

**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 effectively.

**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, leading to rapid erosion and a large amount of sediment being carried away. This can result in siltation of nearby water bodies and a loss of fertile topsoil.

**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 loss of organic matter in the soil reduce the soil's ability to retain water. This leads to less water infiltrating the ground, resulting in a lower and more volatile water table.

**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 increased sedimentation in water bodies. Additionally, it can contribute to climate change by releasing stored carbon into the atmosphere.

**WATER AND SEDIMENTATION IN A FOREST ECOSYSTEM**



**Water**

The water cycle is a continuous process that moves water around the planet. It involves evaporation, condensation, precipitation, and runoff. In a forest, water is absorbed by trees and the ground, and then released back into the atmosphere or infiltrates the soil.

**Sedimentation**

Sedimentation is the process by which particles of rock and soil are deposited in layers. In a forest, sediment is often carried away by water runoff and eventually deposited in nearby water bodies, where it can form a layer of silt or sand.