

Soil Pollution

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Soil is an amalgamation of sand, silt, and clay particles, combined with water, air, and many different microorganisms. Soil is the prime requisite for the producers in biosphere. Without soil, the ecosystems in which we live cannot function.

Role of soil:

- Provides nearly all our food and fiber
- Provides all but three (water, air and sunlight) of the 16 nutrients essential for plant growth
- Cleans the water and prevents flooding through infiltration
- Regulates our climate and help to reduce greenhouse gases
- Helps to purify and safe disposal of our wastes

Soil may be polluted by sevral ways, such as:

- Seepage from a landfill
- Discharge of industrial waste into the soil
- Percolation of contaminated water into the soil
- Rupture of underground storage tanks
- Excess application of pesticides, herbicides or fertilizer
- Solid waste seepage

The most common soil pollutants are:

- Petroleum hydrocarbons
- Heavy metals
- Pesticides
- Solvents

The impact of soil pollution on society and environment is manifold. It hampers the ecological balance includes soil infertility, groundwater contamination, etc. and on the species diversity.

There are several ways of managing the polluted soil. Tainted soil can be transported to a site where humans won't be exposed to the chemicals, or the soil can be aerated to remove some of the chemicals (which may create further problem of air pollution if the chemicals are released into the air).

Other options include what's known as bioremediation, where microorganisms are used to consume the pollution-causing compounds as well as electromechanical systems for extracting chemicals, and containment of chemicals by paving over the tainted area.

None of these are an ideal solution. Preventing contamination from the source is the best option for sustainable environment management.