

## No wonder we stink

By Professor Dr Nizamuddin Ahmed

URBAN Dhaka hardly ever fails to startle by what it has on display – unruly traffic leading to unbearable congestion, insufferable air pollution to which even police vehicles contribute, haphazard construction akin to rape and murder emulated in concrete, subhuman conditions in the slums...

Over the decades we have condemned the city to inconceivable unplanned growth, succumbed to hypocrisy and dishonesty at all levels and chosen corruption as a vehicle to move up the ladder – academic, industrial, mercantile, political and social.

The seminar on *Waste Disposal in Dhaka City* exposed to the citizenry that there was more to the city than meets the eye. The discussion concluded that we are virtually sitting on an underground volcano contrived by waste mismanagement in the city. If only we could see what lies beneath the ground. We are gradually sinking to a point of no return.

We have filled up our lowlands where once the city's wastewater collected. We have strangled the Buriganga – the river along which the city began. We have blocked our sewerage lines with polythene bags – sixty lakh each day. With the help of government agencies, we have illegally connected domestic sewage lines with storm sewers. We have left eighty per cent of the citizens without any sewage disposal system. For tackling liquid waste we rely on the rather primitive way of disposal to rivers and lowland, and that too without proper treatment. Yet we dare to call ourselves creatures of a capital city.

Dhaka today is a city overwhelmed by the very magnitude of its solid waste. The capital city is caught in a quagmire of untreated industrial waste. It is unable to respond to increasing hospital and clinical waste, which are not separated from other solid waste, a matter of serious health concern. It is helpless in flushing out storm water, causing regular flash floods after even a light downpour.

So tremendous has been the pressure on the inadequate existing network that liquid waste and solid waste disposal systems – operated as separate systems all over the world – have alarmingly become combined in Dhaka.

Although hopelessly under-strength in terms of manpower and equipment, the Dhaka City Corporation manages to collect and dump in Matuail about 70 per cent of the city's solid waste. Researchers are convinced that because it is not a sanitary landfill site, the dumping of solid waste is causing severe contamination of ground and surface water in and around the dumping yard.

Institutional reforms are required to tackle the frightening situation. Dhaka City Corporation, responsible for surface drain and solid waste disposal, is simply not adequate for a city of 100 million. It needs to be subdivided into separate cities with independent organisational and operational set-ups.

Dhaka Water and Sewerage Authority (WASA) covers a pitiful 55 per cent of the city's 256 square kilometres and a mere 20 per cent of the population.

More so because of their inadequacies, co-ordination among different government agencies should be top priority. Bickering can only make the city filthier.

Because government agencies are seriously handicapped by lack of personnel, ancillary support, plant and fund, public motivation and awareness programmes, aimed at community-based solutions could be a cost-effective approach in dealing with this massive problem. The government must find a way of making the community its partner in approaching the issue. The solution is now not in sight. It could be beyond the next dump.

Deliberations at The Daily Star-Bangladesh Scouts workshop on

## Waste Disposal in Dhaka City

**Moderator:** This is a discussion to enlighten each other. Perhaps the Department of Environment is working in the same field BUET teachers, as the WASA, RAJUK, DCC may also be thinking on the same lines. This series of seminars bring people together. In our last seminar on traffic problems, the DC Traffic and the BRTA Chairman actually met for the first time. They were very thankful to us for giving them a forum.

Now we will hear from the DG, Department of Environment.

**DG, Department of Environment:** You all know that there are ways of environment pollution – air pollution, noise pollution, water pollution and, very importantly, pollution from waste. Pollution from waste is extremely harmful and calls for particular attention. Those living in Dhaka now see how the public is protesting against waste pollution. So many associations, seminars and workshops are being organised in this regard.

There are various types of waste in the city – municipal waste, household waste, commercial waste, industrial waste and clinical waste. How are these harming us? The laymen may not know how harmful these are. Various germs and diseases can spread from municipal waste in particular. Serious diseases can spread. This is true of household waste. While half of it is disposed through the municipal system, the other half is scattered haphazardly all over the place. The environment gets polluted.

The worst, to me, is clinical waste. It is extremely frightening. In various residential areas we see clinics being set up. Here too, some of the waste is burnt in incinerators and properly disposed, but some of it is not. Our Prime Minister herself has said that clinics should not be opened in residential areas.

In Dhaka, every day Dhaka Municipality disposes of 4500 tonnes of waste. But there is much more, many more tonnes that are not disposed of properly. In other countries, arrangements are being made for waste storage.

There can be two methods. One can be to dispose waste in an efficient manner. In the past, the garbage was removed at night. This would keep the city clean. Of course, things have changed. People have increased. The social system has changed. People's thinking process has developed, but the system of co-ordination has not developed so far. In other countries of the world waste management has progressed far. There are community-based systems. In the private sector, they manage waste. The governments of those countries encourage the private sector in this field.

Waste is being used in various countries in various manners. In some places it is being used to produce electricity. Here too we are considering a plan – waste to energy. The government has taken up a plan in this regard. The Department of Environment is involved in this, although the Energy Ministry has initiated the project. Our waste is also being taken away by people and recycled. This is applicable to glass, paper, textiles and such. The 'tokals' are collecting and selling these.

In the 'waste to energy' project, waste is burnt and the heat produced is being changed into energy. The residue is being used for road construction. Many people say that this is very costly, but it needn't be that costly. It can be carried out on a BOD system. Considerations in this regard are on.

As for the percentage of waste, 47 per cent comes from the households, according to the municipal statement. Seventeen per cent comes from the commercial sector, 32 per cent from the streets while medical waste constitutes 0.5 per cent.

Residents of Dhaka are not only being harmed due to health hazards waste poses. They want a beautiful city. If a tourist comes and sees the filth on the roads, they will not come for a second time. From the tourism point of view, waste should be managed. Tourists say, your country is not clean. The roads are dirty, even around the five-star hotels where the class tourists stay. Not only that – look at the surroundings of the Directorate of Environment.

An American engineer has said that the problem of pollution from autorickshaws can easily be resolved at a low cost of just 100 US dollars. Last month we signed a Tk. 400 million project agreement with the World Bank to deal with pollution. We will set up stations all over the city to control air pollution.

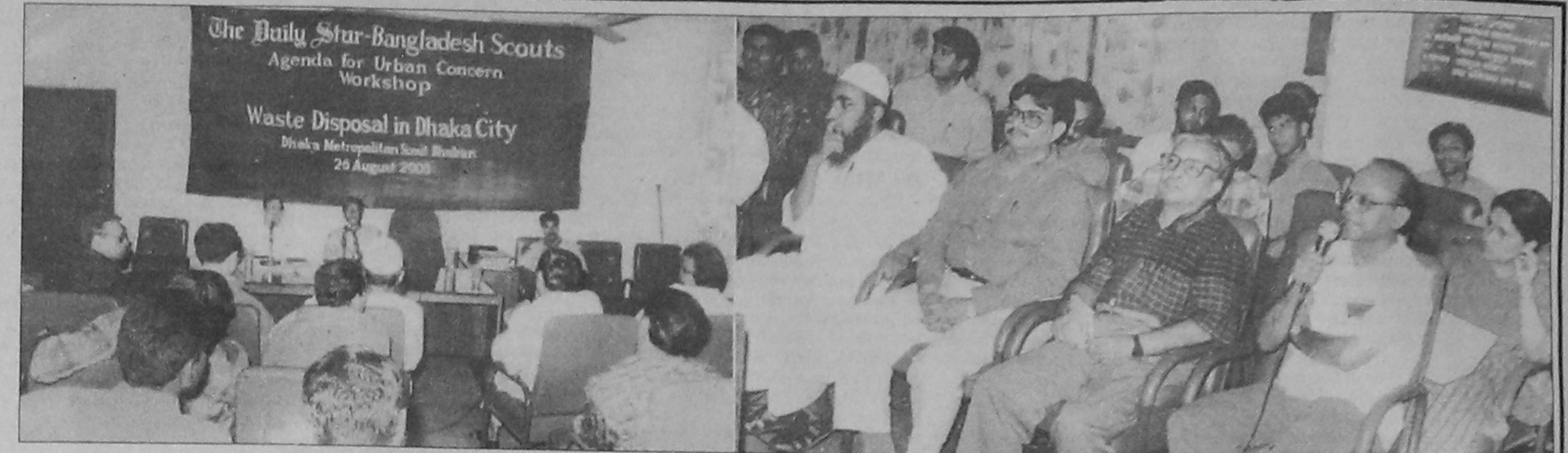
Then there is water pollution, sound pollution along with the air pollution. Then waste must be removed to beautify Dhaka. People want to live well.

**Moderator:** Recently I saw a signboard near the over-bridge outside Shaheen School. I am an acoustics teacher in architecture for the last 20 years. I was rather taken aback by the sign. It asked the people not to exceed 45 decibels of noise. Now what does decibels mean to the common man? I will admit to you that after 20 years on this subject, I am still not clear. It is difficult to define. It is a ratio, a logarithmic ratio. Yet we are giving this term to the common man on the street, that too 45 decibels. It is impossible to contain the noise level on a street to 45 decibels. In this room alone there will be 45 decibels and we are expecting this level near the over-bridge outside Shaheen School. This needs to be corrected.

The matter of clinical waste, as the Environment DG said, is of utmost concern. Then a few days ago there was a fire in a glue factory. The factory shouldn't have been in the densely populated residential area in the first place. Luckily, there was not too much damage, but there could have been.

We would invite questions now.

**Abul Mansur Md. Azad:** I am a geologist. We would like to hear something on the waste disposal-related policy and laws of



## Participants

Moderator  
Dr Nizamuddin Ahmed



1. Parvez Khan, Leader Trainer, Bangladesh Scouts and Deputy Regional Commissioner (Programme), Bangladesh Scouts Dhaka region
2. Syed Rafiq Ahmed, President's Rover Scout and Member, Task Force, Bangladesh Scouts
3. Syed Amin Al Anaas, Student of Social Science, Dhaka University
4. Shaiful Azam Ahmed, Consultant, Water and Sanitation Programme, World Bank
5. Dr Md. Mafizur Rahman, Assistant Professor, Department of Civil Engineering, BUET
6. Md. Shahidul Huq, Senior Officer, Rupali Bank
7. Md. Masudur Rahman, Assistant Officer, South-East Bank
8. Razirul Rahman, Staff Reporter, The Daily Star
9. Professor Dr Md. Nurul Islam, Institute of Appropriate Technology, BUET
10. Professor Dr Md. Mujibur Rahman, Department of Civil Engineering, BUET
11. Professor Dr Feroze Ahmed, Department of Civil Engineering, BUET
12. Engr. Kazi Md. Sheesh, Chief Engineer, Dhaka WASA
13. Dr Mahmudur Rahman, Secretary-General, IPD
14. Md. Zohurul Haque, AIG of Bangladesh Police
15. Dr Farida Nilufar, Assistant Professor, Department of Architecture, BUET
16. Abul Mansur Md. Azad, GM (Acting), Training Division, Petrobangla
17. Engr. Pulak Barua, Research Associate, Waste Concern
18. Architect Magsood Sinha, General Secretary, Waste Concern
19. Kh. Rashidul Huq, Director-General, Department of Environment
20. Dr Md. Ashrafuddin, Chief Health Officer, Dhaka City Corporation
21. Dr ABM Badruzzaman, Department of Civil Engineering, BUET
22. Professor Dr Farooque Alim, Department of Civil Engineering, BUET
23. Abul Kalam Azad, Staff Reporter, The Daily Star
24. Dr Aminur Rahman, Associate Professor, IUB
25. Md. Rahmat Ullah Borhan, Student of Dhaka University
26. Afzal Hossain, National Commissioner (Extension Scouting), Bangladesh Scouts

## Recommendations

### Rajanigandha Group

Professor Dr Md. Nurul Islam (Leader)  
Md. Zohurul Haque  
Dr ABM Badruzzaman  
Dr Md. Ashrafuddin  
Shaiful Azam Ahmed  
Md. Masudur Rahman  
Parvez Khan (Co-ordinator)

### Liquid Waste

#### Sanitary sewage

- Coverage should be increased, considering various low-to-medium cost options.
- Smaller independent sewerage system including its own treatment plant should be considered instead of a large centralized system.
- Rehabilitation of existing (old) sewerage system. Inclusion of existing unauthorised/illegal connection in the rehabilitated system and prevention of unauthorised/illegal connection in future.
- Emphasis should be on regular operation and maintenance.

#### Industrial wastewater

- DoE should ensure that no industrial plant discharges its effluent into the environment without adequate treatment.
- Industries should be given financial incentives for effluent treatment prior to disposal.
- Waste minimisation and pollution prevention programme should be introduced in industries.
- Researches should be undertaken to develop low-cost treatment options for industrial effluent.

#### Storm water

- DWASA and DCC should ensure separate storm water drainage system by preventing sanitary sewage connection.
- The discharge points of drainage networks must be kept clear and operational. Circular waterway around Dhaka should be developed immediately.
- Drainage networks must be kept clear from solid wastes, especially polythene bags.
- Environmental awareness programmes must be undertaken in the industrial sector.

### Madhabilata Group

Engr. Kazi Md. Sheesh (Leader)  
Professor Dr Md. Mujibur Rahman  
Razirul Rahman  
Engr. Pulak Barua  
Syed Amin Al Anaas  
Syed Rafiq Ahmed (Co-ordinator)

### Solid Waste

- Co-ordination of works of different organisations, who are involved directly or indirectly in solid waste management, should be enhanced. Besides public sector and local public representative, community-based and private organisations should be involved in solid waste management.

- Appropriate technology for better disposal, recycling and resource recovery should be searched, and their technical and financial viability should be assessed.

- Unplanned urbanisation and industrialisation should be stopped. All unauthorised construction, land filling and encroachment should be removed. Existing Zonal Master Plan of RAJUK should be strictly followed.

- Different standard set by DoE in managing industrial, clinical and domestic waste and effluent should be strictly maintained. If required, separate waste treatment plants should be installed by private entrepreneurs. Where required, necessary technical and financial support should be provided by concerned authority.

- Public motivation and awareness programmes about environmental should be promoted. Environmental education in formal education system must be introduced. Civil society and other pressure groups should be proactive in seeking transparency in policy-making and of implementing authority.

### Krishnachura Group

Professor Dr Feroze Ahmed (Leader)  
Professor Dr Farooque Ahmed  
Abul Mansur Md. Azad  
Architect Magsood Sinha  
Dr Aminur Rahman  
Md. Shahidul Huq  
Dr Md. Mafizur Rahman  
Abul Kalam Azad  
Dr Farida Nilufar (Co-ordinator)

### Hospital and Clinical Waste

- National policy and legislation to manage hospital and clinical waste needed.
- Awareness among medical personnel, users, community and recycling people required. These may be advanced through pilot projects, mass media, educational curriculum and monitoring.

- Management in segregation, preservation, separate collection and transportation of hospital and clinical waste required as an integrated vehicle of city planning. Appropriate technology should be employed.

- Belief in 'Pollutant Pay Principal'.