People who are uninformed, misinformed, skeptical, or in denial about human-caused climate change often reiterate common myths on the subject. This document shows that those myths can be organized into broad categories and provides brief responses to the most common myths.

It's not happening / It's just part of a natural cycle

Example myths

- It's been far warmer in the past
- We just had a record cold winter
- We're recovering from the Little Ice Age
- Polar bear numbers are increasing
- We're cooling / No change for 10 years
- The oceans are cooling
- Antarctica is getting colder
- It's the sun

Key facts

- Ancient natural cycles are irrelevant for explaining recent, rapid global warming.
- At least 10 key indicators consistently show evidence of a warming world: increasing global average tropospheric air temperature, increasing temperature over land, increasing atmospheric humidity, increasing sea surface temperature, increasing temperature over oceans, increasing sea level, decreasing sea ice, increasing ocean heat content, decreasing snow cover, decreasing glacier volume

The science is uncertain / wrong / can't be trusted

Example myths

- There's still debate among scientists
- Chaotic systems are not predictable
- They predicted global cooling in the 1970s
- It's all a conspiracy / hoax
- We can't trust computer models
- The 'hockey stick' graph has been proven wrong

Key facts

- Every academy of science from every major country in the world (34 countries) confirms the manmade climate change.
- 97% of scientists who actively study climate agree humans are causing global warming.

It's not us

Example myths

- We don't create enough CO_2 to matter
- It's due to cosmic rays
- CO_2 isn't the most important greenhouse gas
- It's the Sun, not humans
- Mars and Pluto are warming too
- Ice cores show CO_2 increases lag behind temperature rises

Key facts

- Human activity is dumping 90 million tons of CO_2 into the atmosphere every day.
- The CO_2 that is building up in the atmosphere has an atomic isotope "fingerprint" that indicates fossil origin.
- Direct satellite infrared radiation measurement shows clear evidence for a significant increase in the Earth's greenhouse effect due to greenhouse gases.

It's no big deal / It's beneficial

Example myths

- It's too cold where I live - warming will be great
- Higher CO_2 levels will boost plant growth and food production

Key facts

To fully assess the impact of climate change, you have to look globally. Here are some examples of negative global climate change impacts:

- **Agriculture** - Increased drought and flood frequency & intensity will make more areas unable to grow crops reliably. Increased severe weather events can affect all food production areas.
- **Health** - Additional stress and deaths from heat-waves. Warmer temperatures increase habitat range of disease-bearing insects (like malaria mosquitoes)
- **Polar Melting** - Loss of albedo causes the ocean to absorb more heat, the warming waters increase glacier and Greenland ice cap melt, raising the temperature of Arctic permafrost, which releases methane. Melting of the Antarctic ice shelves adds further to sea-level rise.
- **Ocean acidification** - As additional CO_2 is absorbed in the oceans, creatures at the bottom of the food-chain lose calcium and shells. This is destabilizing the food-chain.
- **Melting Glaciers** - About one-sixth of the world's population depends upon fresh water supplied each year by spring and glacial melt. No glaciers. No summer water.
- **Sea Level Rise** - Many people & major cities are low-lying. Seawater and storm surges also contaminate rivers and fields. Aquifers become polluted. Current IPCC modeling considerably underestimates the rate of sea-level rise.
- **Environmental** - Growth of oxygen-poor ocean zones, contamination / exhaustion of fresh water, increase of natural fires, vegetation die-off due to droughts, risk of coral extinction, decline in photoplankton, migration pattern changes, food chain disruption and species loss.
- **Economic** - Massive human migrations, disruptions to global trade, transport, energy supplies and labour markets, banking and finance, investment and insurance. Markets experience increased volatility. Institutional investors experience loss and uncertainty.
- **Military conflict** - Countries may be drawn into disputes over water, energy, or land for food.

It's too big / too late to solve

Example myths

- It's too late to do anything about climate change
- Why should we act? China / USA isn't doing anything.

Key facts

- Studies have determined that current technology is sufficient to reduce greenhouse gas emissions the necessary amount, and that we can do so without significant negative impact on the economy.
- China is investing heavily in renewable energy and is a leading supplier of solar and wind equipment. In 2007, China got 17% of its energy from renewables and this is growing. Researchers have found that China could meet all its electricity demands from wind by 2030.