

**SAI Bangladesh faces new
challenges; outcome of a wastes
audit**

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1. Background, audit objectives and scope

SAI, Bangladesh has been consistently thriving to get into environmental audit, particularly after the very successful IDI-WGEA international workshop on environmental auditing, held at Antalya, Turkey. Participation in the workshop has resulted in clear awareness building of our SAI and skill formation to some extent.

Waste is now focussed as the second key theme, next to water, for environmental auditing. Rapid urbanization and industrialization process in general and the phenomenal growth of Dhaka city has necessitated our SAI, to emphasize wastes management. Dhaka City Corporation (DCC) is the only formal organization responsible for management of wastes, including solid wastes of Dhaka City, spends annual budget of around 400 Million TK (1 USD=59 TK).

A population of 12 million within 36 sq KM of area generates around 3000-4000 tons of wastes everyday. It was therefore imperative that the audit had to concentrate on the activities of DCC, for evaluating wastes management of the city.

Audit objectives:

The audit has been aimed at the following objectives:

- (a) To assess effectiveness of Dhaka City Corporation, in professionally managing wastes of the city
- (b) To evaluate adequacy of budgets, manpower and equipment, of the corporation, in professionally managing wastes
- (c) To examine adequacy of regularity instruments, including empowerment of DCC
- (d) To evaluate adequacy and appropriateness of national wastes policy, within the national environmental plan
- (e) To examine the effectiveness of industrial and clinical wastes in the city.

Scope of the audit

The scope of this particular audit covers the following areas and entities:

- (a) Dhaka City Corporation, the only formal organisation for wastes management of Dhaka
- (b) Department of Environment, the government agency, responsible for assisting the government in framing national environmental policy/plan, including policy for wastes management and monitoring implementation of such policy/plan.
- (c) Ministry of Environment, the apex government body, responsible for environmental policy planning, preparation and issuance of necessary guidelines.
- (d) Selected health-care centres, as major generators of clinical wastes
- (e) Selected industrial units, as important generators of industrial wastes

Approach and methodology

The audit has followed performance auditing techniques. We took recourse of (a) review and examination of documents of DCC, (b) testimonials/interviews of concerned officials of DCC, Department of Environment (DOE), (c) physical inspection of waste sites/dumping sites, (d) analysis of researches/ papers prepared by NGOs, Universities and research institutes and (e) opinion of cross-section of citizens.

2. Summary of the major audit results

Finding_1: There is no detailed policy/procedure for wastes management. Dhaka City Corporation (DCC), responsible for wastes management of Dhaka, does not maintain any detailed and written procedure for wastes management.

Audit recommendation: DCC should develop a written and well-documented policy/procedure for wastes management, showing (i) clear responsibility of DCC, (ii) detailed work-plan (procedure) for each stage of the waste stream, (iii) written safety procedures for collection and transportation of wastes and (iv) written safety procedures for dumping

Impact: It is expected that DCC would now try to develop a detailed and documented wastes management policy, leading to more controlled and improved wastes management.

Finding_2: The DCC ordinance is not adequate to facilitate wastes management of Dhaka City. The DCC ordinance of 1993 does not cover waste stream, a basic concept in waste management. Such important aspects like classification of wastes and prevention of wastes are not covered. Disposal of industrial and clinical wastes is also not mentioned in the ordinance.

Audit recommendation: Audit has strongly recommended, that the ordinance should be updated, taking into account the present needs.

Impact: The proposed changes would need a parliamentary processing and would take some time to frame it. However, the proposed changes in the ordinance, when come into effect, would give the necessary legal and policy instruments, to significantly reduce the present environmental and public hazards.

Finding_3: DCC does not maintain separate collection and disposal of hazardous wastes. As there is no classification of wastes, all wastes, irrespective of their differences in properties and risks, are collected and land-filled indifferently.

Audit recommendation: DCC should immediately decide to separate, the collection and disposal of hazardous wastes. It is imperative that it should first identify the hazardous wastes and develop a separate and written procedure for management of hazardous clinical wastes.

Impact: The wastes management authority is already seriously thinking to separate, collection and disposal of hazardous clinical wastes. Complying the audit suggestions (separately treating hazardous wastes) would lead to reduce risks of contamination of diseases, public health hazards and environmental pollution.

Finding_4: No pre-treatment of hazardous wastes including hazardous clinical wastes. The failure of DCC to pre-treat the hazardous wastes has resulted from (i) Lack of classification of wastes, (ii) Indifferent treatment of hazardous wastes, (iii) lack of pre-treatment facilities and (iv) illegal deposit and land filling of wastes.

Audit recommendation: Audit has recommended that DCC should immediately classify hazardous wastes and go for appropriate pre-treatment procedures. The wastes management body should take strong measures for necessary funding and /or tax policy, right type of pre-treatment procedures etc.

Impact: Earlier the authority goes for the required pre-treatment of hazardous wastes, earlier the city-dwellers can have the benefits of lesser growth of microorganisms/carcinogenic elements and the associated risks.

Audit finding_5: Management of industrial and clinical wastes not adequately covered in national environmental policy. No specific rules/regulations are available now, nor there is sufficient monitoring/monitoring policy of such wastes management.

Audit recommendation: Audit has strongly suggested that wastes in general and industrial and clinical wastes in particular, should be adequately covered in national environmental plan and that specific rules/regulations should be framed.

Impact: The results from the proposed amendments in the national environmental plan are estimated to give new guidelines for management of industrial and clinical wastes, leading to more controlled situation and better monitoring.

Audit Finding_6: Poor-quality dumping/land-filling in the form of (i) land-filling in the residential areas, (ii) open and scattering landfilling sites, (iii) haphazard burning and (iv) illegal landfilling sites.

Audit recommendation: Audit has suggested that the corporation should seriously try to develop modern and safe land-filling sites and should target to develop those, far from the city. The corporation should decide on an optimum solution.

Impact: Development of modern land-filling sites, away from the city and locality, will quickly reduce the running risks of environmental and health hazards.

Audit Finding_7: Poor management of waste sites exist in the form of (i) open, deformed bins, (ii) overflow of wastes, (iii) large volume remains uncollected.

Audit recommendation: Audit has recommended for proper maintenance of the bins, exploring the possibility of providing lids/covers for the bins and gradually replacing the existing bins with covered and moveable ones and increasing number of bins and the command area.

Impact: A better management of waste sites as per the audit suggestions, may lead to a major improvement in water and air quality in the city and reduce risks of contamination of diseases/epidemics through rodents/insects.

Audit Finding_8: Illegal waste sites were seriously endangering environmental quality of the locality. Deposits of most of the illegal wastes are not usually collected and remain on the streets/drains and greatly contribute to pollution of surface and ground water and river pollution.

Audit recommendations: Audit has suggested for identifying the illegal waste sites, particularly those in and around government residential areas/ markets and impose penalties/taxes for the inhabitants, necessary empowerment of DCC, close all illegal markets or impose high taxes on the traders and increase number of waste sites.

Impact: The stoppage of growth of illegal wastes sites and illegal waste generators is expected to reduce the probability of unsafe deposits, scattering of wastes.

The audit results discussed hitherto, have covered three major areas, (a) operational issues of wastes management, (b) management issues of wastes management and (c) regulatory issues of wastes management.

3. Challenges faced

(1) Data

(a) **Data consistency:** Data available in DCC and in other published sources vary. For example, data on volume of solid wastes, industrial and clinical wastes differ in DCC documents and in other researches/surveys. Besides, audit does not have its own mechanism of data verification.

Comments: This did not have impact on our audit findings. Although, the differences in data on volume, would lead to differences in risk involvement and management capability needs. Audit has worked

on data on wastes volume, supplied by DCC, but has also assumed that a significant portion of the wastes remain uncollected (survey paper of Asia Pacific University).

(b) Data availability: Some important data are not available. The corporation does not maintain data, needed for policy decisions. It does not have data on unit cost/collection, transportation, land-filling etc. It does not also have data on average generation of different types of wastes.

Comments: The lack of policy data did not have impact on audit findings. This would however, constrain the corporation in finding an optimum solution.

(2) Manpower

(a) Lack of professionally skilled manpower in the corporation and in the concerned government agencies.

Comments: The Corporation has a good number of experienced conservancy staff, who are however, not much aware of different aspects of modern wastes management. Audit has gone for physical inspection and interviewing of experienced conservancy staff as supplementary tools.

(b) Expertise not yet developed in the SAI.

Comments: No separate wing has yet been established, nor any group has been developed for environmental auditing. Our SAI does not have the required manpower as yet. Ahsan Abdullah, a graduate of the IDI-WGEA international workshop, held at Antalya, Turkey, has led the audit.

(3) Regularity instruments

(a) No regularity instruments available for prevention of wastes.

(b) No regulatory instruments available for management of industrial and clinical wastes.

(c) The corporation does not have the necessary empowerment.

Comments: Revisions and updating of existing rules/regulations are needed to facilitate a modern wastes management, operate professionally. Suggestions have been put forward to the government for seriously undertaking the proposed amendments.

(4) No requirements study has been made, so adequacy of manpower and equipment, cannot be assessed.

Comments: No study has been made for calculation of manpower and equipment requirement corresponding to the volume and variety of wastes. Audit therefore could not comment on the adequacy of them.

4. Potential areas for SAI-SAI co-operation

SAI, Bangladesh has initiated environmental auditing. A maiden audit has been conducted in the field of wastes management. This SAI feels that there can be mutual co-operation between SAI, Bangladesh and other SAIs (who are well-marched in environmental auditing). The following areas have been identified for future co-operation:

- (a) Framing a long-term environmental audit plan, within the given country situation
- (b) Prioritizing areas for future audit
- (c) Joint audit in some selected areas, like audit of bio-diversity and quality of air.
- (d) Requirements of manpower and equipment study.