



Urban Upgrading of Deteriorating Residential Environment Case Study of Alteleih Residential Area, Atbara, Sudan

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ABSTRACT—The objective of this research study is to upgrade and promote urban environment of Alteleih Residential area in Atbara. To do this, urban planning of the subjected area should be in consistence with the urban style of Atbara town through arrangement and organization of buildings, providing basic services of electricity and water supply and other services like wireless communication and means of transport to and fro the area. To achieve these goals, the research study uses the historical method, and the descriptive analytical method. It is found that the subjected area was not planned in principle and it was out of the local authority regulations. The main reasons behind that are the migration phenomenon from rural to urban areas and the poor economic conditions of the population.

Keywords—Urban deterioration, upgrading, residential area, promotion, urban planning.

Received 10 April, 2019; Accepted 29 April, 2019 © The author(s) 2019.

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I. INTRODUCTION

(Krista A. Capps, Catherine N. Bentsen, and Alonso Ramírez, 2016) urbanization is occurring at a rapid pace in developing countries. The urban stream syndrome has been well documented in higher-income countries, but in lower-income, developing countries, resources often are unavailable for quantifying how urbanization affects streams. Basic infrastructure to support water supply and wastewater treatment frequently is lacking in lower-income countries, and this situation has repercussions for human health and for ecosystem structure and function. The interaction of environmental, social, and economic factors may produce differences in the expression of the urban stream syndrome in lower-income countries relative to in high-income countries.

Historically the Nile valley was the cradle of the early Sudanic Civilization it has been for a long time an attractive area for the people in the neighborhoods due to rich natural resources, diverse climatic conditions and easy routes. So, it received a successful immigrations in different stages of its history and it became a multi-ethnic country. A squatter settlement can be defined generally as a residential area which has developed without authorization to the land or permission to build. Essentially there are three interrelated factors that helps understanding squatter settlement: the Physical, the Social and the legal factors (Sumaia Omer Moh. Gamie, 2015).

(Samier Mustafa Hadiya, 2018) discussed the effect of urban planning in promotion of residential environment in villages surrounding Khartoum state and explained the international standards in definition of urban and rural communities. The research showed the study of urban planning in Sudan and organization of villages in Khartoum state from the point of view of planning legislations and policies, re - planning and the problems associated with urban and villages planning and residence environment in Alshigla village, west of Omdurman.

(Imad Almasri, 2012) discussed the promotion of urbanism in old Humus city in Syria. The research handled the relation between positive conservation on heritage and urban renewal where the researcher concentrated on observation of constants and development of variables. It was concluded that the protection, remedy and renewal of archaeological buildings should not be separated from environment promotion of these buildings.

(Subeih Farhan, 2014) discussed urban deterioration in historical cities centers in the historical center of old Alkout city in Iraq which effects social and health characteristics of the local population. The reasons behind that are high humidity, less exposure to direct solar heat and narrowness of resident area which lead to serious diseases like asthma, allergy and rheumatism.

(Zubeida Suleiman, 2014) discussed thoroughly a mechanism for urban development related to deteriorating regions (i.e. Aljereif area case study). It was found that urban development faces a great deal of technical obstacles, in addition to various social, economic, managerial and organizational obstacles.

(Shiema Yagoub, 2014) discussed renewing and upgrading of residential areas (i.e. study case of Algamaïr). The problem was summarized in existence of several old residents in Omdurman which suffers from absence of clear gradient of traffic road net, pedestrians passages, open and green areas, random distribution of services and inefficiency of general utilities. The most important results of this study are that the deterioration of these buildings is due to high maintenance cost, also the locality does not contribute in renewal and promotion of the buildings.

Development and improvement of deteriorating regions in Germany was initiated at the beginning of the seventieth of the twentieth century. The concept of development for Germans means development and modernization of old residential areas inside the cities without evacuation of their population so as to keep social entity, improve residences, services and basic general utility, in addition to develop economic resources and provision of job opportunities for the local population. These procedures will improve economic circumstances and boost population income (Rashied Boxany et al., 2017).

II. IMPORTANCE OF PREVIOUS STUDIES

The past studies handled the role of urban promotion in assisting old residential areas population through introducing different methods of promotion and presented several activities which must be followed in urban and population upgrading so as to improve residents environment and achieve social justice (Arrow K. B. et al., 1995) and (Asici A. A., 2013).

III. RESEARCH METHODOLOGY

The research used two methods to fulfill the requirement of the present study. It used the historical method to study the subjected region from the point of view of its development, urban change phases from the past till now so that it could be correctly predicted in the future. The second method is the descriptive analytical method which uses analysis in collecting comprehensive real data for a phenomenon existing in the study area, and this method helps in predicting future and introduces interpretation of phenomena and factors associated with it. The descriptive method depends on the interpretation of current situations, determination of circumstance and the relations which exists between variables.

IV. SOURCES OF DATA COLLECTION

The data collection sources is categorized into initial and secondary sources. The initial sources of data collection include personal meetings, survey visits, observations and questionnaires. The secondary sources of data collection is summarized in books, dictionaries, periodicals and journals, conference proceedings, theses and dissertations, research papers ... etc.

V. DEFINITION OF TERMINOLOGIES

A. Urban Deterioration

This terminology refers to residence environment which becomes deteriorated through the incorrect behavior of its local population. The deteriorated residential areas describe certain economic, social and physical situations. These areas are heavily populated with people although they are narrow, small and unsuitable for living and/or housing.

According to the definition of cities renewal foundation in the United States of America for deteriorating regions, more than 20% of buildings are below the acceptable standard. There are three factors which classify the residential environment as unsuitable and below the international standards: firstly, the physical urban factor which includes area, structural frame, land uses, infrastructure and social services. Secondly, the social factor which includes cultural and educational level of population, also social and behavioral level. Thirdly, the economic factor which includes poverty, unemployment, and low income (Bayram A. H., et al., 2013) and (Beckerman W., 1992).

B. Upgrading

The difference between upgrading and remedy is that remedy focuses on urban and financial components of residential region, whereas upgrading focuses on social, economic and urban components of residential region (Hettige H. M., et al. 2000) and (Dodds W. K., 2013).

C. Urban Development

Urban development means upgrading and improvement of human colonies which suffers from aggravated urban, economic and social problems. It means improvement of the current situation to a better situation putting into account provision of utilities, services and health facilities which help in solving the problems of the region (Hazim Ibrahim, 1982) and (Rana Aljohar, 2016).

D. Renewal or Remedy

It is used in residential regions of medium case and includes the remedy and renewal of buildings, utilities and general urban utility of residential region. Remedy and renewal are utilized in conservation of old buildings which are considered national wealth and boost their real estates value (Ahmed Khalid, 1997 and 1998).

VI. URBAN STUDIES OF THE SUBJECTED AREA

A. Land Use

Land has many uses in the city which include residential, commercial, industrial, entertainment. Also, it is used for transport purposes and services i.e. administrative, educational, financial, religious and health.

The land use in the subjected area of study is as follows:

Residential use: It is considered as the basic urban mass, and constitutes about 32.52% of total study area.

Roads Net: It covers an approximate area of 9.46% of total study area.

Agricultural Use: It accounts about 2.85% of total study area.

Other Uses: In study area there are other uses like open spaces and public squares which constitutes about 35.17% of total study area.

B. Residential Environment in Alteleih Area

From the survey visits and observations made it is found that the residential environment is deteriorated so that a typical house lacks good ventilation and valid residence environment. The area of a house may vary between 150m² and 610m² and the fashion is random where the house owner himself determines the location of the land plot and he may himself builds it. The construction is traditional and the houses are crowded without spaces between neighbors and without ventilation, passages and roads. The buildings are non-uniform and lack specialty and safety.

These circumstances are solely responsible of security, health, social and economic deterioration. However, any remedy could not be made otherwise, promotion, rearrangement of urban structure and improvement of urban and social environment are made.

- The buildings in Alteleih area are deteriorating due to not abiding to the construction and health specification (Ikhlās Hassan, 2012).
- The construction materials used are composed of clay and Zibala (i.e. animal dung) and the ceilings are made of wood.
- Most of the buildings in the study area are composed of two rooms, a kitchen, a toilet and a bathroom.

From the survey study it is found that the area lacks educational, health, religious and environment facilities, which compels residents to move to neighboring areas to access these services. Also, there is no communication facility services and there is a shortage in drinking water supply.

VII. CONCLUSIONS

1. Unbalanced development at the state's level increases internal migration from rural to urban areas and therefore, leads to deteriorated areas.
2. Absence of planning and legislations of residence regulations leads to random and irregular building style.
3. There is a close and proportional relation between random deterioration areas and unethical behavior of individual e.g. spread of crime and prostitution.

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Fatima Mohammed Hussein" Urban Upgrading of Deteriorating Residential Environment Case Study of Alteleih Residential Area, Atbara, Sudan" Quest Journal of Research in Agriculture and Animal Science , vol. 06, no. 01, 2019, pp. 01-04