

# Waste Disposal in Dhaka City

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time, where do you go?

So many people ask me for fast clearance. I say, nothing doing. Even clearance has to follow a certain procedure. Just discussing it here for a couple of hours at a seminar won't do. If I don't keep my house's surroundings clean, if I don't grow that consciousness, who will? I am also responsible.

**Kazi Mohammed Sheesh:** I will have to refer to DCC and RAJUK as there are many things of their concern too.

Today our topic of discussion is waste disposal. Many questions have arisen regarding data. I will try to reply with specific data, then we can discuss the matter and try to find solutions.

In Dhaka city we normally dispose of four types of waste. One is storm water. Then there is domestic sewage. Then there is liquid waste other than rainwater, like water from the kitchen etc. Then there is solid waste. Everywhere in the world, storm water, sewage and liquid waste either go through a combined system and is treated or it is done separately. But solid waste everywhere is treated separately and disposed. Here all four are supposed to be done separately.

Dhaka WASA is responsible to dispose and treat rainwater and domestic sewage. I am an employee of WASA. RAJUK is responsible for the disposal of surface drain water and solid waste. These systems are designed separately to be treated and disposed. This is in theory. But in practice, though we are doing so, these have all become combined. So you can understand just how ineffective the system is.

Let me give you some data on drainage. Our annual drainage volume on average is 560 million cubic metres. Of this, rainwater is 230 million cubic metres and wastewater is 330 million cubic metres. This covers 265 square kilometres of Dhaka city. Our planned drainage network is 140 sq km. Approximate coverage is 60 per cent. This system includes storm water line of 200km, box culvert of 60km, open canals of 65km and three pumping stations. These are permanent constructions. Other than this, for the sake of pumping, temporary pumps are set up.

We have approximately 1.04 cubic metres of sewage daily disposed of. Dhaka WASA's treatment capacity is 120,000 cubic metres. We can extend this up to 1,80,000. If there are nine million people under our sewerage system in Dhaka city, we are giving this service to 20 per cent of the people. This is 30 per cent area-wise. There is one sewage treatment plant, 23 stations and sewage lines of various diameters of about 630 km. There are 45,000 connections.

Surface drains, which are maintained by DCC, make up about 1500 kilometres in the city. Other than this, in various areas there are about 220 km of storm lines maintained by DCC. According to our estimates, solid waste in Dhaka is 5000 tonnes everyday. DCC's capacity is to deal with 3500 tonnes. The rest is removed by other means. The waste which I have been talking about so long is being disposed of, more or less, efficiently or inefficiently, by some means or the other. Other than this, the situation of waste is really bad.

There are about 300 different types of industries in Dhaka. For example, tannery is one type. From these every day 40 tons of BOD goes directly into the river without any kind of treatment. You can imagine the state of the river after. BOD means bio-chemical oxygen demand, a unit to measure pollution. Most of this waste goes into the river Buriganga.

We can talk about one particular industry. About 90 per cent of the country's 270 tanneries, that is about 200 tanneries, are situated in the 25 acres of land in Hazaribagh of the city. Every day 16,000 cubic metres of waste goes directly from these tanneries into the river or are being deposited there. This is seriously polluting the underground water. According to a study of BUET, during the last 10 years, this pollution has increased manifold as compared to the previous years.

Other than this, about 12,000 cubic metres of untreated waste is going to various places from Tejgaon industrial area.

Then there are about 300 large slums in Dhaka city. Of these, 200-250 are permanent.

The situation is coming to the point when at any time Dhaka city may have to be declared abandoned. So this is the time for us to take some steps. It is no use being dismayed.

To do such tasks, politicians, economists, scientists, government officials, journalists, everyone must be committed. Along with commitment, I will add that we have to develop the mentality to work together as a team. To me 'TEAM' means, Together Everybody Achieves More. If we can all be aware and work together, there is no doubt that we will be able to achieve more than we are achieving at present. We don't have much more time for this. If we are to save Dhaka city, we are to jump to this right away.

**Moderator:** We are all sitting on a volcano. We are in a very precarious situation. The sad thing is, there are concerned people working in this area, there are concerned people who have knowledge in this area. But they are not being listened to, they are not being heard. As in many sectors, the wrong people may be in the wrong places and they are taking the wrong decisions.

**Dr Badruzzaman:** I have a three-part question. First, Mr. Sheesh said that 30 per cent area-wise coverage is being given to sewerage. While 30 per cent goes to the treatment plant, the rest goes as leakage here and there. Then our so-called new town, Baridhara, Gulshan, parts of Banani and Uttara model town, please mark the work model, doesn't have any sewerage system at all. It is said that Tk. 25 billion is needed for this. The government is trying to arrange the fund. The rate at which we are proceeding, this will eventually cost Tk. 50 billion because the city is growing. How far has WASA progressed in this regard?

My second question is this. You have spoken about Hazaribagh. Studies have been conducted in this regard. Nowadays studies have virtually become picnics. We face situations where we are told, you all have carried out so many studies. So, you don't need to conduct anymore studies. In this context, as far as I know, ADB took several attempts to see if a treatment plant could be set up there.

Chrome recovery is to be carried out at Hazaribagh. This has progressed to some extent. I think funds are also being arranged for the purpose. However, there is much more pollution in Hazaribagh other than just chrome. There are the chemicals. There are other things too. And the state within Hazaribagh is so bad, I needn't venture into the topic. After DoE was given the authority, how many of the factories there have been established over the last five years or three years? Or are they all old? Are new ones being set up? Have we been able to arrest that trend?

**Kazi Mohammed Sheesh:** DoE can answer that, but possibly there is no room for any more industries. But the ones that exist there are expanding.

**Abul Mansur Azad:** You mentioned classification of waste including solid waste and water waste. Has this been done on a domestic basis or on a global basis?

**Kazi Mohammed Sheesh:** Some are universal. For example, even if you want to, you can't dispose of solid waste through the storm water line. This is a universal system which we follow and it has nothing contradictory to the laws of the land.

**Abul Mansur Azad:** There is a definition of solid waste and of hazardous waste. Have you kept any difference between the two or simply term everything as solid waste.

**Kazi Mohammed Sheesh:** We don't deal with solid waste, but since solid waste affects our system, we collect data to see how much harm it is doing.

**Abul Mansur Azad:** So let me come to wastewater management. Annually you are receiving about 560 million cubic metres of water. How are you carrying out the rehabilitation of this? What do you do after the treatment phase? Where is it being used, where is it being dumped? We would like to know this.

**Kazi Mohammed Sheesh:** This is not treated. Our storm water lines, canals go through box culverts to the low-lying areas or rivers. This is a really primitive method.

**Abul Mansur Azad:** And the drain water?

**Kazi Mohammed Sheesh:** When it is not too much, it goes through the surface below and goes to the river. Then there are connections with the storm water lines, though this shouldn't be so. It has also connection with sewage which it shouldn't. There can be designs in this regard, but our system isn't designed so.

**Abul Mansur Azad:** So can we say that we aren't following any system, that the water goes to the river or the low-lying areas or the marshy land? Is this causing environmental problems?

**Kazi Mohammed Sheesh:** Domestic sewage is being treated at the Pagla treatment plant. That water is going into the river along with that amount of effluents that is allowed.

**Abul Mansur Azad:** Do you monitor this treated water that is going into the river?

**Kazi Mohammed Sheesh:** Yes, definitely.

**Abul Mansur Azad:** What is the monitoring system from WASA?

**Kazi Mohammed Sheesh:** We have our own laboratory. We have the Pagla treatment plant. We bring samples from the river. Particularly during flood times. We check the water by the DoE, by BUET to see if the effluents we send to the river is permissible. If we see that the BOD has gone too high, we then take steps. There is a chlorination system. We increase it. So this is the system. It is not always efficient because many things are coming to the sewer.

**Abul Mansur Azad:** Is there any check and balance downstream? We are seeing alarming reports in the press about the Buriganga. So what are the effects downstream, say towards Munshiganj or Chandpur? The polluted water is spreading. Do you have any plans in this regard? Of any system in place?

**Kazi Mohammed Sheesh:** The treated effluents are within the allowable level. But how much of the effluents are treated? Non-treated effluents are going to the river. I spoke of the Hazaribagh tanneries and other industries, the 2.5 million slum

dwellers. Where are their faeces going?

**Abul Mansur Azad:** So what is the use of your treating 560 million cubic feet of water? If there is a positive result, that is a good point. But we see that more pollution is coming in. So what is the point of keeping this treatment alive?

**Kazi Mohammed Sheesh:** The treatment has to be increased.

**Abul Mansur Azad:** What do you do with the residual solid substance that is left over after treatment?

**Kazi Mohammed Sheesh:** That is at the huge lagoon we have at Pagla. This is dealt with after every three years. It is only being used as fertiliser so far. But we hear it is possible to make bricks and such out of these. We still haven't looked into this.

**Abul Mansur Azad:** So that is still just dumped there?

**Kazi Mohammed Sheesh:** Not dumped. It is being used as fertiliser.

**Prof. Nurul Islam:** I think we are reaching an institutional constraint. The rate at which the population is increasing, it is going beyond the means of those who have been given the responsibility to look after these matters. They are not being provided with the resources. So the issue of private sector participation comes in here. There is the issue of community participation. Institutional reforms are needed.

Then there is the technical problem of centralised versus decentralised handling of the system. This raises the question of private versus public. WASA has legal authority. DoE has legal authority. DCC has authority. Then the question will arise, if a private sector is to enter, that will have to be given legal authority too. I don't know if the private sector can work under the existing law as a sub-contractor or something. Is there any broad-based thinking in this regard? Since there are global institutional reforms in the gas sector, oil sector and other sectors, such reforms can be considered in the city management sector too.

**Moderator:** You all will be knowing that The Daily Star and the Scouts had jointly organised a similar roundtable on traffic recently. We formed six citizens' motivation groups from that roundtable. One of them is headed by the former Home Secretary and one by the BRTC Chairman. The BRTC Chairman can go to DCC and so on. In this way the citizens' motivation groups will tell the government that our seminar says this is what you should do, this is in your scope of work. The people who come here know something or the other. They can say do this, what's your problem in doing this? Then we can report in the newspaper that our group went to RAJUK and this is what happened. Maybe this will get something done.

**Dr Badruzzaman:** You said that the sludge is kept for three years then it undergoes natural de-watering and then is used as fertiliser. The pollutants in the sludge can very easily go to the food chain. Is there any monitoring to see whether this sludge can be used as fertiliser? Is there any monitoring to see check toxic characteristics through a bleaching procedure?

Then there is fish cultivation at the Pagla lagoon. A report appeared in today's newspapers too. It said that this has just been restricted to a letter which you have issued. About four years ago we had conducted a study to see that the fish were being contaminated with a high degree of heavy metal. Initiative was taken to stop this. How successful has this been?

**Kazi Mohammed Sheesh:** Firstly, actually we clean the lagoon thoroughly and then, through contract, the sludge is taken away. My presentation was a bit wrong. We actually do not say that you take this away as fertiliser. It is just for them to remove from that place. Anyway, when the Japanese renovated this, they said that the sludge could be used as fertiliser. But we do have lackings. We should check this for toxic materials.

The second point is very sensitive. I don't know whether this has been raised by the Board. Our Board member Firoze Ahmed is here. From quite some time back there were reports that the fish were being contaminated by heavy metals, that they grew very big in size and that there were a lot of buyers for these fish. Who knows if we ourselves have even eaten these fish? These lagoons are leased out to co-operatives. We have asked to stop the leases. While still in service of WASA, I cannot say anything much more about this.

**Architect Maqsood Sinha:** You spoke of 5000 tonnes of solid waste being generated. What was the basis of this? We feel that in Dhaka city seven million people live. In the entire metropolitan area of Dhaka this will be about 10 million. It is estimated that the waste is .5 kg per person. Then this comes to 3500 tonnes. If you say that the waste is 5000 tonnes, then Dhaka City Corporation collects 2500 tonnes. But that is not so. City Corporation doesn't collect more than 1800 to 2000 tonnes. It cannot do any more with its present manpower and trucks.



Indiscriminate dumping of everyday waste in locality ditches simply pollutes the whole environment.

—Star photo by Sk. Enamul Huq

Then there is the new concept of community decentralised system. And there is the partnership system. This is very important because we can't just pile everything on the government. The government is not isolated part. It is a part of Bangladesh. We can't solve things by just blaming one quarter. That doesn't get us anywhere. So under the Sustainable Environment Management Programme (SEMP) of the Ministry of Environment and Forests, we had been doing the same thing. Eight years ago we told the government that there is a technology which can solve the waste problems free of cost. It can't be solved 100 per cent this way, but can be solved to some extent. This is a community-based system. No one listened. But after we did a demonstration project, the Ministry of Environment and Forests came ahead. It is nothing complicated. Incinerator is not the solution. There has to be a community-based system of local technology. The public has to be made aware.

If we solve the problem on a localised level, if we can reduce the volume of waste, recycle it, and take this up on a policy level, things can be done. If the government gives some support to us who work on a community level, listens to us, bring in a mechanism to change policy, things can be done. We hammered for long on the City Corporation, saying that community participation was needed. You will note that waste is collected in all the localities on community basis. These things happen as it affects everyone.

Look at the dengue problem. A child has been playing in a field for long and the mother never felt the need to have the field cleaned up. Now, however, when she sees picture of sick children in the newspapers, she herself hires labour to get the field cleaned. There was the plague problem in Surat. It was one of the filthiest cities. After the outbreak of plague, Surat is now one of the cleanest cities of India. Calcutta is an example too.

So we must see how the government and the community can work in partnership to improve things.

**Kazi Mohammed Sheesh:** You said that if seven million people live in Dhaka, then where does the 5000 tons of waste come from? Dhaka Mayor has said that there are 10 million people in Dhaka and that leads to the calculation of 5000 tons of waste. Their reports say that we can remove 3500 tons, taking all the vehicles, manpower, broken down trucks, etc. into consideration. So this is from their data. This is not WASA's data.

**Moderator:** We have done a lot of things from a community basis, whether it is tree plantation, dengue, birth control, flood control. We have been successful. We are not here to blame the government or the government to blame the public. The City Mayor is on record as saying, at one of these seminars, that they are repeatedly asking the people to dispose of their garbage in the night and they will take it away before the morning. But this is not being done. We are not following this and so in the morning we have this huge waste on the streets.

**Engineer Pulak Barua:** Badruzzaman Sir has already asked my question about the fish cultivation in the lagoon. A few days ago it was reported in the newspapers that *Pangash* and *Magur* fish were being sold in Dhaka's markets from that lagoon. And in the fertiliser, there are still heavy metals. So those who use that fertiliser are also ruining their soil.



Free flowing waste water from dying factories not only causes immediate inconvenience to the inhabitants but poses peril for their future.

—Star photo by Anisur Rahman.

**Mohammed Zohurul Haque:** My question too has been discussed. It is about institutional reforms and community participation. I want to know if there is any example that an organisation like WASA, I am sure there are similar organisations in the world, is commercially sustainable from its own revenue.

**Kazi Mohammed Sheesh:** In various countries of the world, particularly where water is concerned, there is government subsidy. The process of handing Thames Water Supply of London to the private sector started a few years ago. It is not completely under private sector as yet.

The other method of revenue earning in various places include the utility services as well as the traffic, police, all the rest. This can go under a metropolitan government as our Mayor has said many times. In Hyderabad and Kuala Lumpur we see a separate authority. However, gradually, various sections are going to the private sector. Without handing over to the private sector, this cannot be made viable. In WASA too we have such considerations.

**Dr Mujibur Rahman:** Let us return to the issue of sewerage. We are saying that 20 per cent of the people in Dhaka are under the sewerage system. You spoke about septic tanks. About 40 per cent of the total Dhaka population use septic tanks.

As there are many slum areas and low-income groups in the peripheries of Dhaka, there are arrangements for sanitary pit latrines done by the NGOs. About 15 per cent of the Dhaka population is covered by sanitary pit latrine. So 75 per cent are covered by some sort of sanitary system. The remaining 25 per cent of Dhaka's population, that is about 2.5 million people, are using some unsanitary means. The human waste is going directly into the environment.

You said that the septic tanks are also a kind of treatment. I want to clear this a bit. Septic tank will be a sanitary system only when its final disposal is done properly. But in Dhaka city more than 50 per cent of the septic tanks are not functioning properly. The effluents from these septic tanks are not safe at all. The BOD or micro-organisms are potentially dangerous. Those are going directly to the surface drain and the WASA storm drain in most cases.

You said that you collect 560 cubic metres of storm water and dispose of it without treatment into the surface water bodies. There too is a potential of pollution of the surface water.

Another point arose that sewerage system is very costly. It needs a lot of money to bring the entire population of Dhaka city under the sewerage system. We know that sewerage system is one of the best systems of sanitation in the world. Sewerage systems are set up in the big cities of the world. In the socio-economic backdrop of our country, we really cannot afford a sewerage system for the entire population. We have to think of low-cost alternatives. Our aim is to obtain hygienic conditions. We are not aiming at the most sophisticated conventional sewerage system. So my request to WASA is to look into more low to medium-cost technologies in the world. There are many small board sewerage systems working effectively not just in developing countries, but in Australia too. It is used effectively in Brazil too. The small board sewerage system is used in certain countries of Africa and in some places of UK too.

The pilot scheme in Mirpur is half done till date. Unless you complete this system, the merits of the system will be lost and the people won't want to accept the system. So I request WASA, please, try to complete the system.

Then about North Dhaka city, that is Gulshan, Uttara, where there is no sewerage system, we can go for a more medium cost system which is 40 to 50 per cent cheaper than the conventional system.

Then there is the shallow sewerage system. It is also called the simplified sewerage system. It comes from the conventional sewerage system with some design modifications.

We can consider these sort of systems to lower our costs. If we can cut costs by 40 to 50 per cent, we can cover double the area. Take these things into consideration.

**Dr. Farooq:** There is an alternative option for the areas where there is no sewerage system. That is sub-surface irrigation. There are septic tanks, but most have faulty design. Although it is very simple, there is often no basic concept for which effluents cannot go. If a sub-surface irrigation, a gallery is made near the house, then there can be an effluent disposal system. For example, if there is grass there, then the soil bacteria can be reduced. There is a system like that and it is followed in many developing countries. A bed is formed around the house for the effluent to be disposed of. Sand and special grass are used so that there can be proper evaporation. In this way an individual house can manage its own sewage.

**Kazi Mohammed Sheesh:** Theoretically it is a good proposal. Let's look at it practically. You said keeping a bit of land in front of the house. Before you may have had that in Dhanmondi. But now where will you get that? You had that in Gulshan and Banani. Will you get that now? You even had that in Baridhara. Will you get that now?

In Mirpur the small board sewerage system was to have less costs. It will be cheaper. You will have a septic tank. It will not be so deep. It will dispose of the effluents through a small pipe. That is basically what it is about. The treatment is in the septic tank, not elsewhere. That is not complete. When we started this in Mirpur, we saw that there were septic tanks in some houses. We asked them to fix these. Some houses had no septic tank. We then created community septic tanks on government land comprising a number of houses in the area. So these things are all right in theory, but can't be applied in all places.

**Dr Ashraf:** I would like to put forward an example to discuss how the practical and the theoretical can be brought together. In 1987-88, Dhaka City Corporation started a project with World Bank funding. You will be knowing that in the Old Dhaka areas of Islampur, Shaharabazar and such, the sewerage goes into open drains. With this in mind we started the project with the concept of a two-pit latrine. The condition improved and the project was successful.

**A participant:** If the soil is not appropriate, there is possibility of overflow. Many people have wrong concepts about septic tanks. These are not complete treatment systems unless the effluent is properly disposed of.

We have to think of which system we should follow. And DCC is not the institution to look about 10 million people. Dhaka is a mega city. It has to go for decentralisation. They can make separate towns — city of Gulshan, city of Dhanmondi, city of Lalbagh. This is in London, in Manila. Each city will have a Chairman. DCC's present conservancy strength cannot cater to 10 million people. We can in no way expect this. So we have to change our strategy. We can think of private-public partnership.

The proposal about compost can also be brought under consideration. DCC has 10 zones, but it may just have one conservancy officer each. That's all. But every city council must have full strength.

There are local initiatives, but these have problems as DCC hasn't come forward there. Where there is local garbage collection as in Kalabagan, a question arises. Why should people pay double tax? They are paying conservancy tax. Conservancy tax is two per cent of holding tax. Then they also have to pay the weekly collection fee for the local initiative. The amount of money isn't big. It's the concept. The local initiatives can be brought into a framework.

**Pulak Barua:** Is there any policy regarding clinical waste? There are many hospitals and clinics in Dhaka city. Where is the waste of these clinics going and how? When I was a student of BUET, there was a group called City Watch. They carried out a survey on the waste of Dhanmondi area. Our findings were that in Dhanmondi alone there were about 61 to 62 clinics. The waste of all these clinics were being thrown around various dustbins, not even in the dustbins. We observed that most of the garbage from everywhere was thrown outside of the dustbin and the inside of the dustbins were empty. As for the garbage trucks, we have seen that as they go along the road, they are dropping a trail of garbage, dirtying the roads.

**Moderator:** Perhaps the set ups that are now existing are actually not capable of handling the situation. Dr. Ashraf, will you react?

**Dr. Ashraf:** There is nothing to react about, actually. We have to accept certain realities. Whether we work in DCC or

WASA, we are all citizens of this city.

Actually, there are policies everywhere. There are good policies in place, but how many of us are following these? This group saw clinical waste disposed in Dhanmondi and that it was mixed with other garbage. But are we able to separate the waste of Dhaka Medical College?

But I would like to assure you that we are making an effort for the collection of clinical waste and seeing how we can do it within the city, within the community, area wise. There are arrangements for incineration. There are incineration arrangements at Dhaka Medical College. The question is that, what will the charge be. If the clinics bring their waste, how much will they be charged? How costly or cost effective will it be? And how free of pollution will this system be? There are various controversies and debates within which we have to work.

As for the garbage trucks, we have only 5000 cleaners in Dhaka city. In Delhi they have 17,000. In a small city like Singapore that have 1500 workers who are well equipped, well dressed and well trained to tackle dengue. And we have only 700 workers and I don't even want to talk about how equipped they are. We are definitely under-manned.

There are policies. We try to follow the policies, but the amount of garbage is tremendous. The truck has only a certain carrying capability. When the garbage exceeds that, what to do? Look at the Kalabagan dustbin. Would you believe that we clean it four times a day?

We have limitations and obstacles. We need more community participation with a realistic approach.

**Dr Feroze Ahmed:** I just want to say something about the problems raised here. I will make some recommendations.

First about the sewer system. There used to be two sewer systems in Dhaka. One was the sanitary sewer system. The other was the storm drainage line. But now the situation is such that both the systems are combined. Actually, many people don't know the difference between the sanitary sewer system and the storm sewer system. Wherever they get a line, they make a connection. So there are many sanitary sewer connections with the storm sewer lines. It is not just the common people who have done this. WASA has done this too in many cases. There are high rise buildings, more people and the sewer line doesn't work. It overflows because its capacity is low. Then WASA just connects it with the storm sewer line and the problem is immediately solved. But invisibly it is creating another problem. This is the problem of final disposal.

It is very horrifying. You heard that 20 per cent are under the sewerage system in Dhaka. Of this, 50 per cent of the sewer reaches Pagla for treatment. The rest is being lost on the way through the mother sewer. So 90 per cent of the waste of human excreta is partly being treated by private initiative through septic tanks. The effluent from the septic tank goes to the storm drain. This is evident if we look at the waste gutter in Dhalai Khal. It should not have that much of waste. But a BOD will show it is semi-sewage. Actually 50 per cent of the sewage is being discharged there. Separating it in the future will be a very difficult job.

There is another problem. Under ADB funding there are many drainage lines and culverts, but the end points of these culverts are mainly in the low-lying areas. But these low-lying areas are being filled. Constructions are rising on them. Where will the waste go? We don't think of this now, it will never work. We have to protect it all the way up to the pond. Encroachment at any point of these lines means that the entire line is blocked. It will never work. This has already created a lot of problems. The entire place up till the pump house, the detention reservoir, must be brought under control. There should be some sort of demarcation.

Then we come to industrial waste. Our main concern is the Hazaribagh area. Over the past 25 years I have spoken at various meetings about this, but till today the matter hasn't been solved. The latest development is that WASA and the Industries Ministry have got together for primary treatment of the waste and then taking it to Pagla. But actually we need many treatment plants like the Pagla treatment plant for Dhaka. Where will the additional capacity come from? Studies revealed that this was not possible. The final decision was that a treatment plant would be set up here. This is a US\$ 1 billion project. A similar proposal had been rejected previously. The question before was would the treatment take place here or be taken on later? It was finally decided that a treatment plant would not be set up here. The solid waste generated here will create a intolerable situation.

**Anaas:** It has been said that City Corporation doesn't have sufficient workers for cleaning. Delhi and Singapore have been used as examples. If we want to be developed like Delhi or Singapore, it will be easy. Is the Mayor or others highlighting the matter? There is no dearth of unemployed persons.

And if the waste is removed from the streets after midnight, that would be good. We must be careful about Dhaka City. How will the bodies be accountable?

**Dr Ashraf:** There are certainly plans, but with that you need finance, government approval, zoning and planning. It can't be carried out overnight.

As for the trucks, they take away the garbage from after 10. But only sometimes it is left. We try to remove all the garbage from all places by the morning. Garbage is so piled up on the trucks, it does spill on to the roads. Now if the garbage trucks ply in the daytime, the garbage has to be covered with tarpaulin.

**Kazi Sheesh:** More important than accountability of the government is accountability to oneself. In another workshop I had said that there is a difference between our country and other countries. There must be pressure from the public. In other countries, it is different.

There was an earthquake in Japan's Kobe city a few years ago. The water system there was totally disrupted. A young engineer was given the responsibility to rehabilitate it. He took his crew and drew up a huge estimate. It is a rich country and funds were supplied readily. There was a time limit and he agreed to it. Work was on round the clock. But somehow, he wasn't being able to complete it on time. He had an office in a very high building. One day his dead body was found below. He had committed suicide, as he had failed to carry out his responsibility in time. We needn't go to such extremes if we fail.

In any country of the world we see, if a train commits an accident, the railway minister resigns. We saw this in India too. When a train had an accident here, the railway minister resorted, "Do I drive the train that I will resign?" So there has to be pressure for accountability. We have to have a conscience.

**Dr Mahmud:** I want to talk about medical waste. We recently started work on medical waste management. There is a part on our action plan for Dhaka City which has revealed that there really is no policy in this regard. In DG Health there is a paper comprising an ordinance drawn up during (president) Ershad's rule. It is written that if a clinic is to be given a licence, it must have a good environment. That's very loose. There is nothing about monitoring. The DCC papers talks about solid waste. There is nothing in particular about medical waste. It is mixing with the waste and DCC is having to deal with it. We need coordination between the agencies. There is no policy.

**Moderator:** We have resigned to the fact that we are in a frightening situation.

**Masudur Rahman:** I want to make a sort of recommendation. Speaking on behalf of those suffering due to waste disposal. A few days ago there was quite a shower in the evening. I went out in the rain and there was knee-high water on the road and I was heading home to Elephant Road. I saw cars had stalled on the road. Rickshaws were overturned. I feared that I might fall into a manhole. A jeep passed, splashing water all over me. This is an experience. If we see the problem from this view, from the view of the sufferer, it will be different. Those in authority should see it from this view. Now everyone suffers.

**Moderator:** He is appealing as a citizen so that we focus our thoughts on the people who are affected.

**Sirajul Islam:** Dhaka City Corporation plays a major role in waste disposal in the city. The Dhaka City Corporation Mayor quite often says that he has inadequate manpower. He says that there are so many people under the Dhaka City area that he can't handle it. He then says that he needs a metropolitan government. Under a metropolitan government he wants to take more organisations under his wing. These are Dhaka WASA, DESA, RAJUK, Metropolitan Police and so on.

In Tokyo city there