**Debunking Climate Change Misinformation**

Misinformation: "Climate change is a natural occurrence and not caused by humans." Correction: The current rapid climate shifts are largely driven by human activities, especially the burning of fossil fuels.

Explore the Facts: [IPCC's Fifth Assessment Report](https://www.ipcc.ch/report/ar5/)

In the IPCC's Fifth Assessment Report, global researchers conducted in-depth discussions to study various aspects of climate change. These scientists discovered that greenhouse gas emissions, closely related to many of our daily activities, especially the burning of fossil fuels, are the primary reasons for the significant rise in global temperatures. This temperature increase not only triggers more extreme weather events, such as heatwaves, floods, and typhoons but also accelerates the rise of sea levels and the melting of glaciers.

Misinformation: "The climate is always changing, so it's no big deal."

Correction: The present speed and extent of climate change are unparalleled in human history.

Explore the Facts: [NASA's climate page](https://climate.nasa.gov/evidence/)

NASA's climate page paints a vivid picture: temperature readings from the last century have skyrocketed, with human activities taking center stage as the main culprits. Over the past century, the global average temperature has risen by more than 1°C. This rapid temperature increase has led to a surge in extreme weather events, such as more intense hurricanes and frequent heatwaves. As temperatures rise, polar ice is melting at an alarming rate, causing sea levels to rise and posing unprecedented threats to the lives of residents in coastal cities and islands.

Misinformation: "There's no consensus among scientists about climate change."

Correction: Over 97% of publishing climate scientists confirm that recent global warming is largely due to humans.

Explore the Facts: [Environmental Research Letters](https://iopscience.iop.org/article/10.1088/1748-9326/11/4/048002)

We sifted through a whopping 12,000 climate studies, and guess how many gave a thumbs up to the idea that humans are heating up the planet? A staggering 97%!

Misinformation: "The increase in CO2 is good because it helps plants grow."

Correction: Excessive CO2 has many detrimental impacts, despite potential boosts in plant growth.

Explore the Facts: [NASA's page on carbon](https://climate.nasa.gov/effects/)

While it's true CO2 gives plants a bit of a growth spurt, overloading them with it is like giving kids too much sugar. Yes, they might be more energetic for a while, but the side effects? Rising seas, unpredictable weather, and a climate that's off-kilter.

Misinformation: "The ice at the poles is increasing, so global warming isn't happening." Correction: Long-term trends reveal a significant decrease in polar ice, despite occasional increases.

Explore the Facts: [NASA's data on Arctic sea ice](https://climate.nasa.gov/vital-signs/arctic-sea-ice/)

Imagine your ice cream melting under the sun but sometimes refreezing a bit in the shade. Even with those brief moments in the shade, over time, most of it melts away. Similarly, while there might be temporary increases in polar ice due to various factors, the dominant and consistent trend is a decrease in Arctic Sea ice, highlighting ongoing global warming.

窗体顶端

窗体底端

Misinformation: "It's cold outside, so global warming isn't real."

Correction: Individual cold spells are weather events, distinct from long-term climate patterns.

Explore the Facts: [NOAA's page on weather vs. climate](https://www.climate.gov/news-features/climate-qa/whats-difference-between-climate-and-weather)

Imagine judging an entire movie by one scene or a book by one page. A cold day is just a moment in the ongoing story of our planet's changing climate. While we might bundle up for a chilly day, the overall trend shows our Earth is getting warmer."

窗体顶端

窗体底端

Misinformation: "The sun is causing the current period of warming, not humans."

Correction: The current warming trend is mainly due to humans, with solar activity playing a minor role.

Explore the Facts: [IPCC report](https://www.ipcc.ch/report/ar5/)

While human activities, particularly the emission of greenhouse gases, stand out as the dominant cause of the recent warming trend, solar variations do play a role in Earth's climate. However, compared to the significant impact of human contributions, the influence of solar activity remains relatively minor.

Misinformation: "Scientists used to predict global cooling in the 1970s."

Correction: Most scientific studies from the 1970s projected warming, not cooling. Explore the Facts: [Bulletin of the American Meteorological Society](https://journals.ametsoc.org/view/journals/bams/89/3/bams-89-3-36.xml)

While some folks think scientists were all about "global cooling" in the 1970s, a deep dive into the science stuff from back then shows most experts were already sounding the alarm on warming.

Misinformation: "The climate models are unreliable and have been wrong in the past."

Correction: Past projections from climate models have shown impressive accuracy when compared to observed data.

Explore the Facts: [Geophysical Research Letters](https://agupubs.onlinelibrary.wiley.com/doi/abs/10.1029/2019GL085378)

Climate models are like our weather forecasting tools, and even though there's some skepticism about them now and then, looking back, they've been pretty spot-on! Just as we trust our daily weather forecasts, we should have even more faith when so many models are telling us the same thing. In essence, these models act like our climate "compass", guiding us through the changes happening on Earth.

Misinformation: "Animal agriculture isn't a significant contributor to greenhouse gases."

Correction: Livestock farming produces more greenhouse gases than all global transportation combined.

Explore the Facts: [FAO's report](http://www.fao.org/3/a-i3437e.pdf)

If all the cows, pigs, and chickens formed their own nation and started their own "carpool club", their greenhouse gas emissions would surpass the combined total of all cars, planes, and trains globally. And this isn't just a whimsical thought. The UN's Food and Agriculture Organization has verified that, in terms of global greenhouse gas emissions, animal agriculture is indeed like a heavyweight champion. So, when we think about reducing our carbon footprint, beyond just our transportation choices, our dietary habits also play a pivotal role.

**Misinformation: "Recycling doesn't make a significant impact on environmental conservation."**

**Correction: Recycling plays a crucial role in reducing waste and conserving resources.**

**Explore the Facts: Christchurch City Council's Recycling Data** [**https://ccc.govt.nz/services/rubbish-and-recycling/yellowbin/have-we-bin-good/**](https://ccc.govt.nz/services/rubbish-and-recycling/yellowbin/have-we-bin-good/)

**The reality is, as of July 2023, we have achieved remarkable results in our recycling efforts. During this period, a staggering 99% of trucks have been recycled, with a mere 1% of trucks being sent to landfill. Moreover, this entire process has incurred a total cost of only $7,000. These numbers provide clear evidence of the pivotal role our yellow bins play in safeguarding our planet.**