The State of Our Climate

A Visual Summary of Key Climate Change Trends

The Warming Planet

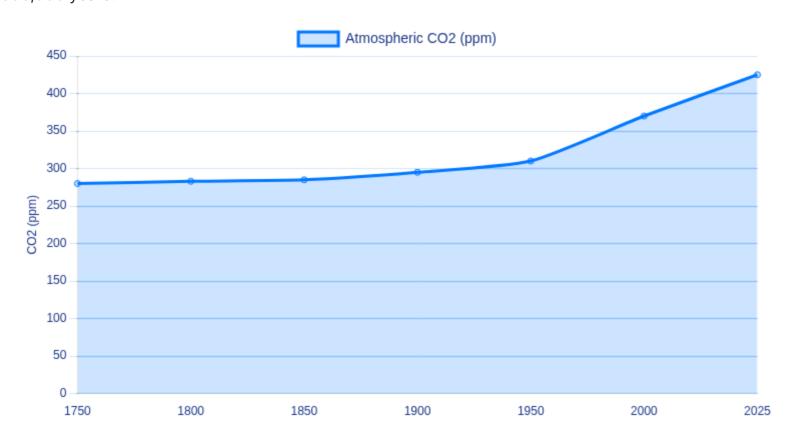
Global average temperatures are rising at an unprecedented rate due to human activities. This warming is the primary driver of broader climate shifts. The last decade was the warmest in recorded history, a clear signal of a long-term trend.

The Earth has warmed by approximately **1.1°C** since the late 19th century.



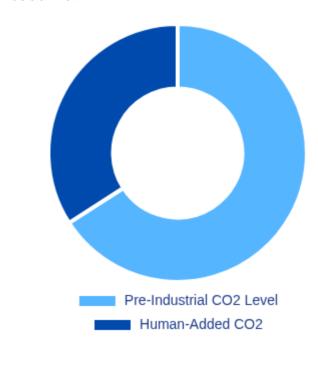
Surging Greenhouse Gases

The concentration of greenhouse gases like Carbon Dioxide (\$CO_2\$) in the atmosphere is the engine of global warming. These gases trap heat, and their levels have skyrocketed since the Industrial Revolution, reaching levels not seen in at least 800,000 years.



CO2 Levels: Then & Now

Atmospheric \$CO_2\$ has increased by over 50% from its pre-industrial level of ~280 parts per million (ppm). This visualization shows the proportion of \$CO_2\$ added by human activity relative to the historical baseline.

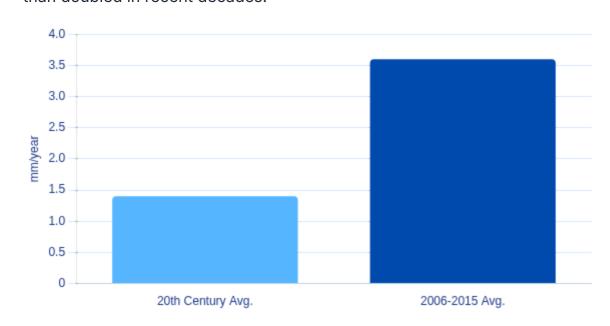


Escalating Consequences

The effects of a warmer world are not abstract concepts for the future; they are tangible, measurable changes happening now. From our oceans to our weather patterns, the impact is widespread and accelerating.

Rising Sea Levels

As ice sheets melt and seawater expands from warming, global sea levels are rising. This threatens coastal communities and ecosystems worldwide. The rate of this rise has more than doubled in recent decades.



Extreme Weather Events

Climate change is loading the dice for more frequent and intense extreme weather events. The patterns we once considered normal are shifting, leading to more destructive and unpredictable conditions.

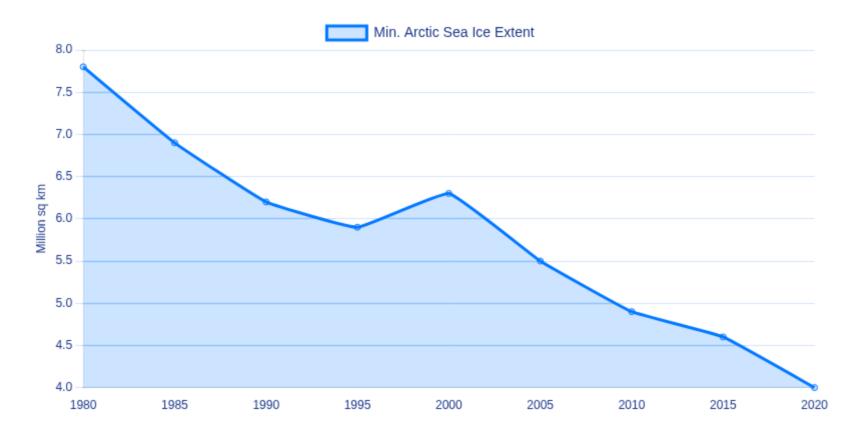




Longer Droughts

The Great Melt: Vanishing Ice

The Earth's polar regions are warming faster than anywhere else, leading to a dramatic decline in ice cover. The shrinking of Arctic sea ice is a stark visual indicator of our planet's rapid transformation.



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