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Editorial Board of the Journal of Policy and Leadership

Foreword

The Journal of Policy and Leadership is published bi-annually (January and June) to advance the study and practice of leadership, policy and public management through publication of articles written by researchers and academicians well informed on the respected fields.

The main purpose of the journal is to bring together a compendium of papers that draw on the Tanzanian and larger African context to advance the science of leadership, policy and public management. By focusing on theory-guided research, we hope to not only stimulate a great integration of leadership, policy and public management but also to propose constructive alternatives and/or future research agendas to guide works in leadership and policy management in Tanzania and Africa.

CONTENTS

Strengthening Participatory Urban Planning for Managing Household Waste in the City of Dar es Salaam, Tanzania

Juma Rashidi Kiduanga[1] and Amina Sufiani Mmaka[2]

Abstract

The research examined the extent to which various stakeholders engage in implementing participatory urban planning for managing the waste generated from housing in the city. The study's findings indicate that the performance of private companies, CBOs, households and Municipal Authorities involved in participatory manner in handling the waste in the studied wards is low. The stages involved by these stakeholders in dealing waste are generation, collection, storage, transportation and disposal. The study proposes the following recommendations for attaining sustainable waste management in the city. First, t*here is a need for the city and municipal authorities to change the mind-set of all the actors to see waste as a resource for production and useful for income generation and urban agriculture. Also, the authorities have to take the responsibility seriously to install waste recycling plants and employ enough staff in all departments of waste management.*

Key words: Waste, Household Waste, Planning, Participatory Urban Planning

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Introduction

The system of providing sanitation service in the form of solid and liquid waste collection in Dar es Salaam is inefficient. As a result waste management has become one of the big challenges to many households and the city. The large volume of waste remaining uncollected has created source of pollution in the city posing increased health risk to many households.

The poor waste management has been persistent with increasing its magnitude in the face of rapid increased urbanization. With an estimated city's population of 4.1 million people in 2009 the daily generation of waste was 3100 tonnes. Out of the amount only 39% was properly collected and reached the designated disposal sites (Mbuya, 2009). In 2013 the city's population increased to about 4.5 million people accompanied with waste generated daily to increase to 4252 tonnes. In February 2018 the population was estimated 6 million while the waste generated was 4,600 tonnes (The Citizen of 27th February, 2018, Tanzania Newspaper).The increase of waste was due to growth of human activities accompanied by low collection capacity level of various partners leaving large proportion of waste (60%) uncollected daily (The Citizen of 27th February, 2018, Tanzania Newspaper).

Large part of the waste is generated from housing when human activities like. Industrial, residential and commercial are being undertaken by different stakeholders (Dar es Salaam City Council, 2004: Dar es Salaam City Environment Outlook, 2011). The sustainable management of waste in the city demands participatory planning because all the households are being involved in producing the waste when they undertake various activities in housing. The paper aims at assessing the way the various partners are involved in managing waste through participatory urban planning in Dar es Salaam. It is organized into five sections starting with section which is about introduction. The other sections of paper are presented as follows:

Theoretical Framework of Participatory Urban Planning for Waste Management

The concept of participation has been integrated in urban planning for the approach to become effective in terms attaining its intended development goals which can benefit all the involved parts. The concept is hinged in democratic governance theory. According to UN-Habitat (2009) report participatory urban planning is a mode of urban governance and is reliant on collective actions of different actors in formulating ideas, policies, programmes and projects and implementing them for the development of the involved partners. Urban systems

are characterized by complex patterns of interdependencies which demand planning being conditioned by collective actions of various actors in a partnership manner.

In the activity of waste management the involvement of different parts is essential in order to realize its sustainable development which is the ultimate aim of good governance. Such achievement according to Schubeter *et al* (1996) is indicated by minimizing waste generation, maximizing waste recycling and reuse and ensuring safe and environmentally sound and disposal of waste. This means that waste management should be approached from the perspective of the entire cycle of material use which includes production, distribution and consumption as well as waste collection and disposal. While immediate priority must be given to effective collection and disposal, recycling should be pursued as equally important with longer-term objectives (*Ibid*…). Cointreau (2001) has also identified the principles that guide a sustainable and integrated solid waste management programme. They embrace good governance. These are provisions of economic service delivery, establishment of cost recovery mechanisms for long-term financial sustainability, conservation of natural resources, public participation, foster environmentally appropriate technologies, seek appropriate levels of recycling and resource recovery. In the present day of intensified globalization the number of actors in managing the waste has increased to involve international partners.

Methods for Data Collection

The collection of the data was undertaken through a combination of various methods. Secondary data were collected through documentary review of research and consultancy reports, policy and legislative documents, books and articles published in various journals. Primary data were gathered through conducting interviews with (a) 600 head of households using questionnaire. The respondent households were from wards of Ilala Municipality. These were Ilala, Kisutu, Mchikichini, Vingunguti, Buguruni and Kariakoo. (b) With the help of interview guide an interview was conducted to the Director of Ilala Municipality and to six Ward Executive officers.

Results and Discussion

Using Participatory Urban Planning for Waste Management

The implementation of Sustainable Dar es Salaam Project which began in 1992 under Sustainable Cities Programme was undertaken through participatory planning by applying the Environment Planning and Management (EPM) process. The EPM is a framework developed

to define the purposes of planning and how it is carried out by involving various actors in a partnership way. There are a number of advantages of involving various actors in the planning.

These include knowledge, skills, labour and financial resources which are important for implementing the planning (UN-Habitat and UNEP, 2004). The EPM has a number of elements. These include the identification of most pressing problems/issues confronting the city; designing the strategies; assessing the required resources for reducing the problems and the ways the actors are involved in implement the planning. The process was done through discussion held in August 1992 by representatives from public, private and popular sectors. From the discussion the following ideas came from the participants as important to address the problems: 1. Improving Solid Waste Management 2. Upgrading Un-serviced Settlements 3. Servicing City Expansion 4. Managing Liquid Waste and Surface Waster 5. Air Quality Management of Urban Transportation 6.Managing Open Spaces, Recreational Areas, Green Belts and Urban Agriculture Potential 7. Managing Economy and Integrating Petty Trading 8. Coordinating City Centre Renewal and 9. Managing Coastal Resources.

Between 1993 and 1997 there was a series mini-consultations involving key stakeholders representing the public, private and popular sectors with the intention of prioritizing the most pressing problems From the discussion waste management was ranked the first position on their list of problems to be addressed through participatory planning with the aim of creating sustainable living environment in Dar es Salaam (Saskia et al., 2000). The main partners involved and the roles they play in managing waste are presented in Figure 1 below:

Partner	Roles
Municipal Authorities	1.Selecting contractors 2.Supervision of the service provided 3. Provide health education and awareness creation 4. Coordinate with heath and other institutions to formulate and implement relevant laws, by-laws, and policies 5.Operation and maintenance of dump sites 6. Cleansing of main streets and roads 7. Building capacities to various actors for managing waste 8. Designing and disseminating innovative and sustainable approaches to manage waste (e.g. economic use of waste, recycling waste) 9. Enhancing skills and developing efficient technologies of waste management to be utilized by other agencies and individuals 10.Keep up to date customer inventory
Leaders at community level	1.Monitoring performance of waste management 2. Awareness creation 3. Enforcement of cleansing laws, regulations, by-laws and policies
Companies, Voluntary Groups and Individual People	1.Providing customers with service of waste collection and disposal 2. Collecting waste collection fees
Clients(Residents, institutions and enterprises	1.Waste generation and deposit in containers 2.Fee payment
External agents	1.Training municipal authorities and companies 2.Providing material support for waste management 3.Network to share experience

Figure 1: Main partners and the Roles they Play in Waste Management in Dar es Salaam

Source: 1.Saskia Bakker, Jasper Kirango and Kees van der Ree (2000) Public-Private Partnership for Sustainable Employment Creation in Waste Management, Dar es Salaam

The Involvement of Partners in Managing Waste in Dar es Salaam

Meaning of Waste

There is a need to understand waste in broad terms. McLaren (1993) refers it as "unwanted materials arising entirely from human activities which are discarded into the environment". The unwanted material concept has also been noted by Davies (2008) who describes waste as unwanted or unusable materials that emanate from numerous sources from industry and agriculture as well as businesses and households and can be liquid, solid or gaseous in nature and hazardous or non-hazardous depending on its location and concentration. There are other scholars who see waste as a concept which is useful to the community. Jones and Hollier (1977) defined as material that has use-value and "a reflection of human appraisal". They further elaborated that just as a material becomes a resource when it gains use value, it also becomes waste when it loses its use-value. Like other resources, waste is also a relative concept or human appraisal because what constitutes waste can vary from one person to another, from one society to another and overtime.

Following this definition according to Dar es Salaam City Environment Outlook report of 2011 revealed the composition of solid waste generated in the city which is largely remains of food and vegetables (60%). In Ilala Municipality a report by Ilala Solid Waste Management of 2012 revealed the composition of remains to waste generated in 1996, 2002; 2005 accounted for 45%; 42% and 42% respectively. The composition of grass/wood to waste generated was 25%, 23% and 22% respectively. The stages involved in handling waste are very important to be known because they will define the role and responsibilities assumed by each actor and the approaches used to reduce the problem. ILO in a report of 2001 developed the management regime concept involving 5 stages. These are: 1. Generation 2. Collection 3. Storage 4. Transportation and 5. Disposal. The recycling however has not been cited in the report. This is also important stage because it is one of sustainable approaches for waste reduction in the city.

Generation of waste

Findings revealed that the amount of waste generated from six wards was about 411 tonnes daily. The percentages of waste generated in wards of Buguruni, Kariakoo, and Vingunguti were 31.1%, 21.7% and 18.9% respectively. These are higher than the waste generated in wards of Ilala, Mchikichini and Kisutu which accounted for 15.6%, 8.4% and 4.3% respectively. The source of waste is housing which accommodates the population involved in carrying out various human activities for their livelihood. Waste is also generated as a result of throwing refuse on streets by hawkers, street traders and customers.

Waste collection and storage

The main storage facilities for waste collected from the households were plastic bags or buckets. Some households dig holes to store waste. They were from Vingunguti (35%), Buguruni (30%), Ilala (30%), Mchikichini (25%) and Kisutu (15%).The study also found that one plastic bag or bucket was used by more than one household as storage facility. The two types of storage facility are contravening a number of bye laws which were passed under the Local Government (Urban Authorities) Act 1982. Among these are The Collection and Disposal Refuse Bye Laws of 2001 Section 4 (1 and 2) and Section 5 which require that each household should use two containers for separation into organic and non-organic waste (Mengisey and Mbuligwe,2005). The residents use these prohibited types of storage facility in the presence of municipal authorities and other institutions empowered to enforce the rules. Such limitation in enforcing the laws by the urban authorities was noted by other studies done elsewhere.

Onibokun (1999) for instance reported 58 pieces of legislations dealing with environment including solid waste enforced by different agencies with duplication of responsibilities impeding effective waste management system. Another limitation noted by the researcher has been the inability or unwillingness of municipal officials to enforce the existing laws on environment. Palezynski and Scotia (2002) observed fragmentation of many legislations relating to solid waste management and those governing public health, environment and local government in developing countries.

The municipal official cited inadequacy of personnel as another factor for failure to enforce the laws and policies governing waste management effectively. This problem was also revealed by Kironde (1999) who found that human resources for waste management in Dar es Salaam were acute which is in the form of managerial and labourers. The reasons for the problem according to Kironde are low wages/salaries and poor working conditions. The problem of lack of enough manpower facing the sector is prevalent in many cities of third world and its causes and effects have been noted by several studies. A study by Onibokun and Kumuyi (1999) reported that the poor waste disposal situation in Third World cities has been caused by the general dearth of qualified personnel in the waste sector. According to him most municipal authorities are unable to attract suitably qualified personnel in various tasks related to waste management such as planning, operations and monitoring. Ogawa (2002) observing the manpower employed in the waste management sector he noted that many officers in charge of solid waste management have little or no training background in engineering or management. Lohse (2003) has also observed that local governments in developing countries generally lack the required capacity and technical expertise to accomplish effective and sustainable waste management programmes.

There are a number of ways the institutions are unable to effectively manage waste in cities of poor countries. According to UN-Habitat (1989) and Zurbrugg (2002) institutional arrangements adversely affect urban management and environment service delivery in particular because many involved in providing solid waste and other municipal services are uncoordinated. Ogawa (2002) has noted that there are often no clear roles or functions of the various agencies involved in urban environmental management. At the same time, no single agency is usually designated to coordinate the activities of waste management. Armah (1993) and Attahi (1999) have therefore observed that the lack of effective coordination among the relevant urban sector agencies often results in different agencies duplicating one function. In the case of externally supported solid waste

management projects. It is common for different agencies within the same country or city to act as counterparts of external support agencies for different waste management projects without any collaboration of efforts. Institutional inefficiencies of this nature can lead to duplication of functions and collapse of solid waste management programmes (UN-Habitat, 1989).

Collection, Transportation and Disposal of Waste

In high income areas in wards of Kariakoo, Kisutu, and Ilala private companies are involved in collecting and transporting waste to dump site. Findings reveal that private companies been performing well in the activity. Evidence indicated that waste collected and transported to disposal site daily was 84%, 75% and 78% respectively. In Mchikichini ward in areas resided by high income residents large volume of waste (70%) is transported to dump site by voluntary groups who are members of Community Based Organizations. This indicates that CBOs have also become more effective than involving individual people to transfer waste. In unplanned areas in wards of Buguruni and Vingunguti the task of collecting and transferring waste is undertaken by individual people. The study found their performance is very poor to the extent that waste collected and properly disposed daily to temporary dumping sites is only 35% and 32% respectively. Many people involved in the activity do not comply with the laws, regulations and policy governing waste management. A large volume of waste collected is dumped on the road sides or into drainage canals or in streams. A study found in Buguruni ward a place near a railway line there is a created dumping site where the individual people dispose waste at night or early in the morning.

CBOs and private companies charge TZS 15,000/- for the service per household per month. Most CBOs hire trucks at a cost of TZS 150,000/- per truck for collecting and transporting the waste to dump site at Pugu. Given the trend of large volume being generated daily the Kisiwani Environmental Group sends four hired trucks of waste to Pugu dumping site at a cost of TZS 600,000/-. In unplanned areas the use of CBOs or private companies is not significant because of user charge principle applied by the CBOs and private companies is beyond the ability of many residents due to poverty.

The service of liquid waste disposal in Dar es Salaam is offered both by private operators and municipal authorities at different charges. The charge of private operators ranges from TZS 10,000/- to 40,000/- and the municipal authorities charge TZS 25,000/- for providing pit-emptying service. A report from many respondents revealed that the charges are higher than the ability of the poor residents who are the majority of city's population. The scarcity of trucks and poor roads particularly in many unplanned areas have increased the difficulty in managing liquid waste sustainably in the city. In these areas the liquid waste is empted haphazardly as noted by Kironde (1999) using the means of hiring specialized people who empty the full pit latrines and dump the contents into nearby hole which subsequently cover with earth. The process is known as k*utapisha*. The study found that in unplanned areas of Buguruni, Vingunguti and Ilala 70%, 80% and 60% respectively of the respondents used such means for emptying their pit latrines when they are full.

Poverty which is in many dimensions is a big problem. It has affected the cleanliness of urban centers in many third world countries as revealed by many researchers. Mobuguje (1975) noted that poor people have been identified to be hostile to the urban cleanliness because of building in unplanned areas which are supplied with improper infrastructure to support their daily life thus spread waste. In Mathare valley, Nairobi the government's efforts to upgrade the Mathere slums that house 300,000 people characterized with garbage, absence of sewage services, clean water, footpaths met a strong opposition from the residents. They went too far as putting a court injunction to stop government's efforts to upgrade the environment and social services in the areas as they were used to the situation (Mobuguje 1975).

Lack of good governance as another dimension of poverty has been noted to affect the cleanliness of many third world cities. According to Devas and Korboe (2000) 'bad governance' municipal governments in poor countries show little regard for the wellbeing of the citizens and so renege on their responsibility to provide basic infrastructure and services to keep the cities clean, healthy and safe. The problem of bad governance is further compounded by lack of effective civil society action to compel governments to enact and enforce effective environmental and sanitation laws and policies and carry out their responsibilities to the citizenry. According to the report by UN-Habitat and UNEP (2004) civil society action is critical for establishing strong laws and policies. A report by Toula (2005) revealed that in 2003 hundreds of residents of Koalack city in Senegal staged a series of demonstrations to complain about the lack of services in their community and vowed to

disrupt government programmes if their demands were not met. Unable to stand the force of demonstrations, the city council held a series of meetings with the protestors to discuss their concerns following which substantial improvements occurred in the city's infrastructure and services.

Recycling waste

Recycling was identified in the EMP as effective and sustainable approach for minimizing waste facing the city. This is a technique by which waste becomes used materials for the production of new products. Other advantages of the technique are people involved in recycling become employed, development of fertilizer for urban agriculture, saving of money will be realized because of reduction in expenditure on transporting waste to dumping site.

Though recycling waste has been recognized as effective and sustainable approach to reduce the problem of waste, its implementation has not been significant. The percentages of waste recycled in Ilala is 16%, in Kinondoni is 18% and in Temeke is 0.5% (Sunday News of June 10, 2012, Tanzania Newspaper). The activity is undertaken in informal manner and confined to few refuse dealers. The study observed that only plastics, animal bones, and steel are recycled. Paper, textiles, remains of food and liquid waste are not recycled. The activity is undertaken at dumping sites and not at waste generation sites. There is no strong institutional support which can promote a culture of recycling. According to Margarita (1992) the culture of recycling needs to permeate all social strata and not just confined to few people.

Conclusion and Policy Implications

The study found that the performance of managing waste in Dar es Salaam is not satisfactory due to a number of constraints relating to implementation of participatory urban planning. On the basis of many findings revealed in the above sections the following recommendations are made to improve the implementation of the approach so as the city can become clean. There also a need for the city and municipal authorities to change the mindset of all the people to see waste is a resource for production and useful for income generation and urban agriculture. The authorities have to take the responsibility seriously to install waste recycling plants; Awareness has to be provided to the public on the importance of clean environment. In addition, there should be enough staff in all departments of waste management should be employed for effective monitoring the activity. Equally important, there should be an enforcement of by-laws for cleanliness should be strengthened. This can be achieved by involving fully the leadership at the grass root level in managing waste.

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