

Environmental Pollution

Environmental pollution is the contamination of the biological components of the Earth, which adversely impacts standard ecological processes. Any unnatural and damaging transformations in all the dimensions (like physical, chemical, and biological factors of any constituent of the ecosystem) which can cause dangerous effects on mixed forms of life and belongings are called environmental pollution.

Environmental pollution is considered one of the biggest issues faced by society, and it is increasing every day, affecting humans and other living organisms. Human actions have a negative impact on the environment as they pollute the air we breathe, the water we drink, and the soil we use to grow plants.

Types of Environmental Pollution

Majorly, **7 types of environmental pollution** can occur on the Earth. A detailed illustration can be extracted from the types of pollution PDF for better understanding. The given pollution types have specific causes, effects, and control measures indicated further in this article.

1. Air pollution
2. Water pollution
3. Soil pollution
4. Thermal Pollution
5. Noise pollution
6. Light Pollution
7. Land Pollution.

Air Pollution

Pollutants such as carbon monoxide, chlorofluorocarbons (CFCs), dust, mold spores, nitrogen oxides, pollen, and sulfur dioxide, cause air pollution. [Air pollution](#) is caused by solid particles and gases present in the atmosphere.

Causes:

Coal, dry grass, dry-farm waste, and leaves utilized as domestic fuels in villages also generate harmful gases in the atmosphere.

Some additional sources of Air Pollution are:

- Automobile pollution
- Burning of garbage
- Decayed plants and animals
- Indoor air pollution
- Industrial air pollution
- Radioactive elements.

Effects:

The major effects of environmental pollution of the air are that it increases the risk of heart disease in humans and causes diseases of the lungs and respiratory systems. It can also lead to asthma and bronchitis. It can also affect the environment as it increases greenhouse gases.

Control Measures:

Households and industries should operate with better-design equipment and smokeless fuels to lessen air pollution.

- Afforestation or planting more trees should be encouraged to maintain a balance in the ecosystem and manage the effect caused by the rising greenhouse gases.
- The government also took initiatives to control air pollution, including the National ambient air quality standards (NAAQS) and the National air quality monitoring program (NAMP).

Water Pollution

Water pollution is caused when toxic materials, including chemical contaminants, discharges of untreated waste, and sewage, are thrown into rivers, lakes, and oceans.

Causes:

The [sources of water pollution](#) include farming methodologies with excess fertilizers and pesticides that also degrade the water bodies.

Environmental Pollution of water has the following causes:

- Agricultural pollutants are dumped into the water bodies.
- Disposal of radioactive substances into seawater.
- Industrial effluents enter oceans.
- Trading of marine.
- Offshore oil rigs.
- Recreational sports.
- Sewage is disposed of into the sea by rivers.

Effects:

The effect of water pollution is that it can cause Minamata disease in humans and dropsy disease in fishes when the amount of mercury increases in water. It also leads to biological magnification (concentration of toxic chemicals increases) and eutrophication (overabundance of nutrients).

Control Measures:

Water consumption must be minimized or reduced by revising the strategies involved in controlling the environmental pollution of water. Wastewater should be treated well to be reused.

Soil Pollution

Environmental Pollution of Soil is caused when concentrations of toxic substances or contaminants increase and accumulate on the soil surface.

Causes of Soil Pollution:

The contaminants that cause [soil](#) pollution are:

- Inorganic ions and metals
- Salts (e.g., carbonates, nitrates, phosphates, sulfates)
- Organic compounds (such as alcohols, DNA, fatty acids, hydrocarbons, lipids, proteins, PAHs, etc.).

Effects:

The effects of soil pollution are that it reduces soil fertility and increases salinity. It results in the blocking of drains, thereby releasing foul odors and gases.

Control Measures:

To control the environmental pollution of soil, we must stop plastic usage. The use of plastic should be reduced to prevent soil pollution, and sewage should be appropriately treated before its utilization as fertilizer on cultivated grounds.

Thermal Pollution

Thermal pollution is the degradation of the quality of water that counters the surrounding water temperature by any procedure.

Causes:

This environmental pollution is caused when industrial factories and power plants use water as a coolant. Boilers from industries, coal fire power plants, crude oil refineries, nuclear and electric power plants, and steel melting factories are some of the causes of thermal pollution.

Effects of Thermal Pollution:

The effects of thermal pollution are that it decreases the amount of dissolved oxygen in the water, kills several species of invertebrates and fishes, along with destroying their eggs laid in the water bodies.

Control Measures:

Thermal environmental pollution can be prevented using a few scientific approaches, like cooling ponds or buildings and constructing artificial lakes. These lakes are man-made water sources that provide a possible alternative for cooling power plants.

Noise Pollution

Noise pollution is an unwanted sound that induces terrible discomfort in the ears. Sound is counted in decibels (dB); the noise of about 90 dB causes auricular weakness, while sound levels exceeding 100 dB can cause permanent hearing loss.

Causes:

Noise pollution is caused by the sound of the ship's water bothering whales' navigation system and even eradicating aquatic species.

- The factories' machines generate whistling, grinding, and thundering sounds.
- Exploding rocks and earth, drilling tube wells, heavy earth-moving machinery, and ventilation fans at construction locations cause this type of pollution.
- Other causes of this environmental pollution are the sound of automobile horns and the high sound of loudspeakers.

Effects:

Noise pollution can cause high BP, stress-related ailments, interfere with speech, result in hearing loss, disbalance in sleep, and lost productivity.

Control Measures:

Noise pollution can be decreased by properly maintaining roadside vehicles and using soundproof equipment in noisy places. Horns should be used minimally on roads. Automobiles and industrial equipment must be fitted with silencers to avoid excessive noise.

Light Pollution

The extra light in the night sky causes light pollution, also known as photo pollution, and is commonly witnessed in urban settlements. This type of environmental pollution makes it problematic to distinguish between day and night as it destroys the ecosystem.

Causes:

It is caused by artificial indoor or outdoor light, street lighting, advertisement and exhibition lighting, security lights, luminous sporting platforms, etc. Light pollution washes out starlight in the night sky, interrupts astronomical analysis, interferes with ecosystems, wastes a tremendous amount of energy, and has damaging health effects on living organisms.

Effects:

Environmental pollution of Light can affect the rhythmic patterns of wildlife, increases the amount of carbon dioxide, cause irritability in the sleep cycle, and blur the appearance of stars in the night sky.

Control Measures:

- Lights should be turned off whenever unused, especially at night.
- The overutilization of indoor lights should be minimized.
- Lights should be pointed towards the ground whenever you are going outside your home.

Environmental Pollution of Land

Land pollution makes a particular area of land unfit in its usefulness, geography, and capability to sustain life forms. It arises when there is improper or no treatment of waste and garbage that ultimately introduces chemicals on the land surface.

Causes of Land Pollution:

The causes of environmental pollution of land comprise the following:

- Biomedical waste
- Chemical fertilizers
- Garbage
- Industrial waste
- Mineral exploitation
- Pesticides
- Urban commercial and domestic waste.

Effects:

Land pollution affects soil quality and makes it unsuitable for agriculture. This may cause a deterioration in food availability. It may also lead to [climate change](#), instant [floods](#), and irregular

rainfall. This type of environmental pollution can cause many species to get endangered or extinct.

Control Measures:

Proper sewage treatment should be done before employing them on land areas. Better agricultural practices must be followed to prevent this environmental pollution.

- Organic fertilizers, an incorporated pest management technique, and crop rotation can all be used by farmers.
- The 3 R's should be embraced by all households - reduce, reuse, and recycle, to generate less waste.
- People should use products as much as possible to generate less waste individually.
- We should pick materials that can be easily recycled, for instance, paper, glass, plastics, and electronic items, and transform them into new products.

Causes of Environmental Pollution

The leading cause of environmental pollution is a pollutant. It is a substance that causes various types of pollution. A contaminant causes harmful effects or uneasiness in the organisms.

- Which Gas is the Main Pollutant Responsible for Global Warming?
- What are the Main Pollutants responsible for Causing the Greenhouse Effect, Acid Rain, and Ozone Layer Depletion?

Depending on whether they remain consistent in the environment, there can be persistent or non-persistent types of pollutants. Other pollutants that are the [causes of Pollution](#) are:

According to their existence in nature:

- Quantitative Pollutants: For example - Carbon Dioxide or CO₂
- Qualitative Pollutants: For example - Fungicides, herbicides, pesticides, insecticides, etc.

Environmental Pollution Causes - According to origin:

- Natural Pollutants: For example - Ash, combustion gases, salt spray, soot, sulfur dioxide, and so on.
- Man-made Pollutants: For example - Carbon Monoxide (CO), Lead (Pb), Nitrogen Dioxide, Ozone (O₃), Particulate Matter (PM), and more.

According to the nature of disposal:

- Biodegradable Pollutants: For example - Agriculture residues, cloth, food waste, fecal matter, green waste, human waste, paper waste, sewage, vegetable stuff, etc.
- Non-biodegradable Pollutants: For example - Arsenic, DDT, plastics, polythene bags, mercury, metal pieces such as aluminum cans, glass objects, iron products, silver foils, synthetic fibers, and so on.

Effects of Environmental Pollution

Environmental pollution can be hazardous for all living beings. Air pollution can lead to multiple diseases, such as skin, nose, and throat irritation, wheezing, coughing, respiratory concerns, etc.

- Air pollution can cause asthma, heart attacks, and other respiratory difficulties.
- Air pollution can also lead to global warming, acid rain, and depletion of the ozone layer.
- The environmental pollution of water can destroy aquatic life and even cause diseases like typhoid and Jaundice when consumed by humans.
- Contaminated water has negligibly dissolved oxygen (DO) and hence becomes unfit for drinking.

- Soil or land pollution can disrupt the life of microorganisms underground and affect the quality of plants grown.

Environmental Pollution Control Measures

Adopting some necessary measures can control various types of environmental pollution.

Managing pollution is required for the safety of humans and other living creatures.

- Plastic use should be prohibited as the environment takes years to decompose plastic.
- Unnecessary usage of indoor and outdoor lights should be avoided.
- Crackers should be banned as they pollute the environment to a large extent.
- Environmental Pollution can be controlled by using reusable materials that should be promoted aggressively and recycled for future use.
- More and more individuals should prefer public transport as it uses less gas and energy.
- Fans should be used more than air conditioners as it operates with less energy and electricity.

