

Pollution Effects on Environment and Human Health

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DESCRIPTION

Pollution contained in an ecosystem moves through that environment, as well as the subsequent consequences of the pollution on nearby populations, is an important stage toward the protection and preservation of societies living near industrial sites. Accurate simulation of the pollution-population system is critical for preventing biodiversity loss. The rate of pollutant uptake by the species has been considered one of the factors in the number of previous research efforts that have mathematically modeled the effects of industrial pollution on species surrounding the industrial site. The rate of uptake has been characterized as a linear process in these cases. While this method simplifies parts of the mathematical analysis, it does not monitor pollution's path through the ecosystem. Recently, research on the migration of contaminants through an ecosystem utilizing a mass-balance approach for the pollution level was released. However this study focuses on a single species living in a contaminated habitat, a similar method may be used for a multi-species model.

Air pollution and climate change are deeply connected. Changing climate is the opposite side of the same coin that decreases the quality of our planet. Pollutants such as black carbon, methane, tropospheric ozone, and aerosols reduce the amount of sunlight that enters the atmosphere. As a result, the earth's temperature is rising, causing ice, icebergs, and glaciers to melt. Climate change will have an impact on the incidence and prevalence of both residual and imported diseases in Europe. Climate and weather have a significant impact on the duration, timing, and intensity of outbreaks, as well as changing the global map of infectious diseases. Mosquito-borne parasitic or viral infections are very climate-sensitive, as warming both shortens the pathogen incubation period and alters the vector's geographic map.

Air Pollutants, Particle pollution, ground-level ozone, carbon monoxide, sulfur oxides, nitrogen oxides, and lead are the six major air pollutants presented by the World Health

Organization (WHO). Air pollution has the power to destroy all environmental factors, including groundwater, soil, and air. Furthermore, it represents a major threat to living beings. In this sense, we are primarily interested in these pollutants since they are linked to more important and common problems in human health and environmental damage. Acid rain, global warming, the greenhouse effect, and climate change all have significant environmental implications for air pollution.

Particulate matter in the atmosphere is commonly occurring generated as a result of chemical interactions between various contaminants. Particle size has a strong influence on particle penetration. The United States Environmental Protection Agency defined Particulate Matter (PM) as a term for particles. Particulate matter pollution includes particles with sizes of 10 micrometers or less, classified as PM₁₀, as well as extremely fine particles with diameters of 2.5 micrometers or less. Moreover, respiratory illnesses and immune system dysfunction are documented as long-term chronic impacts. People suffering from asthma, pneumonia, diabetes, and respiratory and cardiovascular diseases are most susceptible to the effects of PM. PM 2.5, followed by PM 10, and is closely linked to a variety of respiratory system disorders due to its ability to pierce interior spaces. Because of their chemical and physical features, the particles cause harmful effects.

CONCLUSION

Finally, due to their small dimensions, PM₁₀ and PM_{2.5} particles have a longer half-life in the atmosphere, allowing for their long-term suspension and even transfer and spread to distant locations where people and the environment may be subjected to the same level of pollution. They have the ability to alter the nitrogen balance in ecosystems, harm plants, and crops, and acidify water bodies. Assumptions about population development leading to different aging patterns its important in assessing the health impact of air pollution.

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