



REASEARCH TOPIC: ENVOIRNMENTAL POLLUTION

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ABSTRACT:

This research paper highlights the major causes of environmental pollution. Under this heading, we analyze different kinds of environmental pollution. It further focuses on all the ways through which environmental pollution can be decreased or completely eradicated from Pakistan.



KEY WORDS:

World Bank, Soil erosion, pesticides, contaminated water, radioactive substances, Eutrophication, Bioaccumulation, Cardiovascular Disease, Hemorrhage and Billion Tree Afforestation Project.

INTRODUCTION:

When we discuss about environmental pollution this means that we are covering all kinds of pollution which effect the health of humans and destroy the peace of all

individuals. We the people of Pakistan are prone to noise pollution, air pollution, water pollution, soil erosion's, natural disasters and misuse of pesticides. (1)

1. <https://www.aboutpakistan.com/blog/environmental-pollution-in-pakistan/>

BASIC FACTS:

According to the report of World Bank presented in 2013, the top environment issues of Pakistan were noise pollution, contaminated water air pollution. The graph of environmental pollution will increase with the development of industrial sector.



(2)

2. https://en.wikipedia.org/wiki/Environmental_issues_in_Pakistan

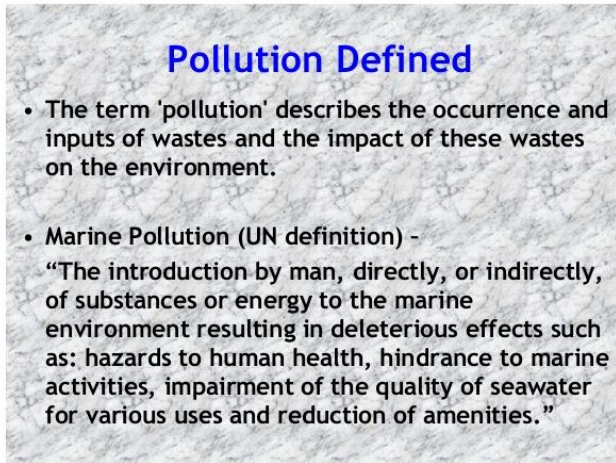
MEANING OF ENVIRONMENTAL POLLUTION:

The absorption of undesired chemical or substances which may be in form of solids and liquids is known as environmental pollution. (3)

3. <https://www.reference.com/science/environmental-pollution-55a206cd395f80a9>

Pollution can be caused by different forms of energy such as heat, light and from radioactive substances. All the sources of environmental pollution have proven more disastrous. When once combined with our atmosphere, it is almost impossible to recycle or decompose these substances so that they are harmless (4)

4. <https://www.britannica.com/science/pollution-environment>



(5)

5. <https://www.nationalgeographic.org/encyclopedia/marine-pollution/>

HISTORY OF ENVIRONMENTAL POLLUTION:

A HISTORY OF POLLUTION



- Syracuse area was settled in the 1700s
 - Salt deposits spurred large scale production
- Resulted in rapid industrial and population growth leading to...
 - Industrial pollution
 - Wastewater pollution

Wastewater Effects on the Lake (timeline):

- 1890- Cold water fishery lost
- 1940- Swimming banned (fecal coliform, total phosphorus and clarity)
- 1994- Lake and sediment added to the EPA Superfund National Priority List

(6)

6. <http://www.pollutionissues.com/Fo-Hi/History.html#:~:text=%20History%20%201%20Water%20Pollution.%20Water%20is,%20air%20in%20Bhopal%2C%20India%2C%20from...%20More%20>

A Brief History of Air Pollution

- London's historical problems
 - King Edward I forbid sea coal in 1273
 - London known for "pea-soup" (dangerous)
 - One "pea-soup" incident caused 700 deaths
 - Term "smog" created around 1911
- Disastrous London smog event of 1952
 - Winds died, smog settled over London
 - People could see where they were walking for 5 days
 - Killed 5,000 lives
 - Caused Parliament to pass Clean Air Act of 1956

(7)

7. <https://www.epa.gov/air-research/history-air-pollution>

TYPES OF POLLUTION



AIR POLLUTION:



Our atmosphere gets polluted when different pollutants absorb in it. These pollutants include harmful gases; carbon dioxide, methane, smoke, soot, pollen etc. (8)

8. <https://www.nationalgeographic.com/environment/global-warming/pollution/>

EFFECTS OF AIR POLLUTION:

Air pollution has many effects on our environment. The major negative impacts of air pollution include: Skin damage, respiratory health problems, extinction of animal

species, acid rain, endangers the lives of species travelling in air, destroys the plants and smog effect. (9)

9. <https://www.tecamgroup.com/effects-air-pollution-environment/>

WATER POLLUTION:



Water pollution is caused when waste materials are thrown into water reserves by humans. These waste materials include Industrial waste which is dumped into lakes and rivers, incursion of pesticides used for plants into rivers, the mingling of chemicals after washing of clothes near lakes. When chemicals from detergents get mixed with the water it causes “Eutrophication”. (10)

10. <https://readanddigest.com/what-are-different-types-of-pollution/>

EFFECTS OF WATER POLLUTION:

Water pollution also has negative impact on our environment. The impact of water pollution depends on what kind of chemicals are dumped into the water. The species found in the water reservoirs are greatly effected by the contamination of water. Many marine animals die due to water pollution. The natural food products are effected too. When our agricultural land receives dirty water this results in the production of such eatables which are completely unhygienic. People suffer from different types of diseases when they use the polluted water while drinking and cooking food. (11)

11. <https://eschooltoday.com/learn/effects-of-water-pollution/>

NOISE POLLUTION:

Noise pollution means a high pitch sound which destroys the peace of humans and may cause abnormalities in other living creatures. Such sound is also known as abnormal sound which cause disturbance in the environment. The sources of noise pollution include; street traffic sounds, sounds which erupt from railway stations and airports, sound produced from the industrial machinery, loud music in residential areas or commercial plots, sounds which become abnormally loud during any conflict, sounds which are produced by firecrackers and sounds produced during household work such as washing machines, generators, vacuum cleaners, coolers etc. (12)

12. <https://www.environmentalpollutioncenters.org/noise-pollution/>

FATAL EFFECTS OF NOISE POLLUTION:

Noise pollution has some everlasting effects on humans as well as animals. Some effects on humans include; effect on hearing, psychological disorders, sleeping disorders, physical disorders, cognitive issues and behavioral changes and cardiovascular issues.

Very loud sounds are not favorable for humans by any means. It first of all impacts the listening power of humans. Basically the louder voices damages the eardrums of humans. People exposed to such environment have to deal with issues of anxiety, depression and fatigue. Similarly people dwelling in areas which are crowded and very noisy have physical issues which include; gastritis, colitis and heart attacks may occur. People may suffer memory issues and louder voices also start damaging the brains. People face issues in absorbing knowledge. (13)

13. <https://www.conserve-energy-future.com/causes-and-effects-of-noise-pollution.php>

SOIL POLLUTION:



Soil is that part of the earth which is seen rarely because of construction of concrete buildings and roads. We use different terminologies for soil such as mud, dirt and ground. (14)

14. <https://www.conserve-energy-future.com/causes-and-effects-of-soil-pollution.php>

CAUSES OF SOIL POLLUTION:

Our soil gets polluted when different pollutants get absorbed in the mud. The soil gets contaminated in many ways such as; when the transports release toxic vehicle emissions, chemicals released from the factories accidentally, dumping of waste materials underground, cracked down paint chips from buildings etc. (15)

15. <https://www.environmentalpollutioncenters.org/soil/causes/>

EFFECTS OF SOIL POLLUTION:



Soil pollution has everlasting effects on humans as well on animals. Soil pollution effects the humans in the following ways:

1. ORGANS DAMAGED: *The presence of heavy metals in the soil can affect the health of humans. Such pollutants may damage the brains of the growing children which may cause neurological disorders and it may also effect the kidneys and liver of individuals belonging to any age group.*

2. BIOACCUMULATION: *Soil which is less polluted may harm humans indirectly. Plants found in areas which have polluted soil absorb the pollutants present in soil. These plants are utilized by animals. Therefore, harmful chemicals are transmitted to the animals. Humans often use animals and plants in their meals. In this way poisonous chemical are transferred to humans.*

3. CANCER: *When soil is eroded due to strong breeze individuals breathe in poisonous soil or mud. This directly effects the liver and lungs of humans. People suffer from Lung cancer and Liver cancer. Individuals connected to the agriculture sector such as farmers have direct contact with soil. If the soil contains harmful chemicals there is possibility that these individuals may suffer from skin cancer. Similarly, children may also suffer from skin cancer. Children love to play with mud; make mud castles, mud houses and many other things. In this manner their skin has direct exposure with the poisonous mud. (16)*

16. <https://healthfully.com/the-effects-of-soil-pollution-on-humans-5217353.html>

RADIOACTIVE POLLUTION:



Radioactive pollution takes place when some radioactive materials get absorbed in our environment. This presence may be due to some accident or due to use of any radioactive materials against any state by enemy state. (17)

17. <https://www.conserve-energy-future.com/radioactive-pollution-causes-effects-solutions.php>

MAJOR CAUSES OF RADIOACTIVE POLLUTION:

Following are some major sources of radioactive pollution:

- 1. NUCLEAR EXPLOSIONS & DETONATION OF NUCLEAR WEAPONS:** *Nuclear explosions and detonation of nuclear weapons has so far been considered as the major reason of radioactive pollution.*
- 2. MINING:** *Mining of radioactive ores (such as uranium ores) involves the crushing and processing of radioactive ores and generates radioactive by-products.*
- 3. NUCLEAR WASTE HANDLING AND DISPOSAL:** *The nuclear waste is often not properly disposed off. This also increases radioactive pollution. The nuclear waste must be dumped in remote areas or where there is less life. Another alternative is that the waste is stuffed in tight cylinders and left in remote caves and abandoned salt mines. (18)*

18. <https://www.environmentalpollutioncenters.org/radiation/causes/>

EFFECTS OF RADIOACTIVE POLLUTION:



The radioactive pollution effects all living beings, whether humans, animals or plants. Human beings are effected by the radioactive pollution in the following:

- 1. DEVELOPMENT OF DISEASES: The skin infections and other dangerous skin diseases erupt due to radioactivity. Radioactivity leads to exposure to many deadly ailments which include leukemia, hemorrhage and different cardiovascular diseases.*
- 2. SOIL INFERTILITY: Radioactivity results in the pollution of soil. All radioactive materials in the waste may absorb in the components of soil. This may cause infertility of soil.*
- 3. CELL DAMAGE: Another grave issue which may raise due to radioactivity is the damage of cells present in human bodies. It may also result in destroying the sensitive tissues present in human beings. (19)*

19. <https://byjus.com/chemistry/effects-of-radioactive-pollution/>

IMPACT OF UKRAINE INCIDENT ON WILD LIFE AND HUMANS:

An incident took place on the land of Chernobyl, Ukraine on 26th April 1986. Almost 35 years ago, a nuclear power plant exploded and the area was sealed for public. This nuclear incident did not affect the reproductive system of species dwelling in that area. The breed of mammals which increase after this incident include; bats, red deer, wolves, hares, beavers, otters, badgers, roe deer, owls, hawks, eagles, swans etc.

For animals, the radioactive materials enter their bodies through food products. The wolves have mushrooms. The nuclear explosive material was absorbed by the mushrooms. When the wolves have this contaminated mushrooms the radioactive waste enters their bodies. (20)

20. <https://www.nationalgeographic.com/news/2016/04/060418-chernobyl-wildlife-thirty-year-anniversary-science/>

This deadly incident had fatal effect on the lives of humans. Almost 4000 to 200, 000 humans lost their lives due to cancer. The government of Ukraine announced that it will restrict tourism around this nuclear power plant. A 20, 000 ton steel-case Named “New Case Confinement” will be constructed around this power plant as a containment structure till 2013. (21)

21. <https://www.theatlantic.com/photo/2011/03/the-chernobyl-disaster-25-years-ago/100033/>

After the spread of radioactive caesium 137 across parts of Northern Ireland, Scotland, Wales and Northern England, the movement of sheep's was restricted. The movement of 4, 225, 000 sheep was confined across 9, 700 farms in order to prevent the entrance of contaminated meat in the food chain of humans. (22)

22. https://en.wikipedia.org/wiki/Chernobyl_disaster//

UNITED NATIONS ENVIRONMENTAL PROGRAMME



(23)

23. <https://www.wikihow.com/Take-Action-to-Reduce-Air-Pollution>

WAYS OF REDUCING AIR POLLUTION:

Air pollution can be reduced in different ways. Rethinking transportation; we should all try to use less transports while moving from one place to another. If we are travelling to our near-by places we should go on foot. If the journey is long in that case we can use transports. Our vehicles have a greater contribution towards air pollution. We should keep our cars in a better condition. Besides this we must prefer buying products with less packaging because extra packaging also pollutes our air. (24)

24. https://en.wikipedia.org/wiki/United_Nations_Environment_Programme

SOLUTIONS TO RESOLVE WATER POLLUTION: *Water pollution can be reduced when we avoid throwing greasy products into the drainage system. These may include oil, fats from food substance, avoid the disposal of chemicals, pesticides, herbicides and fertilizers into the water reservoirs, use less detergents and bleach while washing clothes, always avoid of throwing pills and other medicines in to the drainage and lastly avoid disposing the chemicals and other waste materials from factories. (25)*

25. <https://www.simsbury-ct.gov/water-pollution-control/pages/ten-things-you-can-do-to-reduce-water-pollution>

STEPS TO RESOLVE THE ISSUE OF NOISE POLLUTION: *In order to combat with the issue of noise pollution we need to take out time from our daily routine which we can spend in salience. Secondly we can minimize all the sounds which are under our control. Such as sound produced from televisions, headphones and sound systems should be kept low. We may use sound protection instruments while moving around places which have factories, places where concerts are organized on regular basis. There are different noise canceling headphones which can be used in order to protect our hearing senses. (26)*

26. <https://www.zyto.com/reduce-noise-pollution>

METHODS FOR REDUCING SOIL POLLUTION: *Soil pollution can be reduced in many ways. We should avoid over-cropping & over-grazing. In cultivation areas, crops must be grown in rotation. Tree plantation can help prevent soil pollution. (27)*

27. <https://www.everythingconnects.org/reduce-soil-pollution.html>

In Pakistan environment friendly tress include the tall and shady trees such as Pipal, Toot, Neem, Barghad and Siris. Researcher have proved that tress are real source of decreasing noise pollution, absorbing carbon dioxide, producing oxygen and controlling the temperatures. The survey report further predicts that environment degradation might cost 6 percent of our GDP which is 365 billion per year. (28)

28. <https://nation.com.pk/31-Jan-2010/plant-native-trees-to-fight-pollution>

Cities across the globe have used forestry as means of reducing the urban pollution. Unfortunately in Karachi the parks are converted into shopping malls. For Karachi, Neem, Pipal and Gulmohar trees are environment friendly. These trees are not maintained properly. While planting trees we need to make sure that these trees are not helping species of pollen to grow. According to a survey pollen species are found in the atmosphere of Karachi. These species are a major cause of asthma. (29)

29. <https://tribune.com.pk/story/1069565/greener-city-urban-forestry-to-counter-air-pollution-in-karachi>

Another research proves that Mangroves are also tress which can be grown in Karachi and help in the reduction of pollution. The PTI Government has announced Billion Tree Afforestation Project (BTAP). 1075 Plants on one hectare land absorb six to eight tons of carbon dioxide daily. (30)

30. <https://eyepakistan.app.com.pk/trees-purify-environment-plant-more-to-avert-effects-of-climate-change/#:~:text=Kikar%2C%20Neem%2C%20Beera%20at%20Sindh,chances%20of%20Orains%20in%20Pakistan.>

CONCLUSION:

In this competitive world where the developed and developing countries are continuously focusing on their economic growth. In the process of becoming economically powerful we have started to negate the environment. Our environment is being polluted by different chemicals which is shattering the health of all living beings. Human beings are suffering from various diseases which include skin diseases and infections in the bronchitis as they are prone to an environment which not at all human friendly. Besides this chemicals are also excavated from the use of latest weapons and bombs. Due to these reasons our environment is getting deadly day by day. In order to make the environment pure and feasible for living, it is important to take serious steps. The process of plantation of trees should be started as soon as possible. In this perspective, big corporative societies should take immediate action so that the world can become a better place for living.

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