

Building Resilient Infrastructure And Spatial Planning In Urban Areas of The Sub Saharan Region

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Abstract

The current challenge facing urban managers is that of ensuring adequate provision of the basic amenities ranging from road network, telecommunication, electricity, piped water, waste disposal and sewer network. As the Urban centers expand rapidly the provision of basic urban facilities has remained elusive with most areas facing the problem. This paper disseminates research findings on Strategies to improve infrastructure development and spatial planning in urban areas in Kenya as based on a study undertaken in Eldoret town. It was a case study, focusing on two informal settlements: Langas and Munyaka which were selected purposely for study due to; the high density and consolidation and they are settlements outlying on the urban periphery with lack of appropriate infrastructure, poor maintenance regimes, overcrowding, uncontrolled and conflicting land uses. The researchers stratified the study area into strata's that comprised six blocks defined on the basis of physical boundaries and distinguishing characteristics. 10-20 households were selected randomly from each block depending on the size with an intention to achieve a sample size of approximately 100 responses from the settlement. Munyaka has a formal layout and so was possible to randomly select 50 plots from the two blocks bisected by the main roads. 23 key informants were selected using purposive sampling. Data was collected using questionnaires, interview schedules, observation, focused group discussion and photography. Data were analyzed using descriptive statistics, statistical package for social scientists. Arising from the findings from the research is that Planning should focus on the following aspects: Determination of urban boundary, Zoning of urban space, Categorizing settlement in urban areas with provision of cheaper housing facility by developing, Provision of infrastructure to cover expansion areas. This study recommends that, liaison and co-ordination between different government agencies and stakeholders is necessary for expertise, exchange of ideas and machinery. The municipal should also solicit the participation of residents as this encourages them to be actors of their own development as they are incorporated into urban structure

Keywords: *Urban development, Spatial, planning, infrastructure, squalor settlements*

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I. Overview

As the Urban centers expand rapidly the provision of basic urban facilities has remained elusive with most areas facing the problem. Whereas the urban population has doubled in size during the past decade, infrastructural development has proceeded far more slowly. Development planning has remained reactive rather than pro-active, high demand from tenants and educational institutions that scramble for space has led to investors putting up real estate's undermining proper planning. The growth of Eldoret town is overwhelming and the scenario is even complicated by the informal set up which represents more than 70% of the urban population. The Municipality is experiencing proliferation of informal settlements and this has been one of the domino effects for inadequacy in urban planning in the region; the trend is quickly establishing a due course. Inadequate provision of basic infrastructural facilities is the major problem accompanied by; lack of secure tenure; problems of poor waste management; poor methods of human waste disposal; exposure to acute unsanitary conditions; poor drainage system and poor road network. Responsibility for solving (and ideally preventing) these problems lie with the Local Authorities. This situation has been enhanced by poor development control system compounded by lack of comprehensive legislation governing developers who contravenes land use standards and regulation. In this case local authorities are unable to invest in the municipal infrastructure commensurable with the pace for housing development.

The use of alternative tools and models can assist planners to direct growth in urban areas and deliver the required provision of infrastructure, housing and other services. Although urbanization is the driving force for modernization, economic growth and development, there is increasing concern about the effects of expanding cities, principally on human health, livelihoods, infrastructure and the environment. Due to the increasing rate of urbanization, especially in developing countries, illegal structures as a form of shelter are

common place. In their quest to have a source of shelter, these unplanned and illegal structures tend to increase and thus lead to the springing up of slums. The implications of rapid urbanization and demographic trends for employment, food security, water supply, shelter and sanitation, especially the disposal of wastes (solid and liquid) that the cities produce are staggering (UNCED, 1992).

'Urban poverty and its effects on human lives is perhaps the single greatest challenge in our era. The centerpiece of urban policy in the 21st century must therefore be the fight against poverty, with goals such as integration of the informal cities, the recovery and democratic use of public space, the reversal of the trend towards the concentration of wealth and opportunities, which so often ends in a spiral of violence. ('International meeting on urban

Then, each nation needs a well established planning office which plays an important role in finding proper solutions, in order to direct urban development and to meet the demands of new increasing population in cities poverty'' Recife, Brazil, 1996)

II. Literature Review

Guiding urban development should be a priority for cities in developing countries. This is because the root causes of most current problems encountered by these cities start from urban expansion. The problem is further complicated by the lack of provision of basic services and appropriate places for housing sites.

Urban development is basically referred to as city development, and involves taking into site development. It takes into account all the social, economic, political relationships and the form in which is growing the city in a sustainable way (Baross, 1991). Development is a relative term, locating a particular society or economy in relation to others, usually developed or more developed (Healey, 1974). Urban models played a significant role in urban development; Based on the concentric nuclei and sector theories it was easy to co-ordinate development. Planning was based on the fact that many towns and nearly all large cities grow about many nuclei rather than around a simple CBD. Some of these nuclei are pre-existing settlements, others arise from urbanization and external economies. Distinctive land-use zones develop because some activities repel each other; high-quality housing does not generally arise next to industrial areas, and other activities cannot afford the high costs of the most desirable locations. New industrial areas develop in suburban locations since they require easy access, and outlying business districts may develop for the same reason.

According to sector theory, the view that housing areas in a city develop in sectors along the lines of communication, from the CBD outwards. High quality areas run along roads and also reflect the incidence of higher ground. Industrial sectors develop along canals and railways, away from high quality housing. Thus a high status residential area will spread out along the lines of the sector by the addition of new belts of housing beyond the outer arc of the city. Once contrasts in land use have developed in a sector near to the city, these contrasts will be perpetuated as the city grows

The Role and Importance of Spatial Structure in Urban Planning

Spatial structure is a concept used to interpret, design and make human settlement. It results from interplay between formally planned and spontaneous dimensions of settlement making. The term structure refers to the creation of the public environment that realm which is shared by inhabitants as compared as opposed to private realms of individual's households and businesses. The act of planning is to arrange the elements of the structure into a system of references that supports the processes of living and which establishes a spatial logic eliciting responses from many actors who contribute to the settlement making. Settlement plans should be able to accommodate uncertainty and change rather than simply to accommodate the initial development programme that necessitates the plan.

Infrastructure and Services in African Cities

One of the most visible and disturbing characteristics of the poorer cities is the decline of their infrastructural base. As urban populations grow, and as available resources decline, public infrastructure is being degraded to a point where cities are seriously losing their capacity to operate as productive entities. In many African cities, refuse is uncollected and piles of decaying waste are allowed to rot in the streets; schools are overcrowded; some urban roads deteriorate into quagmires in the rainy season, and are pitted with dangerous potholes during the dry season; private telephones are an impossible dream; public transport systems are becoming seriously overloaded; and more and more people are obliged to live in unserved plots. Not only is little new infrastructure constructed, but existing infrastructure is poorly maintained. (Stern, 1991, p. 7)

Stern's analysis refers to African cities in general. The situation he describes is characteristic of large parts of some of the cities described in this volume, especially Nairobi, Lagos, and Kinshasa, and is becoming increasingly widespread in lower-income areas of the others (see also Ngom, 1989, on Dakar; El Sammani et al., 1989, on Khartoum). The situation is even worse in many smaller cities and poorer countries (Onibokun, 1989).

Stren and White's research in the 1980s showed that most water and electricity supply agencies in African cities were either central government parastatals or attached to central government ministries. In most cases, supply has failed to keep pace with urban growth. Where local government continues to be responsible, experience varies, from Zimbabwe on the one hand, where the supply of water has generally kept pace with urban population growth, to Kenyan local authorities on the other. However, problems should be attributed not only to local government failings, but also to central government policies and inaction. In some francophone countries, the water supply function is contracted out to private companies. The Côte d'Ivoire's experience is that such an arrangement can be efficient if the company concerned is given adequate autonomy with respect to operation and pricing, although there can be difficulties in ensuring supply to low-income areas (Stern, 1989b). An intermediate arrangement, of a national (Ghana) or municipal (some Zambian local authorities) public sector company, is becoming more wide spread, as countries attempt to improve efficiency without outright privatization.

Waste management arrangements in most cities are also far from satisfactory. Whereas anglophone countries rely on a public service, elsewhere solid waste collection may be subcontracted, to a single company as in Abidjan, or to local entrepreneurs (Stern, 1989b). Whatever the arrangement, effectiveness is inhibited by inappropriate collection arrangements and shortages of foreign exchange to import equipment, and equity is reduced by the lack of finance to subsidize services in low-income areas where necessary.

The failure of land subdivision and servicing programmes to keep pace with urban growth, which has led to widespread illegal and informal development, and not only of low-income areas, has hindered the extension not only of water, electricity, and solid waste collection services but also of adequate sanitation arrangements and road networks to large areas of Africa's cities. In the absence of collective sanitation arrangements, households are forced to devise individual solutions suited to their incomes and physical circumstances. Reliance on pit latrine sanitation can give rise to groundwater pollution and problems occur as density rises, while the use of septic tanks needs to be backed up by private or public sludge removal services and suitably located disposal sites. Where waterborne sewage disposal to conventional treatment works is available, it is costly, limited in coverage, and poorly operated, because revenue and foreign exchange shortages have made it increasingly difficult to obtain spare parts and maintain systems. As densities increase, unacceptable levels of sharing occur, or residents cannot get access to any toilet facility and are forced to "use the bush" ("free range" in Accra). Both have adverse health and environmental implications.

In the early years after independence, public transport was typically a public monopoly, whether a parastatal bus company or a local government function. Invariably it was inadequate, owing to shortages of foreign exchange for parts and new buses and poor management. Increasingly, the public monopoly has been supplemented or replaced (legally or illegally) by private operators, a trend that increased its momentum with economic liberalization. Although the availability of public transport has generally improved as a result, the failure of the public sector to provide an adequate road network results in patchy coverage and high operating costs, while its inability to regulate the private sector has resulted in poor safety standards and sometimes violent competition to ply particular routes.

Privatization may occur through a variety of mechanisms, including sale of public assets, deregulation and liberalization, contracting out, public-private or public-NGO partnerships, transfer to NGOs, and government support for private providers (Rondinelli and Kasarda, 1993). Lessons from the Asian experience for African cities demonstrate the need to take care in designing the mechanisms for private/NGO involvement, to devise a workable regulatory framework, and to select only those services for which privatization is appropriate (for example, transport, housing, refuse collection, and perhaps aspects of health care) (Davey, 1993). Institutional reforms related to service provision are under way in African cities.

Local government and its reforms in Kenya

Local authorities' works and municipal physical planning committees are required to play a major role in ensuring that professional consultancies on infrastructural development comply with physical planning requirements. The movement towards strengthening devolved governments to enable them cope with emerging diversities and complexities is a worldwide phenomenon and central governments are increasingly recognizing the important role that local governments can play in governance, economic growth and social development. Local authorities in Kenya are, for example, primarily responsible for delivering many vital services to businesses and households such as water supply, sewerage, drainage, construction and maintenance of roads, primary education, basic health, markets, abattoirs, fire protection, street cleaning and lighting, garbage collection, and cemeteries. Local authorities are mandated by law to oversee the development of the urban areas.

Regarding the institutional arrangements, the local government system in Kenya is riddled with many administrative problems. Currently, in contrast to the global trend, there has been an increasing shift in decision making power from local authorities to central government (Bubba and Lamba, 1991). The ministry of local

government, in particular, has acquired a wide range of powers, controls and supervisory functions over local authorities. Planning focus has now changed from centralization of economic activities to spatial decentralization growth into secondary and tertiary centers in the urban system. The Kenya government has adopted an urbanization strategy which includes an 'a growth and service centre' strategy (Republic of Kenya, NDP 1974). Sessional Paper No.1 on 'Economic Management for Renewed growth' Further places urban development within the context of macro-economic framework in which rural-urban balance is stressed in order to disperse development into secondary towns (Republic of Kenya, NDP 1994: 110)

Kenya local government reforms

It is Kenya Government policy since independence in 1963 to reform the public service in order to make it more responsive and supportive of the welfare of Kenyans. Various government sessional papers have over the years expressed the need to fight social ills such as poverty, illiteracy, disease and ignorance. Other challenges such as the HIV/AIDS, gender disparities and numerous cultural-related practices like Female Genital Mutilation and wife inheritance hit the poor hardest. All these concerns are articulated in the Government's Economic Recovery for Wealth and Employment Creation Strategy (2003/2007). This document outlines measures to improve the welfare of Kenyans and reduce the incidence of poverty in the country.

In line with the foregoing national concerns, the government saw the need to reform Local Authorities, as key public service delivery and governance agencies at the local level in order for them to play their role more effectively. In recognition of the fact that local authorities are closest to the people, it was envisaged that transforming local authorities would enable them to be more responsive to the needs of the citizens, and particularly the poor. Earmarking resources to directly meet the needs of the poor may offer temporary relief; however, a more sustained effort can only be successful if the institutions of governance are set in place, made more accountable to the citizenry and equity considerations built in policies and legislation on service delivery. This requires a mix of project, policy and institutional initiatives.

Overall national strategy

The overall national strategy for priority government actions is outlined in the investment programme for Kenya's Economic Recovery Strategy for Wealth and Employment Creation - 2003 – 2007 (Economic Recovery Strategy). According to this document, poverty in Kenya rose during the 1990s with indications that the proportion of the population living in poverty has risen from about 50% in 1990 to 56% in 2003. The document further states that some regions within the country the poverty levels are below the stated national average, calling for deliberate intervention in such regions.

The Economic Recovery Strategy recognizes local authorities as effective partners in local governance and development processes. This is underscored by the government's commitment in the Economic Recovery Strategy to accelerate the local government reform process in order to further improve local service delivery, governance and poverty .

In their desire to invest, developers continue to initiate many development projects in the urban areas but the planners have been unable to cope with the high demand for land use. A cursory look at the spatial developments in the major urban centers of Nairobi, Mombassa, Kisumu, Nakuru and Eldoret demonstrate the fact that developers are ahead of planners which leads to unplanned structures, mushrooming of slums and unco-ordinated developments. (Ombura 2002)

III. Materials And Methods

The research used a case study approach conducted through the cross sectional survey, based on secondary visits and interviews. The first step was a desk research, It involved collecting and reviewing of a wide range of published data of planning in Kenya, urban growth (controlled and uncontrolled). This was an explanatory nature which provided an orientation and familiarity with the subject in question. Secondary data was acquired from the EMC, Department of land and settlements, ELDOWAS, Ministry of physical planning, officially published policy documents and articles, important reports/documents were copied. The study benefited from first information raised by residents during the stakeholders meeting organized by consultants on Digital mapping of Eldoret town and strategic plan for the vision 2030.

A historical perspective was necessary to capture and fully appreciate the processes. Hence, two settlements were selected for study due to; the high density and consolidation and they are settlements outlying on the urban periphery with lack of appropriate infrastructure, poor maintenance regimes, overcrowding, uncontrolled and conflicting land uses, and lack of readily accessible drinking water, unsanitary living conditions, rapid growth and illegal subdivisions; among others. 23 key informants were selected using purposive sampling while 200 respondents from the two settlements were selected using random sampling. Langas has not been systematically subdivided hence the area was subdivided into six blocks defined on the basis of physical boundaries and distinguishing characteristics. 10-20 households were selected from each block

depending on the size with an intention to achieve a sample size of approximately 100 responses from the settlement. Munyaka has a formal layout and so was possible to randomly select 50 plots from the two blocks bisected by the main road. From this sample, information on effects of uncontrolled urban development on infrastructure provision was obtained.

IV. Results And Discussion

Challenges facing major institutions concerned with urban development

Planning and institutional context addresses elements that affect planning both at national and district level. It focuses on the Municipal Planning environment, laws and regulations that have an impact on Physical Planning at the Municipal level. Currently there is involvement from Non-Governmental Organisations, Community Based Organisations, and private sectors in urban planning and management. All these laws, regulations and the policy making environment have an impact in the operations and planning of the Eldoret Municipal Council. There are two major institutions concerned with the development control system in the town; the local government and the Physical Planning department.

The local government

Eldoret Municipal council is an all purpose Local Authority established under CAP 265 laws of Kenya. It is the responsibility of the local government to deliver vital services to businesses and households such as water supply ,sewerage ,drainage ,construction, and maintenance of roads ,primary education basic health ,markets ,abattoirs, fire protection, street cleaning and lighting ,garbage collection and cemeteries. Extension of boundaries depends on the decisions made by the Municipal council.

Physical planning department

The Department of Physical Planning of the Ministry of Lands and Settlements is charged with the preparation of Physical Development Plans, Structure plans and short term physical development plans in the country. The department is represented at provincial and district levels. It works closely with Local Authorities in matters related to Physical Planning within Municipal boundaries. Physical plans are prepared by the Physical Planning department to guide development at the local level in the interests of the public. Plans are classified as development plans, local physical development Plans and short term development plans. Within short term development plans there are action plans, advisory plans and Part Development Plans (PDP). Previously the decision to make plans emanated from the planner, DDC, Local Authority and Commissioner of Lands. Currently the decision to make a structure plan is vested in the Department of Physical Planning (Planning Act 1996: 68).

The purpose of making a structure plan is indicated in the third schedule of the new planning legislation. Long term and short term plans were prepared by Physical Planners who took them for circulation to Departmental Heads and display at public places for comments. The plan was then submitted to the Commissioner of Lands for approval. The process can be summarised as (Decision -Plan Preparation - Plan Circulation-Director-Commissioner of Lands - Approval -Gazettement). In the new Act the process is: Decision - Plan Preparation - Director for circulation - Minister for approval - gazettement. Circulation of the plan is aimed at incorporating the views of the community.

Challenges facing the two institutions

According to the data review and semi-structured interviews conducted, the following challenges facing the institutions in charge of development control were established;

Planning laws and regulations

There is inherent conflict of various legislations that deal with planning and land administration. Local Government Act empowers the municipality to plan, acquire land and carry out subdivision plans while the Physical Planning Act takes away this authority. Misapplication of the Act in subdivision plans has increased the number of illegal subdivisions in many peri-urban areas. The lack of a regulation to control conflicting interests in land issues leads to grabbing of public land. There are various statutes that deal with planning and land use regulations. Those that deal with planning are: Land Planning Act Cap 303, Town Planning Act Cap 134, Physical planning Act 1996, and the Local Government Act Cap. 265. Statutes and regulations on land use include: Government Lands Act Cap. 280, Land Control Act Cap. 302, Land Acquisition Act Cap 295 and registered titles Act Cap. 300.

The Town Planning Act Cap.134 deals with subdivision of freehold land within urban areas. It is repealed by the physical Planning Act which is not operational at the moment, Land Planning Act Cap. 303: The Act applies to land involving changes of user from agriculture to urban, and allowing subdivisions of up to a quarter an acre and change of user from agricultural use. Users that are no longer agricultural are registered as

leases for ease of planning and development control. The Act is cumbersome to apply and its use is limited to 5 mile radius of outside the Municipal boundaries as well as 400 feet from the centre line of trunk roads where we have change of user and the resulting portions of the subdivision are less than 20 acres. Subdivision of land in the study settlements are less than a quarter an acre hence does not comply with the law.

It stands repealed when Physical Planning Act becomes operational. According to (Ombura, 2002), under major legislation which regulates the planning and the use of land within urban areas (The Land Planning Act CAP 303 of 1968 and the Town Planning Act CAP 134 of 1931), there is no provision for the prosecution of a developer who contravenes land use standards, regulations and building standards.

Physical Planning Act 1996: It deals with all matters relating to preparation of all kinds of physical development plans and subdivisions. It stipulates development control measures and the role of the District and liaison committees. However, the power of physical planning is concentrated in the office of the director and Local Authorities are not seen as planning entities. Local Government Act Cap 265: The Local Government Act provides for the establishment of Local Authorities, Planning subdivision plans, land acquisition, powers to make by-laws, development control and functions of Local Authorities. Therefore, Lack of effective co-ordination between LADPs and physical development plans in the municipality poses a challenge to the council.

Government Lands Act Cap 280: This Act deals with land issues that are both urban and rural relating to land allocation, development control, registration, appointment of a town planning advisor, and preparation of PDPs and development plans. It requires government land to be alienated, surveyed, planned, and serviced before allocation. The Act is cumbersome to apply due to the numerous procedures.

Land Control Act Cap. 302: This Act applies to the subdivision of agricultural land without change of user with sizes of subdivisions not being less than 20 acres. It complements the land Planning Act. The inability to circulate the subdivisions weakens the applications of this Act while the Land acquisition Act, Cap. 295 is used by Local Authorities and the government to acquire land in accordance with Sections 117 and 118 of the constitution of Kenya. Land acquired is meant for Town Planning purposes and owners are compensated at market value plus 15% disturbance allowance.

Disorder in urban development has undermined planners' efforts on regulation and control of activities within the urban area. The analysis results indicate that a (mean of 3.7) the sampled population agrees with this factor. In uncontrolled urban development the sequence is that the Planning phase follows the development of settlements when problems arrive in the occupied area. Corruption is a prevailing issue, evidenced by the approval of inappropriate plans.

Lack of liaison among planning departments

Among the challenges facing the institutions were, Inconsistency between the recommendation of physical plans and investment in infrastructure development and expansion, by the concerned agencies like KPLC, ELDOWAS, TELKOM, ministry of roads. Results from the questionnaires agree (a mean of 3.63) was given for this factor. Results from interviews indicated that, there is lack of Liaison among planning departments and organizations providing infrastructural services for expertise, exchanging of ideas and machinery. The central government and local authority planning structure also hinders co-ordination of major stakeholder organizations that play a major role in urban planning leading to difficult co-ordination between stakeholder institutions concerned with infrastructural development and urban planning.

Lack enough resources

Municipal council lacks capacity to oversee planning matters, guide and control development within the municipality. Capacity focuses on planning capacity, personnel, their skill, available equipment for work and financial management. The staff structure in all the departments is bottom heavy with high number of junior level staff with limited middle and senior level staff. Wages and salaries take up more than 70% of the total budget, impairing service delivery. Key departments of the council lack highly skilled personnel in management and supervisory posts. This has affected revenue collection, poor service delivery, and lack of capital expenditure. The problem of in fighting in the council compounds to the problem.

Lack of development in urban infrastructure to which can cope with the pace of the growing population caused by migration (a mean of 3.6) was is a challenge to the planning authorities. On the other hand good governance is essential for smooth functioning of any organization. Under the legal Act CAP 265 the laws of Kenya mandate the local authorities to, provide the services, control and regulate economic and social activities. Laxity and inefficient prevailing amongst the local authority contravenes the act. Failure of the municipality to conduct surveillance creates problems within the municipality despite the fact that the institution is the one expected to find solution in solving the problem.

Boundary changes

Finally, frequent boundary changes that do not reflect real urbanization trends and resource capacities of the municipal council hinder the Local authority in performing their duties. Municipal council plays a weak role in this issue and its advice is disregarded in the determination of boundaries. Many of these areas lack essential services and remain rural for a long time resulting to present planning constraints.

Eldorets' town boundary was extended to 26sq.km in 1974 and to the existing 147.9 sq .km in 1988. The latest boundary extension brought into the municipality large tracts of agricultural land, most of which have been undergoing subdivisions either legally or illegally. This has resulted in a number of Part Development Plans (PDPs) and several disjointed sectional plans and subdivisions without integration into an overall urban structure plan. The municipal council inherited most settlements of which have been subdivided into plots as small as 255 square meters for residential construction and little has been done to rectify the situation. There be need to re-plan the settlements and relocate the overspill populations where necessary. In order for settlement improvement to take place, however, it will be necessary to appraise the capability of Municipal Councils.

V. Strategies

The urban planning process helps to direct urban development and the uncontrolled development could be redirected and its adverse effects mitigated by timely implementation of development intervention. Having attempted to fulfill the objectives of the study, the following recommendations of urban planning were discussed on four main aspects;

Planning and control

Planning cannot be carried out successfully without constant supply of data. In this sense the current cadastral system should provide useful information for formulating development plans which will form a basis of managing the expansion of medium sized towns. Planning should focus on the following aspects:

Determination of urban boundary

The urban management plan will limit the fringe of new urban areas through suitability analysis which should be conducted to determine the future development areas and consolidate the already uncontrolled areas. An effective co-ordinating mechanism for the preparation, implementation of plans and development control should be executed by the government.

Zoning of urban space

There is a highly diversified land use along the main roads where major developments occur. In this case, there is need for zoning, densification and occupation of the vacant spaces within this growth corridor. Therefore zoning may be an effective tool for restricting certain developments in these growth areas.

Efficient and appropriate municipal actions

It observed that the municipality has no mechanism to avoid uncontrolled urban development which riddles infrastructural provision, thus the following suggestions are;

Institutional arrangements in response to planning and implementation

As a result of the study, the municipality should consider the factors that lead to uncontrolled urban development as parameters of future planning. It is important that urban management, like economic management, be viewed first and foremost as the management of scarce resources in ways that are sustainable, equitable, and efficient. Traditional economic variables (land, labour, and capital) have to be understood within the framework of urban economies. The municipality may consider preparing a detailed digital land use map that the local government may use as a tool in directing development. Application of the computerized system can be used in mapping, site selection, route location, land use inventory, cadastral application, suitability studies, environmental monitoring and traffic control.

As a matter of urgency, government should embark on a comprehensive cadastral survey of all lands in the town, to determine their quantity, use desirability for various purposes, using the Geographical Information System (GIS) approach. Land should be listed and registered to ensure the security of tenure of the holder. It is only when the quantity and quality of lands are known that land could be classified for various uses, and other policies applied to them.

An alternative tool for municipality is to solicit participation of residents, this manner may encourage residents to be actors of their own development and be incorporated into the controlled urban structure.

The Complex procedure and rules of acquiring legal ownership of land should be simplified while plans to be provided at subsidized rates so as to encourage residents develop the area with approved plans. Coordination between the Ministry of Physical Planning, the Ministry of Local government and the Ministry of

lands and settlements in the context of urban development should be strengthened. Liaison among planning departments and involvement of organizations providing infrastructural services will reduce uncontrolled urban development.

Political organization

Another key variable is political organization. Any management process has a political base and in many Municipalities in Kenya, it is vital that the base shifts away from central government to local government. This shift, if it occurs, will undermine the traditional top-down orientation and strengthen the role of democratically elected authorities and civil society generally. Those elected to manage the cities should be fully empowered to take responsibility for their actions and should have the freedom to appoint good managers, lawyers, planners, and accountants to manage city activities.

Staff development

There is the need to strengthen land use planning and management capacity in the city. Capacity building with respect to land issues should be distinguished from manpower development. Sustainable land policies should combine incentive systems, which should be negative (i.e. sanctions), or positive (i.e. rewards), in order that land policies are enforced.

There is also need to stimulate a planning, administration and upgrade the urban municipal administration culture in Eldoret through training courses. It is evident that the larger percentage of personnel needs training in planning issues or the municipality should have people with better knowledge on issues concerned with urban development.

The government should promote and develop the capability of national consultants and Contractors, by employing quality quantity surveyors or planners will minimize demolitions and gradual mushrooming of illegal structures.

Provision of infrastructure to cover expansion areas

The result of the study had identified that the lack of basic services and infrastructure in uncontrolled development areas. It may be possible to explore possibilities of tapping other sources to finance projects for upgrading urban areas.

There is need to invest in urban infrastructure and other services through inter-agency Coordination, by legally empowering and institutionally strengthen local bodies in Order to build a clean, safe and prosperous urban environment. This will progressively guide rural settlements towards urbanization by expanding rural-urban inter-relationship under the overall notion that urban development Promotes rural development.

Another alternative is equal distribution of municipal budget for development of both the controlled and uncontrolled areas. In that sense there is need to provide three main services; roads to new areas, water supply, Electricity and sewerage system.

Affordability of Controlled Development

The result of this study shows that, uncontrolled urban development is common in cheaper areas preferred by people with low income. The municipality may consider into its policies, Categorizing settlement in urban areas with provision of cheaper housing facility by developing organized habitats under the notion of “shelter for all”. An alternative tool for municipality is to solicit participation of residents, and to give incentives by Construction and distribution of cost effective housing together with subsidized loans to poor families through finance companies.

Bibliography

- [1] Baross, P, 1991, Action Planning, Institute For Housing And Urban Development Studies, Rotterdam, NI
- [2] Baross.P.1990: Sequencing Land Development; The Price Implication Of Illegal And Legal Settlement Growth, In Baross And J.V.Van Der Linden, Eds.1990, The Transformation Of Land Supply In Third World Countries: Avery, New Castle Upon Tyne England.
- [3] Cbs, 2000, Op.Cit, P51: Population Census Reports.
- [4] Fuller, F. Kealder: (2005) Promoting Participatory Democracy And Public Participation
- [5] Through Decentralization At Sub-National Levels, Government Printer.
- [6] G. Linden, Rationale And Evolution Of Planning Thought (Draft Paper), Faculty Of Environmental Sciences, University Of Amsterdam, The Netherlands 1995.
- [7] Government Of Kenya Printers (Gok) Sessional Paper No. 10 1965
- [8] Gilbert,A. And Gugler ,J,1981,Cities,Poverty And Development: Urbanization In The Third World',Bookcraft Itda Midsomer Norton Avon Great Britain.
- [9] Human Development Report (2004), Undp ([Http://Hdr.Undp.Org/Reports.Global.2004](http://Hdr.Undp.Org/Reports.Global.2004))
- [10] Healey.P.1974: Planning And Change. Pergamon Press Oxford
- [11] Kothari, C.R. (1985), Research Methodology, Wiley, Eastern Limited: New Delhi
- [12] Kerlinger, F. N. (1973). Foundation Of Behavioural Research, 2nd Edt. India. Surject Publication.

- [13] Lamba,D.(1994)The Forgotten Half Environmental Health In Nairobi's Poverty Areas In Environment And Urbanization, Vol.No.1, April 1994,Pp164-173
- [14] Mackay, J. (2004) Development Of Local Government: A Study Participation Of Intergretal Development Planning, Process Of The City Of Cape Town.
- [15] Municipal Council Of Eldoret (2006/2007) ,Strategic Plan .Nicelyn Technologies Printers; Barnge'tuny Plaza.
- [16] Ngwenya, T. (2005) Towards Democratic Governance And Public Participation In South
- [17] Africa. Assessing Mechanisms And Processes Of Participation In The Context Of Decentralization
- [18] Ombura C.O (2002): Towards An Environmental Planning Approach In Urban Industrial Siting And Operations In Kenya
- [19] Onibokun.A..1973; Urban Growth And Management In Nigeria, In Stren, And R. White (Eds), Africa Cities In Crisis: Managing Rapid Urban Growth; West View Press Inc, Usa
- [20] Republic Of Kenya (1970) National Development Plan 1970 – 1974 Nairobi: Government Printer.
- [21] Republic Of Kenya (1994) National Development Plan 1994 – 1996 Nairobi: Government Printer.
- [22] Roseland, M. (2000) Sustainable Community Development Integrating Environmental , Economic And Social Objective Towards Sustainable Community.Canada Pergamon.
- [23] Rees, W (1992) Ecological Footprints And Appropriate Carrying Capacity: What Urban Economics Leave Out, In Environment And Urbanization 4(2): Pp. 121-129
- [24] Rees, W And W. Waackernagel (1994) Ecological Footprints And Appropriate Carrying Capacity: In Investing In Natural Capacity: The Ecological Economics Approach To Sustainability, Washington D.C
- [25] Stren, R.E. (1989) Institutional Arrangement Strengthening Local Governments In
- [26] Sub-Saharan African. Policy Seminar Report No. 21 Of The World Bank, Washington, D.C
- [27] Stren, E. R. 1993. Urban Management In Development Assistance. An Elusive Concept Cities 10(2): 125-138.
- [28] Stren,R.E And R.R Whites (Eds)African Cities In Crisis ,Managing Rapid Urban Growth African
- [29] Un-Habitat (2002) Local Democracy And Decentralization In East And Southern Africa: Experiences From Uganda, Kenya, Botswana, Tanzania And Ethiopia, Nairobi: Un-Habitat
- [30] United Nations (1991) World Urbanization Prospects, New York
- [31] United Nations Environment Programme (Unep) (1994) 'Air Pollution In The World's
- [32] Mega-Cities' In Environment 36, No. 2:4
- [33] World Bank (1990) ,The Urban Edge, Vol.14 Washington D.C; World Bank, Annual Review Of Urban Development In The Third World.