

## **Urbanization Processes – Environmental and Health effects in Africa**

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### **Introduction**

Urbanization is increasing in both the developed and developing countries. However, rapid urbanization, particularly the growth of large cities, and the associated problems of unemployment, poverty, inadequate health, poor sanitation, urban slums and environmental degradation pose a formidable challenge in many developing countries. Available statistics show that more than half of the world's 6.6 billion people live in urban areas, crowded into 3 percent of the earth's land area (Angotti, 1993; UNFPA, 1993). The proportion of the world's population living in urban areas, which was less than 5 percent in 1800 increased to 47 percent in 2000 and is expected to reach 65 percent in 2030 (United Nations, 1990; 1991). However, more than 90 percent of future population growth will be concentrated in cities in developing countries and a large percentage of this population will be poor. In Africa and Asia where urbanization is still considerably lower (40 percent), both are expected to be 54 percent urban by 2025 (UN 1995; 2002).

Although urbanization is the driving force for modernization, economic growth and development, there is increasing concern about the effects of expanding cities, principally on human health, livelihoods and the environment. The implications of rapid urbanization and demographic trends for employment, food security, water supply, shelter and sanitation, especially the disposal of wastes (solid and liquid) that the cities produce are staggering (UNCED, 1992). The question that arises is whether the current trend in urban growth is sustainable considering the accompanying urban challenges such as unemployment, slum development, poverty and environmental degradation, especially in the developing countries.

### **Urbanization defined**

Urbanization, simply defined, is the shift from a rural to an urban society, and involves an increase in the number of people in urban areas during a particular year. Urbanization is the outcome of social, economic and political developments that lead to urban concentration and growth of large cities, changes in land use and transformation from rural to metropolitan pattern of organization and governance.

### **Major causes of urbanization in Africa**

Natural population increase (high births than death) and migration are significant factors in the growth of cities in the developing countries. The natural increase is fuelled by improved medical care, better sanitation and improved food supplies, which reduce death rates and cause populations to grow. In many developing countries, it is rural poverty that drives people from the rural areas into the city in search of employment, food, shelter and education. In Africa, most people move into the urban areas because they are 'pushed' out by factors such as poverty, environmental degradation, religious strife, political persecution, food insecurity and lack of basic infrastructure and services in the rural areas or because they are 'pulled' into the urban areas by the advantages and opportunities of the city including education, electricity, water etc. Even though in many African countries the urban areas offer few jobs for the youth, they are often attracted there by the amenities of urban life (Tarver, 1996).

## **Processes of urbanization**

One significant feature of the urbanization process in Africa is that, unlike Asia and Europe, much of the growth is taking place in the absence of significant industrial expansion. Although, Africa is fast urbanizing, mega-cities defined as cities with 10 million inhabitants or more are few. Urbanization also finds expression principally in outward expansion of the built-up area and conversion of prime agricultural lands into residential and industrial uses. An alternative to the present expansion of the urban population across a wide area of the country in order to save prime land for agriculture is to construct high-rise buildings and promote commercial development in specific zones, which would depend on effective, appropriate technology and resources.

The urbanization processes are largely driven by market forces and government policies that lead to simultaneous processes of change in livelihoods, land use, health and natural resources management including water, soil and forests and often reactive changes in local governance. Government development policies and budget allocations, which often favour urban residents over rural areas, tend to pull people into the urban areas. In the cities, public investment, which often misses the urban poor, with expenditures biased towards the higher-income classes and poverty among vulnerable groups such as new migrants force them into slums and squatter settlements.

The market forces result in a series of changes in employment, urban agriculture and peri-urban production systems. Ready market leads to an increase in production of horticultural crops and perishables such as vegetables given the high demand and proximity to urban consumers. These factors therefore, act as a great centripetal force in favour of urbanization.

## **Current urban challenges**

In Africa, the dramatic effects of rapid urbanization are very clear in the cities and peri-urban areas. As the cities expand, the main zone of direct impact is the peri-urban area, and those living in the peri-urban interface face many new challenges and opportunities in meeting their needs and accommodating the by-products of the urban populations. Although, cities serve as 'engines' of growth in most developing countries by providing opportunities for employment, education, knowledge and technology transfer and ready markets for industrial and agricultural products, high urban populations place enormous stress on natural resources and imposes 'ecological footprints' on the peri-urban areas (Rees, 1992; Rees and Wackernagel, 1994). For example, urbanization leads to the outward expansion of cities and results in changes in land use whereby urban residents buy up prime agricultural land for residential or commercial purposes. The conversion of farm lands and watersheds for residential purposes have negative consequences on food security, water supply as well as the health of the people, both in the cities and in the peri-urban areas.

Cities impact on health in many ways. In the areas of the environment and health, problems of emission reduction, supply of clean drinking water, sewage and rubbish disposal, food security and poverty reduction are the most important. Vulnerability of the urban population to natural disasters and diseases, especially HIV/AIDS and atmospheric pollution has also been recognized. Although, data about pollution levels are fragmentary, the air and water quality in many cities threatens the health of millions of city residents (UNEP, 1994). Although, a significant positive impact of urbanization is promotion of urban agriculture and the cultivation of staple crops, vegetables, poultry and dairying, which are demanded by urban consumers, cultivation of

vegetables through sewage irrigation and the use of chemical pesticides affect the health of consumers who are not notified of the circumstances of cultivation of these products.

A large proportion of the urban population is also affected by poor sanitation that threatens their health. River pollution is particularly found to be worse where rivers pass through cities and the most widespread is contamination from human excreta, sewage and oxygen loss (UNEP 1986). It is estimated that about 400 million people or about one-third of the population in the developing countries do not have safe drinking water (World Bank, 1990). In many cities such as Kumasi (Ghana) and Lagos (Nigeria), there is limited access to clean drinking water. The quality of several watercourses is poor, with pollutant levels higher than the WHO's standards. Pesticide contamination from urban agriculture, residues from sawmills and manufacturing industries, wastewater from urban drains and municipal dumping of waste especially human excreta pollute drinking water sources that affect the health of the urban and peri-urban populations. In the long-term, treatment of sewage would be required for safer vegetable production and to reduce water pollution.

Urban populations are also vulnerable to diseases such as malaria or those associated with air pollution. Other malfunctions that are associated with industrial and traffic injuries and psychological disorders, especially in low-income urban and peri-urban area are also disturbing. The unhealthy environment and overcrowded housing in the slums expose the urban poor to high rates of infectious diseases such as pneumonia, tuberculosis and diarrhoea. Although it is clear that cities in the developing countries act as nodes through which development occur, it is important to note that rapid urbanization poses particular risks that affect sustainable livelihoods of millions of people. The wide range of effects includes degradation of the environment (soil erosion, deforestation), destruction of watersheds and wetlands, traffic congestion, contamination/pollution of water, and environmental risks associated with low-income housing areas.

## **Conclusion**

Around the world, especially in Africa and Asia, cities are expanding rapidly. For the majority of urban dwellers, especially the poor, finding potable water supply, affordable shelter, accessible and secure urban land for agriculture to ensure food security, securing gainful employment and improvement in health facilities would continue to remain a priority. Since restrictive urban growth policies, especially population distribution designed to reduce the rate of rural-urban migration appear to have had limited success in many developing countries, policies must be directed at transforming the rural economy in order to slow the rate of urban sprawl. Comprehensive land use planning and revision of planning standards and administrative procedures would, go a long way to, reduce many of the problems that face urban populations in the developing areas, especially Africa.

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