

URBAN PLANNING: A TOOL FOR URBAN POVERTY ALLEVIATION IN SUDAN

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ABSTRACT: In the past few decades, urbanization and urban growth have been increasing rapidly in many of the developing countries. It is expected that over 50% of the world population will live in cities in 2005. The growing trend indicates that as many as one fifth of all households still remain with housing tenure problems, which they try to solve through very expensive rentals, insecurity, socially and environmentally-hazardous squatting or unhealthy overcrowding, sometimes ending up with none at all. And hence, proper planning is necessary in urban development policies to improve human settlement managements in a sustainable way. This article has tried to handle urban poverty in the Sudan to a reasonable level of detail. It dealt with selected areas with regard to promotion of sustainable human settlement. The study managed to identify some recent progress in Sudanese human settlements, that is, however, still accompanied by numerous serious instances of decline in the urban environment, especially that of the greater Khartoum. Such instances of environmental deterioration are profiled and analyzed by the study with respect to all human settlement aspects of management, land-use, infrastructure, energy and transport. The paper's conclusion emphasized that improving all these aspects is of high priority.

KEY WORDS: urbanization; urban poverty; urban development; human settlement; Sudan

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1 INTRODUCTION

In the past few decades, urbanization and urban growth have accelerated in many developing countries. In 1970, about 37% of world's population lived in the cities. In 1995 this figure raised up to 45%, and the proportion is expected to exceed 50% by 2005 (United Nations, 1995). Urban population is growing quickly at a rate of 2.5% per year in Latin America and the Caribbean, 3.3% in Northern America, 4% in Asia-Pacific, and 5% in Africa. But, international comparisons are complicated by different national definitions of urban areas. In Eastern Europe, Latin America and the Caribbean, the overall ratio of women to men is higher in urban areas than in rural areas, and the inverse is true for Africa and Asia.

Although the natural population growth is the major contributor to urbanization in many third world cities, rural-urban migration is also an important factor (DE HAAN, 1997). Internal migration flows are diverse,

complex and constantly changing (including county to city, city to county, city to city, and county to county). There is much diversity between nations and regions in the terms of age and level of education of migrants, and in the extent to which migration is considered permanent or temporary. A key determinant of migration is the income differential between rural and urban regions (GILBERT and GUGLER, 1992). Crop prices, landowning structures, changes in agricultural technology and crop mixes in surrounding areas and distant regions also affect migration. It is also influenced by other factors related to individual or household structures and survival strategies, and wider political, economic and social forces (UNCHS, 1996). This study closely follows the structure and content of World Summit on the Environment, Agenda 21, Section 7: "Promoting sustainable human settlement development", Rio, 1992 according to which any similar national progress can be meaningfully monitored. The study adopts selected areas as headings to its main section, to concentrates on aspects

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pertaining to its subject of urban poverty in Sudan and the role of improving human settlements through effective urban planning measures.

2 URBAN POVERTY AND DEVELOPMENT POLICY

2.1 Urban Poverty: Definitions, Concepts and Measurement

There is no consensus on the definition of urban poverty while two broad complementary approaches like economic and anthropological interpretations are prevalent. Conventional economic definitions use income or consumption complemented by a range of other social indicators such as life expectancy, infant mortality, nutrition, the proportion of the household budget spent on food, literacy, school enrollment rates, access to health clinics or drinking water, to classify poor groups against a common index of material welfare. Alternative interpretations developed largely by rural anthropologists and social planners working with rural communities in the third world allow for local variation in the meaning of poverty, and expand the definition to encompass perception of non-material deprivation and social differentiation (WRATTEN, 1995; SATTERTHWAITTE, 1995a). Anthropological studies of poverty have shown that people's own conception of disadvantage often differ from those of professional experts. At first, the definitions of urban areas are based on national criteria such as population thresholds (e.g. settlement over 1000 people is qualified as town in Canada, but the lower limit is 2000 in Kenya, 10 000 in Jordan, 50 000 in Japan etc.), density of residential buildings, type and level of public services provided, proportion of population engaged in non-agricultural work, and officially designated territories (WRATTEN, 1995). Secondly, justification for using income, as a proxy for welfare, is that it is highly correlated with other causes of poverty and is a predictor for future problems and deprivation (WRATTEN, 1995). Thirdly, the independence, security, self-respect, identity, closes and non-exploitative social relationship, decision-making freedom and legal and political rights are important contents. More generally, there has been a widening of the debates on poverty to include more subjective definitions such as vulnerability, entitlement and social exclusion. These concepts have been useful for analyzing what increases the risk of poverty and the underlying reasons for why the people remain in poverty. Vulnerability is not synonymous with poverty, but refers to defenselessness, insecurity and exposure to risk, shocks and stress. Vulnerability

is reduced by assets, such as human investment in health and education, productive assets including houses and domestic equipment, access to community infrastructure, stores of money, jewellery and, claims on other households, patrons, the government and international community for resources at the times of need (WRATTEN, 1995). Entitlement refers to the complex ways in which individuals or households command resources, which vary between people over time in response to shocks and long-term trend. Social exclusion is seen as a state of ill being and disablement or disempowerment, inability, which individuals and groups experience. It is manifest in patterns of social relationships, in which individuals and groups are denied access to goods, services, activities and resources, which are associated with citizenship.

2.2 Characteristics of Urban Poverty

Most studies attempting to describe the urban poverty have focused on drawing out the characteristics, often comparing rural poverty with urban one. However, there is still much debate as to whether urban poverty differs from rural poverty or whether policies to address the two should focus on different aspects of poverty etc. In some views, rural and urban poverty are interrelated and there is a need to consider both urban and rural poverty together because they have many structural causes in common, e.g. socially constructed constraints to opportunities (class, gender) and macroeconomic policies (terms of trade). Many points of the important connections between the two, as household livelihood or survival strategies have both rural and urban components (SATTERTHWAITTE, 1995b). BAKER (1995) and WRATTEN (1995) illustrated this point in the terms of rural-urban migration, seasonal labor, remittances and family support networks. BAKER (1995) mentioned that how the urban and rural households adopted a range of diversification strategies, by having one foot in rural activities and another in urban ones. Conceptualizing urban poverty as a separate category from rural poverty is also problematic because of different yardsticks for defining urban areas in different countries. The urban-rural divide is more a continuum rather than a rigid dichotomy.

2.3 Urban Development Policy

It is now widely recognized that rapid growth of urban population has led to worsening in absolute and relative poverty in urban areas. Urban poverty has, until recently, been low on the agenda of development policy because of dominant perception of urban bias and the need to counter this with a focus on rural development

policy. However, policy interest in urban issues is increasing as a result of these two phenomena. However, some macroeconomic policies may affect the rural and urban poverty in different ways. Projections of a large and increasing proportion of poor people living in urban areas, partly as a result of urbanization, and claims that structural adjustment programs, which have removed some of the urban bias, by removing price distortions, have led to a much faster increase in urban poverty than rural poverty. There have been two broad traditions in policy approaches to urban poverty (AMIS, 1995). The first set of approaches has focused on the physical infrastructure problems of housing, sanitation, water, land use and transportation. Recently there have been more emphases on private investment and an increased focus on institutional and management aspects of urban development. The second set of broad approaches has focused on economic and social infrastructure issues such as employment, education and community services. Recently such approaches have put a lot of emphasis on sustainability issues and community involvement or participation in projects and programming. More recently, concerned with urban environment, violence and insecurity in urban areas have come to the front as factors, which undermine well-being and quality of life. There is some evidence of a strong relationship between poor health and poor environmental quality. The externalities of urban production are disproportionately borne by the poor because of spatial combination of industrial and residential functions, high living densities, overcrowded housing in hazardous and inadequate supply of clean water, sanitation and solid waste disposal services (WRATTEN, 1995). Urban violence is estimated to have increased between 3% and 5% each year over the last two decades, although there are many variations between nations and different cities within nations. Certain specialists stress the significance of inadequate income, which are usually combined with very poor and over crowded housing and living conditions, and often-insecure tenure, as fertile ground for the increased violence. Other explanations emphasize more the contemporary urban environment in which attractive goods are continuously on display and create targets for potential criminals. Oppression in all its forms, including the destruction of original cultural identities, together with racism is also cited as causes (UNCHS, 1996).

3 SYNOPTIC VIEW OF URBANIZATION

The 1998 general picture of Sudan and its human settle-

ments may be briefly depicted as a vast country with a total area of $2.4 \times 10^6 \text{ km}^2$ along with an equally vast range of natural environments ranging southwards from Savannah Desert to tropical forest; with highly regarded natural resources potential. the proper tapping of which is mainly handicapped by political unrest, mismanagement and a long-standing civil war; consisting of 26 federally-ruled (states); supporting a total of 29.5×10^6 people, of which nearly 29.4% is in city, i.e., living in 147 towns defined as settlements with 5000 population or more or those of importance as capitals of states or provinces; having a national capital, Greater Khartoum, as its primate city with around 4.37×10^6 (now said to be 6×10^6) population i.e. almost one sixth of Sudan's total population and one half of its urban population; with a national total of 7×10^6 households mainly earning their living from agriculture and animal husbandry and 40% of whom officially acknowledged to be poor, i.e., with an average monthly income equivalent to US\$50 or less (though the real incidence of poverty is generally thought to be much higher); and, lastly, a more one fifth of these 7×10^6 households, i.e., around 1.8×10^6 households, without their own residences. This may suffice as a quick glimpse here to be followed by more detailed view of the specific subject of the paper. Although Sudan's general housing situation has somewhat improved recently, it is nevertheless still far from being satisfactory. The percentage of households officially owning their residences may have managed to increase from 65% in 1993 to 80% in 1998, yet this latter percentage, which has probably further improved since, indicates that as many as one fifth of all households still remain with housing tenure problems, which they try to solve through very expensive rentals, insecure, socially and environmentally hazardous squatting, or unhealthy overcrowding, sometimes ending up with none at all. This unsatisfactory housing situation may be attributed to several factors contributing to a persistent gap between its supply and demand (EL AGRAA and MUSTAFA, 1980; EL AGRAA and MUSTAFA, 1987) On the one hand, such demand, especially in the urban areas and particularly in the Greater Khartoum, is inflated by a relatively high rate of natural increase of the population and, more seriously, by massive displacement and migration from war-ravaged and/or relatively underdeveloped and/or drought-stricken regions. Supply, on the other hand, is handicapped by long delay and inadequate housing plans, lagging implementation, unaffordable building materials and construction, paralyzing poverty, and almost total inaccessibility to housing loans (with the present, boosted 143×10^6 in an-

nual budget of the Estates Bank which is the only official institution offering financial support to housing with equating no more than the average cost of one hundred house units).

Nearly, 85% of existing house stock in the Greater Khartoum belong to the third, fourth and illegal classes, while 15% belong to the first and second. Although this is welcome, on one hand, as it indicates greater access to housing by the poorer majority of the households, it is unwelcome on the other, as it implies wide-spread lowering of standards and some outright decay in the urban environment, especially in the tenure-insecure, illegal areas and in the temporary fourth class that together account for around 40% of the housing in Greater Khartoum. The above-mentioned classification of housing is itself controversial in several other ways. On one hand, it does provide the households with suitable options to the standards and costs of their residences, since expensive larger plots, more durable materials, higher standards of services etc., are only stipulated to a limit of 15% first and second classes. On the other, its currently adopted physical segregation of the various classes leads, amongst other problems, to a questionable socio-economic segregation of the population. Arguments for and against classification continue, with some asserting that the ultimate solution lies in compromise, i.e., retaining some form of classification without the current pronounced segregation. Theoretically, the dominant means of disposal of housing plots (mainly through a site and services scheme based on a point system for income, age, household size, places of residence and work etc., which is unrestrictedly made to be available to all non-housed Sudanese, including women, at nominal prices for land and reasonable prices for services) seems quite commendable. Practically, however, distribution programs under this scheme terribly lag behind corresponding demand, thus resulting in the perpetual housing deficit mentioned above. And, when at last after years of waiting, a plot is so obtained and costly construction is started, the already-paid-for services under the scheme do not materialize as agreed, resulting in repulsive, hazardous environments as such new housing estates continue to be merely unfinished, uninhabited, unsightly and unhygienic skeletons, hovering over immense dumps of used and unused building materials, heaps of solid waste and ponds of accumulated leaking water. Another form of decay of the Sudanese urban environment is of exaggerated, unjustified physical sprawl. This is a complex multi-faceted problem in terms of its components, contributors to them, and their implications. Here, it may be

mentioned that one manifestation of that sprawl is that as much as 91.2% of households in the Greater Khartoum lived in detached, single-floored houses according to the 1993 Fourth Population Census. This is condonable neither climatologically nor aesthetically nor from the point of view of land conservation, nor from that of transport and services provision etc.

3.1 Improving Human Settlement Management

Urban poverty in Sudanese cities is adequate evidence for their unsatisfactory management. The World Bank in 1992 noted that for Africa, the basic causes for the poverty are the lack of access to services and opportunities and inadequate endowments, which can be stated with regard to this investigation on inadequate access to land and capital. Those continue to reflect the above human settlement management malaise such as initiation and monitoring of urban structure and master plans, launching of urban housing projects, distribution of related plots of land and provision of urban services such as electricity, water, drainage and solid waste disposal. This is even worse at the wider national and regional levels where the pattern of human settlements is far from being properly integrated, with the primate capital attracting massive in-migration from the greatly underdeveloped rural and small settlements, without adequate relief by proper numbers and locations of intermediate urban centers with reasonable access to the vital trio of employment, income and services (EL A-GRAA, 1984).

At the local urban level of human settlements, the theoretically commendable site-and-services concept of housing has practically proved to be very disappointing, as discussed in the previous section, mainly due to bad management also. In fact, bad management extends to numerous other human settlement aspects. One is that of lengthy, un-coordinated procedure for obtaining building licenses. Another is that of out datedness of planning and building regulations, their improper application anyway, and the non-follow-up of construction-as-approved afterwards etc. Still another shortfall relates to information and data. Each state has its own corresponding ministry together with a widely representing physical planning board.

3.2 Towards Sustainable Urban Management

The Sudan is much better than many other countries where land stock, ownership and legislation are concerned. The overall economy experienced a decline in output due to rapid expansion in import with complement shortfalls in domestic production, but with respect

to physical manifestation of poverty, its area of $2.4 \times 10^6 \text{ km}^2$ provides it with a rarely equaled chance for both an adequate and balanced land-use planning for grazing, rainfed and irrigated agriculture, woodlands and forests, as well as for its rural and urban settlements, for its relatively few, 3×10^6 people. Furthermore, its land ownership is predominantly public, with negligible handicaps, if at all, to land-use planning for public interests, rather than private ones. And, lastly, the country has inherited and continues to develop some appropriate land legislation for such public-oriented land-use control, including *Town Planning Act in 1961*, *Non-registered Land Act in 1971*, *Planning of Towns and Villages Act in 1976*, *Civil Procedure Act in 1984*, *Physical Planning Act in 1994 (H)*, and *Land Disposal Act in 1996 (H)*. Yet Land-use planning and management has not always made good use of that hardly-matched, lucky situation, with many negative environmental consequences both at the national and local levels. This has been true for both rural and urban human settlements, but more seriously for the latter, especially the larger ones led by the Greater Khartoum. Here, the authorities only pay lip service to structure and master planning, whilst actually resorting to narrowly-viewed, reactive planning. Well-publicized structure plans for the Capital, Greater Khartoum, were excessive, for instance proposed in the past by internationally renowned consultants such as DOXIADES in 1958, MEFIT in 1972 and Abdel MONIEM-DOXIADES in 1986 (EL TAYEB, 2001). Each one of them presented its own clear view concerning the allocation of various land-use zones and links for various socio-economic activities for the fore-seeable future. But each and every time these were, unreasonably, only very remotely adhered to, if at all, with the authorities falling back on reactive, ad hoc planning instead. One conspicuous result of that ad hoc planning and management of land-use in the Greater Khartoum is the repeatedly-mentioned sprawl, with large house plots (65% of housing land), outside open areas and roads (25%) and services (15%) coupled with very thin building densities, with around 90% of the houses not only being detached but also single-storied. Controversies for and against this have already been covered. But this much is conceded that quantitatively sprawl is a blatantly uneconomic use of land and that qualitatively it exposes the environment to excessive insulation, heat, drought and dust and, moreover, it constitutes dismal aesthetics especially where insufficient plantation, irrigation and maintenance of trees and other forms of greenery fail to relieve the monotony of the sparse, low level, mostly earth-colored, build-

ings. Another result of the shortsighted, ad hoc, land-use planning and management is the defective morphological growth-through-time of urban human settlements.

The comprehensive national strategy estimated the accumulated deficit and new needs to be catered during the period 1992–2002 to amount to 1.6×10^6 new units and 600×10^3 rehabilitated units, the big deficit being a clear acknowledgement of failure of previous housing plans of 1961–1970, 1977–1983 and 1983–1990. Citizens are worried about the usual difficulties facing the process of planning of such suitable new sites and the following increase in demand and in the numbers of immigrants and about the displaced repeating the vicious cycle until no locations are left for new housing plans except at the remote peripheries, with very complex problems of extension of services to them either in the short or long terms. Another result of this is the rise in free market sales and prices of land. The latter may now exceed US\$80 per square meter of first class housing areas and much more for so-called investment-land, reaching almost twenty times as much as that through the site-and-services scheme.

The following measures could be implemented to resolve the urban poverty: 1) to rationalize and manage the process of urbanization and harness it to contribute to economic growth and attain spatial equality; 2) to utilize cities as centers that house and deliver services to its citizens particularly the poor; 3) to create cities with socially and environmentally healthy; 4) to make cities more competitive to serve as economic hubs contributing to national growth; 5) to use urbanization as linkage to promote urban-rural development and regional balance.

3.3 Promoting Integrated Provision of Infrastructure

Provision of such infrastructure is clearly unsatisfactory in Sudanese urban settlements in general, and in the Greater Khartoum, in particular. This is very evident in conjunction with the site-and-services housing scheme, which is supposed to be the most extensively relied upon with that respect, yet fails to deliver such already paid-for services years after agreed dates (if at all). Corresponding negative effects on the environment are axiomatic due to this officially acknowledged recurring failure, which is more detailed below. It is estimated that as many as 74% of Sudanese households still remained in 1998 without water being directly piped to them. Moreover, those housing units connected with the piped water experience daily cut-off water, especially

with the handy pretext of frequent power blackouts. It is asserted by some that, and to rectify this, it is required not only to rehabilitate old networks, but also to install new ones and increase surface water sources (some improvement is claimed to have occurred since 1993, however, when only 20.6% of all households were with directly connected water supply). No such improvement has occurred during the same period (1993–1998) for sewerage nation-wide, with 42% of Sudanese households continuing throughout to have none at home. The systems most used by households in the Greater Khartoum were ordinary and improved pit latrines (68.5%) with much less use of septic tanks and soak-away wells (11%) and even less use of public network sewerage (2%), the remaining households having none (18.5%). Pit latrines thus accounted in the Greater Khartoum for two thirds and are still mainly used in the predominant third and fourth housing classes. Septic tanks and soak-away wells, on the other hand, continue to be normally used in the first and second classes. Public network sewerage is restricted to old parts of Khartoum (with none being installed since the end of the 1950s) and itself suffers from overloading, improper maintenance, frequent overflows and various other unbearably repulsive environmental ills.

Solid-waste disposal is even more problematic. It is estimated that 55% of all solid-waste in the Greater Khartoum in 1998 was merely dumped in open areas, with unmistakable environmental and aesthetic hazards, while an additional 35% was, rather improbably, incinerated there. Although this problem is both serious and soluble, yet it is unacceptably allowed to persist and even get worse. It is also illogical to have surface drainage causing so much functional, aesthetic and environmental havoc in the Greater Khartoum, which experiences only a very few days of rain annually. Improperly provided, impermanent, and badly maintained drains completely fail then. The authorities continue to be defeated by the dilemma that how to totally solve this problem which is so in-frequent, on the one hand, yet calls for considerable funds, strongly competed-for by other services, on the other. Problems are not confined to individual infrastructural services, but occur in their integration as well. For example, solid-waste, which is itself just dumped without proper handling and treatment, accumulates and closes the limited, badly-maintained drains and, together, they obstruct, and themselves are obstructed by, vehicular circulation, and so on. Improvements are both urgently required and mostly possible for every one of these aspects of environmental infrastructure, be it that of water, sanitation,

drainage, solid-waste disposal, or of their integration.

3.4 Sustainable Energy and Transport Systems

The promotion of energy, sustainment or otherwise, has unanimously been acknowledged to be grossly inadequate. Biomass sources-relied upon by low-income groups are not replenished by adequate afforestation matching consumption. Solar and wind energies are not tapped. Electricity and oil, each in its own way, gives chronic headaches to the authorities and communities alike. Electricity generation and supply hopelessly lag behind demand, even with only 20% of legal residences connected nation-widely in 1998. Those housing units connected with electricity supply experience cut-off of power that might continue for house every day. The prices, moreover, are unaffordably high, though accompanied with some token subsidies for low consumption-normally involving low-income groups. Promises of rectification continue to be abundant but are chronically unfulfilled. A long-standing energy problem that now seems to have been reasonably solved is that of oil. Previous importation, requiring hard-to-come-by foreign currency, and resulting in too-short a supply for transportation, and long queues of motor vehicles with empty tanks at petrol stations, has now actually been stopped and even reversed.

Another area that has witnessed sizeable development recently has been that of transport in general and building of roads and bridges in particular. This is true both for national and urban transport. Around 4500km of national roads and related bridges have so far been constructed to link the various regions. However, the picture of transport is not all that rosy. Aspects of planning, detailing, management and financing leave a lot to be desired, especially from an environmental point of view. Two examples of faulty urban planning are those of long transportation distances between residences and places of work, and the adoption of a gridiron pattern of roads that neither helps quick mobility, because of its numerous intersections, nor facilitates slow access, because of its lack of cul-desac. Faulty detailing includes the uncoordinated, incomplete provision of drainage, solid waste disposal, lay-byes, pavements, traffic signals, street lighting, pedestrian crossings, and so on. Moreover, the scattering of makeshift tents, kiosks and open sales along both sides of major urban roads results in general chaos and, moreover, hampers traffic. There are also shocking instances of fraudulent handling of related funds, some of which contributed by keen, trusting communities.

4 CONCLUSIONS

In the view of growing complexity of managing urban poverty, there is definitely a need for tools that assist in this undertaking. While previous planning instruments focused on the physical and economic infrastructure of cities, in particular on spatial planning, housing, and transport, this investigation discusses the need for a city planning instrument involving integration of both physical and social infrastructures, and the city economy and labor market. Such an integrated city planning tool could be of a great help in urban poverty alleviation in Sudan.

This study has tried to handle its assigned topic-urban planning as a tool to alleviate urban poverty up to an optimum degree of detail. It is not as comprehensive as a work, which would have been possible with a bigger, multi-disciplinary teamwork for a considerable duration. Nor is it as curtailed as would have been easy and tempting otherwise but meaninglessly defeatist in this case. The Section 7 of Agenda 21 for human settlement development has closely guided decision on the adopted structure of what is optimum. Section 7 of Agenda 21 of Rio 1992 constituted an excellent model as a general framework and its identified areas have been dealt with selectively by the study, and have even been adopted as actual headings to the major part of this investigation.

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