



NATIONAL CLIMATE ASSESSMENT: HAWAII

The National Climate Assessment is the most comprehensive report on climate change impacts in the United States. Here are a few things we learned from the assessment about impacts in Hawaii.

Heat

- Climate change is happening now, and is primarily caused by carbon pollution from fossil fuels like coal, oil, and gas. How much the climate changes in the future is up to us.
- Rising seas and a warming ocean could permanently change Hawaii's beautiful and fragile ecosystems, and reduce tourist travel that is crucial to the economy.
- The Pacific Ocean has warmed more than 3.5 degrees, on average, since the 1950s. If carbon emissions continue to increase, water temperatures could be nearly 5 degrees Fahrenheit higher by 2090 — a dramatic change with major consequences for marine animals and the people depending on them.
- Hawaii's coral reefs are not only an irreplaceable ecosystem, but are worth nearly \$400 million a year. But when water temperatures are too high, coral reefs suffer "bleaching" — a condition that makes reefs more susceptible to disease or outright kills them. In the last decade, there have been at least three mass coral bleaching events in the Northwestern Hawaiian Islands.
- As the climate grows warmer, many of Hawaii's unique native plants and bird species could decline or disappear.

Sea Level Rise

- Sea level rise is projected to flood many of Hawaii's airports and roads, water treatment systems, agriculture, and beaches.
- More than a quarter of the state's economy is dependent on tourism. Sea level rise could cost the tourism industry billions of dollars a year. The famous Waikiki beach in Honolulu could be flooded.
- The combination of sea level rise and warmer, drier conditions will reduce the amount and safety of drinking and irrigation water.

Ocean Acidification

- Carbon pollution from fossil fuels is also making the oceans more acidic. Globally, acidity has already increased more than 25 percent since the mid-1800s.
- Acidification will harm coral reefs, shell-building animals like oysters, and other marine life. Valuable fish species, like Ahi and Aku tuna (also known as bigeye and skipjack), will decline as the ocean gets warmer and acidification continues.