

INDUSTRIAL POLLUTION AND HUMAN HEALTH (CAUSES, EFFECTS AND SOLUTIONS)

SUDHEER SINGH¹

Assistant Professor, Department of Commerce, R.R.P.G. College, Amethi, U.P., India

ABSTRACT

In this article we will discuss about causes, effects and solutions of industrial pollution and its impact on Human Health. With the coming of the Industrial Revolution, humans were able to advance further into the 21st century. Technology developed rapidly, science became advanced, and the manufacturing age came into view. With all of these came one more effect, industrial pollution. Earlier, industries were small factories that produced smoke as the primary pollutant. The question really should be how factories 'have' affected the environment, as there is no doubt that they have played a major role in the damage caused to the environment. In fact, it has been claimed that factories are to blame for as much as 2/3rds of the pollution that has caused climate change.

KEYWORD: Environment, Pollution, Industrial

INTRODUCTION

With the coming of the Industrial Revolution, humans were able to advance further into the 21st century. Technology developed rapidly, science became advanced, and the manufacturing age came into view. With all of these came one more effect, industrial

pollution. Earlier, industries were small factories that produced smoke as the primary pollutant. However, since the number of factories were limited and worked only a certain number of hours a day, the levels of pollution did not grow significantly. But when these factories became full-scale industries and manufacturing units, the issue of industrial pollution started to take on more importance.



We abuse land because we regard it as a commodity belonging to us. When we see land as a community to which we belong, we may begin to use it with love and respect. -Aldo Leopold

Industrial pollution takes on many faces. It contaminates several sources of drinking water, releases unwanted toxins into the air and reduces the quality of soil all over the world. Major environmental disasters have been caused due to industrial mishaps, which have yet to be brought under control. Below are a few of the causes of industrial pollution that have resulted in environmental degradation.

Industrial Pollution Facts

Industrial pollution is wreaking havoc on Earth. Every nation is affected, and there are people who are

working tirelessly to increase awareness and advocate for change. The activities causing pollution include:

- Burning coal.
- Burning fossil fuels like oil, natural gas, and petroleum.
- Improper disposal of radioactive material.
- Chemical solvents used in dyeing and tanning industries.
- Untreated gas and liquid waste being released into the environment.

¹Corresponding author

CAUSES OF INDUSTRIAL POLLUTION

Some of the major causes of industrial pollution are below-

Lack of Policies to Control Pollution

Lack of effective policies and poor enforcement drive allowed many industries to bypass laws made by the pollution control board, which resulted in mass-scale pollution that affected the lives of many people.

Unplanned Industrial Growth

In most industrial townships, unplanned growth took place wherein those companies flouted rules, norms and polluted the environment with both air and water pollution.

Use of Outdated Technologies

Most industries still rely on old technologies to produce products that generate a large amount of waste. To avoid high cost and expenditure, many companies still make use of traditional technologies to produce high-end products.

Inefficient Waste Disposal

Water pollution and soil pollution are often caused directly due to inefficiency in the disposal of waste. Long term exposure to polluted air and water causes chronic health problems, making the issue of industrial pollution into a severe one. It also lowers the air quality in surrounding areas, which causes many respiratory disorders.

Presence of a Large Number of Small Scale Industries

Many small scale industries and factories that don't have enough capital and rely on government grants to run their day-to-day businesses often escape environment regulations and release a large number of toxic gases in the atmosphere.

Leaching of Resources From Our Natural World

Industries do require a large amount of raw material to make them into finished products. This requires the extraction of minerals from beneath the earth. The extracted minerals can cause soil pollution when spilled on the earth. Leaks from vessels can cause oil spills that may prove harmful to marine life.

Natural Resource Use

Raw material is a must for industries, which often requires them even pulling out underground elements. One of the most common forms of leaching from natural resources is fracking for oil.

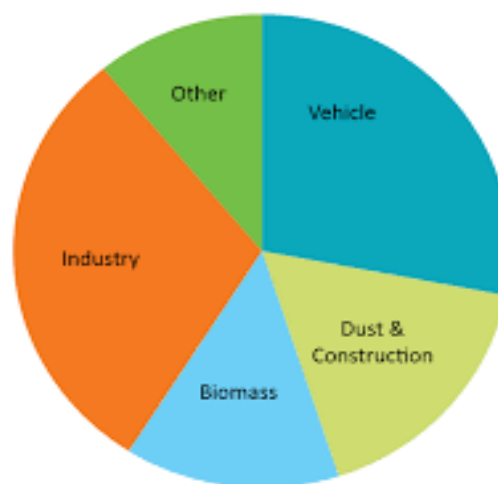
When industries extract minerals, the process causes soil pollution and also causes oil leaks and spills that are harmful and even deadly to people and animals.

EFFECTS OF INDUSTRIAL POLLUTION ON OUR ENVIRONMENT

Below you will find some of the major impacts that industrial pollution has caused to the environment.

Air Pollution

Industrial factories have played a big part in the amount of air pollution that we as people have to endure. The toxic gases that factories release into the air, combined with those added by automobiles on the road, mean that we have an increased risk of developing chronic respiratory disease, lung cancer, heart disease and many other illnesses, diseases and conditions.



Source: NCAP report

Water Pollution

Factories are also a major contributing factor to water pollution across the globe. The illegal dumping of contaminated water, gases, chemicals, heavy metals or radioactive materials into major waterways causes damage to marine life and the environment as a whole. Not all factories will be responsible for this, but those found in less regulated parts of the planet will dump their toxic wastes into oceans or rivers to be rid of it a lot cheaper.

Soil Pollution

Even the earth's soil can become polluted, mainly due to industrial wastes being thrown into landfills. These chemicals and toxic materials can destroy the fertility of the soil, decrease the productivity of crops and even lead to the contamination of foods that we may eventually consume.

Global Warming

As we touched on earlier, a huge portion of climate change or global warming can be attributed to our reliance on industrial activities over the years. Toxic materials and gases are burned and released into the atmosphere, such as carbon dioxide and methane. Because these gases are able to absorb radiation from the sun, they have a direct impact on the temperature of the planet.

Global Warming can lead to:

- Rising sea levels.
- Rise in the earth's temperature.
- Risk of species of animals becoming extinct.
- An increase in tsunamis, typhoons, hurricanes, floods and other natural disasters.
- Melting of the ice caps

Biodiversity Loss

Industrial pollution continues to cause significant damage to the earth and all of its inhabitants due to chemical wastes, pesticides, radioactive materials etc. It affects wildlife, ecosystems and disrupts natural habitats. Animals are becoming extinct, and habitats are being destroyed. Biodiversity loss has many consequences, not only for the environment, but also for human beings at the economic and health level. During the presentation of the IPBES report, David Cooper, the Deputy Executive Secretary of the Convention on Biological Diversity, took the opportunity to warn about this in the midst of the COVID-19 crisis: "**As we degrade ecosystems, the risk of future pandemics increases.**" The increasing liquid, solid and hazardous wastes undermine ecosystem health and impact on food, water and health security. Industrial pollution disasters, including oil spills and radioactive leakage, take years to decades to clean up.

Atmospheric Deposition

Atmospheric deposition is a very important transport process for gases and particles from the atmosphere to the terrestrial and aquatic surfaces. The environmental consequences of this process can be harmful or beneficial. On one side deposition is a cleansing of the air and a transport of additional nutrients to plants. On the other side, deposition of sulfur and nutrients may contribute to acidification and eutrophication of various ecosystems.

WAYS TO CONTROL OR REDUCE INDUSTRIAL POLLUTION

The issue of industrial pollution is critical to every nation on the planet. With the increase of the harmful effects of industrial pollution, there are many agencies and individuals who are working to reduce carbon footprints and live and work in an eco-friendly way. However, industrial pollution is still rampant and will take many years for proper control and regulation. Many steps can be taken to seek permanent solutions to the problem.

Source Control

Adopting new technology, efficient training of employees for safe use and development of better technology for disposal of waste, and being more conscientious about the use of raw materials can help control industrial pollution at the source.

Recycling

Recycling of waste is defined as any recovery operation by which waste materials are reprocessed into products, materials or substances whether for the original or other purposes. Recycling as much polluted water in the industries as possible by increased recycling efforts to reduce industrial pollution.

Cleaning of Resources

Organic methods should be adopted to clean the water and soil, such as using microbes that use heavy metals and waste as feed naturally. Cooling rooms or bins need to be developed that allow industries to recycle the water they need instead of pushing it back into the natural water source it came from.

Industry Site Selection

Consideration of location of the sites and the potential impact on the surrounding environment can help reduce harmful consequences.

Proper Treatment of Industrial Waste

By developing and implementing adequate treatment facilities for handling industrial waste and proper habits can reduce pollution.

Rebuilding Habitats and Afforestation

Rebuilding habitats by planting more trees and plants can help give wildlife back their homes, and the trees can help purify the air with enough oxygen, and act as a buffer against the environment.

Stricter Laws and Enforcement

The Environmental Protection Agency (EPA) works to correct the damage from industrial pollution.

There should be more stringent rules to take action against the companies who do not follow proper protocol and more significant rewards for the companies who operate properly. It requires creating policies that prevent misuse of land.

Regular Environmental Impact Assessments

Being a responsible company or industry should require regular environmental impact assessments that are reported for evaluation. If there are harmful impacts discovered during the review, necessary actions to correct the negative consequences should be developed and enforced.

The question really should be how factories 'have' affected the environment, as there is no doubt that they have played a major role in the damage caused to the environment. In fact, it has been claimed that factories are

to blame for as much as 2/3rds of the pollution that has caused climate change.

As a result of the pollution that is created from toxic and dangerous materials into our environment, not only does the planet's ecosystem come under threat, but our own health is potentially at risk too.

REFERENCES

Robinson DL. Air pollution in Australia: Review of costs, sources and potential solutions. Health Promot J Austr.

Mawer C. Air pollution in Iran. BMJ. 2014

World Health Organization. WHO Global Urban Ambient Air Pollution Database 2016.

www.industrialpollution.com

www.humanhealth.com