

IMPACT OF GLOBAL WARMING

The impact of Global Warming on such things as health, water resources, Polar Regions, coastal zones and forests is likely but uncertain.

Health

The most direct effect of climate change would be the impacts of the hotter temperatures, themselves. Extremely hot temperatures increase the number of people who die on a given day for many reasons:

- People with heart problems are vulnerable, because one's cardiovascular system must work harder to keep the body cool during hot weather.
- Heat exhaustion and some respiratory problems increase.
- Higher air temperatures also increase the concentration of ozone at ground level.
- Diseases that are spread by mosquitoes and other insects could become more prevalent if warmer temperatures enabled those insects to become established farther north; such "vector-borne" diseases include malaria, dengue fever, yellow fever, and encephalitis.

Water resources

Changing climate is expected to increase both evaporation and precipitation in most areas of the United States. In those areas where evaporation increases more than precipitation, soil will become drier, lake levels will drop, and rivers will carry less water. Lower river flows and lower lake levels could impair navigation, hydroelectric power generation, and water quality, and reduce the supplies of water available for agricultural, residential, and industrial uses. Some areas may experience increased flooding during winter and spring, as well as lower supplies during summer.

Polar Regions

Climate models indicate that global warming will be felt most acutely at high latitudes, especially in the Arctic where reductions in sea ice and snow cover are expected to lead to the greatest relative temperature increases. Ice and snow cool the climate by reflecting solar energy back to space, so a reduction in their extent would lead to greater warming in the region.

Coastal Zones

Sea level is rising more rapidly along the U.S. coast than worldwide.

Studies by EPA and others have estimated that along the Gulf and Atlantic coasts, a one-foot (30 cm) rise in sea level is likely by 2050.

In the next century, a two-foot rise is most likely, but a four-foot rise is possible. Rising sea level inundates wetlands and other low-lying lands, erodes beaches, intensifies flooding, and increases the salinity of rivers, bays, and groundwater tables. Low-lying countries like Maldives located in the Indian Ocean and Bangladesh may be severely affected. The world may see global warming refugees from these impacts.

Forests

The projected 2°C (3.6°F) warming could shift the ideal range for many North American forest species by about 300 km (200 mi.) to the north.

- If the climate changes slowly enough, warmer temperatures may enable the trees to colonize north into areas that are currently too cold, at about the same rate as southern areas became too hot and dry for the species to survive. If the Earth warms 2°C (3.6°F) in 100 years, however, the species would have to migrate about 2 miles every year.
- Poor soils may also limit the rate at which tree species can spread north.

- Several other impacts associated with changing climate further complicate the picture:
 - On the positive side, CO₂ has a beneficial fertilization effect on plants, and also enables plants to use water more efficiently. These effects might enable some species to resist the adverse effects of warmer temperatures or drier soils.
 - On the negative side, forest fires are likely to become more frequent and severe if soils become drier.

Source: <https://www.e-education.psu.edu/egee102/node/1980>