

URBANISATION IN ISOLATION: SUICIDE FOR SUSTAINABILITY? LESSONS FROM NAIROBI METROPOLITAN REGION.

1.0 INTRODUCTION

1.1 *Urbanization: The Global Picture*

Urbanisation is a response to economic, social and political forces, but the specific ways in which urban settlements develop and grow, in different countries, change under the influence of new factors (UN-HABITAT and DFID, 2002ⁱ). Ancient cities of Egypt (Thebes and Memphis), Jericho, Mesopotamia (Ur and Babylon), the Indus Valley, and the Americas, all had one similarity: they were initiated by growth in river-valley agriculture.

Lin and Mole (2005 Eds)ⁱⁱ identifies capitalism as the origin of the modern cities. Close interrogation of the assertion identifies the following:

1. that communalism is the hallmark rural lifestyles – livelihoods, economies and society;
2. that capitalism is the breakdown of communal lifestyles,

1.2 *Agrarian African Lifestyles*

Agriculture defines much of African living. Economies, communities and the environment in Africa are all factors of their agricultural practices. Food production, trade, social processes and traditions, are just features of African living defined by agriculture.

1.3 *Agriculture and African Urban Transition.*

Modern African cities were born by the coming of European colonialists as agricultural collection centres. Presently, agriculture remains a dominant sector in the Kenyan economy, for example, accounting for 15% of the country's Gross Domestic Product as at 2009. Currently an estimated 75% of the population in Kenya depends on the sector either directly or indirectly.

Agriculture and urbanization are competing ends of a see-saw that need to be balanced, their symbiosis the pivot. Contemporary research and studies have brought into being the essence of bridging the gap between what is agricultural land and what is to be urban. Previously, the question was on how much land the agricultural realm ought to give for urban development. It remains beneficial to understand the dynamics of urban expansion and sprawl with its consequent diminishing of arable land.

1.4 *The African Psyche and Urbanization*

Fiero (1995)ⁱⁱⁱ suggests that despite the geographical, linguistic, and political differences, Africans share some distinct cultural characteristics, including and especially, a kinship that emphasizes the importance and well-being of the group as essential to that of the individual.

The kinship system was the basis of ownership of factors of production which included land, livestock and labour. Capitalism is therefore identified as alien to Africa.

In the light of the urbanization debates, for the average Africans, the city is not yet home. This is because ideally, most Africans identify with their villages of origin as home.

1.5 **Urbanization in Isolation: The Problem.**

Looking at urbanization as a sole entity (divorced from rurality) raises the following questions:

1. Is it sustainable to talk of sustainable urbanization without consideration to the rural?
2. Is it possible to mainstream rural development as a key tenet to sustainability debates?
3. Are the urban-biased strategies capable of meeting the needs of the projected urban populations?

2.0 **EMPIRICAL EVIDENCE FROM KENYA**

2.1 **Nairobi: A Modern African Metropolis?**

In the last 30-40 years, Nairobi has experienced a population growth and 4.7- 4.8% per annum. This growth rate is high compared to Kenya average national growth of 3.4% per annum. The city population has increased from about 0.8 million in 1898 to 2.1 million in 1999. According to the 2009 census, population of Nairobi city is close to 3.2 million – Table 2.1. This is mainly due to the rural-urban migration as well as through natural increase.

TABLE 2.1: Nairobi: Population for selected years, 1899-2009

Year	Status	Area(acres)	Population
1899	Railway Camp	-	<100
1900	Township	4480	10,000
1920	Municipality	6270	20,000
1950	City	20542	110,000
1964	'	70363 (684 sq. km)	342764
1969	'	'	506,286
1979	'	'	827,775
1989	'	'	1,324,570
1999	'	'	2,087,668
2009			3,138,369

Sources: East African Statistical Department (1986), Republic of Kenya (1966, 1971, 1981, 1999, 2009^v).

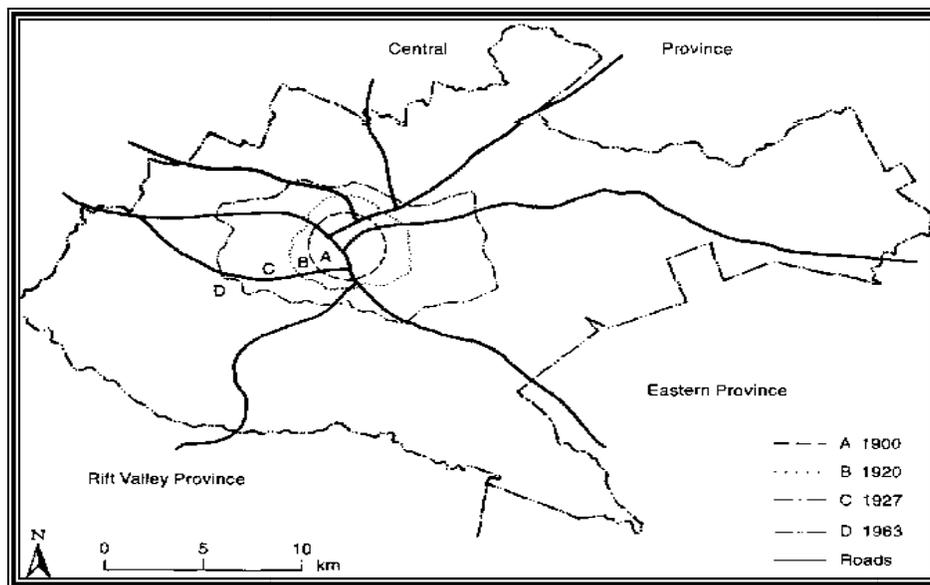
2.2 **Planning for the Growth of Nairobi**

The first urban plan of Nairobi was commissioned in 1926 to recommend zoning arrangements. It was replaced by the 1948 master plan, which was the basis for development of guidelines for residential, industrial and other public purposes for the next 20 years (UNEP *et al*, 2005^v).

The Metropolitan Growth Strategy of 1973 up to the year 2000 made ambitious development proposals. The strategy aimed at maximizing land use in the CBD, utilizing existing infrastructure and public services, harmonizing the then prevailing haphazard zoning system, creating a balanced urban environment and creating incentives for development and redevelopment of derelict areas in the CBD. The strategic plan would not be effectively implemented because of protracted court cases. Currently no master plan exists for Nairobi.

The mainly unplanned growth has seen the city boundaries extended 5 times over the last 100 years (Fig. 2.1). By 1900, the area covered by Nairobi Municipal Community was 18 km². At independence, in 1963, the boundary had been extended to 700 km². Today, NMR measures roughly 3200 km² today, a growth 177 times over a period of 115 years (Figure 2.1). According to the MNMeD (2008^{vi}), the population of the NMR currently stands at approximately 7 million.

Fig. 2.1 Nairobi: Boundary changes, 1900-1963



Source: Obudho and Aduwo, 1992

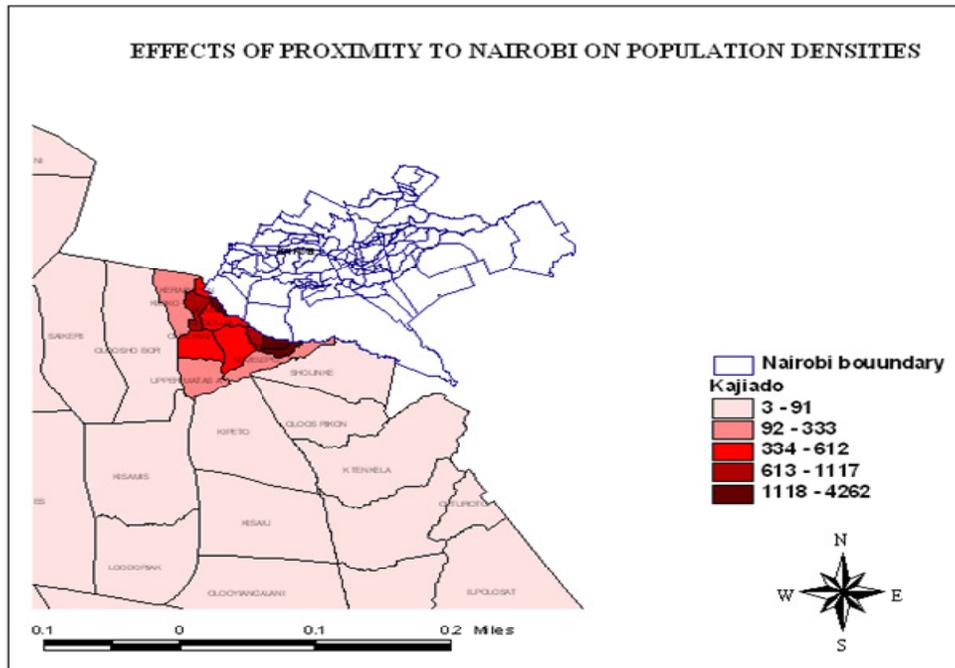
2.3 Forcing Urbanization: The Case of Ol'Kejuado County.

Ol'Kejuado County is one of the 16 local authorities that make up the NMR. It is an area of very diverse character: farmlands, pasture-lands, forests, game reserves and conservancies, ranches, towns and markets, etc. From the onset, decision to include Ol'Kejuado County into the NMR raises more questions than it answers and the local voices resisting its inclusion in the region are but a wake-up call.

According to Kenya (2002)^{vii}, Ol'Kejuado County as a whole is urbanizing at a rate of 12%, compared to the National urbanization rate of 7-8% per annum. The Kajiado district development plan (2002 – 2008) places the main cause of urbanization to rural – urban migration, but a lot of this is ascribed to urban-urban migration.

The distribution and hierarchy of urban centers has been greatly influenced by the proximity of these centers to Nairobi. This evident by the high urbanization rates and population densities experienced by towns located close to Nairobi e.g. Ngong Town with an urbanization rate of 8.6% and Ongata Rongai with an urbanization rate of 7.8%, both located in Ngong division. Ongata Rongai and Ngong account for 64.5% of the total urban population in Kajiado district. The variation in densities as result of proximity of Nairobi is illustrated in the Fig. 2.2 below.

Fig 2.2: Map on the effect of proximity of Nairobi on the growth of Kajiado district



Source: University of Nairobi 2007, based on CBS 1999 statistics.

The areas bordering the city of Nairobi present the highest population densities. Demand for peri-urban housing in areas like Ongata Rongai and other bordering towns have brought about the marked differences. Farther locations still provide low densities of between 3-91 people/km².

Further, developments that have for centuries favoured conservation in Kajiado are coming under threat by the NMR. As the population increases, there is need to increase production of modern housing stocks, as opposed to traditional pro-conservation Maasai Manyatta typologies (Plates 3.1 and 3.2) to cater for the increase.

Plates 3.1 and 3.2: Photo showing Maasai Manyatta in Kajiado District





Source: University of Nairobi, 2007^{viii}

2.4 Cross-Cutting Structural Concerns of the NMR

2.4.1 Urban Sprawl: Death of Rurality

With the actual reduction of agricultural activity, it's not only the rural economy that has declined but also the biodiversity and social fabric. In the case of forced urbanization of Ol'Kejuado County, different land uses are endangered from the threat of urbanization. These are not merely important because of the livelihoods involved, but include potential damage of huge ecosystems like wildlife conservation zones, loss of agricultural land, for example in Ngong and Kiserian, loss of forests like Ololua Forest, loss of pasture lands and group ranches, erosion of the Maasai culture and heritage, etc.

2.4.2 Rejecting the Claim on the City

UN-HABITAT (2001)^{ix} has identified that a radical form assumed today by the linkage of people to territory is the loosening of traditional sources of identity, such as the nation or the village. At a micro level (read cities and towns), this statement can be taken literally as outlying villages are subject to acceptance that urbanization has caught up with them, and hence have to change to conform with the times. These have been referred to as new city users.

In the NMR, this phenomenon has taken place in different measures. While areas like Ruai, Mwiki and Njiru to the east, and Ruaka and Muchatha to the north have transformed into urban landscapes, other areas like Dagoretti, Kiambaa, Thome, among others, refuse to change. In these areas, agriculture continues unabated, its only threat remains the wanton sub-division of the land into tiny parcels that makes people realize that better profits can be made in other form of investment like housing development. Further afield, the Kajiado Maasai in Namanga, Kajiado and Isinya have gone up in arms rejecting the forced claims to be included in the Nairobi Metropolitan Area. This is in spite of increasing seductive vibes from the government that their livelihoods will be expanded, service provision increased and living standards improved.

2.4.3 Unresponsive Urban Planning

Urban studies have tended to focus on the capital and other large cities, whilst rural development projects do not even mention the small and medium-size towns where the project administration and services on which the rural areas depend are mostly located (DFID, 2003). Though they have been objects of little research and attention, small and medium-size towns

play an important role in urban and national development and will continue to do so (Owuor 2005 Ed). It is important to note that several recent developments have provided many opportunities for enhancing the role of small and medium-size towns in development process.

Responsive urban planning is urban planning that addresses the various concerns without drastically altering the status quo of the way of life of various rural and urban communities. The practice has been to look at Regional Planning, Urban Planning and Rural Planning as distinct isolated processes that produce different unrelated products. Responsive urban planning, in this context, is planning that seeks to place urban planning in the context of rural and regional development.

2.4.4 Infrastructure Provision Challenges

Infrastructure provision is one of the lubricants for development. The adequate supply of infrastructure services has been viewed as essential for economic development and poverty alleviation, both in policy and academic realms (UN-HABITAT, 2011^x). However, a large urban footprint and extensive boundaries makes it difficult to provide infrastructure and services. Issues of high initial capital outlay, maintenance and management of trunk infrastructure. It is therefore of vast importance to have compact development per definition, to enable local authorities provide infrastructure.

2.4.5 Conflict of Interests among Local Authorities

In the NMR, various pictures emerge. Different local authorities from different backgrounds present different strengths and challenges to the collective. Broadly, the following emerge as the broad groupings, including 'Pest' Population-Dense 'Consumer' Local Authorities like the City Of Nairobi) and 'Producer' Resource-Frontier Local Authorities like Kajiado, Ruiru, and Kikuyu.

2.5 The Death of African Urbanization

The annihilation of rural areas by the increasing urban surge spurs the physical expansion of the urban areas for the short term. Later, there arises a difficulty in provision of basic services farther from the centre. The resultant scenario becomes one where cities are unable to provide for their areas jurisdiction. This in turn presents a lack of impetus for future growth. In the core Nairobi, the expansion of the city eastwards due to speculations that rose from the 1973 Metropolitan Strategy provisions led to the development of the sprawling Kayole estate. With the deterioration of the site and site schemes of Dandora and Umoja, service provision in the eastlands Nairobi has remained a challenge, and these areas continue to attract huge populations of low-income earners. With the expected expansion of the region to more than 45 times the current size, the cost of infrastructure provision and management will be unimaginable, what with the low financial provisions available.

Other notable pointers to death of urbanization include:

- ✂ **Interference with livelihoods for peri-urban communities:** Communities that have been used to farming like coffee farmers in Ruiru, dairy farmers of Limuru, horticulture farmers of Kikuyu, when they are rendered unable to do their farming without restrictions

that come with change of tenure will find it difficult to cope with the new expected lifestyles. Maasai *morans* that are used to life in the forest likewise will find it difficult to fit into urban lifestyles. Further, the death of the agriculture in the peri-urban areas will involve transportation of food from other regions. The result will mean increased costs of food and even food insecurity, all additional costs that must be borne by urban residents.

- ✂ **Environmental Degradation:** Like in the case of Kaputei and Kitengela, essential wildlife habitats will be broken and wildlife existence in these areas will be endangered.
- ✂ **Tearing of the Social Fabric:** Transforming the traditional Maasai from the relaxed rural life to the rigmarole of urban dwelling overnight is a social disaster in the making. Overnight, the Manyatta will become a structure not fit for human habitation, and development control measures will bring about regulations and standards that these people do not know. Their ways of life would have to be considerably broken. And because the Maasai will not herd cattle, they will need to sell their land and speculators will fleece them dry. Low levels of education and exposure would then have to drive them into lifestyles not their own, and the cycle of poverty borne would be unimaginable.

In a nutshell, urbanization is the only chance for survival of humankind, and current projections point that unless a major urban catastrophe occurs worldwide, humanity must come up with ways of living in towns and cities, and to live there sustainably. One key path to such urbanization, in the African context, involves integration of rural development planning as a prerequisite for sustainable urban development. Rural economies, communities, societies and heritage must be protected.

3.0 CONCEPTUALIZING SUSTAINABLE URBAN FUTURE FOR AFRICA

Agenda 21 of the United Nations Conference on Environment and Development(UNCED) reported that “Expanding human requirements and economic activities are placing ever increasing pressures on land resources, creating competition and conflicts and resulting in sub-optimal use of both land and land resources.” (Bonfiglio, 2004^{xi}). However, in Kenya, and indeed much of Africa, what is rural and what is urban still stand in very distinct poles. Whereas urbanization has increased, the urban and the rural cannot be mistakenly pooled together. Numerous examples exist in Kenya – but Nairobi is the prime example.

3.1 *City Image and Identity*

The issue of city image and identity is not unique to Nairobi (MNMeD 2008). UN-HABITAT (2001) captures the error of the quest to transform the NMR into a world class African Metropolis. It says that the particular historic character of a city often gets submerged in the direct and overt quest for an international image and international business. Local identity becomes an ornament, a public relations artefact designed to aid marketing. Authenticity is paid for, encapsulated, mummified, located and displayed to attract tourists rather than to shelter continuities of traditions or the lives of its historic creators (UN-HABITAT, 2001). If then the NMR is thus designated merely to ‘become an ornament, a public relations artefact’, then there is every need to question intents of the government of Kenya on protection of ecosystems, heritage, and livelihoods.

3.2 The Place of Mega Cities

Although the city itself is five thousand years old, the metropolis is a new phenomenon, dating from a mere hundred years ago. Its scale alone differentiates it from any older type of urban settlement. Cities are merging together to create urban settlements on a massive scale. These configurations take the form of mega-regions urban corridors and city-regions. Cities in clusters, corridors and regions are becoming the new engines of both global and regional economies, and they reflect the emerging links between urban expansion and new patterns of economic activity (UN-HABITAT, 2010).

Even ancient Rome, with its million inhabitants, was in visible relation to its surrounding countryside. One could walk from one district to another or from the central to the rural area. In the metropolis, this is hardly possible; even in a car it may take hours to move from centre to periphery. Thus the city has swollen to a vast organism whose scale far transcends individual control (Lynch and Rodwin, 1960^{xii}).

The growth of the metropolis revolutionized urbanization. It now appears that these metropolitan complexes will become a dominant environment. In many places, cities (or indeed these metropolitan complexes) will merge together to create urban settlements on a scale never seen before. These new configurations will take the form of mega-regions, urban corridors and city-regions, creating a new urban hierarchy and landscape. For example, it is estimated that Japan's Tokyo Nagoya-Osaka-Kyoto-Kobe mega-region will have a population of 60 million by 2015 (WHO and UN-HABITAT ,2010). Africa is still far from reaching these levels.

3.3 Sustainable Urbanization

Sustainable urbanisation is a dynamic, multi-dimensional process covering environmental as well as social, economic and political-institutional sustainability. It embraces relationships between all human settlements, from small urban centres to metropolises, and between towns and cities and their surrounding rural areas (UN-HABITAT and DFID, 2002). In light of the foregoing, sustainable urbanization becomes increasingly tied to sustainable rural development.

Whatever the patterns of urbanisation, activities in urban settlements are inextricably linked to those in rural areas, while many people's lives straddle both urban and rural frontiers. For instance, the extraction of resources and disposal of urban wastes can adversely affect rural areas both close to and far away from cities. These inter-linkages underlie many of the challenges to achieving sustainable urbanisation (UN-HABITAT and DFID, 2002). According to UN-HABITAT (2010a), future urban planning must take place within an understanding of the factors shaping 21st-century cities, including:

- ✂ the environmental challenges the demographic challenges of rapid urbanization,
- ✂ the economic challenges
- ✂ increasing socio-spatial challenges, especially social and spatial inequalities, urban sprawl and unplanned peri-urbanization; and
- ✂ the challenges and opportunities of increasing democratization of decision-making as well as increasing awareness of social and economic rights among ordinary people.

4.0 TOWARDS SUSTAINABLE AFRICAN URBANIZATION

The World Bank suggests that even though direct management of land through government agencies has rarely been effective, there is a clear role for government to ensure that resources that embody broader social and cultural values and benefits, such as landscapes, biodiversity, historical sites and cultural values, will not be irreversibly destroyed by myopic individual actions. Furthermore, public action is warranted to reduce undesirable externalities and nuisances, provide incentives for the maintenance of positive external effects such as hydrological balances, and facilitate cost-effective provision of government services (2003)^{xiii}. To achieve these, the following proposals are provided to guide towards integrative planning:

4.1 **Putting Rural Development First**

Though current calls for wholesale urban transition are good, the justification for this are based on actual statistics and trends of growth, and the numbers clearly show what is actually happening, retailing such thoughts on the decision and policy-making arena need not be a cut-and-paste arrangement across the board as facts and realities in Europe and the Americas differ substantially with those in Africa. But Africa is the home of the fastest urbanization rates, East Africa, and Kenya, topping the global charts on the rate of urbanization charts.

In seeking to sustainably stabilize livelihoods of rural and urban communities in Africa, as well as ensure a satisfactory supply of food, and other non-food items to the urban areas, it is important to lay a firm foundation for a paradigm shift with regards to sustainability. Rural development planning stays at the height of sustainability debates based on the importance of rural ecosystems and economies, as well as the high rate of transformation taking place as the rural realm continually gets swallowed by the urban. But the urban future seems to cast a bleak future to all that is rural, if that which is currently rural is not looked from the light cast by the future that is urban. For that reason, it is best to prioritize the needs in their order of 'felt-needs' placing rural development planning first; and all urban development planning must happen in light of the rural development plans.

4.2 **Strategic Sprawl Control**

Strategic sprawl control is a novel all-inclusive model to reduce sprawl. Sprawl is not a single-issue phenomenon, but is caused by a combination of factors. This calls for a multi-pronged framework for control, especially viewed from the lens of strategic planning and sustainable development. According to UN-HABITAT (1999)^{xiv}, Strategic Planning reflects the "process" view of planning and is characterised, *inter alia*, by cross-sectoral coordination, financial feasibility, enabling mechanisms by the public sector to support both the formal and informal, private-sector activities, realistic choice mechanisms of monitoring and evaluation. This is aimed at promoting a process of integrated urban development.

Strategic sprawl control, therefore, is not merely a diagnostic and corrective process, but also a preventive and restrictive. Various components to be critically assessed and tackled in strategic sprawl control include aspects of:

- ✂ Growth and causes of growth and expansion of the cities;

- ✂ Legal, policy and regulative frameworks that direct development control;
- ✂ Incentive and disincentive factors that influence sprawl, including availability of cheap land in the outlying areas;
- ✂ Political and socio-economic parameters in the outlying areas, including the desire of the residents of the outlying areas;
- ✂ Opinions of the stakeholders and actors in the outlying areas; and
- ✂ Environmental factors and the ecosystems vie of the city and the city region.

Specific interventions proposed to prevent to control urban sprawl include:

- ✂ Increasing Government Investment in housing and infrastructure development;
- ✂ Zoning for higher development density in housing and commercial centers;
- ✂ Strengthening planning and technical capacity building in planning institutions;
- ✂ Preparation of effective strategic development plans for all local authorities;
- ✂ Formulation of laws to protect natural environment, agricultural land and green belts;
- ✂ Introduction of road and fuel pricing to reflect the cost of infrastructure development; and
- ✂ Increasing investment and efficiency in public transport sector and reduce car trips.

4.3 Re-orienting Sustainability to suit Current Urbanization Trends

Achieving urban sustainability has been identified as a key part of any shift towards achieving sustainable development on a global scale. Naess (2001)^{xv} has identified five elements of urban development and spatial planning deemed necessary for sustainable development to occur. They are:

- 1) A reduction of the energy use and emissions per capita in the city to a level compatible with the ecological and distributional criteria for sustainable development at the global level;
- 2) A minimising of the conversion of and encroachments on natural areas, ecosystems and soil resources for food production;
- 3) A minimising of the use of environmentally harmful construction materials;
- 4) A replacement of open-ended flows, where natural resources are transformed into waste, with closed loops relying to a greater extent on local resources; and
- 5) A sound environment for the city's inhabitants, without pollution and noise damaging to the inhabitants' health, and with sufficient green areas to give opportunities for the population to experience and become emotionally related to nature.

Clearly, a fundamental shift in the form and function of the city will be required to meet any of these criteria for sustainability. Urban sprawl clearly conflicts with most, if not all, of the elements of sustainable development listed above (Arbury, 2010).

4.4 Development of Satellite Towns

Both to encourage economic diversification and to avoid further urban sprawl, planning for the city region should pay more attention to the development of satellite urban centres including Machakos, Ongata-Rongai, Ngong, and Kikuyu, in the case of Nairobi. Neglected in the past, these centres have an important role in agricultural processing, marketing, storage, and

distribution. Their prosperity depends on the availability of markets in Nairobi and the city's ability to supply them with goods and services such as agricultural equipment.

4.5 Compact Development of African Cities

Sustainable urbanization in Africa must focus on establishment of a small African urban imprint. A small African urban imprint focuses on maximization of space use in the urban centres. Indeed the current area under development in core Nairobi still features very low densities compared to other areas in the world. For example, Johannesburg, Nairobi and Toronto have low population density of about 23, 42 and 40 persons /hectare respectively. This is quite low compared to 74p/ha in Kuala Lumpur, 123p/ha in London and 350 p/ha in Cairo (Mairura, 2005). While the densities of high-class residential development (like Muthaiga in Fig.4.1 below) may be difficult to increase because of zoning policies, blighted areas, slum and squatter settlements like Kibera (Fig. 4.2) can be densified through regeneration and development and redevelopment to provide increased housing.

Fig. 4.1 and 4.2: Satellite images of the population density in different areas of Nairobi.



Source: RCMRD, cited in UNEP et al (2005)

In core Nairobi, large tracts of land can still be seen that do not have any developments. In Kasarani, for example, there still are found farmlands and open spaces.

4.6 Conclusions

Development of the twenty-first century African city is taking place in a pressure cooker of various critical factors. One interesting feature is that if it continues to happen that way, it will suffer an implosion, and urbanization may never be sustainable. Therefore, there is need to constantly and consistently vent African urbanization with the fresh air of rural development planning. The rural will help in balancing the ill-effects of urbanization, hence preventing the potential suicide of urbanization.

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