

Poisoning of city lakes portends an ecological disaster.

MD. ASADULLAH KHAN

It may have happened some years before. Timing is immaterial but the consequences are far reaching and colossal. Recent reports of poisoning of lake in Gulshan-Baridhara is forcing people and industries to take a look at what the callous DCC and RAJUK administration and complacent WASA authorities have wrought. Dead fishes float in the lakes and most of these might have gone to market without anybody's knowledge. Small wonder, we might have consumed it. It is not a pretty sight: poisoned lakes, fouled river, murky air and denuded lands. Thwarted by successive apathetic governments people in even the posh area of the city do now have to pay the price of the carelessness of the city administrators. Quite pathetically, the city is sliding into a morass of problems ranging from unparalleled crime, bureaucratic inefficiency, administrative breakdowns and growing human misery.

The precise timing of the disaster affecting people matters less than the colossal effects it has posed. Spurred by poverty and rural restlessness new arrivals from the countryside and even small towns are invading Dhaka city at a pace unlike any ever in the past and unlike other city in the country. Each immigrant from any other rural village or small town is bursting with ambition. Each harbours a plan a better life. More by default than by design, Dhaka has emerging as a dream city of Bangladesh a city that might provide people with job and home! Between 1990 and 2000 Dhaka's population has swelled by 40 percent - faster than in any other city and is now close to 10 million.

So Dhaka city works for life. Precisely true, as life and work become more intertwined with the opening up of communication technology people are flocking to cities that cater to both. On that yardstick, the surging waves of immigrants to Dhaka are an indication of its problems fifth generation water pollution and garbage problem. This stems from the fact that nobody planned Dhaka's growth. For years Dhaka's fabric has been built, broken rebuilt and knocked down again not according to the blueprint of any government.

What has triggered problems here in this city is that much of the business is done without paying user charges for power, water or waste disposal. About 80 percent of the effluents, mostly untreated, drain into the river Buriganga, Shitalakhya and much of it in the lakes and wetlands that stand by the even posh areas. Buriganga and Shitalakhya that serve as the crucible of life for the denizens of Dhaka and Narayanganj are now threatened by the unceasing flows of sewage, industrial wastes and toxic effluents containing cadmium and chromium. As Dhaka city grows apace, its trash mainly hazardous wastes including plastics, metals and packaging is growing exponentially. Right now, Dhaka city, it is learnt, generates about 3500 tonnes of garbage daily. About 70 percent of Dhaka city's population has no access to sanitation services. Result: this large chunk of population sends its wastes including human excreta into the river Buriganga and Shitalakhya and small lakes, and other water bodies in the periphery of the city. In consequence of indiscriminate population, huge piles of garbage remain unattended, festering and stinking and becomes breeding grounds for diseases. That means these rivers and lakes and also the streets today are foul receptacles of raw sewage and toxic waste. Small wonder, people who live amidst this rotting garbage and raw sewage fall easy victims to dysentery, jaundice, malaria and a raft of other diseases. Inevitably true, in such a situation the city's crumbling sewer network with seas of waste accumulating in the open surface drains portend an ecological disaster.

What keeps our cities so dirty? It's a combination of slothful utility organisations who are reluctant to change outdated disposal practices that can no longer keep up with population growth, new kinds of trash like plastics and a near total apathy of citizens. Protest and rallies must hammer out the problems of inaction on such issues that pose a direct threat to citizens' life.



PHOTO STAR: SK. ENAMUL HAQ

Dead fishes float in the lakes and most of these might have gone to market without anybody's knowledge.

The most enigmatic planner now sees contours of Dhaka's endangered dream in about 60 percent of its population that lives in slums and shanties. The stark reality is that the most glittering Baridhara, Gulshan and Dhanmondi areas are equally gloomy and frightening. Behind the blinding glitter of the new millionaires, the city is failing the bulk of its citizens. Even the basic rudiments of a civic life and civil behaviour seem to be evaporating from the city. It is now evident that DCC-WASA-RAJUK triumvirate will continue to gloss over the city's problems for short term gains. The disaster causing death to entire fish population in Gulshan-Baridhara lake has resulted because Dhaka Water and Sewerage Authority (WASA) has installed a vast network of sewer lines keeping the lake as the only discharge point for a vast array of drain outlets. The disaster is compounded by the criminal action of allowing industries to live cheek-by-jowl with residential quarters and large apartment blocks. Alarmed citizens do know that they are being slowly poisoned by hazardous wastes leaking out from smelters, tanneries and dyeing units and a host of other industrial units large or small. Residents and workers are exposed to serious health threats and even death as hundreds of industries and shanty units in the city produce and reprocess the by products -- a class of toxic metals and chemicals called hazardous wastes. The health impacts of these wastes are wide ranging and seriously damaging. Shockingly, the poisoned waters from these lakes and rivers now symbolise not life but death. By hazardous wastes we mean a class of toxic chemicals -- cyanide, arsenic, mercury, cadmium,

chromium and slag from industrial processes, and even certain kinds of plastics. They are produced during the manufacture of a range of products from fertilizers, dyeing and tanning agents to car batteries.

It is not hard to find out how this pollution scenario of lakes and rivers has exploded on the face of the citizenry. Some few hundreds of industrial units, many of them illegal, operating in Tejjagon industrial area, Badda, Rampura, other than Hazaribagh, Lalbagh, Islambagh and Zinzira on the western side of the city generate thousands of tons of toxic wastes. These are either pumped into drains, lakes and rivers or dumped on open ground that leach into ground water -- every day. Shockingly, till now, we don't have any scientifically built dumping grounds. Besides, hundreds of tons of toxic materials are imported from abroad every year but hardly there is any control on the disposal of toxins. With no such curbs, recycling industries are using these wastes causing serious health hazards. Other than this, in the teeming city that now accommodates 10 million people, about 10 lakh cubic metre of human wastes stagnates in the choked drains and ultimately find its way into lakes and rivers. It is now learnt that about 30 such drains are connected to Gulshan-Banani-Baridhara lake. Clearly, this hazardous waste problem has been ignored for too long. More so, this still water body without having any connection with any big river could hardly handle this pollution load and now it has gone completely out of hand. As industrialisation grows and as exodus of people continue to the city unabated, so too has grown all types of its pollution load, including human excreta.

Experts believe that toxic waste flowing into the lake has wrought havoc on the fish population by reducing the biochemical oxygen demand (BOD) in this water. Most of the effluents flowing into the lakes and rivers remain untreated.

As against 10 lakh cubic meter liquid wastes generated in the city, Pagla plant can treat only 50,000 cubic metres of wastes with its 25 pumping stations. According to WASA sources till now only 30 percent of the city areas enjoy the facilities of sewerage system. It is shocking that throughout these long years new township grew up in Gulshan, Banani, Baridhara and Uttara under governmental control and even private apartment complexes were allowed to grow in Banashree, Mohammadia Housing Society, Chhayaneer etc. without least thought about the sewerage system that now unfolds a recipe for disaster. With neither the government nor RAJUK ever investing in new sewer systems in recent time the existing systems are breaking down under mounting pressure of population growth in the city. Experts are afraid if the situation goes like that the whole city would come to a halt. Moreover, as the practice goes in our cities water pipelines run next to sewer lines. In such a situation threat of contaminated water and disease is eternal. People wonder if the proposed plan for the construction of sewer system for Gulshan-Baridhara along with liquid waste treatment plant that envisages a cost of 2090 crore take in foreign exchange equivalent can ever be implemented without donor assistance when the country is facing dire economic breakdowns. Precisely true, with the system to check the imports as well as domestic production of hazardous wastes the courts are the last best hope on earth. So it was done in India. "The country cannot be made a dumping ground for toxic wastes generated in other countries", declared Justice Anil Dev Singh of Delhi High Court in 1997. In another case, Supreme Court of India went further ahead and ordered giving a time limit by which every state was supposed to tell the Court how much waste was generated and a list of sites where wastes were dumped. The order further said, "State government must explain why they have not closed illegal units that handle hazardous wastes".

What keeps our cities so dirty? It's a combination of slothful utility organisations who are reluctant to change outdated disposal practices that can no longer keep up with population growth, new kinds of trash like plastics and a near total apathy of citizens. Protest and rallies must hammer out the problems of inaction on such issues that pose a direct threat to citizens' life. These so-called authorities must be made to realize that the sewer lines lead to drains, which take the sewage - all of it untreated - directly into the rivers, lakes or other water bodies, killing virtually all aquatic life. As it now appears, Baridhara-Banani-Gulshan lake and also Dhanmondi lake have turned into a giant sewer.

Encouragingly true, sewage treatment can also raise money. In Delhi's Okhla Works, which treats nearly half of Delhi's sewage, the waste gases generated are piped to kitchens in 6000 homes at a cost of about Rs. 60,00 a month. With a third of the country's population slated to live in urban areas by the year 2004, the sewage and garbage crisis threatens to get out of hand. Our DCC, RAJUK and WASA authorities can take first inspiration from Ahmedabad and Surat, once considered two of India's filthiest cities. Inspired municipal commissioners have shown how to motivate staff, monitor finances and raise money and involve citizens using incentives and punishments. Precisely true, the government cannot do it alone: citizens must join in the big clean up.

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When enemies lurk within the house

Animal dander, molds, dust, mites and other biological substances threaten our health

Some of the common symptoms that are seen in an average household in our country include exacerbation of asthma (recognised infectious disease), conjunctival inflammation, recurrent fevers (also called allergic fevers), chest tightness and coughs and sneezes. Awareness about these kinds of indoor pollution need to be created in order to educate people to take steps to rid themselves of it. A little care will go a long way to a long and healthy life.

MUNEERA PARBEEN

SHUMAILA has a sudden tendency to develop a cold. She falls sick without any warning, and spends a major part of any month with coughs, sneezing and watery eyes. Her mother is tired of her daughter's inability to cure a cold, and takes special care to ensure that she doesn't take cold baths and that she has adequate intake of vitamin C to keep the cold at bay. However, her problem doesn't get any better.

Take for example the other day when Shumaila's mum was dusting the house. Instead of lending her a hand, Shumaila was in bed, coughing and sneezing and the mother though sympathetic was actually a bit angry that every time she went on a spring cleaning session, her daughter fell sick and was unable to help.

A simple visit to a doctor to treat Shumaila's allergy to metals however shed light onto this lingering problem that had bothered her for so long. Her doctor after hearing about the frequent spells of her reaction took a few tests and revealed the secret behind her illness. On further investigation it was found that Shumaila was having the allergic reactions to the dust and moulds in her house. The problem was aggravated on days when her mother dusted the house, when she always used to fall sick because of increase in the pollutants that affected her breathing and set off a natural allergic reaction to it.

It's not only dust and molds are the only factors that pose a health risk within the houses of our country. Biological air pollutants are found to some degree in every home, school, and workplace. Sources include outdoor air and human occupants who shed viruses and bacteria, animal occupants (insects, other arthropods, mammals) that shed allergens, and indoor surfaces and water reservoirs where fungi and bacteria can grow. A number of factors allow biological agents to grow and be released into the air. This is especially true of a climate where there is high relative humidity, and that encourages house dust mite populations to increase and allows fungal growth on damp surfaces.

Mite and fungus contamination can be caused by flooding, continu-

ally damp carpet (which may occur when carpet is installed on poorly ventilated room floors), inadequate exhaust of bathrooms, or kitchen-generated moisture. Appliances such as humidifiers, dehumidifiers, air conditioners, and drip pans under cooling coils (as in refrigerators), support the growth of bacteria and fungi.

The common problems that lead to the above becoming a reason for cause in our country is lack of knowledge regarding these. Bathrooms are poorly ventilated in countries as ours, not very hygienic in their build-up, or use -- there are too many old buildings, too little access to sunlight and lack of ventilation.

Components of mechanical heating, ventilating, and air conditioning (HVAC) systems may also serve as reservoirs or sites of microbial amplification. These include air intakes near potential sources of contamination such as standing water (potholes on roads, ponds and ditches during the rainy season), organic debris or bird droppings (apertly in gardens, roads and fields), or integral parts of the mechanical system itself, such as various cooling coils, or condensate drain pans. Dust and debris may be deposited in the duct work or mixing boxes of the air handler.

Biological agents in indoor air are known to cause three types of human disease: infections, where pathogens invade the human tissues; hypersensitivity diseases, where specific activation of the immune system causes disease; and toxicosis, where biologically produced chemical toxins cause direct toxic effects. In addition, exposure to conditions conducive to biological contamination (e.g., dampness, water damage) has been related to nonspecific upper and lower respiratory symptoms.

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Peat's popularity bogs down eco-struggle

SARAH ROE writes from Bratislava, Slovakia

IN the shadow of the Tara Mountains, where Slovakia Poland, a much-coveted resources lies abandoned and disused. Between tufts of shrubs and moss, red-brown peat the main ingredient of gardening compost is exposed among the green.

This silent wasteland in Slovakia's Orava region is home to some of the most endangered species in Europe. The boggy habitat attracts birds such as the Corncrake, now virtually wiped out in Western Europe, while rare butterflies and plants flourish in the damp undergrowth. Sometimes bears and wolves stalk over from the surrounding forests in search of red deer and small mammals.

Yet it is economic value of the peat bog, which covers 100 hectares and burrows to five metres in depth, that attracts local interest.

In the past, poor farmers shovelled small amounts of it onto their land to nourish their farms. Now they hope to sell off the resource for hard currency exports to the West, where peat is used in the booming horticulture industry.

Peat cutting is virtually outlawed in most European Union countries because the peat bog a dome of partially decomposed moss formed over more than 10,000 years supports such rare wildlife. Once, cut, the peat bog dries out and its delicate ecosystem breaks down.

Peat bogs also absorb carbon dioxide, a greenhouse gas that contributes to global warming. The issue of 'carbon sinks' in which countries get credit for gas-absorbing vegetation is key to ongoing international climate change talks, with the latest round at Marrakesh, Morocco, concluding on 9 November.

In Western Europe, intensive agricultural and building development drained much of the original peat land the peat-cutting industry has devoured many of the remaining sites.

In Britain only six per cent of the country's original peatlands is left and the Netherlands has due up or destroyed all its resources. Yet continuing demand for the amateur gardener's favourite ingredient means firms are scouting around less regulated Central and Eastern European countries for their supply.

Energy companies in Ireland and Finland, where peat is burned in power stations, are also interested in exporting the technology to Eastern Europe. Over the next decade numerous sites throughout Eastern and Central Europe, which include some of the last habitats of Europe's rarest species, are earmarked for peat cutting.

Western companies have already begun exporting peat from the Baltic countries, particularly Estonia, where around a fifth of the country is covered by peat bogs.

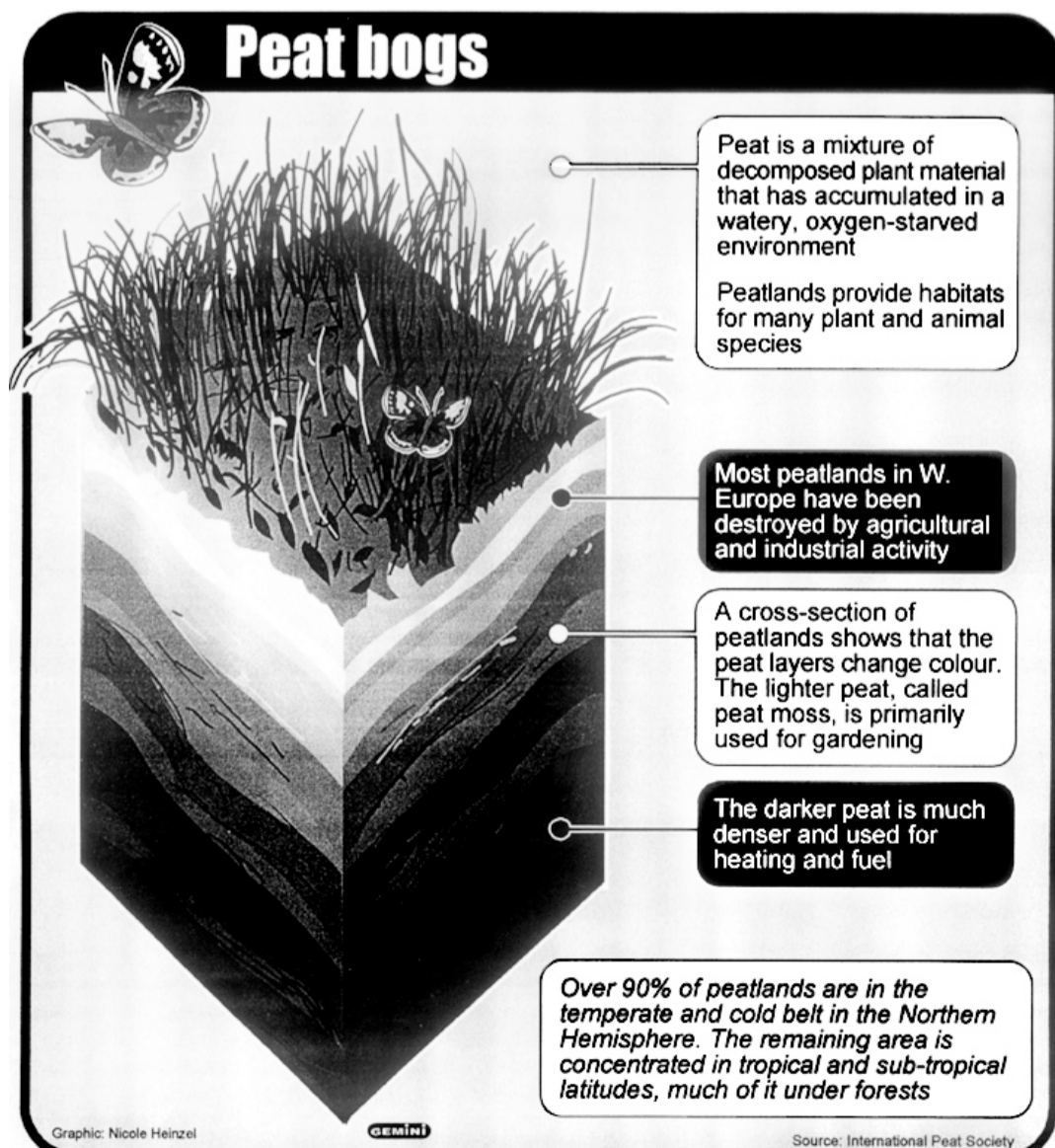
According to Alan Shaw of the Britain-based Peat Producers' Association, up to 10 per cent of Britain's peat now comes from the Baltic region. The figure is expected to rise over the next few years.

"I think [imports from Central and Eastern Europe] will grow and I suspect the Baltic countries and Russia will become more important," he said.

Peatlands in the Czech Republic, Poland, Slovakia and Ukraine are also particularly vulnerable.

Forty years of communism helped to conserve many of the peat bogs in Central and Eastern Europe. Lack of

Peat is the earthy delight of amateur gardeners, but it also plays an important role in the environment. With Western Europe's peat bogs all but gone, horticultural companies are now tapping boggy lands in Central and Eastern Europe, where lack of regulations and enforcement make peat-cutting easier. A Gemini correspondent visits Slovakia, where a delicate ecosystem is under threat.



commercial development left them virtually untouched and the wildlife supported by them has thrived. Elk still lurk in these ancient landscapes and the endangered capercaillie grouse along with spotted and white-tailed eagles swoop overhead.

The head of the Daphne Institute of Applied Ecology, a Bratislava-based environmental research organisation, voices conservationists' frustrations.

"The same mistakes that were made in Western Europe are being repeated in Eastern Europe and now we know it was a mistake," Jan Seffer told Gemini News Service. "When [peat cutting] was begun in Western Europe there was little knowledge about such ecosystems but now we understand them more, so it is hard to apologise for such an approach."

Peat is the latest natural resource to be threatened

by commercial exploitation.

Large areas of forest have already been cut down to supply the timber industry and agricultural firms with land. On a smaller scale, smugglers transport rare birds, animals and plants out of the country to supply pet shops and the growing herbal medicine industry in the West.

Such pressures are likely to increase once the 10 countries in the region join the European Union, so conservationists want to ensure that legislation enforcement is adequate.

Although most Central and East European countries have nature conservation laws to protect wildlife, in reality there is insufficient funding to implement these laws and underpaid officials are easily bribed.

As a result environmentalists across Europe have joined forces in recognition of the threat to peat bogs. Wetlands International, an organisation focusing on wetland habitats, has funded the Central European Peatland Project, which aims to draw up a list of all the peat bogs in the region.

The British government has also financed a training programme through its Darwin Initiative for experts in the 17 countries of Central and Eastern Europe. Locals were invited to Scotland to learn from restoration and conservation work carried out on its peatlands.

"They were shocked when they saw our peat bogs because our sites are so degraded," recalls Stuart Brooks, campaigns and projects manager of Scottish Wildlife Trust, one of six organisations running the programme.

Staff at Daphne are currently negotiating with locals in Orava, who claim ownership of the land, to restore and conserve a small area of the peat bog, though the rest is set to be sold off. They are also working with other private landowners who bought back areas after the collapse of communism in 1989, to protect the rare habitats.

Slovak botanist Viera Stanova says nature protection is an uphill struggle.

"It was easy to do nature conservation during socialism because all land belonged to the state and there was no private property," she explained. "Now after the break-up of socialism there are private owners who have to accept that areas are protected, but we need permission from them to carry out nature conservation activities."

One way to save such habitats is to reduce demand for peat products in Western Europe.

According to Shaw of the Peat Producers' Association, companies are reacting to a large consumer market for peat-based products. "In the biggest sector, the growing materials used for patio containers, hanging baskets and so on, peat alternatives have not performed very well," he said.

Market demand, however, may be disguised by the fact that many brands of compost do not mention that they include peat.

Greater public awareness of the damage caused to wildlife habitats by peat cutters would help boost sales of peat-free products and encourage companies to invest more in improving their quality, experts say.

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