

1. What will happen to water and sediment if a forest is removed?

When a forest is removed, the water and sediment that would normally be absorbed by the trees and roots are instead washed away. This can lead to increased erosion and sedimentation in nearby water bodies, which can harm aquatic life and reduce water quality.

2. How will vegetation influence the amount of water that infiltrates the ground?

Vegetation plays a crucial role in water infiltration. The roots of trees and plants help to break up the soil, creating channels for water to seep into the ground. Additionally, the organic matter in the soil, such as fallen leaves and twigs, acts as a natural sponge, retaining water and allowing it to infiltrate more slowly and deeply.

3. How do water table levels change?

Water table levels can fluctuate significantly depending on factors like rainfall, evaporation, and human activities. In a forested area, the water table is generally higher and more stable due to the natural water cycle and the presence of vegetation that helps maintain soil moisture.

4. What will happen to water and sediment if the landscape has been cleared?

Clearing a landscape leads to a significant increase in runoff. Without the protective canopy and roots of trees, the soil is more exposed to rain, which can cause rapid erosion and carry large amounts of sediment into nearby waterways. This can lead to siltation and a decline in water quality.

5. How do water table levels change?

In a cleared landscape, the water table levels are likely to drop. The removal of vegetation and the resulting increase in runoff reduce the amount of water that infiltrates the ground. This can lead to a lower and more unstable water table, which may affect local ecosystems and water availability.

6. Why should we not clear land?

Clearing land can have severe and long-lasting impacts on the environment. It leads to soil erosion, loss of biodiversity, and disruption of the water cycle. Preserving natural landscapes is essential for maintaining ecological balance and ensuring the sustainability of our planet.

WATER AND SEDIMENTATION IN A FOREST ECOSYSTEM



Water

The water cycle is a continuous process that involves evaporation, condensation, precipitation, and runoff. In a forest, water is absorbed by trees and plants, which then release it back into the atmosphere through transpiration. This process helps to regulate the local climate and maintain soil moisture.

Sedimentation

Sedimentation is the process by which particles of soil, sand, and silt are transported and deposited in a new location. In a forest, sediment is often carried away by water runoff, which can lead to erosion and the formation of new soil layers. This process is essential for the renewal of the soil and the growth of new plants.