

The background of the slide features a large, faint watermark of the Jadavpur University logo. It is a circular emblem with a scalloped outer edge. Inside the circle, there is a central lamp with three flames. Above the lamp, the text 'विश्वविद्यालय' (Vishwavidyalaya) is written in Devanagari script. Below the lamp, the text 'यादवपुर' (Yadavpur) is written in Devanagari script. The entire logo is rendered in a light gray color.

Soil Pollution

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Soil Pollution:

The introduction of substances, biological organisms, or energy into the soil, which may cause change in soil quality and inversely affect the society and environment



Sources of soil pollution:

Intensive husbandry: Animal dung introduces large quantities of nitrate, filters into the water table

Non-biodegradable pollutants: Products that cannot be completely decomposed by living organisms

Industrial pollution: > 700 non-biodegradable soil pollutants are produced by industry

Domestic pollution: Generated by an increase in household waste and detergent spilled into wastewater.

Household waste: It is composed mostly of biodegradable organic matter but also contains plastics, detergents, solvents and heavy metals

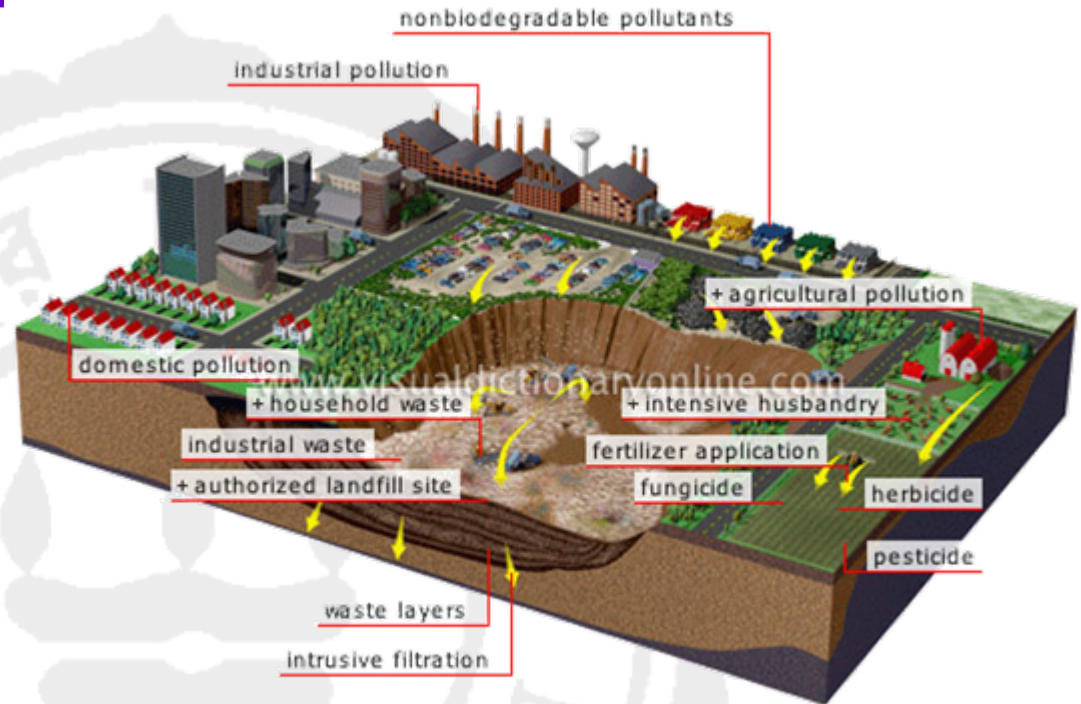
Industrial waste: Contains toxic substances produced from specialized sites

Intrusive filtration: In spite of the sealing of waste layers, rainwater runoff allows certain pollutants to seep into the subsoil

Fungicide: Used to destroy parasitic fungi on crops

Herbicide: Used to destroy or limit the growth of plants harmful to crops

Fertilizer application: Excessive use of fertilizers leads to an increased quantity of mineral compounds in the soil and in farmed crops



Agricultural pollution: Developed with the intensification of agriculture and the large-scale use of fertilizers and pesticides

Authorized landfill site: Land that is filled with household and industrial waste and then covered with successive layers of earth

Waste layers: Each waste layer is sealed using a plastic film or a base layer of clay

Pesticide: Product (insecticide, herbicide or fungicide) that destroys harmful organisms. It sometimes enters the food chain and affects flora and fauna

Soil Pollution:



Information needed to clean up contaminated soil:

Kind of material – organic or inorganic, whether the material is biodegradable or whether it is dangerous to animals and humans

Quantity of material – how much it is added to the soil, whether it is overload to the microorganisms of that soil, etc.

C : N ratio: whether any more additional nutrients (P, K, etc.) are needed

Kind of soil: whether the soil has ability to control the pollutants before the groundwater become contaminated

Soil Pollution:

Growing conditions for the microorganisms: whether that is too hot or too cold, suitable for their thriving condition

Time: how long the materials are on the site, is there any evidence of environmental problems or natural decomposition

Immediate danger: for the people and environment to assess the urgency of the situation

Thank You



Oil Spill