# Recent Climate Report Findings

Recent reports, including the international ‘Global Warming Of 1.5 Degrees Celsius’ from the Intergovernmental Panel On Climate Change, as well as the United States’ Fourth National Climate Assessment, have been released in the past year. Each report outlined the causes of climate change, warned of significant impacts and risks of climate change, and offered suggestions for how to avoid the worst impacts of a warming planet.

## IPCC Report: Global Warming of 1.5 ºC

*In December 2015, the Paris Climate Agreement was adopted, and 195 nations signed on to fight climate change with a central aim to limit global temperature rise to 1.5 degrees Celsius. As a part of the agreement, the UN Framework Convention on Climate Change (UNFCCC) invited the Intergovernmental Panel on Climate Change (IPCC) to provide a report on the impacts and risks posed by a warming of 1.5 degrees Celsius, as well as 2 degrees Celsius. The report is the first of three reports and is constructed by 91 scientists from 40 countries, who analyzed over 6,000 scientific studies.*

**IPCC Report: ‘There Is No Documented Historic Precedent’ For Action On Climate Change Needed Now**. According to Vox, “We have just 12 years to make massive and unprecedented changes to global energy infrastructure to limit global warming to moderate levels, the United Nation’s climate science body said in a monumental new report released Sunday. ‘There is no documented historic precedent’ for the action needed at this moment, the Intergovernmental Panel on Climate Change (IPCC) wrote in its 700-page report on the impacts of global warming of 2.7 degrees Fahrenheit, or 1.5 degrees Celsius. From rising sea levels to more devastating droughts to more damaging storms, the report makes brutally clear that warming will make the world worse for us in the forms of famine, disease, economic tolls, and refugee crises. And there is a vast gulf between the devastation from 1.5°C, what’s considered the moderate level of average warming, and 2°C.’” [Vox, [10/8/18](https://www.vox.com/2018/10/8/17948832/climate-change-global-warming-un-ipcc-report)]

**Current Global Greenhouse Gas Emissions, Even Under The Paris Agreement, Will Not Limit Global Warming To 1.5 Degrees Celsius**. According the IPCC, “Estimates of the global emissions outcome of current nationally stated mitigation ambitions as submitted under the Paris Agreement would lead to global greenhouse gas emissions 18 in 2030 of 52–58 GtCO2eq yr−1 (medium confidence). Pathways reflecting these ambitions would not limit global warming to 1.5°C, even if supplemented by very challenging increases in the scale and ambition of emissions reductions after 2030 (high confidence). Avoiding overshoot and reliance on future large-scale deployment of carbon dioxide removal (CDR) can only be achieved if global CO2 emissions start to decline well before 2030.” [IPCC, [10/8/18](https://www.ipcc.ch/sr15/chapter/summary-for-policy-makers/)]

**To Avoid Severe Impacts By 2040, IPCC Found Greenhouse Gas Emissions Must Be Reduced By 100% By 2050.** According to the New York Times, “Absent aggressive action, many effects once expected only several decades in the future will arrive by 2040, and at the lower temperature, the report shows. ‘It’s telling us we need to reverse emissions trends and turn the world economy on a dime,’ said Myles Allen, an Oxford University climate scientist and an author of the report. To prevent 2.7 degrees of warming, the report said, greenhouse pollution must be reduced by 45 percent from 2010 levels by 2030, and 100 percent by 2050. It also found that, by 2050, use of coal as an electricity source would have to drop from nearly 40 percent today to between 1 and 7 percent.” [New York Times, [10/7/18](https://www.nytimes.com/2018/10/07/climate/ipcc-climate-report-2040.html)]

**IPCC Report Claimed That 99 Percent Of Coral Reefs Would Vanish If Globe Warmed 2 Degrees Celsius**. According to the Washington Post, “The document finds that instabilities in Antarctica and Greenland, which could usher in sea-level rise measured in feet rather than inches, ‘could be triggered around 1.5°C to 2°C of global warming.’ Moreover, the total loss of tropical coral reefs is at stake because 70 to 90 percent are expected to vanish at 1.5 degrees Celsius, the report finds. At 2 degrees, that number grows to more than 99 percent. The report found that holding warming to 1.5 degrees Celsius could save an Alaska-size area of the Arctic from permafrost thaw, muting a feedback loop that could lead to still more global emissions. The occurrence of entirely ice-free summers in the Arctic Ocean goes from one per century to one per decade between 1.5 and 2 degrees, it found — one of many ways in which the mere half a degree has large real-world consequences. Risks of extreme heat and weather events just rise and rise as temperatures do, meaning these would be worse worldwide the more it warms.” [Washington Post, [10/8/18](https://www.washingtonpost.com/energy-environment/2018/10/08/world-has-only-years-get-climate-change-under-control-un-scientists-say/?utm_term=.89ef24f560b6)]

**IPCC Says That Carbon Dioxide Emissions Must Be On An Extremely Steep Downward Path**. According to the Washington Post, “Most strikingly, the document says the world’s annual carbon dioxide emissions, which amount to more than 40 billion tons per year, would have to be on an extremely steep downward path by 2030 to either hold the world entirely below 1.5 degrees Celsius, or allow only a brief ‘overshoot’ in temperatures. As of 2018, emissions appeared to be still rising, not yet showing the clear peak that would need to occur before any decline. Overall reductions in emissions in the next decade would probably need to be more than 1 billion tons per year, larger than the current emissions of all but a few of the very largest emitting countries. By 2050, the report calls for a total or near-total phaseout of the burning of coal. ‘Understanding the Arctic is really a key to understanding the whole global system.’”[Washington Post, [10/8/18](https://www.washingtonpost.com/energy-environment/2018/10/08/world-has-only-years-get-climate-change-under-control-un-scientists-say/?utm_term=.89ef24f560b6)]

## Fourth National Climate Assessment

*The Trump administration released the fourth National Climate Assessment on November 23, 2018. The report was written by several federal agencies and scientists from inside and outside of the government to fulfill the mandate of the Global Change Research Act of 1990 to submit a report to Congress and the president no less than every four years. The report is the result of a team of over 300 experts and guided by a 60-member Federal Advisory Committee.*

**Fourth National Climate Assessment Stated That Heat Deaths And Disease Will Rise As A Result Of Climate Change.** According to Vox, “Rising temperatures kill — in any number of indirect ways, the report notes, but literally, too. The most direct way they do so is by increasing the frequency, intensity, and duration of heat waves; this summer alone, we saw deadly temperature spikes in Japan, Canada, and Pakistan that killed dozens of people. In the US, this heat is expected to more than offset any lives saved from warmer winters. ‘With continued warming, cold-related deaths are projected to decrease and heat-related deaths are projected to increase; in most regions, increases in heat-related deaths are expected to outpace reductions in cold-related deaths,’ according to the report. Other maladies are also projected to get worse as the climate changes. Mosquitoes that spread viruses like West Nile and Zika are seeing their ranges grow. The ticks that spread Lyme disease are moving northward.” [Vox, [11/24/18](https://www.vox.com/2018/11/24/18109883/climate-report-2018-national-assessment)]

**Fourth National Climate Assessment Warned Climate Change Could Cost Economy More Than 10% Of Its GDP By The End Of The Century.** According to CNN, “A new US government report delivers a dire warning about climate change and its devastating impacts, saying the economy could lose hundreds of billions of dollars -- or, in the worst-case scenario, more than 10% of its GDP -- by the end of the century. The federally mandated study was supposed to come out in December but was released by the Trump administration on Friday, at a time when many Americans are on a long holiday weekend, distracted by family and shopping. David Easterling, director of the Technical Support Unit at the NOAA National Centers for Environmental Information, emphasized that there was ‘no external interference in the report’s development.’ He added that the climate change the Earth is experiencing is unlike any other.” [CNN, [11/23/18](https://www.cnn.com/2018/11/23/health/climate-change-report-bn/index.html)]

**Fourth National Climate Assessment Stated That Climate Change Disproportionately Impacts Lower-Income And Marginalized Communities.** According to the Fourth National Climate Assessment, “The impacts of climate change are already being felt in communities across the country. More frequent and intense extreme weather and climate-related events, as well as changes in average climate conditions, are expected to continue to damage infrastructure, ecosystems, and social systems that provide essential benefits to communities. Future climate change is expected to further disrupt many areas of life, exacerbating existing challenges to prosperity posed by aging and deteriorating infrastructure, stressed ecosystems, and economic inequality. Impacts within and across regions will not be distributed equally. People who are already vulnerable, including lower-income and other marginalized communities, have lower capacity to prepare for and cope with extreme weather and climate-related events and are expected to experience greater impacts.” [NCA 2018, [4/24/18](https://nca2018.globalchange.gov/)]

**Fourth National Climate Assessment Said That Impact Of Climate Change Has Doubled Devastation From Southwest Wildfires**. According to The Atlantic, “According to the report, human-caused climate change has heated and dried out the American Southwest, leading to deaths, enormous costs, and lingering health consequences. Climate change has led to an increase in the area burned by wildfire in the western United States. Analyses estimate that the area burned by wildfire from 1984 to 2015 was twice what would have burned had climate change not occurred. Furthermore, the area burned from 1916 to 2003 was more closely related to climate factors than to fire suppression, local fire management, or other non-climate factors. Climate change has driven the wildfire increase, particularly by drying forests and making them more susceptible to burning. Specifically, increased temperatures have intensified drought in California, contributed to drought in the Colorado River Basin, reduced snowpack, and caused spring-like temperatures to occur earlier in the year.” [The Atlantic, [11/26/18](https://www.theatlantic.com/science/archive/2018/11/most-chilling-parts-2018-climate-assessment/576598/)]

**Fourth National Climate Assessment Confirmed Risks Outlined In 2014 National Climate Assessment**. According to the New York Times, “For instance, the 2014 assessment forecast that coastal cities would see more flooding in the coming years as sea levels rose. That’s no longer theoretical: Scientists have now documented a record number of ‘nuisance flooding’ events during high tides in cities like Miami and Charleston, S.C. ‘High tide flooding is now posing daily risks to businesses, neighborhoods, infrastructure, transportation, and ecosystems in the Southeast,’ the report says. As the oceans have warmed, disruptions in United States fisheries, long predicted, are now underway. In 2012, record ocean temperatures caused lobster catches in Maine to peak a month earlier than usual, and the distribution chain was unprepared.” [New York Times, [11/23/18](https://www.nytimes.com/2018/11/23/climate/highlights-climate-assessment.html)]