

Erosion! The Ever-Changing Earth

Adapted from "Erosion! The Ever-Changing Earth," Robin Koontz (2014)

The Power of Water

Water is the primary cause of weathering and erosion. Just a little drop of rain can carry away tiny bits of soil. So, imagine what a downpour can do! Little streams join to become a bigger stream, and the water rushes downhill. More and more sediment is picked up and carried along in streams and then into rivers. The faster the water rushes, the more sediment it gathers. This wears away the riverbanks and creates larger and larger valleys.



Photograph 1: Moving water created the Grand Canyon, which is about a mile deep and almost twenty miles wide in some parts. It took about 5 million years to form.

Ice, Wind, and More

Glaciers are very large, slow-moving chunks of ice. They creep across the landscape as they melt and refreeze. Along the way, they pick up rocks and soil and carve the land they travel over. Glaciers shape valleys and lakes.

Wind can blow hard enough to wear down rocks. With help from sand it picks up, wind can reshape a rocky landscape. It can also pull away topsoil and destroy fertile farmland.

Human impact

Many natural landforms help slow down flooding. For example, barrier islands are areas of sand near the coast that are formed by waves. They can lessen the storm surge from a hurricane! However, these natural barriers have been impacted by developments and businesses.



Photograph 2: In Miami Beach, people are trying to slow down the erosion caused by sea level rise, storms, and apartment buildings by adding more sand on the beach.

Some structures made by humans can have harmful impacts on the land. Human-made structures like apartment buildings and canals have caused many of our natural landforms to erode. Sometimes they even disappear! One of the reasons this happens is because people pull up plants and cut down trees to build these structures. Erosion is part of nature. However, humans can make erosion happen more quickly.

Possible Solutions

Thankfully, in many areas people are trying to help repair and slow down erosion:

1. Volunteers plant trees and other plants along creek banks.
2. Businesses can no longer cut down trees near certain creeks. Plant and tree roots help to protect the banks from further erosion.
3. People use rocks and fencing to restore creek banks. This helps to prevent the banks from collapsing and eroding. Then more plants and trees are planted.

Perhaps you will want to volunteer to help restore our eroded creeks and streams!