

University Establishment and the Rise of Informal Settlements in Kenya: A Case of Rongo University, Migori County, Kenya



George Ouma Ochola*, Daniel Odinge Nyamai and J B Okeyo-Owuor

Department of Agronomy and Environmental Studies, Rongo University, Kenya

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*Corresponding author: George Ouma Ochola, Department of Agronomy and Environmental Studies, Rongo University, P.O. Box 103-40404 Rongo, Kenya

Abstract

Institutions of higher learning have been highly embraced in various parts of the world based on the important role they play in social cultural and socio-economic development. Apart from producing skilled personnel and equipping individuals with knowledge, competence and building capacity of individuals, universities are also job creators besides offering a wide range of business opportunities in areas they are established. Further, universities are instrumental in stimulating infrastructural development which act as a magnet in attracting people from far and wide for settlement to conduct business or investment. Owing to the rapid expansion in settlements with the risk of inadequate planning, consequently, the localities where they are established have been characterized with development of informal settlements to meet the need of the rising population. Therefore, this study sought to determine the influence of universities in the development of informal settlement with particular reference to the establishment of Rongo University in Rongo Sub-County, Migori County, Kenya. This study relied on the analyses of Landsat images before and after establishment of Rongo University for comparison purposes. The images of North Kanyajuok Sub-Location in Rongo Sub-County were retrieved. The study considered the Landsat images of 2010 before the establishment of Rongo University and 2013, immediately after the establishment and 2017/2018 period during which the university has been operational for some time. The findings of the study showed that there had been rapid change from natural to built-up environment. The study has also established that Kitere shopping centre has witnessed a sudden transformation from a small open centre prior to the establishment of Rongo University to a major slum settlement characterized by haphazard development of housing and a mixed up of dilapidating structures, including high rise buildings, and single floored structures. The study concludes that the establishment of Rongo University has had a significant influence in the development of informal settlement or slums in its areas of jurisdiction. It is therefore imperative that university establishment be underpinned by appropriate policies and legislation which regulate urban/town development triggered by higher learning institutions such as university to address negative externalities such as creation of slums.

Keywords: Establishment of rongo university; Land-use transformation; Natural environment; Built-up environment; Informal settlements; Policies and legislation migori county, Kenya

Introduction

Rongo University is located in Rongo sub-County, Migori County, Kenya. It is the only fully chartered university in Migori County despite existence of other universities such as Kisii university satellite campus which is in Migori town. Rong University was a constituent College of Moi University and it became chartered in 2017. The communities in Migori County have embraced this university as a showcase of higher learning institution which provides educational services in the region. Many people support its establishment and subsequent development noting that educational services have been brought closer to them. Apart from providing educational services, Rongo University has offered employment and a wide range of business

opportunities in the sub-county as well as to the neighbourhood. Indeed, the establishment of the university is regarded as a major flagship project in Rongo Sub-County and Migori County leading to the reason why majority have embraced it. It has also stimulated and opened up Rongo Sub-County for various developments. These have been characterized by development of improved road network, business development and establishment of institutions serving different sectors of the economy. The university has also created market for food staff and other goods and services in the region. More business activities are perceived to have improved since the establishment of Rongo University. Additionally, the university has drawn private developers from

every corner of the county. Many structures are being developed to provide housing services for the increasing population in the area. Majority of the respondents residing in Rongo Sub-County have expressed satisfaction that the development in this region has been perceived to have taken right direction. However, despite the good reception of the university establishment, there are concerns from sustainable environmental management point of view regarding its development without proper planning, a factor which has led to land use transformation from natural environment to built up environment.

Literature Review

According to Odhiambo [1], is estimated that urban areas contribute 70% of the GDP (Gross Domestic Product). For that matter they play important roles in the development of a nation. Harnessing the potential of urbanization therefore remains critical as it enhances growth and development. Addressing the challenges associated with urbanization also remains critical since if not done, environmental degradation may be realized, and this may in turn impact negatively on development. Nabutola [2] contended that Kenya has been suffering urban development challenges due to lack of an all-inclusive policy framework guiding urban development. In his view, the previous sector policies fell short in adequately addressing urbanization as a changing system that fosters both economic growth and other forms of development. He posited that urbanization should be viewed in a manner that integrates both rural and urban development in a mutually beneficial relationship [2].

Initially, development of urban centres in Kenya was mainly guided by the Local Government Act CAP 265 which was repealed. The Physical Planning Act of 1996 [3] also played a major role in guiding development of urban centres. The specifications in these policy documents were clear but their implementation remained a great challenge. Numerous urbanization challenges especially in management of rapidly developing urban population and transformation of natural environment into built environment. Equally, emergence and rise of informal settlement remains a challenge considering the urban poor. Exploring opportunities also remain to a challenge. Okong'o (2014) emphasized on the need to streamline the management and governance of cities and urban areas with the Kenyan 2010 Constitution implement as a way to achieve sustainable urbanization. He advocated for the need to integrate the Urban Areas and Cities Act 2011 [4] for realization of sustainable urbanization. The major challenge which has been noted especially on the documents guiding urban development more specifically the 2012 Physical Planning Act Cap 286 is lack of clear reference to the users of the physical development plans whose preparation is a preserve of the regional or local director.

Despite the existence of the new Urban Areas and Cities Act of 2011 [4], development of urban centers has not been rooted on what is envisaged in this Act. For instance, it is expected that

development of urban areas to be associated with better social infrastructures, improved opportunities, augmented survival choices and services integrating urban and rural development. The opposite is realized especially while considering the rising number of universities institution within our country. The guiding policy document have failed to provide for planning especially in areas where the universities are or are supposed to be established. According to Odhiambo [1], this is what translates to "urban rush where urban features of quick fix are developed to tap the overwhelming market demands."

The National Urban Development Policy (NUDP) of 2011 [5] stipulated whet a sustainable urban development should be addressing in the country. Some of the thematic areas it highlighted included; physical infrastructure & services, urban housing, urban governance and management, social infrastructure & services, urban finance, urban safety and disaster risk management, urban economy, national & county urban planning, land, environment and climate change and marginalized & vulnerable groups. A framework for development of health and education facilities is also provided for in this policy. That is, these facilities should be planned for, developed and management appropriately. The policy did not leave out recreational facilities, public open spaces, parks and sports amenities. Within this policy, planning & development of critical physical infrastructures & services have been prioritized for sustainable urbanization.

It is unfortunate that universities as educational facilities were not adequately addressed as drivers for urban development. It has never been a secret that many establishments of many universities have led to development of urban centres. Kenyatta University for example, has led to the development of Kenyatta Market (KM) which is now considered a university slum and not only accommodates students but several other workers in Nairobi. Baraton University of East Africa has also led to the development of a slum nearby. Many informal settlements have emerged as a result of these universities. Though considered affordable housing, they pose environmental stress in the regions where the universities are established. Additionally, clauses 176 (2) and 184 of the Kenyan 2010 Constitution provide for regulation of urban areas and cities. In its clause 200(2a), the constitution spells of the "governance of the capital city, other cities and urban areas." The Kenyan Vision 2030 also advocate for urban planning & development nationwide. It has always remained a challenge that we have not embraced urban planning as a proactive tool in mitigating challenges so as to achieve sustainability in our development. We have rather remained active and that is why in most cases we fall in awkward situation when we fail to manage some impacts resulting from urbanization.

According to Nabutola [2] Kenya is among the countries in the world experiencing rapidly urbanization. Migration, natural growth in population political process and arbitrary extension of urban boundary are some of the factors which occasion urbanization in Kenya. It is unfortunate that the planning & man-

agement institutions have been left behind in terms of provision of sustainable urban livelihoods to correspond with the rapid urbanization experienced. It is worth noting that in Kenya, the urban planning & implementation tools in existence have not adequately provided attractive and orderly urban environment [2]. Several incidences of environmental challenges in urban centres have been witnessed in Kenya. Some of which include; development of informal settlements, poor waste management, squatter's settlements, traffic congestion, competing land uses, incessant collapse of buildings, urban sprawls and ribbon pattern of development.

In management of urban development, Urban Development Control Process has been embraced in Kenya. This is governed by a number of Sessional Papers and Legislation. These include; Sessional Paper No.3 of 2009 [6] on National Land Policy, Physical Planning Act 1996 Cap 286, Constitution of Kenya 2010, Urban Areas and Cities Act 2011 [4], Environment Management and Coordination Act 1999 [7] (reviewed 2015), Land Control Act Cap - 10 - 302, the County Government Act of 2012 [8], National Land Commission Act 2012 [9], the Land Act 2012 [10], and the Land Registration Act 2012 [11]. The specifications in these legislations might be clear in some sections. Their implementation remains a challenge. As was noted earlier, these legislations are not clear on the externalities which arise from university establishment. There is therefore need for adjustment and strengthening them as the current state of affairs in most Kenyan towns indicate that some of the requirements for these legislations escape the attention of the concerned enforcers.

Research Methods

The primary data was collected using the key informant interviews, observation, photography, questionnaire administration and focused group discussion. A number of documentary ev-

idence which included but not limited to photographic materials were taken to show exactly what is taking place on the ground. The study also relied on Landsat images which were taken before and after the establishment of Rongo University. Supervised classification was used to analyze land-use/cover change data generated from GIS and remote sensing which allowed for defining of the training data set/signature that indicated the pixels to be selected and the type of software to be used for land-cover categories. Other primary data was analyzed using SPSS and Excel software. The information /data and material evidence generated in the course of the study was collated, analyzed and the results are presented in charts, graphs and tables.

Results and Discussions

The findings of the study revealed that Kitere which used to be a small shopping centre before Rongo University was established, (that is, before transformation of what it used to be as Moi Institute of Technology) has developed rapidly into an informal settlement. Many structures have come up in the shopping centre. Some of these structures serve as hostels which have largely been developed courtesy of the private developers who supplement the limited housing facilities provided by the university. Similarly, some of the structures are serving as business enterprises. Equally, there are structures which tend to double as residential units and at the same time used as business enterprises. The only concern is that these structures are haphazardly developed. There have not existed proper development plans to regulate the development of such structures. For instance, the Physical Planning Act Cap 286, stipulates that every developer is supposed to submit the Environmental Impact Assessment Report before the development if approved. Environmental Management and Coordination Act of 1999 reviewed in 2015 also provides for Environmental Impact Assessment before the proponent is allowed to undertake any development activity.



Figure 1: Section of Bushy Kitere Shopping Centre (Slum) with Mixed Structures.

What is witnessed in Kitere shopping centre is a real characteristic of an informal urban centre developing in the region. Sincerely, the houses are not planned, and the developers do not take into consideration the issues of conformity and/or compliance with the regulatory requirements. Some houses within Kitere shopping centre are sub-standard and out of character. It is not only in the shopping centre alone where this is experienced but also in North Kanyajuok Sub-Location where the university main campus is located. Some private developers have established high rise structures (storey buildings) which do not conform with the neighborhood at all. Figure 1 shows a pictorial view of the mixed up in structures.

The Physical Planning Act Cap 286 of the laws of Kenya is very specific and clear on neighborhood development. For example, the number of units required for a particular lot size is predetermined. The area has seen out of character structures which deprive the people of their privacy. The Kenya's Development Control provides for zoning of various structures to ensure conformity. It also provides for separate location of industries, residential structures and commercial buildings. This not only enhances peaceful environment, but it also reduces conflicts and enables easy flow of services.

The study also established that Kenya's governance structures are silent about the externalities associated with establishment of the universities. For instance, The Kenyan University Act of 2012, the Urban Areas and Cities Act of 2011 [4], the County Government Act of 2012, among other provisions are all silent on the guidelines. They have inadequately addressed the myriad urbanization challenges. Streamlining implementation and proper follow up of Urban Areas and Cities Act of 2011 [4], the Physical Planning Act Cap 286 and the 2010 [12] constitution of Kenya need to be brought to bare in order to realize prop-

er management, governance and sustainable urbanization. The revised Physical Planning Act 2012 CAP 286 has not provided clear reference to the plan users but stipulate the preparation of physical development plans which is a preserve of the regional or local director.

Similarly, Environmental Management and Coordination Act of 1999 (Reviewed 2015) provides for subjecting development projects to Environmental Impact Assessment. Equally, it provides for periodic auditing of the on-going projects. This helps to protect the environment from injurious projects. The findings of the study revealed that the provisions of this Act are not followed strictly in the development within and around Rongo University. A number of developments are being undertaken without subjecting them to EIA. This has led to haphazard development of structures which do not conform with the set standards and requirement to match with neighborhoods. The study noted that significant number of structures are out of character in the areas they are established. For example, the mix up of bungalows with storey building which in most cases deprive other people of their privacy and at the same time interferes with free air circulation. The implications of haphazard development associated with improper implementation of the legal statutes are evident in informal settlements associated with university establishments. Also, there is poor waste management in general and lack of avenues (access roads that link various sections of the developing slum). There is also mix up of dilapidating structures and the modern ones posing health risks. Figure 2a & 2b show mixed structures as portrayed in Kitere. The bushy areas within the buildings pose security threat in the Kitere slum. The structures are being developed without following requirements as envisaged in the policies guiding development activities. Provision for various services like waste collection by the county council becomes a challenge. The bushy areas have been turned into dump sites.



Figure 2a: Bushy Areas in Kitere.



Figure 2b: Mixed Structures & Bushy Areas.

In some cases, even the human feces can be found at those places as other waste. Some people are using these bushy areas

for long calls. These bushy areas within the centre may harbour various dangerous organisms like snakes. Such kind of actions

pose health risks in the area. Further, the study noted that Kitere shopping centre which is currently developing into slum does not have a designated dump site. Every person is managing his or her waste in a manner they deem fit. Provisions for other services such as water supply will be a nightmare in an unplanned

urban centre even though currently the residents are still using water from the shallow wells and occasionally from drilled bore holes. This is also a threat to groundwater extraction. Figure 3a & 3b show how solid waste is poorly managed in Kitere slum.



Figure 3a: Solid Waste in Open Space.



Figure 3b: Solid waste in Bushy Area.

The waste is not sorted before disposal. Both household/domestic waste and other hazardous waste are dumped together which poses health risks. Currently, there is no policy in Kenya that specifically deals with externalities that arise from university establishment. What is envisaged in the existing policies and other legal frameworks have failed to specify the control measures that can be adopted to regulate development in university triggered slums which have been perceived to be inevitable in areas where universities have been established. Consequently, the environment around the universities have been threatened with rapid transformation from natural to built-up environment.

The biodiversity around these places have been affected. Some of the biodiversity are lost and habitat destroyed leading to loss and even extinction of various species. In order to capture the legal perception of the local people, the study engaged the locals in determining whether development within and around Rongo University follows the legal procedures laid in the legal institutional framework. Results (Figure 4) indicate that majority (65.5 percent) of the respondents reported that the legal frameworks are not adhered to and only 34.5 percent indicated that the procedures are being followed.

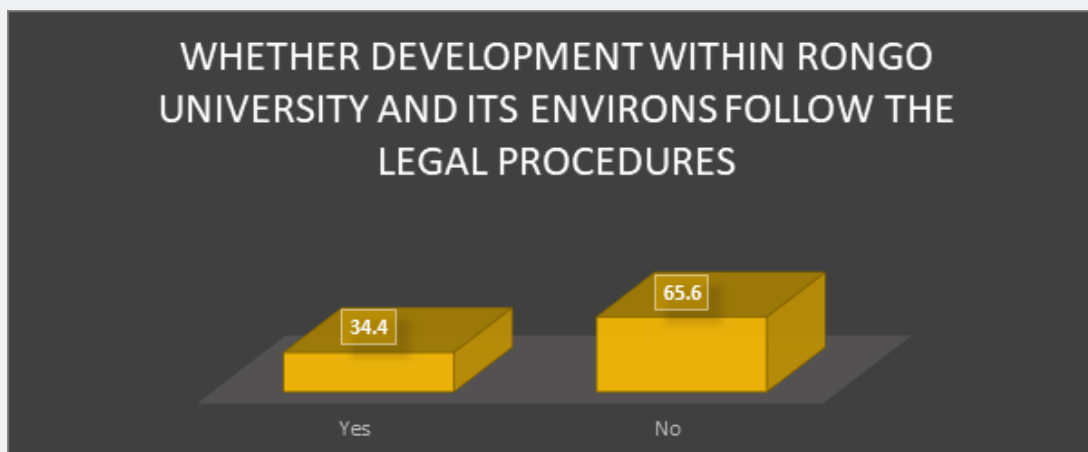


Figure 4: Whether Development within Rongo University and its Environs Follow the Legal Procedures.

According to these respondents, many development activities were being undertaken in the areas with no idea at all of what the development policies stipulate. Some respondents claimed that some developers do not understand the policy pro-

visions while others ignore the guidelines all together. One of the respondents stated that “the developers might be aware of the legal provisions, but they don’t implement them because there is no follow up by the authorities concerned with compliance.

This clearly showed that there is a weakness in enforcement and monitoring of policy implementation.

The study also established that there is poor coordination or overlap in performing various responsibilities by the two principal agencies of the government, i.e., NEMA and the National Construction Authority (NCA). The respondents claimed lack of understanding in how the two authorities operate and which authority is to come first. One of the respondents stated that “there has been a confusion in the role performed by NEMA and the NCA in terms of which authority is mandated to approve development projects especially the building.” In their view, the NCA normally comes and writes NCA on the wall and from there,

no other follow up activities are witnessed. Other respondents claimed that they had never seen NEMA officials doing a follow up of development activities. Consequently, many people do not understand their roles. Consequently, many developments are coming up without EIA being conducted. According to the respondents, there has been limited public involvement in development projects taking place in the region. In their view, the neighborhoods are always getting surprised with various developments in the area in which some do not conform with such neighborhoods. Generally, there are a number of reasons why many developers do not follow the required procedures laid down in the development policies. Some of many reasons are summarized in Figure 5.



The results (Figure 4) indicates that the major reason for no following the legal procedures while undertaking development activities is lack of knowledge on the provisions of these legal frameworks by the public which stands at 35percent. The respondents claimed that majority of the public are not aware of the existing policy provisions such as the ones in the Physical Planning Act, the EMCA, Urban Areas and Cities Act together with Development Control among other legal frameworks. Other respondents (23 percent) were of the opinion that though they understand the legal provisions, their implementation is costly. They contended that implementation of these legal frameworks involves other cost of implementation for instance charges paid before approval of EIA reports and even before approval of structures by the NCA. According to them, such extra costs discourage the developers in following such procedures who focus on the extra costs incurred but not having sustainable development. Similarly, another 23 percent of the respondents reported that the public could be aware of the legal provisions which guided development in various regions, but they might be reluctant to implement them during development activities because of lack of good will. This also deters adoption of legal procedures in development. On the other hand, 19 percent of the respondents

also argued that the provisions of the legal frameworks are not usually easy to understand. In that regard, the public find it challenging to implement what they are not able to interpret. Consequently, they end up sidelining them and continue with their development activities.

In a related development, the information obtained from the focused group discussion and interview scheduled revealed that there has been changes of use even for structures which were initially established to serve as business premises. In their opinion, some business premises have changed to serve as hostels. They noted that initially there were no high-rise buildings but as a result of the establishment of Rongo University, a number of high-rise buildings have emerged in the area. The only challenge is that there has never been a plan for development of these structures and change of use. Figure 6a & 6b show structures which were initially used as shops, but their use changed when their owners thought they could fetch much benefits if used as hostels. According to the owners of the structures, there was shortage of accommodation facilities when Rongo University was established. The dire need for hostels contributed to the change of use of various structures to meet the accommodation demand that kept on rising with increase in student enrolment.



Figure 6a: Dora Hostel.



Figure 6b: Michelle Hostel.

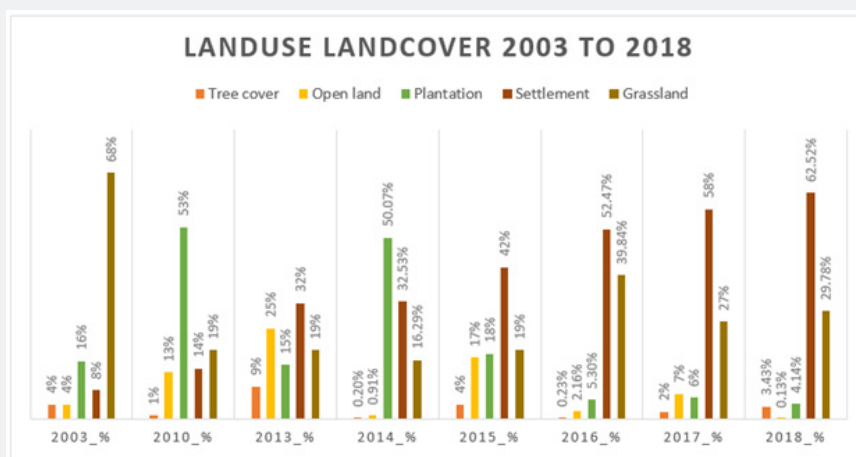


Figure 7: Summary of Land Use and Land Cover between 2003 and 2018.

Source: Regional Center, Kasarani, Nairobi, 2019.

In the focused group discussion, the study established that sugarcane plantations are disappearing with time. The lands where agricultural practices used to take place have been sold to private developers leaving the natives with small pieces which cannot support large scale sugarcane plantations. It was also revealed that the issue of selling land to private developers is leaving some of the community members landless and it also brings family conflicts. There is constant transformation of the natural

environment into a built-up environment. More housing facilities are required in the area to be used as rentals and provide accommodation to the increasing number of students. Others will also be needed for business purposes. It is worth noting that plantations or areas initially occupied by crops are in constant increase from the year 2015 as indicated in Figure 7. This is a threat to food security in the area as agricultural land is transformed into built environment at a faster rate.



Figure 8a: Hostel on a Subdivided Land



Figure 8b: Plot Awaiting Development.

The neighborhoods have perceived that there is a lot of benefits that accrue from development of rental and other accommodation facilities. They end up selling their lands to private developers so as to acquire money to develop their own structures for income generation. Unfortunately, as was revealed in a focused group discussion, the household heads in most cases end up consuming what they have acquired from the sale of their land and remain stranded. That is to say, the agricultural land is lost but the beneficiaries become the private developers. What was evident during data collection exercise was land fragmented into small plots. Some of these plots have been built-up while others are fenced mostly with barbed wires. Figure 8a & 8b shows a subdivision of land which have been built and others awaiting development. They are meant to offer accommodation services both to students and other residents. Some of these places were farmlands and they are now being turned into buildings. Others were occupied by vegetation and these have been lost as the land loses its natural form.

The study findings also revealed that the lands which were formerly open or bare, the grasslands and the ones which were supporting sugarcane and other food crops such as maize have

tremendously reduced in sizes. The only challenge is that the community around perceive this as positive direction taken in the region. The attention has not been paid to the harm caused on the environment as was noted earlier that very few development activities in the region follow the laid down procedures in the policies guiding development activities in Kenya. It therefore becomes apparent that if such trend continues then a lot of environmental resources will be lost since the trend in development realized in the region currently is not sustainable

The construction of privately-owned hostels attracts the students who are not able to cope with the rules governing the university hostels. Other students are also married and would like to enjoy their free life hence prefer hostels which are not managed by the university. Figure 9a & 9b show samples of the hostels which are privately owned. The only challenge is that development of these hostels does not follow what is provided in the Physical Planning Act and Development Control which provide for conformity and zoning of structures. A good example is the building portrayed in plate 4.6. It is considered out of character since the neighborhood does not have a similar structure like itself.



Figure 9a: Oxford Hostel.



Figure 9b: Oxford and the Neighborhood.



Figure 10a: New & Dilapidating Houses in Kitere.



Figure 10b: Old Residential Structures.

As was noted earlier, the provisions in the Physical Planning Act for residential neighborhoods development are very clear on

neighborhood development. For example, some of the aspects considered important in the Act are the size of the population,

plot coverage and the dwelling units' number. A residential neighborhood unit should also ensure sufficient provision of basic services to the community and effective road network. The existing support services should be adequate for the population within that neighborhood. It is unfortunate that the develop-

ers do not look into these. New storey buildings are evidenced among the old dilapidated structures. Figure 10a & 10b portray dilapidated structures in Kitere. They occupy bushy areas with poor access roads, but they have residents.



Figure 11a: Pupils along Kitere Bushy Path.



Figure 11b: Man in a Kitere Slum Bushy Path.

The study noted a faster and haphazard development and destruction of natural resources and the environment. This was derived from what has been witnessed at the developing slum near Rongo University where each structure is taking its own form and does not conform with the neighborhoods. In such cases offering and managing urban services like water supply will be difficult. There should be provisions for such public utilities in an urban set up. The access roads/avenues and way-leaves must also be catered for. Figure 11a & 11b indicate the condition of access road in Kitere. They might not be visible and at times someone may think they are not in use.

The current informal settlements which is former Kitere shopping centre is bushy in some places and lacks access road at particular points which can ease movement. It is growing into a small urban center which is not planned at all. The challenge is, the government is silent about this at the moment, but future interventions might prove costly and too late. If such an action will be taken, then many people will incur a lot of losses.

Conclusion

Development of slums in places where universities are established is becoming inevitable. Normal expansion of universities as institutions as well as development of infrastructures to enhance their services cannot be prevented. Universities draw people from various regions and these people together with students need accommodation or places of residence. As such, natural environment is converted to built-up environment. Many structures come up to be used as business enterprises, accommodation facilities, lecture rooms, libraries, staff quarters and other leaning facilities. The nearby shopping centres turn to be slums with unplanned structures. They lack basic facilities such as access roads and waste management become a challenge too. Private developers do not take into consideration the provision

of the policies guiding development. Buildings which do not conform with the neighborhoods are evident. Mixed up of dilapidated structures among new structures are also evidenced.

Recommendations

Considering the results of this study, the following recommendations are proposed:

- It is imperative that the government revise and enforce development control policies guiding university establishment to integrate environmental management concerns;
- Equally important is the need for monitoring development activities in the regions where the universities are established to ensure that they comply with statutory requirements;
- Ensure effective coordination between the regulatory agencies of the government responsible for physical planning development and environmental conservation to promote effective delivery of services to avoid confusion and unnecessary overlaps.

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