

Low-income groups and living environment in the cities of the Republic of Malawi.

A direct survey about formal and informal settlements

YASUHIRO HAYASHI¹

Abstract: After a direct survey, the purpose of this study is to provide elements for a discussion on how to explore sustainable systems in the main cities of the Republic of Malawi (Lilongwe, Blantyre, Mzuzu) where the current situation, the historical background and the challenges present typical coexisting cases of formal and informal settlements. The study explores how to improve upgrading systems within Sub-Saharan Africa cities. Over 60% of the population in Malawi lives in informal settlements and experiments the deterioration of the living environment due to rapid urbanization. Through direct surveys in informal settlements and in high-density housing areas, comparative analysis by maps and satellite photographs, bibliographic survey and interviews, the study tries to propose a method for sustainable living environments, housing supply systems, city planning guidelines, building systems.

Keyword: low-income groups, informal settlements, housing supply systems.

Introduction

Background and research purpose

It is said that by 2030 in Africa one in three people will live in the cities: the slums originating by the rapid urbanization will cause sicknesses such as AIDS and Malaria, increase the crimes (young people) and the deterioration of the safe environments. The Millennium Declaration of the United Nations has the target to improve at least 100 million slum residents' life by reducing poverty, and improving water and safe environment by 2020. The Republic of Malawi (Fig.1) is a small inland in Africa; GNI per person is 330 US dollars: 1) The farming population lives in area of about 118,000 square kilometers; the total population is

1. Yasuhuri Hayashi: PhD Candidate, Graduate School of Engineering and Design, HOSEI University, Japan, Tutor Hidenobu Jinnai; email: yachi884@yahoo.co.jp.

15.38 million people; 2) About 80% of the population is a small-scale farmer. More than 60% of the city population of Malawi lives in informal settlements, so the deterioration of the living environment due to rapid population growth is getting serious. By 2020 21,000 housing supply per year are needed; 3) In 2000 the Malawi government provided a *Long-term National Development Plan* (vision 2020) in the framework of a *National Development Policy* with the poverty reduction as main objective. In addition, Malawi growth and developmental strategy (MGDS: Malawi Growth and Development Strategy) is a mid/long-term strategy concerning national and economic development policies scheduled in 2006, as it is forecasted for the second stage (from 2011 to 2016).

Methods

This study is based on direct surveys held in Malawi: data collection, maps, satellite photographs, literature on the state of the art, interviews, tries to define features as living environments of low-income groups in major city of Malawi, housing supply systems and city planning guidelines, construction methods and building programme. The residential areas – informal settlements, High Density Area and THAs (Traditional Housing Areas) – in the three largest cities in Malawi have been targeted.

Outline of living environments: low-income groups in major cities

Within the three large major cities of Malawi the residential areas are classified into low density residential districts (Low-density Areas), medium density residential districts (Medium-density Areas), high density residential districts (High-density Areas), traditional residential districts (THAs: Traditional Housing Areas), and very high density unplanned residential districts (informal settlements) (Fig.2). THAs are residences given from the government to the low-income population since the beginning of independence in 1964; infrastructural supply such as electricity and water are insufficient in that areas. The housing situation is complex due to the diversity of the landowners and to the housing policies lack. The services supply – like in a formal dwelling – are insufficient and correspond to the increase of unplanned residential

districts built by the village population. The majority of the residents of the informal villages live in substandard houses, with no (or very low) access to basic urban infrastructure and services. The dwelling supply from Malawi Housing Corporation (MHC) is mainly addressed to low-income people and it is the main public housing agency. A dwelling for a low-income group is leased for one month with 3,000 MWK-5,000 MWK.(1USD=394.6 MWK) and the ratio of the housing cost compared to the salary is high. The distribution of the residences to the low-income groups in each major city is as follows.

Lilongwe: about 70% of the inhabitants live in unplanned residential district in the Capital town Lilongwe (population: 817,300); the rate of population in unplanned residential district is increasing 7~8% a year (Fig.3).

Blantyre: Blantyre is the first merchant town in Malawi (population: 751,600) and hosts about 70% of the informal settlements population. About 15.7% inhabitants (population: 110,000) live in the Ndirande district – the most relevant THAs: Traditional Housing Areas in blantyre (Fig.4, Fig.5-Photo.1).

Mzuzu: the third city located in the northern part of Malawi (population: 168,900), about 60% of the population, lives in informal settlements. Basic city services such as an appropriate infrastructures, roads, water services, drainage, and electricity are insufficient. To improve resident's life condition, and to reduce poverty, the upgrade is urgently needed. (Fig.6-Photo.2).

Residential environment improvement housing supply policy

Housing supply policy in Malawi

The agency distributing and managing social housing within the residential neighborhoods is the Malawi Housing Corporation. However Malawi Housing Corporation dwellings are expensive, and the stock available does not correspond to the increase of the low-income population groups determined by the sudden rise of the cost of construction materials etc. The housing supply for the low-income groups depends on NGO such as Habitat For Humanity and The Centre For Community Organization And Development (CCODE).

City planning guidelines and approval procedures

The approval of design projects for construction and land development is managed through the Council of the City Planning Committee. However, there have been only few attempts to introduce the architectural guidelines and the building code for one story dwellings during the 1990s, and the regulations concerning architectural units have not been enacted clearly through the city planning guidelines during the 1960s. The approval application procedure doesn't work due to indefinite building standards and to the lack of staff's skill. It can take from one to half a year to complete the procedure for one application. The approval procedure for the high-density areas (the low-income group) is organized in each city office (city assembly).

Residential improvements: living environment and building methods

Burnt-brick dwellings in Malawi

Dwellings built in concrete blocks are widespread in Zambia and Tanzania. The 230×115×60 mm sized burnt brick blocks are used in Malawi as a standard construction material (easy and cheap technique). The piles-up wall made of bricks and cement. The steel wires are inserted in the middle part of the wall, and the upper part of the opening is reinforced by lintel made of RC. The roof is tiled with plating metal boards and supported with a wood truss. It can be assumed that the ceiling height is about 3 mt. The floor is installed on the concrete slab with mortar. Two stories (or more) constructions require reinforced concrete structure and brick walls (Fig.7).

Disasters and dwellings

The earthquakes are few in Malawi. However, an earthquake of 6.0 scales hit the town of 'Karonga' in the northern region of Malawi – it started from magnitude 5.4 on December 2009. Because of the rainy season there were a lot of people in their homes and the damage was considerable; 300 people or more were injured and about 4,000 dwellings were destroyed or damaged. Most of the damaged houses and schools had been built by poor cement and bricks. The collapse of the corner openings and doors was particularly serious. Reinforcement of

structure, maintenance of legal standards, improvement of completion inspection, improvement of the quality of the construction technology and materials have been all necessary actions to provide (Photo.3).

Conclusion

In the near future the Malawi low-income population will increase. The residential environment should improve because of better housing policies, buildings maintenance, building regulations, a more appropriate architectural education and use of construction methods (including the use of rain water, wind, photo-voltaic panels). The improvement of the conditions in traditional residential areas (THAs) and in unplanned residential areas, will have to be implemented as these areas are not suitable for the human living needs and for a city which aims to raise the inside income by 2020 also through the land value.

These improvements are important to forecast the development of middle-income population within 2020 (including land use and urban landscape of Malawi). New unplanned settlements by illegal residents are expected in the future. In order to prevent this, proper controls by building permit system and modern strict land use regulations will be required. In addition, there is a need to improve the living environment through land readjustment project in THAs and unplanned settlements.

So the normalization of unplanned residential areas and the development of a system that limits the illegal occupation due to illegal residents is considered a priority such as to induce the direction of the future development. Rather than simply to remove unplanned residential areas and to relocate the inhabitants, the improvement of the quality of the existing residences – price, scale, housing supply for low-income people, a better surrounding urban environment – is an effective method for backward developing countries such as Malawi.



Fig. 1. Malawi geographical location



Fig. 2. Main cities in Malawi

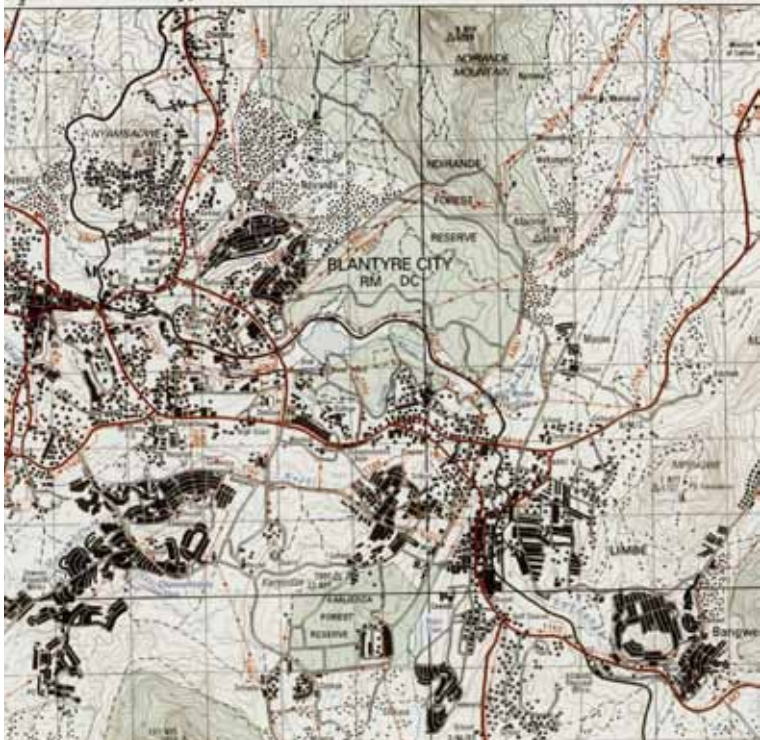
Bibliography

- 2010 World Bank Report
- 2011 World Bank Report
- UN-Habitat Reports
- On-site Survey

Fig. 3. Map of Lilongwe(1979)



Fig. 4. Map of Blantyre (1979)



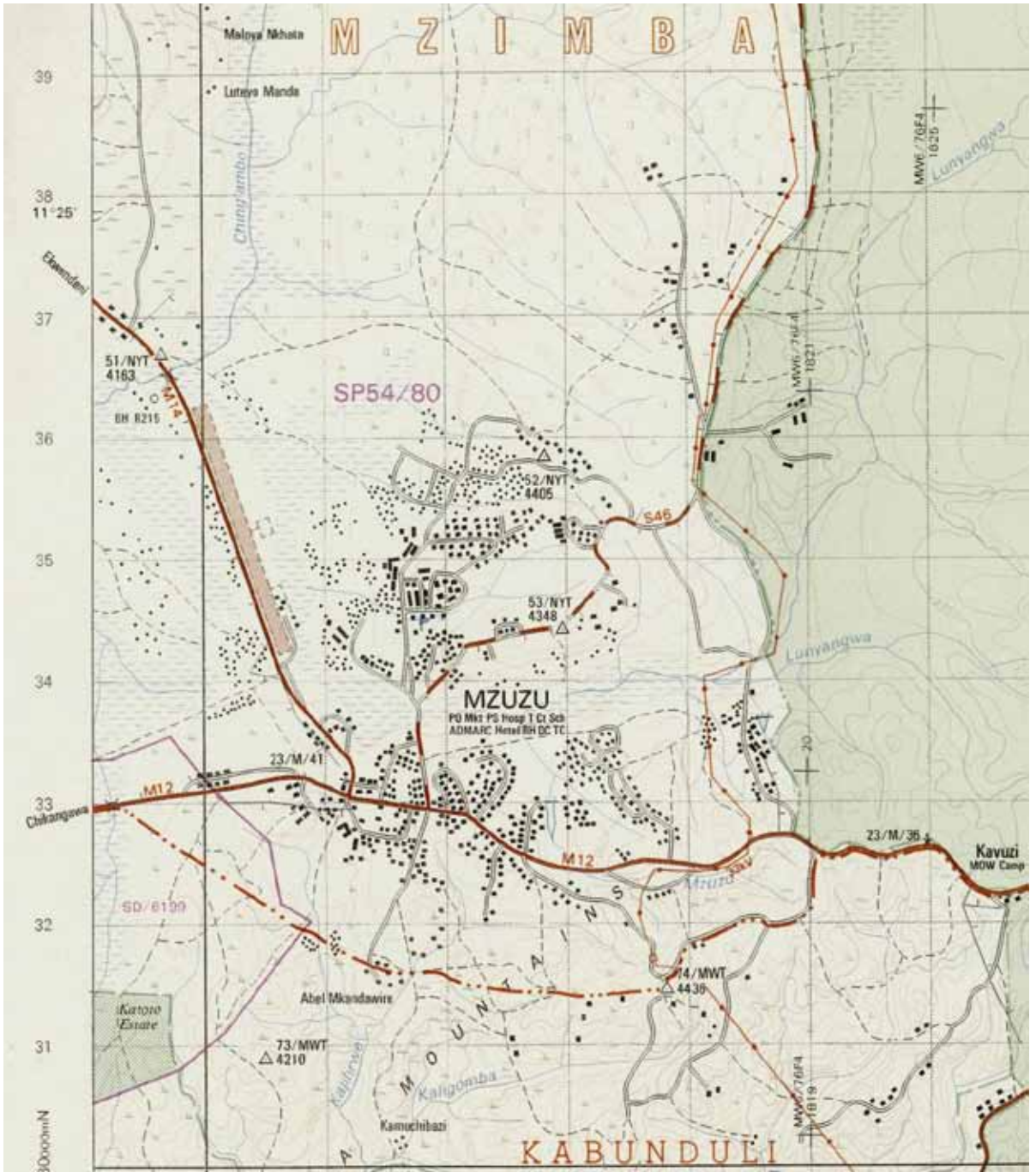


Fig. 6. Map of Mzuzu (1989)



Fig. 5. Satellite photograph of Ndirande



Photo 1. Photos of Ndirande



Photo 2. Informal Settlements of Mzuzu (1989)

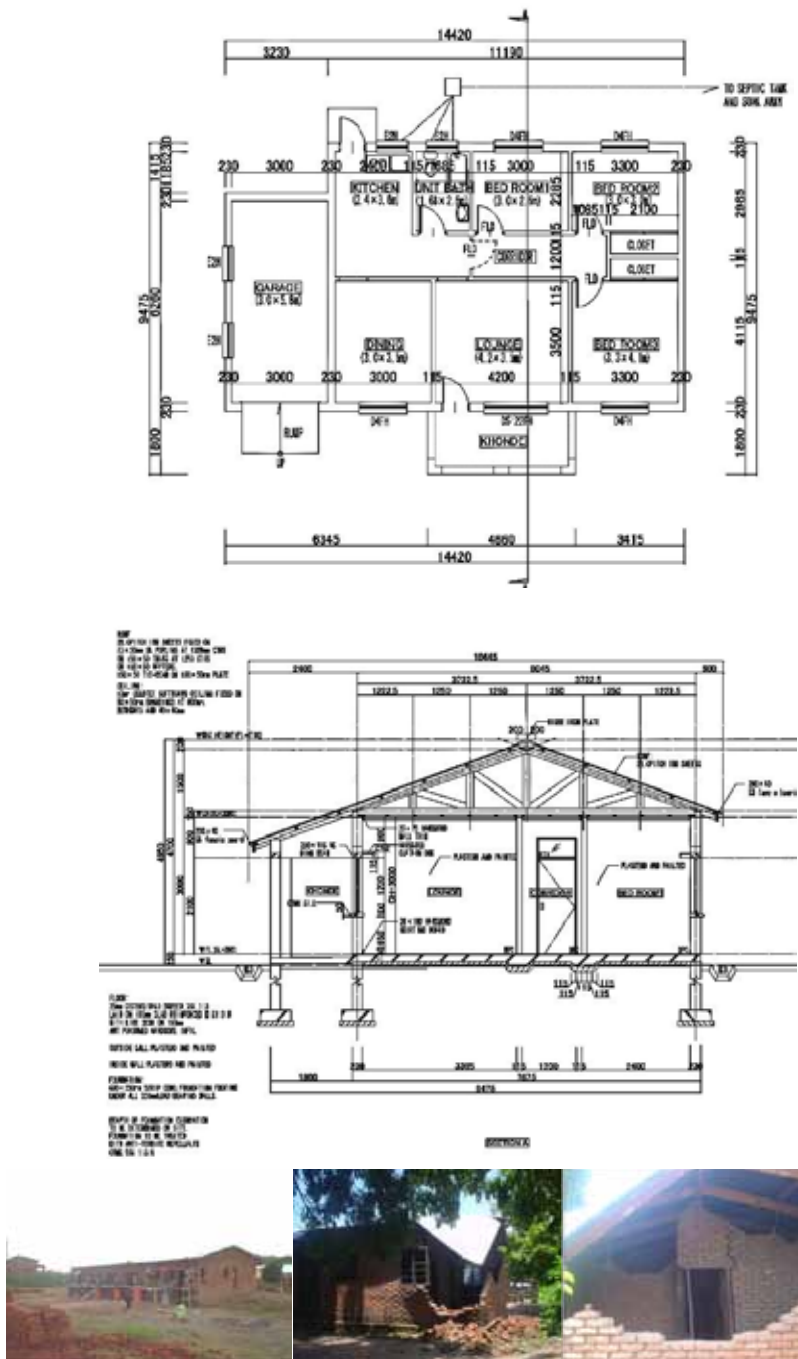


Fig.7. Drawings of a house; Photo.3. Building construction technique