

Environmental Pollution: Its Effects on Life and Its Remedies

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Abstract

Environment pollution is a wide-reaching problem and it is likely to influence the health of human populations is great. This paper provides the insight view about the affects of environment pollution in the perspective of air pollution, water and land soil waste pollution on human by diseases and problems, animals and trees/ plants. Environmental pollution is any discharge of material or energy into water, land, or air that causes or may cause acute (short-term) or chronic (long-term) detriment to the Earth's ecological balance or that lowers the quality of life. The research finds that these kinds of pollutions are not only seriously affecting the human by diseases and problems but also the animals and trees/ plants. As our suggestions (authors), still time left in the hands of global institutions, governments and local bodies to use the advance resources to balance the environment for living and initiates the breathed intellectuals to live friendly with environment. As effective reply to contamination is largely base on human appraisal of the problem from every age group and contamination control program evolves as a nationwide fixed cost-sharing effort relying upon voluntary participation.

Keywords: Air Pollution; Contamination; Environment Pollution; Land pollution

Introduction

One of the greatest problems that the world is facing today is that of environmental pollution, increasing with every passing year and causing grave and irreparable damage to the earth. The significance of environmental factors to the health and well-being of human populations' is increasingly apparent (Rosenstock 2003; World Health Organization [WHO], 2010b). Environmental pollution is a problem both in developed and developing countries. Factors such as *population growth* and *urbanization* invariably place greater demands on the planet and stretch the use of natural resources to the maximum. Pollution reaches its most serious proportions in the densely settled urban-industrial centers of the more developed countries (Kromm, 1973). In poor countries of the world more than 80% polluted water have been used for irrigation with only seventy to eighty percent food and living security in industrial urban and semi urban areas. (Mara & Cairncross, 1989). Industry, clustered in urban and semi-urban areas surrounded by densely populated, low-income localities, continues to pollute the environment with impunity (Government of Pakistan, 2009). Over the last three decades there has been increasing global concern over the public health impacts attributed to environmental pollution (Kimani, 2007), Human exposure to pollution is believed to be more intense now than at any other time in human existence (Schell et al, 2006). At present, the adoption of environmental auditing in any economic sector is voluntary but future legislation could well make it mandatory. (Goodall, 1995). Sharp & Bromley (1979) posit that pollution control program evolves as a nationwide fixed cost-sharing effort relying upon voluntary participation. Interestingly, Good all (1995) refers tourism as the potential to damage the environment. There is no doubt that excessive levels of pollution are causing a lot of damage to human & animal health, plants & trees including tropical rainforests, as well as the wider environment.(Tropical Rainforest Animals, 2008). According to Fereidoun et al (2007),.

Environmental pollution is tangled with the unsustainable anthropogenic activities, resulting in substantial public health problems.(Khan, 2004). Environmental pollutants are constituent parts of the pollution process. They are the actual “executing agents” of environmental pollution.They come in gaseous, solid *or* liquid form. Environmental pollution consists of five basic types of pollution, namely, air, water, soil and noise.

Air Pollution

Air pollution is the contamination of natural air by mixing up of it with many different contaminating particles including chemicals, harmful fumes etc. This type of pollution always behaves as a potential risk, leading to respiratory infections, heart diseases, strokes etc. Other health effects due to air pollution include asthma and cardiac conditions.The pollutants for air pollution are divided into two categories. The first type of pollutants known as primary pollutants are those which are produced from a certain process like the smoke emitted from the vehicles. The second type of pollutants are termed as the secondary pollutants and these are the ones which are generated due to the reaction of primary pollutants with natural air.Different pollutants affect the air in different forms. Like the reaction of sulfur oxides and nitrogen oxides results in the production of acid rain. The vehicles, from their exhaust systems, give out the component of carbon monoxide which has an adverse effect on the atmosphere. The ground level ozone which is the basis of certain regions of stratosphere can also act as an air pollutant which in high concentrations aids in the generation of smog. Coal is another source which contaminates the air. If the burning coal gets mixed up with the smoke from some other sources, it results in the generation of smog which is also a major type of air pollution.

Water Pollution

It is defined as the constant addition of pollutants to the water bodies resulting in contamination of the water. This makes the concerned water unfavorable for the use for both humans and commercially and is left as a waste only. The contaminated water when mixed with a bigger water body results in the adverse impact on the aquatic species. The major role played in the contamination of water is by the various industrial chemicals and wastes that are thrown into the water body without adequate treatment and thus contaminating the water. The high temperature fluids adversely affect the thermal state of the water and lead to the discoloration of natural clean water.The list of the contaminants of water also includes many other particles such as detergents being generated by the industries and also from the households which get readily mixed with the water bodies. Testing the extent of water pollution can be done in a number of ways including the physical testing which means to analyze the temperature, solids, concentration and other factors for a particular sample of water

Soil Pollution

Basically, the soil pollution refers to the mixing up of soil with the materials which are potent enough to affect the natural soil when mixed up with it in more than adequate proportions. The addition of the contaminated particles to soil happens both due to the human and natural activities in which the former plays a major part. The most important factor leading to soil

pollution is the ever increasing number of construction sites in today's world. The harmful chemicals which are used in these construction activities harm the environment both during the construction and also after the construction has been completed. The other factors leading to soil contamination include the landfill and illegal dumping that is usually carried out in the outskirts of urban areas due to which the waste decomposed intermixes with the nutrients present in the soil in the initial phases and leads to its depletion. The contaminated soil directly affects the human health either through the direct contact with it or by the inhalation of harmful soil contaminants which are vaporized. For example, the nitrate particles are highly dangerous to be dumped under the soil cover and thus are first mixed up with the ammonia to reduce their impact, but even after this the resultant mixture leads to highly dangerous health hazards.

Noise Pollution

Noise pollution is the generation of sounds that are irritating and have a high pitch as compared to the hearing capabilities of humans. The basic sources of this sort of pollution are the machines that are extensively found in the industries and the transportation systems. Also, the loud noise created by loud music and other building activities can also contribute to this pollution leading to cardiovascular effects and other undesirable health effects for the humans. The need for preventive measures for noise pollution has always been there and this in a way has resulted in the emergence of hybrid vehicles which are less noisy than other contemporary vehicles. The concept of noise pollution is a very unique one, as sound is something which has the capability to have both good and bad effects on the health of humans. Undesirable noises, in the form of noise pollution, can cause many health problems, but at the same time some soothing sounds can have a positive effect on the mental as well as physical health of the humans.

2. Impact of Polluted Environment on, Animals, Plants and Human

When water in the atmosphere mixes with certain chemicals –particularly sulphur dioxide and nitrogen oxides emitted during the burning of fossil fuels–mild acidic compounds are formed. This acid rain can leach toxic aluminum from the soil, which at low levels can stress fish in lakes and streams or, at higher concentrations, kill them outright. Acid Rain also weakens trees in forests and contributes to air pollution that can harm humans. Human beings are not the only organisms affected by vehicle exhaust. “Motor vehicles emit a complex mixture of airborne pollutants, many of which may have ecological effects,” (Bignal et al., 2008). The environment takes a brutal impact from the chemical compounds released into the air. There are obvious effects, like the depletion of the ozone layer and less obvious effects such as damage to plants. The leaves of plants can get clogged with the particles released from vehicle emissions making it hard for the plant to photosynthesize. Many plants are killed off by vehicle exhaust. On the edge of highways there is a certain distance before plants start to grow with vigor. City planners should realize that vehicle exhaust is a dangerous combination of chemical compounds that should not be inhaled. Structure of cities should change to include more bike lanes and pedestrian walk ways in areas with lower levels of traffic. Public transportation planning should also take a high priority in decision making. If public transportation is convenient for the citizens, less people would decide to drive. Delaney et al. stated that to make a better public transportation system, it would require support from the public, which is “difficult to garner in our car-dependant society,” (2009). Society needs to change views of what is important for

vehicles and realize the detrimental effects exhaust is having on human health and environmental function. Polluted drinking water or water polluted by chemicals produced waterborne diseases like, Giardiasis, Amoebiasis, Hookworm, Ascariasis, Typhoid, Liver and kidney damage, Alzheimer's disease, non-Hodgkin's Lymphoma, multiple Sclerosis, Hormonal problems that can disorder development and reproductive processes, Cancer, heart disease, damage to the nervous system, different type of damages on babies in womb, Parkinson's disease, Damage to the DNA and even death, meanwhile, polluted beach water contaminated people like stomach aches, encephalitis, Hepatitis, diarrhoea, vomiting, gastroenteritis, respiratory infections, ear ache, pink eye and rashes (Water Pollution Effects, 2006). Loss of wild life is directly related to pollution (Progressive Insurance, 2005) and according to Water Pollution Effects (2006) on animals i) Nutrient polluted water causes overgrowth of toxic algae eaten by other aquatic animals, and may cause death; it can also cause eruptions of fish diseases, ii) Chemical contamination can cause declines in frog biodiversity and tadpole mass iii) Oil pollution can increase susceptibility to disease and affect reproductive processes and negatively affect development of marine organisms and it can also a source of gastrointestinal irritation, damage to the nervous system, liver and kidney damage iv) Mercury in water can cause reduced reproduction, slower growth and development, abnormal behavior and death v) Persistent organic pollutants may cause declines, deformities and death of fish life and Fish from polluted water and vegetable/ crops produced or washed from polluted water could also make impact on human and animal health. More sodium chloride (ordinary salt) in water may kill animals and plants, plants may be killed by mud from construction sites as well as bits of wood and leaves, clay and other similar materials and plants may be killed by herbicides in water (Kopaska-Merkel, 2000). For tree and plants water pollution may disrupt photosynthesis in aquatic plants and thus affecting ecosystems that depend on these plants (Forestry Nepal, n.d). Soil pollution effects causes according to tutor vista (n.d) are cancer including leukaemia and it is danger for young children as it can cause developmental damage to the brain furthermore it illustrated that mercury in soil increases the risk of neuromuscular blockage, causes headaches, kidney failure, depression of the central nervous system, , eye irritation and skin rash, nausea and fatigue. Soil pollution closely associated to air and water pollution, so its numerous effects come out as similar as caused by water and air contamination. TNAU Agritech Portal (n.d) soil pollution can alter metabolism of plants' metabolism and reduce crop yields and same process with microorganisms and arthropods in a given soil environment; this may obliterate some layers of the key food chain, and thus have a negative effect on predator animal class. Small life forms may consume harmful chemicals which may then be passed up the food chain to larger animals; this may lead to increased mortality rates and even animal extinction.

Conclusion

It appears that polluted environment is global an issue and world community would bear worst results more as they already faced. As effective response to pollution is largely based on human appraisal of the problem (Kromm, 1973) and pollution control program evolves as a Nationwide fixed cost-sharing effort relying upon voluntary participation (Sharp & Bromley, 1979). Education, research, and advocacy, are lacking in the region as preventive strategy for pollution (Fitzgerald, 1998) especially in Asia. At present the adoption of environmental

auditing in any economic sector is voluntary but future legislation could well make it mandatory (Goodall, 1995) and still time available to use technology and information for environmental health decision. Policymakers in developing countries need to design programs, set standards, and take action to mitigate adverse health effects of air pollution. Healthy people mean human resources are the main object of any successful business or country. These societal beneficial efforts need to carefully adapt available knowledge from other settings, keeping in mind the differences in pollutant mixtures, concentration levels, exposure patterns, and various underlying population characteristics.

References

- <https://www.udemy.com/blog/different-types-of-pollution>
- <http://www.worldwildlife.org/threats/pollution>
- Avdeev, O. & Korchagin, P. (1994). *Organization and Implementation of Contaminated Waste Neutralization in the Ukraine - National Report II, Central. European Journal of Public Health, 2(suppl), pp. 51-52.*