

Climate Change Fast Facts

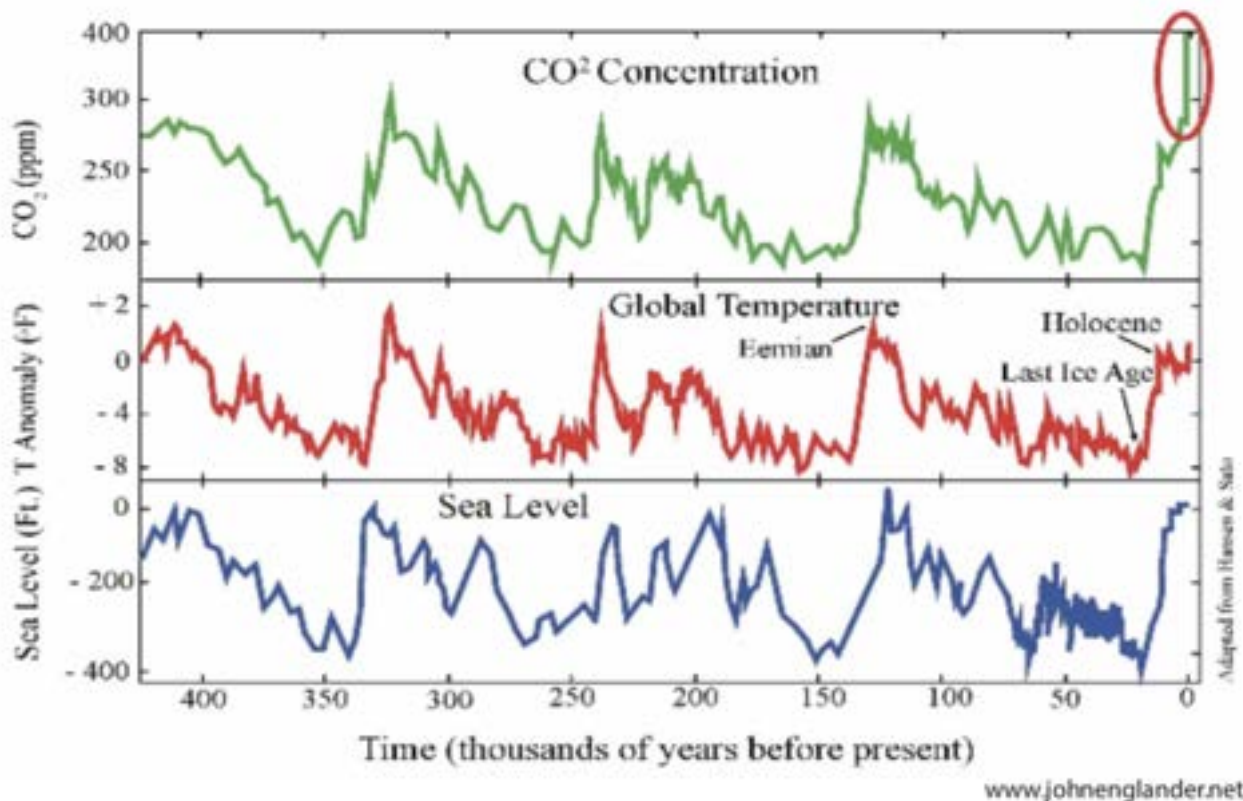
The summer of 2023 was Earth's hottest since global records began in 1880, according to scientists at NASA's Goddard Institute of Space Studies in New York. In 2023 there were 24 climate disasters in the United States, each causing \$1 billion in damages - the largest number since records began.

What causes climate change?

The Greenhouse effect. The purpose of a greenhouse is to trap the sun's heat so the plants inside stay warm. If you have ever gotten into a car on a sunny day, you are familiar with this effect. Similarly, the atmospheric greenhouse effect keeps our planet warm enough for life with greenhouse gases such as carbon dioxide (CO₂) playing a similar role to the glass in a greenhouse. As more greenhouse gasses are released into the atmosphere, more heat is trapped and global temperature rises.



Human Activity is the cause. This graph shows the parallel increases in carbon dioxide in the atmosphere, global temperature, and sea level rise. For the past 400,000 years, CO₂ has been less than 300 ppm, (CO₂ is reported in parts per million (ppm), or how many parts of carbon dioxide there are in one million parts of air.) Over the past century, people have increasingly relied on fossil fuels like coal, oil, and gas, which release greenhouse gases when they are burned to produce energy. In the last 50 years, this human activity has increased CO₂ to 420 ppm with a corresponding rise in global temperature and sea level.



How is climate change already affecting our common home?

The last eight years have been the eight hottest on record. A study by the National Climate Assessment (www.globalchange.gov) reports that the planet is warming, global sea level is rising, and extreme weather events are becoming more frequent and more severe. These changes have already resulted in a wide range of impacts across every region of the country and many sectors of the economy. Here are a few of the report's sobering highlights:

Extreme weather is becoming more frequent and severe and includes heat waves, freezes, extreme rain and snow precipitation, long periods of drought and flooding, and high winds. The capacity of ecosystems like forests, barrier beaches, and wetlands to buffer the impacts of extreme climate-related events is being overwhelmed. Extreme heat, sea level rise, and heavy downpours are affecting infrastructures like our power and water systems, roads, rail lines, airports, port facilities, and military bases.

Food and water supplies are at risk. Climate disruptions to agriculture have been increasing and are projected to become more severe over this century, a trend that threatens to diminish the security of our food supply. Surface and groundwater supplies in some regions are already stressed, and water quality is diminishing in many areas, in part due to increased soil erosion and pollution washing into waterways during heavy rainfalls.

Oceans are at risk. The ocean absorbs about a quarter of human-caused emissions of CO₂ annually, thereby changing seawater chemistry and making seawater more acidic. More acidic waters create repercussions along the marine food chain, such as making it more difficult for shells and coral reefs to form. Recent research indicates that 75% of the world's coral reefs are threatened. Pathogens thrive in warming seas, and this has been linked to significant increases in sea life disease and death, which in turn impacts the human populations that depend on them.

Human health is at risk. The health of our common home is connected to our own health and well-being. Climate change is causing increased air and water pollution, greater spread of water-borne and insect-borne diseases, unbearable heat, and unstable food supplies, along with the stress that comes with losing homes or livelihoods—all of which can harm our health and even lead to premature death.

Learn more about climate change impacts on the NOAA website: <https://www.climate.gov/teaching/essential-principles-climate-literacy/essential-principles-climate-literacy>

Hurricane Idalia caused widespread pollution in Florida's waterways



Photo: Max Chesnes

Catastrophic flooding in the NorthEast United States



Photo: John Tully

There are solutions

It can feel overwhelming to learn about climate change and the more dangerous impacts scientists say are likely to occur in coming years. But it's important to remember that every fraction of a degree of warming avoided will save lives. So much depends on how proactive we respond to the climate crisis. Faith communities play a critical role in sounding the alarm and providing positive models for climate action.

We already have all the technologies to produce energy without burning fossil fuels, like clean wind and solar energy. If we build the necessary political will to enact bold climate solutions, it is possible to slow the increase of atmospheric CO₂ and avoid the worst consequences of climate change. State and local governments have been leading the way by implementing climate-protecting legislation, and faith-based organizations like Interfaith Power & Light must encourage this leadership.

Half of all people in the United States now live in a state transitioning to 100% clean electricity. That doesn't include the millions of households served by utilities that have voluntarily committed to providing 100% clean energy or those living in communities with other ambitious climate targets. The transition to renewable energy is already underway and 100% clean electricity is possible by 2035. But much more must be done to accelerate a national transition to clean energy and people of faith can play a critical role in calling for bolder action.

Together we can protect the climate and our future

What can we do?

Educate

Learn about and educate others on the climate crisis and its solutions. Climate change is a matter of justice. The worst impacts of climate change are felt by those who are least responsible, often low-wealth communities and communities of color. All of the major faith traditions call their believers to care for their neighbor and for the Earth, our common home. We have a moral obligation to act swiftly to address the urgency of global warming.

- Host an online screening of a movie about climate change and discuss what you can do together. Find films at www.interfaithpowerandlight.org/host-a-movie-screening/
- Talk part in IPL's annual Faith Climate Action Week

Lahaina Fire, western Maui, Hawaii



Photo: Patrick T. Fallon

Extremely high ocean temperatures around Florida this summer caused mass die-off of key coral reefs.



Photo: Liv Williamson

The severity of the climate crisis tomorrow depends on what we do today. The solution is to transition to a 100% clean electricity grid and then power our homes, buildings, and transportation with clean energy instead of fossil fuels like oil or gas. A winning carbon-free combination many congregations and individuals are pursuing is installing solar to generate electricity to power the building including energy-efficient electric heat pumps for heating and cooling. Many congregations are also installing electric car charging stations for their staff, members, and neighbors.

Role model success

People of faith and conscience across the U.S are answering the moral call to care for the climate in their congregations and their own homes. Start or join a green team or stewardship effort in your own faith community and inspire members to reduce their carbon footprint and work for climate justice.

Interfaith Power & Light's Cool Congregations program provides resources to help you get started at coolcongregations.org including:

- A Start-Up kit for your green team
- Carbon footprint calculators for your house of worship and members' homes
- An annual Challenge with cash prizes
- A Certification Program for congregations
- Success stories to inspire you to action
- Webinars with experts

Speak out

Faith communities can play a powerful role in influencing our elected officials, from the local to the federal level, to support policies to bring about a clean energy future. Show your elected officials your faithful commitment to creating strong, resilient, and fossil fuel-free communities.

Contacting your elected officials is a very important way to respond to climate change. They listen to their constituents who take the time to contact them. As people of faith and conscience, our voice carries even more weight because we are leaders in our communities and have the ability to address the moral values of responding to the climate crisis with solutions grounded in equity and justice.

Let them know how climate change is affecting your community and call on them to act boldly to reduce the impacts. Remind them there is a moral call to heal the climate.

- Write a letter or send a postcard
- Make a phone call or set up a virtual meeting to talk to your representatives
- Attend public meetings
- Thank your members of Congress if they support climate change legislation
- Write a letter to the editor or an op-ed to your local paper about climate change and the need to act
- Use social media to talk about the issues and tag your representatives

IPL offers opportunities for climate advocacy, such as supporting Clean Car Standards and incentives for clean energy, such as wind and solar. Visit the Take Action page at interfaithpowerandlight.org for more information. Connect with your state IPL to get involved at the local level. Find your state IPL at www.interfaithpowerandlight.org/affiliates/

It will take all of us to heal our climate, but people of faith and conscience must lead the way.

