

URBAN WASTE MANAGEMENT IN LARGE CITIES: BETTER CITY MANAGEMENT AND PLANNING FOR DEVELOPMENT RESULTS

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SYNOPSIS

African cities face numerous development risks. Chief among these are health hazards, induced by environmental degradation resulting from mounting waste management challenges. Compounding these are increased rates of urbanization in the region currently estimated at an annual growth rate of 3.5 percent. The causes of poor waste management in the continent include weak institutional and policy arrangement; deficiency of effective urban and land use planning; inadequate financial capacity; and limited devolution and management processes that do not sufficiently incorporate waste management. Behavioral and attitudinal issues are other dimensions, as well as limited waste management know-how and technology. The African Community of Practice (AfCoP) initiated this online discussion as a means of sourcing ideas and strategies on how African governments can better manage urban waste for better development results across the continent. The role of the private sector including informal operators, civil society and community based organizations have been explored in alleviating these problems; as well as that of external assistance (donor support) in bridging the financing gap including limited state budgetary provision, and technological know-how for effective waste management.

Introduction

Under the auspices of the Africa for Results Initiative (Afrik4R), the African Community of Practice (AfCoP) on Managing for Development Results (MfDR) organised an online discussion from **21st February 2015 to 20th March 2015, on the theme “Urban Waste Management in Large Cities: Better City Management and Planning for Development Results.”** This discussion is very critical since it was held at a time when Africa is grappling with the challenge of managing increased urbanisation. By 2020, the number of people living in developing countries is projected to grow from 4.9 billion to 6.8 billion, and Africa is likely to face a compounded risk, as more than half of its population will live

in urban areas by that time.¹ By 2050, the region’s population is expected to grow by 800 million.² Twin risks of this alarming development are (i) increased food insecurity, and hence social instability, and (ii) heightened urban waste management challenges leading to increased environmental and health hazards with increased chances of morbidity and mortality in the region. This knowledge brief, therefore presents the key issues and lessons from the one month AfCoP’s online discussion on Urban Waste Management.

¹ International Food Policy Research Institute, IFPRI, (2000, p.1)

² Food and Agricultural Organisation, FAO, (2011, p.6)

Ensuring effective and sustainable Urban Waste Management (UWM) in Africa has been a perennial challenge and remains a crucial factor affecting the performance of the continent on many fronts, including the achievement of the UN Millennium Development Goals (MDGs). Inadequate appreciation of the context and landscape of UWM in a low-income region like Africa has been a key underpinning of the challenge. Urban waste management is a multi-layered and multi-stakeholder concept characterized by municipal refuse generated “from households, non-hazardous solid waste from industrial, commercial and institutional establishments (including hospitals), market waste, yard waste and street sweepings encompasses the functions of collection, transfer, treatment, recycling, resource recovery and disposal of municipal solid waste.”³

This suggests that, sustainable urban wastes management involves complex and careful development planning processes including optimal/efficient design of organisational, management and technical systems; waste generation processes; rules, regulation and procedures that guide the processes; and facilities for waste handling. Planning helps to capture the varying interests, concerns, roles and responsibilities of key actors involved, including (i) households, community-based organisations and other service users, (ii) local and national government authorities, and (iii) non-governmental organisations, and international community; and should be adaptable and sensitive to the prevailing political, social, economic and environmental context of the particular city and country.

The objectives of this online discussion, were to, 1) Source ideas and strategies on how African governments can effectively manage urban

waste for better development results across the continent.

2) To stimulate dialogue as well as mobilize ideas and experiences on strategies that could be adopted by African countries to promote effective urban planning and management including engagement of private sector, local communities and development partners’ in addressing challenges of urban waste.

3) Specially, the discussion focused on sharing case studies and experience on the following issues:

- Challenges and alternative strategies for urban waste management in Africa;
- Leveraging private and other sector opportunities for effective urban planning and waste management;
- Identifying policies that African governments could put in place to encourage the participation of local and foreign investors in urban planning and waste management;
- Identifying roles of state and non-state actors to curb urban waste and pollution;
- Gender dimension, in ensuring sustainable waste management in the continent;
- Role of international waste movement and best practices in the regional efforts to improve urban solid waste management.

The following sections present results of the discussion, summarized around the issues/ideas identified during the process, backed by relevant literature reviews.

³ p.9.

Causes and Implications of Weak Urban Waste Management System⁴

- Factors impeding effective waste management in big urban cities, including those in Africa: **Wrong attitudes and perceptions** of the people about sanitation issues have contributed to waste management problems in many urban and big cities. In rapidly growing cities of developing countries, UWM systems are currently regarded as one of the most worrying challenge faced by city authorities. About one third to half of all solid waste generated in the third world countries remains uncollected. Incorrect attitudes were emphasized by Kanenga Haggai who reported lack of unwillingness to pay for waste collection services by communities in Zambia. Many of these communities, however, were constrained to do so due to low income, thereby making operations unprofitable and unsustainable.
- **Limited capacity and governance systems** compound the ineffective UWM experienced in these economies, leading to the exhaustion of existing waste collection services, and inadequately managed and uncontrolled dump sites. Institutional arrangements for UWM have been opaque and amorphous, coupled with chronic under-resourcing and rapid urbanization. There have not been adequate regulatory, technical, and financial frameworks, as well as clear

definitions of actors and roles and responsibilities.

- **Urban waste management planning has been generally inadequate** across the developing world, with particular reference to Africa. The complex processes involved in UWM requires optimal/efficient design of organisational, management and technical systems; waste generation processes; rules, regulations and procedures guiding these processes; facilities for waste handling; and identification of the varying interests, concerns, roles and responsibilities of key actors.
- **Limited disposal infrastructure** such as land to accommodate sanitary landfills has stalled urban waste management efforts across the developing world.
- **Inadequate domestic financing for waste management.** James Okot-Okumu especially noted in the case of the East Africa Community States that “waste management has been poorly financed because it is not a prioritised activity in all urban councils. Funds for the operation of the urban councils are mainly from external sources (over 50%) like the central government and donors in the form of grants. The central governments do not adequately cost-evaluate the decentralised environmental management functions implemented by the urban council.”⁵

⁴ Online contribution from Kanenga Haggai, Achala Agarwal Mediratta, and Donald Houessou, as AfCoP members; supported by Peter Schübeler (1996, pp.9-13); UNECA (2009, pp.1-8); Okot-Okumu (2012, p.1).

⁵ Okot-Okumu (2012, p.1).

Inadequate urban waste management has a range of implications

- **Disincentive to tourism and foreign direct investment: The quality of waste management services is a good indicator of a city's governance capacities.** The way in which waste is produced and discarded gives a key insight into how people live. If a city is dirty, the local administration may be considered ineffective and/or its residents may be characterised as insensitive to environmental and public health. This could be a disincentive to tourism and foreign direct investment due to health related issues.
- **Limited development results: Given the rapid rates of urbanization occurring around the developing world with Africa not being an exception,** the importance of an efficient and effective urban waste management system has become more crucial for sustainable socio-economic development. It is evident from the foregoing highlights that optimal development results such as improved health outcomes, environmental sanitation and hygiene, active schooling, longevity and economic growth can be difficult to come by, without effective and sustainable urban waste management and waste in general across society.
- **Wider implications:** The impacts of ineffective waste management extend over a wide range of spatial scales, including the household, the place of work, the neighbourhood, the city, the

wider region, and ultimately the world. This implies that, while the concern of urban waste management currently concentrates in the developing regions such as Africa, the negative externality transcends borders and calls for concerted national, regional and global efforts to deliver effective and sustainable waste management systems.

General Requirements for Ensuring Effective and Sustainable Urban Waste Management⁶

Changing mindsets, attitude, and encouraging recycling

This includes

- Promotion of public information campaigns to encourage urban population to reduce waste streams through the practice of converting **waste into resources**. Resources can effectively be recovered from waste if they are separated at the source, and are treated properly. Emphasis should be placed on “upstream” resource management and waste reduction efforts, as compared to “downstream” waste management options such as treatment and disposal. By reducing production of waste, and by maximising the use of reusable and recyclable material, a city can achieve greater resource efficiency, leading to production of smaller amounts of

⁶ Online contribution from Kanenga Haggai, Achala Agarwal Mediratta, and Donald HOUSSOU, as AfCoP members; supported by Peter Schübeler (1996, pp.9-13); UNECA (2009, pp.1-8); Okot-Okumu (2012, pp.11-12).

physical resources with the same amount of products or services while generating less waste.

- City managers need to be encouraged to pursue Integrated Solid Waste Management (ISWM) and Reduce, Reuse and Recycle (3Rs). The two approaches place highest priority on waste prevention, waste reduction, and waste recycling instead of just trying to cope with ever-increasing amounts of waste through treatment and disposal. Such efforts will help cities to reduce the financial burden on city authorities for waste management, as well as reduce the pressure on landfill requirements.
- In order to ensure sustainable waste management, effort must be geared towards discouraging wasteful use of materials and encouraging waste minimization so as to promote efficient use and conservation of materials. Costs of waste management should be internalized as far as possible in the production, distribution and consumption phases.

Political considerations

This concerns the formulation of goals and priorities, determination of roles and jurisdiction, and the legal and regulatory framework covering the following:

- The need to have a strong political commitment for development and implementation of adequate urban planning and waste management policies, strategies and plans. This is a prerequisite for overcoming the explosion of unplanned human settlement patterns seen in urban

centres in the developing world. This challenge is a common sight in African cities, which have witnessed sprawling of slums and shanty towns thereby compounding waste management challenges when the existing infrastructural capacities are way below demand.

- Society's goals and priorities regarding environmental protection and equitable service access must be clearly articulated by policy makers in order to mobilise popular support and resources required for their realisation.
- A clear definition of jurisdiction and roles is essential to the political sustainability of waste management systems, and strategic plans have the advantage of providing firm basis for putting the defined roles of government authorities and other actors into effect. Clear legislations, by-laws, ordinances and regulations are all critical to the process, but will only bear desired fruit if there is the needed commitment to their implementation.

Institutional arrangement including private sector participation and capacity building

The clear distribution of functions and responsibilities for urban planning and waste management across key actors at a given location is paramount. Involvement of different actors especially the private sector in waste management and urban planning is also important. Generally, the following should be considered:

- Effective waste management must ensure appropriate distribution of responsibilities, among different

authorities and revenues between national, provincial and local governments.

- It requires decentralization of responsibility with commensurate devolution of powers and capacity-building focusing on strategic planning and financial management; ensuring that discrepancies between job requirements for waste management and the actual staff qualifications are resolved, and that adequate training and human resource development are provided.
- A clear and strategic national institutional direction for coordinating waste management issues is crucial to the success of waste management. Placing the coordinating role in the wrong institutions has debilitating effects to success.
- Well-articulated and implemented land use plan incorporating urban waste management, clearly locating sanitary land-fills among others is critical.
- Strong **private sector** participation should be encouraged, phasing out the role of government institutions from service provision to regulation. An effective model of private sector participation is the use of competitive bidding; supporting firms' technical and organisational capacity; and institution of regulatory instruments and monitoring and control systems.
- **Informal waste recovery** and scavenging may be rendered more productive through support measures

and appropriate technical design of the waste management systems.

- Compliance with the efficient waste management principles requires that appropriate systems and infrastructure facilities are put in place to undertake scientific collection, management, processing and disposal of waste.

Waste Management at the household and community level

These include the patterns of waste generation and handling at households and community levels, community-based waste management and the social conditions of waste workers, covering the following:

- Waste generation patterns are determined by people's attitudes as well as their socio-economic characteristics. Attitudes towards waste may be positively influenced by awareness-building campaigns and educational measures.
- In many low-income residential areas, community-based solid waste management is the only feasible solution, but should be functionally linked with municipal system for sustainability. In the same token, even where municipal waste collection services are normal, user cooperation is essential for efficient operation, which is encouraged through general awareness-building programmes and information campaigns.

Internalising health and safety concerns

This should be part and parcel of waste management systems in respect of the following:

- The need to ensure that waste workers health and safety concerns are addressed, especially those in the informal private sector, who live and work under socially precarious conditions and are subject to serious health risks. There is need to improve their working conditions, earnings, and access to social services.
- Sources of hazardous waste materials must be identified, registered and targeted for appropriate management; special attention needs to be paid to infectious healthcare wastes.

Financial Considerations

These relate to budgeting and cost accounting issues; capital investment; cost recovery and cost reduction; impact of services on economic activities; cost-effectiveness of waste management systems; and macro-economic dimensions of resource use and conservation, and income generation. These cover the following.

- Sustainable management requires employment of practical methods of budgeting, cost accounting, financial monitoring and financial evaluation in the process.
- Local governments could be accorded investment authority. User charges, local taxes and intergovernmental transfers are viable options for financing recurrent costs, ensuring clear preference for user charges to promote ownership of services, processes and development. However, to achieve equitable service access, some degree of cross-

subsidisation and/or financing out of general revenues is often needed.

- Fee collection performance in waste management systems is reported as poor across the developing world. Thus, improvement can be achieved through attaching solid waste fees to the billing for another service, such as water supply.
- Furthermore, solid waste service revenues normally flow into a general municipal account, where they tend to be absorbed by overall expenditures. Clear political decisions and autonomous accounting procedures are required to ensure that waste management revenues are employed for the intended purpose.

Economic consideration

These relate to the impact of services on economic activities; cost-effectiveness of waste management systems; and macro-economic dimensions of resource use and conservation, and income generation. It includes:

- The general performance of the state in accelerating gross domestic product and employment is critical to increasing the state revenue generation capacity towards investment in urban and national waste management.
- A fine balance should be ensured between the objectives of low-cost collection service and environmental protection.
- Strategic waste management planning and investment programming should involve economic evaluation.

Design and technical issues

This includes:

- The design of technical facilities and equipment that pays special regard to operating characteristics, performance, maintenance requirements and expected life-cycle costs.
- Paying attention to preventive maintenance, repair and spare parts availability, and design of transfer facilities and equipment that matches the characteristics of local collection systems and the capacity of existing disposal facilities. Local collection systems should be designed with active participation of the communities concerned.

Role of key actors

Role of Non-Governmental Organisations (NGOs), Community Based Organisations (CBOs) and Informal Operators

The role of NGOs, CBOs and informal operators are instrumental in waste management. The following is an example from the East African Community:

In the East African community, the NGOs, CBOs and informal operators have been instrumental in waste management, participating in waste collection, recycling and disposal in the urban areas. These organisations have been focusing “on the less privileged urban communities where they serve more than half the population compared to urban councils and private companies combined.

CBOs are especially noted to be much better established in Dar es-Salaam and Nairobi where they focus mainly on the urban poor solid waste

management.⁷ Informal operators have also been instrumental in waste collection. In these cities they are referred to as *waste pickers* or *scavengers* who collect from public bins, disposal sites and along streets; some are itinerant waste buyers who trade or exchange/barter items from households such as bottles, plastics and old newspapers for mostly fruits and vegetables, the Kampala City in Uganda is well known for this. And there are also waste buying kiosks for scrap metals and plastics. The informal waste collectors operating in urban councils deal directly with households, markets and other establishments.⁸ Furthermore, non-government organisations play important role through awareness raising and sensitization on good waste management practices.

The Role of the Donor Community

Development assistance is noted to have comparative advantage in waste management in the developing world in the areas of policy and institutional development, private sector involvement, user participation, knowledge and technological development/transfer, and hazardous waste management. As noted by the United Nations Economic Commission for Africa, “The international community should support transfer and dissemination of knowledge and technology and foster investments in best practices for environmentally sound management of various waste streams within the African continent. The scale of investments needed for proper sanitation and environmentally sound management of wastes is beyond the capacity of African countries.”⁹

⁷ Okot-Okumu (2012, p.11).

⁸ Okot-Okumu (2012, p.11).

⁹ UNECA (2009, p.8).

Conclusion and Recommendations

A key lesson derived from the above discussion is that having an integrated population policy accompanied by effective implementation mechanism is central in addressing urban waste management challenges. A key source of population pressure in African urban settings is the underdevelopment of the rural areas, compounded by unsustainable extraction of resources from this sector; all of which drive rural-urban influx over and above urban infrastructural capacity to cope with increased population, and hence the waste management problem, among a range of others. Fundamentally viewing contemporary African urban waste management problems from this viewpoint, coupled with the highlights above could go a long way in sustainably resolving waste management challenges. AfCoP and partners have a central role to play as follows.

- Carry out detailed regional analysis of the existing urban waste management frameworks and their implementation experiences, highlighting successes and challenges. The national CoPs could be of tremendous use in this effort for reporting at AfCoP level.
- Encourage presentations on country waste management practices at AfCoP annual and in-year meetings in the coming years to further encourage share of challenges and success stories.
- Supporting sensitization and social mobilisation programmes towards change of attitudes and behaviour is critical in the fight against waste in the region.
- Political will is an identified issue—a missing resource—in the management of waste; and engagement of national authorities through various platforms including regional bodies is critical.

- Also, there is a need to review regional cooperation programmes in light of their sensitivity to waste management issues.
- Engage with existing and potential donors in waste management in Africa.

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