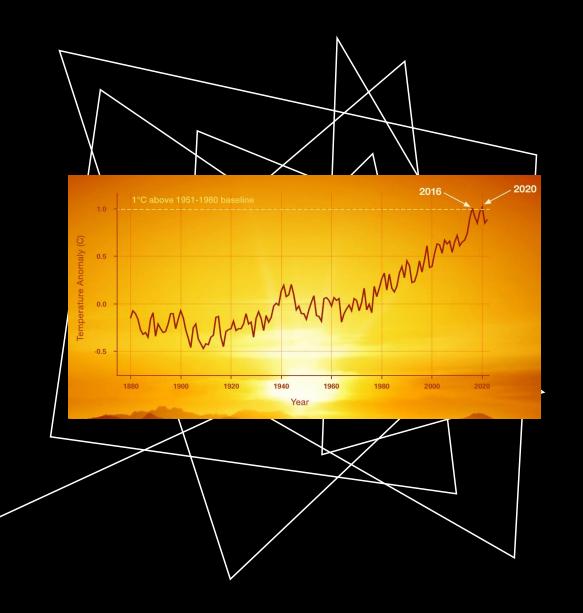


Greenhouse effect and climate change









## WHAT IS GLOBAL WARMING?

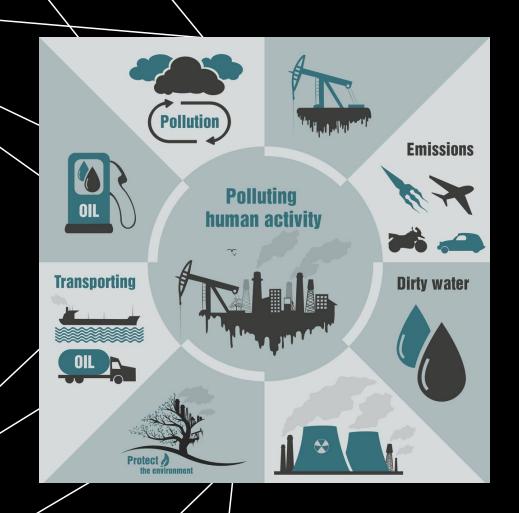
Global warming is the long-term heating of Earth's surface observed since the pre-industrial period due to human activities, primarily fossil fuel burning, which increases heat-trapping greenhouse gas levels in Earth's atmosphere. This term is not interchangeable with the term "climate change."



The change in global surface temperature from 1880 to 2020



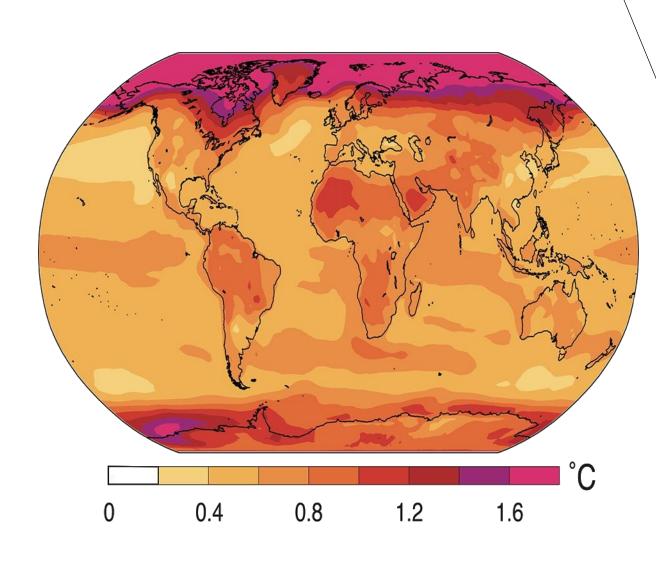




Since the pre-industrial period, human activities are estimated to have increased Earth's global average temperature by about 1 degree Celsius, a number that is currently increasing by more than 0.2 degrees Celsius per decade. The current warming trend is unequivocally the result of human activity since the 1950s and is proceeding at an unprecedented rate over millennia.

## WHAT IS CLIMATE CHANGE?

Climate change describes global warming—the ongoing increase in global average temperature and its effects on Earth's climate system. The current rise in global average temperature is more rapid than previous changes and is primarily caused by humans burning fossil fuels.





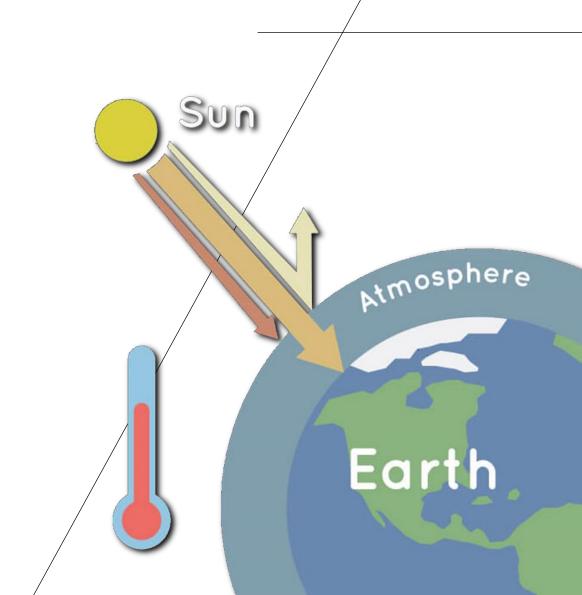
Fossil fuel use, deforestation, and some agricultural and industrial practices increase greenhouse gases, notably carbon dioxide and methane. Greenhouse gases absorb some of the heat that the Earth radiates after it warms from sunlight. Larger amounts of these gases trap more heat in Earth's lower atmosphere, causing global warming.





### GREENHOUSE EFFECT

The greenhouse effect is the way in which heat is trapped close to Earth's surface by "greenhouse gases." These heat-trapping gases can be thought of as a blanket wrapped around Earth, keeping the planet toastier than it would be without them. Greenhouse gases include carbon dioxide, methane, nitrous oxides, and water vapor.



#### GLOBAL TEMPERATURE & CO2 +1.1° (1.98°F) +0.9° 390 +0.7° 370 +0.5° 350 $+0.3^{\circ}$ +0.1° -0.1° 290 -0.3° 270 1880 2020



Scientists have determined that carbon dioxide's warming effect helps stabilize Earth's atmosphere. Remove carbon dioxide, and the terrestrial greenhouse effect would collapse. But by adding more carbon dioxide to the atmosphere, people are supercharging the natural greenhouse effect, causing global temperature to rise.

#### GLOBAL TEMPERATURE & CO<sub>2</sub> PPM +1\_1° (1.98°F) 410 **TEMPERATURE** +0.9° 390 +0.7° 370 +0.5° 350 +0.3° 330 **CARBON DIOXIDE** 310 +0.1° -0.1° 290 -0.3° 270 2020 1880





More frequent and intense drought, storms, heat waves, rising sea levels, melting glaciers and warming oceans can directly harm animals, destroy the places they live, and wreak havoc on people's livelihoods and communities. Today's scientists point to climate change as the biggest global health threat of the 21st century. It's a threat that impacts all of us—especially children, the elderly, low-income communities, and minorities—and in a variety of direct and indirect ways. As temperatures spike, so does the incidence of illness, emergency room visits, and death.

# THANKS FOR YOUR ATTENTION

TAKK FYRIR

