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Private solid waste collection services, Dar es Salaam, Tanzania

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Introduction

IN THEIR DAILY activities, people generate solid waste. Regardless of the procedures used, solid waste needs to be properly managed in a way that minimise risk to the environment and human health. Inadequate collection and disposal of solid waste is a major factor in the spread of diseases and environmental degradation

SWM is a service for which local governments are responsible. However due to a lack of capacity in the public sector, the private sector has stepped in to fill the gap. Private sector contribution in solid waste collection is now a common phenomenon in most cities in developing countries.

Dar es Salaam (DSM) – Tanzania is one among the cities in developing countries in which its solid waste services has stepped in private sector since 1994. Contracting out of solid waste services to the private sector has emerged to fill the gap in service delivery. Despite the successes the scheme has faced constraints during its implementation, and efficiency is still low, only a portion of solid waste generated are collected.

Background

Dar es Salaam is located in the eastern part of Tanzania. The city covers an area of approximately 1,350 square kilometres. It is divided into three municipalities; Ilala, Kinondoni and Temeke. It is one of the fastest growing cities in Sub-Saharan Africa. Dar es Salaam is the Primate city, commercial, industrial and administrative centre in Tanzania. It has an estimated population of about three million and a growth rate of 8–10% per annum.

SWM in DSM is now undertaken jointly by the city authorities, the municipalities and private sector that include local contractors, Community Based Organisation (CBOs), Non Government Organisation (NGOs). Currently the solid waste generation is estimated at 2500 tonnes per day and solid waste collection is estimated at 800 – 900 tonnes per day, which is about 36% of the total waste, generated. The remaining amount of solid waste usually left uncollected is dumped haphazardly around residential areas, burnt, and or buried indiscriminately.

Why involve private sector in solid collection service?

Tanzania in general and DSM in particular do not have an efficient SWM. Local authorities are not presently able to meet the continually growing demand for solid waste collection system. The main reason for the situation is the rapid growth of its population coupled with the expansion of the city, which leads to the increasing quantities of solid waste generated. For example, the waste generated in 1992 was 1400 tonnes/day at the moment is about 2500 tonnes /day, (Ishengoma, 2003). Hence, local authorities experience difficulty in keeping pace with the growing demand of solid waste collection.

The private sector in solid waste collection in DSM has been promoted by the Sustainable Dar es Salaam Programme (SDP) through its project of supporting the DSM city council as it foster new partnerships among public, private and community sector to develop sustainable solutions to priority environmental issues including SWM. (UNCHS, 1994). This SDP was initiated under the global Sustainable City Development Programme (SCDP). Several cities, including DSM, are part of this sustainable network in which SDCP is promoting demonstration project worldwide (UNCHS).

Private sector involvement in solid waste collection started in September 1994. It started with only one contractor that served 10-city centre wards. The contractor was empowered to collect solid waste collection charges directly from the service recipients' (household had to pay some amount of money 'TSh 300 – 800 per month). Presently privatisation covers 44 wards out of 73 city wards, and 20 active private companies are involved, and approx. 60% of the city ward are covered with the service (Chinamo, 2003).

This means the service providers assume the role of an agent and the DSM city council becomes the Principal. The principal has the role of enabling framework including passing bylaws that compel service users to pay for solid waste collection. Enforcing bylaws through monitoring the performance of service providers. The following are some By-laws in place for solid waste collection as mentioned by (Nondek, 2002):–

- By-laws of the Kinondoni Municipal Council (Collection and Disposal of Refuse) By laws, Government Notice No 353, published on 16/11/2001 and

- By laws of the Temeke Municipal Council (Collection and Disposal of Refuse) By laws, Government Notice No.45 published on 25/1/2002.

Before SWM privatisation, the city was able to collect only 2 – 4% of the daily solid waste, for example in 1992 the city generated 1400 tons of solid waste and the city collected only 30 – 60 tons of the daily waste generated (Halla, 1999). The amount of waste collected has continuously increased since 1994 when the city introduced private sector in collection service. The trend since private sector participation is shown below in table 1.

Year	Generation/day	Collection (tonnes/day)	%
1994	1500	185	12
1995	1620	230	14
1996	1772	260	14.5
1997	1850	300	16
1998	1980	380	19
1999	2144	490	23
2000	2200	700	30
2001	2300	750	32
2002	2400	800	33

(Source; Chinamo, 2003)

From the table it can be concluded that the problem of solid waste collection in DSM still exists and needs to be addressed. It shows the waste collected until 2002 is only 33%, and the rest of solid waste generated is often not collected, which accumulates in drains and main holes, open spaces, and some remain closer to residential areas. The accumulation of the solid waste has public health and environmental consequences.

Arrangement of Solid Waste Collection in Dar es Salaam (DSM).

The local authorities handle selection and contracting process. The procedures start with the municipalities inviting suitable firms i.e. local contractors CBOs to provide solid waste collection services including street sweeping, the collection of solid waste and transportation, drain cleaning, grass cutting and removal of dead animals along the streets in the allocated area.

There are bylaws in place as mentioned earlier to support the private sector. The private sector has been given rights to collect prescribed charges from residents. These charges are not included in any other taxes collected by the municipalities or any other authority. The municipalities are responsible for the supervision and monitoring roles, tendering and contracting, dealing with special wastes, tendering and contracting, creating awareness in the

community, co-ordination and reviewing bylaws. The residents are required to participate in solid waste collection by using waste containers which include bags and bins to store waste before collection, in accordance with the private collectors' schedules and paying for the solid waste collection services

Impact of Solid Waste collection by Private Sector in DSM

Involvement of solid waste collection in DSM City has created employment through private companies, NGOs, and CBOs and creating income generation. Currently about 2,300 employees are employed by private sector of solid waste collection. Solid waste collection charges range between TShs 3,000 (equivalent 2.86US dollars) per month in planned areas to TShs 300 (equivalent 0.29US dollar) per month in unplanned area (Chinamo, 2003). Apart from employment and income generation, another important impact is the improvement of the solid waste collection and overall cleanliness of the city. The city and municipal are not involved in primary waste collection and are not responsible for fee collection and paying salaries for most waste workers. However, there are also unresolved issues, which contribute to insufficient provision of the service. Ishengoma (2003) has mentioned some of them as follow;

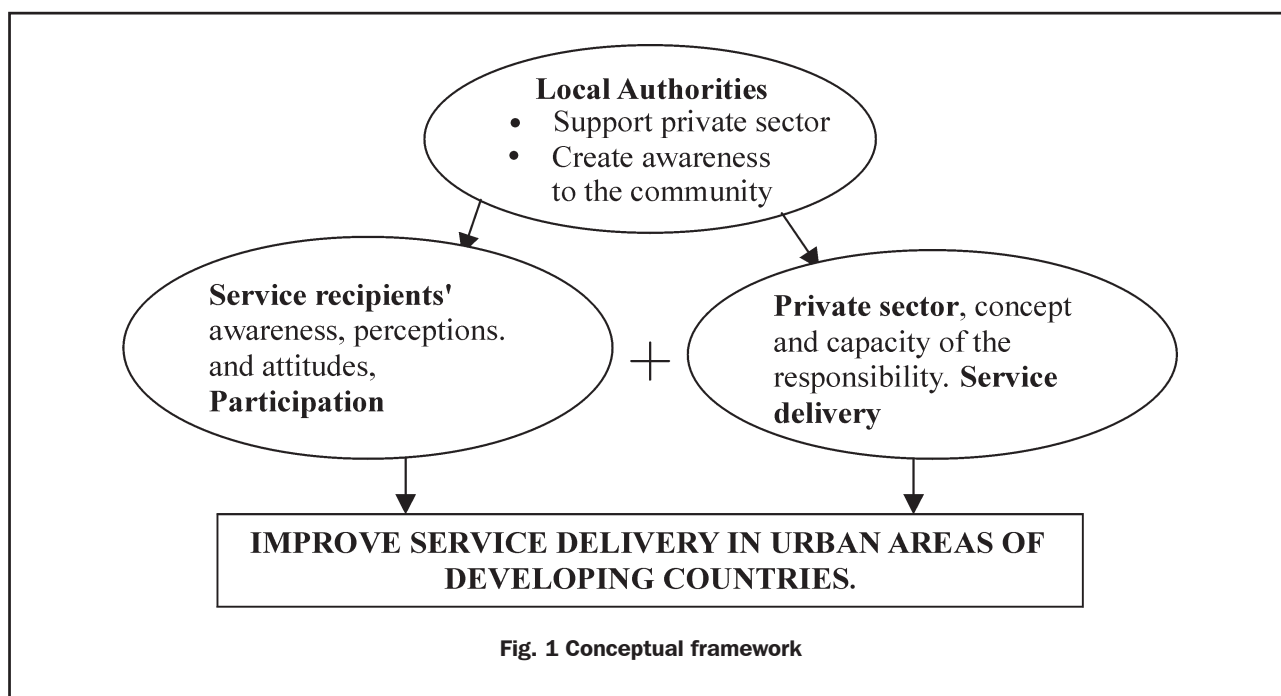
- Many CBOs and NGOs fail to transport waste that they collect to the disposal site because of the high costs involved in.
- Problems associated with the location of transfer sites in the local community neighbourhood.
- Public awareness is still low.
- Rejection of low-income area by local private contractors.
- Insufficient enforcement of bylaws.

Conclusion and Recommendations

It is concluded sustainable partnerships, as per Millenium Development Goal #8 could provide effective solid waste management and employment creation. The private sector in solid waste collection may be more effective than the public sector, but it still needs to be improved by bridging the gaps (some of them have been mentioned above). Since the efficiency of private sector in solid waste collection is still low there is a need to study the local happening in all three major parts of the system (i.e. private sector, public sector and the service recipients). Considering the following; (i) The capacity of the private sector to provide service.(ii) The perception and attitudes of the local authorities towards the private sector and (iii) the perception and attitudes of service recipients towards the private sector. The study will provide with the information regarding the courses and suggest remedies for better improvement. The fig. 1 below shows the conceptual framework for the better improvement and sustainability of the system.

Continuity in municipal governance is essential for ensuring the sustainability of the system; the local authorities

1 Currently 1 US dollar is equivalent to TSh. 1048.



need to be transparent, fair and effective in supporting the system. The private sector should be effective and capable with the provision of services. In addition the community needs to be aware and participate in the system

References

1. Ishengoma A.W. (2003) *Structuring Solid Waste Collection Services to Promote Poverty Eradication in Dar es Salaam – The ILO Experience*. Solid waste collection that benefits The Urban Poor Workshop Dar es Salaam Tanzania March 2003
2. Chinamo E.B.M. (2003) *An Overview of Solid Waste Management and how Solid Waste Collection Benefits the Poor in the City of Dar es salaam*. Solid waste collection that benefits The Urban Poor Workshop Dar es Salaam Tanzania March 2003
3. Senkoro H. (2003) *Solid Waste Management in Africa A WHO /AFRO Perspective*. Solid waste collection that benefits The Urban Poor Workshop Dar es Salaam Tanzania March 2003
4. Mbuligwe S.E (2002) *Potential and Constraints of Composting Domestic Solid waste in Developing Countries: Findings from Pilot Study in Dar es Salaam Tanzania*. Resources, Conservation and Recycling Journal, Volume 36 page 45–59.
5. Nondek L.(2002) *Municipal Solid Waste Management in Dar es Salaam Report prepared for UNIDO*
6. Halla F. and Majani, B. (1999) *Innovative Ways for Solid Waste Management in Dar es Salaam: Toward Stakeholder Partnerships*. Habitat International Journal. Volume 23 No. 3 Page 351–361.
7. Ali, M. and Coad A. (1996). *Micro – Enterprise Development for primary Collection of Solid Waste* Loughborough, Water Engineering and Development (WEDC)
8. Pfammatter, R. and Schertenleib, R. (1996). *Non Governmental Refuse Collection in Low–Income Urban Areas*. Duebendorf, Switzerland, SANDEC.
9. Yhdego, M. (1995) *Urban Solid Waste Management in Tanzania; Issues, Concepts and Challenges* Resources, Conservation and Recycling Journal, Volume 14 page 1–10
10. WB (1994). *World Development Report 1994: Infrastructure for Development*. Washington, World bank; page 52–71
11. UNCHS Habitat (1994) *United Nations Centre for Human settlements News* Volume 16 No.1 April 1994.
12. UN (1993). *The Global partnership for Environment and Development: A guide to Agenda 21* New York, United Nations page 88–94.

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