

Effect of Climate Change in Coastal Areas

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Introduction

The effects of climate change could be causing a lot of damage to vulnerable coastal and marine areas as well as to the function and structure of their ecosystems. Increasing the sea level changes the shape of coastlines, contributes to the coastal erosion and leads to flooding on the earth and more underground salt-water intrusion.

Warm and cold ocean currents can affect the climate of an area along the coast if the winds blow in from ocean. Warm ocean currents are used to heat the air above the water and carry warm air to the land, increasing the temperature of the coastal regions.

The same is temperatures are used true for cold ocean current except that they carry cooler air to the land and lower the temperatures of the coastal regions.

This effect can be seen in two cities at same latitudes but along with the different coastlines. For example, cities along the west coast area of the United States are affected by a cool ocean current that carries cool air toward the California coast guards.

Along the east coast guard lines, the Gulf Stream brings the warm air toward the coast, which helps maintain warmer temperatures along with the coastal area. Areas that can have the ability to "landlocked" to receive sun's energy directly based on the latitude do not have the moderating effects of the ocean currents and the air they bring with them.

Climate Change Impacts on the Coastal Zone Ecosystems

All coastal areas in Asia and Africa are facing an increasing range of stress; shocks and which are exposed to threat the hurricanes and damage to the ecosystem of ocean living organisms and both the human and coastal environmental systems, which are caused lightly due to the climate change. The abstract of the ecosystem of major concern follows the impact of climate change. Coral reefs, Sea grass beds, Mangroves and Coastal Wetlands and Tsunamis.

Discussion

Tsunami is described in the Earthquakes chapter as damaging waves that result from the sharp jolt to the water from an undersea earthquake. Landslides, meteorite impacts or any other jolt to ocean water may form a tsunami. Tsunami can travel at speeds of 500km per half an hour.

Tsunamis are having the small wave heights and the long wavelengths so they are usually unnoticed at sea areas. As the wave rides up the continental shelf the wave height increases gradually.

Usually hot water is having the less dense than the cold water because they have different densities due to the effect of heat on the water molecules.

The both hot and cold water is having the liquids forms of water (H₂O). The density difference is very small and the significant impact on natural phenomena such as ocean currents where the warm currents tend to raise cold things.

The Sea Surface Temperature (SST) of the ocean is indicated by the measurements taken at depths that are usually range from 1- 20 meters. Some measurements are made using shipboard instruments but the satellites provide the majority of global Sea Surface Temperature data.

Conclusion

Warm and cold ocean currents can affect the climate of coastal regions but only when local winds blow in from the sea. Warm currents heat the air over the ocean and bring higher temperature over land. Cold currents can lower air temperatures and bring colder temperatures over land. Because the current that runs along the coastline runs from north to south it carries cool water.

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