

Analysis of urban aspects of housing in the Ngulu-Nzamba district in the city of Kikwit, R.D.C.

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Abstract: The cities of the Democratic Republic of Congo have been experiencing a housing crisis since 1960. Our study aimed to analyze the urban aspects of the habitat within which social groups shelter and the functions they give to this type of housing. in the Ngulu-Nzamba district of Lukemi commune in the city of Kikwit in the Democratic Republic of Congo. The dwellings of the households surveyed at the study site constitute our study material. We conducted a cross-sectional study from March 2018 to June 2020 using the method of direct observation in the field and instrumental supported by survey techniques, document review, interview, sampling. It emerges from this analysis that most of the subjects surveyed have as their main activity traditional agriculture with a very low income value, i.e. less than 50 us per month, and have acquired their plot from Heads of Land and almost all did not obtain any building permission before building. This situation means that the majority of dwellings have clay soil as their quality of wall and pavement. So the dwellings in the study setting are rudimentary and uncomfortable and expose their occupants to environmental vulnerabilities.

Keywords: Town planning aspects, Inhabitants, Ngulu-Nzamba, kikwit

I. Introduction

Access to decent housing is a major challenge to be taken up in almost all of the countries of the Globe. Concern for the urban environment has proven to be a priority for states or societies, because, according to the International Development Research Center (1997), more than 60% of humanity will live in urban areas in the dawn of the year 2020. To corroborate this thesis, several figures have been put forward by the authors and United Nations organizations. Regarding developing countries or countries in economic transition (China, India, Brazil), Monyo (1998) cited by Munkuamo (2016), notes strong urban growth or very high concentrations recorded for the cities and populations of these countries. According to this author, by the year 2025, between 60 and 85% of the population of these countries will be concentrated in cities.

The Congolese towns in general and that of Kikwit in particular present two facies which coexist, two physiognomic aspects both urban and rural which reduce the aesthetics and the quality of the living environment in the city. These are generally the cities in which neighborhoods appear in disarticulation with the rest of the urban space, making access to basic social services, in particular: housing, drinking water and energy, difficult. To this list is added the isolation of certain portions of the urban territory, thus increasing the vulnerabilities of its inhabitants to water-borne diseases, overcrowding, insecurity, ailments which expose the populations who live there to environmental and health risks. important.

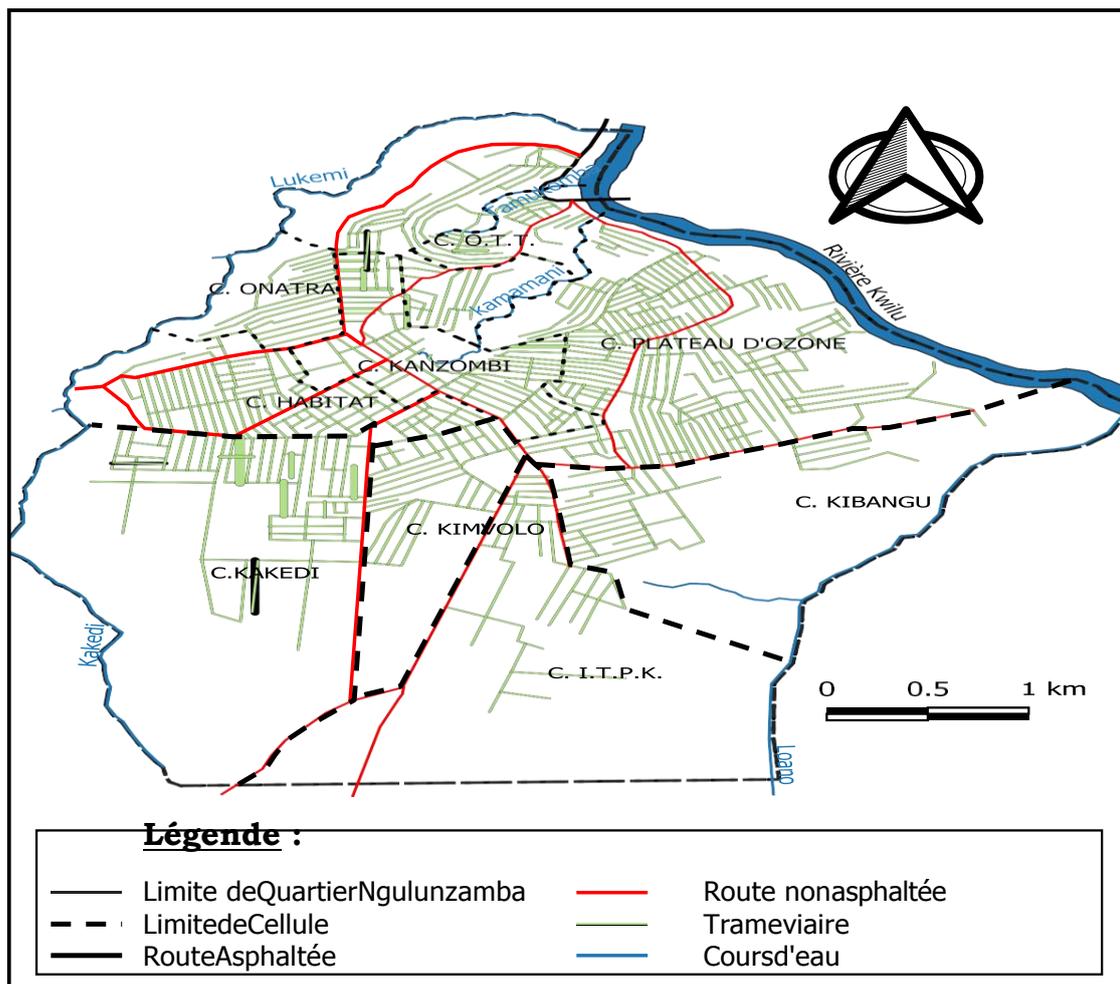
The municipalities lack green spaces, permanent stress, pollution and nuisance, anarchic constructions, the spread of several diseases and / or epidemics, the isolation of the environment, erosion phenomenon, quality of housing construction materials. All the problems noted above and others constitute the real challenges in our urban areas.

The old towns inherited from the colonizer were developed and the phenomenon of rural exodus as well as the demographic dynamics of populations were controlled, as a result environmental problems were less felt and the population lived in ecological security more or less experienced, however after 1960 As land anarchy has taken hold, we are currently witnessing the occupation of extraordinary urban space, as is the case of the Mpsa I and II, Pakadjuma and Abattoir districts in Kinshasa (Lelo Nzuzi 2018) and Ngulu Nzamba at Kikwit.

This reality gives rise to disaster scenarios during torrential rains and the soil in these areas is susceptible to environmental threats of all kinds.

Let us think with Mpuru (2014) that in every era, the city of Kikwit has always been confronted with the problem of housing. The Ngulu-Nzamba neighborhood was no exception.

The general objective of this study is to contribute to the improvement of the housing conditions of the Ngulu-Nzamba district.



Map 2. Administrative division of Ngulu Nzamba district (Source: Department of Geography and Environmental Management / ISP / KKT January 2020)

The Ngulu-nzamba district, which is our study environment, is located in the humid tropical climate of the AW4 type, sandy clay soil and is located on a plateau type relief. In terms of plants, this once natural ecosystem is occupied on the one hand by spontaneous dwellings and on the other by traditional agricultural activities. On the banks of the Kwilu, Lukemi, Loano and Kamanimani rivers grows a tree savannah. On the rest of the space of our study environment, the plant landscape gives the appearance of a plantation of *Elias guinéensis* dotted with different trees: mango trees, saffron trees and many others.

II.2 Material And Method

This study is of a cross-sectional type using the household as the unit of statistical analysis. We used the method of direct and instrumental observation supported by the technique interview, documentary review, surveys. Our sampling is on 192 households surveyed randomly.

During our visit to the field, we used several data collection instruments. These include, among others: Investigation sheet; Camera ; Telephone apparatus; Stopwatch; Pen; Mesureing tape.

III. Results

1. Indicators related to the profession

Occupation is an important indicator for analyzing the lifestyles and even the behavior of the inhabitants of an urban environment. Figure 1 shows the reader the distribution of subjects surveyed according to their profession and level of education.

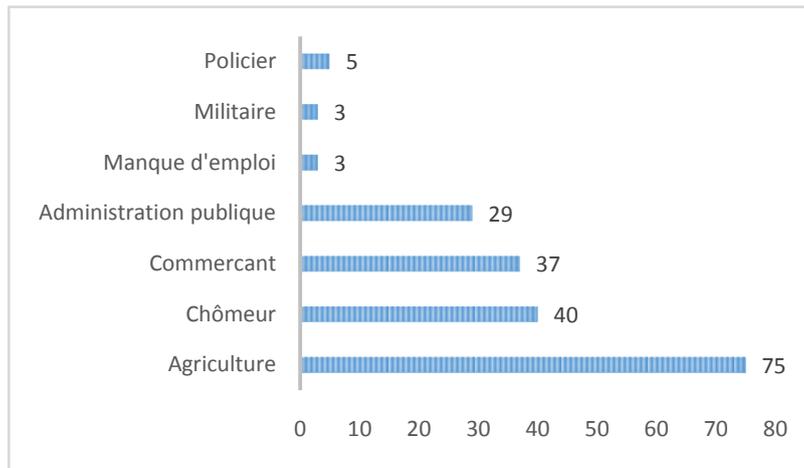


Figure 1 profession of respondents

Figure 1 shows that 39.1% of subjects surveyed have agriculture as their main activity, followed by 20.8% of the unemployed, 19.3% of traders, 15.1% of public administration employees, 2.6% are police officers, 1.6% are military and finally 1.6% others lack jobs. This proves enough that many occupants in our study environment have as their main activity traditional agriculture for own consumption and have not studied much.

Value of monthly income

The urban planning framework of urban areas and their environmental management are strongly linked to the monthly income value of the occupants because this simultaneously determines their social level. Figure 2 illustrates the monthly income indicator.

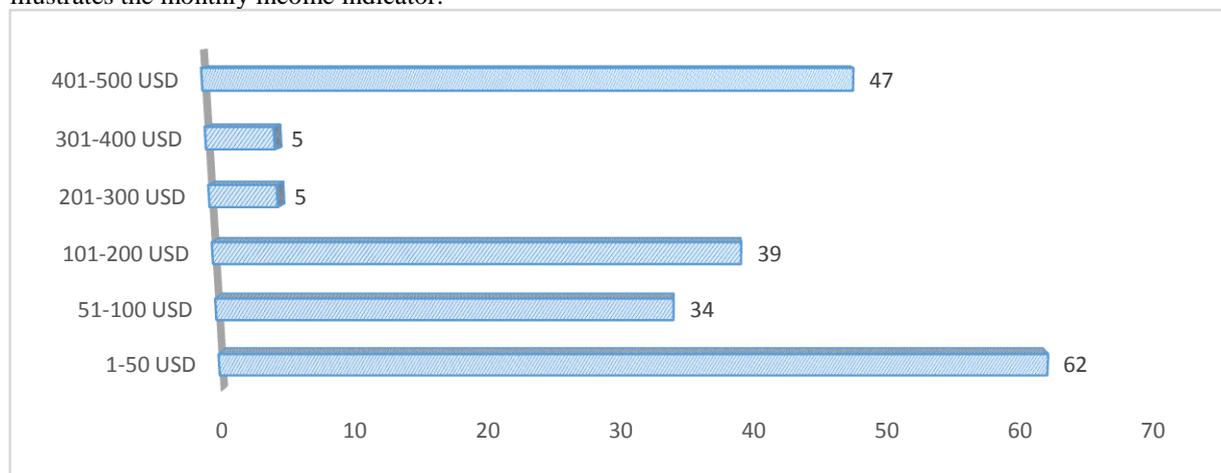


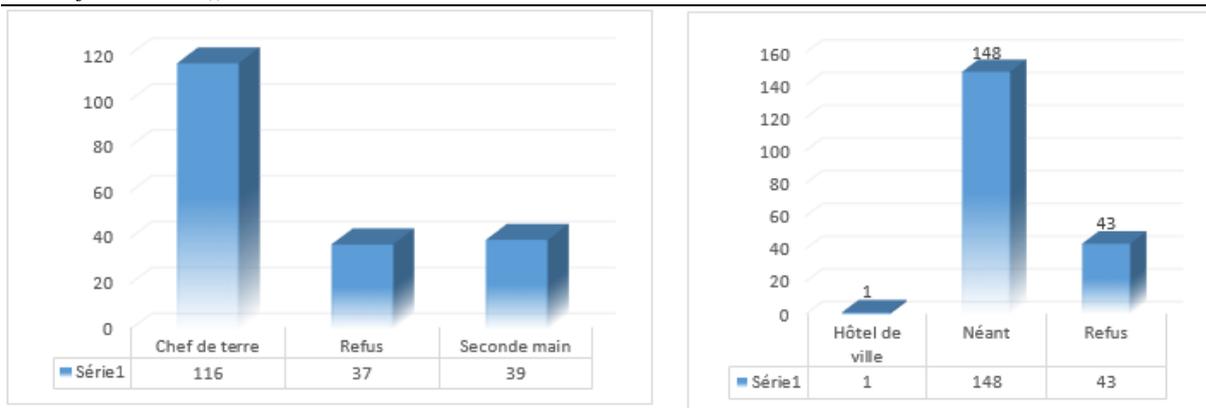
Figure 2 monthly income of respondents

III.1.2 Analysis of Urbanistic Aspects

The urban framework is the mirror of an urban environment, in the following paragraphs we present the results in the different figures. Our surveyed subjects gave reasons for their opinions on the source of obtaining their land and their authorization to build, the nature of the walls and paving of their accommodation. All the indicators mentioned above allow us to analyze the urban planning framework of the subjects and the dwellings surveyed.

1. Source of obtaining land and their building permit

We found it useful to know the various sources of obtaining land and the existence of the authorization to build housing surveyed. Figures 6 and 7 reveal the different sources of obtaining land for the dwellings surveyed and their building permits.



Source of land obtaining opinion on obtaining the building permit

More than half of the households surveyed, i.e. 60.4% obtained their land via the Chef de Terre, 20.3% obtained it via the second hand (from another buyer) and 19.3% abstained. . The Heads of Land are the main sellers of land in our study environment over the helpless gaze of the competent urban planning and habitat services.

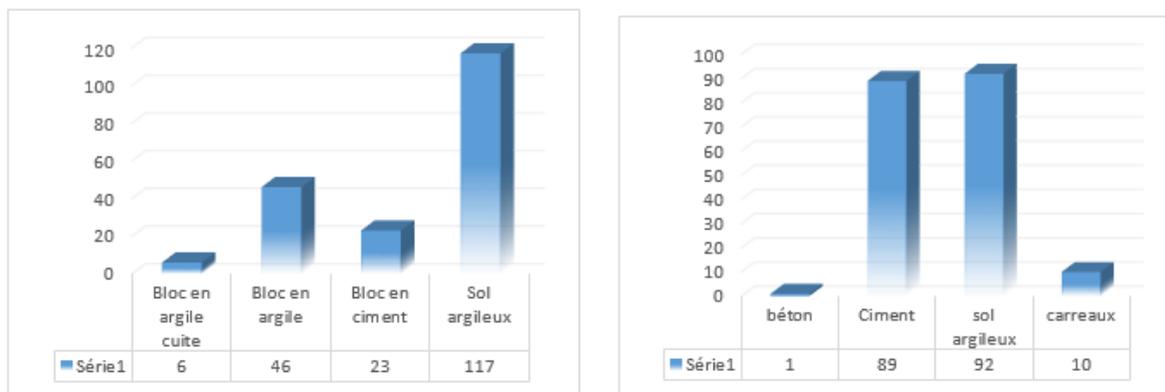
Figure 4 shows that 77.1% of the dwellings surveyed do not have a building permit, 22.4% abstained and only 0.1% obtained it via the Kikwit Town Hall.

Some dwellings have been built and others that are under construction have not obtained their building permission and therefore these are anarchic, uncomfortable and harmful occupations.

2. Nature of wall, pavement and roof

Urban housing should be durable and comfortable to keep its occupants healthy and avoid possible damage from logistical vulner abilities.

Figures 5 and 6 show the nature of the wall and pavement of the dwellings surveyed in our study environment.



Nature of their wall Type of pavement

It emerges from figure 5 that most of the walls of the dwellings surveyed, i.e. 60.9% have walls in clay soil, 24% are in clay block, 12% are in cement block and only 3.1% are in clay block. fired clay.

The homes in our study environment are unsustainable and vulnerable to pedological, climatic and even ecological threats, and this is at the root of several material damage, even loss of human life.

However, figure 6 shows that 47.9% of the dwellings surveyed have natural pavements in clay soil, 46.4% are in cement, 5.2% are in tiles and 0.5% in concrete.

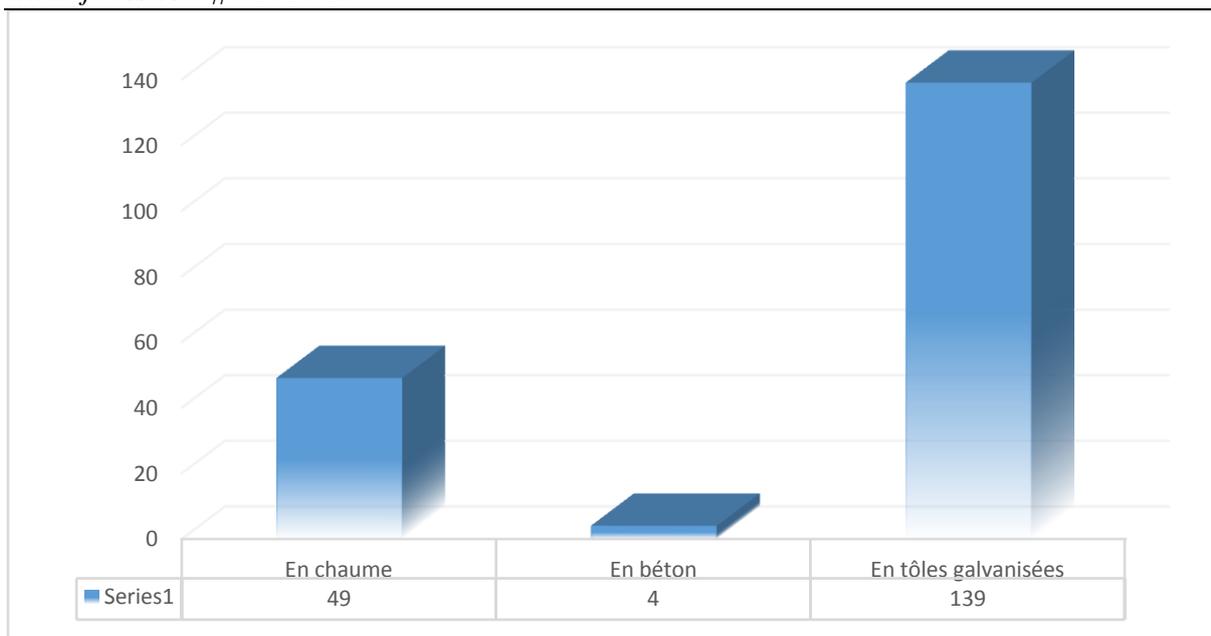


Figure 7: Distribution of dwellings surveyed according to the type of window

Figure 10 shows that most of the dwellings of the heads of households surveyed, ie 72.4% have a galvanized sheet roof, 25.5% are thatch and 2.5% have a concrete roof. Note that galvanized sheets are sold in downtown Kikwit at a socially acceptable price. Figures 8 and 9 analyze the nature of the windows and the existence of anti-theft devices in the homes of the heads of households surveyed.

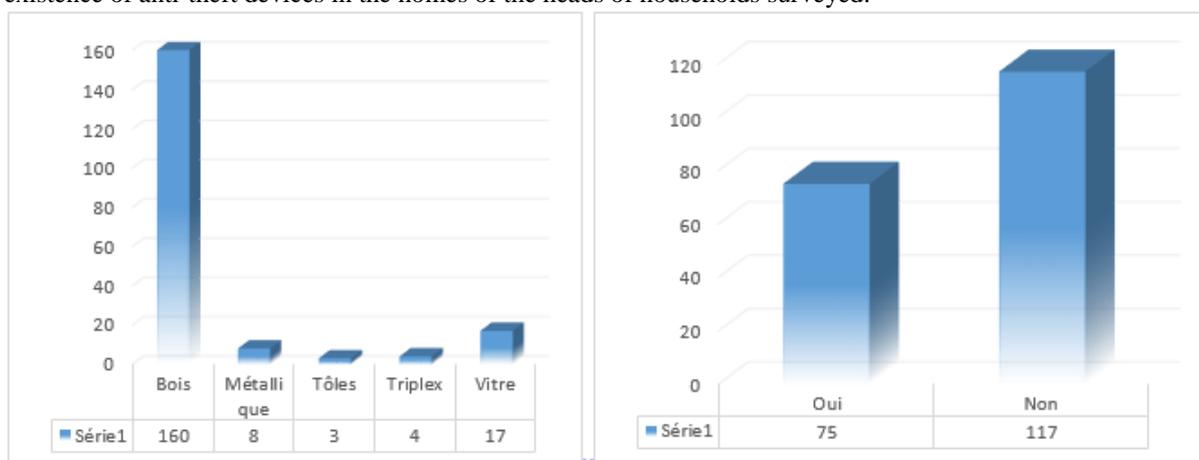


Figure 8 shows that most dwellings, i.e. 83.3%, have wooden windows, those of 8.9% are glass, 4.2% are metal, 2.1% triplex and 1.6% are made of sheets.

The wood is available because our study environment is, in the past, forest and it is easy to obtain it to make windows. Most of these residential windows, ie 60.9%, do not have anti-theft devices and only 39.1% do. Anti-theft devices play a very important role in the comfort and security of homes.



Photo 1 a view of a galvanized sheet housing, clay soil walls, clay soil pavement, wooden windows and no locks (Photo MUNDUKU 2019).

Photo I Illustrates the nature of construction materials used by the subjects surveyed. This kind of dwellings are unsustainable and exposed to various threats and are uncomfortable.

As readers may well notice, the windows are wooden and small in size, with no anti-theft devices, nature of wall and paving in clay soil. Table 1 illustrates the relationship between the nature of the wall and the profession.

Table 1: Relationship between the quality of the wall and the profession

VARIABLES		Profession							Total
		Agricultur e %	Chômeu r	Commerça nt	Fonctionnai re	Manqu e d'empl oi	Militair e	Polici er	
Qualité du mur	Bloc argile cuite	1 (0,5%)	1 (0,5%)	2 (1%)	2 (1%)	0	0	0	6 (3,1%)
	Bloc en argile	11 (5,7%)	8 (4,1)	12 (6,3%)	13 (6,8%)	0	0	2 (1%)	46 (23,9%)
	Bloc en ciment	0 (0%)	1 (0,5%)	12 (6,3%)	10 (5,2%)	0	0	0	23 (11,9%)
	Sol argileux	63 (32,8)	30 (16%)	11 (5,7%)	4 (2%)	3 (1,5%)	3 (1,5%)	3 (1,5 %)	117 (60,9%)
Total		75 (39%)	40 (20,8%)	37 (19,2%)	29 (15,1%)	3 (1,5%)	3 (1,5%)	5 (2,8 %)	192 (100)
		X=78.741 P=0.000							

It emerges from Table 17 that the P = 0.000 which means that there is a very large association statistically between quality of wall and occupation. In view of the results obtained, the surveyed subjects who are farmers built

their homes in clay soil and none built in cement block. On the other hand, most of the civil servants and traders built their homes in clay blocks and cement blocks.

Our hypothesis is confirmed, because most of the subjects surveyed have traditional agriculture as their main generating activity. Consequently, they do not have enough means to build sustainably and while respecting urban planning standards.

Photo 2 below illustrates this situation



Photo 2: a view of a dwelling whose wall and paving nature are clay soil with a thatched roof and these occupants are poor and / or vulnerable farmers. (Photo MUNDUKU, 2019).

As the reader can well notice from the image, the occupants of these dwellings are generally poor with a very low monthly income value and traditional farming remains their main activity.

Table 2: Relationship between the type of roof and the value of monthly income

VARIABLES	Valeur de revenu mensuel						Total
	1-50 USD	51-100 USD	101- 200 USD	201- 300 USD	301- 400 USD	401-500 USD	
Nature de toiture							
Chaume	10	11	13	1	2	12	49
en béton	2	0	1	0	0	1	4
tôles galvanisée	50	23	25	4	3	34	139
Total	62	34	39	5	5	47	192
						X=6,722	P=0,751

It emerges from Table 2 that $P = 0.751$ therefore, the variable on the value of monthly income has no statistically relationship with the nature of the roof. The hypothesis of the present study is rejected because, whatever the level of monthly income of the subjects surveyed, the type of roof of their home remains almost the same.

Discussion

In relation to the level of education and the results of this study, it appears that 35.1% of subjects surveyed have an average level of education or secondary, 22.4% have a primary level, 14.6 are of the higher, only 9.4% are at university level and 0.5% have no level. These results corroborate with those of Mpuru et al. (2013) who assert that the majority of heads of households in the Kikwit IV district have a primary level of education, followed by a secondary level. We share the same opinion with this author because the inhabitants, especially from the peri-urban areas of the city of Kikwit, have not made much progress with their studies.

When it comes to permission to build, there is widespread chaos. The results of this study show that 77.1% of the dwellings surveyed have never obtained a building permit. These results are supported by those of Mpuru (2013) who thinks that most housing constructions in the Kikwit IV district have not been authorized by the competent urban planning services. Let us reflect with Musibono (2012) that the more the population has a weak purchasing power, the more it will not be able to build while respecting modern urban planning standards and above all it will be unable to better manage its environment or its living environment.

In relation to the type of roofing, the results of our work stipulate that most of the dwellings surveyed, i.e. 72.4% have galvanized sheet roofs against 25.5% thatch, 83.3% have windows made of wood and 60.9% of the windows do not have locks. We confirm our results with those found by Mpuru et al (2013) that wood remains at 72.3% and 80.2% the most used material in use respectively, the doors and windows of the houses of Kikwit IV. The materials of recovery (sheets, triplexes, mats,...) are more perceived in certain houses under construction.

According to the same author, 66.6% of the houses surveyed have galvanized sheet roofs, 33.4% whose roofs are made of straw. According to this author, the dominance of galvanized sheets is undoubtedly linked to the degradation of the savannah around the city, but also to the efforts of city dwellers to build decent housing.

Lelo Nzuzi (2017) talks about the Manzanzaville, which he defines as "originally a habitat on the margins of legality. It is often the consequence of the gap between strong demographic pressure and the housing supply ". This author characterizes these Manzanzavilles as dwellings which illegally occupy open interstitial and unsanitary spaces near the center or urban outskirts. They are in a way considered to be squatting areas. It is a kind of illegal neighborhood that one meets either in the flood zones of the Congo river near the industrial district, or in the flooded minor beds of the rivers, or on the hills dangerously threatened by erosion and in the railway rights-of-way. . It can take hold quickly in a matter of days. Their homes are built with recycled materials especially with sheets, planks and tarpaulins.

Building on Mukuamo's (2016) reflection on habitat. According to this author, vulnerable cities with inappropriate housing pose serious threats to the quality of life. Therefore, Agenda 21 (1991) advocated, in its seventh chapter, for "the promotion of a viable model of human settlements" (Habitat). According to this vision, access to adequate, safe and healthy housing is necessary to enable the individual to achieve physical, psychological, economic and social well-being. Thus, by complying with Agenda 21, it emerges that the best urban management is appreciated in particular in the availability of housing "adequate housing for all". This presupposes an urban policy "of encouraging the construction and renovation of housing which is environmentally sound". In the conduct of this policy, a particular privilege must be given in priority to the marginal groups and the poor. Unfortunately, this is not the case in Kikwit, where the poor lack state support.

Lelo Nzuzi (2013) confirms that in its constitution, in article 481, the Congolese state guarantees the right to decent housing. According to this author, this constitutional provision has turned into a slogan without concrete realization. Housing in the DRC is not seen as an essentially humanitarian problem for which the state must assume responsibility. As a result, since 1960, the public authorities have not launched a large-scale social housing program. As a consequence, the housing crisis hits the country hard. According to the same author, the housing crisis in Kinshasa has no longer benefited from a social housing policy while its population and habitat are growing in anarchy. Successive governments have had different concerns, more marked by prestigious development projects, commonly referred to as white elephants, which do not meet the major needs of the population.

Housing remains the major problem of this poorly controlled urban growth. Its urbanization is no longer synonymous with economic growth as it once did before 1960. Rather, it operates against a background of poverty. There has been no materialization of a social housing construction program. It is no exaggeration to recognize that there is a housing crisis in Kinshasa and in several cities of the country, because the needs are numerous and unmet. Almost thirty years ago, the Caisse Nationale d'Epargne et des Crédits Immobiliers (CNECI), assessing housing needs, estimated a cumulative deficit of around 162,577 housing units between 1972 and 1985. (Lelo Nzuzi 2013).

Conclusion

The present study was devoted to "the analysis of the urban aspects of the housing of the Ngulu-Nzamba district in the city of Kikwit in the Democratic Republic of Congo". Inhabitants of the Ngulu-Nzamba district?

The present study is a contribution to the multiple questions related to the social housing policy in the city of Kikwit and in the cities which meet similar conditions.

The results of this study open up avenues for socio-environmental actions to improve access to decent housing.

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