

Flooding and Soil Degradation

What is the issue?

\n\n

\n

- The recent floods in Kerala and parts of Kodagu in Karnataka led to widespread soil erosion.

\n

- The gradual loss of soil productivity can have a lasting impact on the local economy.

\n

\n\n

What impact do floods and soil erosion make?

\n\n

\n

- Soil degradation due to flooding is a serious concern.

\n

- An estimated 14 million hectares of land suffer soil degradation due to flooding annually in India.

\n

- E.g. After the 2009 floods in North Karnataka, 13 flood-hit districts lost around 280 million tons of top soil.

\n

- It also led to loss of soil nutrients across 10.75 million hectares of farmland.

\n

- Under market prices, the replacement of nutrients such as nitrates, phosphates and iron would have cost around Rs. 1,600 crore.

\n

- Besides, the cost of replenishing the organic material lost would have cost nearly Rs. 850 crore.

\n

- In addition, considerable amount of time and concerted programmes of recovery are needed to recover and replace the soil productivity.

\n

- At present, soil profile of affected districts in Karnataka indicates “shallow or very shallow” soil depth.

\n

- They also exhibit organic carbon deficiency, and low productivity of land.

\n

\n\n

Is flooding always destructive to soil health?

\n\n

\n

- Soil takes thousands of years to form through natural processes and through recent inputs by farmers.

\n

- Floods result in this being swept away to be dumped in reservoirs or in the sea.

\n

- However, not all floods are bad for the soil.

\n

- E.g. floods along the banks of the Ganga, Kosi, Brahmaputra.

\n

- These and other rivers emanating from the mountains carry with them, loosened alluvial soil.

\n

- They wash over farmlands as well as replenish flood plains with fertile soil.

\n

- However, in south and central India, floods wash away rich, weathered soils that are deposited in reservoirs or as sand bars along the river bed or in the sea.

\n

\n\n

How to deal with it?

\n\n

\n

- Agricultural and plantation practices to reduce the incidence of soil erosion should be employed effectively.

\n

- Soil replenishment should be a part of the rehabilitation program in flood-affected areas.

\n

- State agriculture universities, with the help of earth observing satellites, should assess the intensity of the problem.

\n

- With this, consistent and long lasting effort is needed to boost the lost soil health and productivity.

\n

\n\n

\n\n

Source: The Hindu

\n

