

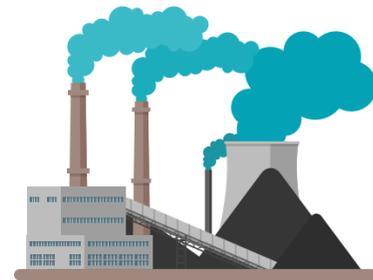
Solar energy comes across the atmosphere

# What is Global Warming?

It is the rise in the temperature of the earth's surface due to greenhouse gas emissions such as Carbon Dioxide CO<sub>2</sub> and It's produced mainly by the burning of fossil fuels.

Part of this energy bounces back into space

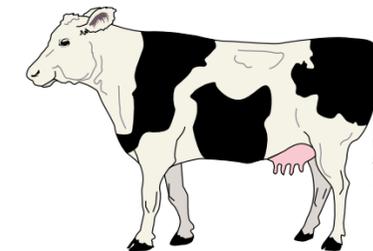
## Main sources of greenhouse gases



Coal-fired energy production



Transportation CO<sub>2</sub>



Cattle Methane



Deforestation eliminates CO<sub>2</sub> sink

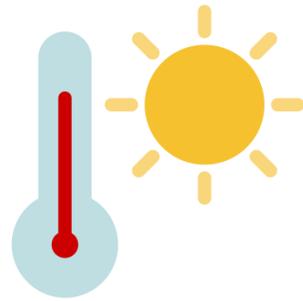


Fertilizers Nitrogen

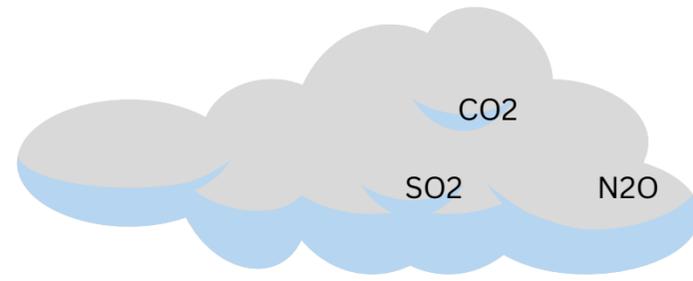


Aerosols Cloroflourocarbono

More energy is trapped by **greenhouse gases** raising the temperature on the earth's surface.



Extream heat - Increases the number of days above 90F



Increased air pollution  
Smog -ozone



Melting of the glaciarees



Increased precipitation  
and floods



Sea level rises to threaten coastal population



Wild Fires



Drought



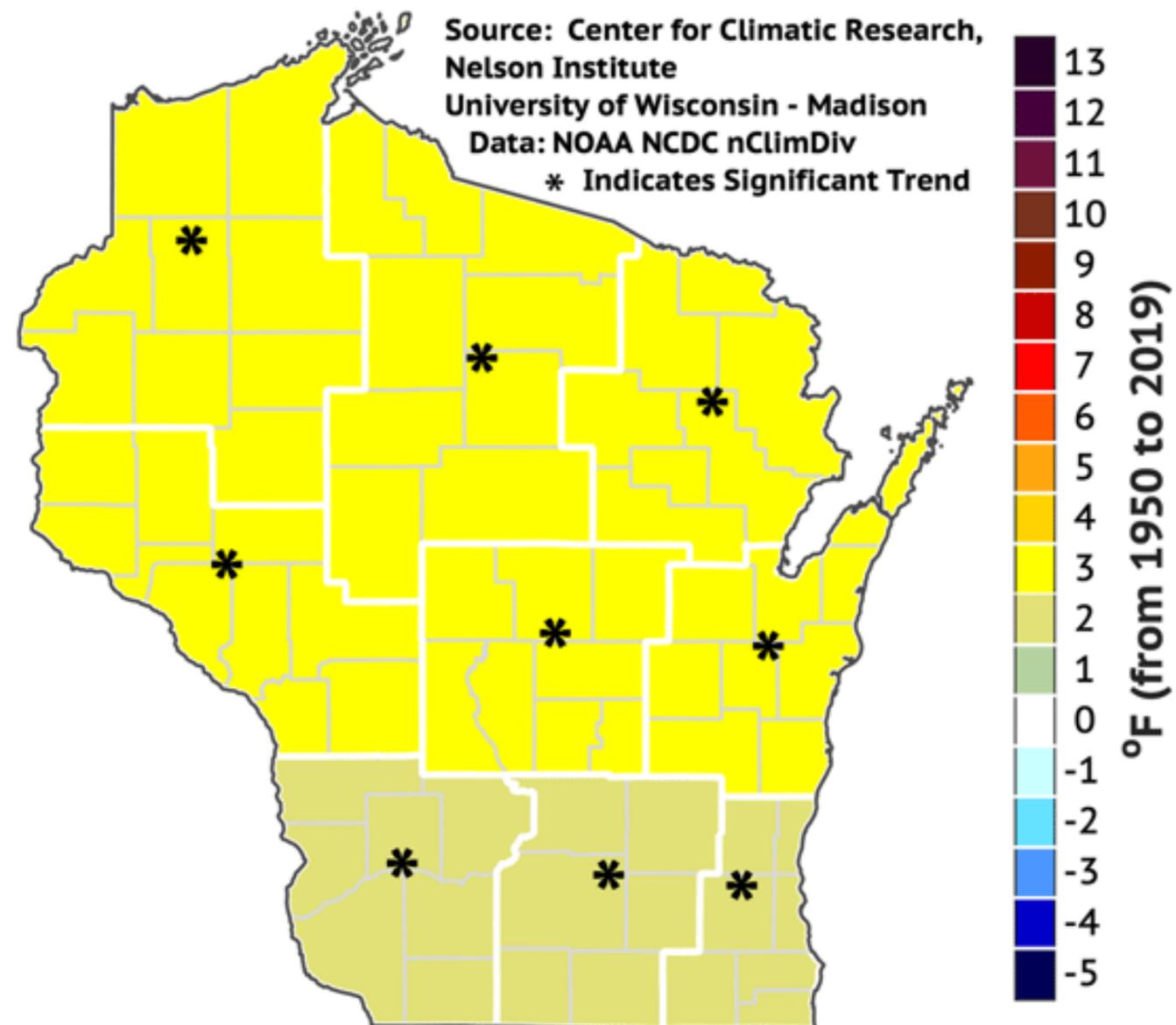
Extreme and frequent  
weather events



Increased acidity in the oceans, harming marine life and resources

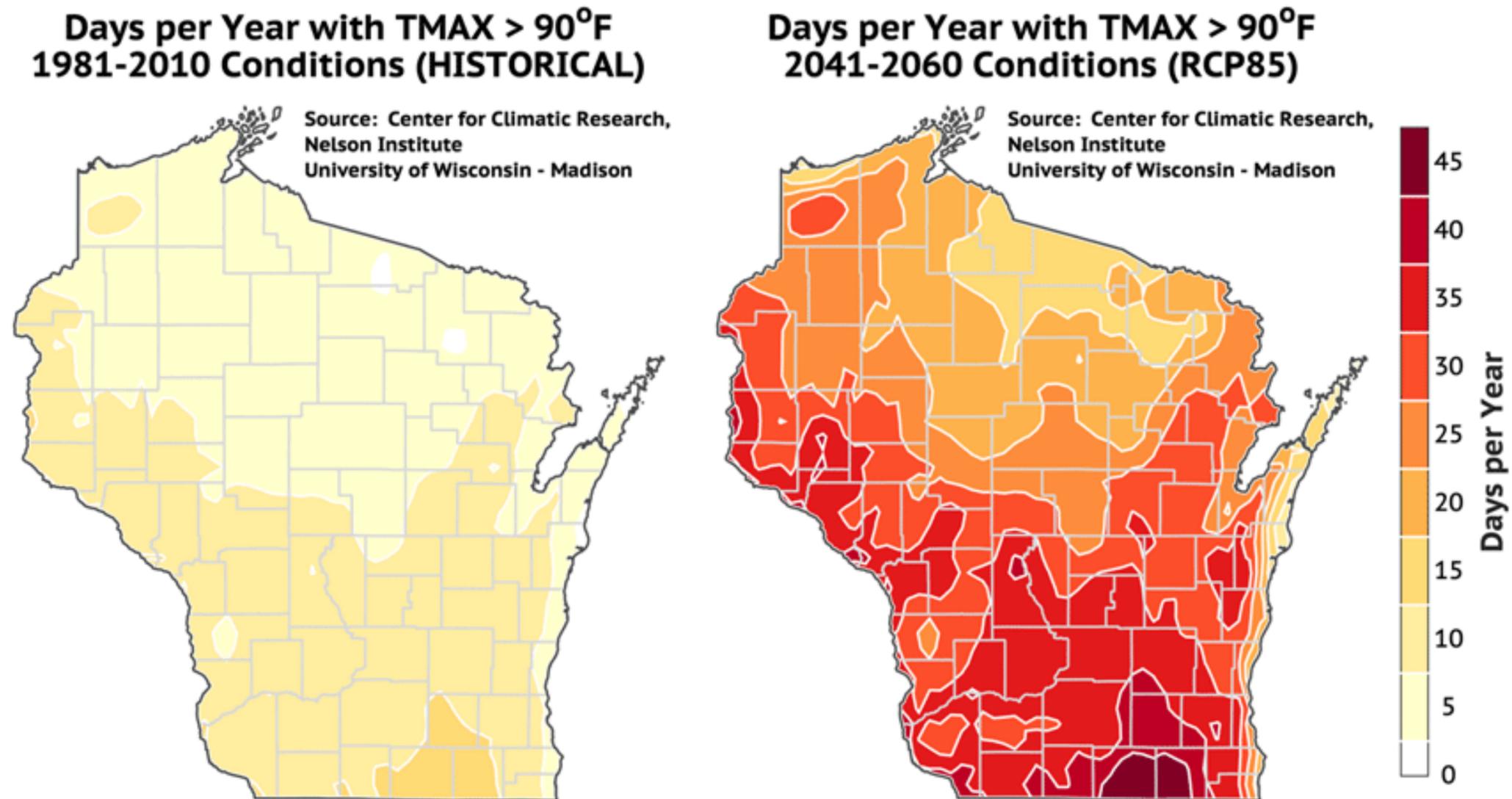
# The temperature in Wisconsin has increased between 2F to 3F in the last 70 years

## Historical Change in Annual TMEAN from 1950 to 2019



# Forecast of number of Days with a temperature above 90F (32 C) in Wisconsin

We will also likely see a tripling in the frequency of extreme heat (days above 90 degrees Fahrenheit), rising from about 10 days per year in 2020 to about 30 days per year by 2050

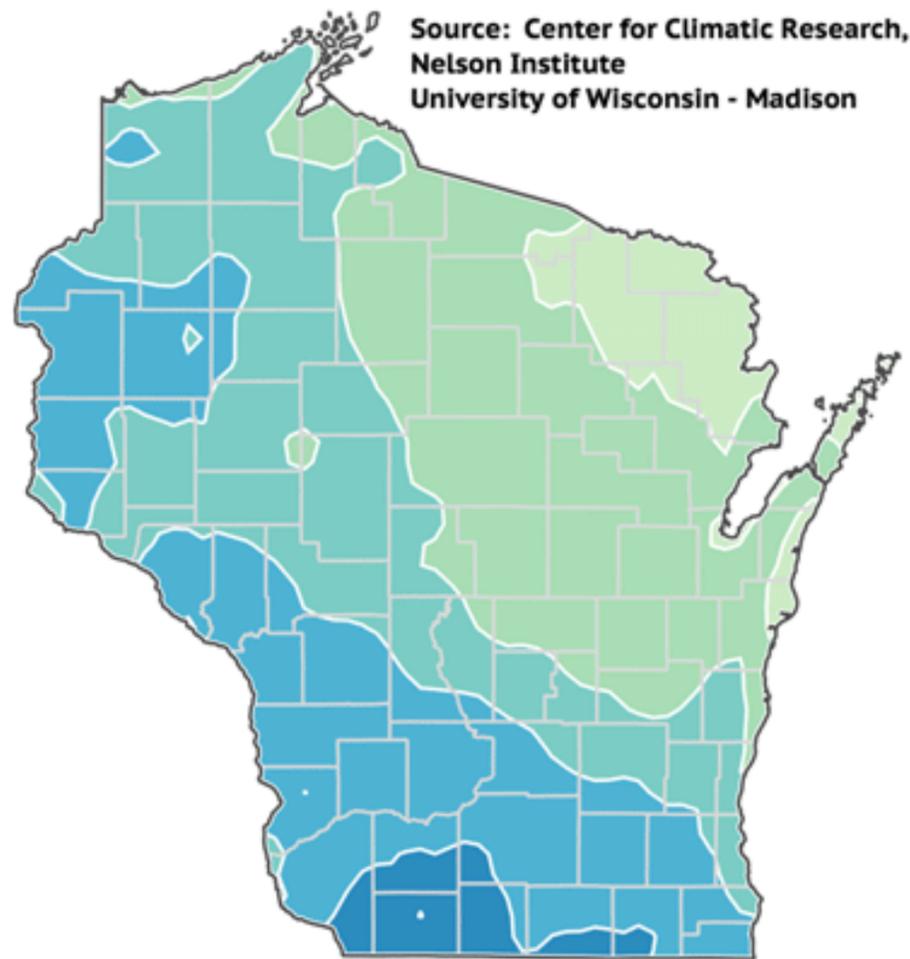


# Forecast on Increased precipitation

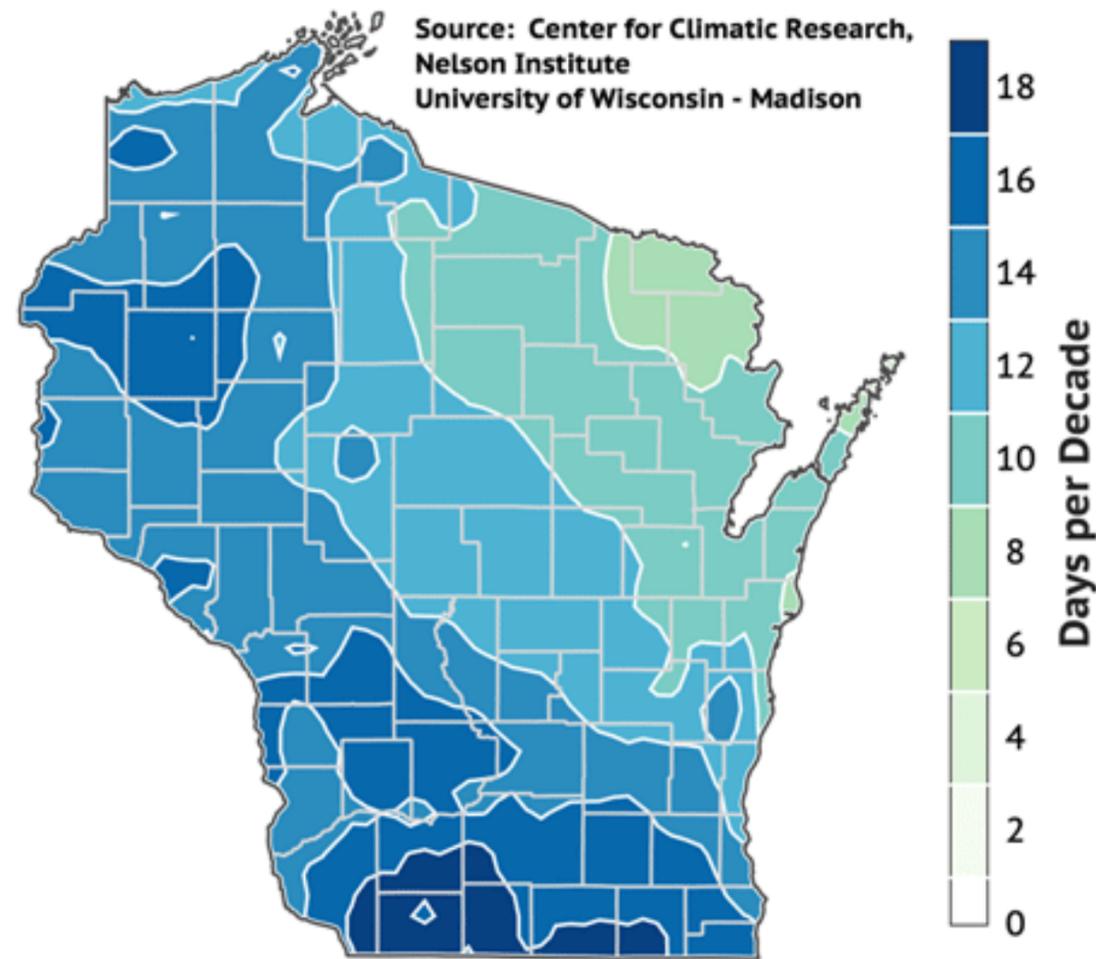
Precipitation events of more than 2 inches between 1981-2010

Precipitation events of more than 2 inches between 2041-2060

**Days per Decade with PRCP > 2in  
1981-2010 Conditions (HISTORICAL)**



**Days per Decade with PRCP > 2in  
2041-2060 Conditions (RCP85)**

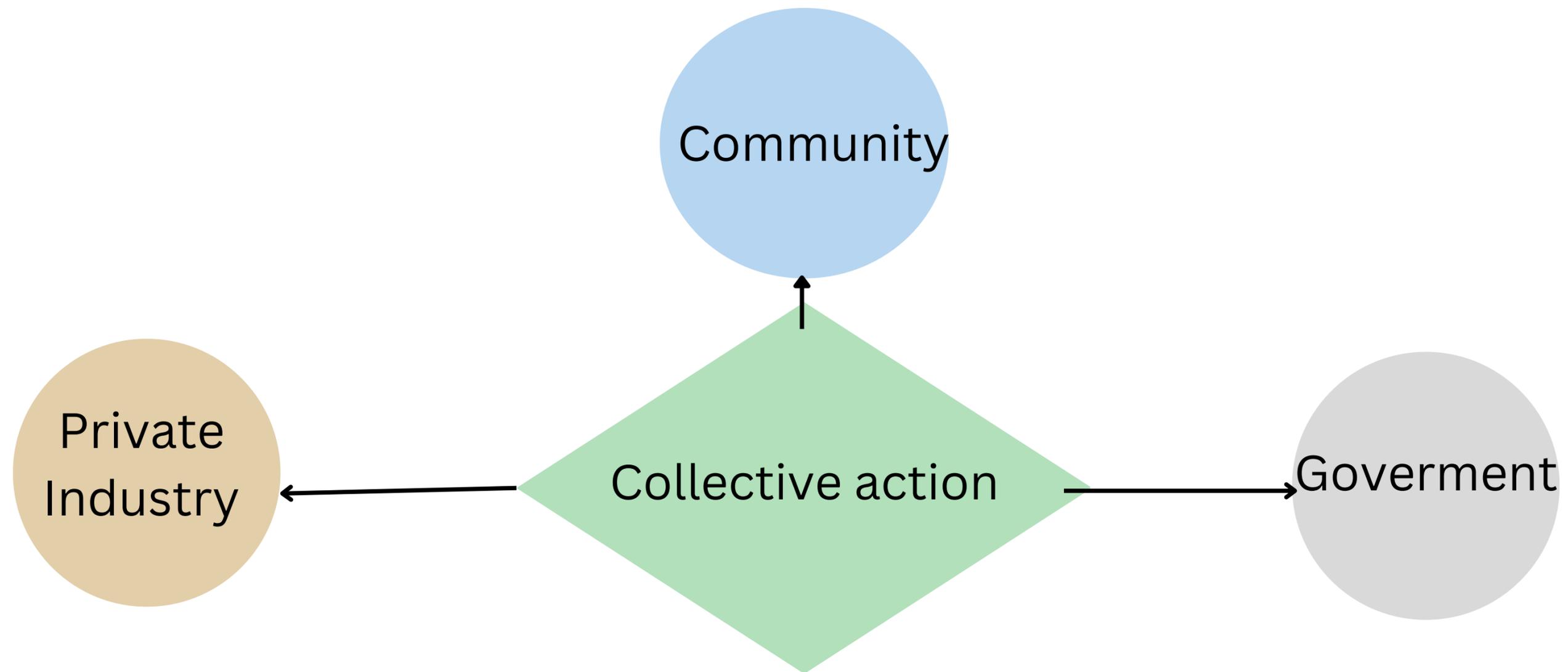


Projections suggest a 30 percent increase in the frequency of 2-inch rainfall events and a near doubling of 5-inch rainfall events.

Data: Wisconsin Initiative on Climate Change Impacts.

# Climate Change and Health

|  |   |  |  |
|--|---|--|--|
| Increased Temperature  | Increased Temperature<br>Smog/ozone                 | Increased precipitation<br>Climate disasters                                   | Warmer seasons<br>and flooding   |
| Extreme Heat   | Air Pollution                                       | Flooding   | More insects   |
| Heat worsens chronic conditions<br>cardiovascular diseases<br>diabetes<br>asthma<br>dehydration<br>Heat stroke | Worsens respiratory diseases<br>Asthma<br>allergies | Water-borne illness<br>Contamination of drinking water<br>Harmful algal blooms | Diseases transmitted by mosquitos and ticks<br><br>Lyme<br>Malaria<br>Zika<br>West Nile<br>denge |



**Reduced percentage of energy produced by Coal-Fired Plants in Wisconsin**

- Wisconsin's energy production from coal-fired plants decreased from 85% in 1997 to 42% in 2021.

**Ozone layer is recovering**

NASA reported this year that the ozone hole is recovering after the international community united and took measures to limit and prohibit CFCs aerosols that were depleting the ozone layer.

**The federal and international governments aim to reduce carbon emissions so that global warming does not rise more than 2 Centigrade (3.6 F) by the year 2050 and mitigate the consequences.**