

**A TIME TO CHOOSE BETWEEN THE CHILD AND A CAR
“ TAKE A BREATHE IN A POLLUTION-FREE
ENVIRONMENT ”**

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Abstract

Explore the susceptibility of the urban population of Bangladesh to air pollution, recommend measures to be adopted for prevention of air pollution. The large number of street children, local streetwalker and rickshaw puller in our country pose a definite threat to this air pollution. Young children are mostly exposed to cadmium (Cd) through inhalation of smokes and contaminated soils and dust from industrial emissions and sewage sludge. The high lead (Pb) in the environment from gasoline, paints, ceramics, batteries, etc has also been factor to increase the risk of polluted air.

The study was done through the latest Internet, seminar and literature survey on global and regional information on Environment, analysis of the existing situation in Bangladesh, and discussion with the national and International experts was held to know their views. Air pollution kills 15,000 Bangladeshis each year, according to a World Bank report released recently. The report says Bangladesh could save between \$200 million and \$800 million per year -- about 0.7% to 3.0% of its gross national product -- if air pollution in the country's four major cities was reduced.

The report adds that 6.5 million people in those cities suffer each year. And the major disease in Bangladesh is not diarrhea, as is the general perception, Air pollution kills an estimated 2.7-3.0 million people every year throughout the world, which is about 6% of all annual deaths. About 9 deaths in every 10 due to air pollution take place in the developing world, where about 80% of all people live. Again out of this 2.7 million, 1.6+ million die from Asian countries only. In 1995, for example, the average ozone concentration in Mexico City was about 0.15 parts per million, 10 times the natural atmospheric concentration and twice the maximum permitted in Japan or the US. The density of lead in the air of Dhaka is 463 nanograms per cubic metre, which is ten times more than the acceptable standard and several times more than the above mentioned cities, even than the most polluted city of Mexico.

The paper strongly warns against the danger of 'denial' and complacency. We do not want to die so disastrously. An appropriate measures must be taken as soon as possible, otherwise the sufferings of the children (specially who are at the age between 4 and 7) from gastrointestinal disorders, anemia, insomnia, weight loss, motor weakness, muscle paralysis, nephropathy, school drop-out and behavioural changes, may paralyze the nation in future. Not only that, this level of lead poisoning is a major factor responsible for decreasing the mental abilities of the children as a result of which the country will have acute shortage of intellectuals in the long run.

INTRODUCTION

Air pollution kills 15,000 Bangladeshis each year, according to (Paul Martin, a bank environmental specialist in Dhaka) a World Bank report released. The report says Bangladesh could save between \$200 million and \$800 million per year -- about 0.7% to 3.0% of its gross national product -- if air pollution in the country's four major cities was reduced.

The report adds that 6.5 million people in those cities suffer each year at least 8.5 million cases of minor illnesses not requiring treatment. And the major disease in Bangladesh is not diarrhea, as is the general perception, but is the acute respiratory infections caused mainly by the polluted air. Automobiles (auto rickshaws, trucks and buses, some 35 percent is related to fine particulate matter and 48 percent to hydrocarbon mainly generated by Vehicles with two stroke engines [using a direct mix of Mobil and petrol], particularly by baby taxis, tempos and motor cycles), industrial emissions, bad civic practices and poor government services are some of the factors causing Bangladesh's polluted air. The bank gave Bangladesh \$4.7 million last July to fund an air quality management project. It also supports a program to train drivers how to reduce emissions.

Air pollution from cars, trucks and other sources is killing more people worldwide than traffic crashes, according to a new study. Air pollution kills an estimated 2.7-3.0 million people every year – about 6% of all deaths annually. About 9 deaths in every 10 due to air pollution take place in the developing world, where about 80% of all people live. Again out of this 2.7 million, 1.6+ million die from Asian countries only. About 2.5 billion people, almost all in developing countries, suffer from high levels of indoor air pollution which is due to burning wood, animal dung, crop residues, and coal for cooking and heating. Most of the victims of indoor pollution are women and girls, who have primary responsibility for cooking and tending the house. On the other hand, outdoor air pollution harms more than 1.1 billion people, mostly in cities.

The study tracked deaths attributable to air pollution in Sao Paulo, Brazil, Mexico city and New York city. Researcher estimated that adopting green gas mitigation methods currently available would save 64,000 lives in those cities during the next 20 years. The clean up would also prevent 65,000 cases of bronchitis and save about 37 million days of restricted or lost work.

While debates about energy choices, long term climate change impacts, and the capacity to adapt to those impacts continue to evolve, there is little doubt that air pollution from current patterns of fossil-fuel use for electricity generation, transport, industry and housing are already sickening or killing millions through out the world.

The research team studied ozone, particulate, carbon dioxide and other pollutants from the combustion of fossil fuels, which produce the so-called greenhouse affect the climate in coming decades. The pollutants also cause premature deaths form asthma, heart disease and lung disorders. Earlier air pollution studies have found that reducing emissions from older, coal-fired power plants in the United States would prevent 18700 deaths, 3 million lost days and 16 million restricted activity days each year. One regional study showed that reducing emission from nine older coal plants in the Midwest would prevent 300 yearly deaths, 2000 respiratory and cardiac hospital admissions, 10,000 asthma attacks and 400000 days of respiratory symptoms.

In the latest study, researcher said even more public health benefits could come from reducing air pollutants they did not chart. In cities that lack pollution controls, millions of people are at risk from outdoor pollution. Densely populated and rapidly growing cities such as Bangkok, Manila, Mexico City, and New Delhi are often entombed in a pall of pollution from trucks and cars and from uncontrolled industrial emissions. In 1995, for example, the average ozone concentration in Mexico City was about 0.15 parts per million, ppm, 10 times the natural atmospheric concentration and twice the maximum permitted in Japan or the US.

The concentration of particulate matter and lead, carbon monoxide and hydrocarbon in the air of Dhaka City is much above the standard level and is probably the highest in the world and also one of the more cancer inducing cities of the world. The lead content of dust in Dhaka City was determined by Atomic Absorption Spectrophotometer (AAS). Lead content of dust ranged from 7 to 240 parts per million, ppm. Which is ten times more than the standard level and several times more than the above-mentioned cities, even than 'The most polluted city-Mexico.' The highest amount of lead was found in the dust collected from Syedabad and the lowest was found at Dhaka University bus depot

AIR POLLUTION AND CHILDREN

A New Child-Attacking Virus Thrives in Dhaka as Pollution Heightens. A new variant of a virus has been hitting small children of Dhaka with debilitating effect attacking their breathing problem. The school children of Dhaka City had nasal irritation, cough when they caught by cold, headache, dizziness. The reason behind is the high lead in the environment from gasoline, ceramics, batteries, paints, etc. Young children are mostly exposed to cadmium through inhalation of smokes and contaminated soils and dust from industrial emissions and sewage sludge.

The children have in most cases been given antibiotic that is not useful in combating viral infections. However, what is alarming is that the medical community appears unprepared and unequipped to deal with this new viral strain and some medical experts have blamed it on the high level of urban pollution.

In the developing countries, 22-lakh children die of respiratory infection associated with indoor air pollution a year

Lead pots, pipes, and smelters are usually held responsible by the experts for loss of intelligence among children and for brain damage and abnormal behaviour among adults. Heavy metals released into the environment today come from uncontrolled emissions by metal smelters and other industrial activities, unsafe disposal of industrial wastes and lead in water pipes, paint, and gasoline. The heavy metals most dangerous to health include lead, mercury, cadmium, arsenic, copper, zinc, and chromium. Such metals are found naturally in the soil in trace amounts, which pose many problems. When concentrated in particular areas, however, they present a serious danger. Arsenic and cadmium, for instance, can cause cancer. Mercury can cause mutations and genetic damage, while copper, lead, and mercury can cause brain and bone damage.

Lead additives in gasoline cause widespread health problems. In Thailand, for example, a 1990 study found that some 70,000 children in Bangkok risked losing four or more points of IQ because they were heavily exposed to lead emissions from motor vehicles. In Latin America, some 15 million children under the age of two are at risk of ill health from lead pollution.

In United States Leaded gasoline began to be phased out after the passage of the clean Air Act in 1970. It was not until the mid 1980s, however, that the European Community followed suit. Elsewhere (like Bangladesh), leaded gasoline continues to be used extensively.

Air pollution is not only a health hazard but also reduces food production and timber harvests, because high levels of pollution impair photosynthesis. In Germany, for example, about US\$ 4.7 billion a year in agricultural production is lost to high levels of sulfur, nitrogen oxides, and ozone .

The World Health Organisation estimates that about 700,000 deaths annually could be prevented in developing countries if three major atmospheric pollutants – carbon monoxide, suspended particulate matter, and lead – were brought down to safer levels. The direct health cost of urban air pollution in

developing countries was estimated in 1995 at nearly US\$100 billion a year. Chronic bronchitis alone accounted for around US\$40 billion).⁴

RECOMMENDATIONS

People have been crying out for solution for decades but nothing has yet been done. The atmosphere is under increasing pressure from green house gases that threaten to change the climate and from chemicals that reduce the ozone layer. 'The major air pollutants affecting respiratory tract are sulfur dioxide, photochemical oxidant, ozone and NO₂.'

Government need to:

- Take the lead in managing this disastrous situation.
- Promote national energy efficiency and emission standards and develop efficient, cost effective, and less polluting mass transit systems.
- Completely abolish import and use of leaded gasoline,
- Completely abolish 2 stroke engine vehicles,
- Completely abolish old vehicles (which are more than 20 years),
- Promote correct use of lubricants to reduce the emission levels,
- Encourage people to use Compressed Natural Gas (CNG) or Liquid Petroleum Gas (LPG), Rechargeable Battery (recently being used in US) driven car,
- Immediately scratch out all unfit vehicles and punish those driving unfit vehicles on the streets,
- Immediate relocate/shift the Industries (such as Tanneries, Battery, Pharmaceutical, Tobacco) away from Dhaka city,
- Create Public awareness on Air pollution through media materials (such as videos, pamphlets, booklets, radio and television including print and electronic media, film and the arts, and new media technologies)
- Modernize existing power systems and reduce fossil -fuel combustion

Training for the Doctors and treatment facilities for the patients are required. General Training should be held quarterly to train the drivers how to reduce emissions. Seminar/ National and International Conference should be held Yearly. Industrial wastage should be properly disposed of.

The United Nations framework Convention on Air pollution should be implemented in our country. Within this framework a National level commission along with NGO's should be formed to combat this situation. UN Environment Program, UNEP, should open a technical office, specializing in air pollution in Dhaka like Kathmandu, Nepal.

We need to save the forest and promote plantation inside the cities to maintain or restore the ecological balance. Lastly we need ‘Strong Political Blessings’ to save our environment.

CONCLUSION

In developing countries (like Bangladesh) today the old killers are still around-TB, malaria and diarrhoeal disease, among others now HIV/AIDS. But joining these as important causes of death and ill health are cancers, diseases of the bones, livers, lung, kidney and chronic diseases (such as Bronchitis, gastrointestinal disorders, breathing problem, anemia, insomnia, weight loss, bronchial asthma, pulmonary oedema, cough, muscle paralysis, nephropathy, respiratory infection etc) caused by industrial and agricultural chemicals and other pollutants in the atmosphere, soil and water.

Lead, mercury, copper, arsenic and other heavy metals used in industry have caused many deaths. A number of pesticides and other chemicals, known as PoPs (persistent organic pollutants), which are used both in agriculture and in industry, can cause cancer and genetic abnormalities in humans.

Bangladesh soils are polluted with arsenic due to irrigation with as contaminated groundwater. Arsenic was found above permissible limits in vegetables, fruits and cereal crops grown in soils irrigated with contaminated water

Air pollution is not only causing serious health problem but also imposing huge social cost. The cost of living in Dhaka is being seriously increased by this hazard and on top the medical management facilities are not adequate. It seems dying in Dhaka is becoming a long stretched out business which we can barely afford. Such a problem needs immediate attention from the policy makers as the existence of human being depend on the solution of the problem. As we came to know that lead emissions from motor vehicles is the primary element for declining the IQ level of the children as such the country will have acute shortage of high-brow in the coming future. What we foresee, after 10 years from now, our young children won't be able to *smell what their mother would be cooking*, rather they will be inhaling and exhaling only Polluted Air. One has to remember that the arrogant roar of an engine can easily drown the crying of a child. The pollution-vomiting vehicles are now again on the high roads because the government somewhat backed down lately after their dialogue with transport associations centered on a strike they had called to protest. Even the high-risk old vintage transports are now allowed to ply and the police have eased the regulation. However it more complex problem than reducing Polly bags.

The bottom line is Bangladesh Government should immediately translate its National Environmental Policy, transport policy into action to benefit the people of this country. Other wise we will be in limbo.

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