# An Assessment of Institutional Housing in Zambia

# A Look at Ministry of Education Housing in Lusaka District



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# Introduction

The paper assesses the provision of institutional housing in Zambia. Institutional housing which is understood as housing provided by institutions mainly for housing their employees, developed as a policy of employment tied housing after independence in 1964. Just after independence, with good revenue from copper mining, the government undertook a massive institutional housing construction programme for all its ministries and this included the Ministry of Education. Construction of the Ministry of Education housing was part of the schools construction programme.

With time, as copper prices kept falling, the government found it increasingly difficult both to sustain the rate of construction and the level of maintenance of such housing. The result of this was the decline in the construction of housing units and the increasing difficulty in managing and maintaining built housing. Despite all this, there has not been a regular programme for the assessment of such housing in terms of the provision, quality and sustainability to address the shortage and shortcomings in management and maintenance of such housing.

The assessment is specifically confined to Ministry of Education institution housing or simply called *Education housing* for primary or basic and secondary or high schools in the Lusaka District of Zambia.

With the continuation and improvement in the provision of education housing, it has become critical for an assessment to be undertaken. The paper therefore assesses the **provision**, **quality** and **sustenance** of such housing through the three aspects namely: *the demand for housing*, *quality of housing* and *sustainability of housing* on which proposals for improvement are based.

# 1 Shelter Situation Analysis

## **1.1 Basic General Data**

#### 1.1.1 Geography and Administration

Zambia is a land-locked sub-Saharan country sharing boundaries with the Democratic Republic of Congo (DRC), Tanzania, Malawi, Mozambique, Zimbabwe, Botswana, Namibia and Angola. It covers a land area of 752,612 square kilometres, approximately 2.5 % of Africa. Administratively, the country is divided into nine provinces and 72 districts. Of the nine provinces, two are predominantly urban, namely Lusaka and Copperbelt, while Central, Western, Eastern, Northern, Luapula, North-Western, and Southern are predominantly rural provinces. It is a multi-party democratic state whose head of state is elected after every 5 years.

Zambia lies between 8 and 18 degrees south latitude and between 20 and 35 degrees east longitude. It has a tropical climate and vegetation with three distinct seasons; the cool dry winter from May to August, a hot dry season during September and October, and a warm wet season from November to April.

#### 1.1.2 Demography and Health



Figure 1. Map showing the Location of Zambia. Source: <u>http://travel.nationalgeographic.com/places/</u> <u>maps/map\_country\_zambia.html</u>

The 2000 national census reported a population of 9.9 million with a population growth rate of 2.4 % per annum. The average density by province in 2000 ranged from 64 people per square kilometre in Lusaka province to 5 people per square kilometre in North-Western province.

The national population is currently (2009) estimated at  $12,935,000^{1}$  while the annual rate of urbanization (2005-2010) is estimated at 2.3 %.<sup>2</sup>

The fertility rate was 5.9 births per woman in 2002. The Zambia Demographical and Healthy Survey (ZDHS 2007) estimates show a decline in infant mortality from 95 deaths per 1,000 live births in 2001-2002 to 70 deaths in 2007.

The general population life expectancy for 2008 was estimated at 38.59 yrs<sup>3</sup>.

#### 1.1.3 Economy

The performance of the Zambian economy considerably improved during the period of the implementation of the Poverty Reduction Strategy Plan (PRSP) and Transitional National Development Plan (TNDP) from 2002 to 2005. Real gross domestic product (GDP) growth averaged 4.7 % per year, up from an annual average of 2.2 % in the preceding four years due primarily to the rapid expansion of mining and construction. The recent estimate (2007) puts the real GDP growth rate at 6%<sup>4</sup>. The increase in global metal prices had a positive impact on Zambia's mining industry and the macroeconomic environment in general<sup>5</sup>.

## **1.2 Shelter Related Fact and Figures**

#### 1.2.1 Access to Shelter

#### a) Housing Stock, Yearly Percentage increase in Units, & Deficit

According to the UN–Habitat (2008) Report, the national housing stock in 1991 was estimated at 1,501,898. This increased to 2,311,988 in 2001 representing approximately 65% increase over the years.

According to the 1996 National Housing Policy (NHP) document, 'about 80.0% of the nation's housing stock was owned by individuals; about 5.0% by central government; 6.0% by District Councils, about 6.0% by parastatal organisations and 3.0% by private organisations.

The housing deficit is currently estimated at 1.5 million houses countrywide<sup>6</sup>.

<sup>&</sup>lt;sup>1</sup> http://en.wikipedia.org/wiki/Zambia

<sup>&</sup>lt;sup>2</sup> Zambia People 2009, CIA World Fact book.

<sup>&</sup>lt;sup>3</sup> Index Mundi, Zambia Life Expectancy at birth, http://www.indexmundi.com/zambia/life\_expectancy\_at birth.htm <sup>4</sup> Ibid.

<sup>&</sup>lt;sup>5</sup> ZDHS 2007

<sup>&</sup>lt;sup>6</sup> Times of Zambia, Monday, October 5, 2009.

#### b) Housing Standards

Housing in Zambia is basically divided into rural and urban housing. The main types of housing are: i) *traditional housing, ii) squatter housing, iii) site and service housing, iv) low cost, v) medium cost housing and vi) high cost housing.* 

Standards of housing are determined by: *i*) *area of housing unit, ii*) *quality of materials and finishes used in construction and iii*) services available or provided to such housing.

These standards have been based on the *National Housing Standards and Inspection Manual*, a document which could not be traced<sup>7</sup>.

#### c) Housing Quality

According to the 1996 NHP document approximately 36.0% of the 1.3 million households in Zambia were supplied with piped water; about 38.0% used wells or bore holes and about 26.0%, used rivers or streams. About 17.0% of households used flush toilets, about 54.0% used pit latrines and about 29.0% did not have toilet facilities at all.

It notes that about 64.0% of the nation's housing stock was in rural areas where the dispersed settlement patterns make it difficult to provide basic, infrastructure and social services. Basic services were therefore generally poor or none existent. Of the remaining 36.0% in urban areas, approximately 70.0% of the dwelling units were equally poorly serviced.

Kind of Dwelling (%)									Total	
	Traditional	Improved	Detached	Flat/	Semi-	Servants	Other	All	Number of	
Area	Hut	Traditional	House	Apartment/	detached	Quarters	Dwelling		Households	
		House		Multi-Unit	House		-			
All Zambia	45.5	18.7	24.5	5.3	4.3	1.0	0.8	100	2,110,640	
Rural	68.5	22.5	6.6	0.9	0.7	0.2	0.6	100	1,288,064	
Urban	8.9	12.7	52.9	12.3	9.9	2.4	1.0	100	822,575	
Urban Low Cost	11.1	15.8	47.7	13.3	10.4	1.0	0.7	100	593,484	
Urban Medium Cost	2.4	5.5	71.4	6.9	9.5	3.1	1.2	100	143,394	
Urban High Cost	3.9	2.9	59.2	14.1	6.7	11.0	2.2	100	85,697	
Lusaka Province	6.4	6.8	49.6	24.6	10.2	2.0	0.4	100	309,949	

Table 1.0 Distribution of Households by Type of Dwelling

Source: Living Conditions Monitoring Survey Report 2004, Central Statistics Office.

## **1.3 Housing Policy**

#### **1.3.1 Policy Goal**

The main goal of the 1996 National housing policy was to provide adequate affordable housing for all income groups in Zambia. On institutional housing, it states as follows;

<sup>&</sup>lt;sup>7</sup> This is according to a Ministry of Local Government and Housing official.

'Employers should not be obliged by law to provide housing to their employees. Notwithstanding the provisions of this clause, employers unable to provide their employees with accommodation or housing loans shall pay their employees an appropriate housing allowance.

Government will for the foreseeable future continue to provide employer housing for specific institutions such as customs and immigration departments, hospitals, etc'.

The policy thus limited the provision of institutional housing to government which was earlier mandatory for all employing institutions as required by the repealed Employment Act.

## 1.4 Actors in Shelter Delivery and their Roles

The following have been the main actors in Shelter delivery in Zambia;

- 1.4.1 The government of Zambia through the following ministries;
  - a) The Ministry of Works & Supply,
  - b) The Ministry of Education (MoE),
  - c) The Ministry of Local Government and Housing (MLGH)-This Ministry does not provide housing directly but through local Councils and the National Housing Authority, a corporate body established through an act of Parliament.
  - e) The Ministry of Health,
  - f) The Ministry of Agriculture,
  - g) Government Parastatals, good examples being the Zambia State Insurance Corporation (ZSIC) and National Pensions Scheme Authority (NAPSA). These have been providing housing for their employees and for rent.
- 1.4.2 Private Sector Developers/Organizations these mainly provide medium and high cost housing for rent and sale. The main ones being Lilayi Housing Estate, Meanwood Property Development Corporation and Legacy South Gate.
- 1.4.3 **Financial Institutions-**such as commercial banks.
- 1.4.4 **Private Individuals**-this includes all income groups.

## 1.5 Shelter Design

## 1.5.1 Physical Planning

- The *Ministry of Local Government and Housing* has the Department of Physical Planning and Housing and the Department of Infrastructure and Social Services. It formulates housing policy and supervises housing programmes. Planning and regulation of actual development at city or town level is the responsibility of *local authorities*.
- The Town and Country Planning Act (Chapter 475; Revised Chapter 283) provides a framework for planning, granting of planning permission and control of development in the main cities and towns in the country.

## 1.5.2 Land Use, Norms & Codes

• Land use is based on the Land Act of 1995 which outlines procedures of land acquisition and use (lease).

# 2 Organisation

## 2.1 DESCRIPTION OF THE ORGANISATION - MINISTRY OF EDUCATION

The Ministry of Education (MoE) is a Zambian government ministry charged with the responsibility of providing equitably accessible education and skills training opportunities for sustainable livelihood and development. Its vision is to provide *'innovative and productive life-*

## long education and training accessible to all by 2030'.

The Ministry of Education intends to effectively carry its mandate and achieve the goals and objectives under the Fifth National Development Plan (FNDP) through the 8 programmes listed below;

- a. Curriculum Development and Educational Materials
- b. Standards and Assessment
- c. Teacher Education
- d. Infrastructure Development
- e. Distance Education and Open Learning
- f. Equity
- g. Management and Administration
- h. Research in Education

Under programme (d) Infrastructure Development, the objective '*is to provide appropriate and sufficient infrastructure facilities and services including rehabilitation and maintenance in order to improve equitable access to, and quality of education*. Infrastructure encompasses construction and renovation of classrooms and other educational facilities, **teachers' houses**, provision of school furniture and equipment, and preventive maintenance measures'<sup>8</sup>. *Emphasis added*.

My role as an Architect in the organization is basically to advise and carry out design and supervision roles on the construction of educational facilities which includes housing.

# 3 Shelter Problem

#### 3.1 Definition of the Problem

- The paper assesses the shelter problems in institutional housing in Zambia under the institution of the Ministry of Education. *Institutional housing in Zambia is understood as housing provided by government, quasi-government or private institutions/establishments for accommodating employees and renting out to tenants.*
- Ministry of Education institution housing simply called "Education housing" is defined as, Housing provided by the Ministry of Education or by any other Ministry of the government, or housing constructed, bought or given to the Ministry of Education by any other organization for use of its employees.

In assessing the problem in education housing, the paper narrows the scope to 'Education housing for basic and high school teachers and other education staff in Lusaka District.

- The problems of Education housing are assessed through three aspects. The three aspects are:
  - i) The demand for housing;
  - ii) Quality of housing; and
  - iii) Sustainability of housing.

These three aspects are drawn from the problems outlined in the 1996 NHP document.

<sup>&</sup>lt;sup>8</sup> Education Sector, National Implementation Framework 2008 -2010, Implementing the Fifth National Development Plan

#### <u>Aspect No.1</u> – The Demand for housing for teachers/Education Staff

Based on the '2008 Educational Statistics Bulletin' of the Ministry of Education of 30<sup>th</sup> April, 2008, there was a shortfall of 38,448 housing units in total for basic school teachers and 9,302 housing units in total for secondary schools teachers.

The shortfall continues to increase as more teachers and related staff are employed while the rate of construction is lagging behind. *The target for 2008 was only 231 houses for basic school teachers countrywide*<sup>9</sup>.

Most rental housing in formal settlements in Lusaka district is generally unaffordable for teachers. Teachers 'take home pay' in August 2009, ranged from K1, 145,300.00 (US\$238.60) to K1, 631,600.00 (US\$340.00)<sup>10</sup>. See table below. This makes the availability of educational housing very critical.

Settlement Status	Settlement	Average Month	•	Average Monthly HH Income		(House rent exp.)(income)	(Income)-
Status	Settlement	Rent Expenditure(ZMK)(US\$)		(ZMK (US\$)		(%)	(house rent exp.) (\$)
Planned Urban Settlement (Formal Settlements)	Kabulonga	3,089,000	813	5,679,000	1,494	54,4%	681
	Olympia	1,983,000	522	5,451,000	1,434	36.4%	912
	Rhodes Park	1,498,000	394	3,584,000	943	41.8%	549
	Kabwata	1,077,000	283	2,117,000	557	50.8%	274
	Kamwala	633,000	167	2,935,000	772	21.6%	605
	Kaunda Sq.	399,000	105	1,078,000	284	37.0%	179
	Matero	250,000	66	417,000	110	60.0%	44
	Mtendere	230,000	61	671,000	177	34.5%	116
	Mandevu	140,000	37	321,000	84	44.0%	47
	New Kanyama	114,000	30	n.a	n.a	n.a	n.a
Unplanned Urban Settlement (Informal Settlements)	Kalingalinga	287,000	76	523,000	138	55.1%	62
	Jack	225,000	59	904,000	238	24.8%	179
	N'gombe (Old)	208,000	55	706,000	186	29.6%	131
	Garden	161,000	42	395,000	104	40.4%	62
	Bauleni	141,000	37	345,000	91	40.7%	54
	John Laing	134,000	35	348,000	92	38.0%	57
	Chibolya	133,000	35	348,000	92	38.0%	57
	George	131,000	34	377,000	99	34.3%	65
	N'gombe (Ext)	121,000	32	n.a	n.a	n.a	n.a
	Chainda	105,000	28	324,000	85	32.9%	57
	Kanyama	76,000	20	258,000	68	29.4%	48

Table 3.0 Rental Housing Cost against Household Income

Source; JICA Study, 2009

#### Aspect No.2 - Quality and type of housing being provided for teachers/Educational staff

Firstly, the Ministry of Education infrastructure is divided into categories according to:

<sup>&</sup>lt;sup>9</sup> 2009 Infrastructure Operational Plan, Ministry of Education, Republic of Zambia.

<sup>&</sup>lt;sup>10</sup> The Monitor & Digest, Issue No. 474, Friday, September 18-Monday, September 21, 2009

#### a) Levels of Construction.

There are three levels of construction of structures outlined below:

- i. **Permanent structures** are structures built with durable materials such as concrete that can serve for many years, usually built at high cost using skilled labour and quality materials.
- ii. **Temporary structures** are temporal in nature largely due to the type of materials used and are built as a stop gap measure to provide basic infrastructure, and
- iii. **Incomplete structures** are designed to be permanent structures but are still under construction and are often already in use before they are completed<sup>11</sup>.
- All Ministry of Education housing being currently built using contractors falls under **permanent structures** and is completed before use. In most cases, houses built with the involvement of the communities are used before they are completed due to the delay in completion.
- **Temporary houses** are built by local communities or schools or teachers and in some cases NGO's with the worst ones being of pole and mud with thatched roofs and these fall into a category of what is termed as *traditional housing*.

#### b) Standard of construction.

The standard is distinctly divided into:

- i) Primary/basic school housing and
- ii) Secondary/High school housing.

Both basic and high schools have housing in rural and urban areas. Rural area housing is mostly built as detached units while the urban type is distributed in: a) detached units, b) semi-detached units and c) flats. See figures 2, 3 and 4. They are all currently built to the size of three bedrooms, with a sitting room and kitchen as a minimum. All bedrooms sizes are above *the acceptable minimum standard of 2.5 by 3 metres* for a sleeping room<sup>12</sup>.

#### i) Primary/Basic school housing.

Basic school housing unit floor area ranges from **75 to 85** sq. metres. They are currently designed with external facilities for cooking, toilet and bathing.

<sup>&</sup>lt;sup>11</sup> 2009, In-Depth Vulnerability and Needs Technical Assessment Report by the Zambia Vulnerability Assessment Committee (ZVAC), June 2009, Lusaka.

<sup>&</sup>lt;sup>12</sup> National Gender Policy, March 2000, page 40

#### ii) Secondary/High school housing.

Unlike basic schools, high school housing generally has a different standard for each category of teachers and education staff. High school housing unit floor area ranges from **85** to **115 sq. metres**. They generally have internal cooking, bathing and toilet facilities.



Fig. 2. Urban type Detached housing units at David Kaunda Technical High School in Lusaka District. Picture by Author January 2010



Figure 2. Urban type Semi-detached Ministry of Education housing units at New Kanyama Basic School in Lusaka District. Picture by Author, July 2009.

#### <u>Aspect No.3</u> - The sustainability of what has been and is being built.

Sustainability is considered in two parts:

- a) Sustaining the continuation of construction of teachers housing and
- b) Maintaining or keeping in good condition what has been built or constructed.

#### a) Sustaining the construction of teachers housing.

At independence, the government had enough resources and entirely financed the



Figure 4 Two Storey Teachers Block of Flats at David Kaunda Technical High School in Lusaka District. Picture by Author, January 2010



Fig. 5.0 A Metal workshop converted into living Quarters due to critical housing shortage at David Kaunda Technical High School in Lusaka District. Picture by Author, January 2010

construction of houses as part of an on-going school construction programme. When the economy became bad, major lending institutions such as World Bank, largely financed

the programme. Currently, the government is largely financing such programmes from its own revenue due to the improvement in its economy.

The programme of construction is being sustained by new school programmes with the corresponding need for teachers housing.

#### b) Maintaining built teachers housing.

The need to maintain or sustain existing housing units and those under construction becomes critical when one considers the need for, and the cost of providing such housing. It has been observed that *'buildings not maintained have a limited life span'* and that *'maintenance can prolong their useful life almost indefinitely'*<sup>13</sup>.

The 1996 NHP document noted that, *most institutional houses, particularly those* belonging to the government and local authorities, are in a deplorable state of repair due to lack of proper maintenance and care.

The documented programme for maintenance of infrastructure under the Ministry of Education from 1984<sup>14</sup> has been that for *Preventive Maintenance*. It has been for both primary (basic) and secondary (high) schools.

# 4 Proposals for Change and Improvement

Proposals for Change and Improvement in the provision of Education housing below are drawn from the assessment, using the three aspects.

#### 1) The Demand for housing for teachers/education staff.

The demand for teachers housing has far outstretched the available supply as earlier noted. This has consequently led to a critical shortage of such housing at national level as noted earlier and at district level.

In Lusaka district, the shortage is so critical that structures not built to be used as housing units such as classrooms and storerooms, have been converted into accommodation for

<sup>&</sup>lt;sup>13</sup> Maintenance of Institutional Buildings, A Management Perspective by Bjorn Carlqvist, *Building Issues 1, 1997 Volume 9*, Lund University, Lund Centre for Habitat Studies

<sup>&</sup>lt;sup>14</sup> Preventive Maintenance System in Learning Institutions, An Internal memorandum by Allan M Shawa, Preventive Maintenance Co-coordinator, ZEPIU, 2009.

teachers<sup>15</sup>see Fig.5. From a total number of **6,918**<sup>16</sup> **teachers** at basic and high schools in Lusaka district, only **766**<sup>17</sup> **serving teachers** were accommodated in Ministry of Education housing units in 2008. This problem has been worsened by a number of what are termed as non-serving individuals i.e., those who have stopped working for the Ministry of Education but are still occupying Ministry of Education housing units. In addition to non serving individuals staying in Education housing, there are those that are not entitled to stay in education housing. This has reduced the supply of housing units even from the already available ones.

#### a) Current Approaches

- Paying of housing allowances. The paying of housing allowances to teachers without accommodation has had minimal contribution in lessening the critical shortage because the allowance is meager for one to rent decent accommodation. It ranges for most teachers from K200, 000.00 (US\$42.00) to K280, 000.00 (US\$58.00) per month<sup>18</sup>. See also, table 3 showing Rental Housing Cost against Household Income.
- 2. Currently, the other approach that has been adopted to build more houses with limited funds has been through the inclusion of beneficiaries (termed as community) in the construction process. By the beneficiaries contributing, mainly through providing materials, there is a saving the government makes in the cost of each housing unit. Though this has made a substantial contribution, it still falls short and needs to be supplemented.

#### b) New Approaches

There is need therefore to adopt a strategy that can increase the number of housing units using the current limited resources in these areas; i) **Minimum requirements in terms of housing areas or rooms,** ii) **categories of housing units** i.e., **detached** and **semidetached units** and **flats,** and iii) **management to ensure that all existing education housing is available for teachers and education staff.** For example, two similar housing units built as semi-detached units as opposed to being built as detached units

<sup>&</sup>lt;sup>15</sup> Ministry of Education, Lusaka District Housing Units, 2008. A Report on the Status of Housing Units in Lusaka District.

<sup>&</sup>lt;sup>16</sup> Zambia Schools 2008- Preliminary Data 041108, Lusaka Provincial Education Report

<sup>&</sup>lt;sup>17</sup> Ibid 15

<sup>&</sup>lt;sup>18</sup> Provincial Education Office Accounts Office Records, 2009.

saves about 10% of the cost. This means more housing units can be built of similar standard if they are semi-detached as opposed to being detached.

#### 2) Quality and type of existing and new housing

Quality has been achieved through,

- a) Personnel and
- b) Materials and workmanship
- a) Personnel

Technical personnel are required to, prepare drawings and technical documents, direct a transparent procurement process for the engagement of a competent contractor(s) and to supervise works to ensure adherence to standards and quality for housing projects.

A set up that ensures that competent technical personnel employed by the Ministry of Education undertake the above tasks timely and adequately, is essential to ensure quality. Currently, the School Infrastructure Section (SIS) in the restructured MoE coordinates and implements school infrastructure development programmes<sup>19</sup>. SIS is based at the Ministry of Education Headquarters under the Directorate of Planning and Information headed by a Director. The current SIS's operational structure has a Project Management Unit (PMU) of technical staff at HQ in Lusaka comprising 3 Architects, 3 Engineers and 2 Quantity surveyors, employed under the Zambia Education Projects Implementation Unit (ZEPIU)<sup>20</sup> and a Resident Engineer for each province employed under ZEPIU. There is also a Water and Drainage Engineer employed by ZEPIU. A Senior Building Officer (SBO) in each Province and a District Building Officer (DBO) in each district of a province, are employed directly by MoE.

#### b) Materials and Workmanship

Quality depends on type of materials used, and how they are used (workmanship).

<sup>&</sup>lt;sup>19</sup> Final Report for the Development of a New Ministry of Education, School Infrastructure Section Operation Structure by the Department of Civil & Environmental Engineering of the University of Zambia.

<sup>&</sup>lt;sup>20</sup> A separate unit of the Ministry of Education specifically established to undertake school construction programmes.

Materials are tied to personnel in that personnel have to supervise to ensure that the right type and quality of materials as specified are utilized. Thus quality is based on materials used and workmanship.

Provision of permanent and good quality education housing at schools attracts teachers to these schools and therefore plays a critical role in helping government to achieve its vision of providing 'innovative and productive life-long education and training accessible to all by 2030".

Provision of temporary and poor quality education housing at schools, is a demotivation to teachers and discourages them to go and teach at such schools and this has an effect on the number of children having access to education and the quality of education they receive.

#### 3) The sustainability of teachers housing.

The sustainability of teachers housing is looked at from two angles;

- i) Sustaining the construction of new housing and
- ii) Maintaining what has been constructed.

#### i) The Sustaining the Construction of new housing

With an ongoing construction programme, or when funds in place for construction, a competent technical personnel structure or Project Management Unit (PMU) is necessary, as earlier stated, for quality housing works.

#### iii) Maintaining what has been constructed.

**Building maintenance** according to *Maintenance of Institutional Buildings, A* management Perspective, Building Issues 1, can be defined as: work done to keep an existing building in, or restore it to, a condition where it can perform its intended functions. It is divided into;

- i) **Preventive maintenance**. This is maintenance carried out to a predetermined plan to reduce the risk of failure.
- ii) **Corrective maintenance**, carried out after failure has occurred.
- iii) **Emergency maintenance**, necessary immediately to avoid serious consequences.

Of the three forms of maintenance, there has been no scheduled or systematic programme of building maintenance for school buildings except for *preventive maintenance*.

A report on the status of housing units in Lusaka Province of 2008, noted that 'there is generally no maintenance of the institutional housing units'.

Preventive maintenance has been 'sustained' with donor support. It has been more of a cleaning exercise such as removing cobwebs and storm drains with little actual physical repair work involving replacing glass panes, window handles and door locks. It has been administered centrally by ZEPIU through printing literature for distribution to schools, holding of workshops on preventive maintenance, and visits to schools. Because this has depended on the availability of funds attached to a programme, it has not been sustained to-date.

The other two forms of maintenance have been carried out from Ministry of Education Headquarters and are dependent on the availability of funds.

#### a) Proposals on Increasing Quality and Number of Housing Units.

- PROJECT MANAGEMENT UNIT (PMU) To ensure efficiency and the PMU having more control of the construction process from the beginning to the end with management giving more support as opposed to controlling the process, the paper proposes the reestablishment of a PMU under ZEPIU in line with the proposal by the consultants engaged to develop a New MoE School Infrastructure Section Operation Structure. The set-up at ZEPIU worked better in ensuring that the above requirements were met especially, in guaranteeing efficiency and adequate logistical support such as arrangements for inspection of projects. It also ensured minimal interference in the actual administering of construction contracts and so avoids inadequacies in infrastructure being provided. ZEPIU in the past was responsible for the implementation of school infrastructure development programmes and had the PMU which embraced the provincial Resident Engineers, based at its offices. Realistic restructuring in the current ZEPIU establishment needs to be done to achieve this proposal.
- 2) FLOOR AREAS In light of increasing demand of housing units to reduce the critical shortage of accommodation, it is proposed that if the area of sleeping rooms for example, cannot be reduced to the acceptable minimum standard of 2.5 x 3 metres, then the policy should consider minimizing the construction of detached units and instead increase the construction of semi-detached units or single storey flats. This is especially recommended for urban areas where there is an added problem of acquiring land.

Alternatively, the option of reducing the minimum number of bedrooms from 3 to 2 should be considered to increase number of housing units.

### b) Proposals on Management and Maintenance of Housing Units.

- 1) MANAGEMENT OF EXISTING HOUSING UNITS In line with the
  - recommendations of the Task Force team on the status of housing units in Lusaka
    District, a team or teams need to be established to compile an accurate inventory of all of
    education housing units in the district. Once this is in done, then a process of removing
    illegal tenants need to be initiated to release the units affected for use by the entitled
    teachers and education staff. This will increase the number of education units to
    teachers/education staff without undertaking any construction.

#### 2) CREATING A MAINTENANCE STRUCTURE & PROGRAMME

Lack of a systematic programme of maintenance of school infrastructure has been due to a lack of a properly coordinated decentralized structure with centralized backing. It has been noted that,' *maintenance can be made more cost-effective with decentralized organizations'*. It has been further noted that 'if users can be made to perceive *themselves as co-owners of their institutions, the user-inducted deterioration can be substantially reduced'* and that 'further gains can be had from users actively participating in the upkeep of their institutions"<sup>21</sup>.

It is therefore proposed that a system that interlinks the *centralized establishment* and *decentralized ones* with *a technical* and *a financial backing* be established in the Ministry of Education, as it is the ONLY one that can handle maintenance of housing units adequately and consistently. Merely disseminating information on maintenance (such as preventive maintenance), cannot establish a sustainable structure for maintenance.

# Conclusion

The importance of provision of institutional housing or education housing for teachers and related staff cannot be over emphasized. Provision of housing for teachers is at the centre of the levels of literacy in the country from basic to high schools. It has been observed that the rapid growth in enrolment in grades 1-9 of 40% in 2004, is primarily on account of the policy of Free

<sup>&</sup>lt;sup>21</sup> Ibid 13

education at Grades 1-7 (introduced in 2002), was supported by the completion of about 900 new classrooms each year at new and existing schools with **housing for teachers**<sup>22</sup>.

Continued provision of *permanent and good quality education housing at schools, will attract teachers to schools and consequently play a critical role in helping government to achieve its vision of providing 'innovative and productive life-long education and training accessible to all by 2030".* Provision of temporary and poor quality education housing in schools, is a demotivation and a discouragement to teachers to teach at such schools and this has an effect on the number of children having access to education and the quality of education they receive. Lack of further provision of education housing will further affect the provision of education as most teachers who are not in a position to rent in Lusaka district as shown in this paper, will not be available.

In the light of the above concerns, the proposals outlined in this paper based on the three areas or aspects of assessment namely: *the demand for housing*, *quality of housing* and *sustainability of housing*, needs to be further considered for adoption. Critical shortage of housing, lack of a well executed programme of construction of new housing and continued lack of maintenance of such housing leading to quick dilapidation of constructed housing, cannot support the retaining and engagement of teachers who are so crucial to the education system in Zambia.

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