



G.D.GOENKA PUBLIC SCHOOL

Subject: Science (7th)

Wednesday, 25th August 2021

Topic: Soil Erosion

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LEARNING OBJECTIVE: To understand the effects of soil erosion.

SKILL FOCUS: Characterization of various causes of soil erosion.

What is Soil Erosion?

In this process, the soil particles are loosened or washed away in the valleys, oceans, rivers, streams or far away lands. This has been worsening due to human activities such as agriculture and deforestation.

Soil erosion is a continuous process that occurs either slowly or at an alarming rate. It results in a continuous loss of topsoil, ecological degradation, soil collapse, etc.

Effects of Soil Erosion

The major effects of soil erosion include:

Loss of Arable Land

Soil erosion removes the top fertile layer of the soil. This layer is rich in the essential nutrients required by the plants and the soil. The degraded soil does not support crop production and leads to low crop productivity.

Clogging of Waterways

The agricultural soil contains pesticides, insecticides, fertilizers, and several other chemicals. This pollutes the water bodies where the soil flows.

The sediments accumulate in the water and raise the water levels resulting in flooding.

Air Pollution

The dust particles merge in the air, resulting in air pollution. Some of the toxic substances such as pesticides and petroleum can be extremely hazardous when inhaled. The dust plumes from the arid and semi-arid regions cause widespread pollution when the winds move.

Desertification:

Soil erosion is a major factor for desertification. It transforms the habitable regions into deserts. Deforestation and destructive use of land worsens the situation. This also leads to loss of biodiversity, degradation of the soil, and alteration in the ecosystem.

Destruction of Infrastructure

The accumulation of soil sediments in dams and along the banks can reduce their efficiency. Thus, it affects infrastructural projects such as dams, embankments, and drainage.

Soil Erosion Prevention

Soil erosion is a serious environmental issue. Steps should be taken to curb this problem. Following are some of the methods of soil erosion prevention:

1. Plant trees on barren lands to limit erosion of soil.
2. Add mulch and rocks to prevent the plants and grass underneath to prevent soil erosion.
3. Mulch matting can be used to reduce erosion on the slopes.
4. Put a series of fibre logs to prevent any water or soil from washing away.
5. A wall at the base of the slope can help in preventing the soil from eroding.
6. Every household should have a proper drainage system so that water flows down into proper water collecting systems.

