

## **Improving Governance for Sustainable Waste Management in Nairobi**

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### **Chapter 1. Urbanization and governance for waste management in Africa**

#### ***The urbanization process in Africa***

Urbanization introduces societies to new, modern ways of life, an improved level of awareness, new skills, a learning process, and so on. However, when the rate of urbanization gets out of control, it poses a big challenge to governance — optimizing forces become weakened, institutional capabilities become inadequate and ineffective, and, with these, the problems of urbanization are compounded. This might be a result of poor management, poor programs, inadequate facilities, and so on.

The United Nation's projection is for world urban population to become majority (60%) by 2015. Urban population is increasing much more rapidly in developing countries than in more developed economies. What is noteworthy about contemporary urbanization in Africa is its fast pace.

#### ***The waste-management problem***

In the developing world and especially in Africa, the rapid rate of uncontrolled and unplanned urbanization, coupled with Social and economic changes that most African countries have witnessed since the 1960s have contributed to an increase in waste generated per capita and subsequent environmental degradation.

In the Kenyan and wider African scenario, the sheer volume of waste does not actually constitute the problem — it is the inability of governments and waste-disposal firms to keep up with it. Both financially and physically, cities are unable to provide waste collection/management, especially to the urban poor occupying peri-urban or other geographically inaccessible areas resulting to spatially skewed service provision. Their illegal status, inaccessibility, inability to collect fees and very high waste generation which cannot be handled with available vehicles and equipment make local authorities reluctant to provide them with urban services.

The lack of support given to the urban poor in this area has serious consequences on their health and on the urban environment. Thus, in cities of the developing world, the management of solid wastes is now an issue of vital importance to urban sustainability.

As urban environmental problems worsen in developing countries, non-conventional approaches to urban pressure points like waste management will have to be adopted

#### ***The implications of urbanization problems for governance.***

Waste management is one of the most visible of urban services. These services are a major employer and consume a large proportion of the operational revenue of a city or municipality.

As such, effective and sustainable waste management goes hand-in-hand with good local governance and sound municipal management

The problems generated by rapid urbanization in Africa threaten the governance of its' urban centers and call into question the capacity for governance of African countries, and are a clear indication of the need for adequate, unskewed, spatially just, efficient and reliable Waste management services, which are typically not found in African cities.

Country	City	Waste-governance setting
Anglophone		
Nigeria	Ibadan	State run and privatized
Tanzania	Dar es Salaam	State run and community based
South Africa	Johannesburg	Community based and privatized
Francophone		
Côte d'Ivoire	Abidjan	State run and privatized

**Table 1.** Waste governance in four African cities

Source: *African Research Network for Urban Management (ARNUM)*

The concept of *Governance* embraces the role of the state in society; the management or mismanagement of socioeconomic activities in the public, private, and community sectors; and the involvement or lack of involvement of civil society in the management of society as a whole.

Good governance emphasizes effective and accountable institutions, democratic principles, a reliable electoral process, representative and responsible structures of government, institutionalization of appropriate policies, programs, and strategies for urban management that help to eliminate or ameliorate the problems posed by rapid urbanization, and the need to ensure an open and legitimate relationship between civil society and the state. Governance in the Kenyan context therefore needs to be examined to determine the extent to which it responds to the challenges of urbanization and Urban growth.

## Chapter 2. Local government & waste management in nairobi city

Established 1895, Nairobi is Kenya's capital with a population of 4 Million persons (44% of its' resident falling below poverty line) settling on an area of 696Km<sup>2</sup>, and dominates the country's economy by virtue of generating 60% of Kenya's Gross Domestic Product. Nairobi is located between 1500-1900 meters above sea level and situated at the south-eastern end of the agricultural heartland of Kenya. Its climate is mild with a biannual rainfall pattern, with rainy seasons in March-May and October-December.

Administration of urban areas in Kenya is the responsibility of local authorities under the Ministry of Local Government. Legally, and borrowing from British colonial heritage, Local authorities are bestowed the responsibility for the provision of most urban services. Despite many ordinances the colonialists put in place to strengthen urban administration, they regarded towns and cities as accidents of geographic expansion and, therefore, made no serious efforts to resolve the emerging problems, particularly not those of sanitation.

Today, the colonial pattern of development which sowed seeds of apparent chaos in governance of waste still persists with provision of Waste management and other basic urban services being spatially skewed in favor of the high-income, well-planned suburbs to

the west and northwest of the City in sharp contrast to the inadequately served middle to Low income high-density and/or informal housing settlements neighborhoods to the east of the City are the which play host to over 50% of the city's population.

The provision of basic urban infrastructure and services has not kept pace with the rapid growth of the city resulting in an ever-widening gap between the need for and the supply of essential services.

Because the westernized approach to service provision is failing, alternatives must be explored bearing in mind the need to establish the reasons for the failure of urban service provision.

### ***Nairobi's solid waste situation and statistics.***

Of the total 1,530 tonnes of solid waste generated daily in Nairobi, the CCN and the Private sector collect only about 40 and 20 percent respectively. The balance of about 1,130 tonnes of the total garbage is either left uncollected, or disposed of through burning, dumping in pits and other unauthorized places, or is collected by the numerous Non Governmental Organizations (N.G.Os ), Community-Based groups and other ad hoc or voluntary groups (JICA 1998).

The Nairobi City Council (NCC) is unable to manage solid waste from the point of generation to the point of disposal.

Moreover, the situation is made worse by the public, who litter and appear to have no regard for the beauty of the city, and the City Civic Councilors who have vested interest in waste collection services, and are more concerned with the private accumulation of wealth than the efficient management of urban services. To them, there is money to be made from the lack of good governance for waste. There are also poor relations between the politicians and chief officers.

Further, In Nairobi, waste is still regarded as waste, not as an asset. As a result, waste is currently recycled at a very skeletal and low-key level.

50% of the solid waste generated in Nairobi consists of organic matter. Toxic materials are estimated to be 0.2 % of Nairobi's total waste.

### ***Waste Governance system***

Nairobi City has in place both a public and privatized waste-governance systems, whereby private sector participation is still very low.

In addition, the City employs the expensive method of Mechanical transfer of waste from generation points to dumping sites which reduces litter and spillage.

CCN owns and operates Nairobi's only official landfill disposal site, situated 7.5 Km from the CBD in the Low income- quarter of a million Households populous Dandora High density residential neighborhood to the arid Eastern part of the City. This disposal site has been in use since 1981, is filled with approximately 1.3 million cubic meters of waste sprawling over 30 Acres at present. This is where about 30 per cent of the entire City waste (excluding hospital waste) collected is taken.

Due to absence of waste minimization practices like transfer stations and composting facilities coupled with of poor management, the disposal site is perceived to be full.

Today, there are four major responses to Nairobi's waste / garbage challenge, which depicts disjointed duplication and a near total lack of co-ordination leading to non improving and/or unexpanding operations.

At the most basic levels are people who bury, burn and recycle their household garbage in their own small gardens. Second are the small scale organic waste recyclers who make compost manure. These small scale recyclers lack skills and resources to standardize or market their products. Third, are about 70 private collection companies, who are the beneficiaries of CCN's efficiency vacuum. Resulting from CCN's lack of support and regulation, private garbage- collection companies are still a low-volume business, operating mostly in the city's wealthier neighborhoods. Few have taken the initiative to look beyond waste collection and focus on longer-term management measures such as establishing their own dumpsites due to the prohibitive cost involved.

At the fourth level are industrial-scale recycling firms, who collect waste mainly from large manufacturing concerns, and turn them into useful second-generation products, such as cardboard packaging and plastic containers.

Kenya has approximately 77 statutes that relate to environmental concerns. The failure of the laws and regulations for waste management is largely due to handicaps especially on provisions and sanctions to deal with those who flout them, weakness of the related agencies and the inability or unwillingness of officials to enforce such laws.

Since its inception, the CCN symbolically established a Department of Environment (DoE) in June 1996. Ironically the City was much cleaner in the past when Environment was one of the 11 sections under CCN's Public Health Department.

CCN's approach to solid-waste management is inclined towards more efficient and increased collection and disposal than to sustainable Waste management (reducing generation and disposal problems). This is reflected in the fact that very limited recycling of wastes takes place.

Regarding Private sector participation, DoE's primary role is that of regulator. The Council has yet to institute any performance requirements for registered companies and takes to its mandate without consulting anyone else concerned.

### ***Waste governance and local-government evolution.***

CCN, saddled with waste management responsibility, is controlled and solely relies on the central government for resources and political maneuverability.

Both the central government and CCN lack democracy, transparency, accountability, and cooperation with the public in their operations, and processes and in their relationship with civil society. This is due to the inadequacies of the people in political office plus a high turnover of both political and executive leadership, which negatively impacts on the continuity in leadership needed to build up stable management tradition in CCN.

### ***Financial and technical considerations***

Nairobi's urban management has not been conceived in terms of economic considerations. Starting from the colonial period, successive governments installed infrastructural facilities and services in the low-density (high-income) areas either free, at subsidized rates and, with little consideration of the cost, whereas possible revenues were kept artificially low.

A very small return of the cost of waste management is recovered resulting to unsustainable Waste management systems.

Waste management faces lack of qualified personnel, non –functioning Waste management machines and equipment because of insufficient maintenance, primarily due to difficulties in procuring spare parts.

### ***Citizen participation.***

Limited involvement of civil society in policy formulation, operation and maintenance of Waste management systems and facilities plus exclusion of small contractors in the execution of projects is a salient aspect of governance of waste management in Nairobi.

CBOs and NGOs many of them with funding from donor agencies are playing significant roles in other areas of urban life but have not been involved in waste management to any reasonable degree.

### ***Foreign assistance or intervention in waste management***

Foreign governments and donor agencies - by way of feasibility studies, master plans, donations, encouraging civil society to participate in waste management, cleanups, and prompting and sponsorship of CBOs and NGOs -have been active in waste management in Nairobi and other Kenyan towns.

Although such interventions have helped alleviate Nairobi's waste problems, they have created dependence syndrome, difficult maintenance of foreign sourced machines/equipments, adoption of inappropriate strategies and that emphasis has not been on sustainable and appropriate small-scale technology.

## **Chapter 3. Lessons learnt and recommendations.**

### ***Good governance.***

The paper amply demonstrates that lack of good governance is the root Nairobi City's urban problems, particularly in waste management. Therefore, appropriate structures are urgently needed to ensure good governance.

Nairobi and other Kenyan towns need to emulate experiences from all over the world that depict institutionalization of good governance hinges on democratization and participation. This entails bridging the gulf between the rulers and the ruled and increasing trust, interdependence, reciprocity, responsiveness, and accountability in governance.

### ***Citizen participation.***

Good governance requires the cooperation of the people. A lot of improvements can be made if urban managers and the populace sit together to find ways and means of solving urban problems. People should also be encouraged to establish local-community organizations to enhance urban governance. Central governments should encourage local governments, by example and by regulation, to operate more transparently and accountably, both to themselves and to the citizens.

If systems for solid-waste removal are to be efficient, citizens need to know their daily responsibilities, the routines, the collection timetables, the standard procedures, and the

locational factors. An elaborate system of public education should therefore be called for, with a focus on critical issues, such as methods for waste minimization, collection, storage, and delivery to the refuse dumps and the inherent dangers of giving inadequate or no attention at all to waste.

To ensure a higher level of commitment from the citizens, facilities for solid-waste management should be shared equitably within cities. There is need to even use Geospatial technologies for identifying disparities in spatial coverage of waste collection services. Waste management should be recognized as a public good and a public responsibility.

### ***The revenue base of local governments.***

Nairobi's case reveals that no Waste Management system can be effective without an effective revenue base. More power should be devoted to local Authorities, and statutory responsibilities should be made to match the requisite resources so that local governments can perform the duties assigned to them.

Until the revenue-allocation formula reflects the importance of local government in governance, waste management, together with other local-government responsibilities, will continue to suffer. The path critical to follow is the devolution of power to local governments and the meaningful decentralization of the resource base.

### ***Streamlining of responsibilities***

The present fragmentation of governance depicted by various tiers and agencies of government pursuing their programs and projects with little or no collaboration are a major impediment to good governance, and results in confusion, collision, and inconsistency. Therefore, a more holistic view should be taken of urban planning, so that waste management is handled as a subsystem of a larger planning system, each impacting on the others. Furthermore, the institutional framework for solid-waste management must be reviewed, with a view to reducing the number of institutional actors and clarifying their responsibilities.

### ***Private-sector involvement in waste management.***

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View of the financial constraints and limited infrastructure relative to needs of the public, the private sector should be involved in a reciprocal stakeholder-participatory approach. Infact, Nairobi's Abidjan and Dar es Salaam experience show that the private sector, despite the various problems confronting it, has been more efficient and effective in the management of waste than the public sector.

Thus, to ensure a higher level of participation from the private sector government should streamline their regulations to make them more relevant to local problems and more enforceable and sustainable. In addition, small-scale operators should be encouraged to get involved, particularly at the levels of house-to-house collection and transfer of waste to refuse dumps. Small-scale operators also need regular training and capacity-building, as well as being encouraged to share expertise, experience, and facilities to enhance their individual capabilities.

***Law enforcement and institutional harmonization.***

Being long on policies/laws and short on implementation, the Government should reexamine its laws and regulations to determine their currency, appropriateness, and applicability and then strictly enforce those that are relevant.

There is also need for the harmonization and coordination of local government bylaws and state solid-waste management laws/ regulations and functions.

Furthermore, strategies including fees and penalties, provision of economic incentives, such as tax relief for operators, social facilities for communities, and enlightenment campaigns conducted through the media, should be developed to ensure more effective compliance and enforcement of all laws.

***Cost recovery.***

As limited capacities of the responsible public agencies and institutions to recover their operating costs obtain, thus rendering the City's Waste-management systems unsustainable, the CCN and the Central government are to set measures towards substantially raising the levels of cost recovery through funds and waste-management taxes. More consumers are prepared to pay for waste services if they are efficient and a good mechanism is put in place for revenue collection, along with a penalty for defaulting.

Further, the government should increasingly encourage privatization of waste management, particularly collection, transportation, disposal, and recycling. To ensure unskewed/ effective coverage of the entire city each private-sector establishment is to be compulsorily allocated a mixture of waste collection in both the City's rich and poor neighborhoods. This can introduce an element of cross-subsidy, as the richer areas pay higher rates than the poorer ones.

***Affordable and sustainable technology.***

Another reason for the unsustainability of waste-management systems in Nairobi has been their capital-intensiveness, arising largely from heavy reliance on large-scale imported technology, without local capacities for maintenance and inability perform when it comes to collection from overwhelmingly inaccessible communities and recycling,

This creates the dire need for local construction of practical, effective, and sustainably affordable equipment through the application of appropriate technology, ranging from manual to modestly 'jua Kali' mechanized bins, carts, custom-built vans, shaker-sorters, dryers, badgers, drum digesters, and gasification chambers.

***Waste-recycling practices and options.***

Apart from achieving a cleaner environment, effective recycling of waste is a feasible strategy for employment creation, income generation, and poverty alleviation. Government needs to lead from the front and heavily invest in recycling, and incline its various economic-development programs towards according priority to private sector led waste recycling initiatives.

Development agencies and NGOs can facilitate and encourage the private sector through microcredit programs, to finance both large and small-scale industries for industrial-waste recycling,

Civil society and Concerted community participation is needed to achieve effective waste recycling in Nairobi. This Government can enable this by instituting a waste-management policy to facilitate the process, by way of incentives such as advancing loans, training, granting tax holiday, offering land and reducing the cost and procedures of establishing waste management facilities, and using forums such as public-awareness campaigns focused on engaging the citizenry on reduction of the amount of waste, maximization of practice of separating at source, promotion of small-scale waste-recycling industries, and integration of resource recovery into formal waste management.

***Health, safety, and preventive measures.***

For populations residing in unserved areas, waste workers/ scavengers, workers in facilities that produce infectious or toxic material, people living close to disposal or recycling facilities, and people deriving a livelihood from the dumping areas—and especially those who help to manage waste, the Government should assist them financially, help them form cooperatives, facilitate their training to enable them do profitable businesses, put on protective gear and do first aid incase of injuries.

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