INFORMAL SECTOR AND URBAN ENVIRONMENTAL HEALTH IN NIGERIA: AN APPRAISAL

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Abstract: *This paper discusses the state of urban environmental health in Nigeria and notes the role played by informal socio-economic activities in its steady decline. It identifies accelerated growth in municipal wastes generation, sustained exposure to environmental pollution, food poisoning due to unhygienic food handling and storage practices, among other issues as some of the urban environmental health problems resulting from informal economic activities. The paper however notes the socio-economic significance of this sector, most importantly, the provision of employment to the large share of the country's workforce that remains outside the world of full-time, stable and protected jobs. The paper concludes by recommending measures for creating healthy urban environment without compromising the activities of the informal sector operators. This include the integration of informal sector activities into the environmental health policies and programmes of the governments at all levels, as well as the involvement of informal sector operators in the urban environmental management.*

Keywords: *informal sector; urbanization; sustainability; environmental health*

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INTRODUCTION

In Nigeria, rapid population growth, uncontrolled urbanization and government efforts to tax and regulate economic activities have spurred the rapid expansion of informal sector which comprised of micro-enterprises, and

other small-scale economic activities which operate outside the purview of the state. Although, historically seen as little more than a collection of street merchants, today the informal sector is increasingly recognized as a leading contributor to employment, Gross Domestic Product and a hotbed of innovation and entrepreneurship (Nwaka, 2005, Akintoye, 2008, Khan, 2010). While policy makers and academics have accepted the fact that the growth of the informal sector has generated important economic benefits, to date, they have almost completely ignored the environmental health impacts of these activities. This oversight may have to do with the persistence of the fiction that the informal sector is comprised only of environmentally benign retail and service-oriented activities (Napier et al, 2009).

Actually, informal sector includes many economic activities (such as food vendoring, barbing/hairdressing, commercial motorcycle (okada) and cab/bus operation, wood work, metal works etc.), that are capable of exerting negative effects on the environment. Thus, giving the sheer number of such undertakings in Nigeria (About 8.6 million according to CBN/FOS/NISER, 2001), the aggregate environmental impacts are likely to be significant.

As observed by Blackman and Bannister (1999), while environmental degradation is mainly contributed by large industries in developed countries, the bulk of environmental degradation in urban areas of developing countries is the result of dispersed medium/small-size industries which in many regions comprise the major part of manufacturing activities. Although, one may argue that with the collapse of infrastructure and its attendant limitation on manufacturing in Nigeria, informal commercial enterprises appear to be the major source of environmental degradation in Nigeria. Although, efforts have been made by the governments at all levels, especially the state and the local governments to tackle the environmental health problems in many cities, but controlling environmental degradation created by informal firms is especially difficult. The reasons for this are not farfetched: first, by definition, informal enterprises have few pre-existing ties to the state. Second, such firms are difficult to monitor since they are small, numerous, and geographically dispersed. Third, intensely competitive informal firms are under considerable pressure to cut

costs regardless of the environmental impacts. Finally, informal enterprises are usually a significant source of employment and are often situated in the midst of poor residential areas (Blackman, 2004). As a consequence, they appear to both regulators and the public as less appropriate targets for regulation than larger, wealthier, firms. Given these constraints, the application of conventional command and control regulation is bound to be problematic if not completely impractical. However, with the dwindling health status of many urban dwellers in Nigeria, as revealed by the decline in major environmental health indices (UN-Habitat, 2009), coupled with the fact that informal sector is a significant part of urban life in the country, there is a pressing need to assess the contributions of the sector to this decline. This is with a view to suggesting sustainable policy measures to achieve sound urban environmental health without jeopardizing entrepreneurship and innovativeness.

Informal Sector: Types and Characteristics

An extensive review of the literature revealed the classification of informal sector into four different categories as follows:

Informal Enterprises – this are mostly micro and small enterprises (MSEs). Their marginal, subsistence-oriented economic activities tend to remain too small and remain confined to limited market. They usually engage in commercial and to some extent industrial undertaking (Horn, 2011; Sonobe, et al., 2009).

Informal Employment – This consists of small scale units owned by individual engaged in production and distribution of goods and services with the primary objective of generating income, notwithstanding the constraints on capital, both physical and human, and the technical know-how. It is largely unorganized, unregulated and mostly legal but unregistered. Informal employment has within it informal enterprises. The only difference is that while informal enterprises are largely commercial and industrial undertakings, informal employment incorporates primary, secondary, small-scale distribution and tertiary economic activities (Basorun, 2004). The primary activities are the agricultural-related economic activities like crop farming, poultry, animal husbandry and fishing. Secondary activities comprise mainly the non-

agricultural occupations or traditional crafts such as; weaving, carving, blacksmithing, shoe making, carpentry or woodwork, tailoring etc. All this required an appreciable period of apprenticeship. The small-scale distribution is concerned with the geographical spread of commercial activities within the urban economies.

Those who engage in this activity are grouped into a number of sections based on their mode and location of operation. The first group comprises of the hawkers who trade on light manufactured goods like cosmetics fruits and other food stuffs with no fixed location. The second group comprises the petty traders who make use of movable tables and kiosks along the streets to offer a range of items or article for sale. The third group comprises of the market sellers whose activities are limited to the market places only. The fourth group comprises of wholesalers who engage in bulk sales. The tertiary activities are those that enhance conducive and higher productivity among urban dwellers. Notable among them are the activities of transport operators, restaurant operators, laundry workers, computer typesetting and photocopier operators etc.

Informal Credit – These are means of financing activities in the informal economy. Informal credit operators can be divided into five groups: Money Lenders; Pawn Brokers; Rotating Savings and Credit Associations (ROSCAS); Friends, Neighbors and Relatives (FRN); and Community Groups (Bell and Srinivasan, 2004).

Informal Settlement: These occurs, when there is a non-compliance of property development with the state land administration system which embraces tenure and its registration, regulation of land use and development, property taxation, and direct public intervention, often involving public landownership (UN-Habitat, 2009). Most informal settlements are precariously established and haphazardly thrown together without basic social and civil services. The residents themselves are usually responsible for the major improvements in such settlements. Informal settlements are present in a number of countries. The largest in Asia is the Orangi Township in Karachi Pakistan, while the largest in

Africa is Khayelitsha in Cape Town, South Africa. (Kelly, 2006; Wikipedia, 2012).In Nigeria, virtually every city has its share of informal settlements, especially, those that serve as regional or state capitals. Such cities include Ibadan, Lagos, Kano, Enugu, and Portharcourt.

Informal sector activities are characterized by small-scale, self-employed activities, with or without hired workers, typically at a low level of organization and technology, with the primary objective of generating employment and incomes. Moreover, in contrast to the formal sector, the informal sector is generally characterized by low entry barriers and ease of entry, reliance on indigenous/local resources, family ownership of the enterprises, simple organizational and production structures, small scale of operations, labour intensive and adapted low technology, skills outside the formal system of education and training, little capital investment, irregular working hours, and personal sources of funds for investment. Other common features of the sector are: low quality of the goods and services produced; limited capital and limited capacity for capital accumulation due to restricted access to assets, credits and other services as well as low level of formal education of the operators (ILO ,2005; Rukmana, 2007; Olofin and Folawewo, 2009) .

ENVIRONMENTAL HEALTH DEFINED

Today's environmental health concerns are part of a "third wave" of concerns that have occurred within the field throughout time. Concerns about infectious diseases from adulterated food and contaminated water dominated the first wave, which began in Europe during the 19th century. Around the time of World War II, a second wave emerged. This phase involved two key movements: (1) the ecology movement, which focused on conservation of natural resources and preservation of historic sites; and (ii) control of toxic substances, which have been negative consequences of industrialization. The third and current wave emerged in the 1950s as a function of the accelerated rate of economic development, a trend which is evident today in patterns such as sprawl (Yassi et al, 2001). Environmental health, according to the United States National Institute for Environmental Health Sciences (NIEHS), is the field of science that studies how the environment influences human health and disease (NIEHS,

2005). Though accurate as this definition may be, it is arguably incomplete in that it suggests only a one-way relationship, rather than a reciprocal one. As opined by Lynn (2006), promotion of urban environmental health requires that we not only understand how surroundings influence well-being, but we must also understand human behaviors and how they affect the resources upon which we depend for life.

Thus, offering a more expansive definition than the above – described NIEHS' definition, WHO (2006) defines environmental health as those aspects of human health, including quality of life, that are determined by physical, biological, social and psychosocial factors in the environment. It also refers to the theory and practice of assessing, correcting, controlling and preventing those factors in the environment that can potentially affect adversely the health of present and future generations.

The US Department of Health and Human Services (2000) also recognizes the array and complexity of human influences on environmental health and has adopted the following definition in the development of its Healthy People 2010 objectives:
"In its broadest sense environmental health comprises those aspects of human health, disease and injury that are determined or influenced by factors in the environment. This include not only the study of the direct pathological effects of various chemical, physical and biological agents, bsut also the effects on health of the broad physical and social environment, which includes housing, urban development, land use and transportation, industry and agriculture" (DHHS, 2000: 8).

As similarly observed by McArthur and Bonnefoy(1998) cited in Nwokoro (2005), urban environmental health involves those aspects of public health concerned with the factors, circumstances and conditions in the human surroundings that can exert influence on health and well-being of urban dwellers. The factors include waste generation and management, pollution, food handling and storage practices, and potable water supply and sanitation

Dimension of Urban Environmental Health Problems in Nigeria

While aggregate health statistics paint a rosier picture of the health of urban dwellers compared to those living in rural areas, there is a large and growing gap between the health status of the upper/middle class urban residents and those living at the margins (WHO, 2011). About 65.8% of Nigerians currently reside in densely populated, over-crowded unsanitary conditions often lacking access to basic health, water and sanitation services (UN-Habitant, 2009). While there is little data on the health status of this population, the little evidence suggests that they face severe challenges that inhibit their ability to be active, productive and prosperous members of the society. Disaggregated urban data (where they are available) shows that infant and under-five mortality rates for the poorest 40% of the urban population are most often as high (if not higher) than those found amongst similar groups in rural areas (Antai and Moradi, 2010).

Urban residents, while better nourished on average are extremely vulnerable to macroeconomic shocks that undermine their earning capacity and lead to substitution towards less nutritious, cheaper foods. The urban poor are particularly vulnerable in that they are not likely to have savings, large food stocks that they can draw down over time or access to land upon which they can grow and produce nutrient-rich foods. The nutritional vulnerability of the urban poor is evidenced by the fact that, where data is available, the number of children that show evidence of malnutrition and stunting amongst the urban poor is again the same, if not higher than that amongst the rural poor (WHO, 2011).

Today, air pollution is among the most significant environmental health threats arising from domestic and economic activities. Many studies (Darby et al., 2006; Patrick, 2006; Sullivan et al. 2005; Corburn et al., 2006) have demonstrated an association between exposures to environmental pollution and the development of chronic diseases or other health problems. Examples of such relationships include that of random and lung cancer (Darby et al., 2006) arsenic and cancer (Patrick, 2006) and particulate matter and aggravation of heart (Sullivan et al., 2005) and respiratory diseases (Corburn et al., 2006).

Water borne diseases such as cholera and typhoid fever have also been major health threats in most urban centres in Nigeria in the larger part of the 20th century till date. This is due primarily to a shortage in water and sanitation services in most of these cities. As revealed by UN-Habitat (2009), about 35% of Nigerian urban dwellers do not have access to improved drinking water and sanitation. Although, improvements in sanitation and drinking water treatments have drastically reduced the death rates from water borne diseases in some countries, the same cannot be said of Nigeria (WHO, 2011). In addition, urban slums are also home to a wide array of other infectious diseases (including malaria, cholera, pneumonia and tuberculosis) which easily spread among the slum dwellers that are unaware of simple, life – saving prevention measures. There is a growing body of evidence to support the effects of the built environment on health and disease. For example, Mobley et al (2006) observed that the built environment and socio-ecologic characteristics of financially – disadvantaged women were associated with Body Mass Index (BMI) and Coronary Heart Disease (CHD).

As observed by USAID (2010), healthy cities require safe, easily accessible and affordable water, sanitation; safe home and work environments; clean air; and reduced exposure to disease pathogens. Poor housing conditions, exposure to excessive heat of cold, diseases, air, soil and water pollution along with industrial and commercial occupational risks, exacerbate the already high environmental health risks for the urban poor. Lack of safety nets and social support systems, such as health insurance, as well as lack of property rights and tenure, further contribute to the health vulnerability of the urban poor. Perhaps the most deleterious aspect of urban living condition particularly the urban poor is the sustained exposure to environmental health hazards as they are forced to live in their own excreta, surrounded by uncollected and often hazardous solid waste exposed to industrial and commercial pollution and forced into cramped spaces where personal safety and mental health is seriously. Although, healthcare facilities are overwhelmingly concentrated in urban areas, which consequently makes urban population (on average) have greater access to formal health care services (Ola, 2011), there are, however, a number of barriers to the ability of the urban residents particularly the poor to make use of these services. Cost is

an obvious challenge. Social factors such as the lack of cultural appropriate services, language/ethnic barriers and prejudices on the part of providers also play a role (Wang, 2002).

There are also significant blockages to providing increased health education in slums. Donors and governments alike may assume that outreach and education are not necessary in urban areas, confusing the existence of health facilities and educational services in middle and upper class neighborhoods, with widespread access to information. The urban poor may not have access to those channels of communication. There may also be barriers to the education of slum populations because health outreach workers are afraid to work in slums. This consequently leads to lack of outreach services in slum areas leading to an inability to identify symptoms and seek appropriate care on the part of the poor (USAID, 2010).

According to Lynn (2006), understanding the human dimension is critical to promoting environmental health. Why, for example, are some individuals or groups more likely to engage in environmentally-responsible behaviours than others? What specific factors influence environmental behaviour? If air pollution, water pollution, wastes (solid and liquid) and other environmental health threats are to be controlled, then the human behaviours which impact these conditions must be addressed. It should be noted that environmental health policies and regulations had little influence on environmental behaviours, particularly among informal commercial business owners. Therefore, individual and community level influences on environmental health needs to be addressed in order to promote a more sustainable relationship with the environment.

Informal Sector and Urban Environmental Health: Identifying the Conflicts

One common feature of cities in Nigeria in recent years is the steady use of many open spaces as refuse dumps. Apart from physically obstructing legitimate human activities, these wastes have in effect also constituted themselves into grave health and safety hazards. Unfortunately, many city authorities are unable to cope with the accelerating growth of municipal waste emanating from the

informal economic/commercial undertakings of the urban residents to the extent that waste disposal is now one of the most conspicuous environmental problems of Nigeria's urban centres. Available information reveal that both the absolute and per capita quantity of wastes from discarded pure water bottles and sachets by hawkers/vendors and their customers is increasing at an alarming rate, thus making the per capita municipal waste production in Nigeria cities averaged about 0.5kg/day (Nabegu, 2010).

Many operators of the informal sector in Nigeria, especially street hawkers, market vendors, small automotive and machine repairers, shoemakers, barbers, hairdressers and tailors generate by-products in their daily effort to provide goods and render services. These by-products deface the streets and clog the drains (Onyenechere, 2011). The concomitance of these actions is the stimulation of health hazards, flooding, noise pollution, traffic obstruction and nuisances. In a recent study of informal sector in Lagos by Lawanson (2007), it was observed that the operators tend to construct their make-shift kiosks along drainage channels and also dump domestic wastes indiscriminately into these drains, thereby causing blockage and consequently floods as frequently experienced in areas like Orile-Iganmu and Coker.

As noted by Nabegu (2008), the widespread existence of the unplanned and poorly accommodated informal sector in most parts of Nigeria makes the collection, transportation and proper treatment of municipal waste extremely difficult coupled with general problems of lack of control over consumption pattern and over waste minimization, lack of appropriate landfill sites and inadequacy of financial resources. Managing solid waste is one of the most costly urban services. Typically, it gulps up to 1.5% of any nation's Gross National Product (GNP) and 20 – 40% of the municipal revenue in a developing country like Nigeria (Ashiri, 2006).

The primary source of air pollution in most Nigerian cities is improper disposal of solid and liquid wastes, exposure to toxic fumes from cooking fires and burning cow dung in the abattoirs, fumes from rickety cars, motorcycles, lorries and trucks, generating sets used by barbers, welders etc. While noise pollution

resulting from ball rung incessantly by peddlers, hawkers and other salesmen to advertise their goods, highly amplified music from record shops and noise from grinding machines, drilling machines and electricity-generating plants, all help to cause irritation and can in extreme cases impair hearing. Jayant (2010) asserts that noise above 45 decibels will disturb a person's sleep; the health implications become more visible once noise levels cross 85 decibels, while noise above 120 decibels can cause hearing damage or reduced sensitivity to noise. This affects humans functioning abilities and can cause their reasoning faculties to be reduced. Moreover, the use of generators involves burning fossil fuels, which apart from causing noise pollution, releases greenhouse gases that leads to global warming and eventually destroys the ozone layer, causing climate changes, rising sea levels, changes in vegetation and severe weather events.

Unhygienic food handling and storage practices occur in open market places, slaughter houses, other public places and in the extensive ready-to-eat street food industry, widely patronized by workers, school children and other urban residents in the country, because they are inexpensive and quickly served. Moreover, hawkers of food items display them in open and unhygienic containers and sometimes on open drains filled with trash and grey water. Several studies have shown that street foods have the potential for serious food poisoning outbreaks due to microbiological contamination and use of non-permitted food additives, colours and the presence of other adulterates (Akinyele, 1996).

Also, potable water supply is grossly inadequate in most Nigerian cities. As revealed by UN-Habitat (2009), about 35% of the country's urban dwellers do not have access to improved drinking water while household connection to good quality water stand at 7%. The inadequacy has been attributed to the polluting effects of informal commercial activities of the potential sources of good drinking water. In addition, sanitation facilities, especially toilets/ comfort stations and drainages channels are hardly found in urban markets, motor parks and other public places. These contributed immensely to poor sanitation in

most Nigerian urban centres, as about 65% of the cities' inhabitants do not have access to improved sanitation (UN-Habitant, 2009).

CONCLUSION

With the significance of these sector fully appreciated, recognizing the activities of the sector as one of the underlying causes of declining urban environmental health and a key player in the issue of climate change is imperative for the sustenance of Nigerian cities. This calls for appropriate policy formulation and implementation to ensure sound urban management, if cities are to remain both economically and environmentally sustainable.

Considering the fact that several laws, policies and programmes on environmental management have been put in place (such as War Against Indiscipline, Environmental Impact Assessment Decree, Federal Environmental Protection Agency Act), none actually recognize informal sector as one of the major contributors to worsening urban environmental health. Thus, there is the need to properly integrate informal sector activities into urban environmental health policies and programmes of governments at national, state and local levels. Similarly, there is absence of policies to mutually involve the informal sector operators and other residents in the urban environmental management. What we currently have in some states, is the coercion of the people to participate in weekly or monthly environmental sanitation, which has produced little results. Also, there is the need to formulate a clear-cut policy on the less-cumbersome formalization of the small scale enterprises. This will afford the relevant environmental regulating agencies, the opportunity to adequately identify which of the sub-sectors of the informal sector are mostly responsible for environmental degradation and appropriate measures taken to control their activities.

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