Contents lists available at

Journal of Environmental Management and Safety

Journal homepage: www.cepajournal.com

Long-run Trend of Cities' Informal Housing: a Solution for the Majority of Kigali Urban Dwellers and a Challenge to Urban Development in Rwanda

Emmanuel Twarabamenye
National University of Rwanda; Faculty of Science, Department of Geography, P.O.Box:117 Butare, RWANDA
Email: etwarabamenye@nur.ac.rw; emmatwara@yahoo.fr
Phone: 250 (0)788856784

and
Adrie Mukashema
National University of Rwanda, Faculty of Agriculture, Department of Soil and Environment, P.O.Box:117 Butare, RWANDA

ARTICLE INFO

Article history
Received 23 November, 2011
Received in revised form 23 December, 2011
Accepted 14 February, 2012
Available online 3 March, 2012

Keywords:
Rwanda, Kigali, urbanisation, informal housing, urban management

ABSTRACT

Urban population of developing countries is increasing at an alarming rate. In 2007, an annual urban growth rate of 3.1% was expected in developing countries against 0.4% in developed countries by 2030. In eastern Africa, the annual growth rate is expected to be around 3.8%. It is specifically projected that Rwanda will have an annual urban growth of 4.1% by 2030, actually one among the highest in the world. In 2008, Kigali City accommodated around 800,000 inhabitants, 57% among them being immigrants. Urban population will go on increasing, obviously in Kigali, because it hosts more than 70% of economic activities. The high number of immigrants led to a large development of informal housing with self-help construction as the major model of housing production. Today's estimation from Kigali City shows that informal housing counts from 70% to 80% of the city and accommodate between 80 and 90 % of the population. Informal housing developed as a response to the State's inefficiency in land and house provision, and non-affordability of formal housing in Kigali City.

@2012 cepa

Introduction

One of the greatest socio-economic changes that occurred since 1950s is the rapid urbanization worldwide which started in 1900s. World urban population shifted from 745 million in 1950 to approximately 3, 5 billion in 2010 (Bloc-Duraffour, 1998; Habitat: 2009). The global urban transition witnessed over the last three decades or so has been phenomenal. While from 1950 to 1975 the population growth was more or less evenly divided between urban and rural areas of the world, the period since has seen the balance bent considerably in favour of urban growth. In 2008, for the first time in history, more than half of the world's population lives in urban areas (UN Habitat, 2003). In the meantime, urban growth is mainly occurring in the South while urban population is stagnant or decreasing in the North. The rapid urban growth in the South stems from the high rate of natural population increase estimated to be more than 3% in some countries, great number of rural-urban migrants, and changes in national economies. Urban population growth is expected to continue in coming decades in developing countries. By 2030, it is predicted that 56% of the population in developing countries will be living in urban areas and more than 50% of world urban population will live in cities of developing world.

This "*explosive growth of cities in developing countries – presents a serious challenge to national and local authorities*", especially in African countries for various reasons (UN Habitat, 2003). African governments are not well prepared to accommodate this high and constant inflow of population in terms of job creation, services and infrastructure provision, and social support that are necessary to sustain good environmental and health conditions. As a consequence, 61.1 % of African urban dwellers lived in informal settlements in 2003 (UN Habitat, 2003). This is a common situation mainly in African cities, including Rwandan cities and towns. Rwanda like other African

countries is experiencing rapid urbanization and faces same problems since 1960. In spite of low urbanization from the beginning of the 20th century until early 1980s, urban population has constantly grown up to 1,800,000 people over 8,128,553 total populations in 2008. Although Rwanda remains the least urbanized country in Africa with only 18.2% living in urban areas (UN Habitat, 2008), the high urbanization growth rate exerted high pressure on housing in Kigali, and other Rwandan towns as well.

Basing analysis on data gathered from governmental and published materials, this paper examines the formation process and the extend of informal housing in Kigali City and analyses factors that led to its excessive development as well.

1. Urbanization in Rwanda: A Recent Phenomenon

Up to the beginning of the 20th century Rwanda was totally rural. Ruhengeri, Gisenyi, Kigali, Cyangugu and Butare were the first towns created by the German colonialists respectively in 1903, 1907, 1908, 1914, and 1927. Kigali was recognized as the capital of Rwanda in 1908 by Dr Richard Kandt, the then German Governor of Rwanda. In 1962, when Rwanda recovered its independence, Kibuye, Byumba, Kibungo, Gikongoro and Gitarama, were also recognized as towns. Nyanza and Rwamagana were recognized as towns by the Government of Rwanda (GoR) in 1975, Nyagatare and Kabuga in 1995, and Ruhango in 2002.

Urbanisation in Rwanda was very slow from early 1900s until early 1960s: less than 1 % of Rwandans lived in urban areas in 1962. Kigali was the only town accommodating around 6, 000 people; other towns were small villages. The root causes of this slow urbanization in were: (i) the little interest that Rwandans had for burgeoning urban centers, (ii) the catholic clergy which prevented its followers to join the new urban centers

considered as depraving milieus; (iii) and the official Belgian prevention for Rwandans to settle in urban centers unless they could prove to have a legal urban job.

Table 1: Evolution of population in Rwanda, 1970 - 2002

Population	Year				
	1970	**1978**	**1991**	**2002**	**2008**
Total population	3,680,574	4,831,527	7,157,551	8,128,553	10,000,000
Urban population	125,460	222,727	391,194	1,372,604	1,800,000
Urbanisation level (%)	3,0	4,5	5,6	16.9	18.2

Source: MININFRA, 2008; UN Habitat, 2008

Urbanisation growth rate remained relatively slow from independence until early 1980s following prevailing policies and practices aiming at limiting rural-urban migration (UN Habitat, 2008). From 1970 to 1991, the total urban population increased threefold, and the level of urbanization shifted from 3% to 5.6% (table 1) while the total population had not doubled yet. The urbanisation level rose from 5.6% in 1991 to approximately 9% just before the 1994 Genocide against Tutsi (UN Habitat, 2008).

Urban population dropped off drastically in 1994 following the Genocide, the flight of a great proportion of Rwandans in neighbouring countries, and the post-war and post-Genocide economic crisis. Urbanisation peaked up from 1995 more firmly than in previous years. In 2002, the total urban population was estimated to 1,372, 604 people, and the urbanization level was 16.9%. Between 2002 and 2008, urban population was increased of around 500,000 people. The rapid increase of urban population between 1991 and 2008 is, however, to be taken cautiously: indeed urban

population increased but also all urban centers were legally extended to rural areas in 2002 and end 2005.

This rapid urbanization since 1990s stems from profound shifts in the national urban policy and the economic development strategy. In fact, in late 1990s, the GoR totally abolished all policies and practices that prevented Rwandans to settle in urban areas. The GoR also adopted a new development policy. Conversely to the long prevailing approach basing national development on subsistence agriculture, the GoR focuses more on services and small-scale industry and market-oriented agriculture development. As result, urban population reached 1.8 million in 2008. From 2005 to 2010, urban annual growth rate is estimated to be 4.2% against 2.7% for the entire population (UN Habitat, 2008). This high urbanization occurs however in a context of low industrialization and little creation of employment in formal tertiary sector. Though urbanization level increased seventeen-fold from 1962 to 2008, Rwanda remains the least urbanized country in Africa.

According to Rwanda Vision 2020 which is the long-term planning document of Rwanda, it is expected that the number of towns will increase to 30 and the urbanisation level to 30% by 2020 (MINECOFIN, 2000). To achieve this goal, it is expected that all rural district headquarters and rural dynamic centers will be recognized as towns in coming years.

2. Brief Historical Evolution of Kigali

Data in Table 2 collected from different sources show that Kigali expanded slowly from mid-1910s until the independence in 1962 and increased at dizzying rate since. Kigali remained a small village during German period rule which ended by mid-1916, (Sirven, 1984). The only existing buildings were small offices, a few small shops and a small military barrack. From 1916 to 1962, Belgians who ruled the country merged Rwanda and Burundi into one

country with Bujumbura as capital, and Butare as the main city for Rwanda. Then all administrative and commercial activities were transferred from Kigali to Butare, slowing down Kigali development. In 1945 when Kigali was re-recognised as capital of Rwanda, the population amounted to 2,000 people and then covered less than 0.5 hectares (Sekaganda, 2005). The town was confined at the top of Nyarugenge Hill and was prevented to grow quickly due to the very restrictive belgian policy on living in urban centers. In 1962, the population of Kigali amounted to 6,000 people (Sirven et al., 1974) and covered around 10 km^2.

Table 2: Evolution of Kigali, 1916–2020

Year	Area (square kilometers)	Population
1916	0.06	600-700
1945	0.43	2,000
1962	10	6,000
1970	Not available	57, 00
1978	116	111,990
1991	110	235,664
2002	313	603,049
2008	730	860,000
2020	730	3,000,000

From 1962, the city then started growing over Nyamirambo, Biryogo and Muhima areas. In 1978 Kigali accommodated 57,400 inhabitants. Table 2 shows that Kigali population increased fourfold from 1970 to 1991. From 1980 to 1990, the annual population growth rate of Kigali was 10% against 4.4% for all urban areas (UN Habitat, 2008). Kigali then accommodated 60.2% of total urban population whereas Butare, the second largest town, hardly accommodated

7.5%. Despite the still prevailing practices and policies aiming at limiting rural-urban migration, following high rural density over the entire country, and impossibility of international migration, thanks to emergence of small-scale industrial and commercial activities especially in Kigali, and improvement in transport infrastructure, rural-urban migration boosted so that total urban population reached 391,194 people in 1991. Kigali then spread over new sectors: Kimihurura, Gikondo, Kicukiro, Remera, Nyamirambo, Gatsata, Kigali, Kacyiru, Gatsata, etc (see figure 1). Indeed, Kigali was the most dynamic city in Rwanda following the concentration of administrative, commercial, industrial and other service activities; and attracted great number of rural-urban migrants. In 1990, in war-period, for better administrative purposes, Kigali was enlarged to 116 km^2.

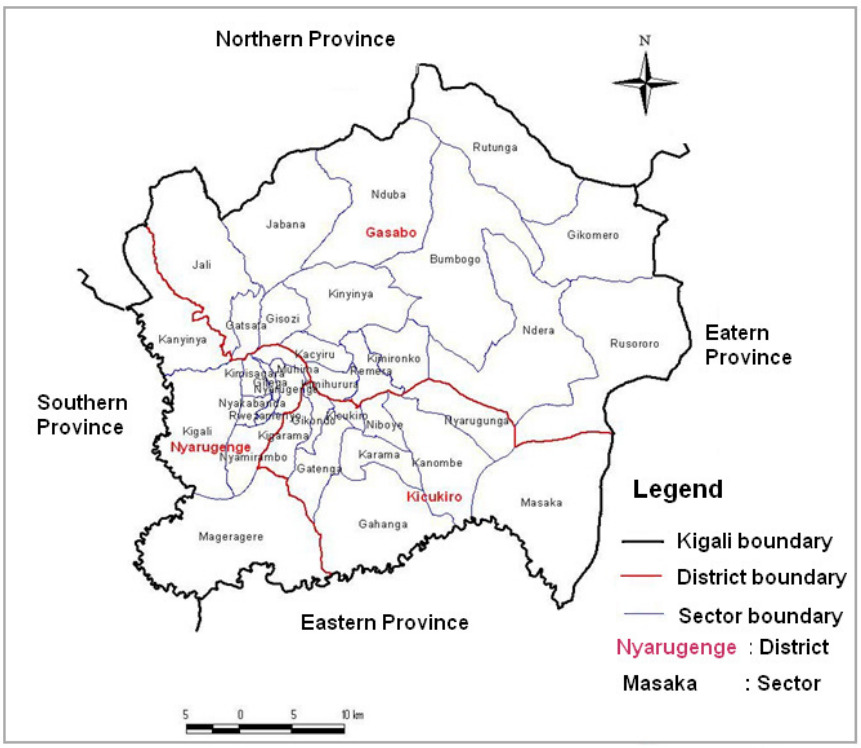


Figure 1. Kigali City: Administrative Map

Following the liberation war, the 1994 Genocide and the escape of many Rwandans in neighbouring countries, Kigali's population dropped off drastically to 62,079 in 1994, but once after pacification, the population increase picked up to 228, 933 people in 1998 (Nsabayezu, 2001). In 2002 and 2005, Kigali City was enlarged to 313 km^2 and 730 km^2 respectively including huge rural areas (MINECOFIN, 2005c, Ville de Kigali, 2008).

Between 1991 and 2008, despite the 1994 tragedy and its aftermaths, Kigali's population had increased fourfold (UN Habitat, 2008). This rapid urban population increase resulted from a high in-migration of people searching for security and job opportunities, and the settlement of a great number of returnees in the capital. Indeed, the 2002 Census revealed that 57% of Kigali's dwellers were in-migrants. According to Ilberg (2008), in 2006, Kigali's population was growing at an annual rate of about 6%. Kigali is expected to accommodate more than 3, 000,000 people by 2020.

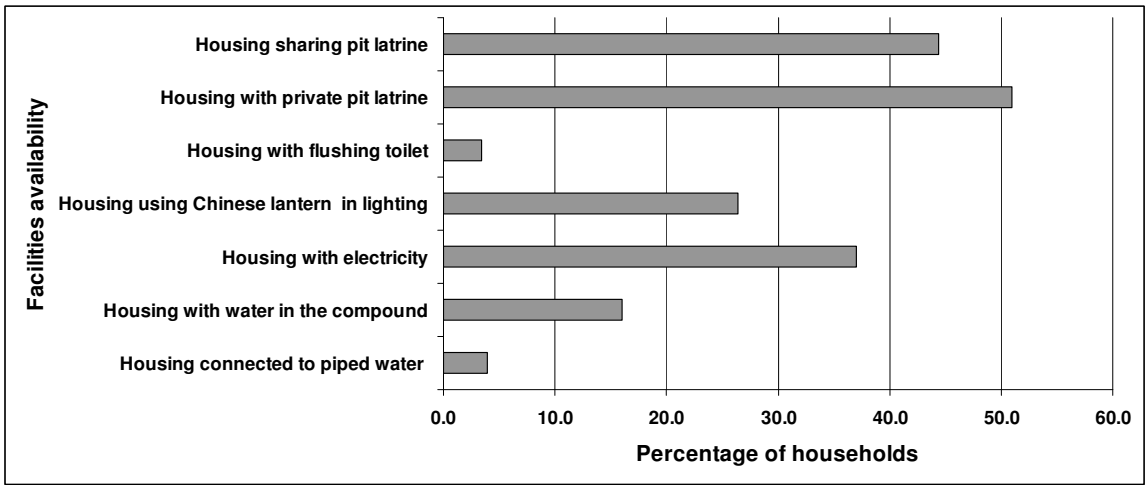
3. The Extent of Informal Housing within Kigali City

The high population growth of Kigali from 6,000 people in 1962 to 860,000 in 2008 exerted high pressure on Kigali administration which was not prepared to absorb such a great number of population in terms of job creation, infrastructure, services and housing provision. Thus, the high and constant in-migrant inflow resulted in large development of informal settlement (MININFRA, 2008). In 2008, slums accounted for 70% to 80% of settlements in Kigali and accommodated between 80 % and 90% (UN Habitat, 2008).

In Kigali like other cities of developing world as well, a house to be considered as informal must fulfill at least one of the following criteria: (i) utilization of non long-lasting building materials, (ii) insufficiency/lack of infrastructure and services, (iii) houses and plots not fulfilling the minimum legal size, (iv) houses built without legal land tenure,

(v) dwelling built without legal authorization, (vi) location in hazardous sites.

Referring to building materials, the 2002 Census (MINECOFIN, 2005a) revealed that more than 90.2% of houses in Kigali had walls made in non-lasting materials, 82.6% had a roof covered with light corrugated iron sheets and local tiles, 11.6% had a roof covered with thatch and 3.2% a roof covered with carton and sheeting, and 36.4% had an unpaved floor.



Source: (MINECOFIN, 2005a: 17-27)

Figure 2. Facilities Availability in Housing in Kigali City, 2002

Apropos of facilities availability, the situation is also alarming: figure 2 shows that the proportion of houses connected to piped water and the ones having flushing toilet was lower than 5%; less than 50% of households had electricity, and 97 % had a private or a shared a pit latrine. Figure 3 shows that housing density is high to the point that putting in place amenities, schools and other infrastructure in place is impossible without large demolition. The road network is very poor in informal settlement to the point that most of dwelling units are not accessible.



Figure 3. Kibiraro Informal Settlement close to Nyarutama planned area, Kigali City

Plots and housing size, they vary greatly depending on the household's income, but are usually under the legal minimum. In Muhima informal settlement which developed since mid-1960s, Sekaganda (2005) found out that 18% of surveyed dwelling units were built on plots whose size were between 12 m^2 and 25 m^2. He also observed that 58% of dwelling units had a surface area below or equal to 50 m^2. In Gatsata area, according to Kanyamugenge (2006), 53.2% of dwelling units were built on plots whose size was ranging between 50 m^2 and 200 m^2. She noted also that 81% of dwelling units had a surface area below 100 m^2. In Kibiraro informal settlement, Nsabimana (2007) found that none of the 140 dwelling units surveyed in 2006 had a surface area greater than 44 m^2, and 43 % of them had a surface area ranging between 12 m^2 and 20 m^2 (see figure 3). A great number of informal houses is built on very small plot with size far less than 400 m^2 which is the legal minimum plot size in Kigali City (Republic of Rwanda, 2005) and the dwelling surface area is far below 180 m^2, the urban legal minimum size for a house accepted in Rwanda.

Concerning land acquisition, above mentioned authors reported that more than 70 % of surveyed households in

informal settlements acquired their building plots through informal purchase. The same authors noted that more than 95 % of dwellings were unauthorized. Therefore those housings are recorded nowhere.

In regard with environmental location, informal housing is not confined to specific sites or in specific part of Kigali. Informal housing is found in all topographic position: flooding valleys, hillside, hilltop, and bottom of hill as well. It is also visible in all parts of the city except small parts of the city where formal housing is found.

4. Informal Housing Development Process in Kigali City

In the colonial era, informal housing was quite inexistent in Kigali City because Belgians colonialists contained rural-urban towards burgeoning urban centers. Informal housing started after independence in 1962, when Rwandans began to join Kigali firstly as temporary workers, and later as permanent migrants to occupy new urban functions, despite administrative measures aiming at preventing Rwandans to join urban centers. The urban in-migration became more important since 1970s. As result, more than 50% of Kigali's dwellers settled in informal settlement known as *Akajagari* in national language (Sirven et al., Prioul, 1974). Immigrants managed to acquire land through informal purchase and erected their houses.

The quasi-totality of housing has been self-built: housing owners managed to acquire plots building and were responsible for organizing the design and building works of their houses. Housing construction for low-income group could start as simple refuge affording privacy and protection that were improved incrementally. Mid- and high-income groups built nice houses fulfilling minimum legal size with long-lasting buildings materials but without required authorisation. Informal housing was tolerated: housing demolition was rare except when unauthorized constructions were erected on public

land planned for public construction. House owners managed to erect quickly their houses and occupy them to avoid their eventual demolition. This was encouraged by "unwritten rule" according to which any house already occupied, though unauthorized, could not be demolished. Informal housing developed by infiltration, no case of land invasion was reported so far. In post-war and post-Genocide eras, because of large deficit of housing, squatting public and private land and informal housing was largely tolerated till 2005.

5. Informal Housing: A Response to Formal Housing Provision Failure and Inefficiency of Urban Services

The large extent of informal housing in Kigali City resulted from a combination of various factors. These include low provision of formal housing, inadequate planning and poor enforcement of the existing laws, the monopoly of the Ministry of Public Works on urban planning and management related-activities, inefficiency of department dealing with urban development, informal urban land market, population's poverty, high and constant rural-urban migration, poor financing system and inexistence of small-scale contractors.

5.1. Low Provision of Formal Housing

Informal housing has developed as a response to the failure of the State and the private Sector to provide formal housing to a large proportion of Kigali dwellers since the colonial era. During early 1950s, when other developing countries started urban large-scale public housing for accommodating low-income groups, a few small houses for Rwandan civil servants were built by the Belgian colonialists in Nyamirambo. After independence in 1962, Rwandan elite occupied residential houses that were previously occupied by the colonialists whereas other urban dwellers had to rely on personal arrangements. In early 1970s more 50% of Kigali dwellers lived in informal settlement (Sirven et al., Prioul, 1974). Until 2008, only 2,467 formal dwelling units were constructed in Kigali

(UN Habitat, 2008), this is trifling for a city whose population was 800,000 inhabitants. The upshot of this gap is the development of informal housing which was tolerated by the Department of town planning and Kigali City.

5.2. Inadequate Planning and Poor Enforcement of the Existing Laws

In the colonial era, informal housing was not a challenge as rural-urban migration was very restricted. From 1962, the GoR did not pay much attention to urban development. Kigali first master plan was produced in 1965 but was never implemented because the area of extension was already occupied. A law stipulating that any new unauthorized construction within urban areas had to be demolished was also passed. A second master-plan was elaborated in 1984. But in meantime, as the city's population was increasing, informal housing went on developing to house all new urban dwellers.

This second master plan was also not implemented because identified areas for urban development had already been occupied by housing, commercial, and administrative activities and building, some were authorized, and others were not. Therefore, implementation of this 1984 master plan required large compensation that was not foreseen. Expropriation was carried out in a few neighbourhoods for redevelopment. The operation was stopped after some pilot areas because it required huge amount of money that the State had not, and the absence of appropriate mechanism for the State to recover money spent in land development. Beneficiaries of compensated land paid a symbolic amount which was more for payment of rendered administrative services rather than the real cost of a plot in serviced areas (MININFRA, 2004). The GoR then concentrated on infrastructure and services provision. In meantime informal housing largely developed within the city and its immediate outskirts considered as rural.

Beside failure in strategic planning, urban development monitoring was poor. Administratively, Kigali dwellers were obligated to construct their houses with long-lasting materials. When applying for building permit, people committed to use durable building materials and to fulfil all administrative requirements. But once the building permit was issued, in absence of construction monitoring, people used to build with short-lived building materials. As a result, almost every house in Kigali is informal, especially when regarding building materials. The non-implementation of the 1965 and 1984 Kigali Master-plans reveals incapacity of the Government to control urban development and to enforce rules and regulations it had passed itself.

5.3. Long-prevailing Over-centralisation of Urban Planning and Urban Management Activities

From 1962 until 2000, activities relating to urban planning and management countywide were in the Ministry of Public Work's competencies. Kigali staff could monitor small dwelling units' construction but had no legal responsibility to demolish them. This was the responsibility of the ministry which was informed many months or years after houses were occupied. The ministry being unable to appropriately monitor urban development on one side and to provide land, infrastructure and services on the other, henceforth informal housing largely developed until mid-2000s when some ministry's prerogatives were transferred to Kigali City Council.

5.4. Low Performance of Departments Dealing with Urban Development

From 1960s to 2005, departments dealing with town planning within Kigali City have been unable to avail land for housing for all categories of Kigali's population. Financial limitations, understaffing and under-equipment are the key factors of that low performance (MININFRA, 2008).

Kigali City has undergone frequent administrative enlargements especially in 1991, 2002, and 2005. At each enlargement, huge rural areas were included in the city. Those rural areas had no urban infrastructure and services. To put them in place requires much money that neither the ministry in charge of town planning and management nor Kigali City had. Large amount of fund is also required for making land available for urban development through compensation of landowners. For instance, in 2004, Kigali City produced only 4,747 housing plots despite an annual demand estimated to 10,000. Among them, only 3.9% were low standards while low-income group constitutes the majority of Kigali's population (MININFRA, 2004). Limited financial resources resulted also in the maintenance of informal housing in neighbourhood already identified to be redeveloped (Kanyamugenge, 2006). Consequently, parts of non-serviced areas newly included were gradually invaded by informal housing while housing densification was happening in the already existing unplanned areas.

Understaffing also largely contributed to informal housing development in Kigali City. In 2005, Kanyamugenge (2006), and Sekaganda (2005) noted that all staff expected to work in the Department of Town Planning at Kigali City[1] and at District levels were not in place, and those in place were not necessarily trained in urban planning or related fields. At Kigali City Office, over eight staff expected to be working in Town Planning Department, only four were in place. Curiously the only town planner working at Kigali City was in charge of expropriation! Kigali City and Districts had a few land surveyors without appropriate equipment. At Sector level, dwelling construction monitoring was done by the Sector Coordinator assisted by Local Defense Forces (LDFs) agents, young people selected from the community and who work as volunteers

[1] . Kigali City is divided in 3 Districts, District is made up of Sectors, Sector is made up of Cells and Cell is made up Villages.

in keeping security. As LDFs were not paid, they were easily subject to be bribed by people erecting unauthorized houses and therefore not report timely informal housing.

For longtime, urban development monitoring within Kigali has also been undermined by poor registration. A few built housing plots, mainly belonging to the State and large companies, were registered, many others were not. Furthermore, land and housing registration documents were kept in hard copies. This made the retrieval, update and maintenance of such documents very hard on one hand and land and housing registrations, update and transfer next to impossible on the other hand. Though database system management, geographical information system (GIS) and remote-sensing technologies that make easier urban planning and management were largely diffused since 1980s, Rwanda had no staff trained in those fields until mid 2000s. As result, informal housing development was inescapable.

5.5. High Urban Standards

Rwanda like other developing countries has adopted high urban housing standards which cannot be met by the majority of Kigali dwellers. For instance, according to the prevailing urban standards, the legal minimum size of dwelling plot is 400 m^2 (Republic of Rwanda, 2005), and the legal minimum size for a dwelling unit is 180m^2. Moreover, such a dwelling unit must be built with long-lasting building materials, be reachable by road and have basic facilities such as electricity, piped water, sewage, septic tank, etc. However low-income people can content themselves with smaller dwelling unit built on smaller plot with local low-cost building materials like mud bricks and corrugated iron sheet which are banned in Kigali City. The high standards considerably increase formal housing's price.

5.6. Relative easy access through informal urban land market

Informal housing has developed following the incapacity of the State to avail land for housing since the independence. As the State possesses neither free land to allocate to plot seekers nor sufficient funds to expropriate landowners for further distribution, it tolerated informal urban land market. The ministry in charge of town planning somehow legalized informal urban land market in mid-1980s when landowners were officially authorized to sell pieces of land and keep only between 300 and 400 m^2 for them. This legal breach opened door to free informal land market and led to a large development of informal urban land market (MINITRAPE, 1995). As a result, almost all housing plots in informal settlements were acquired through informal purchase (Ilberg, 2008).

In past years, plot prices varied greatly according to the plot's size, available infrastructure and services, and their location. Land located in physical good environment and in already serviced areas is the most expansive. Raw land acquired through informal purchase can be five times cheaper or more than developed land in the same area (Kanyamugenge, 2006). Recourse to informal urban land purchase had several advantages: (i) low price paid, (ii) size of plot adjusted to the financial capacities of the land seeker, (iii) immediate land ownership without administrative papers hardly obtained with the then prevailing bureaucracy, (iv) possibility for erecting housing without requesting official authorization, (v) use of building materials affordable for land acquirers, (vi) not paying taxes as long as the dwelling is not officially registered.

5.7. High and Constant Inflow of Poor Rural-urban Migrants, Poor Financing System and Inexistence of Small-scale Contractors

The 1978 and 2002 national Censuses revealed that more than half of Kigali dwellers were immigrants. Most of them

were poor unskilled young males in search of job opportunities who could not access to formal employment. Thus in 1985, 75 % of labour force in Kigali was employed in informal sector, the population's annual income amounted only to ± 1,973.2 US dollars, and 59,5 % of Kigali households had annual income below than 987,2 US dollars (MINITRAPE, 1995). Since the situation has improved, yet by 2005, unemployment hit 23 % of active population, and 13% of households living in Kigali was living under poverty line (UN Habitat, 2008). In these conditions, accessing formal housing is quite impossible for the majority of Kigali's dwellers where housing-price-to-income ratio was 11.4: 1 in 1998, among the highest in Africa; this is two times the ratio accepted by UN (UN Habitat, 2003).

Limited sources of funding also contributed to the informal housing development. From 1962 till 1994, six financial institutions had been operating in Rwanda. Among them, only *Banque Populaire du Rwanda* and *Caisse d'Epargne du Rwanda* largely financed housing units' construction. Other banks were reluctant to lend money to low- and mid-income groups, fearing not to be paid back. As a result, until early mid 1990s, only 11.5 % of total amount of bank loans went to the housing sector, and 95% of housing production was financed by individual savings and informal financial arrangements (MINITRAPE, 1995).

Furthermore, housing sector has suffered from a limited number of building companies until mid-1990s: fifteen or so large companies shared the construction market countrywide. Those enterprises were interested more in constructing large public and private buildings than in dwelling units' construction. Large building companies and small-scale contractors flourished since late 1990s, but all of them were interested in reconstruction of public buildings and rural villages construction. Therefore, the majority of Kigali dwellers had to rely on self-building for dwelling units

and small-scale shops, restaurants, etc, perpetuating informal housing.

5.8. Little Indemnity for Land during Compensation Process

Until 2008, land was expropriated for free countrywide: compensation was paid only for assets on it like houses, wood, and crops etc., houses and wood being the most valued. To avoid low compensation, landowners had two alternatives: to anticipate expropriation by erecting small houses or to sell small pieces of land to housing seekers who used to immediately built houses. This process contributed *de facto* to land price increase in Kigali and its periphery. As a result, the State was unable to compensate landowners at large-scale since mid-1980s until 2010when the ministerial decree establishing reference land price was enacted. But yet the reference land price is lower than the one paid in land informal land market. Therefore informal land market is likely to continue in Kigali City.

5.9. High cost of buildings materials

Building materials generally constitutes approximately 80% of the total value of housing. For a good housing affordability, it is, therefore, important that building materials be made available at affordable costs for the majority of the population. Unfortunately this is not the case in Rwanda. Durable building materials – which are the only accepted – have undergone drastic price increase since mid-1980s. For instance, from 1980 to 2009, the price of a sack of cement (50kg) increased from 1,700 to 10,000 Rwandan Francs (RwF); and the price of corrugated iron sheet increased from 450 to 5,000 RwF. From 1990 to 2009, the price of a piece of baked brick rose from 8 to 40 RwF, and the price of metallic doorframe have tripled from 1990 to 2009. Higher increase of building materials than income increase in last years made next to impossible for the majority of Kigali dwellers to access formal housing**.**

Conclusion

Rwanda is facing rapid urbanization since 1990s. The urban population is concentrating in Kigali, the capital, because it concentrates many economic, political and industrial activities. The great number of rural-urban migrants heading to Kigali which was not prepared to accommodate such a great population led to the development of informal housing since early 1970s. Nowadays, informal housing accounts for between 70 % and 80% of Kigali City. Informal housing was tolerated by the GoR because the State has failed to avail land for housing and formal housing for more 80% of Kigali's population. The profound causes of large informal housing development in Kigali are the incapacity of the State to enforce urban regulations and weaknesses in strategic planning, limited financial and local human resources, poor urban investment and poor urban governance till early 2000s, high rural-urban migration, high urban standards, and off course urban population poverty.

Some of these obstacles are being removed following the decentralization policy adopted by the country since 2002. With effective administrative decentralization, all urban planning and management activities-related have been transferred from the ministry in charge of urbanism to Kigali City Council. Now the latter is well staffed and carries out those activities better than in the past. It has passed rules and regulations governing urban construction and made them accessible to the population. Kigali has a new master plan passed in 2007. Since, urban development monitoring is effective and hundreds of many informal housing have been cut off. The City Council has also initiated partnership with the private sector especially in land and housing development, infrastructure and service provision.

The country has embarked on training Rwandans in urban and regional planning so that in the future, many of them will be operating in department dealing with urban developments matters within Kigali City Council. All those

good initiatives will improve efficiency in urban planning and management, and will contribute to stopping informal housing development.

References

Bloc-Duraffour, P. (1998), *Les villes dans le monde*, Armand Colin, Paris.

Ilberg, A. (2008). *Beyond Paper Policies: Planning Practice in Kigali*, available at http://www.n-aerus.net/web/sat/workshops/2008/Edinburgh/papers/NAERUS_2008_Ilberg_.pdf, retrieved June 20, 2010

Kanyamugenge, A. A., (2006), *Le quartier spontané de Gatsata dans la Ville de Kigali : une étude géographique*, Université Nationale du Rwanda, Butare

Nsabayezu, E. (2001). *La commercialisation des matériaux bruts de construction dans la Ville de Kigali. Etude de Géographie économique*, Université Nationale du Rwanda, Butare.

Nsabimana, E. (2007). *Etude d'un nouveau quartier spontané dans la ville de Kigali. Cas de Kibiraro sur le versant nord-est de Nyarutarama dans le District de Gasabo*, Université Nationale du Rwanda, Butare.

MINECOFIN (2005a). *Analyse des résultats. Habitat et son environnement*, Printer Set, Kigali

MINECOFIN (2005b). *Analyse des résultats*. *Migrations*, Printer Set, Kigali.

MINECOFIN (2005c). *Atlas géo-démographique du Rwanda*, Printer Set, Kigali.

MINECOFIN (2000). *Rwanda Vision 2020*, Kigali.

MININFRA (2004). *National Human Settlement Policy in Rwanda*, Kigali.

MININFRA (2008). *National Urban Housing Policy for Rwanda*, Kigali.

MINITRAPE (1995). *Examen et évaluation des questions concernant les établissements humains et le logement par une série d'indicateurs*. *Rapport definitive*, Kigali .

Republic of Rwanda (2005). *Organic law No 08/2005 of 14/07/2005 determining the use and management of land in Rwanda*, Kigali.

Republic of Rwanda, 2010. *Ministerial Order Nº 002/16.01 of 26/04/2010 Determining the Reference Land Price Outside the*

Kigali City. Official Gazette, n° 19, p. 115.

Sekaganda, K. JMV. (2005). *L'extension des quartiers dans la Ville de Kigali. Cas du Secteur Muhima*, Kigali Institute of Education, Kigali.

Sirven, P., Gotanègre, J.F. and Prioul C., (1974). *Géographie du Rwanda*, Editions A. De Boeck, Editions Rwandaises, Bruxelles, Kigali.

Sirven, P. and Prioul, C. (Editors) (1981). *Atlas du Rwanda*, Association pour l'Atlas des Pays de la Loire Paris, Kigali, Nantes.

Ville de Kigali (2008). Schéma Directeur d'Aménagement Urbain de la Ville de Kigali (DAU) en place, *Imvaho Nshya*. N° 1799. p.19

UN Habitat (2008). *Country Programme Document 2008 – 2009 Rwanda*. Unon Publishing Services Section, Nairobi, available athttp://www.UN- Habitat.org, retrieved July 20, 2010

UN Habitat (2009). *Global Report on Human Settlements 2009. Planning Sustainable Cities*, Earthscan, London.

United Nations Center for Human Settlements (1996). A*n Urbanising World: Global Report on Human Settlement 1996*, Oxford: Oxford University Press