

Impacts of Climate Change

by Sophia



WHAT'S COVERED

In this lesson, we will cover the topic of impacts of climate change. We will discuss five major areas of impact resulting from climate change: loss of ice caps and glaciers, alterations in weather patterns, disruptions in ecological processes, disruption of agriculture, and human health impacts. Specifically, this lesson will cover the following:

1. Impacts of Climate Change

While impacts from climate change are challenging to predict, there are some major areas of impact that are generally accepted and talked about. The following are the major areas of impacts:

- Loss of ice caps and glaciers
- Alterations in weather patterns
- Disruption of ecological processes
- Disruption of agriculture
- Human health impacts

Climate change has already had these five types of impacts at a local, regional, and global level, and will continue to do so.

1a. Loss of Ice Caps and Glaciers

As global temperatures rise, it is causing glaciers and ice caps to melt, as illustrated in the photograph below of an Iceland glacier.

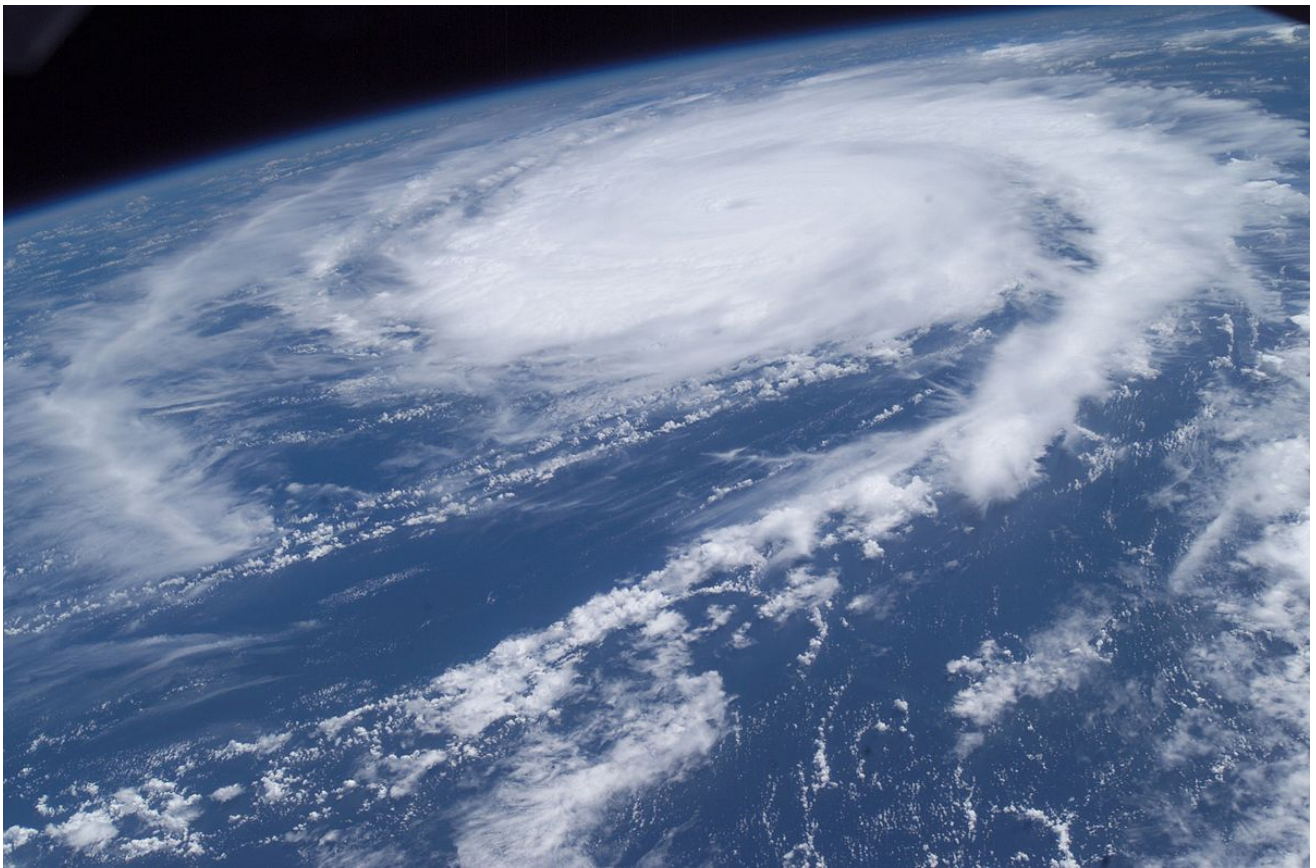
The result is instability in mountainous and permafrost regions, shifts in Arctic and Antarctic ecosystems, and loss of fresh water supply for inland communities that rely on glacial ice melt.



1b. Alterations in Weather

Climate change causes shifts in weather patterns such as changes in rainfall patterns, which can result in flooding and drought. As water supply becomes stressed, it can impact household, agricultural, and industrial uses of water.

Weather changes can result in less arable land and/or changes in arable land usability. As arable land becomes tenuous, it can affect food supply and increase the number of malnourished and undernourished people.



Weather changes can inundate coastal areas with too much water, and conversely, decreased rainfall can affect the productivity of hydroelectric energy sources.

1c. Disruption of Ecological Processes

Climate change can disrupt ecological processes as well. Certain regions are experiencing warmer temperatures earlier in the season, causing flower blooms and animal mating to occur historically earlier in the season. Warming regions have encouraged species to expand their habitats to new locations where they previously did not live.



The shifts and changes in climate patterns are causing, and will continue to cause, loss of biodiversity as species become endangered or go extinct, while others experience population growth and increased biodiversity as ecological niches become vacant.

As sea levels rise, certain coastal habitats might become covered in water, completely decimating the ecosystems that previously thrived there.

1d. Disruption of Agriculture

As climate change bends and shifts the growing season, agricultural crops and their planting times will be affected. Increasing and decreasing temperatures will also change which plant pests can survive in a particular area.



1e. Human Health Impacts

Human health impacts from climate change may include the following:

- Heat-related illnesses
- Changes in infectious diseases
- New allergies from plant pollens that have immigrated to new areas
- Flooding from new weather patterns, which could increase biological contaminants and their associated gastrointestinal diseases



SUMMARY

In this lesson, we learned about the five major **impacts of climate change**: **loss of ice caps and glaciers**, **alterations in weather**, **disruption of ecological processes**, **agricultural shifts**, and **human health impacts**.

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