A: Metropolitan urban daily market which meets in covered structure Such metropolitan markets have constant peak from morning to evening with daily attendance of 15000 to 25000 people The metropolitan daily markets are usually surrounded by feeder markets in the peri-urban areas of the city. Kibuye and Juilee are such markets

(b) Grade A Urban daily district markets: These markets take place daily but the total attendance and revenue collected is comparatively smaller than that for the metropolitan daily markets. These types of markets are common in the inland district or sub-district urban centers. Although most of these markets meet daily there are one or two important days of the week when they attract a larger population. Kondele and Mamboleo fall in this category

(c) Grade A and B: Bi-daily open-air lacustrine markets. These markets are located mainly in the ports of Lake Victoria in the Coastal Region and along the inland lakes. The morning markets usually begin soon after dawn and continue up to 10 a.m. and the afternoon markets begin at 2p.m and remain open until the 7p.m.

The morning markets meet when the fishermen land their catch and late evening markets meet when the itinerant traders and importers bring their hinterland produce to the coastal ports after a day's journey from the inland periodic markets. Dunga and other Beaches fall in this category.

(d) Grade B or C: Rural daily open-air markets: These markets gained their importance during the post-colonial era. Most have two important meeting days. The other days of the week are used mainly to buy perishable produce and some shop goods. These daily rural markets are now an important part of the landscape as well as the economy. These are found in the City sub-urbs such as Chiga and Dago.

(e) Grade B or C: Cattle or twice-a-week open-air markets: These large rural markets meet either on Mondays or Tuesdays and Thursdays or Fridays leaving Wednesdays and Saturdays and Sundays free for attending other lower-order markets. The cattle market is just one of the three variations of the fair type of rural market. Wathorego and Chiga meets this categorization

(f) Grade B or C, Weekly markets : These types are few and least popular in Kenya. They meet only once weekly. Although the absence of cattle is regulated by law it should be pointed out that as these markets grow in importance livestock transaction facilities are usually added. The weekly produce markets are the most common in Kenya. The great majority of the consumers live no more than fifteen kilometers away. Ojola is one such market

(g) Village or roadside markets: These markets are fewer than the weekly markets and they contain limited number of buyers and sellers. Although small these markets meet only to satisfy particular demand at specific time. These are the typical markes in the slum areas of Nyalenda, Manyatta, Bandani and Obunga.

CITY MARKETS	
Migosi	Kisian
Jubilee	Chiga
Fish market	Nyamasaria
Kibuye	Dago
Kondele/Flamingo	Ojolla
Oile Market	Wath Orego
Kiboswa	Otonglo
Mamboleo	Kibos
Oponono	Obambo
Kowino /Pandi pieri	Ayanga
Manyatta	

2.7 Market Operations

2.7.1 Revenue Collection:

Collecting revenue from the market is main objective of the City Board. The Board, through the Market Attendants collects license fees from traders on a daily basis except for Markets such as Kibuye and Jubilee where long term licence fees are paid. The receipting systems is however not tamperproof and there have been efforts towards automating the revenue collection through LAIFORMS software. This will reduce handling of cash and enhance revenue collection.

Kisumu City Council exhibits constraints in developing and maintaining wholesale markets, and they seem to be considered as low-priority infrastructure for municipalities, leading either to underfunding or to being viewed as an entirely commercial venture. One therefore notes no significant improvement in the two markets that act as wholesale; Kibuye and Jubilee and hence no significant growth in revenue in these two major markets.

2.7.2 Transportation and Access

The transportation system has been integral in the development of markets in Kisumu. The major markets are located along/off the main highways. Kibuye and Kondele on Kakamega road. Nyamasaria, Jubilee and Oile on Nairobi road, Bandani, Riat, Kisian and Ojola on Busia road, Obambo on Bondo road, Chiga on Kibos

road, Dago and Kiboswa on Nyahera road and Mamboleo on Miwani road.

The lower level markets in the residential estates have attempted to enhance their visibility by maximizing access. Those markets that did not have this component factored in their design have tended to collapse. Cases in point are Manyatta, Migosi and K'Owino World Bank II projects developed in the 70s.

2.7.3 Electricity:

A number of markets decry the lack of electricity in effect limiting the nature of operations they can engage in. Apart from contributing to insecurity, it also means a number of artisans cannot operate in these markets. All markets should have provisio for electricity with designated areas for artisans being facilitated to ensure ease of connection

2.7.4 Solid Waste Management:

The Council seems to be overwhelmed with regards to collection of waste in the markets. There was support from UNHabitat which saw the introduction of skips in specific areas. These skips have since rusted and have been abandoned at the dump site. Local management strategies include burning although this does not seem effective especially in the larger markets. The location of skips in every market should be included in the overall strategy for SWM for the City.

2.7.5 Water and Sanitation:

The issue of toilets and water kept cropping up in all markets. Even in markets where

there was provision there were issues of inadequacy, vandalism, access, control, adequacy and cleanliness. In all cases there seems to be a movement away from Council management of toilets to Market Committee, with proven positive results. There is therefore need to ensure that each market has appropriate sanitation managed by the Market Commitees. Water points need to be provided based on the number of projected users (traders and customers)

2.7.6 Storage and Visibility:

The design of stalls in the markets has elicited concern especially as it relates to issues of storage of goods overnight and the visibility of traders/wares to the customers. One therefore finds scenarios where "modern" markets are abandoned due to these concerns. The other issue is the large number of traders who want to use the markets; well beyond the capacity to accommodate them. The proposals have therefore focused on simplicity of design to ensure maximum visibility from the road, simple but effective storage for the traders at night and multi-storey development to maximize on the number of traders accommodated especially in premium locations within the city. Examples are cited of similar ventures in Kampala's Owino Market.

3.0

THE KISUMU MARKETS

3.1 METROPOLITAN URBAN DAILY MARKETS

JUBILIEE MARKET

Boasting over 2000 traders Jubilee market boast being the main market in Kisumu and has a full retinue of County staff. The history of Jubilee Market stretches back to the colonial era which saw the laying of the first stone in 1935. The market was established as one of a kind in East Africa for sale of the produce collected from the colonial farms, mostly fresh vegetables, fruits and cereals. In 2000, the Jubilee United Development was established to take over from The Africa Traders Union. This saw a proactive engagement of the new union in the running of the market. Spillover of activities from the original Jubilee Market has been allowed creating poor visibility for traders in the original structure. These structures around the old market building has led to tampering with the drainage. The stalls have increased the number of traders in the market by over 300. The customers parking bay has been invaded by boda-boda, Tuk-Tuks. This crowding has driven away the up-market customers. The market traders have since 2004 to date have experienced poor trade.

The old wholesale market between Jubilee and the Fish Market is moribund and is currently used by street urchins. Coupled with this is the expansion of Nairobi road which will affect the parking space in front of the

market and lead to a lot of reorganization of activities in this frontage.

Although Oile Park Market traders do not have any direct participation in the management of Jubillee market but this informal market creates a lot of competition for customers hading to Jubilee Market.

There has been suggestions that the Council considers making the market a 24 hour market.

OILE PARK MARKET

The former Oile Park has over the last two decades been converted from a public park providing an open place for public use into a bustling market that sells products ranging from foodstuff to clothing. This market is an extension of Jubilee Market and needs to be understood as such. The market grew out of the need for a market pace in the evening after Jubilee closed its gates. The temporary closure of the central bus station during its renovation saw pressure from traders initially located there moving to the park. This is not an official market yet it is one of the major revenue generators for the City Board. Attempts by the City Authorities over the years to move the traders out of the park have been fraught with battles that yielded no results. The Park has about 1500 traders but occassionaly peaks to over 2000 during harvest season in the hinterland with traders spilling onto the road reserve.

The three roads that bound the Park act as drop-off points for public transport. On the side facing Jubilee market is a terminus for public transport (town service and long-haul)

Congestion at the main entrance to Jubilee Market

KIBUYE MARKET

The Sunday shopping experience at Kibuye is what defines this market. Although it is a daily market, it has a peak on Sunday which runs from early morning to late at night. The number of traders is about 7000 but this number doubles on Sunday. There are also 2800 traders doing wholesale and about 1000 artisans.

The churchgoers at the large Kibuye Cathedral provides a substantive number of the customers on Sunday. The market provides an outlet from raw products and manufactured goods. It also has a large 'jua kali' unit that houses a number of timber and metal artisans fabricating goods for local sale and export to other markets in the region. There have been various initiatives to provide stalls for the traders inside the market. However the interventions have been piecemeal and do not address the needs of the large multitude of traders and customers. The market is divided into Upper Kibuye which houses fishmongers and food-stalls and

the wholesale units, Middle Kibuye which is where most retail trade takes place and Lower Kibuye which houses most of the artisans and cereal traders.
Kakamega road which joins Nairobi road links the market to key towns in Kenya through these highways and the public transport system.

It is noteworthy that the Council is in charge of security and solid waste management which however is not adequately handled. Due to the fact that the market spills over the fence onto the road reserve it has become difficult to provide security in all locations.
Council provides water through designated water points. Given the expanse of the market the water points are not enough. This is compounded by the fact that there are no water storage tanks to ensure adequate flow all day long.

The market is a complex of shops, stall and open air traders operating a flux of symbiosis and competition depending on location and day. The large number of customers selling more or less the same goods makes the trade cut-throat. There is an expressed need for the fencing of the market to include the shops/kiosks inside the perimeter.

3.2 URBAN DAILY DISTRICT MARKETS

FISH MARKET

This market was an offshoot of Jubilee Market. Started in 1974, it is a specialised market that provides specialised facilities for fish traders. Though adjoined to Jubilee market, it operates as a separate market with a separate Market Management Committee. It has good access from the Central Bus Station which allows fish traders to bring in fish directly to the market. With over 250 traders the market has exceeded its design capacity. It also act as a feeder to the fish traders in Oile park market where traders work longer hours after the formal Fish Market closes its doors after 6pm.

The Council collects revenue and is supposed to ensure that the facilities work. The cold-room and the ice-plant collapsed but are being repaired to enable the traders operate at optimum levels. It is important to note that fish traders from Oile Park Market also use the Fish Market for storing their fresh fish at night

Entrance to Fish Market

MAMBOLEO MARKET

The market is the second largest after Kibuye based on revenue turnover. Mamboleo Markert started of in 1988 with only 4 stores of semi-permanent structures. The market now the market boasts over four hundred stores with over 2000 traders on market days. It also has a ground which can accommodate about two thousand traders. Livestock sale is done along the road since it has no designated place for this activity.

There is no provision for livestock trading area. The city administration had allocated a site under the power transmission cables, which did not pick up. People buy livestock if they see them when they come to purchase other goods and services in the other market.

KONDELE FLAMINGO MARKET

Over 4000 traders operate in this market that was established in 1982 as a result of spill-over of traders from Kibuye who settled to do business at Kondele. The market is an informal growth along the road reserve for the by-pass from Nairobi road at Nyamasaria to Busia road at Kisat. Hence it has not been feasible to put up infrastructure for the market even though it has grown to be the third largest market in Kisumu in terms of size and revenue. However coping strategies including a solar street light allows for some modicum of security in the evening. There exist a public toilet established by the traders themselves and supplemented by LATIF. However these will soon be inaccessible due

to the construction of an overpass road cutting off the market from the facilities.

The traders contributed to the setting up of the Kondele Police Post through contribution of money and materials for construction. This has since enhanced the security levels in this informal market.

K'OWINO/PANDPIERI MARKET

This market has only 10 traders since most traders operate outside the built market. This is a World Bank funded market that has refused to pick up due to issues of allocation of shops, access for shoppers and issues of vandalism. A number of traders operate outside the market where they state that they are able to get customers quickly. They have also alluded to the poor ventiliation within the market stalls that make them uncomfortable to operate in. The market has shops, toilet facilities and access to piped water. Some of the asbestos sheets on the roof are cracked and leak.

Some of the stalls in the market have been converted into residential houses. The tenants also act as security guards for the goods left in the market night

MIGOSI MARKET

This is another one of the World Bank funded markets and started operating in the year 1989 but has only 8 traders leaving 90 stalls empty. The allocation of the stalls was mired in controversy and during the period when it

was not occupied fittings were vandalised. It therefore has no proper electrical fittings to provide enough security to the traders hence they are afraid to venture into business within the market. The structures that exist within the market have asbestos sheets roofs that leak and therefore there is need for replacement. The road access to the market has been grabbed and blocked by construction of illegal structures. The market has two toilets and one wash room. The market has a water line functioning but there is lack of meter. The drainage system was blocked due to the construction of illegal structures on the drainage channels.

MANYATTA MARKET

The market was established in the 1950s with a few structures. In 1992 the modern market construction was completed. The new market has a public latrine and a proper drainage system. The Council employees maintain the cleanliness of the market. There are 250 registered traders with another 50 or so turning up to sell over and above this number.

There was a gate for the market which has been vandalized. The skip that was locate at the market has been removed so now the traders burn waste onsite after cleaning the market.

This is a modern market in the heart of the Manyatta slum settlement. Being a public space amidst private land ownership, the houses surrounding the market direct drai**n**age and garbage here.

KIBOSWA MARKET

Started way back in the 1930s the market has grown to bestraddle three regions; Kisumu, Vihiga and Aldai. Plots were allocated to individuals who then built structures without any type plan. These buildings constructed many years ago are still being used. These structures surround the open space for the market. The facilities for the market have been rundown over the years. There used to be electricity within the markets but it was vandalized. The market access roads are not motorable in wet weather. There is inadequate clean water in the market. The market people depend on roof catchment from a few market sheds but the storage tanks are old and leaking. There are about 100 traders in market (160 on market days)

The trade spills over beyond the County boundaries to Vihiga and Nandi counties that now have buildings and trading coming up. Revenue for those parts of the Market in the two counties of Vihiga and Nandi goes to these counties.

3.3 RURAL DAILY OPEN-AIR MARKETS

CHIGA MARKET

This is a market with about 150 traders, a figure which doubles during market days. Situated along Kibos – Miwani road, the market has been in existence since 1950s. However to date it has no access road connecting to the main road except for a muddy stretch connecting it to Kibos. A few matatus pass by on this motorable track. . There are several permanent and temporary structure in this market. Most of the permanent structures are old buildings in poor conditions. The trade in cereals, which is a major activity in the market, is linked to the productive hinterlands in Nandi, Kitale and Busia

The market has two well constructed toilets one of which was construction through CDF and is functional and another through LASDAP. A new toilet has just been completed as part of the ESP. It has modern market shades constructed via LASDAP and another by the Central Government (Economic Stimulus Program) and is yet to be occupied. The livestock yard at the market is on private land.

The improvements on the market did not factor in the large numbers of traders. One thus finds an anomaly of modern market stalls with no occupants. The plots for construction

of shops around the market are yet to be developed. These shops would act as a perimeter boundary giving the market a sense of security. Provision has been made for harvesting roof catchment for use in the toilets and to supplement the provision of water from the KIWASCO

DAGO MARKET

Started in the 1960s, Dago market was known as Dad Ochuka, later it was renamed Dago Market. Dago market operates daily starting from morning until evening (9.00 am – 6.00 pm). Construction of a new building funded by Economic Stimulus Program (ESP) has been completed but is still unoccupied awaiting the modalities for allocation of the stalls which are far less than the original number of traders estimated at about 70. The tarmac road links the market to Kiboswa on Kakamega road and Daraja Mbili on the Busia road. There are a number of shops around the market that has a synergetic relation with the market traders. However the market lacks water and toilet facilities which constrains its activities.

KIBOS MARKET

Located off the Kibos Railway Station, this is an informal market that has grown as a result of the Railway Station. The collapse of the Kenya Railways has greatly impacted on its growth. The Market spills over from a small public plot onto property that belongs to Kenya Railways, giving it a precarious existence. It caters for about 150 traders.

Public transport link to local market

WATHOREGO MARKET

Wathorego market is situated in Wathorego sub-location on a piece of land that was given out by the Community of Kamenya. Before it was renamed Wathorego it operated under the name “Orego“ (Luo word for a mill for cereals) because there were some European who built a maize-mill near the current location of the market. Wathorego was a weekly market with market day on Thursdays before it was upgraded in 2007 to a full daily market.

The market has abot 200 traders spreading their wares on the ground. Ironically there are 84 modern stalls not in use.

OBAMBO MARKET

This is a typical rural market that was established in the 1960s. Located off the Bondo road, it provides space for traders of livestock and on market days the few racks and open space is used fully. The CDF has put up a number of sheds for the 180 traders and some modicum of toilets which have improved the general operations of the market

OTONGLO MARKET

The community started selling and buying's, their goods – barter trade under the existing trees in the area in the year 1945. They then decided to give out the land freely to be used as their official local market. The community members who donated the land then decided to subdivide part of the market into small plots and allocated themselves for construction of shops. The market was then taken over by Kisumu Municipal Council in the 80s, who fenced it with barbed wire with two gates, one gate was for a entry and paying of the taxes while the other gate was exit and for the counter checking of the receipts. The opening time of the market was very early in the morning, at around 9.00 am and the closing time was late in the evening at around 6.30 pm. The market has grown to house a total of 800 traders with 500 stalls.

The market is located off Busia road. The expansion of the road puts the market right at the edge of the road reserve. When it rains the poor drainage and road surface runoff

forces all traders out of the market due to flooding. At times, even the stores fill up with water

3.4 VILLAGE OR ROADSIDE MARKETS:

OPONONO

This is not a market in the strict sense of the term. It is made up of stalls along the fence of Jomo Kenyatta Sports Ground and Juakali area. The city adminitration collects revenue from the businessmen as street-traders. The allocation of sites for the stalls is on a Temporary Occupation Licence. The traders have their own management structure which determines entry of traders, security and other welfare considerations.

There has been proposals to centralize the traders in a formal market. This would entail finding a site within the CBD. The only such available site is the Railway grounds and the Jua Kali plot. The development would require high density development of a multi-storey structure able to accommodate over 15,000 traders if all the traders on the streets were to be mopped up.

NYAMASARIA MARKET

Nyamasaria market was started in 1953, on land donated by Arodi Sule. The Market was given to African District Council (ADC) which was later on transferred it to the Kisumu County Council and later on to the Municipality when the boundary was

extended in 1972. The market, which has sprawled along the Nairobi Road, has created a busy large sub-urban trading centre with 35 stall, 300 kiosks, shops and rental houses. It caters for 350 traders which almost doubles in the evening.

TIENGRE MARKET

This is an informal roadside outfit along the Busia road. It is due for displacement due to the planned expansion of the Busia road. The market operates daily with a peak in the evening from 16hr to 19hrs. It has one shop structure and a couple of racks which are not enough for the number of traders approximating 20, most of whom are women.

GITA MARKET

This market was started in 1950s. Market days used to be on Fridays. Council revenue collectors used to work in the market. The Council stopped collecting revenue after it realised that it would not be able to provide services in the market. This is a market with no stalls, no toilets or water and no fence. The access road is in a poor state and is not easily usable during rainy season. The plots look like gardens and there is no clear demarcation of the boundaries.

KISIAN MARKET

Kisian Market is a temporary location at the Junction of Bondo-Busia roads. The market is due for demolition as a result of expansion of the Busia road. The official location for the

market is 200 metres off the main roads and has very poor access. The traders were allocated plots within the market site but have not moved to the site. Currently a few fish traders are operating on the official site, preparing the fish for sale in the more accessible roadside stall at the junction. Due to the temporary nature of the informal site at the junction there are no infrastructure facilities developed. The market has about 240 traders, 150 of whom are squatting on private property.

ANYANGA/NYAWITA MARKET

The market was established in the year 1950s with the name Ayanga Market on land donated by community members. It has built up shops on plots surrounding an open air market. The shops also double up as residential housing for some traders. The infrastructural facilities within the market are poor and the access road is a muddy strip that eventually connects to the Kondele by-pass. The market has about 100 traders who sell various types of foodstuff. There are no stall so the traders spread their wares on the ground.

BANDANI MARKET

Lying between Busia Road and the Railway line, this is an informal roadside outfit along the Busia road. The expansion of the Busia road is threatening its existence. With over 80 traders the market operates daily with a peak in the evening from 16hr to 19hrs. It has a number of tin shack shop structures. In

response to the threatened eviction, members have began fundraising to buy land to set up a formal market. The market provides an avenue mainly for residents of Bandani to buy foodstuff on their way home.

3.5 WEEKLY MARKETS

OJOLLA MARKET

Riat Market began in 1958 as a barter trade centre, where goods were being exchange through barter trade. It died off in the same year where some people hijacked its operations and moved part of it to Otonglo Market. In 1972 it was revived. It became known as Ojola Market because people from different places were meeting somewhere near a euphobia (ojola) tree. By 1974, the Municipal Council of Kisumu had recognized it and formalised it as a market and gave plots to some traders. It is a one day market that operates on Sunday. The Ojolla Catholic Church acts as the attractor for this Market

4.0 ENERGY AND SOLID WASTE IN MARKETS

4.1 Solar Power:

Lighting has been identified as one of the key factors in operations of the markets within Kisumu City. In markets where there is lighting traders operate late into the night with attendant increased in revenue. Solar powered lamps is the most used form of lighting in the small periodic markets. One of the non-governmental organizations operating in Dunga beach, Ecofinder Kenya, is piloting renting of solar lamps. After training about small-scale business and solar lamps, Ecofinder provides a new "Solar Lamps Entrepreneur" with a starter pack of 10 solar lamps. The entrepreneur can then rent them every night to his local customers and recharge them in the daytime. The only condition is that entrepreneur will pay back 25% of his income to Ecofinder until the cost of sale of the lamps are met. It has been noted that the cost of hiring the lamps is below the cost of using kerosene lamps.

The Ecofinder solar lamps

4.2 Solid Waste

Waste is an unavoidable byproduct of human activities. Economic development, urbanization and improving living standards in cities, have led to an increase in the quantity and complexity of generated waste. According to UNEP, (2009) inefficient management and disposal of solid waste is an obvious cause of degradation of the environment in most cities of the developing world. Primarily, UNDP, (2003) cites commercial refuse from markets as important source of commercial waste, much of it is organic waste. Other sources include modern stores, officer, restaurants, warehouses and hotels. Institutional refuse derived from schools, governments, offices and religious buildings are included in these categories, paper and hospital wastes form a large bulk of institutional solid waste source. Street sweepings waste consists of sand stones and litter. They may also include appreciable amounts of household refuse, drain cleanings and human/animal fecal matter.

Disposal of municipal solid waste has become an increasing urban service problem in developing countries, as population increases in dense urban developing countries. According to the UNHabitat, (2000), the onus

of providing solid waste management service often lies with local government. A fundamental deficiency is the failure of government to assume their basic responsibility to raise sufficient funds to provide waste management services, an unacceptable and often inappropriate collection equipment or inability to maintain a sufficient collection fleet. Consequently, the service provided in a majority of developing countries, cities and towns can at best be described as unreliable, irregular and inefficient.

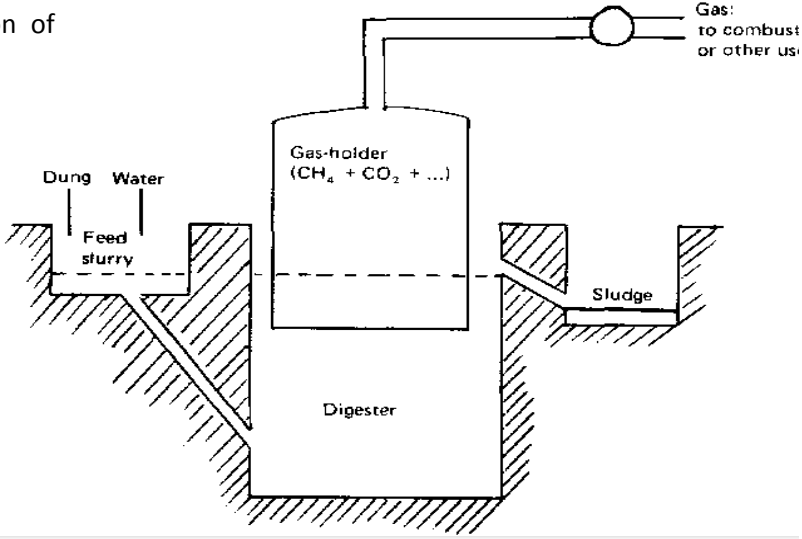
The solid waste scenario in Kisumu is widely reflective of the situation in the majority of cities in the Lake region. Kisumu is faced with problems of lack of collection facilities and low efficiencies in operation of existing facilities as well as the design, capacity and location of final disposal sites. Most of the solid waste generated in city markets remains uncollected with collection efficiency estimated at 20%. The collection that takes place is shared between the municipal council and a few un-authorized private collectors mainly concentrated in the high income areas, leaving the poor peri-urban neighborhoods largely unattended. In the process of developing the City Development strategy (CDS), it emerged that some very positive re-use and recycling initiatives exist in Kisumu.

4.3 Biogas

Methane was first recognized as having practical and commercial value in England, where a specially designed septic tank was used to generate gas for the purpose of lighting in the 1890s (Cheremisinoff et al. c1980). Units to produce methane gas have been successfully applied in meeting energy needs in rural areas, particularly in India and China (Lewis 1983) and are more recently being installed in Vietnam (Rodriguez et al. 1997).

Raw materials may be obtained from a variety of sources - livestock and poultry wastes, night soil, crop residues, food-processing and paper wastes, and materials such as aquatic weeds, water hyacinth, filamentous algae, and seaweed. Different problems are encountered with each of these wastes with regard to collection, transportation, processing, storage, residue utilization, and ultimate use. Residues from the agricultural sector such as hay, cane trash, maize, and bagasse need to be shredded in order to facilitate their flow into the digester reactor as well as to increase the efficiency of bacterial action. Succulent plant material yields more gas than dried matter does, and hence materials like brush and weeds need semi-drying. The storage of raw materials in a damp, confined space for over ten days initiates anaerobic bacterial action that,

though causing some gas loss, reduces the time for the digester to become operational. Markets in Kisumu have ample raw material. However use of these raw material for biogas production will be determined by management considerations and location of the market.

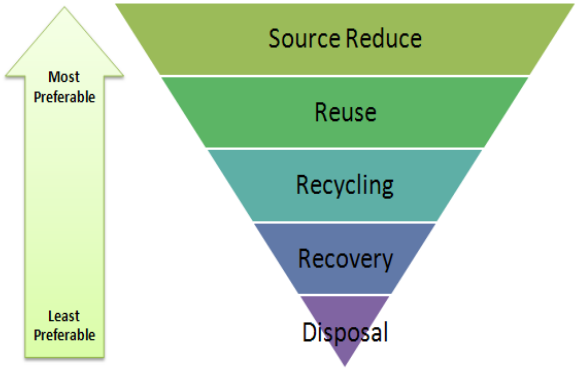


Biogas plant showing the flow of material

5.0 TECHNOLOGY INNOVATIONS FOR MARKETS

5.1 Solid Waste Management in Markets

The waste management hierarchy (fig.1) sets out the justifiable sequence of waste management practices from the most preferable option to the least preferable option. It is nowadays the most effective guiding principle of municipal solid waste management in all around the world. It serves as the classification of waste management activities according to the energy efficiency, environmental, economic and finical condition. The introduction of waste management hierarchy in 1970's was to topple down the disposed-base waste management solution, the scientists argued that not all of the garbage should be buried but some of them should not be over produced, some of waste could be reused, some of them could be recycled, some of them can be composted and some should be incinerated.



Solid waste management hierarchy,

Source: UNEP, 2009.

An integrated approach is an important element of sound solid waste practice because integration allows for capacity or resources to be optimized and, thus, fully utilized (JICA,2009). There are frequently economies of scale for equipment or management infrastructure that can be reached only when all of the solid waste in a region is managed as part of a single system. An integrated approach allows for participation of public, private, and informal sector participants, in roles appropriate for each. Some solid waste management practices are more costly than others, and integrated approaches facilitate the identification and selection of low-cost solutions. Some waste management activities cannot bear any charges; some will always be net expenses, while others may produce an income. An integrated system can result in a range of practices that complement each other in this regard.

In general, UNEP (2009) states that technologies developed in the industrialized countries are designed for their own local circumstances, characterized by high labour costs, high technical capacities and waste rich in packaging materials. (UN-Habitat,2010) elaborates that one way to approach this challenge is through understanding the properties and functions of the technology currently applied in developed countries, instead of copying their technical

specifications. Technology affects not only on the physical environment, but also on the local, social and economic circumstances.

Conflict of interest between different stakeholders and inappropriate technological innovations in solid waste management has led to the increase in amount of waste in dumpsites in Kenya. The challenges that are witnessed in solid waste show that the private sector is affected in discharging its duties to the public. According to UN-Habitat (2011) the private sector is constrained by a number of issues including, resistance by trade unions to the contracting out of services, "double standards" allowing for local authorities to operate at lower than legal requirements. Bylaws restricting certain categories of work for exclusively the local authorities, Poor legislation, and Lack of and inconsistent enforcement of legislation also affect operations in the private sector.

UN-Habitat/World Bank (1996) states that a potentially attractive avenue for the production and utilization of compost could be collaborative mixed fertilizer production with current Kenyan fertilizer manufacturers and sellers, resulting in the development of optimal organo-synthetic fertilizer products that would tap into the strengths of each component, and which would be superior in performance to either component applied alone. In this way composting groups, CBOs

and private waste handlers can gain fair pricing for compost product and tap into the already established distribution and marketing chain of synthetic fertilizer manufacturers and sellers in the country, leaving them to concentrate on compost production and quality assurance. Such an arrangement with fertilizer manufacturers and sellers not only means reduced distribution/marketing expense but also helps build the credibility of compost as an agricultural product, as it positions it among 'modern' chemical fertilisers which are already bought and positively perceived by many farmers, and also as a result of the already existing business relationships fertilizer manufacturers and sellers have built with farmers.

Recycling can render social, economic, and environmental benefits. Factories that consume recyclable materials can be built for a fraction of the cost of building plants that consume virgin materials. Recycling saves energy, water, and generates less pollution than obtaining virgin raw materials, which translates into lower operating costs. Recycling also reduces the amount of wastes that need to be collected, transported and disposed of, and extends the life of disposal facilities. Recycling can result in a more competitive economy and a cleaner environment, and can contribute to a more sustainable development.

Waste Management

Public-Private-Partnership

Despite the low-response rate, there is some PPP initiatives for SWM for markets in Kisumu. In Kisumu one self-help group, BAMATO is now making mattresses, baskets and caps from recycled polyethylene. This group and other affiliated groups have successfully engaged large numbers of unemployed poor in gainful self-employment. A great potential exists for the formation of Public-Private Partnerships (PPPs) for the provision of MSWM services.

In most markets the problem of dumping waste is a common practice. As has been earlier stated ignorance and careless behavior

are to blame. Perhaps what the populace don't know is that dumping waste in such drains compounds the problem even further since the risks associated with the latter might turn out to be severe than expected.

D*umped waste in drains at a Manyatta Mkt.*

The implementation of an Integrated Solid Waste Management Strategy in Kisumu is an ongoing process. The Markets provide a unique opportunity for piloting a number of the strategies that the City has proposed for managing the large volumes of waste in the City markets.

Opportunities for Solid Waste Recovery and Recycling.

The study found multiple opportunities for municipal solid waste management initiatives which should be geared towards increasing technical capacity in SWM. They include: SWM legal and institutional frameworks present; opportunities for plastic recycling; massive NGOs and donor support; and

increased PPP in solid waste management within the city. There are different types of actors are involved in solid waste recovery activities in markets in Kisumu City. They include the waste pickers, waste dealers and the Jua-Kali recycling industry. Waste pickers operate in market places obtaining all kinds of waste materials from open spaces, roadsides, dustbins, skips and other waste receptacles. Waste dealers are interested most in plastic & scrap metal items and act as brokers i.e. a linkage between the waste pickers and Jua-kali artisans and other Waste Recycling Industries based in the city in and other market outlet.

The city council has presented a critical element towards integrating appropriate technologies into SWM systems for markets in Kisumu city. It has invested in real time technology which would see a reduction in collection delays and eventual waste reduction. The technology involves placing of micro-chips in skips which would operate in a feedback loop with the city council database administrators when they are full, thereby alerting garbage trucks to proceed and collection point for the garbage.

5.2 Information Technology and Market Environments

Current trends in the market environment, such as shrinkage of markets, increase of competition, technology turbulence, and diffusion of the Information Technology (IT)

through the organizations, preempt structural changes in the organizations and their marketing channels. These trends call for increased collaboration among organizations that leads to increased outsourcing activities, transformations in the value chains of the organizations and of their distribution channels, and the formation of new network organizational structures. Thus, although the Internet has been the favorable theme for numerous researchers and scholars during the last decade, there is still a lack of systematic practical evidence regarding the role of the Internet vis-à-vis the marketing activities and performance of business organizations especially on the best ways that internet can be used in achieving organizational goals, and the drawback has been felt mostly in women led businesses.

This section is based on research at Jubilee Market in Kisumu. The Kisumu Municipal Market (Jubilee Market) was established in 1935. It is a farmers' market, with over 300 stalls stocking all sorts of items including baskets, pots, fruits, cereals and the famous fish market adjacent to it. It borders the Kisumu Bus Park which is a transport hub for all travelers from the surrounding towns and villages. The assessment looks at the relationship between women, internet technology and marketing, and attempts to investigate how the use of the Internet

technology affects the marketing efforts and performance.

Women and Internet Technology

Huyer (1997), discussed issues of access, the benefit to African women of using Internet Technology, and their role in the production and dissemination of information. The author discusses how to empower African women through Internet Technology and the barriers to their full use of these technologies, the first being the high rates of illiteracy. The work has five case studies (four from South Africa and one from Uganda) to explain the importance of developing 'women-friendly Internet Technology systems'. According to the author, one of the major findings was that the type of information accessed by women is an important consideration. It is recommended that Internet Technology be located in local institutions to which women have open and equal access, such as health centres, women's NGOs and churches. The purpose of the project was to identify women's groups that were able to make successful electronic connections and to follow up those that were experiencing difficulties. It was also intended to integrate groups working on the same topic through the networks, and connect more groups. One of the emerging issues was that 'women's access to IT also seems to be a major hindrance'. Other examples are drawn from the responses of women researchers (mostly from the Association of African

Women for Research and Development, AAWORD), who complained that only secretaries had access to the computers in their departments. They did not have decision-making powers in determining how computers should be used, or where modems should be installed. If women at this high-level had these problems, what about the poor? Other initiatives outlined are the APC Women's networking programmes, the Women's Environment and Development Network (WEDNET) research project, and the building of a women's information and communication network in South Africa on SangoNet.

Challenges in Adopting IT in Developing Countries

By its very nature the IT phenomenon is relatively in the developing world. Available data, suggest that the majority of developing countries such as Kenya in sub-Saharan Africa are lagging behind in the information revolution (Zhao and Frank, 2003). Not surprisingly, the quest for adoption of IT in educational management has been problematic and will require fundamental shifts in the regulatory environment, as well as renewed attention to public-private partnerships and social services. For example, developed countries have 80 per cent of the world's Internet users, while the total international bandwidth for all of Africa is less

than that of the city of São Paulo, Brazil (Campbell and Sellbum, 2002).

Yahya (1993) examined some of the problems facing efficient use of information technology in developing countries. “They result from, among other factors, the high costs of imported systems (both hardware and software), the lack of sufficiently trained personnel and deficiencies in the industrial infrastructure.” (p. 349)

The Digital Divide

There are a number of ICT-based initiatives which cater for non-market information and extension services including financial, utilization of best agriculture practices, research, weather, climate, and distribution and supply chain management. Some of the initiatives include: KenCall Farmers Helpline, Kilimo Salama, M-PESA, and Mali Shambani - all in Kenya, Esoko, Cocoalink and Radio Ada in Ghana, and MAKWACHA in Malawi. KenCall Farmers Helpline, a for-profit call center in Kenya, is a real-time call center service staffed by agricultural experts that provide agricultural information, advice and support to smallholder farmers over the phone, using voice and voice call-back to farmers (Payne et.al., 2010a).

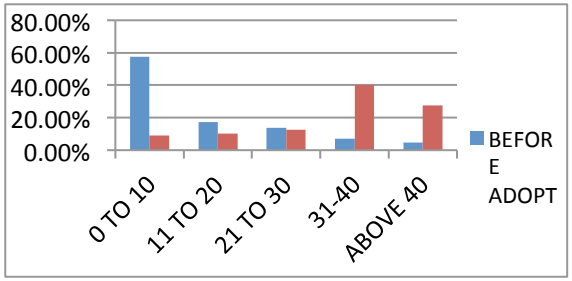
Mali Shambani, in Kenya, is a weekly hour-long radio program featuring agricultural news and responding to a wide range of topics, including market prices and trends,

farming techniques, weather and seasonal issues, financing opportunities, inputs, land use, and quality standards. Each program also offers an interactive call-in component where farmers are given the opportunity to pose agricultural questions to a panel of experts either via phone or SMS. In addition, Farmer Voice Radio (FVR) is a radio extension service currently operating in Kenya, Malawi, Tanzania, Mali, Ghana and Zambia that targets smallholder farmers. Extension agents of FVR provide regular, on-site extension support to a small group of pre-selected farmers, which are then documented and broadcast via radio (Payne et. al., 2010a).

In Kenya and Malawi, e-banking and especially mobile banking is another ICT-based service which has had a tremendous impact on the socio-economic status of farmers. Through innovative schemes such as M-PESA in Kenya, farmers are able to send and receive money using their mobile phones. Safaricom reported 6.18 million registered M-Pesa users as of March 2009 (ITU, 2010). The smart-card-based MAKWACHA system in Malawi allows rural farmers to receive payments and purchase farm inputs electronically. The card can be used at any of the company's ATM terminals situated at merchant stores in rural trading centers throughout the country (Nyirenda-Jere, 2010). In Kenya, mobile telephony was being used for delivery of

animal health services which has reduced transactions costs and increased efficiency of animal care (Kithuka, et al. 2007).

The system works with a community animal health worker, who purchases a veterinary drug kit and mobile phone at a subsidized price. Animal health assistants and veterinarians working with the project also receive mobile phones. The phone system allows the animal health care providers to update one another, share information, and conduct referrals. ICTs are also being used in distribution and supply chain management and traceability to increase efficiency and predictability and to reduce spoilage (including recording movements along the value chain, responding to quality standard requirements, and helping large buyers track, manage, pay, and reward small producers). Examples include: dairy sector and agribusiness in Kenya; cotton supply system in Zambia; fruit and vegetable supply system in Mali and Ghana (Payne et. al., 2010b).



Average number of the clients served in a day before and after adoption of IT

It is noteworthy that in Jubilee Market IT increased the number of daily clients thus increasing sales. The study established that the average service rate before adoption of IT in the organization was very low comparing with average number of clients served in a day after adoption of IT.

Perception: Majority of the respondents felt that the main constraints to adopting Internet technology is inadequate infrastructure 34% while 21% felt that it was because of lack of skills. Only 10.3% indicated that the main constraints to adopting Internet technology were because of attitude and 12% felt that there are no proper policies in place to govern the use and implantation of IT. 23% of the respondents felt that accessibility is the major constraint to adopting IT.

Attitude: CBOs' computer experience relates positively to their computer attitudes. The more experience users have with computers, the more likely that they will show positive attitudes towards computers (Rozell & Gardner, 1999). Positive computer attitudes are expected to foster computer integration in the office and home (van Braak, Tondeur & Valcke, 2004).

Skills- This issue is particularly important because it impacts not just managers and end-users, but the IT professionals as well. Levels of individual expertise range widely

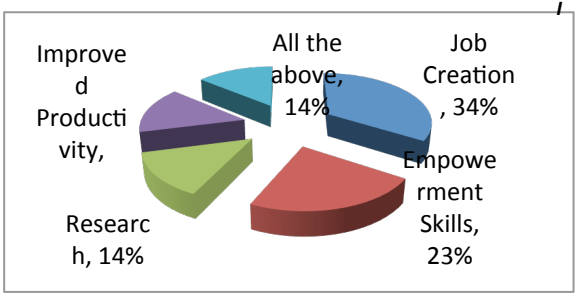
across organizations. The ramifications of this problem are deceptive, often the assumptions are that this is merely an issue surrounding the training of users and managers on new ITs and their applications. This is not the case. When planning for ITs, it is important to consider the expertise levels of all individuals throughout the organization and what needs should be addressed based on those levels. A secondary impact which this issue has on planning is the difficulties which arise based on the expertise levels of those engaged in the process itself. In other words, it is very difficult to plan effectively for ITs if your understanding of them is limited.

Infrastructure- One of the top issues of obvious import to this particular area was insufficient infrastructure plan for internet technology. As discussed in chapter 4 above, 34% of the respondents perceived this issue as highly problematic. As might be expected, the lack of a formalized strategic plan for IT makes the planning process more problematic. The key here is the formalized nature of the plan that shows the infrastructure in terms of availability, cabling, telecommunications lines. Lack of infrastructure plan or use of a purely informal plan provides little or no concrete directives for the acquisition or implementation of iternet technologies within an organization.

Accessibility- Access to IT infrastructure and resources in organizations is a necessary

condition to the integration of IT (Plomp, Anderson, Law, & Quale, 2009). Effective adoption and integration of IT into organizations depends mainly on the availability and accessibility of IT resources such as hardware, software, etc. Obviously, if users cannot access IT resources, then they will not use them. Therefore, access to computers, updated software and hardware are key elements to successful adoption and integration of technology.

The respondents' business organizations were mostly for goods and services. The study revealed that the average number of clients served in a day after adoption of IT were more as compared with the average number of clients served per day before adoption of IT. On service rate before adoption of IT in the organization, the rate was very low comparing with rate after adoption of IT`.



Impact of IT on business in Jubilee Market

Further, the study revealed that IT increased the number of daily clients thus increasing sales and also the production rate in an 8hr working day after adoption of IT. Majority of the respondents felt that the main constraint to adopting Internet technology is lack of resources and poor policies.

The finding of this study was that the organizations suffered from lack of enough recourses and proper policies to adopt and implement IT.

6.0 DISASTER MANAGEMENT WITHIN THE MARKETPLACE;

6.1 Types of Disasters

Disasters such as local floods are serious disruptions of the functioning of a community or a society causing widespread human, material, economic, or environmental losses which exceed the ability of the affected community or society to cope using its own resources. (UN/ISDR, 2004) Local floods are floods caused by seasonal storms and depressions and exacerbated by saturated or impervious soil and in built environments like cities which generate higher surface run-off that is in excess of local drainage capacity, thereby causing flooding (WMO/GWP, 2008).

While a hazard is a potentially damaging physical event, phenomenon or human activity that may cause the loss of life or injury, property damage, social and economic disruption or environmental degradation. (UN/ISDR, 2011) Official disaster registers only include earthquakes, floods, hurricanes, fires, industrial or transport accidents and other events where 10 or more people are killed, 100 or more are seriously injured (Bull-Kamanga et al 2003). Currently, populations in cities have to deal with a range of environmental hazards, and global climate change is likely to exacerbate many of these problems (Sari and Rais, 2008).

However the main focus of this chapter dwells mostly on the effects of local floods in the urban marketplaces in Kisumu. This is important because the informal sector in Kisumu provides for the bulk of the working population i.e. transport, petty sales, repairs, carpentry, metalwork, and many other small-scale businesses that have yet to evolve out of the informal sector and it uses the marketplaces as platforms that provide employment opportunities (UN, 2005)

In the 30 years between 1973 and 2002, Asia had a 40 per cent share of all flood disasters, followed by America (25 per cent), Africa (17 per cent), Europe (14 per cent) and Oceania (4 per 2 cent). Available data indicate that the flood frequency is increasing in all Asian countries, and this has been attributed mainly to climate change and to land use changes and surface degradation; these were also identified as the main reasons for urban flooding in Africa (Ramachandraiah, 2011) Flooding is one of the most frequent and widespread of all environmental hazards. Floods of various types and magnitudes occur in most terrestrial portions of the globe, causing huge annual losses in terms of damage and disruption to economic livelihoods, businesses, infrastructure, services and public health (Roger et al, 2003).

Urban areas are more susceptible to local floods because a high percentage of the surface area is composed of impervious streets, roofs, and parking lots where runoff occurs very rapidly. (Wallingford, 2009)

6.2 Impact on Urban areas and markets

Climate change increases the likelihood of extreme weather events such as droughts, floods and heat waves, as well as more gradual changes in temperature and precipitation. (Pierre and Gina, 2007) As a result of climate change, there is a more than 90 per cent probability of heavier precipitation events in the twenty-first century – with an increase in both frequency and the proportion of total rainfall from heavy falls. (Ramachandraiah, 2011) It should be noted that although the physical reality of most of the projections have not been vigorously tested in this study due to various limitations, the results of the projections indicate increases of mean annual rainfall of up to 10% in northern parts of Kenya for 2030 scenario, with corresponding values of 18% in northern Kenya for 2050. However, these regions are generally arid and semi-arid, such that the percentage projected increase in rainfall may not result in significant amounts but may result in episodic flooding.

These projections may have far reaching implications on the frequency or severity of floods and droughts (DFID, 2009) Kisumu and

Western Kenya are likely to see increased rainfall of up to 40 per cent. This presents challenges caused by flooding, but also opportunities for rainwater harvesting and storage as a clean source of water (UNICEF, 2010)

Recent scientific outputs suggest that climate change is likely to cause shifts in the global pattern and intensity of flood events, in some regions increasing the exposure of populations to severe flooding. Potential future risks underline the importance of research and intervention work aimed at strengthening local capacity to cope with flooding, especially for the poor in developing countries (Roger et.al,2003).

Interestingly, irrespective of global climate change, cities alter their local climate, particularly by reducing rainfall and increasing night time temperatures. This "urban heat island" effect is caused by day time heat being retained by the fabric of the buildings and by a reduction in cooling vegetation.

The magnitude of the urban heat island is, in general, proportional to the size of the city. The effect on urban areas can also cause considerable intensification of rain, hail and thunderstorms. Due to these factors and to their location by rivers, lakes or in coastal

zones, cities are particularly prone to floods (Sari and Rais, 2008)

Many disasters take place in urban areas, affecting millions of people each year through loss of life, serious injury and loss of assets and livelihoods. Vulnerability can be considered as the degree to which a system such as a marketplace, its population and its infrastructure are likely to experience harm due to exposure to a hazard, either a perturbation or a stress factor.

Urban populations face a wide range of risks – from the everyday hazards to health posed by poor living conditions to the large-scale disasters that can result in heavy loss of life and property. (Bull- Kamanga et al 2003). Markets exhibit some of these challenges. For example, many drainage facilities are not in good shape due to lack of cleaning and maintenance. Rubbish and debris tend to clog the drainage facilities, thus reducing the drainage capacity and leading to increased surface runoff and back up effects, causing local floods (Wallingford, 2009)

6.4 New approach to flood disaster management

Global policies in disaster management have radically changed since 1990s, shifting the previously entrenched emphasis on emergency management, towards new applications of risk management (Gülcan Ulutürk, 2006).

The last two decades have witnessed considerable rethinking on how society should approach the management of hazards (Roger et al, 2003). However, it is difficult to get the institutions responsible for disaster response to make this shift, in part because many of the measures to reduce disaster risk require collaboration with other agencies and engagement with low-income communities (Bull-Kamanga et al, 2003).

A comprehensive assessments of risk vulnerabilities for exposed market places in the cities, and the dissemination of such information is critical. Another key consideration is establishment of early warning systems and evacuation plans, including emergency preparedness and neighborhood response systems and improved efficiency of the water supply management. This makes resource management and infrastructure planning more challenging and increases the urgency of the need to adapt city-level operations to both current climate variability and future climate change. (Pierre and Gina, 2007)

Blaikie et. al, (2004) argue that hazards, vulnerability, and risk are all uniquely intertwined in the development of death and destruction from disasters. To date, however, the main focus of adaptation planning has been at the national level, and has not

adequately addressed municipal-scale adaptation. (Pierre and Gina,2007)

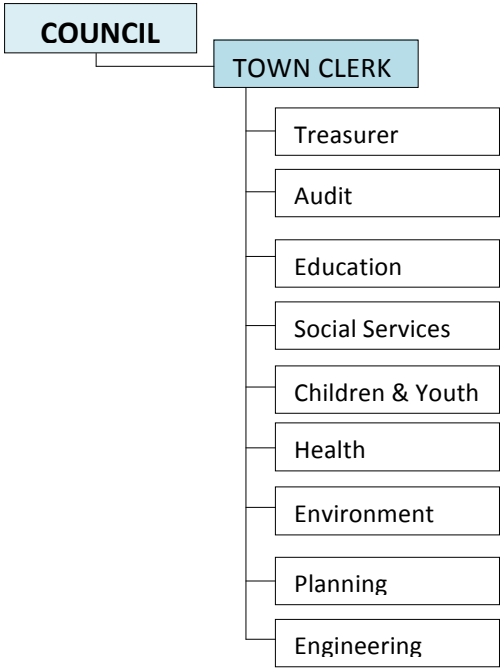
For urban areas, this means working with different departments of city and municipal governments and with the many community-based organizations and local NGOs engaged in urban development. It also means working collaboratively to tackle complex issues such as the fact that much urban development occurs without provision for basic infrastructure (such as storm and surface drainage and roads); that so many urban markets are located in large, dense, informal settlements (usually with high risks of accidental fires); and that many of these unplanned urban settlements develop on sites at high risk from disasters (for instance, on floodplains or steep hillsides). (Bull-kamanga et al 2003) .

Moribund Fire Brigade unable to respond well to emergencies

7.0 INSTITUTIONAL AND REGULATORY FRAMEWORKS.

7.1 Organization Structure

The Institutional structure for Kisumu is based on a standard framework provided by the Government as shown in the diagram below. The Councils have a number of staff who provide experienced leadership, building on skills drawn from their previous engagements. It has been noted that there are cases of some staff overstepping department boundaries leading to conflicts of interest in departmental functions. The best examples of such activities include housing, KENSUP, roads and collection of revenue in the markets. Yet for Planning and Market issues to be addressed there is need for cross-departmental operations. This is an area that has been addressed in the development of the Strategic Plan of the City with focus on objectives rather than departments.



Recruiting and retaining a skilled and diverse workforce strengthens the capacity to promote commercial development and respond to market needs. The restructuring into County governments has major implications for institutional management since the City falls under the authority of the County Government and the City Management Board is taking over the role of the Council. The Board needs to focus on a workforce with skills needed to promote market development in the 21st century, including market information technology, informatics, business literacy, and policy analysis and implementation while at the same time linking these to spatial development and growth of city. It was pointed out by the Director of Planning of Kisumu that cross-training and recruiting diverse professionals (e.g., economists, scientists, psychologists, criminologists, urban planners, architects, engineers, home inspectors) can enhance service delivery.

The City's regulatory framework is derived from national legislation. Key amongst these is the Cities and Urban Areas Act, Devolved Government Act and the Physical Planning Act.

7.2 Management of the Markets

It is significant that the key role of the City administration with regards to markets has been collection of revenue. In only key permanent markets do we have a resident Market Attendant who works with the Market

Committees in management of the markets. Management includes determination of issues of waste management and sanitation, security, entry of new traders and infrastructure development.

The Market Committees undertake the following:

- Most manage toilets as the Council does not seem to have this capacity. They pay for the license to run these facilities
- The disputes resolution involving the traders' welfare; with the decision informing the council's decision
- Help negotiations of fees to help improve on the services.
- Contribute to security in areas with shortage e.g. Kiboswa, Chiga which suffered theft once the contractor left the site
- Work with Environment Department to undertake cleansing services

The informal markets still provide a challenge since there is no clear regulation on management of such markets. A case in point is Oile market and the other traders covered under the title Oponono Market. These are markets there is ease of entry and tend to be family outfits which see youth out of school joining their parents/siblings in the trade. Quite a number use this as a stepping stone into the business world. Attempts to relocate them to other market sites elicited resistances from traders in these sites, including the underutilised K'Owino market.

7.3 Desired Improvements on the Management

The movement towards a 24hour city is a key driving force in the proposals towards revitalising the market system. This would require appropriate investment in the necessary infrastructure such as buildings, flood lighting, security services and public transport. The involvement of the Management Committees of the Markets becomes critical in this process.

However there is still concern about basic requests. The Council must have budgetary provisions for the management and maintenance of the market. This shall be monitored by the public on the Budget Day.

The Council also needs to develop an operations manual for all the Market Attendants which ensures standardised level and quality of service. Customer Service Delivery Charter should be displayed in locations where the traders are able to see such information and follow up on service requirements. A possible model is putting the Charter below a clock tower at the entrance to a market.

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The market place has played a key role in forming cities in Africa. In cities such as Kisumu most market places are informal and periodic. But market places are important and vital parts of the city as they serve as means for: interaction, meetings, exchange of goods and services, sales, marketing and production.

This text captures some of the salient features of Markets in Kisumu and presents it in a form that allows for easy reading for a cross-section of persons interested in knowledge about Market Places in Kisumu

MISTRA URBAN FUTURES

KISUMU LOCAL INTERACTION PLATFORM (KLIP)

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