

# Soil Pollution as an Increasingly Urgent Environmental Crisis That Demands Immediate Action

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## DESCRIPTION

Soil pollution is a significant environmental issue that arises from the introduction of harmful substances into the soil, leading to a degradation of its quality and productivity. This type of pollution can result from various human activities such as industrial processes, agricultural practices and improper waste disposal. The presence of pollutants in the soil affects not only the fertility of the land but also have serious health risks to humans, animals and plants.

One of the primary causes of soil pollution is industrial waste. Factories and manufacturing units discharge toxic chemicals, heavy metals, and other hazardous substances into the environment, which eventually goes into the soil. These pollutants alter the natural composition of the soil, adaptation for agricultural use and potentially contaminating groundwater sources. Similarly, mining activities contribute to soil pollution by exposing heavy metals like lead, arsenic and mercury, which remain in the soil for years and affect its overall health.

## Role of soil pollution in agriculture

Agricultural activities are another major contributor to soil pollution. The excessive use of chemical fertilizers, pesticides and herbicides has led to the accumulation of harmful chemicals in the soil. While these substances are intended to enhance crop yields and protect plants from pests, their long-term impact on soil health is harmful. Over time, these chemicals reduce soil fertility, disturb microbial balance and contribute to the contamination of food crops, which can have adverse effects on human health when consumed.

Improper waste disposal is also a key factor in soil pollution. Household waste, plastic materials, and electronic waste are often dumped in open landfills, where they degrade slowly and release toxic substances into the soil. Plastics in particular break down into micro plastics, which persist in the environment for hundreds of years and contribute to long-term pollution. Additionally, medical and hazardous waste if not disposed of

correctly can introduce harmful pathogens and chemicals into the soil further intensifying the problem.

## Role of deforestation in soil pollution

Deforestation and urbanization have also played a role in increasing soil pollution. The clearing of forests for agricultural expansion and urban development leads to soil erosion and the loss of essential nutrients. As cities grow, construction activities introduce pollutants such as cement, paint and chemicals into the soil, further deteriorating its quality. The lack of vegetation in urban areas also reduces the soil ability to absorb and filter pollutants, leading to a more severe impact on the environment.

The effects of soil pollution are far reaching and impact various aspects of life. Contaminated soil affects agricultural productivity, leading to lower crop yields and poor-quality produce. This in turn affects food security and the economy, particularly in regions that depend on heavily on agriculture. Soil pollution also has serious health implications, as toxic substances can enter the food chain and cause a range of health issues such as cancer, neurological disorders and respiratory problems.

Addressing soil pollution requires a complex approach that involves government regulations, public awareness and sustainable practices. Governments need to implement strict policies to regulate industrial emissions and waste disposal to prevent further contamination. Encouraging sustainable farming practices, such as organic farming and crop rotation, can help reduce the dependence on chemical fertilizers and pesticides. Public awareness campaigns can educate people about the importance of reducing waste, recycling materials and adopting eco-friendly practices.

## CONCLUSION

In conclusion, soil pollution is a demanding environmental concern that demands immediate attention and action. Its causes are varied, stemming from industrial, agricultural and domestic sources and its effects are widespread, impacting both

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the environment and human health. Efforts to combat soil pollution should focus on prevention, sustainable land use practices and responsible waste management. By taking

collective action, it is possible to restore the health of the soil and ensure a sustainable future for generations to come.