

AIR POLLUTION - IT'S CAUSES AND EFFECTS

Rahul Patel

Delhi School of Economics, University of Delhi

Air pollution refers to the release of pollutants into the air which is detrimental to human health and the planet as a whole. According to the World Health Organization (WHO), each year air pollution is responsible for nearly seven million deaths around the globe. Air pollution can be classified into two sections — invisible and visible air pollution. Visible air pollution, as the name suggests, can be visible. Smog is an example of visible pollution. Invisible air pollutants are less noticeable, but they can be more deadly, for example, sulphur dioxide, carbon monoxide and nitrogen oxides.

Causes

1. Burning of Fossil Fuels:

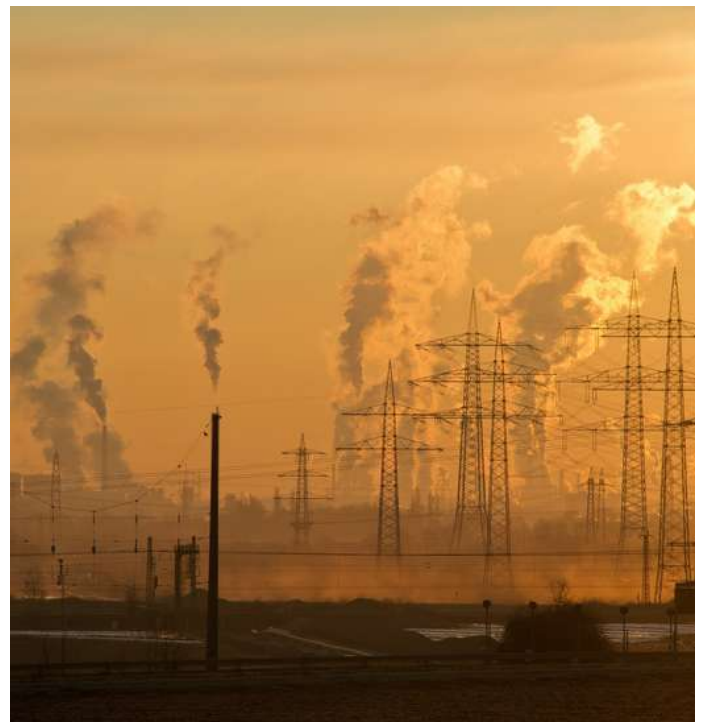
Burning of fossil fuels such as coal, oil, petrol to produce energy for electricity or transportation, which releases carbon monoxide in the air, leading to respiratory illness.

2. Industrial Emission:

Industrial activities emit particulate matter 2.5 and 10, nitrogen dioxide, sulphur dioxide, and carbon monoxide leading to effects associated with one's health, ranging from irritation in the eyes and throat to breathing issues, chronic illness.

3. Transportation:

Vehicles emit carbon monoxide, hydrocarbons, nitrogen oxide, and particulate matter. When vehicle pollution is high in the atmosphere, it creates a hole in the ozone layer, contributing to smog and causing various health issues.



4. Open Burning of Garbage Waste:

Exposure to open burning of garbage waste can pose serious health risks, including cancer, liver issues, impairment of immune system, reproductive functions; it can also affect the developing nervous system.

5. Construction and Demolition:

With the rise of population in the city, construction and demolition is a part of the development phase. Raw materials such as bricks and concrete cause haze and foul air which is hazardous for people especially, children and elderly citizens.

3rd December



Global No Pesticides Use Day

Effects

1. Respiratory and Heart Problems:

Air pollution creates several respiratory and heart conditions like asthma, chronic bronchitis, emphysema, heart attacks, and strokes along with cancer, among other threats to the body. Several million are known to have died due to the direct or indirect effects of air pollution.

2. Child Health Problems:

Exposure to high air pollution levels during pregnancy causes miscarriages, premature birth, autism, asthma, and spectrum disorder in young children. It also has the potential to damage early brain development in a child. Children are at a greater risk of short-term respiratory infections and pulmonary diseases in areas exposed to air pollutants.

3. Global Warming:

Another direct effect is the immediate alterations that the world is witnessing due to global warming. With increased temperatures, an increase in sea levels, and melting of ice from colder regions and icebergs, displacement, and loss of habitat have already signaled an impending disaster.

4. Acid Rain:

Harmful gases like nitrogen oxides and sulphur oxides are released into the atmosphere during the burning of fossil fuels. When it rains, the water droplets combine with these air pollutants, become acidic, and then fall on the ground in the form of acid rain, causing great damage to humans, animals, and crops.

5. Effect on Wildlife:

Toxic chemicals present in the air can force wildlife species to move to a new place and change their habitat. The toxic pollutants deposit over the surface of the water and can also affect sea animals.

Now there's emerging evidence that polluted air is also detrimental for one's brain.



Researchers have discovered over the last decade that excessive levels of air pollution can harm children's cognitive ability, raise the likelihood of cognitive decline in adults, and even lead to depression.

