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Socio-Economic and Environmental Considerations of Upgrading and Planning Villages Around Khartoum
Case Study of El Salama Village

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Dedication

To my father's soul,
to my mother, husband
and to my two sons
Acknowledgements

Special thanks and appreciation to Dr. Yagoub Abdalla Mohamed my supervisor, for his encouragement, constructive, advice and fruitful guidance throughout this research.

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Abstract

In many third world countries there has been a positive change and orientation, such as the replacement of slum and shanty-town demolition with upgrading programmes. In some instances, the provision of secure tenure to squatters has greatly encouraged the development and improvement of houses and whole settlement.

In Khartoum urban area the complex nature of urbanization and urban planning process have increasingly posed very challenging problems to the authorities, the scholars, and the general populace as well.

However this study tried to examine the nature and scope of the planning process in Elsalama village through the provision of infrastructure components (e.g. water supply and sanitation, waste disposal, road planning and drainage) through direct government intervention or with community support. The study also directed its attention to assess the impacts of social or economic nature within the affected population.

Chapter, one, an introductory section aiming at or to explaining the objective of the planning and replanning activities along with the provision of piped water and electricity and other communal facilities through upgrading roads and houses. In addition to that the study tried to examine the relationship between the shortage of houses, lacking of affordable public utilities and the level of income. The chapter also covered methods and technique that followed in the survey. The difficulties also that faced the researcher were highly.

Chapter two described, the area of study which include the geographical location, the climate and the topographic features of the
land as its flatness facilitated in the influx of migrants from adjacent area. The chapter also discussed that the characteristics of population of Elsalama.

Chapter three literature review, which include the growth of squatter settlement as an urban phenomenon, their causes and effect, and response taking Kenya and Latin America as examples.

Chapter Four was devoted to policies of upgrading. In this section, the absence of direct measures for control on land by the land and planning authorities has facilitated the occupation of such land by speculators and squatters. The Government solved the problem of displacement by creating Dar Elsalam township to absorb these vulnerable groups.

Chapter Five provided the results of the study through assessing and evaluating the satisfaction of Elsalama inhabitants, considering the socio-economic aspect along with the environment.

The study found that upgrading of squatter areas is a sound policy and received wide support by the local population.

The planners in El Salama were able to draw the expertise of local leaders in solving any problems that may rise.

The upragriding created suitable environmental conditions and provided security of tenure leading to improvement in the built up area.
الخلاصة

في كثير من دول العالم الثالث هناك توجهات وتغييرات إيجابية، منها تصحيح وترتيب الأوضاع السكنية مثل معالجة المستوطنات العشوائية. فضلاً عن الإزالة. أن التوسع في التخطيط العمراني والذّى صحبه تنظيم وتخطيط المناطق العشوائية لتحسين بيتها وتقين وضع النازحين ليصبحوا ملوكاً لقطعهم السكنية قد شجع كثيراً في ارتفاع بيئة منزلهم وأوضاعهم السكنية.

و في مدينة الخرطوم نجد طبيعة التركيبة الحضرية المعقدة ودعت المسئولين والشعبيين إلى تحدي كبير أذ أن النازحين بطبيعتهم شريحة لا تحمل مهارات تساعدهم في كسب العيش في المدن خاصة وانهم قد جاءوا من مناطق ريفية.

وقد أجريت هذه الدراسة في محاولة للكشف طبيعة وشكل عملية التخطيط في قرية السلمة من خلال تزويدها بالخدمات الضرورية والبنية التحتية (مياه الشرب - نقل الأوات والتصريف وتوزيع الشوارع) من خلال تدخل الحكومة المباشر أو الدعم الاجتماعي. أيضاً فقد وجهت الدراسة بتركيزها على طبيعة الآثار الاجتماعية والاقتصادية من خلال السكان المتاثرين.

الفصل الأول يهدف لتوضيح أهداف التخطيط من خلال تقديم الخدمات الضرورية والاجتماعية بالمنطقة. بالإضافة إلى ذلك فقد حاولت الدراسة الكشف عن العلاقة بين القصور السكني والنقض في الخدمات العامة.
ومستوى الدخل عموماً. وفي هذا الفصل تم جمع المعلومات عن طريق الاستبيان والمقابلات الشخصية والملاحظات الميدانية والوثائق والمراجع المتوفرة.

في الفصل الثاني وصف عام لجغرافية المنطقة وطبيعتها من خلال المناخ والزراعة والتضاريس فنجد أن طبيعة السطح المستوى سهل عملية البناة والتمدد الأفقي للمهاجرين من عدة جهات من القطر على نحو عام ومدينة الخرطوم على نحو خاص.

الفصل الثالث يشمل ظاهرة السكن العشوائي في المدن وديمه في النسيج الحضري واسباب هذا النمو، وأخذ كينيا وامريكا اللاتينية كمثال.

ناقش الفصل الرابع ناقش السياسات التخطيط من خلال غياب السياسات المتاحة لقواعد أسس التخطيط عبر الجهات المسؤولة لكيفية ضبط الانفلات السكاني واستغلال الأراضي. وقامت الحكومة بوضع بعض الحلول للنازحين بتسكينهم بقرى دار السلام ومدهم ببعض الخدمات.

في الفصل الخامس تم تقديم الحلول والنتائج للدراسة من خلال تقييم المواطنين لعملية التخطيط وما أفرزته من استقرار وامن. ووصفت الدراسة إلى أن تخطيط وتنظيم المستوطنات العشوائية كبعد سياسي وجد دعماً واسعاً من السلطات المحلية والشعبية. وقد استطاع المخططيين في منطقة السلمة تنفيذ العمل بالتماسك مع الجهود الشعبية والسلطات المحلية في المنطقة. فان عملية التخطيط خلفت بيئة مناسبة للنازحين مثل تمليك الأرض و توفير الأمن مما أدى إلى تحسن البيئة السكنية عامة.
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Chapter I
Research Strategy

1.1 Introduction

The world is in the midst of massive urban transition unlike that of any other time in history. Within the next decade, more than half of the world's population, an estimated 3.3 billion, will be living in urban areas a change with vast implications both for human well-being and for the environment. As recently as 1975, just over one third of the world's people lived in urban areas. By 2025, the proportion will be risen to almost two third (Attahi, K, 1992).

The most rapid change is occurring in the developing world, where urban populations are growing at 3.5 percent per year, as opposed to less than 1 percent in the more developed regions. Cities are also reaching unprecedented sizes - Tokyo 27 million; Sao Paulo, Brazil, 16.4 million - placing enormous strains on the institutional and natural resources that support them.

Rapid urban growth has produced the most obvious and dramatic mark of third world "under development" (UNDP, 2001) : Around or beside the big cities of the developing world, shanty towns have sprung up to spread their rickety dwelling over everything in sight. These squatter settlements lack electricity, sewerage, drinking water, postal services, transport and all other urban amenities. They also present almost irresolvable problems of legal tenure and land titles.

The projected doubling of the populations of urban areas in the developing countries implies an increase in demand for serviced land - for residential plots for all income groups, for industry, commerce, and all other urban functions - at scale and rate without precedent in the industrialized countries.
Given these trends, it is clear that the question of land supply and the management of land will be one of the key issues of urban development in the countries of Africa, Asia and Latin America in the coming years.

In addition, many developing countries face an economic crisis which has imposed severe budgetary constraints. Economic adjustment policies have limited investment in infrastructure housing and informal-sector business, as well as social services. Low-income groups suffer disproportionately from such policies specially women, in terms of employment opportunities and pay.

Nevertheless, cities of the developing world are expected to "develop" indeed, the third world metropolises is regarded as the engine which will put the rest of the country into the twenty first century; but in the process, traditional attitudes and ways of doing things are likely to be abandoned, involving a breakdown and reconstruction of relationships with family, friends, and authorities. In the process everything is affected, including hope and love, desire and ambition.

1.2 Research Problem

In Khartoum urban area the complex nature of urbanization and urban planning processes have increasingly posed very challenging problems to the authorities, the scholars, and the general populace, as well. However, the magnitude of such problems has weighed on some obstacles and inefficiencies, like uncontrolled rural-urban migration and meager finances. This understanding of the problem is mere casual observation that ignores the fact that the economic, ideological, conceptual and institutional framework of planning are producing the spatial and social structure of urban areas. (Smith, M.D., 1977) Thus the problem of squatter settlements in Khartoum urban area has been related
to both the national spatial development policy and the urban housing philosophy - on the one hand, the national economic philosophy and policy have failed to slow down the flow of rural migrants to Greater Khartoum. On the other hand, the economics of the social policy adopted by the successive governments have also failed to solve the urban housing question. As a result the migrants and a considerable numbers of the town dwellers whose incomes are low and uncertain, have been forced to occupy land illegally at the fringes of the three towns - unavailability of a house or minimally serviced land at a cost affordable to the urban poor has already reached the crisis point, eventually, a minimum shelter in shacks or isolated mud rooms has become the sole solution for these groups (Elyas, M.H 1997).

The growth of squatter settlements has taken place despite the fact that the 1961 regulations of local government (Article 8, 1, a) stated clearly that measure by local orders would be taken to prevent uncontrolled and illegal buildings. In addition, the town replanning ordinance, 1950 was amended in 1956 and 1961 to regulate and control the physical growth of the suburban villages around Khartoum urban area. More over, the incorporation of these suburban villages into the boundary of urban area, has brought them and all un-built land adjacent to them, under the 1961 planning law.

These regulatory measures were ineffective, and the squatter settlement has spread remarkably because of the following reasons:

1. Contradiction of the official policy on lease of land and housing with such local orders and regulatory measure,

2. Absence of a comprehensive and responsive national urban policy. This has led to migratory current which destroy the regulatory measures,
3. Absence of direct measures for control on land by the land and planning authorities. This has facilitated the occupation of such land by land speculators and squatterers.

4. Peripheral locations of the squatter areas have suited the migrants of rural background and economic status.

According to their site, accessibility to basic utilities, population size, the magnitude of environmental problems and the economic level of the individual squatter, the squatter housing in Khartoum urban area may be classified into four types (Fig. 1.):

1. Typical shacks and hovels squatter areas. These are found in the Green Belt area, south of Khartoum. These areas are the worst in their social and physical environments. The squatters in these areas, who are very low income, are recent arrivals to the Khartoum urban area.

2. Squatter areas adjacent to suburban villages, the original suburban villages were incorporated into Khartoum urban Area in early 1950s; and have witnessed some replanning activities along with provision of piped water and electricity. Such changes have encouraged the occupation of lands adjacent to those villages by squatters from the town proper and by the migrants as well.

   Unlike the first type, which is admitted to be illegal occupation of government land, in this second type the villagers and the early squatterers have claimed the ownership of the occupied lands. Such uncontrolled sprawl of suburban villages include Suba, Hamadab, Shagara, Kalakla, Gabra, Ushara and West Gerief in Khartoum. This type of squatter housing is occupied by low-and lower-middle income groups who have stable incomes. Here, quality of houses varies according to income, while shortage of social services includes hospitals, public transport, secondary schools, recreation facilities and police protection.
3. Regularized squatter areas. In this type, regular block layout has developed under the directives of people's council after 1970. Lack of coordination among local authorities, land authorities and planning authorities has facilitated the distribution of land by neighbourhood councils, without considerations to land administration and regulations and planning rules. This type, which is similar to the second type in its origin and residents, has developed in Soba, Gerife West of Khartoum and older part of Umbada in Umdurman. Maladministration has led to transfer of into the hand of land speculators and to lower-middle income squatterers.

4. Active squatter housing. This type is found in lands already demarcated for entitled persons in the current and extended housing plan and spill-over for replanning schemes in Omdurman. Because of Piecemeal distribution of plots, very slow provision of urban basic utilities and low income of entitled persons, the construction of houses is delayed. Inconsequence, the squatter from the first type as well as from those who are not entitled to plots, have occupied such lands, where isolated mud rooms have been constructed. This pattern is mainly found in Omudurman at the fringe of Umbadda, and Mayu-South belt-Khartoum.

The cause-and-effect relationship in the emergence of squatter settlement is vital because this phenomenon is a common feature not only in the developing countries but also in many rich countries like United States and South Africa.

1.3 Importance of the Study:

The importance of this study comes as the result of lacking applied studies in the geography of towns in the Sudan in general and in particular the area of study. Thus in the light of the foregoing, this
research handled one dimension of the rapid urban growth phenomenon of Khartoum as uncontrolled peripheral dwellings, is one of the spatial expressions of urban development, the horizontal and wide expansion of the city led to the difficulty in the provision of necessary social services, and the extension of basic structures to all the remote areas in the city. In this sense, Elsalama area is a good example of these phenomenon. So urban planning has become a deliberate political decision to solve the problem of urbanization and to distribute social services on equal basis.

1.4 Objectives
1. To evaluate the formulation and implementation of the plan to upgrade El Salama.
2. To assess the satisfaction of the inhabitants with respect to environmental safeguards.
3. To examine the plan of upgrading El Salama from the point of view of socio-economic considerations.
4. To evaluate the degree of local involvement in the implementation of upgrading plan.

1.5 Hypothesis:
1. The people are satisfied with plan in terms of housing basic services, employment .. and etc.
2. There is strong relationship between the level of building materials and the level of income.
3. Health improvement are generally associated with good standard of sanitation which is improved as the result of upgrading.
1.6 Methodology:

The planning of towns has witnessed in the last years radical changes, in its methods and concept in accordance with the global changes. The study handled some geographical factors as related to human and physical component. Such changes and variables are important to validate the socio-economic, cultural and environmental analysis with reliable data and hence, the descriptive analytical approach was appropriate. The following techniques are used:

1.7 Documents

Small urban centers are cores of growth in the third world process of development. Researches have concentrated on big urban centers such as Khartoum to the neglect of small urban centers that face similar problems that affected local setting in the periphery. I.e El Bushra in his unpublished thesis (1970), examined Khartoum urban area on the light of the western theories of town growth and structure. According to El Bushra (1972), and although each of the three towns displays a core, the urban area is divided into an inner zone and a middle zone and an outer zone which in turn is divided into urban and suburban. On the problems related to land use, El Bushra discussed how greater Khartoum suffers from inadequate distribution of work places in relation to residential places.

By no positive relationship between functional areas of town El Bushra apparently refers to absence of cohesion in the urban area and to that amenities are thinly provided to the outer zone of the three towns.

A comprehensive study on urban deprivation appeared in (Hijazi, N.B., 1981). In that research, investigation of forms of deprivation and its related social problems in Greater Khartoum was based on social area analysis and factorial ecology.
Conceptualization of urbanization and planning problems received valuable studies by Mazari, S, (1959) and Abu Sin, M.E, (1985) in his two works, Mazari, explains that the existing planning system is not suitable in our local conditions and, a complete departure from planning administration and planning education is required.

In a recent paper based on conceptualization of planning, Abu Sin discussed the reasons of absence of comprehensive planning and how people are alienated from planning processes because their perception of planning contents and administration are not considered.

The latest research work on the problems of urbanization and planning in Greater Khartoum was published in February El Sammani O.M. & et al (1986), entitled - Management problems of Greater Khartoum : this valuable report makes a link between growth of population in Greater Khartoum and the remarkable decline of urban utilities and services particularly in health services. Many recommendations are based on restructuring city management and finance, as well as the planning system which has failed to help balance of population pressure, housing and services .Again Banaga, S (2001) "in his valuable book" Displaced people and chances of peace . Explain how Greater Khartoum over exploded as the result of migration and urbanization which affected urban amenities and services. He went deeply by giving statistical figures about the percent of displaced people to Khartoum which their attitude and behaviour influenced by the urban life. This can be shown in their daily life picture, a feature of the house instead of hut or mud , changes to bricks, also the size of the rooms. Housh occupied, he gives a full explanation about water and soil, how it is important on urban development and the displacer himself .Also the studies explain the picture of the planning processes as machine of urban life and adaptation that appear in the recreational areas, open spaces,
garden, marketing system, transportation and its influence for the creation of employment chances for these areas.

Another study about the planning in the Khartoum town by Doxiados (1959), on the conceptualization about the dynamic city through the urban development and transport, and that representative in many objective such as:

- The conservation on the character of the town with the considering of transport as the mean of connection and transmission.
- Connection of regional road with internal net roads.
- The general feature of the town's growth within the elongated planning for roads.
- Relocation of Air Port, railway line to far remotest areas to Khartoum.

Again Mefit studies (1974) concentrated on the revolution and developmental planning of Khartoum, considering the functional and official position for the town, and facilities and transport

1.8 Interviews

Interview were carried out with residents of the village. In this aspect systematic random sampling survey was used with "replacement".

Accordingly the area of Elsalama was divided into three parts, Block (1) Block (2) Block (3). Block (1) has about 500 households, 50 samples has been selected, Block (2) also has about 500 houses and 50 samples were selected. Block (3) about1000 houses and 100 samples has been selected (see Table 1). The questionnaire itself consist of 41 questions that concern the socio-economic cultural and environmental aspects, starting from age groups, gender, tribal systems, reasons behind coming to these area, social condition and the income level, kind of
transport that has been used, also expenditure/family, the role of public committee especially toward the environmental observation, type of insects and consequently the sort of diseases and the methods of protection that used by every households or family.

Also the questionnaire included some questions like respondent's opinion about planning and replanning, The questionnaire also assessed the involvement of people to improve the area socially-economically and environmentally through provision of communal facilities like schools, health care, recreational areas, regularization of housing and roads. Also the availability of security and etc…

The data was tabulated using a computer programme.

Table (1) : Shows The samples were selected in a randomly systematic way (replacement)

<table>
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<tr>
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</table>

Source : Field Work

1.9 Observations:

This technique is important as a complementary part, because in every study there is a phenomenon which has been observed by the researchers, for example. For this purpose a checklist was used including house layout, streets, absence of drainage system of waste's accumulation, use of vacant places and areas which are not occupied absence or the lack of vegetation and house garden, numbers of cart for
carrying water, and motor vehicles. School plans and conditions of streets during rainy season were also reported on.

1.10 Difficulties

- Lack of recent data.
- Difficulties in obtaining information from documentary sources in the library in the Ministry of Urban Planning and Public Works because of decaying as the result of rain and flooding in the year 1988.
- People feel frightened to give accurate information, i.e. they are conservative about the number of family-income, education.

These difficulties were solved through:

- Careful handling of the respondents
- Field observation
Chapter II
Literature Review

2.1 Urban Growth

The cities of our world are growing at unprecedented rates. At the beginning of the 1900s, roughly 10% of the world's population were city dwellers. Between 1990 and 2025, the number of the people who live in urban areas is expected to be more than 5 billion people. Most of this growth will occur in the countries of the developing world (Fig. 2).

In the developed world, the most rapid urban growth took place over a century ago. By 1995, more than 70 percent of the population in both Europe and Northern America are living in urban areas.

Urban growth continues, in developed world although at a much slower rate on average than in previous decades. Much of the population shift now under way involves movement away from concentrated urban centers to vast, sprawling metropolitan regions or to small - and intermediate - size cities. Some of the rapidly growing cities are in the south western United States - but because this growth is fueled largely by urban - to urban migration, it does not affect the overall level of urbanization.

In the developing world, Latin America and the Caribbean constitute the most urbanized region. Rabid urban growth is continuing especially in small intermediate - size cities. By contrast, Africa and Asia are now only about 30- to 35 percent urban. It is in these regions that the most explosive growth is underway, at roughly 4 percent per year. This trend is projected to continue for several decades. Both Asia and Africa are expected to be about 54 percent urban by 2025 (Fig 3).
In some respects, the pattern of the urban growth in developing countries today are not much different of what occurred a century ago in Europe and Northern America.

Many of the forces driving urbanization to day are the same. Chief among them the shift of jobs from agriculture to industry and services and the concentration of the economic opportunities in urban areas. And although cities of the developing world are growing at least twice as fast today as those of the developed world, these rates are not unprecedented. A number of European and U.S (as mentioned above) cities sustained very rapid growth in the early 20th century, as fast as that now underway in the developing countries.

What is unprecedented now, however, is the absolute scale of the change, in terms of the number of countries under going rapid urbanization, the number of cities worldwide that are growing rapidly, and sheer number of people involved. Roughly 150,000 people are added to the urban population of developing countries every day (Darnton, J, 1999).

Although rates of the growth vary dramatically from region to region and city to city, growth is generally most pronounced in two context: in the poorest regions and in those regions that are under going rapid economic growth. Each has vastly different implications for the urban environment and quality of life.

Local government are often fasten for cash and do not have the resources to provide even the most basic environmental services for their residents. In 1994, some 30 per cent of African urban residents were not served by municipal water services in any form. Hassan, M.H, (1986).
2.2 What Fuels Urban Growth?

Cities are growing because they provide, on average, greater social and economic benefits than in rural areas. The higher capital investment caused by urbanization bring health and social benefit than could be achieved in rural areas only at far greater costs. The data are sparse and not always reliable, but access to drinking water, sanitation, health services, and educational opportunities is often dramatically higher in urban areas than in rural areas. As a result life expectancy is usually significantly higher and infant mortality significantly lower. These benefits, however, often do not extend to the poorest groups within a city, as is described below.

Urban growth is inextricably linked with economic growth, although it is not entirely clear which fuels which. Again rapid urban growth was largely fueled by rural-to-urban migration (in developing countries today, however, the natural increase of the urban population is at least as important as migration).

2.3 Urban Poverty

Just as the world is becoming increasingly urban, there is an increase in the number of urban poor. In his "millennium report", united nations Secretary General Kofi Annan declared that "extreme poverty is an affront to our common humanity" and called on the international community, to adopt the target of halving the proportion of people living in extreme poverty by 2015.

A number of recent inter-governmental meetings related to reviewing progress on commitments made at major UN conferences including the preparatory process of Istanbul +5, have identified a range of concerns about the present urban context, some of these are:
• The worsening of access to shelter and security of tenure resulting in a severe overcrowding, homelessness and environmental health problems.
• Large and growing backlogs in delivery of basic service
• Moving towards a new paradigm.

2.4 Reducing Urban Poverty in Africa

Poverty in Africa has long been associated with rural societies. However, most studies (using economic indicators of human development index) reveal that depending on the countries and towns; between 15 to 65 percent of African city dwellers are living in poverty, with very little or absolutely no access to an entire set of social and urban services which constitute decent living conditions. This suggests that urban poverty in Africa is growing faster than rural poverty (Bahroglu, D and Kessides, C., 2000).

Rural-to-urban migration, weak rural economies and poor industrial base can not absorb the unskilled labour from rural areas. Issues such as corruption, inequitable distribution of land and nepotism further weaken the economic base of the cities. Urban poverty is, therefore, a very complex phenomenon in Africa. Despite the complex nature of urban poverty in Africa, most poverty reduction policies, programmes and approaches are very sectoral and remain mainly oriented to the interests and priorities of donor institutions, practices and programmes (Soumare, M & Jerard, J. 2000).

Since urban poverty in Africa is an extremely complex phenomenon, it is becoming more and more evident that only integrated methods can bring about sustainable solution to the problems of the most destitute groups and individuals in Africa. This calls for the strengthening of main economic, social and political assets of the poor, through
generation of resources and income-generating opportunities, and access to various basic services and infrastructure.

In order to achieve this, poverty eradication strategies should focus on the promotion of effective good local governance, including the necessary state and public policy reforms.

Combating urban poverty in Africa is a major challenge for all development partners, from the international community down to community based organizations. It is important to open debate and decompartmentalize poverty eradication programmes which have a tendency to operate autonomously and on their own, and to conduct comparative analyses of the programmes and projects in progress.

2.5 Kenya's Urban Tragedy

Kenyans began to move into urban areas during the 1950s, drawn mainly by job and the surge toward independence from Britain, which occurred in 1963. Over the next four decades, urban hubs such as the capital, Nairobi, in central Kenya, witnessed explosive population growth.

Nairobi became the flagship city of Africa's more stable countries. It became the centre of Kenyan industry, as well as regional headquarters for international bodies such as the United Nations. Roughly 830,000 people lived in Nairobi in 1979, today the population has soared to more than 2 million.

At the same time, population pressure grew in rural areas. Kenyans found they had smaller slices of land to cultivate as the country's population rose by a staggering annual rate of 3-6 percent.

The rapid population growth wore down the infrastructure in rural areas, overwhelmed public health facilities, left schools under-equipped and teachers under paid. Those factors, combined with the distance many
urban Kenyans must cover to reach their rural homes, have only deepened the disconnection between city dwellers and the countryside (Weru, J., 2000).

Kenyan who have grown up in Nairobi are often stunned by tribalism in rural areas, where sometimes one's whole life revolves around tribal identity. In some places one's neighbours, work mates, business owners and the government administrators are all members of the same tribe. In Kenya, and throughout Africa, tribes tend to dominate specific regions of the country. That means outsider are spotted quickly and often viewed suspiciously.

In Kenya's capital city of Nairobi, there are over 100 slum communities that are home to 2 million people. The residents of Nairobi's informal settlements constitute 55 percent of the city's total population and yet they are crowded on to only 1.5 percent of the total land area in the city. And even that land is not theirs. The residents of the informal settlement live in contrast fear that their homes will be demolished or destroyed in a forced eviction.

The roots of this crisis is a government policy that refuses to recognize the urban informal settlements as inhabited areas. The government views the public land on which the poor reside as a vacant land that can be alienated at anytime to political elites and private individuals for commercial development.

In the last decade, Kenya has witnessed the rapid privatization of public land as a means to reward political loyalty. The residents who occupy this land are simply thrown off the land. The result is that a large number of Kenyans are living as refugees in their own country. They have been rendered landless, homeless and denied even their most basic human right and dignity. Weru, J., (2000)
2.5.1 **The Historical and Current Situation in Kenya**

Historically, the squatter community emerged with the advent of colonialism in Kenya. At the turn of the century, the British colonial government declared vast tracts of land in the colony, including land occupied by indigenous Africans, to be crown land, property of her Majesty, the queen of England.

It also created "native reserves" in which indigenous African were forced to live in order that the best arable land could be farmed by white settlers, as the same time colonialist rapidly displaced the vast majority of Kenyan from their homes. It was this injustice that failed the Mau Mau struggle for independence.

Unfortunately, the new post-colonial government fueled to address the land issue and millions of Kenyans who had been kept on reserved after they lost their land to settlers remained landless squatters. Moreover, due to poverty in the rural areas coupled with a dramatic population growth, a large influx of landless people migrated to urban areas in search of jobs. Since the state provides virtually no housing for the poor, over the years and till the present, this population has been forced to build one room shacks on vacant government land using temporarily materials ranging from plastic, polythene and cardboard to mud and wattle as their only means of shelter.

The informal settlement in Nairobi and other Kenyan cities like Mombassa are severely overcrowded, insecure and unsanitary. An average of 5 to 6 people stay in a room that has an average size of 3 to 6 square meters - one room shanties are sandwiched together so that the densities average 250 units per hectare versus 25 units in a middle class area and 10 units in high income areas. The only walk ways are narrow dirty paths that frequently flood and impossible during the rainy seasons (Weru, J., 2000).
Urban infrastructural services virtually non-existent in these informal areas. Residents have no access to electricity. Potable water must be purchased from vendors of prices up to ten times higher than the rate charged by local authorities. Over 95 per cent of the residents do not have no access to proper sanitation. People are forced to pay to use a pit latrine shared by approximately 50 people per toilet on use open areas. The city have long since stopped collecting refuse, so garbage lies permanently in-stinking heaps, often blocking the drainage channels. The lack of sanitary facilities to dispose human waste and garbage has led to serious environmental and health hazards, including a higher incidence of diseases like typhoid, cholera and tuberculosis. Corruption is rampant in the informal sector. In addition the chief often arrest and flog residents as a means of a control and administration. This system of extortion breeds a high level insecurity and violence that undermine social and community structures.

2.6 Land Grabbing and Forced Eviction

In the last decade, public land has become a commodity used by the ruling elite to buy political patronage. Such land on which most of the squatter villages are located, is often allocated or sold to individuals and organizations that have proved their loyalty to the state apparatus. Because most of the squatter villages are located on government land that is close to the city center, the informal settlement are situated on potentially some of the most valuable land in city. The communities, which have been living in those settlements for generations, have subsequently been forcefully evicted to make room for "development".

Unfortunately, in Kenya politics play a much more important role than the rule of law in the area of housing and land disputes. The judicial process, which was intended to provide necessary safety valve to protect
the rights of Kenyan citizens, has totally collapsed under the massive weight of corruption. As a result, the courts have turned a blind eye to both the unlawful and forced evictions of residents of the informal settlements and have sanctioned the rapid land grabbing that is endemic in Kenya today.

As a result of this crisis in the informal settlement, in the early to mid 1990's, the slum dwellers of Nairobi and Mombassa organized themselves into federation called the Munganowa Waravijiji (Federation of Slum Dwellers) and the Ilishe Trust respectively (Weru, J. 2000). Their aim is to organize and unite all slum dwellers; In addition, the Mungano and Ilishe are engaged in raising the awareness levels of the poor about their housing and land rights. So that this sector can advocate for land law reform.

On July 2000, the Mungano launched an urban land right campaign in order to highlight the plight of slum dwellers that do not have a place to live with dignity in Kenya in a country that have one of the highest disparities of wealth in the world. In that manifesto, they demanded, in part, for:

- A Moratorium on demolitions and evictions that is implemented with the full protection of the law.
- Official recognition of the right to the land on which the urban poor live.
- Secure and permanent tenure to the residents of the informal settlements.

The Mungano is working to unite not only the slum dwellers, but all sectors of society to advocate for land law reform.

It has successfully received public support from the leaders of the major religious denominations, the professional associations and the civil
society in . The government, having been pushed by its citizens, has reluctantly agreed to review the constitution.

2.7 Urban Growth Processes in Latin America, their Socio-Economic and Ecological Impacts, and the Potential for a Sustainable Development.

In the last four decades most Latin American countries have undergone a change from mainly rural structured societies to highly urbanized ones. After the fast growing of the national capitals, later it was specially the secondary centers which showed a high population growth. While most of the Latin American primate cities already have declining growth rates, those of regional centers still show high levels. This rapid concentration of the population in the cities has put on extraordinary strain on the local and national resources as well as on the government which is hardly able to meet the needs of city dwellers. Due to the severe ecological, social, economic, and political impacts of the urban growth processes, the demand for a more sustainable development gets specially important for the urban context (Rusk, D., 1994).

The proposed research project (Site and Services project) of upgrading aims at comparing the urban growth processes of two non-metropolitan coastal cities (Chicago - Peru and Fortaleza - Brazil) in different environmental, socio-economic, cultural and political settings. In particular, the consequences of the urban growth to both the socio-economic and ecological structures of the cities will be examined.

Concerning the city's functional change special emphasis will be laid on the increasing informal sector of the cities. In this context it is only important to analyze its problematic impact on the natural and social environment but also to determine its role in the respective urban development. Although in many Latin American cities the informal sector
represents more than 50% of the urban work force and thus contributes to the reduction of unemployment and poverty - an important goal of sustainability. It is mostly ignored by the urban planning. In the same way the negative impacts of many informal activities on the environment is not seriously taken into account.

The crucial question is therefore: Is there any possibility to combine the informal sector and urban planning in spite of its inherent contradiction? the present project (Site and Services project) of upgrading to contribute to the essential question of combining sustainability, in terms of human development, which means also economic development (including the informal sector as a main economic force) and the conservation of nature as a support for the satisfaction of the basic needs of the majority of the population. In order to achieve this projective, it is specially important to enforce the environmental consciousness of the respective urban actors and to integrate them into the decision making process. The project will meet this demand by organizing workshops and establishing special platform, which should provide an opportunity for the respective parties to elaborate a common solution. In this sense the propose project is not only of scientific interest, but it also has a considerable pragmatic component, as it provides an important base for planning institutes and local government for their decision-making and moreover strengthen their cooperation with the different urban actors.

2.7.1 In Latin America - why do squatters settle on hillside?

"Hillside provide readily available land and at essentially no cost. They offer land with limited competition from other sectors. The trade-off is between legal title and expensive land, and land of no cost and often with an advantageous location but with unclear tenure. More

2.7.2 The Location is paramount:

Hillsides that are centrally located are the most desirable and ones most quickly settled because they provide access to central business areas with their vast opportunities for casual employment. Goethert, R (1991) goes on to comment that "In hillsides sites the threat of eviction is inherently less since there is little interest from development and other potential users, particularly where the gradient is 35 percent or more. Conversely the danger of erosion from mudslides increases as the squatter settlements are consolidated. In this matter, two reasons are noted - firstly, the rainfall runoff increases as more surface area is covered by development, and secondly, as the dwellings become more permanent they gradually convert to brick construction and increase the location on the relatively unstable soils". More critical are the erosion problems at the community level, where the heavily used pedestrian walkways require a more organized input and the question is always, "how will the material be paid for, and who will do the work? (Goethert, R (1991).

2.8 Displacement:

In most developing countries, and population displacement as a "process, conditioned by historically shaped social, economic and political forces, and not as a single event taking place at a moment in time. Instead of focusing too much on agents of displacement (I.e., famine, wars, flood, etc.) the causes of displacement, which usually start long before the actual agents occur, became the subject of investigation in migration causation. As more people, particularly in developing countries, lose their lives and possessions because of "environmental
disasters" , it is imperative to investigate how these hazardous environmental conditions develop in the first place - and why large number of people continue to occupy areas prone to recurrent disasters such as flood, hurricanes, and droughts. (Smith,O.1991) offers a convincing explanation based on the misguided, uneven development which leaves the majority of people excluded from its fruits and renders them susceptible to disasters. He states :

"It is the conditions of underdevelopment which force the poor, the most vulnerable to leave relatively move secure forms of adaptation and move into increasingly vulnerable and hazardous economic and geographic circumstances". Hamid, J.M.(1986) pp. 32.

Utilizing this conceptual framework of mobility of the causes and response of displacement, the remainder part of this chapter analyzes the pattern of mobility as experienced in the Sudan as represented by Khartoum.

Since the past decade, massive population displacement have been the most visible sign of crisis in the political -economic development of the Sudan. Millions of people have been uprooted from their homeland by droughts, famine, desertification and civil war. The concomitants depopulation of vast areas of rural Sudan, and hyper urbanization of urban centers, were unprecedented, and have far reaching repercussions. (Hamid, J,M 1996).

The mobility of a large mass in most Sudanese states to their hostends as displaced people provide imbalance in social, economic and security situation. (Cuny, 1991) The Government tackles the problem differently - seminars, conferences and institutions had been initiated to combat displacement out comes, on the other hand, squatter settlements in Khartoum.
In Khartoum city, shanty towns started in the 1926-1927 with the influx of Fellata and other tribes. In Omdurmand it was the cattle market and the slaughter houses that brought Kordofan and Darfur tribes to Ummbada in 1959. Unauthorized settlements cover half greater Khartoum in size and population. They occupy eleven thousand hectares of urban area which represent 53% of the areas allocated for the new housing scheme (based on site and services) (Bannaga, 1994).

2.8.1 The causes and effects of population displacement:

In regard to causes and consequences of population displacement resulting from the civil war in southern Sudan, and since the causes of displacement due to natural causes are self-evident, the conclusions arrived at the National Dialogue on Peace Issues Conference, NDPIC (1989) were reiterated as a suitable preamble to these recommendations. In particular, the following points were stressed:

1. The essence of the conflict in southern Sudan and in other regions is the (uneven) regional development. Lack of clear and consistent development philosophy is behind the persistent economic development instability, and its ramifications on other facets of life.

2. Religion, is source of love, unity and tolerance.


4. Culture and language (diversification).

5. Decision making.

6. Participation.

7. Corruption.

8. Intervention (foreign campaigns).
Policies (short-term):

- Protect the basic human rights of "displaced" and facilitate their access to basic needs.
- Provision of health care specially for women and children.
- Awareness, through education - participation.
- Employment opportunities.
- Public services.

Long term Policies:

- Resettlement.
- Integration and involvement (specially in development scheme).
- Plan for rehabilitation and improving their environmental conditions.
- Implementation of the development/resettlement programs should adhere to the guiding principles followed in the planning phase.

Institutional Structures

- The government official should be maintained in order to ensure support for the Naziheen projects at the highest executive level.
- Two super-visionary boards, composed of representatives of all the appropriate governmental agencies together with regional leaders and Naziheen representatives.

Legislation Regulating Voluntary Activities

- Regional authorities should give attention to voluntary work and to facilitate the activities of national and international NGOs.
- Financial, technical and managerial assistance.
2.9  **Coping with Displacement: The Institutional Response**

In addressing the institutional and policy aspect of population displacement in the Sudan, it is important to evaluate first the polices and institutional structures devised by successive Sudanese governments to deal with it. What makes this an important point of departure is that the displacement problem is national in scope, hence needs to addressed at the national level.

The scale of the problem, and the range of resources and infrastructure required to tackle it, can only be mobilized by central government committed to the welfare of its citizens. Although a national government may lack the resources, the expertise, or even the political will needed to alleviate the ramification of displacement, it should not relieved from its responsibilities towards the displaced communities and the affected areas.

**Policy Options:**

- Repatriation, integration, resettlement and retention.

**Repatriation:**

The most desirable option because it enables the displaced households to resume their normal life in their homelands.

**Integration:**

Every citizen has the option of relocating freely from one part of the country to another. However, institutional harassment of displaced households complicates their spontaneous integration with the host community of Greater Khartoum. This is even more so in the case of the southerners and Nubas, whose cultural background is very different from that of the host community.

**Resettlement:**
Resettlement the Sudanese displaced in the agricultural schemes is one of the major components of the national displacement policy (resolving the chronic labor shortage in the schemes while transforming the displaced into a productive force.

Retention:

Compared to the other option, retention of the displaced in camps is least desirable, because of its negative psychological impacts.

2.10 Formulation of A National Displacement Policy:

Most of the previous attempts to deal with these problems had been ad hoc, focusing on provision of relief supplies and series of uncoordinated projects. This formulation of a national policy to deal with the problem of displacement became clear during the discussion of National Dialogue on peace issue conference (UDPIC) 1989.

- The Main Objectives of the Conference are as Follows:

1. Discussion of government policy to overcome the problems, by considering the socio-economic and political levels and addressed at a national level with clear vision.

2. Unification of the local public opinion of the problem as a new phenomenon in the country.

3. Consolidation of the national feeling with emphasis on the unity of the Sudan under the umbrella of peace settlement and development.
2.11 Sudan: Briefing on Khartoum Displaced

The displaced in Khartoum are mainly people who fled conflict or drought in southern Sudan and southern Kordofan since 1983-1984. Among them are also a number of people displaced by drought in western Sudan or deforestation in central Sudan. Making up 41 percent of the capital's current population, they also represent almost half of Sudan's displaced population which, at about four million, is the world's largest, according to UN estimates.

Most displaced in Khartoum State are scattered in hundreds of unauthorized squatter areas or settlements. An assessment conducted by UN, NGO and government agencies in 15 of the main squatter areas found them to be characterized by overcrowding, poor housing and unhealthy water and sanitation conditions. Health services were found to be limited to curative treatment, and frequent disease outbreaks were reported.

The majority of the displaced from agricultural backgrounds, are illiterate and have limited skills, according to a UNDP report, only about 5-10% have been able to find permanent jobs in the public or formal private sector, others depend on incomes earned as casual workers, domestic servants or petty traders.

Their 15 year-old displacement into an alien urban environment has left them without land to cultivate and few possibilities for sustainable livelihoods. As a result, they face long-term poverty and poor food security conditions.

Since 1991, many Khartoum squatter settlements have been demolished, some without prior notice, as part of a government urban renewal plan formulated with the assistance of the world Bank. Those living in cleared squatter communities are relocated to official displaced camps or other planned sites on the outskirt of the city.
In the current demolitions, at least 3,000 affected squatter families in carton Kassala (1970) are to be relocated to other areas. While tens of thousands of homes have been destroyed since 1991, the number of the demolitions had gone down drastically over the past year, possibly due to a combination of international criticism, a shortage of government funds and the collapse of the city's real estate market, according to various sources.

About 250,000 of the 1.8 million displaced persons live in four camps established by the government in 1992. While the camp residents benefit from substantial health, water and other basic services provided by UN and NGO agencies, their household food security, in particular, remains precarious. Data provided by humanitarian agencies (Banaga, 2001) indicates that malnutrition rates among children under five years old in the camps in 1997-98 has ranged from 12 to 24 percent, including severe malnutrition rates of up to three percent.

There are no general food aid distributions for the Khartoum displaced but an average of 46,000 displaced people per month benefit from special programmes run by the Adventist Development Relief Agency (ADRA). Beneficiaries include malnourished children, pregnant women, orphan, new arrivals and other vulnerable groups, ADRA told IRIN. In times of increased food stress, displaced children are sent to work to supplement family incomes according to UN Humanitarian Coordination Unit (UNHCU) in Khartoum. Only about 36 percent of displaced school-age children were enrolled in schools in 1997, an assessment by Operation Lifeline Sudan (OLS) found last year.

Mid the global confusion over organizational mandates for IDPs, increased protection is cited by Khartoum-based agencies as a UNHCU, which last year started and IDP programme with a protection component, said that 95 percent of people held in Khartoum's prisons are displaced
women changed with activities such as been brewing and prostitution. Many women in the displaced camps depend on these illegal activities as the sole source of family income.

Also at particularly high risk of physical, sexual or psychological abuse are the estimated 10,000-15,000 street children in the capital, most of whom are war-affected displaced, a humanitarian sources said.
Chapter III
Description of the Area Under Study

3.1 Location

The area under study (Elsalama village) is located south of Khartoum city. It is part of the largely featureless flat area of central Sudan with an average height about 380 to 400 meters above sea level. Elsalama is a sub-urban village located to the south east of Khartoum - Wad Medani Road. It is linked to Khartoum by a paved road that runs between Elsalama to the east and Azhari to the west. (Fig. 4)

3.2 Climate

The dominant feature of the climate is characterized by semi-arid climate that has seasonal changes. There are two seasons:

1. **Cold Winter:**
   
   Winter season starts from mid November-March. The weather is completely cloudless - the north-easterly winds brings cold waves that determine the degree of temperature. The highest degree reaches 22° during the day and the minimum at night about 5°.

2. **Hot Summer**

   This season dominate during March-September, which is the longest season. In March the average temperature begins to rise till reaches 40°C and 45°C by May. During this time, the arid weather, is dominant relative humidity is less than 3% . At June southerly winds dominate and leads to cloud formation and hence the rainy season in Khartoum area usually commences in July. The amount of annual rainfall ranges between 100-200 mm from July-September (Eltom, 1975).
3.2.1 Winds

The most obvious feature of the wind circulation over the central Sudan is seasonal reversal between the northerly dry-season and southerly wet-season direction. In fact there are variations within these two patterns. The major variations arise from the fluctuations in the advance or retreat of the I.T.C.Z (Inter-tropical Convergence Zone) that affect the time of establishment of one or other of the two patterns.

The Arabic word for dust storms, "haboob", has been adopted to describe dust storms. As Bhalotra (1963) wrote "the dust storm phenomenon is most striking weather feature of the arid areas of the central and north Sudan. This is particularly true of the area covered by Khartoum Province".

Three main types of dust storms, according to origin, have been recognize by Bhalotra, Y. P. R (1958).

a) Pressure gradient storms in strong north winds behind cold front moving across parts of the Sudan, particularly from February to May.

b) Pressure gradient storms caused by increasing southerly winds associated with an advancing surge of I.T.C.Z. or marked thunder storm build-up in the eastern areas of the central Sudan to the west of the hill regions.

c) Instability dust-storms produced by down draughts in thunderstorms and cumulo-nimbous cells which usually occurs at the start of rainy season.

Climatic features must be considered in urban planning particularly the incidence and character of the rainfall.

All this affects the measures to be taken when planning drainage structures. The problems of tropical architecture and of urban and building climatology are closely related to the consideration of building
and town design in terms of ventilation and shading, of internal temperatures, of dust from haboob and of roof-drainage in heavy rain. As well as the structural form of the individual building, the orientation of buildings and blocks of buildings, with respect to the position of the overhead sun and the seasonal reversal of the winds and other climatic factors are important considerations in town planning (Sutton 1923 and Oliver 1965).

3.3 Geological Formation

It is important to investigate the geology and relief of the capital region, particular emphasis is placed on more recent geological history since much of the richer agricultural land bordering the White, Blue and Main Niles owe their origin to this period.

Implication of the geology and geomorphology for urban development in the region are discussed in the following sections.

3.4 Physiography

An observer of the ground is immediately struck by the almost flat nature of the terrain over much of the region. This comparative flatness is confined by limited detailed contour mapping where it has been carried out around Khartoum (El Bushra, 1976). Interruptions to these flat or gently-sloping ground surface in Khartoum state are provided most notably by associated Jebels (isolated hills) or series of hills corresponding resistant rocks out crops - sand dunes of Goz.

The region is also characterized by pediments and pediplains with associated jebels which form inselberg. These pediment surfaces are thought to have formed through weathering and erosion spanning a comparatively long, tectonically stable geological period (Sheksby, R.A, 1986 and Whiteman, A.J,1971).
These are covered with variable thickness of weathering products and wind-blown sediments.

The geological formation in Khartoum Province is reported in (Fig. 5). These formations include:

a) **Basalt Rocks**
   
   This type covers a large area of the town, in north-western part which makes barriers to underground water.

b) **Nubian Sandstone**
   
   Mixture of the two sand and mud, cover a large area in the Khartoum Province - in eastern, western Omdurman, Khartoum North and the area of study.

c) **Basement Complex**
   
   Concentrated in the south western part particularly in the south of Omdurman. Also the area of study covered with clays (alluvial soil) with sand, and aerial sediment from the action of sand creeping because of the location of the area.

### 3.5 Soils

In Khartoum soils are varied from one place to another. Studies identified the following - (Musa, A. S. and Bridges, E.M. 1974):

a. **Alluvial soils**: cover a large part of the area and river banks.

b. **Fragile soils**: It is found above the river banks and cover a considerable part of the area of study. It is considered as immature, alkaline and poor in vegetation cover. It is useful for building which is available and cheap.

c. **Sediment Soil**: Cover a large area, in the eastern and western parts of the state. It has been used as a building material particularly (local bricks) available and cheap.
3.6 Vegetation Cover

There is a general lack of vegetation, except locally in areas of more favourable water availability.

In such areas not only are the modified soil moisture conditions important, but the effects of the plant cover on the surface albedo, and through shading, must be taken into account. The degradation of vegetation of the capital region is largely man-made, that the whole region has been badly denuded of its natural tree cover.

3.7 Population

The capital region has become increasingly the dominant urban center in the country, with a rapidly rising population. The 1956 census recorded a population of just quarter of million people (Abu Sin 1991). By 1983 this had risen to 1.7 million and by 1990 to 3.6 million persons.

Between 1956 and 1983 the population increased by about 1.2 million, an average of 8.8% a year on the 1956 population figure. From 1983 to 1990 there was an increase of 1.8 million, an average increase of 16% a year on the 1983 (Table 2).

<table>
<thead>
<tr>
<th>Years</th>
<th>1956</th>
<th>1983</th>
<th>1990</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban % of population in relation to Khartoum</td>
<td>50.4</td>
<td>74.4</td>
<td>81.1</td>
</tr>
</tbody>
</table>

Source: Abu Sin and Davies H.R.J (Sudan Census 1983)

As the urban area has expanded so too has the urban sector of the population, with this has gone the absorption of many former rural village.
The table (2) shows the situation in 1956 in comparison with 1990. The significant change is the increase of urban population especially male as the result of drought in the western parts especially Kordofan Region and civil war in the south. The overall picture is of a large growth of population in the urban fringes of the towns and in some of the less well occupied areas within towns. The area under study faces the same problems, the large increase in population appears to suggest a large influx from different parts of the country especially male, looking for work.

3.8 Population Characteristics of El Salama

An attempt was made to find out the rate of population growth for the area under study, but it was not possible as Khartoum commissionerate census of January 1990 did not give the required details. This indicates that the rate of population growth of the urban squatter settlements of greater Khartoum was higher than that of greater Khartoum itself. Population characteristics of squatter areas taking El Salama as an example, shows a high percentage of males as shown in Fig. (6). On the other hand, considering the tribal affiliation of the sampled population, and Fig. (7) Shows that most are from northern region.
From the Fig 7 it is clear that the dominant tribe in Elsalama were Bataheen followed by the Jaaleen. This indicates that the northern tribes (18.5 percentage) represent the majority of the older migrants and squatterers.

3.9 Characteristics of Socio-economic Services:

* Education

Education is primarily associated with economic, social and political development of societies. Through self-help, primary or co-education schools were built. Buildings were generally poor, without fencing walls and with insufficient basic services such as pit latrines, drinking water, and no signs of greenery could be seen (Plate No.1). Classrooms and equipment inside need maintenance. In the level of education of the sampled population we notice that it was distributed between Khalwa, primary education, secondary and university (Fig. 8). Fig.(9).
Plate (1) : Boys neighbouring girls schools which without fencing or surrounding walls
The number of schools before planning were two and after planning, the constructed schools are four. This made the majority of the inhabitants send their children to schools to continue their education.

From the Fig. 8 we notice that the level of education is reflected on the type of occupation by the heads of household. The majority of them work in the private sector, such as merchants, government officials and labours (Table 3).

Table (3) : Type of occupation for the sampled population

<table>
<thead>
<tr>
<th>Occupation</th>
<th>No.</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Official work</td>
<td>46</td>
<td>23%</td>
</tr>
<tr>
<td>Employee</td>
<td>21</td>
<td>10.5%</td>
</tr>
<tr>
<td>Private</td>
<td>96</td>
<td>48%</td>
</tr>
<tr>
<td>Idle</td>
<td>33</td>
<td>16.5%</td>
</tr>
<tr>
<td>Unknown</td>
<td>4</td>
<td>2%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>200</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source : Field Work

Income:- About 56% stated that their income level was more than 150,000 Sudanese Pounds/month. This explains that monthly savings were very much likely to be spent in the improvement of the family's house and on the settlement at large.
Table (4): Age group for the sampled population

<table>
<thead>
<tr>
<th>Age group</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>20-30 years</td>
<td>22</td>
<td>11</td>
</tr>
<tr>
<td>31-40</td>
<td>22</td>
<td>11</td>
</tr>
<tr>
<td>41-50</td>
<td>56</td>
<td>28</td>
</tr>
<tr>
<td>51-60</td>
<td>54</td>
<td>27</td>
</tr>
<tr>
<td>&lt;60</td>
<td>46</td>
<td>23</td>
</tr>
<tr>
<td>Total</td>
<td>200</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Field Work

Marital Status:- It was found that the ratio of the married heads of households was high - 77%.

Table No. (5): Marital status of the sample population

<table>
<thead>
<tr>
<th>Marital Status</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Married</td>
<td>154</td>
<td>77%</td>
</tr>
<tr>
<td>Divorced</td>
<td>8</td>
<td>4%</td>
</tr>
<tr>
<td>Widow</td>
<td>10</td>
<td>5%</td>
</tr>
<tr>
<td>Bachelor</td>
<td>28</td>
<td>14%</td>
</tr>
<tr>
<td>Total</td>
<td>200</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: Fieldwork

It is believed that the family size has a direct relation with the standards of living of the family.

Place of Birth: the Ratio of heads of households who are not born in Elsalama is about 77%, (Fig. 10).
From the table (5) it was found that the majority of Elsalama people were coming from outside the area, as the result of a shortage of houses in urban Khartoum, inability for renting in centers of the town, and the lack of the ownership of the land (Table 6).

Table (6): The reasons for coming to Elsalama, as reported by the sampled population.

<table>
<thead>
<tr>
<th>Reasons for coming</th>
<th>No</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Looking for work</td>
<td>92</td>
<td>21%</td>
</tr>
<tr>
<td>Good services</td>
<td>30</td>
<td>15%</td>
</tr>
<tr>
<td>Relatives</td>
<td>64</td>
<td>32%</td>
</tr>
<tr>
<td>House's ownership</td>
<td>64</td>
<td>32%</td>
</tr>
<tr>
<td>Total</td>
<td>200</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: Field work

From Table (6) we notice that the main reason for coming to this area is house's ownership because of the shortage of houses in Khartoum, then present of relatives, that can be considered as a common feature for the Sudanese migrants.

Feeling secured and comfort, the inhabitant have no desire to return to their original home land. This can be attributed mainly to social and economic factors (Table 7).

Table (7): Respondents reporting satisfaction for the sampled population.

<table>
<thead>
<tr>
<th>Thinking of resident</th>
<th>No.</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Permanent residents</td>
<td>158</td>
<td>79%</td>
</tr>
<tr>
<td>Thinking for return</td>
<td>42</td>
<td>21%</td>
</tr>
<tr>
<td>Total</td>
<td>200</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: Field Work (2002)
Table (8): The duration of residents for the sampled population

<table>
<thead>
<tr>
<th>Duration of resident</th>
<th>No</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Born there</td>
<td>96</td>
<td>23%</td>
</tr>
<tr>
<td>&lt; 10 years</td>
<td>84</td>
<td>42%</td>
</tr>
<tr>
<td>10-15 years</td>
<td>26</td>
<td>13%</td>
</tr>
<tr>
<td>&gt; 15</td>
<td>44</td>
<td>22%</td>
</tr>
<tr>
<td>Total</td>
<td>200</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: Field Work (2002)

From Table (8) we notice that the residents of Elsalama came to the area very early and there are not thinking to move away, especially after they have own houses, either through purchasing, donation. (Table 9).

Table (9): The methods of obtaining land in Elsalama for the sampled population

<table>
<thead>
<tr>
<th>Kind of residential ownership</th>
<th>No.</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchasing</td>
<td>172</td>
<td>86%</td>
</tr>
<tr>
<td>Donation</td>
<td>6</td>
<td>3%</td>
</tr>
<tr>
<td>Rental</td>
<td>22</td>
<td>11%</td>
</tr>
<tr>
<td>Total</td>
<td>200</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: Field Work (2002)

3.10 Evolving Social Behaviour

Living under the city umbrella, they are fully covered by the active public media, radio's, TV, newspaper etc. The result of all these is that the dwellers have been under going social changes manifested in the way they dress (better clothes, and body cleanliness as reflected in the presence of amenities inside the house). Also it was found that the
relationship among the heads of household and neighbours are good. Again this is a sign of social interaction because those dwellers originally with rural background despite being of different tribes and status, and of course had a different social traditions, so frictions among them is expected.

**House Resident:**

(The size of plots are variable, ranging from 200 square to about 600 M²).

Table (10) : Shows the range of house area for the sampled population

<table>
<thead>
<tr>
<th>House's Areas</th>
<th>No.</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>200-250 M²</td>
<td>28</td>
<td>14%</td>
</tr>
<tr>
<td>251-300 M²</td>
<td>22</td>
<td>11%</td>
</tr>
<tr>
<td>301-350 M²</td>
<td>20</td>
<td>10%</td>
</tr>
<tr>
<td>351-400 M²</td>
<td>38</td>
<td>19%</td>
</tr>
<tr>
<td>&lt;400 M²</td>
<td>92</td>
<td>46%</td>
</tr>
<tr>
<td>Total</td>
<td>200</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source : Field Work (2002)

As shown in Table (10) the majority of house areas is more than 400 meter square (about 46 % of the inhabitant). Hence as the house is spacious the opportunities for improving it are better than if it is small.

More convenience of its room for the family members, also with available space for garden.

As far as house greenery, e.g. garden fruits and shade trees, are observed with varying degree according to house space. Despite this it is interesting to note that the residents of Elsalama show no sign of interest in greenery except the growing of Neem and Brazilian trees, (this may be
related to their cultural background and ability to care for such trees (Plate 2). Also may be due to the limited amount of water supply specially in summer. Traditionally, building materials have been readily available to the urban poor because it is obtained locally. For the Elsalama, it was found that the majority of houses are built from red bricks - 52% and mud bricks and few of concrete. This explains the level of income and the standards of living, which has been reflected in the way of building and urbanized layout of houses (Table 11) (Plate 3).

Table (11): Building material used by the sampled population

<table>
<thead>
<tr>
<th>Material Used</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clay/mud</td>
<td>28</td>
<td>19%</td>
</tr>
<tr>
<td>Red bricks</td>
<td>104</td>
<td>52%</td>
</tr>
<tr>
<td>Mud Bricks</td>
<td>34</td>
<td>17%</td>
</tr>
<tr>
<td>Concrete</td>
<td>24</td>
<td>12%</td>
</tr>
<tr>
<td>Total</td>
<td>200</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: Field Work (2002)

In addition, the house's facilities that are available to the inhabitant for cooking and daily life usage are gas (56%), while charcoal, wood, electricity are of less important constituting (44%) (Table 12).

Table (12): Power used as reported by the sampled population.

<table>
<thead>
<tr>
<th>Power Used</th>
<th>No.</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gas</td>
<td>112</td>
<td>56%</td>
</tr>
<tr>
<td>Cool</td>
<td>52</td>
<td>26%</td>
</tr>
<tr>
<td>Wood</td>
<td>22</td>
<td>11%</td>
</tr>
<tr>
<td>Electricity</td>
<td>19</td>
<td>7%</td>
</tr>
<tr>
<td>Total</td>
<td>200</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: Field Work (2002)
Plate (2) : The introduction of greenery inside the houses is the positive sign of plan.
Plate (3) : The Majority of houses are built from redbrick
3.11 Basic Urban Services

The provision of services is an element of settlement improvement that generally can not be tackled by NGOs in isolation. Sewerage, electricity supply, garbage disposal, water supply, health care and emergency life saving services are all elements that generally need to be linked to the larger framework of urban administration. Services also represent the border line between what can be done on the basis of private initiative and the responsibilities of the state.

3.11.1 Electricity

It became easier to introduce electricity into households and school since "1972". The dwellers would have to pay the expenses, e.g. cost of concrete poles, wires, etc. The concerned head of household would pay the cost of their monthly electricity consumption like the other urban clients in the legitimate portions of the city of Khartoum.

Pressure groups from the area (guided specially by public committee) played a fundamental role in the introduction of electricity in their settlement (Plate 4).

3.11.2 Water: The hygienic condition of the drinking water in some area, is often questionable depending on the source. The availability of the potable water varies from one quarter to the other. To acquire the necessary amount of water for a household, people will have to spent a considerable amount of their income and time. Water produced by the bore-hole is not enough for the dwellers, even the limited direct supply of water to houses is stopped during the day hours and resumed during the night. The power used for pumping is either mechanical
Plate (4) : The Introduction of electricity in the area
(using direct oil) or electrical (Plate No.5 & 6) all of these are provided by the dwellers themselves through self-help (Table 13).

Table No. (13) Availability of house's facilities for the sampled population

<table>
<thead>
<tr>
<th>House's Facilities</th>
<th>No.</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electricity</td>
<td>10</td>
<td>5%</td>
</tr>
<tr>
<td>Water</td>
<td>94</td>
<td>47%</td>
</tr>
<tr>
<td>Electricity + Water</td>
<td>92</td>
<td>46%</td>
</tr>
<tr>
<td>None</td>
<td>4</td>
<td>2%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>200</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source : Field Work (2002)

3.11.3 Transportation

The existing system of urban transportation in Greater Khartoum has been a superficial attempt to overcome the friction of distance between residential areas and work places and urban basic facilities, the locational system of place of work, schools and hospital require the greatest movement of people between centrally located places and places of residence.

In the cost-benefit approach, public transportation is seen as non productive investment, and therefore, the role of government is continuously declining as (shown in the table No.14) compared to the private sector. This is so due to two reasons:

Lack of spare-parts and shortage of qualified drivers who prefer private sector (Plate No.7 & 8). As a result of inadequacy of transportation facilities, it has become a common feature of the urban life in Khartoum, that workers, patients and students travel long distances on foot. Thus the urban poor have been forced to exert effort, and waste time and money as a result of inadequacy and maldistribution of this essential
Plate (5): Water taps are near dwellers units

Plate (6): The provision of drinking water in the area
Plate (7): Transportation Network

Plate (8): Use of modern buses after planning
facilities. For instance, a trip to and from work place, costs worker of limited income group who live in Elsalam and work in Khartoum about 2.5 Sudanese pound about 55-70% of his daily income. According to labour regulations such worker is entitled to 60 pounds monthly as transport allowance. In addition to waste of money, in sub-urban villages the person is expected to spent between one and a half or two hours to reach the place of work. Because of inadequate roads (inside the area), people have to walk long distances to the bus station in the main road (Table 14).

Table (14): Means of transport from and to the work for the sampled population

<table>
<thead>
<tr>
<th>Means of Transport</th>
<th>No.</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public</td>
<td>118</td>
<td>59%</td>
</tr>
<tr>
<td>Private</td>
<td>78</td>
<td>39%</td>
</tr>
<tr>
<td>On foot</td>
<td>16</td>
<td>8%</td>
</tr>
<tr>
<td>On cart</td>
<td>8</td>
<td>4%</td>
</tr>
<tr>
<td>Total</td>
<td>200</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: Field Work (2002)

Elsalam is partly served by one asphalt road constructed after the upgrading of the area (Plate 9). It has two branches, one line from Elsalama to Khartoum, and the other from Elsalama to El Soug el Shaabi Khartoum (Table 15).
Plate (9) : Asphalt Road passing by Elsalama to Khartoum

Table (15) : Daily expenditure of transport of the sampled population.
During the rainy seasons, the muddy and sticky nature of the soil in the study area, together with lack of good drainage system (unconstructed and uncovered) make the movement inside the area very difficult especially during the rainy season. (Plate 10&11). About 65% of Elsalama residents agreed that there is a problem and 25% disagreed (Table 16).

Table (16): Daily traveling time, for the sampled population

<table>
<thead>
<tr>
<th>Daily traveling time/hours</th>
<th>No.</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than ½ hour</td>
<td>68</td>
<td>34%</td>
</tr>
<tr>
<td>1-1.5 hours</td>
<td>76</td>
<td>38%</td>
</tr>
<tr>
<td>1.5-2 hours</td>
<td>28</td>
<td>14%</td>
</tr>
<tr>
<td>&gt; 2 hours</td>
<td>28</td>
<td>14%</td>
</tr>
<tr>
<td>Total</td>
<td>200</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: Field Work (2002)

3.11.4 Health:

The utilization of health facilities has been significantly affected by spatial proximity (a part from the economic distance and variation in income). As a result greater numbers used health centers despite their poor facilities in terms of shortage of physicians, medical technician and
Plate (10) : An example of water stagnation after rainy season

Plate (11) : Unconstructed Drainage System after planning
instrument, specialized and in-patient services. Health services of the curative medicine made little improvement as a result of being close to Khartoum urban area. Such services have not been decentralized as a result of the urban sprawl. Inequity in health services and provision of health care manifested in two ways: The location of health centers and lack of specialized facilities.

The fact that the lower and lower middle income groups spending money in private clinic and pharmacies and uncontrolled cost of private medical practice is a reflection of the social policy which turns such a human need into a commodity. The area under study has only one clinic, medically served by one dispensary and medical assistant with non specialized pharmacies. This clinic or small public hospital has not been established by the government, but have been either established or assisted by self-help programmes, or by some wealthy citizen, (almost offer poor services and lacking physician).

In general the health facilities available in the area are inadequate for the dwellers and hence, residents would go to the near by health centers, e.g. (Ibrahim Malik in Elsahafaa area), private clinic or the main Khartoum Hospital.

Environmental services, despite its irregularity, are known in the area under study i.e there is a garbage and rubbish removal, with specific schedules, execution may not be regular because of shortage in the logistics (cars, petrol, spare-parts, cheap labour,..etc.). Environmental services are provided by the popular council of Elaazhari, and fees for that are collected from heads of households. Garbage removal is not done according to strict timetable (i.e every two weeks or more), as a result waste accumulates in open spaces, and vacant areas (see Plate No.12 and 13). Some people or residents remove it by their own private cars and the others burn it inside the area (Fig.11).
Plate (12): An example of land pollution from waste refusal in open space.

Plate (13): Waste pollution in open spaces and un-built houses
Fig. (11)
From the (Fig.11 ) we notice that 33% of inhabitants remove their waste through private methods such as burning process. In addition, some of the inhabitants keep animals inside their houses (cows mainly) as a result animal dung is accumulated in pathways and street, open spaces which increase the spread of flies, insects specially during the rainy season (Table 17).

Table (17) : Factors of spread of pests in the area as reported by sampled population

<table>
<thead>
<tr>
<th>Spread of pests</th>
<th>No.</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mosquito</td>
<td>36</td>
<td>18%</td>
</tr>
<tr>
<td>Flies</td>
<td>74</td>
<td>37%</td>
</tr>
<tr>
<td>Rodentia</td>
<td>14</td>
<td>7%</td>
</tr>
<tr>
<td>All above mention</td>
<td>76</td>
<td>38%</td>
</tr>
<tr>
<td>Total</td>
<td>200</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source : Fieldwork (2002)

The role of people committee is that, they simply collect fees, taxes, for improvement specially, water and waste disposal.

Again the role of local municipality to provide, barrel, truck, cars, petrol, but these services are not always available in addition to mismanagement (Fig. 12 ).

About 63.5% of resident agreed that before planning and upgrading the narrowing, alleys and ugly road the miserable layout of houses and shortage of good services were dominant features but after planning the situation has been changed to better. The resident recognized the advantages of upgrading and planning for their livelihood and for their future coming generations.
The provision of services and regularization of roads, land ownership and registration are of the major concern for the planning process.(Fig. 13).

3.11.5 Security

There is strong relationship between the crime ratio and the level of urbanization and urban growth, in a sense that the security condition can directly affected by the socio-economic structure of the human communities.

In the area under study, there is a real improvement, although the security services were poor and partly provided by the nearest police point. In such areas because of absent of big crime like murdering, about 69% of inhabitants agreed that the area was secured.(Fig. 14).
Chapter IV
Policies of Upgrading

4.1 Housing Policy

In most cities of developing countries, the poor have few or no opportunities to acquire a house through a conversional housing scheme. Most housing developments in urban areas are intended for middle-income or high-income groups, and housing and few schemes that are left for the enormous demand of urban poor. Moreover, the houses in these schemes are often still too expensive for the low income groups for which they are intended.

As a consequence, the urban poor in developing countries tend to live as tenants in overcrowded and dilapidated slums or as squatters in spontaneously developed settlements erected without authorization from the government and without permission from the owners of land. At present, millions of people, sometimes more than half of a country's urban population, live as squatters in the outskirts of a city or on land with in a city not used for other purposes, e.g. river beds, and a long railway lines, etc. The residents on these sites should not be viewed only as people in need, but also as a reservoir of human resources that, in partnership with professionals and policy makers, can transform their communities. (Gopalan, P and Patel, S. 1990).

One of the principal conditions for successful squatter upgrading and sites- and services project is a national policy and "enabling" strategy that addresses the needs of the poor and low income families and communities in terms of their participation in sustainable human settlements.

Housing and human settlement policies are often a compromise between conflicting aspirations of different groups in a settlement and
their respective stakes in the decision making process. There appear to be at least two prevailing ways of viewing and treating urban growth. One approach views the city purely in terms of its market value and land purely as a commodity, the value of which must be maximized in order to sustain municipal finances through property taxes. This approach dismisses the urban poor, their informal economy, and their residents as low-value occupants of urban space.

The second approach looks at the city in terms of its use value as a place to live and produce, and tries to safeguard the traditional social fabric and the residential and economic activities of the informal sector. Squatter settlements make significant contribution to the city as a whole, add to the city's labour force, consume some of its production, and house themselves at little direct cost to the city. This people oriented approach, however, is steadily losing ground to the more conventional economic analysis, because of increasing pressures on the use of urban land.

As a result of the growing reliance on the economic structure of the city, planning instruments such as building codes, redevelopment schemes, zoning ordinances, and land use regulations tend to support the large-scale influential businesses rather than the poor and disadvantaged households.

### 4.2 Global Strategy for Shelter to the Year 2000

In recognition of the poor results of public-sector direct involvement in shelter projects and delivery of services, UNCHS (Habitat), through the global strategy for shelter to the year 2000, advocates a change in how governments operate in this sector.

The Global strategy promotes an "enabling" role for government and describes the basic elements of a cooperative action in which all
actors (government, the private sector, non governmental organizations and communities themselves) are mobilized in a national strategy.

An underlying assumption of the UNCHS (Habitat) strategy and programmes is that governments do not have the financial and administrative resources to respond directly to the housing human settlement needs of the poor, who represent the majority of the world's people, more and more of whom are living in urban centers. Further, both experience and common sense show that the participation of the poor themselves in their communities offers the best hope for fulfilling basic housing and infrastructure needs.

Both the deficiencies of government and the potential of people at the level of communities to shape their housing and living conditions have made the promotion of community participation in human settlement development one of the primary concerns of UNCHS (Habitat). This focus was introduced as early as 1976, at Habitat United Nations Conference on human settlements, held in Vancouver, Canada, at which public (or community) participation was identified as one of the main requirements of the development of human settlements. Recommendation E.I reads:

"Public participation should be an indispensable element in human settlements, especially in planning strategies and in their formulation, implementation and management, it should influence all levels of government in the decision-making process to further the political, social and economic growth of human settlement".

4.3 Land

Adequate land supply and the management of urbanized land will be one of the key issues, if not the central issue, of urban development in Africa, Asia and Latin America in the coming years. Land which
provides the physical location for shelter, commerce, industry, roads, transport provide the starting point for all human settlements.

However, governmental strategies to increase the supply of land for the poor through public sector interventions have been insufficient to meet the need. Access to legitimate and secure shelter near income-earning opportunities, with an acceptable level of essential services such as roads, water supply and drainage, remain an impossible dream for millions in developing countries. Therefore, an increasing number of low-income people are finding accommodation through informal channels. Arrangements include unauthorized invasions of public and private land, encroachments on marginal lands, and occupation of abandoned properties.

The general tendency is for informal arrangements to be increasingly commercialized. The result is that residents are often subjected to harassment and exploitation and are, therefore, reluctant to invest their savings. Commercial arrangements include illegal sale of public land, substandard land subdivision, land rental and land fragmentation. Such arrangements normally require down payment to the land holder and recurrent changes for services.

Public-sector intervention often leaves out the lowest strata among low-income groups, because ability to repay is an eligibility criterion for public sector schemes. These arrangements have a particularly adverse effect on women. Hence poverty and lack of information available to low-income communities place them in a disadvantaged position with respect to both commercial and non-commercial land arrangements. The limited availability of vacant land open to squatter invasions or encroachments, strict enforcement of legal measures by the authorities, decreased supply of cheap rental accommodation in inner-city slums.
4.4 Environmental and Infrastructure - Shelter for the Homeless, the Role of NGOs (Nairobi, 1988)

Human settlements require integral development and upgrading of all physical infrastructure components e.g., water supply, sanitation, waste disposal, transport, communications, and energy. If satisfactory living conditions are to be achieved and social and economic development of the people promoted. There is also a strong but complex relationship between human settlements and natural environment. Inefficient use of natural resources by burgeoning populations is putting resource systems under stress in abroad range of settlements, most visibly in large urban areas. In devastated neighbourhoods it is popular to refer to the "impact of human settlements on the environment", as though the environment were some independent entity separate from human beings and their way of life. The fact is, however, that human beings in human settlements, and the real question to be faced is how the environment can support human settlements to the greatest long-term benefit of the people who live in them.

The experience in many countries of the failure of infrastructure projects indicates that there is a need to involve the target community at all stages of project, from conception, through planning and design to implementation and operation. Planning from community upwards is a practical means of improving a project's chances of success, and therefore of making best use of resources.

In most societies women generally have the most to gain from and have the greatest interest in improved water and sanitation services, because of their traditional functions of child and homecare. However unless specific efforts are made, gender-related constraints often limit the participation of women. The issue though is not necessarily creation of special programmes only for women, but the recognition of the needs,
demand and potential of women and the necessity for their conscious inclusion in project planning and implementation - in managerial, professional, community and household roles.

4.5 **Settlements Financing**

The types of investment needed for human settlements development can be classified in four main categories.

a) On-site infrastructure, including roads, water supply, sanitation, surface water drainage, street lighting and electrification, and off-site infrastructure that connects the site with the city.

b) On-site facilities, such as schools, clinics, hospitals, churches, police and fire stations, community centers, etc. These facilities are more than physical: they include education, health care and social services.

c) Industrial and commercial structures; such as office building, shops, stores, factory building, community production center.

d) Residential structures, e.g. multiple dwellings, individual houses for rental and/or owner occupancy etc.

Outlays for land, physical infrastructure, and house together make up the capital costs. For a settlement project to be feasible and sustainable, its resident must be able to pay all or most of the capital costs. For a settlement project to be feasible and sustainable, its resident must be able to pay all or most of the capital costs for services like water, sanitations and electricity. The problem is that most low-income people can not pay for these without the help of specially designed financial schemes, most often in the form of savings or loans for these purposes. People can use their own savings or loans from friends, families, employers, cooperatives and other informal public lenders, housing agencies, local authorities. NGOs play an important role in providing
support to CBOs for the poor to become self-reliant. They can intervene by helping the community remove obstacles in existing organizations, or create new community-based credit mechanisms the training of community people to manage these mechanism, women who head households often require special assistance (UN, 1988).

4.6 Squatter-Settlement Upgrading

Squatter settlements should not be looked at as merely a symptom of the housing problem of the urban poor, but rather as their contribution to its solution. There is a growing awareness that demolition of squatter settlements means the destruction of considerable investments in labour and money made by the urban poor. It does not solve any problem, if the poor do not have an alternative to squatting. Authorities gradually realized that, instead of demolishing squatter settlements, they should be regularized and upgraded, so that the existing housing stock is preserved and the housing conditions for the residents are improved. Research on squatter settlements indicated that, once the threat of eviction is removed and the squatters feel secure, they are able and willing to invest their saving in the improvement of their houses.

- Phases of Settlement Upgrading Projects
a) Selection of settlement - when a government launches a large-scale squatter settlement upgrading programme, it formulates criteria to determine which settlements qualify for regularization and upgrading, and which "upgradeable" settlements should be regularized for land tenure (title) and accorded priority. The "headiness" of the community organization motivated to participate in the regularization process and infrastructure services, is just one consideration in this critical phase.
b) Surveying - the collection of data is the first step in planning the regularization ad upgrading of squatter settlement.
Various ways of gathering this data are discussed. A profile of the socio-economic situation of the community, including what community organizations exist, and the physical features of the area, including a map, are an essential base for information for project authorities and community participants. The community can play an important role in developing the profile, and help to ensure that women and a women's perspective is included in the analysis of the profile. The survey can also be a good organizing and educational tool for community participation throughout the life of the project.

c) Community Organization - participation of all residents in the planning and implementation of squatter -settlement upgrading project requires some form of organization. Identification of local leaders and roles is a necessary and sensitive stage to establish sound linkage at the very start.

d) Establishment of priorities - through the surveys and meeting with the community, an inventory of the housing needs and problems of residents can be made, with view to establishing their suggested priorities - only with a clear understanding of the relationship between problems, causes, and solutions, will residents be able to make choices from among the option project authorities present.

e) Concept Planning - Once the community and the project authorities have jointly taken the decision on which improvement are most urgently needed in the settlement, they prepare plans or the regularization and upgrading, i.e. identification of constraints and ways to overcome them, such as preservation of the existing housing stock instead of being demolished; and general plans to integrate the settlement into the overall urban services.

f) Project financing - The cost of the project include the cost of the land, cost of developing infrastructure and services and sometimes also overheads the residents have to pay all on most of these costs. Therefore,
the total costs must not exceed the paying capacity of the settlement's residents' i.e., the money the people can raise from their daily, weekly on monthly income, and from other sources. In view of the heterogeneity of squatter settlements with respect to income levels of residents, a viably just paying system must be devised with the cooperation of the specific community.

g) Detailed Planning - Plans are needed usually covering one neighbourhood, with map showing details of the proposed infrastructural improvements and, as they may serve as a legal basis for the issuing of title deeds, the exact location, dimensions and land used of individual plots. A long with a list of items on which decision have to be taken, these are discussed among community members for consensus and presentation to project authorities.

h) Implementation - Implementation of squatter settlement upgrading project entails:

  i) Regularization, i.e. the issuance of the title deed, and

  ii) Upgrading, i.e. the construction or improvement of infrastructure and the extension of services. Depending upon the local circumstances, the construction or improvement of infrastructure may require a combination of work being carried out by community members and contractors hired by the community with the help of project authorities. Local authorities also need to be involved.

  i) Payment of changes - Financing of the project involves community commitment over a long period of time: Many residents take out loans (often related to women), the recovery of which becomes a problem not so much of willingness to pay, but of the method of collection. Authorities should develop flexible procedures that do not penalize the poorest groups.

j) House Construction land Improvement
The aim of an upgrading project is to create favourable conditions for the improvement of houses by residents themselves. The project can assist in this phase, with loans, training and technical assistance, so that the houses can be improved cheaply and efficiently.

4.7 Main Features of Replanning Schemes in Khartoum Urban Areas

In the process of replanning, the following steps were followed in the preparation of each of the replanning schemes:

1. Announcement of the scheme in the government Gazette and public newspaper, with adherence to the legal land administrative measures of the Replanning ordinance 1950. This was intended for the anticipated land disputes.
2. Establishment of a replanning committee consisting of a replanning team from the land department and (mainly sociologist, town planner and physical planner - architects) and one or two members from the survey department.
3. Drawing of the proposed structural plans for the new layout and spill-over area.
4. Detailed survey of the affected plots for purpose of compensation.

The main features and achievements of the replanning schemes varied because of differences in time of implementation, local orders, social conditions, ownership of land, and the performance of each replanning committee in its locality.
Chapter V
Socio-economic & Environmental Benefits to El Salama Area

5.1 Socio-Economic Consideration

The information provided in the previous chapters reflected the socio-economic and environmental situation in El Salama village which is one of the oldest villages witnessed the process of replanning.

As we know the continuous influx of migrants (old migrants and new one) to greater Khartoum as result of "civil war, drought desertification ... etc" has made serious problems to both, the authority and public. The lack of policy from the successive governments that inherited the colonial system accelerated the problems. The result is over-crowding, shortage of facilities and infrastructure which lies beyond the capacity of the town planning authorities to make surgical operation for these problems which are:

1. The treatment of squatter areas either to be incorporated into urban fabric by relocation or replanning. This consist of more than 150 squatter settlements which were established in areas which are unsuitable for residence (around the stream or khors or in flood area, or garbage wastes places near the poisonous polluted factories). Such squatters were removed to new sites and places called Naziheen camps in (Dar el Salam - Elbasheir, Jebel Awlia, Mayo farm). In such places families were given about 215-250 square meter, to build their residence. The government introduced some basic facilities such as water, education, health centers and electricity which made population or squatters feel comfort and secured, although there are inadequacy of communal facilities in some areas (Fig. 15)
2. Some villages have to be incorporated into urban fabric after replanning and improving of environment to absorb the squatters that settled in the oldest areas inside the villages. The rest of them have been relocated in Dar el Salam townships, and the others are to be transferred to the Naziheen camps (Fig. 16).

3. Being far from security check points and surveillance, and in the absence of social controls, squatters living in shanty towns and slum areas commit all sort of crimes, and threaten the security of other citizens. In addition, tribal conflict that occur frequently in some of the displaced upset the squatter settlements and lead to physical conflicts which was greatly aggravated by illegal selling of drugs, prostitution and wine sale.

4. The establishment of some urbanized centers in the oldest areas and new one to improve environmental condition. (process of innovation).

5. The relocation of functions such as relocation of garbage areas, Arabic Souck and stable in Khartoum improved the Durban setting.

6. Application of decentralized system through the establishment of new market centers, such as El Kalakla market, Helat Kuku in the eastern part and El Sheikh Abu Zeed in the west and in the area of study (Plates 14 &15).

7. Again the process of redistribution of infrastructure to cope with these expansion. As we mentioned above all these trial or surgical operation was to decrease the stress and frustration created by the process of displacement (Bannaga, S. 2001).

5.2 Environmental Consideration

Generally the green space in the area under study were absent. Trees were rarely found inside houses and in the streets, affecting the health in many ways. But after planning it has been observed signs of
Plate (14) : An example of local market in the area after planning

Plate (15) : An example of urbanized market center in the area after planning
greenery specially inside the houses, but with varying degree relative to the house's area. The removal of the green belt which was supposed to protect the area from the dust storms and environmental pollution, and collect water from to Khartoum sewerage treatment plant, created conditions that may affect the quality of the Nile and represent source of breeding of insects and flies causing many diseases to the residents.

5.2.1 Water Supply

The area being located in the peripheries of the city and has been recognized by the local authorities is not connected to water supply network. Water for domestic uses is supplied from one deep boreholes supplemented by surface wells. The majority of people buy water from water vendors (Plate 16 & 17).

The traditional storing of water in earthenware vessels called (zeers) defeats the purpose of providing clean water. Zeers are not cleaned or covered, and dirty containers are often used to remove water from them.

So the quality and quantity of water supply is a vital element for healthy urban environment. The majority of the households have access to house water distribution within the area specially after the replanning, such as tap water inside the houses, therefore a protected water supply piped into the dwelling is the best means of providing adequate quantities of safe water.

5.2.2 Waste Water Disposal and Drainage System

The majority of the houses in El Salama area were provided with the proper bath-rooms. The amount of waste water either from bathing,
Plate (16) : Water vendors (The majority of people for domestic used)

Plate 17: Water vendors for providing water
washing clothes or other purposes was noted to be small and have no sign of environmental problems. But the problems arise during the rainy season, as there were no drainage provided in the streets. Water is stagnant in the street and vacant places which provides a suitable ground for the breeding of flies and mosquitoes. Therefore the inhabitants are became aware of the importance of health education and the benefit of involvement of the community. The result is that, surface drainage were constructed or improved, depressions in the streets be leveled but need control and preventing methods against vectors that transport commutable diseases must be implemented.

The survey revealed that 33% of inhabitants get rid of their waste through traditional methods such as burning, added to these most of the respondents had traditional pit latrines for excretal disposal, which indicate a positive urban sign. On the other hand modern systems were introduced after planning such as garbage collection by cars.

5.3 Socio-economic and Cultural Dimension

The study also assessed indicators of change in the social behaviour of the inhabitants. These changes include family entities and cultural values. (of course these could be discovered through questionnaire and observations):

A. Family Household Types

The result obtained from the surveyed population showed the types of households are nuclear and extended families. The majority of the households were extended ones. Such phenomenon was not widely noticeable previously. Slight variations of the household types were observed among the different tribes. The (Bataheen) (18.5%) of them had extended families.

B. Out of the total surveyed households 80% were found to be taken care of by male household head, which means that most of the inhabitants
were old migrants who were able to find jobs in Khartoum to support their families.

C. According to the above mentioned results and observations the present living conditions differ greatly in terms of house construction, neighbourhood and design. Housing design and building materials in El Salama is typical to that found in urban areas (Plate 18 & 19).

D. They still preserve their tribal links whereby they share meals and sympathize with each other specially in illness or death ceremonies through frequent visit.

E. The Role of Household Head

The role of the household head was derived indirectly through the previous family support responsibility. The surveyed of household result or assert that the major economic support affairs fall in the responsibility of the husband. It reflects a remarkable changes to families member not have been damage or broken specially children

F. Women's Role

The role of women had been studied through the investigation of the responsibilities of the work performed by any female member outside the settlement areas. Out of the total surveyed household 20% stated that they are extremely confined to the household domestic needs required by all members of the family.

5.4 Services

5.4.1 Health Services

The ease of connection to Khartoum and nearby areas through the paved road line after planning help the inhabitant to develop. In the way that health education should be practiced fully in area in order to eliminate unhygienic behaviour of squatters.
Plate (18, 19): The 2 plates show an example of urban housing
(urban front)
- Provision of health services in El Salama area will improve people health status and protect them from the prevalent endemic and infectious diseases.
- Suitable water treatment methods should be applied for water distributed from all public well.

5.4.2 Lightening Facilities

Proper lightening is another important parameter for a health environment consumption of electricity is one of the indicators of the level of socio-economic development in the area.

It became easier to introduce electricity into households and school etc. before the plan (pressure groups from the area), guided is especially by public committee, played a fundamental role (as mentioned above in Chapter 2) in the introduction of electricity in their remained settlement especially after the implementation of plan which includes electrification of the main streets.

5.4.3 Education:

Educational services considered as the main tool for human development. For these reasons both the official and public authorities have a great concern on these services. Most of squatter's families as we know was pulling their children out of school to earn extra money. A great challenge for planning and replanning process is to encourage these vulnerable groups to be aware of the importance of education especially for girls. Therefore the numbers of schools established especially after the planning system became 5 schools.
5.5 Tenure Security in the Area

A major problem of security of tenure due to the consequent absence of any official documentation relating to title. In the case of the area of El Salama the inhabitants feel comfort and secured especially after the implementation of plan. Because the land's position encourage the residents to improve their places.

One area where there has been a positive change in many third world government's orientation is the replacement of slum and shanty -town demolition with upgrading programmes . In some instances, the provision of secure tenure to squatters has greatly encouraged the development and improvement of their houses and their whole settlement. If public authorities want to guide urban growth and to reduce the problems inherent in relying only on illegal developments to provide new housing for low-income groups, they have to offer a legal alternative which low-income groups can afford. Thus, Government must seek ways of vastly increasing the supply and reducing the cost of legal development land. Since land is an important cost component -often the most important - in low-income urban housing, Government intervention in the land market is essential. As part of this intervention, public acquisition of land (or of the right to use land) must play a large role.

Clearly, there are certain preconditions for an effective public acquisition programme to help provide low-income groups with improved housing conditions. The first is firm Government commitment to such a goal, with this commitment backed by fiscal and human resources. The second is a good understanding by the public agencies involved of the needs of low-income groups. Neither has been much in evidence recently, although perhaps some progress has been made in the past 15 years.

(Satterthwaite, D., 1983)
5.6 Planning Process

Outlays for land, physical infrastructure, and house together make up the capital cost for a settlement project to be feasible and sustainable, its resident must be able to pay all or most of the capital costs for services like, water, sanitations and electricity. The problem is that most 10 cm income people can not pay for these without the help of specially designed scheme. Authorities gradually realized that, instead of demolishing squatter settlements, they should be regularized and upgraded.

The construction or improvement of infrastructure and the extension of services depending upon the local circumstances, may require a combination of work being carried out by community members with the help of project authorities local authorities also needed to be involved.

Public participation should be an indispensable element in human settlement, especially in planning strategies and in their formulation implementation and management, it should influence all levels of government in the decision-making process to further the political, social and economic growth of human settlement.

The role of women had been studied through the investigation of the responsibilities of the work performed by any female member outside the settlement areas.

The provision of secure tenure to squatters has greatly encouraged the development and improvement of their houses and their whole settlement. Because a major problem of security of tenure due to the consequent absence of any official documentation relating to title.

Since land is an important cost component – often the most important – in low income urban housing, government intervention in the land market is essential. As part of this intervention, public acquisition of land (or of the right to use land) must play a large role.
5.7 Recommendations

The study reached the following results:

* The replacement of slum and shanty-town demolition with upgrading programs is a positive sign of planning.
* The study found that upgrading of squatter settlement in the study area is a sound policy and received wide public support.
* Upgrading schemes have created suitable environmental conditions and secured land tenure leading to improvement in the study area.
* Public participation or (community) especially in planning strategies and in their formulation, implementation and management. It should influence all levels of government in the decision-making process to further the political, social and economic growth of human settlement.
* The people of El Salama were satisfied with the plan especially with respect to environmental safeguarded, the provision of basic urban services like sewerage, electricity supply, water supply, garbage disposal, open spaces, schools, health centers, planning roads and housing together.
* The upgrading and planning in El Salama area provide a security of tenure that due to present of legal or official documentation relating to title.
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