Changes to Sea Level

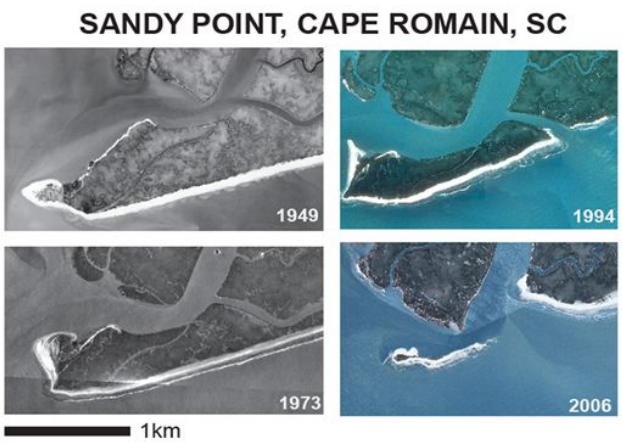
Sea Level

This data describes how sea level has changed over time.

Background

Claim: As the temperature changes, so does sea level. With warmer temperatures, ice on land melts and adds water to the ocean.

Changing sea levels can affect people who live near the coast. Rising sea level comes into low wetlands and dry land, erodes shorelines, and causes flooding. Higher sea level also makes homes and buildings more vulnerable to damage from storms.



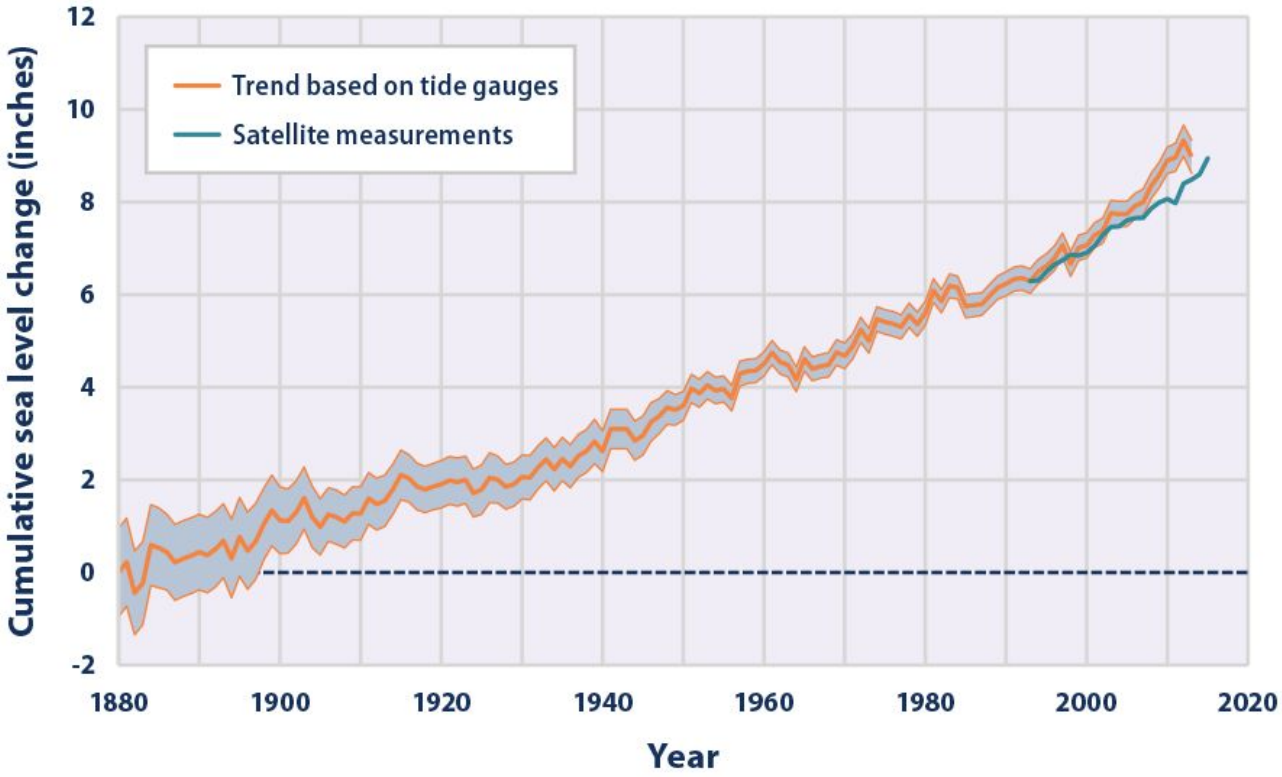
About the Data

This data shows trends in sea level based on measurements from tide gauges and satellites that orbit Earth. Tide gauges measure sea level at points along the coast. Satellites measure overall sea level over most of the ocean surface. Tide gauges have collected data for more than 100 years. Satellites have collected data since the early 1990s. The graph below shows the overall change in sea level.

Sources:
Reading adapted from Environmental Protection Agency Climate Change Indicators: https://www.epa.gov/climate-indicators/climate-change-indicators-sea-level

This information is provided by scientists and researchers at the Environmental Protection Agency and the National Oceanic and Atmospheric Administration. Both are United States government departments.

Global Average Absolute Sea Level Change, 1880–2015



Data sources:

- CSIRO (Commonwealth Scientific and Industrial Research Organisation). 2015 update to data originally published in: Church, J.A., and N.J. White. 2011. Sea-level rise from the late 19th to the early 21st century. Surv. Geophys. 32:585–602. www.cmar.csiro.au/sealevel/sl_data_cmar.html.
- NOAA (National Oceanic and Atmospheric Administration). 2016. Laboratory for Satellite Altimetry: Sea level rise. Accessed June 2016. http://ibis.grdl.noaa.gov/SAT/SeaLevelRise/LSA_SLR_timeseries_global.php.

For more information, visit U.S. EPA's "Climate Change Indicators in the United States" at www.epa.gov/climate-indicators.