

#2 SOLID WASTE MANAGEMENT IN LAHORE – PAST AND PRESENT

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1. Introduction

After a long period during which there was little effort to develop the capacity of municipal staff working in solid waste management (SWM) in Lahore, Pakistan, the last eight years have seen new approaches and many attempts to improve services by developing capacity. This paper reviews that changes that have taken place in waste collection services in Lahore, and examines measures that have been implemented to improve the capacity of municipal staff and private sector service providers. It also suggests reasons for the successes and failures of past policies, and refers to current measures that aim to bring improvements.

Lahore is a large, sprawling city surrounding an area of 1770 km² with an estimated population of about 8 million. The total waste generation from all sources is around 5,200 tons per day, of which about 4000 tons is collected.

2. The Past

2.1 Leadership

The evidence suggests that no significant developments in SWM took place until the current century. However many notable initiatives were taken in the short tenure of a dynamic managing director of the Solid Waste Management Department (SWMD) of the Metropolitan Corporation of Lahore (MCL). He worked for about one year and introduced an unprecedented number of innovations. Having a strong formal education (with MBBS, MBA and LLB degrees), he was successful in implementing his innovative ideas mainly because of his extensive experience in development issues and impressive management skills, as he worked with both government and international agencies.

2.2 Institutional Arrangement for SWM

2.2.1 Local Government Administration

The Metropolitan Corporation of Lahore (MCL) was the local government authority and its major responsibility was the collection and disposal of solid waste in Lahore.

Door-to-door collection is widely regarded as the best method of collection, but this method was not used on a city-wide scale by local government in Pakistan. Instead, sanitation workers swept the streets and collected waste mainly from community containers. This method encouraged the general public to throw garbage on the streets, resulting in dirty streets and blocked drains.

Although door-to-door collection was considered to be the most desirable method, there had, for many years, been a belief in MCL¹ that this method would not work in Lahore because of the need to change the behaviour of the public and the huge requirements for trained manpower, finance and supervision. Municipal managers believed that the sanitation workers would not be able to adjust to a new method of collecting waste.

2.2.2 Private Sector Involvement

In view of these problems, MCL turned to the formal private sector to bring the manpower, resources, and new vision needed to introduce primary door-to-door collection. MCL would provide the management and the private enterprises would do the rest. After reviewing experiences with the private sector in other cities, MCL decided to use the franchise system, in which the private sector service providers would collect their income directly from the households and businesses. The franchisees were to be responsible for street sweeping and door-to-door collection, bringing the waste to transfer points from where it would be collected by municipal crews. Municipal inspectors were to check on their work and impose penalties for shortcomings.

The franchise system was introduced with the intention of bringing revolutionary improvements to the cleanliness of the city. Before introducing the system at city-wide scale, it was tried on a pilot scale in six high-income areas. It proved to be successful after a trial period of four to six months. Then the project was formally launched in June 2001 in nine main areas (low-, middle- and high-income areas) of Lahore, with the expectation that it would run for a trial period of one year. These areas were considered to be the most suitable for the system. MCL, with its limited staff, was already working in these areas, so these employees were withdrawn when the franchise system was introduced. The bids of the potential franchisees were assessed according to their proposed service charges for these areas – the charges being preferably less than MCL's quoted rates. An average of six enterprises competed for each area. Some of the enterprises were new to the waste management business.

Before launching the system, there was no attempt to develop the capacity of the municipal staff or the franchisees. This was a totally new system, being introduced for the first time in the history of Pakistan, and both the government and the franchisees were unaware of the implications of the system.

The system failed for three reasons:

- Weak coordination between the MCL and the franchisees (in particular, unreliable removal of waste from the transfer points, and lack of effective monitoring) led to indiscriminate open dumping of solid waste, causing pollution, nuisance and dissatisfaction. These failures were associated with an absence of accountability resulting from the lack of interest of higher officials coupled with the low political priority of SWM.
- Weak co-operation between the communities and franchisees resulted in low participation in the system. The underlying causes for this low participation included the poor quality of the service, insufficient interaction with community leaders, the service charge that was considered to be unaffordable for the residents in low-income areas, and a lack of environmental concern.

¹ There is a list of acronyms at the end of this paper.

- Before introducing the franchise system, all the stakeholders should have been involved in decision-making and capacity building not only to create ownership of the system but also to ensure the sustainability of the franchise system. Since the system was new to all, capacity building of all the stakeholders could have been done with help from overseas SWM experts.

2.2.3 NGO Involvement

A pilot project was launched in an old walled city area in Lahore, serving 36,000 residents. It was not part of the above franchise system, but was a joint venture of MCL and a non-government organization named Youth Commission for Human Rights (YCHR). It was funded by the Department for International Development (DFID), UK. It started in 1999 and ended in November 2001.

MCL Collecting Door-to-Door

MCL also took another initiative to provide a door-to-door collection service in some parts of the city by dividing the whole city into ten zones, the zones into wards, and the wards into units. Unfortunately the inefficiency of the sanitation staff tarnished the image of the MCL. Checks and control of staff were ineffective. There was also laxity on the part of residents who did not put their waste into containers or use bags when getting rid of their waste.

2.3 Capacity Development Programmes

A number of innovative ideas were discussed and subsequently implemented in the period from mid 2000 to mid 2001 by the top management of the MCL. Most of these initiatives were focused on improving the capacity of the SWMD by introducing new ideas. Information about some of these initiatives follows:

2.3.1 Recruitment of Qualified Professionals

Most of the staff had been working in the field of SWM for decades. Some of them were illiterate and others had had some schooling. Aware of the scarcity of qualified manpower, the top management decided to recruit freshly qualified professionals (mostly town planners) into the SWM sector. The recruitment of these professionals not only contributed effectively in reducing graduate unemployment but also gave an impetus to SWM activity. The number of these professions was later reduced, some being transferred to other departments and others leaving following non-renewal of their contracts.

2.3.2 Use of Computers for Record-keeping

To maintain records of the solid waste collected, transported to, and disposed of at the officially designated sites, data covering the whole SWM system were computerised. Forms were prepared to be filled in for different activities so that data from them could be entered into the computerised system for up-to-date tracking of the information.

The computerized records are still being maintained. Use is made of a geographical information system (GIS) for preparation of maps showing administrative boundaries of towns and UCs.

2.3.3 Cost Recovery

Most people in Pakistan consider that waste collection is a service that should be provided at no charge, and they were not willing to pay for the service – especially those living in low income areas. To challenge this misconception, a user fee was introduced.

There were two issues associated with the user fee – firstly, how to collect this amount from all segments of the society given the fact most of the people would not be willing to pay for municipal services, and secondly, how much should be charged. The preferred solution was to add a surcharge (varying according to the area of the house) to the water bill, and this arrangement has proved to be successful since refusal to pay can lead to the cutting of the household's water supply.

2.4 Public Relations

2.4.1 Complaints Cell

A complaints cell (or unit) was also set up in the SWMD of MCL. The purpose was to maintain records of complaints regarding the solid waste collection service and also address them in due course of time. The complaints cell is still in operation because it creates a sense of ownership among the citizens since they have the right to lodge complaints and seek redress.

2.4.2 Mass Awareness Campaign

The mass awareness campaigns were based on stalls of the SWMD set up in different exhibitions. The idea was to create awareness among the public about the working of the Department and the initiatives taken by them.

3. Lahore Today

3.1 Institutional Arrangement for Solid Waste Management

3.1.1 Recent Changes

In June 2001, MCL was dissolved and a new government authority called City District Government Lahore (CDGL) was constituted under the Punjab Local Government Ordinance in August 2001. The district of Lahore was first divided into 6 towns and 150 Union Councils (UCs) instead of 8 zones and 130 wards in the era of MCL. For each UC, there is one Nazim (elected leader) and one Naib Nazim (elected assistant to the Nazim) and there may be several Councillors.

The purpose of dividing the whole city of Lahore into six towns and 150 Union Councils was to decentralise powers to the lowest administrative level. The elected representatives were held responsible for administering their respective districts, towns and UCs by monitoring the SWM activities of the SWMD staff. Following the establishment of the CDGL there was a further subdivision of the city into 9 towns because some towns were too large to be effectively administered by the elected officials.

The management of the solid waste system was decentralised to the UCs to enable elected representatives to monitor the activities of the sanitation staff within their respective jurisdictions. In this new system, one sanitary worker serves 1000 persons each day, but this has led to inefficient SWM all over the district because the workload is too high for the labourers.

As would be expected, these radical changes in the administrative arrangements have not been without difficulties and problems. The CDGL is responsible for a variety of functions and has been encountering many problems at different levels. These problems have been caused by the lack of infrastructure, poor town planning, the lack of expertise, encroachment,

environmental hazards, the lack of machinery, shortages of staff, and inadequate public awareness.

Efforts are underway to overcome these problems. A comprehensive SWM plan (for the year 2007-2021) has been chalked out. The vision behind this plan is to create a zero waste society (in Lahore) by introducing and implementing 3Rs concept (reduce, reuse, recycle), focusing on compliance with laws and regulations, and developing economic incentives, partnership and technology. Other important aspects of the plan include

- ♦ improvement and expansion of infrastructure,
- ♦ private sector management of composting and materials recovery facilities;
- ♦ performance-based wages for SWM staff,
- ♦ efficient use of financial resources,
- ♦ capacity development of the SWM staff; and
- ♦ outsourcing of revenue collection.

3.1.2 Continuation of Earlier Initiatives

The complaints cell is still playing a useful part in regard to customer relations and the computer-based record-keeping system is still in use. Building on this experience with computers, CDGL has developed and maintained its own website where information about the working of different departments can be obtained.

Some of the initiatives taken in the past had significant impacts on SWM. Some of these impacts lasted for only a short time but others have continued to this day.

3.2 Capacity Development Programmes

3.2.1 Leadership

New concepts of in-house training programmes and awareness campaigns were developed, leading to a comprehensive capacity building programme which is due to start by the end of 2008. The catalyst behind these ideas was the District Officer (Planning) SWM. He has been actively working on the implementation of these ideas. He has had the full support of top management so far. He is also concerned to conserve resources, and so he has installed used furniture in the training hall, and used secondary construction materials etc. for its construction. At the entrance of the training hall, he has fixed this slogan "*For hard-working people, mountains look like pebbles and vice versa*".

The following sections mention the main features of this programme.

3.2.2 In-house training

Local training will be delivered in an in-house training programme for lower grades of staff including sanitary workers and sanitary inspectors. The trainers will be trained by international experts. Many of the unskilled employees are illiterate and uninformed regarding the fundamentals of the SWM and health and safety issues. Most of the employees have been working in the SWMD for many years without understanding the implications of their work.

A training hall has been earmarked for the elementary training courses for the lower grades of staff. Each training course will involve about 30 persons (including sanitation workers, supervisors and inspectors). The courses will run throughout the year, each course lasting for one week. The various topics that are planned include solid waste basics, basic principles of SWM, functional elements of SWM, waste generation, waste storage, primary collection,

transport of waste, disposal of waste, recovery of recyclable materials, public education, the economics of waste management, hospital waste management, and composting. After the completion of each course, examinations will be held to evaluate what each participant knows. Promotions and postings of staff will be based on performance in these exams as well as on past experience and records, and this link with participation in training is expected to motivate them to pay careful attention to the training that they receive.

3.2.3 Training at Middle Management Level

Trainings for middle managers and graduate level staff (such as Assistant District Officers) will be provided by local institutions such as Punjab Professional Development, the Sustainable Development Policy Institute (SDPI), and the Urban Unit of the Planning and Development Department (P&DD). The Urban Unit has also been asked to develop a syllabus for training middle-level managers.

Additional training will be provided by other government organizations using invited speakers from overseas. One example of such events was the four-day training course in 2007 entitled "Integrated Solid Waste Management in Punjab" which was organized by the Urban Unit (P&DD) in collaboration with the World Bank and the Korean International Cooperation Agency, using SWM experts from the Korea Environment Institute and Sudokwon Landfill Site Management Corporation. The aim of the training was to address the institutional deficiencies in SWM services at local level. The training was attended by the SWM staff including Sanitary Inspectors, Chief Sanitary Inspectors, Deputy District Officers, Urban Planners and other staff belonging to various government and private sector entities such as CDGs, Tehsil municipal administrations (for small cities divided into Tehsils and not towns), Urban Units, Cantonments, and the Defence Housing Authority all over Punjab province.

3.2.4 Urban Unit

The Urban Unit is playing a pivotal role in institutional strengthening of the SWMDs in various cities. It was established in March 2006 as a Project Management Unit within the Planning and Development Department (P&DD) of the Government of the Punjab. It has been offering its services only in Punjab province.

The Urban Unit is headed by Project Director (who was the Managing Director of SWMD of MCL during the period mid 2000 – mid 2001). It is staffed mostly by qualified and experienced foreign professionals in various fields such as Urban Planning, Urban Transport, SWM, Urban Water & Sanitation and Municipal Finance.

Recently, the Urban Unit has been working on several projects under the heads of Urban Planning, SWM, Urban Transport, and Municipal Finance. The projects under the head of SWM include; "Consultancy for Integrated SWM in Punjab," "Integrated SWM Plans for Cities in Punjab," "Institutional Capacity Building of SWM Departments in Punjab," "SWM Equipment Technical Specifications," and "Data Collection for GIS."

As part of the project entitled "Institutional Capacity Building of SWM Departments in Punjab," the Urban Unit recruits professionals from outside and trains them using the resources already available within the cities. The recruitment is based on a written test followed by interviews of the qualified candidates. The recruitment of project officers is in progress. The ultimate aim of the project is to enhance the capacity of the cities in terms of the number and quality of people working in waste management. After training, the professionals will be posted to nine cities to enhance the capacities of their respective departments.

The Urban Unit is also working in other ways to upgrade institutional capacity in SWM. Recently, the Urban Unit prepared a comprehensive institutional realignment plan for one of the towns of the city of Lahore and submitted it to the SWMD of CDGL for its approval. The plan includes proposed revisions to the organizational structure (including new appointees such as area managers and social mobilizers) as well as provision for funding. Once approved, the plan will be implemented under the supervision of the Urban Unit. Unfortunately, no progress has been made on this endeavour up to the time of writing. Such initiatives should be given top priority on the political agenda. If this plan is approved and successfully implemented in one town, it will be replicated in other towns.

3.2.5 International Training

International training opportunities are already being provided for executive class people (Assistant District Officers, Deputy District Officers, District Officers etc.) once a year by the SWMD. These training programmes are conducted overseas in various countries, such as Japan. Two places are available each year to get training in a range of subjects including waste storage, recycling, and health and safety. The duration of international training courses varies, typically from 1.5 weeks to 10 weeks.

3.2.6 Awareness Campaigns in CDGL Institutions

Awareness campaigns will be launched in CDGL female institutions (for all levels), initially with the help of female staff. The motive behind these campaigns is to educate children to keep their surrounding environment clean by reducing wastage, reusing waste and throwing garbage into the designated containers. This is a pre-requisite for any SWM system to work efficiently in a society.

As part of the campaign, lectures will be delivered on various topics related to SWM. In addition, items made from recycled materials will also be displayed to show the children the value of waste. Educating children in this way will not only create awareness among children, but is also expected to raise the awareness of their parents. Parents learn and respond when influenced by their children.

3.2.7 Additional Impacts

It is abundantly clear that the focus of the SWMD on capacity development of the existing employees is unlike the situation in the past. The initiatives and programmes currently being planned will bring further significant changes in the system. The training of the sanitation workers will not only help them understand the basics of SWM but also promote awareness among the service beneficiaries because these employees are the primary interface between the SWMD and community. Likewise, the awareness campaigns in schools and colleges will not only educate the children – and indirectly their parents – but also promote cleanliness in the neighbourhoods.

4. Conclusions

The observations described here illustrate the importance and impact of leadership on standards of SWM services, and raise the issue of how senior managers themselves can develop their own knowledge and expertise to face new challenges.

The present local government administration is striving for improvements in SWM services, as some administrations have done in the past. Some of these initiatives in the past were implemented successfully and some lasted only for short periods of time. Capacity development programmes are regarded as a necessary tool for achieving better performance.

The success or failure of these programmes depends upon the motivation and commitment of top management.

A major obstacle faced by the waste management sector is that the managers who are concerned to bring innovation and improvements are often either replaced or posted elsewhere because of a change of government or for some other reason. Another common challenge is that SWM is not given a high priority on the political agenda. Sometimes, important decisions are avoided because of this low political priority. Effective advocacy to persuade decision-makers of the importance of good waste management is needed as an ongoing activity, to reach new administrations and to remind existing ones.

Another important aspect, which has not been discussed here in detail, is the role of academia (universities) and other institutions such as the Urban Unit (P&DD) and SDPI, which are also working for the improvement of SWM services by carrying out research and providing training to waste management staff. The people in these organizations who can have the greatest impact are those who are not only highly qualified but also experienced in SWM and hence able to provide practical solutions to the problems being faced by municipal managers.

Training overseas and training provided by international experts can be of great value if the content of the training is well suited to the conditions, degree of development, socio-economic status and local challenges of the situations in which the trainees work.

The benefits of involving the private sector can be realised only if the government side creates a favourable and enabling environment, particularly in terms of sharing risk and ensuring transparency, and also commits resources to fair and effective monitoring of private sector operations.

List of Acronyms

CDGL	City District Government Lahore
CDG	City District Government
DFID	Department for International Development (UK)
GIS	Geographical Information System
MCL	Metropolitan Corporation Lahore
P&DD	Planning and Development Department
SDPI	Sustainable Development Policy Institute
SWM	Solid Waste Management
SWMD	Solid Waste Management Department
UC	Union Council
YCHR	Youth Commission for Human Rights (NGO)

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