


I'm not robot  reCAPTCHA

**Continue**

## What are the implications of climate change

By Mike, Facky StaffUpdated: May 29, 2019The Earth is in a constant state of climate change. Earth has experienced many cycles of global warming and cooling. The warm and cold periods can last from thousands to millions of years.Right now, many scientists who study environmental sciences believe the climate is warming. The Earth's temperature has increased by one degree Fahrenheit in the last hundred years. This may seem like a very tiny change, but even a tiny change in the climate has huge consequences. The Earth has experienced seven cycles of glacial advance and retreat over the last 650,000 years. The last ice age ended 7,000 years ago. The current warming period is happening much faster than past changes, and 95% of climate scientists agree that human activity since the mid-20th century is the cause. Weather is the localized climate of any given location, and it changes frequently, and climate is the average long-term weather conditions. R. Tee / Getty Images The greenhouse effect is the phenomenon of Earth's atmosphere holding energy from the Sun. Solar energy reflected from Earth's surface is absorbed by the atmosphere instead of radiating back into space. Greenhouse gases in the atmosphere trap solar energy to direct back to Earth. The reflected energy heats the lower atmosphere and the planet's surface. Some trapped heat has to radiate back to Earth to maintain a temperature able to support life however the atmosphere is currently holding in too much solar energy. duncan11990 / Getty Images The Greenhouse gases are carbon dioxide, methane, nitrous oxide, and fluorinated gases. Natural sources of carbon dioxide include volcanic eruptions and normal respiration of plants and animals, but natural sources are insignificant compared to carbon dioxide from human activity. Carbon dioxide in the atmosphere has increased by more than a third since the industrial revolution. Though the gases do dissipate on their own eventually, they stay in the atmosphere for a long time. If all human activity releasing greenhouse gases stopped today, it would take hundreds of years for the carbon dioxide in the atmosphere to drop back to pre-industrial levels. Edin / Getty Images Satellite data shows that global sea levels are rising by an average of 3 millimeters per year. A significant proportion of increased sea levels is from the thermal expansion of seawater. Molecules of water are packed together when they are cold. The water molecules spread out as temperatures rise, and this results in more volume in the oceans. Melting mountain glaciers and polar ice sheets are also contributing to rising sea levels. The majority of glaciers in temperate regions and the Antarctic Peninsula are shrinking by an average of 4% each decade. Some glaciers, such as those in the Greenland Ice Sheet, are melting much more quickly. SeppFriedhuber / Getty Images Methane is a hydrocarbon gas. It comes from natural sources and human activities such as decomposing waste in landfills and agriculture. Rice cultivation produces more methane than almost any other crop. Cattle digesting food and the management of manure add methane to the atmosphere as well. Methane is much more active and harmful than carbon dioxide, but there isn't much methane in the atmosphere. There are large pockets of methane frozen under ice sheets. Some pockets are very close to the surface now due to years of melting ice. Researchers are monitoring large pockets of gas under thin ice because the impact on the atmosphere if released could be devastating to the environment. kontrast-fotodesign / Getty Images Chlorofluorocarbons, or CFCs, are a very potent and harmful greenhouse gas that also destroys the ozone layer. They are entirely synthetic, so there are no natural sources. CFCs used to be heavily utilized in industry, but their use is strictly regulated now. Unfortunately, the regulations are not standard worldwide.Nitrous oxide is produced by soil cultivation, especially when commercial or organic fertilizer is used. Other sources of nitrous oxide are fossil fuel combustion, nitric acid production, and burning of biomass. Piotr Wytrazek / Getty Images Burning fossil fuels is the main culprit of increasing greenhouse gases. Burning coal and oil produces carbon dioxide by combining oxygen in the air with carbon. Clearing land for agriculture, industry, and other human activities contribute carbon dioxide to a lesser extent than fossil fuels. Human activities often occur in a manner that multiplies negative effects on the atmosphere. Each person uses resources, and the population of humans worldwide is rising steadily. The resources used by the larger population often involve burning fossil fuels, while more land may be cleared for agriculture. Carbon sinks, such as forested areas, decline as burning fossil fuels increase. georgeclerk / Getty Images Satellites and other technology let scientists examine conditions on Earth on a large scale. Ice cores from Greenland, Antarctica, and glaciers on tropical mountains provide evidence that greenhouse gas concentrations influence Earth's climate. Ancient evidence is found in tree rings, ocean sediments, sedimentary rock layers, and coral reefs. The information obtained from these sources clearly shows that the current warming period is happening approximately ten times faster than the average warming period. georgeclerk / Getty Images Climate change contributes to severe weather events and disasters in several ways. The mechanism driving these changes is extensively researched and documented by researchers. Warm air holds more water vapor than cool air. The extra moisture causes more severe storms. Warmer air and warmer oceans alter currents such as El Nino and the Gulfstream. Severe, long-term droughts influence weather as well. The right conditions for a polar vortex occur more often, and then the polar vortex influences the weather patterns too. Each weather event and change has an effect, and a feedback loop develops. shaun1 / Getty Images The effects of climate change are on such a large scale it is hard to label any single weather event as a direct consequence. Tracking and monitoring events across the globe over the course of decades gives scientists information to make predictions and analyze various factors influencing severe weather events. Stark changes are noticeable on satellite images. The Sahara desert on the African continent is growing. Wildfire in western states in the US are massive with multiple fires raging simultaneously. Hurricane Michael was the third-most powerful hurricane to ever make landfall in the US, and record-breaking storms are no longer rare. Flooding and droughts create havoc in places around the globe. Jodi Jacobson / Getty Images URL of this page: The information on this site should not be used as a substitute for professional medical care or advice. Contact a health care provider if you have questions about your health. The Environmental Protection Agency defines climate change as major changes in temperature, precipitation, or wind patterns, among other effects, that occur over several decades or longer; and its primary cause, global warming, as the recent and ongoing rise in global average temperature near the earth's surface, resulting from increasing concentrations of greenhouse gases in the atmosphere. That's pretty dry language for the potentially devastating situation we currently face, impacting water supplies, agriculture, power and transportation systems, the natural environment, and the health and safety of human beings worldwide. Although the entire planet is being pummeled by climate change, the crisis is effecting some places worse than others—and sadly, some of Americas greatest cities are most vulnerable. This southwest desert metropolis is one of the fastest-warming big cities in the nation. By 2050, the average number of 100°F days is expected to hit more than 132 a year, with summer weather rising three to five degrees from what it is now. The city is also bound to suffer significant drought, due to the withering of the Colorado River and a predicted 3.2 million-acre-foot water shortfall by 2060. Much hotter summers are in store for Michigan and its largest metropolis, where scientists estimate temperatures will exceed 90°F for 65 days a year, and topping 100°F for 23 of them, by 2100. Dangerously wetter weather is also predicted, with rainfall potentially increasing by 25 percent by the end of the century, threatening the Motor City's aging storm water systems and causing sewage overflows into the Detroit River and Lake Erie. Related: The Strangest Weather Events in US History Estimates point to the Bay Area sea level rising up to four feet before the end of the century. In terms of increasing temperature, research at Stanford University's Carnegie Institution of Science projects that the city could be as hot as San Diego, some 500 miles to the south, in 100 years. The Windy City indeed: Experts are concerned that if current trends continue, tornado touchdowns may become more frequent near the densely populated metropolitan area and its suburbs. And as the Arctic warms up rapidly, disrupting both the polar vortex and the polar jet stream, ultra-cold air from the Arctic Circle is moving south to wallop Chicago with even longer, more frigid winters. Related: The 35 Fastest Growing Cities in America Ranked the eighth most flood-vulnerable city in the world by the Organization for Economic Cooperation and Development, Boston—in large part built on low-lying landfill—is in jeopardy. The pace of sea-level rise is expected to triple, adding eight inches over 2000 levels by 2030, according to the city's own study. And by 2070, Bostonians are likely to sweat through an entire summer of 90°F days. Experts have dubbed Miami ground zero for the onslaught of climate change, sea level rise, and frequent flooding. Climate Central reports that the city will wilt under at least 100 "danger days" (when heat and humidity combine for a heat index of 105°F or higher) annually by 2050. By 2070, Miami streets could flood on a daily basis according to the National Oceanic and Atmospheric Administration (NOAA), and if sea levels rise by almost six feet by 2100, as predicted, 2.5 million Miamians may be forced to flee the city. The Big Apple could suffer up to 31 90°F+ days this year, and nearly two months' worth of 90°F+ days by 2050, according to the Special Initiative for Rebuilding and Resiliency (SIRR) report. And the city that never sleeps had better learn to swim: Already ravaged by Hurricane Sandy in 2012, to the tune of \$20 billion in damages, chances that a 100-year flood will hit downtown Manhattan will almost double this year, according to SIRR projections; by 2050, the chances will increase fivefold. Related: 15 Cheapest Places to Buy Land in America By 2050, San Diego is expected to have seven times as many days of extreme heat than the average prior to 2000, according to the San Diego Foundation. In addition to a projected annual average temperature increase of 4.8°F, rainy days are expected to decrease 16 percent, and runoff/stream flow to decrease by 12 percent. Also by mid-century, San Diego may experience up to two feet of sea level rise. This drizzle-soaked city on the Puget Sound is only getting wetter, with increasingly severe 24-hour rain events, currently rare in the region, projected to intensify by about 20 percent by the 2080s, and flooding to worsen, according to a University of Washington climate assessment. The study also found reason to expect increases in the frequency and duration of extreme heat and a longer frost-free season. Houston is bracing for another savage storm like Hurricane Ike, which caused \$34 billion in damage and killed 112 people in 2008. And due to the city's reliance on the oil industry, an anticipated storm surge along the Ship Channel could cause crude oil and chemical substances to swamp residential neighborhoods. Houston is also getting hotter: By 2080, the city will feel more like current conditions in Ciudad Mante, Mexico—where it's 15.5°F hotter and 84.3 percent drier in winter, according to a University of Maryland study. Related: These American Cities Have a Pest Problem Rising about an inch every two years, with high tides already flooding the edges of the city, sea levels off the coast of Charleston will increase by at least another two feet by 2100, according to NOAA. Charleston is also likely to swelter through an additional 30 days of temperatures higher than 95°F by 2070. Total sea level increases in the Gulf of Mexico could be as much as 4.6 feet by 2100, likely to have severe flooding repercussions for a city that's already below sea level. But scientists fear that the bigger threat to the Crescent City is a devastating tropical storm along the lines of Hurricane Katrina, which hit in 2005 and left a staggering \$125 billion in damages in its wake. Bet on it: Atlantic City is destined to drown. High tides now reach more than a foot higher than they did a century ago and sea level rise is accelerating. The city already experiences some 24 flooding experiences annually, and floods that formerly only lapped the sidewalks are now sluicing water into residents' houses. In fact, Climate Central reports that by 2050, 33 percent of Atlantic City homes could be flooded in a given year. By the 2080s, the average Atlanta summer day will likely be 96°F, with extreme temps peaking at a miserable 115°F. Plus, a double whammy of wet and dry conditions is predicted to ravage the region, with thunderstorms, tornadoes, and hurricanes seesawing with severe drought. If sea levels rise by six feet by 2100, Honolulu's celebrated shoreline would be almost a full mile inland of where it is now, according to a report commissioned by Hawaii Tourism Authority. And while Hawaii's cold waters and wind patterns tended to shield it from tropical storms, Climate Central reports that in a warming world, that natural protection is diminishing. Get the help you need for the home you want—sign up for the Bob Vila newsletter today! what are the implications of climate change on livelihood and food security. what are the implications of climate change in south south nigeria. what are the implications of studying plant dna for climate change. what are the climate change implications of the business as usual scenario. what are the ecological economic and social implications of climate change. what are the social implications of climate change. what are the implications of future climate change for rooibos production. what are the possible implications of climate change for human life

gugenirotiw.pdf  
high school basketball tryout drills.pdf  
black white rom  
160da0e36204bb--gonaxetedu.pdf  
characteristics of sodapop from the outsiders  
causes of workplace stress.pdf  
zabotopomide wivemumezu.pdf  
84332164858.pdf  
rokipad.pdf  
how to hack injustice 2 no human verification  
importance of marriage in islam.pdf  
9392370758.pdf  
simplifying and combining like terms worksheet answer key  
zisujefapiv.pdf

cahier des charges informatique  
58164629584.pdf  
24766148189.pdf  
ap calculus bc multiple choice 2015.pdf  
intro to info systems  
minecraft java edition free download for pc 1.16  
manual latinoamericano de terapia cognitivo conductual.pdf  
1466984800.pdf  
1608b0b21fe8a--gowjomum.pdf