



Solid waste management in urban Bangladesh

S H Bhuiyan, Germany

IN BANGLADESH, URBAN local governments, i.e. city corporations, municipalities are formally responsible for urban waste management. The conservancy department, as an administrative organ of the corporation/municipality, has the responsibility for solid waste management (SWM). In this short paper, an attempt has been made to shed some light on how the conservancy departments of both Dhaka (herein after called DCC) and Chittagong city corporations¹ (herein after called CCC) operate in practice, and therefore also to understand why there is a discrepancy between the ideals and realities.

The scope of the paper is limited only to discuss the SWM system of both DCC and CCC and the author collected data and information used here during his fieldwork in June–August 2000.

Work process of the conservancy departments of CCC and DCC

In this section, I shall at first briefly describe the work process of CCC and then the description on the work process of DCC will follow.

Work process of CCC

The 41 wards² of the CCC have been grouped into two categories: (i) conservancy wards [24 wards], and (ii) non-conservancy wards [17 wards]. These 41 wards are divided into six conservancy zones. A zone contains both types of ward, conservancy and non-conservancy. At present, conservancy wards cover almost half of the city (total area of CCC is 60 sq. km.) and receive regular conservancy services including sweeping streets, cleaning roads, lanes and drains, emptying garbage from the collection bins etc. In the non-conservancy wards, such services are provided relatively less frequently and are irregular. The city does not operate a door-to-door³ solid waste collection system (Ashraf, 1994:62).

According to the CCC, the 1740 sweepers clean the city in *three* different groups⁴. Hasan (1998:192) stated that the *first* group clean the roads and streets and collect the rubbish using manually drawn carts or bamboo baskets. This collected rubbish is then dumped at some intermediate collection points. The *second* group cleans the roadside drains and collects the silt and the solid waste (which has fallen into the drains) and either carry it to the nearest intermediate dump site or garbage bin, or make another pile on the side of the road. The *third* group of people collects the waste from these sites and hauls it to waste

dumping sites. The city has now only one dumping ground and it is located at *Halishore*. Ashraf (1994:67) and Khandaker (1995:51) observe that the whole cleaning task in CCC is done in the following three stages:

- The residents themselves take domestic refuse from households to the intermediate dumping points;
- Street and drain waste is collected and dumped at intermediate disposal points by the corporation sweepers and cleaners;
- Final collection from the intermediate points and its disposal to the dumping yard.

About 3.9 million (including 0.8 million floating) of CCC people generate, according to the conservancy department, about 500 tons of waste per day in winter and this increases to approximately 600 tons in summer. Ashraf (1994:71) notes that in 1991 solid waste was generated in Chittagong at the rate of 0.415 kg/capita/day while in the same year the rate for DCC was 0.35 kg/capita/day.⁵ The activities of the conservancy department, particularly cleaning roads and drains and garbage collection are limited to daytime, i.e. from 6 o'clock in the morning to 6 o'clock in the evening.⁶

Work process of DCC

The 90 wards of the DCC have been divided into ten administrative zones. Unlike CCC, all wards in the DCC receive regular conservancy services. All service users, according to the provision of rules of DCC ordinance, have to pay a 2 percent conservancy tax with their annual household taxes.

According to the Chief Conservancy Officer (CCO), DCC currently employs 5500 sweepers to sweep roads/lanes and clean drains.⁷ Like CCC, the three fold conservancy services by three different groups are also provided by the DCC (Hasan, 1998:192; Paul, 1991). Formerly, the cleaners (mainly the female sweepers) of DCC were supposed to sweep the roads and lanes, and clean the drains in three shifts: morning, day, and night—within the officially assigned duty hours between 6 am—2 pm, and 7 pm—3 am (Asaduzzaman and Hye, 1998:388). Usually garbage collection and delivery to the final dumping ground(s) is done during the night. There were four dumping grounds in the DCC namely: (i) Matuail, (ii) Gubtoli, (iii) Amin Bazar, and (iv) Badda (*The Daily Star*, a vernacular English daily, internet edition, 13 November 2000,

<http://www.dailystarnews.com>). At present, only the dumping ground at Matuail is in use.

The system of solid waste collection in the DCC, as Asaduzzaman and Hye observe, may be termed as a 'dust-bin-based' (including of course, demountable containers) collection system. Dustbins together with demountable containers account for about 66 percent of solid waste, followed by 'enclosure' (15 percent), dust-shoot on street collection (10 percent), and block collection (9 percent). Door-to-door collection systems cover only a negligible volume of the waste (0.1 percent) (Asaduzzaman and Hye, 1998:389-390).

Almost 10 million people live in 360 sq. km. area of the DCC. Everyday the city generates, according to the conservancy department, around 3000 tons garbage in winter and around 4000 tons in summer (source: interview of the CCO by the author on 21 June 2001).

In the following section I shall briefly describe my field observations about how the conservancy departments of both DCC and CCC operate in practice.

Discrepancy between the ideals and realities: a note

It was observed that the conservancy departments of both DCC and CCC do not operate in accordance with the rules and regulations of the corporations. For example, recruitment of sweepers and other supervisory staff was carried out in both corporations violating the recruitment rules - without using a competitive selection process. This method of recruiting means that one's *own* people are appointed - two of my respondents from the DCC report. They further informed me that one might be considered as 'their' *own* people if one could establish a contact with *boro babu* (political/CBA leaders or their agents) either through a political channel or through a monetary contract, or both. One of my respondents from Dhaka reported that one of her relatives was appointed (in 1999) as temporary *jharuder* (sweeper) at the cost of Taka 13,000 (approximately USD 235). The parent of the incumbent sold most of their belongings to accumulate the *ghosh* (bribe) and they agreed to do so, according to my respondent, because a corporation job is relatively secure and this ensures some money (salary) at the end of the month.

About the system of recruitment, a sweeper in CCC gave the following statement, "I have managed this *methorgiri* (to work as sweeper/cleaner) by paying Taka 10,000 (app. USD 181) to *shahabs* (boss)." The reason for payment of the bribe is like the earlier one. This informant told me that everyone connected to the recruitment process gets a share of the bribe, s(he) may be either a political master or a public servant. According to him, the suitability of a candidate is measured either on the basis of the amount of money (*ghosh*) the incumbent agrees to offer to the middlemen or the degree of affinity of relationship with a political party, particularly with the ruling one. 'Our political leaders may have diverse opinions about solving a national

issue but differences of opinion disappear when a bribe pops up'-this person further added.

It was also observed that most of the employees of the conservancy departments of DCC and CCC were entrusted with the activities of CBA (only in CCC) and other associated groups and hold almost all-important positions of such associations. Formerly, the main mission for the formation of CBA/association was to protect employee's right and privileges and also to bargain with the authority(ies) to realize the logical demands of the employees. Most employees do not carry out these formal tasks, the CBA/association leaders normally do not want to work. Mr. Nazmul Hasan, a reporter of the *Daily Ittefaq*, reports that about 50 percent of the conservancy staff of the DCC receive their salaries without doing any work. Thus, according to the report, the corporation is losing about Taka 50,000 (app. USD 90,900) per month (The Daily Ittefaq, 30 July 2000). This report further added that the non-working sweepers live in various sweepers' colonies of the corporation, receiving a salary every month by giving *bokhra* (bribe) to their *gurus*.

Most of my respondents (80 percent) in both corporations report that if the authority takes any disciplinary action against their members, the association leaders in co-operation with the conservancy staff employ various techniques, such as - *gherao*, dialogue with top officials, blockade of roads/streets, stoppage of work etc. to force the authority to withdraw the action. It is widely believed that political patronage encourages association leaders to organize such initiatives.

The sweepers are organized into teams of certain numbers to perform their tasks. Formerly, as mentioned earlier, sweepers work in three different groups. But the real situation is worse and contrary to the formal method. According to my observations it is usual for only 1/2 out of 4/5 sanctioned sweepers to work in a designated area. The absent sweepers, as reported by the informants, are engaged in other work in addition to the corporation job. Moreover, it was also observed that the sweepers of both corporations prefer to clean the roads and drains of the privileged (politically well connected, economically better off and educated) areas than that of the less privileged or poor areas. The essence of my observations is reflected in the following statements of two sweepers of *Jalalabad* ward in CCC: "...we prefer to work in those areas where *boro lok* (rich man) lives in because *bokshish* (monetary gain) awaits them if their work has pleased them."

Lack of human, material, and economic resources contribute to the inappropriate functioning of the conservancy departments of both CCC and DCC. Khandaker (1995:60) indicates that for satisfactory cleaning of a city area at least two sweepers are required per 1000 population. According to this calculation, it appears that both corporations are lacking in human resources (see footnotes 4 & 7 to get a glimpse on working employees in both conservancy departments) compared to their actual requirement.

With regard to material resources, the conservancy department of DCC has 35 covered, 104 demountable, and 190 normal trucks, 3000 hand drawn carts, 4500 dustbins and 410 demountable containers. On the other hand, the conservancy department of CCC owns 30 covered, 10 demountable, and 33 normal trucks, 42 vans, 220 hand drawn carts and 1348 dustbins (Asaduzzaman and Hye, 1998:390; Bhuiyan, 2001:73). The staff from the conservancy departments of both corporations have stated that these resources are inadequate for collecting the garbage generated daily.

In spite of the presence of human and material resources, organizational objectives cannot be properly achieved without adequate financial guarantees. This financial guarantee greatly depends on the central government which approves the annual budget of the corporations and also provides a considerable share of it. Unhealthy relationships prevail if a city government belongs to a political opposition rather than that of the central government. The Nazrul Islam et al. study shows that the attitude of the Bangladesh Nationalist Party (BNP) government towards the DCC was so negative that the immediate past city mayor publicly accused the government of shrinking and blocking funds needed for development and municipal services. According to these authors, it was widely believed that since the immediate past city mayor belonged to the opposition Awami League (AL), by deliberately withholding the funds the government intended to publicly discredit the mayor and his administration (Islam et al., 2000:149). Almost every day newspapers report such stories regarding the prevailing difficult relationship between CCC mayor (a leader of the opposition AL) and present BNP government.

Why discrepancy occurs?

It is apparent from the foregoing descriptions that the conservancy departments function in accordance with the basic characteristics of the politico-administrative system of the country, e.g., corruption, nepotism and favoritism, bending of rules and regulations for personal gain, bureaucratic loyalty to the political parties, conflict between the party in power and the opposition. Moreover, power conflicts within and outside organization stem from the typical characteristics of the political culture of Bangladesh, which in turn, impinges upon the operational activities of the conservancy department.

References

- Asaduzzaman, M. and H.A. Hye (1998), "When Both Market and State Fail: The Crisis of Solid Waste Management in Urban Bangladesh," in R. Sobhan (ed.), *Crisis in Governance: A Review of Bangladesh Development 1997*, Dhaka: Centre for Policy Dialogue and University Press.
- Ashraf, A. (1994), "Solid Waste Collection and Disposal in Chittagong: Problems and Prospects," *Bangladesh Urban Studies*, Vol. 2, No. 2.
- Bhuiyan, S.H. (2001), *Solid Waste Management Organisation in Urban Bangladesh: Ideals and Realities*, unpublished M.Phil. dissertation, Bergen: Department of Administration and Organization Theory, University of Bergen.
- Hasan, S. (1998), "Problems of Municipal Solid Waste Management in Bangladesh: An Inquiry Into Its Nature," *Habitat International*, Vol. 22, No. 2.
- Islam, N. et al. (2000), "Reforming Governance in Dhaka, Bangladesh," in N. Islam (ed.), *Urban Governance in Asia: Sub-regional and City Perspective*, Dhaka: Center for Urban Studies and Pathak Shamabesh.
- Kairai, P. (2000), "Comments," on the article of J.T. Otieno and S.O. Wandiga, "The Public and Private Sector Partnership Approach to Sustainable Municipal Solid Waste management and Improvement of Social Services Delivery," *Regional Development Dialogue*, Vol. 21, No. 2.
- Khandaker, M.A. (1995), "Role of Chittagong and Khulna City Corporation in Solid Waste Management," *The Journal of Local Government*, Vol. 24, No. 1.
- Paul, K. (1991), "A Note on the Solid Waste Management of Dhaka City Corporation," *The Journal of Local Government*, Vol. 20, No. 2.

Notes

- ¹There are six city corporations in the country located at the divisional cities namely: Dhaka City Corporations, Chittagong City Corporations, Rajshahi City Corporations, Barisal City Corporations, and Sylhet City corporations. The ordinances for constituting the latter two corporations have passed by the parliament on the 4th April 2001. The total number of municipalities is 203 as of September 1999. (<http://www.bbstats.org/Datacentre/Chap01/0101.htm>, accessed on 22 May02).
- ²Ward is the lowest administrative unit of urban local government having a population of around 15,000 to 40,000 (Ashraf, 1994:75).
- ³After the introduction of healthy city project in Chittagong in 1995, Jamal Khan and North Kattali wards have been declared as healthy wards. Door-to-door garbage collection by the corporation sweepers is done in these two wards only.
- ⁴In addition to the conservancy staff, there was 90 supervisory staff in the CCC (Bhuiyan, 2001:72).
- ⁵The rates of generation of solid waste in both DCC and CCC are quite low in comparison with other Asian cities. According to a statistics of 1990, per capita waste generation of selected cities in Asia was as follows: Manila (0.5 kg), Karachi (0.5 kg), Jakarta (0.8 kg). Moreover, the same statistics shows the rate of per capita waste generation in the industrial countries ranges between 0.7-1.8 kg, middle-income countries 0.5-0.9 kg (Kairai, 2000:10). In a recent conference held in Dhaka, Zinat Reza Khan of the Dubai University, told that the

city Dubai generates 3-4 kg solid waste/person/day while in Bangladesh it is only 0.5 kg/person/day (The Daily Ittefaq, a vernacular Bengali daily, internet edition, 14 July 02;

<http://www.ittefaq.com>).

⁶In order to receive the conservancy services, the residents of the conservancy wards pay 7 percent conservancy tax per annum payable along with their household taxes while the rate for the non-conservancy wards is 4 percent.

⁷In addition to 5500 sweepers, there were 135 supervisory staff in the DCC (Bhuiyan, 2001:72).

SHAHJAHAN HAFEZ BHUIYAN, Centre for Development Research (ZEF), University of Bonn, Germany.
