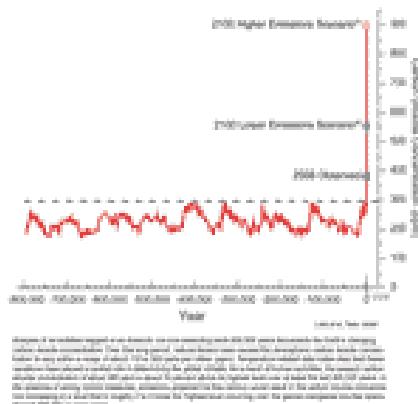
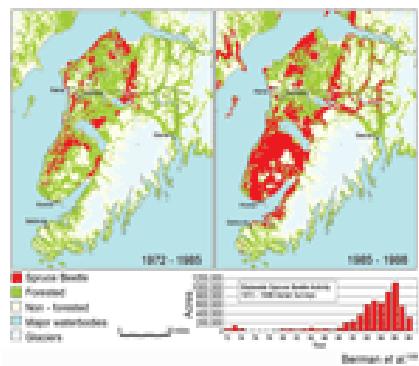


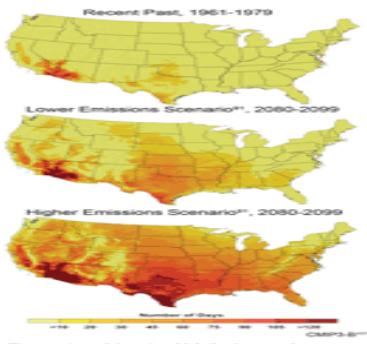
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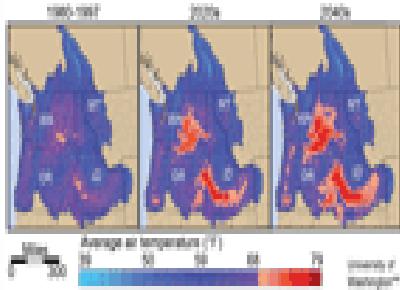


[Alaska spruce forest infested by pine-bark beetle](#) [Download Hi-resolution version]



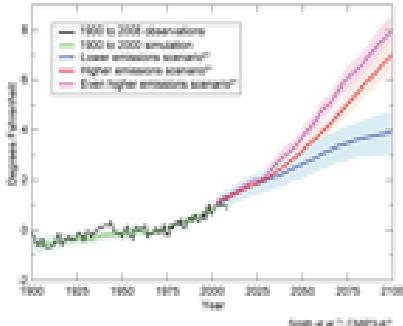
The number of days in which the temperature exceeds 100°F is projected to increase significantly by the end of the century under the lower emissions scenario. Under the higher emissions scenario, the number of days exceeds 100°F by the end of the century under the

[Numbers of days over 100 degrees F \[Download Hi-resolution version\]](#)



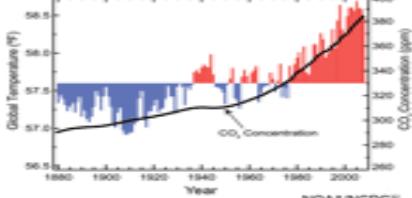
Salmon can be found where average air temperatures is less than about 70°F (shades in blue). Projected average August surface air temperatures in the Columbia River suggest that salmon are likely to be threatened by rising temperatures across much of their current habitat, based on a higher emission scenario.

[Decrease in cold-water fish habitats \[Download Hi-resolution version\]](#)



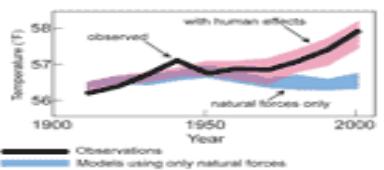
Observed and projected changes in the global average temperature under three IPCC emissions scenarios. The shaded areas show the likely ranges, while the lines show the central projections from a set of climate models. A wider range of model types shows outcomes from 1 to 11°F.³³ Changes are relative to the 1960-1979 average.

[Emission Scenarios \[Download Hi-resolution version\]](#)



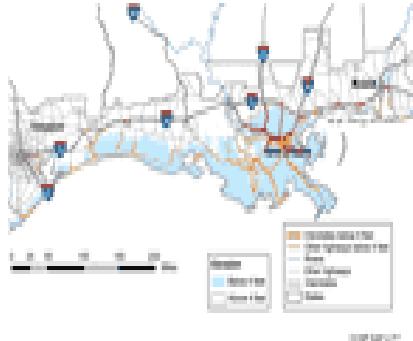
Global annual average temperature (as measured over both land and oceans). Red bars indicate temperatures above the average, blue bars indicate temperatures below the average temperature for the period 1901-2000. The black line shows atmospheric carbon dioxide (CO₂) concentration in parts per million (ppm). While there is a clear long-term global warming trend, each individual year does not show a temperature increase relative to the previous year, and some years show greater changes than others.³³ These year-to-year fluctuations in temperature are due to natural processes, such as the effects of El Niños, La Niñas, and the eruption of large volcanoes.

[Global Annual Average Temperature \[Download Hi-resolution version\]](#)



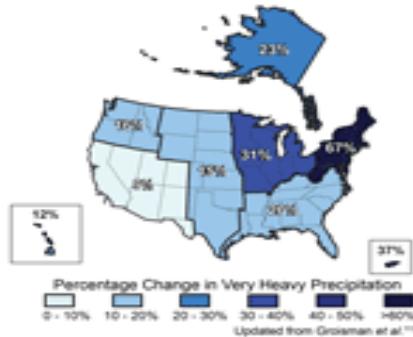
Hegerl et al.⁴⁹
The blue band shows how global average temperatures would have changed due to natural forces only, as simulated by climate models. The red band shows model projections of the effects of human and natural forces combined. The black line shows actual observed global average temperatures. As the blue band indicates, without human influences, temperature over the past century would actually have first warmed and then cooled slightly over recent decades.⁵⁰

Global Average Temperature change [Download Hi-resolution version]



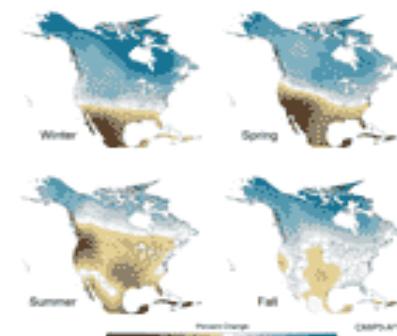
Within the next 100 years, a wide range of sea level rise projections are projected to be experienced by coastal areas along the Gulf Coast. The map shows projected sea level rise vulnerability for each county in the region. While elevation and topographic features play a role in determining which areas are most vulnerable, projections are based on a range of possible future sea level rise scenarios.⁵¹

Vulnerability of Gulf-Coast roads [Download Hi-resolution version]



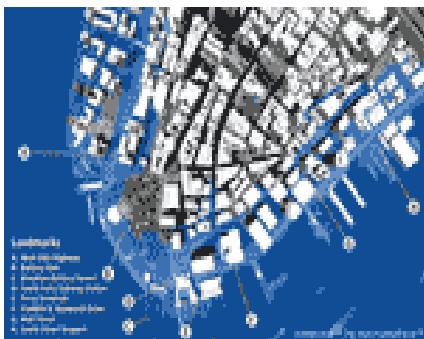
The map shows the percentage increases in very heavy precipitation (defined as the heaviest 1 percent of all events) from 1958 to 2007 for each region. There are clear trends toward more very heavy precipitation for the nation as a whole, and particularly in the Northeast and Midwest.⁵²

Increase heavy precipitations in the U.S. [Download Hi-resolution version]



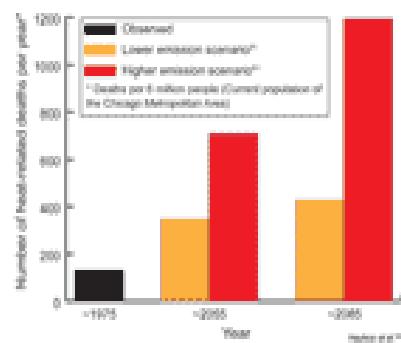
The maps show projected future changes in precipitation relative to the recent past as simulated by 15 climate models. The simulations are for late this century under a higher emissions scenario.⁵³ For example, in the spring, climate models agree that northern areas are likely to get wetter, and southern areas drier. There is less confidence in seasonal projections for summer and fall, but models do project increased precipitation in the northern United States and drier conditions in the southern United States.

Projected changes in North-American-precipitations [Download Hi-resolution version]



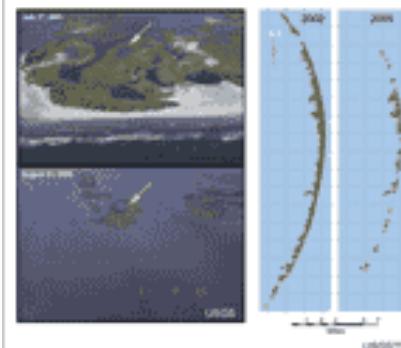
The light blue area shows major today's 100-year flood zone for the city (the areas of the city that is expected to be flooded under every 100-year, once-in-a-century event). A 100-year flood is the level of flooding that has a 1% chance of occurring in any given year. The darker blue areas show the higher projected levels of flooding by 2050 under a lower emission scenario. Colored dots indicate areas where the projected increase in flooding will be the greatest. Colored lines indicate the projected increase in flooding along major waterways.

Vulnerability of New York City to sea-level rise [Download Hi-resolution version]



Increases in heat-related deaths are projected to rise sharply in the future, especially under higher-emission scenarios.^{a, b} This graph includes projected future population increases. The graph reflects the projected number of deaths per year averaged over three decades around 2010, 2030, and 2050 for the City of Chicago under lower and higher emissions.^c

Projected heat-related deaths in the U.S. [Download Hi-resolution version]



In 2005, 211 square miles of land and wetlands were lost to open water during hurricanes Rita and Katrina. The photos and maps show the Chandeleur Islands, east of New Orleans, before and after the 2005 hurricanes; 85 percent of the original above-water land mass was eliminated.

South-East land loss during Katherina and Rita [Download Hi-resolution version]