

# Air pollution assignment

[Environment](#), [Air](#)



Air pollution of Bangladesh is mainly caused by the vehicle emission, industrial discharge and burning of fossil fuel. The water resource of Bangladesh becomes a major health hazard due to arsenic contamination, inadequate solid waste and industrial effluent management. Necessary steps are to be taken to protect the environment for our own existence. This paper provides an overview of different environmental problems of Bangladesh and discusses the ways to improve it. Keywords: Environmental Pollution, Air Pollution, Water Pollution, Noise Pollution 1.

Pollution has become the first enemy of the mankind. Industrial revolution of 19th century led to environmental disaster. The whole world is now more afraid of pollution rather than nuclear blast. Technological advancement has brought revolutionary changes in life style and national economy with overwhelming power over nature. The protection of environment has become a major issue around the globe for the well being of the people and economic development. 1. The present environmental condition of Bangladesh is not at all equilibrium. Severe air, water and noise pollution are threatening human health, ecosystems and economic growth of Bangladesh. Air pollution caused due to increasing population, burning fossil fuels, industrialization and associated modernization. The water pollution caused due to industrialization. The underground water of Bangladesh has been polluted due to arsenic. The inhabitants of major cities of Bangladesh are also exposed to high level of noise pollution.

Environmental degradation of Bangladesh is also caused due to poverty, over-population and lack of awareness on the subject. It is manifested by deforestation, destruction of wetlands, soil erosion and natural calamities.

Few steps have been taken by the government to improve the environmental degradation and pollution control. This paper analyzes the different types of environmental pollution and associated health hazard in Bangladesh. It also discusses the different governmental steps as well as some suggested steps to improve the pollution control. Air pollution. Air pollution is a serious environmental health hazard affecting the populations of Bangladesh. Air pollution of Bangladesh is caused due to increasing population and associated modernization. Indoor air pollution is mainly associated with the use of biomass fuels during cooking with poor ventilation. Industrial emissions and automobiles are the principle sources of outdoor air pollution.

The national ambient air quality standards of Bangladesh and amount of pollutants in the air of Dhaka city is shown below: Table ?? 1: Bangladesh National Ambient Air Quality Standards \*Sensitive areas include national monuments, health resorts, hospitals, archeological spots, and educational institutions-source: Department of Environment (DOE), 1997. Table – AAA: Pollutants in the Air of Dhaka City Table – B: Pollutants in the Air of Dhaka City 2. 2 Main Sources Of Air Pollution. 2. AAA. Burning of Fossil Fuel.

Air pollution mainly occurs due to burning of fossil fuels like coal, petroleum etc and associated black smoke. Over 99% of the brick kilns use fossil fuel but don't comply with the “ Brick Kiln Ordinance” and pollute enormous air. 2. B. Industrial Discharge. Industries cause air pollution through smoke emission. Agro based industries like sugar, pulp, paper, tanneries and value

added industries like textile, garments, pharmaceuticals, oil refineries, fertilizer and chemical industries are the major contributors for air pollution.

The air pollution percentage of most five industrial sectors of Bangladesh in the year 2001 is shown below: Table-3: Air pollution percentage Of most Five Industrial Sectors Of Bangladesh in the ear 2001 Source: Research Work by Islam Facials on " Industrial Pollution in Bangladesh" in the year 2002. 2. C. Emission from Vehicles. One of the major sources of air pollution in urban areas of Bangladesh is due to the unburned fuel from two stroke engine vehicles. Dacha has been rated as one of the most polluted cities of the world.

Bangladesh Atomic Energy Commission reports that automobiles in Dacha emit 1 00 keg lead, 3. 5 tons SUMP, 1. 5 tons SIS, 14 tons HCl and 60 tons CO in every day. The contribution of air pollution by different types of vehicle and the amount of pollutants emitted from vehicles in Dacha city is as follows: Table-4: Contribution of Air Pollution by Vehicle Type Source: Country Profile on Environment of Bangladesh by Japan International Cooperation Agency in the Year 1999. 2. 3 Water Pollution. Water pollution creates serious health hazard for Bangladesh.

The dumping of municipal wastes, hospital wastes and toxic environmental discharges from mostly industries pollute both surface and ground water sources. The most dangerous threat emanating from environmental degradation is the arsenic contamination of ground water. 2. 4 Main Sources of Water Pollution. 2. AAA. Industrial Waste and Effluent. The main industrial areas of Bangladesh are at Dacha, Chitchatting, Chula, and Bogart districts.

The mostly contributing industries for water pollution are pulp and paper, pharmaceuticals, metal processing, food industry, fertilizer, pesticides, dyeing and painting, textile, tannery etc.

More than 200 rivers of Bangladesh directly or indirectly receive a large quantity of untreated industrial wastes and effluent. Everyday approximately 700 tanneries of Dacha city are discharging about 1 6, 000 cubic meters of toxic wastes. The Department of Environment (DOE) has listed 1, 1 76 factories that cause elution throughout the country. Water pollution percentage of most five industrial sectors of Bangladesh in the year 2001 is shown below: Table-5: Water Pollution Percentage Of most Five Industrial Sectors of Bangladesh in the year 2001 in the year 2002. 2. B. Solid Waste and Sewage Disposal.

The indiscriminate discharge of solid waste, domestic and hospital sewage are the major source of water pollution in Bangladesh. About 4, 000 to 4, 500 tons of solid wastes are generated daily and only half of the generated wastes are disposed of in low lying areas or into river water. These solid wastes are associated with the problems of littering on roads, spilling around the bins, clogging of drains, indiscriminate dumping on vacant plots and cause serious environmental pollution. More than 500 hospitals and clinics of Dacha city generate and release hazardous and toxic wastes without any treatment.

The generated solid waste of six famous hospitals / clinics of Dacha city is shown below: Table-6: Solid Waste Generation from Six Famous Hospitals/Clinics of Dacha City Source: M Sheaf Allah on “ A study of hospital

waste management in Dacha city' in the year 1999. 2. C. Inadequate Sanitary Facilities. Inadequate sanitation facilities pose a serious environmental threat in Bangladesh. Dacha Water and Sewerage Authority (DADS) can serve only for 15 to 20% of city population. In absence of the sanitation and infrastructural services, 40% having septic tank and soak pit, 15% using pit latrines and 30% using open latrines.

The sewage is mostly released into low-lying areas and river water in untreated manner causing great environmental hazards. 2. Ad. Arsenic Contamination of Ground Water. Arsenic in ground water poses a serious environmental hazard for Bangladesh. About ninety-seven percentages (97%) of Bangladesh people have been using ground water as the main source of drinking water but the water has been threatened by arsenic contamination. More than half (52%) of the studied population drink well-water containing  $> 10 \mu\text{g/L}$  of arsenic and more than two-thirds (70%) drink well-water containing  $> 10 \mu\text{g/L}$  of arsenic.

The acceptable level of arsenic in drinking water is  $0.05 \text{ mg/L}$  for Bangladesh but some places it is found more than 70 times higher than that standard. About 80 million people are at a risk of arsenic contamination. The arsenic level of ground water over  $0.05 \text{ mg/L}$  surveyed in 1998 by the British Geological Survey team is as follows. Table-7: Percentage of Ground Waters Surveyed in 1998 by the British Geological Survey Team with Arsenic Levels over the Limit Source: Allan H Smith, Elena O Lings & Mayfair Raman on "Contamination of drinking-water by arsenic in Bangladesh: a public health emergency" in 1998. . 5 Noise Pollution. The noise pollution is also a

major health hazard in Bangladesh. According to World Health Organization (WHO), 60 decibel (DB) sound can make a man deaf temporarily and 100 DB sound can cause complete deafness. According to the Department of Environment (DOE), the perfect sound condition for Bangladesh is 45 db for the daytime and 35 db for the night in peaceful areas and 50 db for the daytime and 40 db for the night in residential areas. The main sources of noise pollution are industries, motorized vehicles, construction works and indiscriminate use of loudspeaker.

At present noise level in Dhaka city are estimated ranging from 60 to 100 decibel. If present situation continues then by the year 2017, 50% people of Dhaka city will lose 30 decibel of hearing power. The daily variation of noise level near the road at some of the key locations of Dhaka city is shown below: Table ?? AAA: pollutants in the Air of Dhaka City. Source: Nazim Chowder research on noise pollution in Dhaka city on Feb. 2002. Table – B: Pollutants in the Air of Dhaka City. 2002. 3. EFFECT OF ENVIRONMENTAL POLLUTION 3. Severe environmental pollution is threatening human health and economic growth of Bangladesh. Air pollution mostly affects the urban children. Indoor air pollution is a greater threat to health than outdoor air pollution. Bangladesh could avoid 10,000 deaths and save between 200 and 500 million dollars a year if indoor air pollution in four major cities can be reduced to acceptable limits. 3. Immediate effect Of smoke inhalation causes headache, vertigo, burning sensation of the eyes, sneezing, nausea, tiredness, cough etc.

It's long term effect may cause asthma and bronchitis. Lead affects the circulatory, nervous and reproductive systems as well as affects kidney and liver including liver cancer or cirrhosis. Carbon monoxide hampers the growth and mental development of an expected baby. Nitrogen oxides cause bronchitis and pneumonia. 3. 3 Industrial emissions cause different waterborne disease and damage to health. Arsenic poisoning is slow and cumulative. It causes melanomas, kurtosis and conjunctivitis. Subsequently respiratory problem, gangrene, skin, kidney and lung cancer would arise.

The Arsenic effect not only causes serious health hazards but also creates a widespread social problem. The inadequate sanitation facilities also pose a serious health threat in Bangladesh. 3. 4 Noise pollution causes mental and physical illness among the people. Sound pollution causes deafness to heart attack. Any sort of noise pollution seriously affects expecting mothers. It also causes high blood pressure, tachycardia, headache, indigestion, and peptic ulcer. 3. 5 Many people died every year in many diseases due to environmental pollution.