

A city of chaos, pollution

TAHMINA CHOUDHURI ISLAM and
KHALID B ISLAM

IN the face of fast-paced urbanisation, Dhaka has turned from a garden city into a concrete jungle over the last few years. Dust and vehicular emissions have made clean air a distant dream. With every step of progress, the city appears to have regressed 10 steps. The reason: a lack of management and organisational skills. Individual skills and endeavours have resulted in certain progresses; however, if we do not take care of the environment, such progresses could lead to destruction.

Pollution and chaos are at their heights. We are aware that the traffic pollution is being considered, but under the circumstances, there are no traffic signs at major crossings neither the concept of zebra crossings exist for pedestrians. The lonely traffic policemen only hide or disappear behind trucks and vans, when things frequently go out of control. How can we blame them? Should we simply stand and watch

the fiasco or think of a little bit better value for our own lives? If one drives through different roads, one can hardly breathe because of the sea of traffic plying through the jammed, dusty roads. The only escape route is to sit and stare at the myriad of billboards that pollute your eyesight rather than allowing one the least chance to read them. The plethora of colours, sizes and writings outnumber you and you feel like an ant trying to swim into the peace and quiet of oblivion. Is this the road to growth and development? The saviour comes only when the car turns through second capital with lush green avenues of trees soothing your eyes with some peace and serenity of nature's bliss.

The skyscrapers are rising and multi-storey complexes are emerging at a haphazard scale, tall and engulfing as one walks through the littered pavement or ends up on heaped litter of pebbles or huge puddles of dirty water, perfect breeding ground for mosquitoes. While in the same city the long pavements stretches are found from Moghbazar to Ramna Park and the

areas around are pretty much maintained and what we can maintain and what we cannot remains only to our own will. We have to wish to maintain clean habits and civic senses that are easily lacking.

In most areas, there appears to be a total lack of public toilets which are nowhere ever in sight nor a dustbin or a simple trash can. Once, in a failed attempt in search of a trashcan, a banana peel had to be carried back home in the pocket! But maybe if there were bins there would more open dirty bins than clean ones. The stagnation of sewer water in the drainage systems by the roads does nothing but add to the disastrous situation. The waste piles lie open on small roads, on the main roads, posh residential roads to expensive commercial avenues, they are dumped even in front of your gate if unnoticed. What an easy waste-disposal system! Then, why do we even need to pay for the wheelbarrow cleaner in residential complexes, as he collects them and disposes them right outside on the road.

Does it matter, because you can

just easily walk into your nice apartment or your air-conditioned house fresh and clean. Then simply draw the curtains to shut the view and try to seclude yourself in an ironical attempt to give a false sense of living in a clean and nice surrounding. But it matters for every citizen!! It is obligatory that you protect your environment if you wish to protect yourself from deadly diseases. Are you aware of health hazards, toxic environment, and cancer besides the fly and mosquito-borne infectious diseases? Why are we blaming the mosquitoes when we are creating a good breeding ground for them, why are we not aware that everyone is responsible for our clean environment. The air we breathe and the water we drink comes from how we dispose of our waste on a daily basis.

We need integration of efforts. We cannot just sit and think of only network communication to help us build a modern society and watch as globalisation proceeds. In a world that is developing at a tremendous pace, many countries are tirelessly trying to preserve and protect their

environment from destruction by consumers and their used consumables. If we want a place in such a world we have to move on with same civic values. Nothing simply happens, one has to create, to educate those who are unaware of environmental hazards, the modes of environmental protection, waste disposal methods and the mere concept of recycling. We can only but learn from others, if we are not aware ourselves.

Having lived in a country like Sweden, where each individual's awareness is the reason for clean environment, we cannot but make our voices heard, if not loudly, but diligently, protect your environment, protect yourself. We cannot compare with an affluent country like Sweden but we can learn from their organisational skills and share their experiences that may provide some solutions. The primary goals that need to be undertaken are as follows.

1. We have to begin with environmental education -- awareness for a safe environment for a better health. Each has to be responsible for

proper disposal of the waste in a bin and not on the road.

2. Waste has to be sorted at proper 'small covered disposal stations' which contain large arrays of containers. The sorted waste needs to be decomposed, burnt or dealt by specific methods depending on the type of waste. Stagnation of waste should not be allowed by the authorities. Sites for land filling for the city waste decomposition has to be increased and properly selected as there appears to be a huge scarcity for that.

3. Recycling of paper, plastic and glass has to be undertaken when such consumables are on the rise and sorting of the waste has to be done with proper instructions sent to respective localities by the recycling agencies. Sadly enough, our waste is also sorted by poor 'tokais' as they go through the strewn litter and sort out plastic and glass occupying pavements and polluting further the city.

Tahmina Choudhuri Islam is a senior research scientist and Khalid B Islam an associate professor of molecular medicine at Karolinska Institute in Sweden.

ENVIRONMENT WATCH

Invasive species in Africa's wetlands

AFP, Nairobi

A variety of alien plants and animal organisms introduced in Africa have wreaked havoc in the continent's biodiversity, thereby costing it billions of dollars annually, a UN Environment Programme (UNEP) report released here Wednesday said.

"The annual worldwide economic damage caused by the onslaught of invasive flora and fauna worldwide is estimated at around 400 billion dollars," said the report, titled Aliens: Invasive Species In Africa's Wetlands.

"The damage caused by alien species to African wetlands also runs into billions of dollars annually, but hard data is difficult to acquire as the impacts of these species are only just being realised," the report's author Geoffrey Howard told journalists on the sidelines of UNEP Governing Council meeting here.

"The problems caused by these foreign plants and animals are big, and will grow gradually if no preventive measures are put in place," Howard said.

The report, compiled by Nature Champions, grouping the World Conservation Union (IUCN) and Global Invasive Species Programme (GISP), singled out water hyacinth as the most stubborn plant that has rapidly inflicted damage on African biodiversity, like wetlands, lakes, rivers, hydro-electric schemes and irrigation.

"This notwithstanding, it is one of the worst aquatic weeds in the world, and has inflicted enormous environmental and economic damage on Lake Victoria, among other many places in Africa, and around the world," it said.

The hyacinth is also threatening to block water turbines at Uganda's Owen falls and other lakes, including Zambia's Kariba, and Chivero in Zimbabwe.

"Thirty years ago, the Nile Perch, an alien species to the region, was introduced to improve the fisheries of East African countries of Kenya Tanzania and Uganda, a UNEP statement pointed out.

"The Nile perch is now believed to be behind the extinction of over 200 fish species, which preserved the health and equity of the lake," the report added.

UNEP's Executive Director Klaus Toepfer blamed accidental carelessness and sometimes deliberate introduction of exotic organisms in Africa, for its expensive and sometimes destructive impact.

"Such forms of life were brought from other continents into Africa in ships' water ballast and hulls, through horticulture and pet trades," Toepfer explained.

For human habitat

AFP, Nairobi

The UN agency for human settlements (UN-HABITAT) on Wednesday received a grant of 15 million dollars from a US-based research institute to help it meet its goals, the agency said.

"We have received a grant of 15 million dollars to assist us meet the goals of our agendas," UN-HABITAT Executive Director Anna Tibajuka told journalists on the sidelines of the UN Environment Programme's (UNEP) Governing Council session in Nairobi.

"The grant from Environmental Systems Research Institute (ESRI), makers of Geographic Information Systems (GIS's) software, will provide technology and training to up to 1,000 cities in developing countries to enable them participate in collection of urban indicator information," Tibajuka said.

According to Tibajuka, indicator information will include issues on poverty, environmental damage, lack of urban services, generation of existing infrastructure and lack of access to land and adequate shelter.

"Most local authorities worldwide have outdated information on the state of their cities and few of them have technology to collect and analyse data about basic infrastructure and current status of housing," she said.

First marine protected area in Middle East

AFP, Abu Dhabi

The World Wildlife Fund awarded its highest conservation accolade to the United Arab Emirates Wednesday for efforts to preserve the environment on Qarnein Island, one of the last breeding areas for the hawksbill turtle in the Gulf.

Qarnein Island, rare amongst the Gulf islands in having a mixture of sand, rocks and corals around its shore, is home to endangered green turtles, and hawksbill turtles nest on the island's beaches, one of the last breeding areas in the region for this critically endangered species.

The rich coastal waters of the island 180 kilometres northwest of Abu Dhabi are also a spawning ground for a wide variety of local fish species.

The island, uninhabited by humans, is also home to huge numbers of breeding seabirds, including 20,000 pairs of lesser-crested terns, bridle terns, sooty gulls and Sooty terns.

"This is the first 'gift to the earth' recognised in the whole of the Middle East and is of particular importance because of this, as it also signals the commitment of the UAE to conservation of nature," said Claude Martin, director general of WWF International.



PHOTO: STAR

Tale of two worlds... a Swedish environmental station for sorting waste prior to disposal and recycling (left) while rag-pickers scavenge through the garbage dump on the outskirts of Dhaka

A matter of choice, not destiny

Greener future is there to be had. Needed is a mix of technology and political will, writes **Md. Asadullah Khan**

DANGERS that seemed exaggerated and distant even a decade ago -- global warming, ozone depletion, desertification, and extreme weather conditions -- are now at our doorsteps. Water vapour and carbon dioxide trap infrared radiation in the atmosphere, warming the world. Water vapour accounts for nearly 98 per cent of the warming, without which the Earth would have been 61 degrees Fahrenheit colder. Carbon dioxide, emanating mainly from combustion of fossil fuels, accounts for the rest more or less. However, fiddling with that two per cent is like pushing a long lever: a tiny push can bring about enormous changes.

Concentration of carbon dioxide has risen about 280 parts per million before the Industrial Revolution to 360PPM today. The world has warmed about one degree Fahrenheit over the last century and oceans have risen four to 10 inches. Century-to-century variability has seldom been this high over the last ten millennia. According to the Intergovernmental Panel on Climate Change [IPCC], sea levels will rise six to 37 inches more by 2100, which means low-lying areas such as Bangladesh coastal region, Maldives, Mumbai and Gujarat coastlines in India, and even parts of the United States will go under water. With drastic changes in global weather patterns, vector-borne diseases will increase, affecting agriculture, livestock and fisheries.

Carbon dioxide stays in the atmosphere for a century on average: gas from the coal that warmed the Americans some 100 years back could be still up there. Even if we stop burning coal, oil and natural gas right now, the world would still continue to get warmer. Stabilising emissions does not stabilise climate, as long as the gases keep rising, even at current rates. So, to stay on "an environmentally benign course we need to reduce emissions 1 to 2 per cent per year for the next century. If we don't start now, we will have to cut 3 to 4 per cent per year", which would be even more daunting, says atmospheric physicist Michael Oppenheimer of the Environmental Defence Fund [EDF].

So, how do we strike the balance? Just look closely at the nature. There is no waste in the natural system: the same materials have been recycled for billions of years. All we have to do is to relearn the lessons.

BASF Corp's carpet fibre unit has developed a recyclable nylon that makes it possible to reconstitute old carpets into new. Swiss semiconductor maker ST Microelectronics has saved more than \$60 million by cutting its energy usage and \$20 million by reducing water consumption below baselines set in 1994. The company issued some environmental goals and empowered its divisions to become creative: the responses include using solar power and finding ways

to recycle water.

Cargill Dow, a joint venture by agricultural giant Cargill and chemical company Dow, is manufacturing biodegradable and recyclable plastics from corn sugars. The company already makes environmentally friendly packaging for Sony products and pillow stuffing for Pacific Coast Feather. McDonalds, it is learnt, has stopped buying chicken treated with "Cipro-like antibiotics" and Nike has begun stripping toxins from its shoes.

The key to sustainability is to make the market work for, and not against, the environment. For too long capitalism has not put a proper value on the services nature provides, such as water supply and climate control, nor has it accurately assessed the costs of the damage industry can do to the environment. But putting a larger price tag on pollution can alter the behaviour. Anticipating the global movement to combat climate change, British Oil giant BP decided in 1997 to reduce its carbon emissions to 10 per cent below 1990 levels by the year 2010. In the year 2001 report by Baxter International, a Deer field, Illinois, medical products maker detailed how reductions in energy, water use, improved wastes disposal and recycling over the past seven years cut costs by \$53 million. The savings amounted to nearly 10 per cent of its 2001 net income.

Since fossil fuels are heating up the earth, the race is to develop cool

alternatives. Experts say wind could provide up to 12 per cent of the Earth's electricity within two decades. Reports have it that wind farms in Texas, Oregon and Kansas have helped the US wind-energy output to 66 per cent last year and an additional \$3 billion in American projects are in the pipeline. BP is building a \$100 million solar plant in Spain.

How soon we reach an era of clean, inexhaustible energy depends on technology. Solar and wind energies are intermittent: when the sky is cloudy or the breeze dies down, fossil fuel or nuclear plants must kick in to compensate. But scientists are working on better ways to store electricity from renewable sources. Current from wind, solar or geothermal energy can be used to extract hydrogen from water molecules. In the future, hydrogen could be stored in tanks, and when energy is needed, the gas could be run through a fuel cell, a device that combines hydrogen with oxygen. The result: pollution-free electricity, with water as the only by-product. Already fuel-cell buses, cars and small generators are being tested. Eventually, some visionaries say, fuel cells placed in individual buildings could replace many of today's giant electric plants. But that will not happen unless the technology is refined and the cost drops.

While the developed nations debate how to fuel their power plants, however, some 1.6 billion

people -- a quarter of the globe's population -- have no access to electricity or gasoline. They cannot refrigerate food or medicine, pump well water, power a tractor, make a phone call or turn on an electric light to do homework. Many spend their days collecting firewood and cow dung, burning it in primitive stoves that belch smoke into their lungs. To emerge from poverty, they need modern energy. And renewables can help, from village-scale hydropower to household photovoltaic system to bio-gas stoves that convert dung into fuel. More than a million rural homes in developing countries get electricity from solar cells.

Ultimately, the earth can meet its energy needs without fouling the environment. "But it won't happen," asserts Thomas Johansson, an energy advisor to the United Nations Development Programme [UNDP], "without the political will". To begin with widespread government subsidies for fossil fuels and nuclear energy -- estimated at some \$150 billion per year -- must be dismantled to level the playing field for renewables. Policymakers must factor in the price of pollution: coal plants are more expensive than renewable power when one includes the cost of scrubbers on smokestacks and the expense of healthcare for coal-related illnesses. Environmentalists are calling for taxes on carbon to slow the growth of fossil-fuel use.

Another way to increase renewables' share of the energy mix is to reduce the use of conventional fuel through efficiency incentives. Experts believe that efficiency could slash the globe's projected energy consumption by a third. Strict standards can cut energy use in everything from air conditioners to cars. Compact fluorescent lamps use a quarter of the electricity of incandescent bulbs to provide the same amount of light. The European Union, for instance, requires its members to boost electricity from renewables to 22 per cent of production within the next eight years.

On the road to enlightened energy policy, a few countries offer models of reform. More than a decade ago, Denmark required utilities to purchase any available renewable energy and pay a premium price; today the country gets 18 per cent of its electricity from wind. Thanks largely to Germany and Spain, which have enacted vigorous incentives for renewables, Europe today accounts for 70 per cent of the world's wind power. In Japan 80,000 households have installed solar roof panels since the government offered generous subsidies in 1994; consequently, Japan has displaced the US as the world's leading manufacturer of photovoltaics. India established a fund that has lent \$1.1 billion to alternative-energy projects; the country is now the globe's fifth largest generator of wind and solar

power. Iceland, which lies on a hotbed of underground volcanic activity, uses that geothermal energy to heat 90 per cent of its buildings. The island nation is planning to use geothermal and hydroelectric power to produce large amounts of hydrogen, creating the world's first hydrogen economy. Global energy demand is expected to triple by mid-century. The earth is unlikely to run out of fossil fuels by then, given its vast reserves, of coal, but it seems unthinkable that we will continue to use them as we do now, for nearly 80 per cent of our energy. The world has gradually moved toward cleaner fuels -- from wood to coal, from coal to oil and from oil to natural gas. Renewables are the next step.

Royal Dutch/Shell has pledged to spend up to \$1 billion on renewables through the next five years. Japanese manufacturers, led by Sharp and Kyocera, have moved aggressively into photovoltaic cells, which turn sunlight into electricity.

Such examples show that the future "is more a matter of choice than destiny", says Brazilian physicist José Goldemberg, chairman of a recent United Nations energy study.

Md. Asadullah Khan taught physics and is now controller of examinations at the Bangladesh University of Engineering and Technology (BUET).