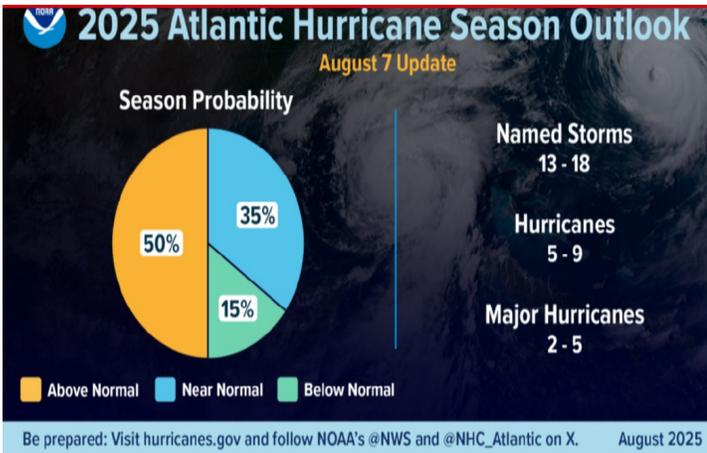


Climate Science and Policy for Nonscientists

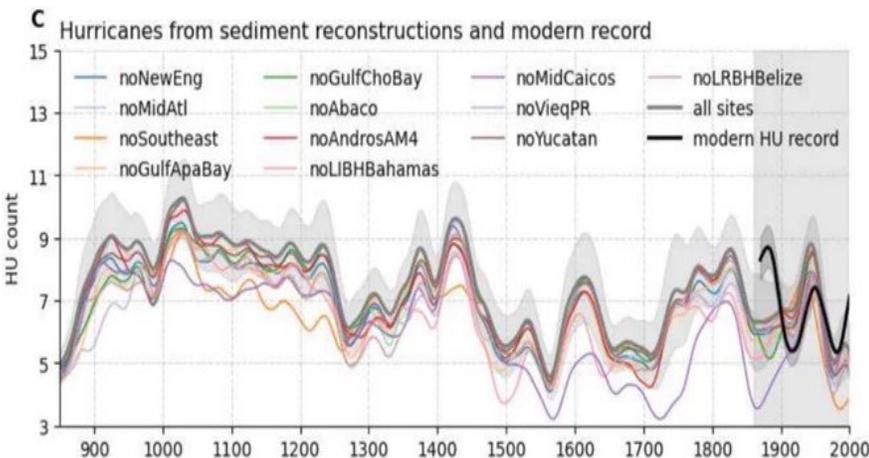
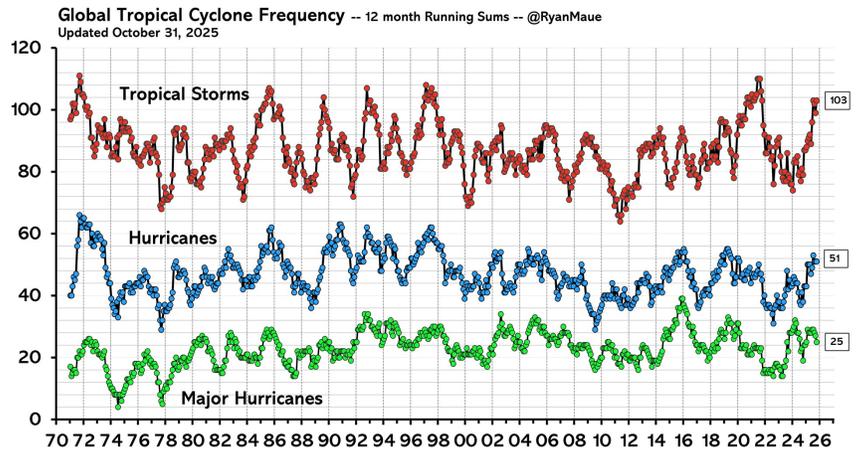
One Picture is Worth a Thousand Words.



**HURRICANE WRAP UP**

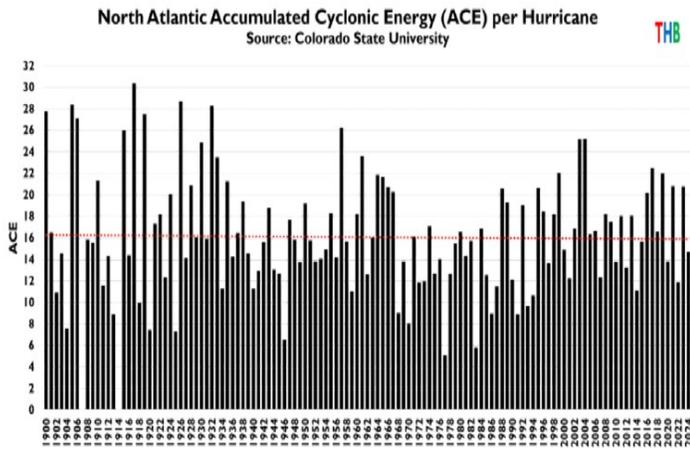
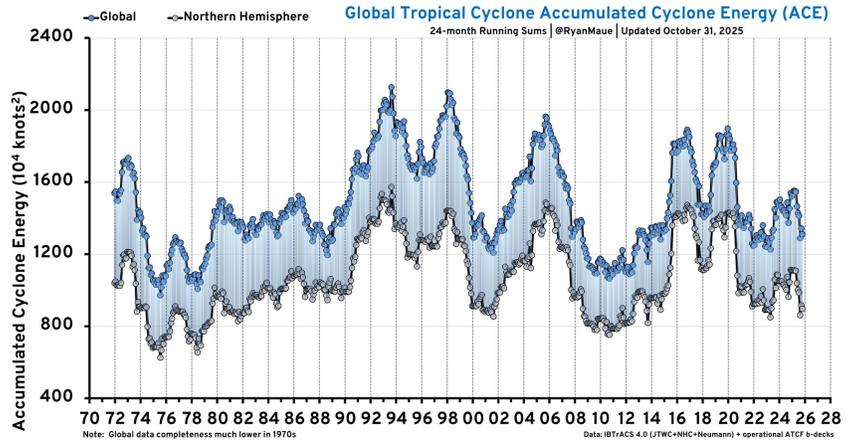
The hurricane season (June-November) is now over. Virtually every scientist, who published a prediction, predicted that the season would be “more active” than normal. As late as August 7, the US government (NOAA) still predicted a 50% chance of greater activity than normal. The actual results were 13 named storms (also called Tropical Storms) versus a long-term average of 14.4 and 5 hurricanes versus a long-term average of 7.2.

Globally for over 50 years there is no upward trend in the number of Tropical Storms, Hurricanes (Cat. 1-5), or Major Hurricanes (Cats 3-5).



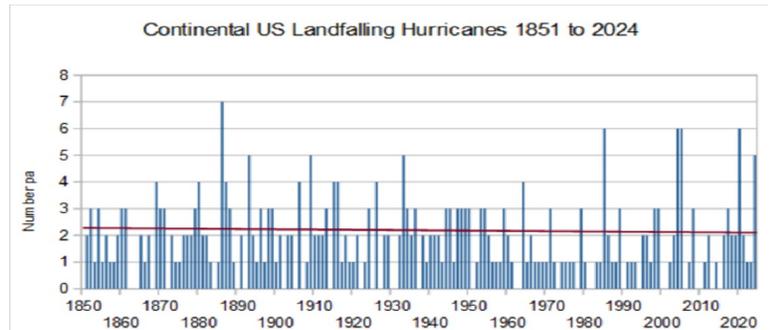
Studies that use proxy data to reconstruct hurricane frequency prior to the instrumental period (the “modern record”) conclude that hurricane frequency has been declining since the Middle Ages, as shown by this study going back to the year 850.

Besides number, another important hurricane statistic is Accumulated Cyclone Energy (ACE) per season. This is the total energy in all the storms that occurred during the season. It takes into account not only the number of storms, but also their duration and their strength. The data shows significant annual variability, but no upward trend in over 50 years.

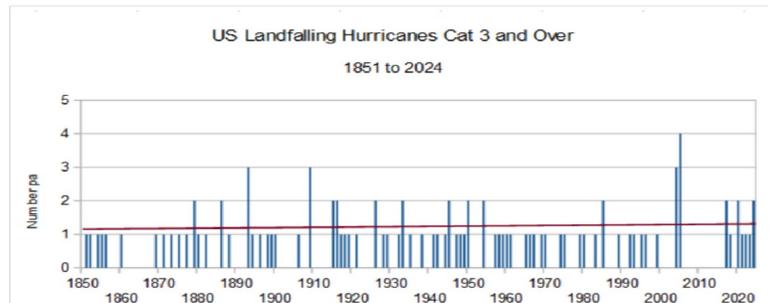


Some scientists have argued that the number of hurricanes has been declining, so that ACE remaining constant per year conceals an increase in strength per hurricane. But this concern is addressed by the data on ACE per hurricane, which shows that the average ACE per hurricane has not been increasing in over 100 years.

The most unusual thing about the 2025 hurricane season was that there was no hurricane strike on the US. On average there are about 2 strikes per year with one of those being a major hurricane. The last year with no US hurricane strike was 2015, and the trend line is flat.



<https://notalotofpeopleknowthat.wordpress.com/wp-content/uploads/2024/12/image-4.png>



This season a surprising number of storms diverted their paths to move to the North and East, thus missing the US. This image shows the path of Hurricane Imelda (Sept.27 -Oct.2).



This image shows the path of Hurricane Melissa (Oct. 21-31), which struck Jamaica and Cuba but not the US. So is climate change causing more hurricanes to move more towards the North and East, thus missing the US?



Compare the path of Hurricane Katrina, which struck New Orleans in 2005. Scientists can not predict accurately hurricane paths more than about five days in advance. So, while scientists routinely predict the number of hurricanes per season, scientists do not even try to predict the number that will hit the US.

## EXTINCTIONS

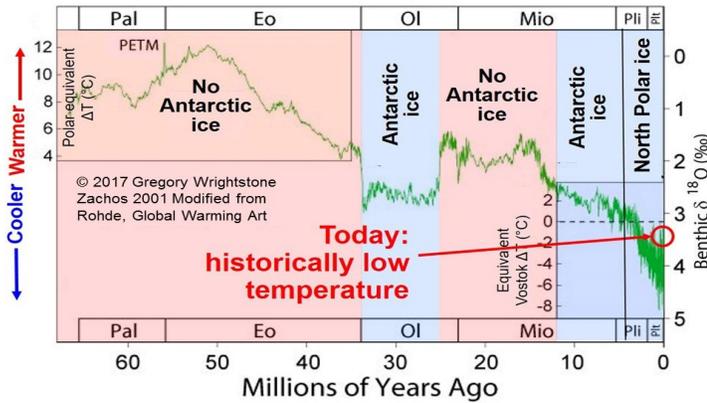
Two major issues relating to extinctions are: (1) the rate of extinction over the last 500 years, and (2) the cause of such extinctions. In October 2025 the Royal Society of England published a paper adding to the controversy on these issues. The paper concluded that, while extinction rates have risen over the last 500 years, they have declined over the last century, and are now lower than at anytime in the past 500 years.

As to causation, the paper concluded: (1) that island extinctions are most frequently caused by invasive species, (2) that habitat loss is the most important cause of mainland extinctions, (3) that studies in the past showing large rates of extinctions have improperly extrapolated to the mainland the higher extinction rates that have occurred on islands, and (4) that, while commercial hunting was a significant cause of extinctions in the past 500 years, it is now a much less important cause than invasive species and habitat loss.

Thus this paper supports the view that there is no danger of a mass extinction, and that climate change is a relatively minor cause of extinctions compared to invasive species and habitat loss. (And see CliSciPol Science Topic: Extinctions).



## Unusual and unprecedented COLD



The Canadian tundra (shown in red on the map) is a vast, treeless, frozen area that is now melting due to global warming. This melting is opening up new research opportunities for paleobiologists, scientists who study ancient life through fossil records, combining biology and geology to understand the evolution, ecology, and development of organisms throughout Earth's history.



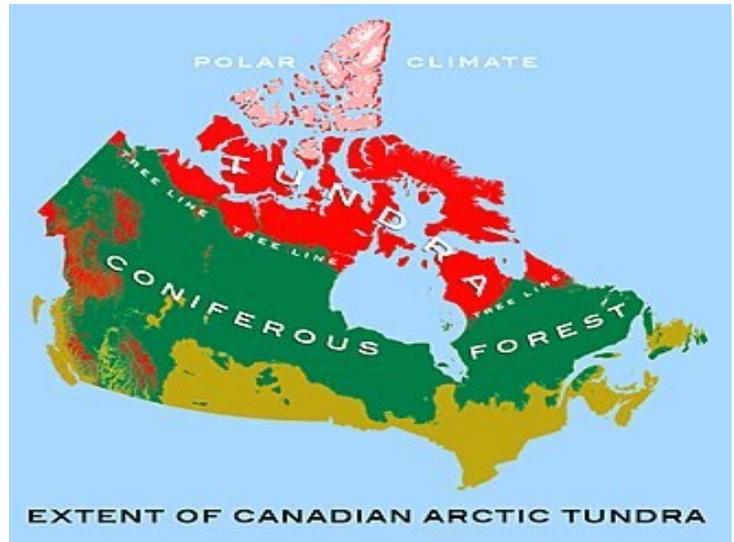
Modern camels descend from giant High Arctic camels that lived in Canada's North before the Ice Age. (Global Mechanic/Courtesy of Handful of Films)

## COP30 WRAP UP

COP30 in Brazil ended on November 21, 2025. It was immediately noticeable that there was no dramatic announcement of any new agreement to pursue Net Zero and/or to reduce CO<sub>2</sub> emissions. In recent weeks information about the internal deliberations has been emerging that tends to confirm the fracturing of the Climate Crisis Movement.

## CAMELS IN CANADA

For most of the last 60 million years the world has been much warmer than it is today. For significant parts of the last 60 million years there has been no Antarctic ice sheet at all. The present Greenland ice sheet only began to form about 2-3 million years ago.



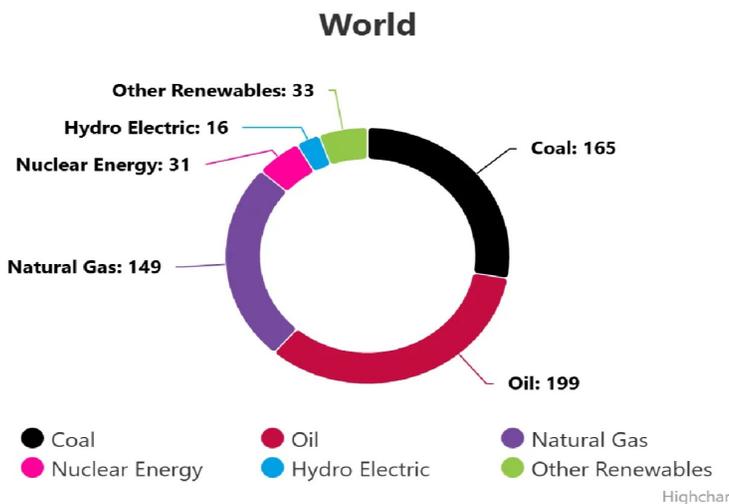
We now know that the Canadian Tundra, also known as the Canadian High Arctic, 2-3 million years ago was a lush, vibrant forest paradise. One of the most surprising findings has been that this was the home of a giant version of modern camels, and it has been suggested that modern camels are descended from this High Arctic ancestor.



Pope Leo XIV attended COP30 and gave a speech urging countries to take concrete actions to stop climate change that is threatening the planet. But, as one observer has commented, President Trump has left the global climate movement in a “shambles” with his withdrawal from the Paris Agreement and with his sending no official US delegation to COP30. The plan of COP30 organizers was to push for a legally binding “road map” for the ending of the use of fossil fuels. But of the roughly 200 nations participating, only about 80 supported this push, so the effort failed.

Of particular significant was the fracturing of what has been known as the “global South.” A number of African leaders insisted that the near-term use of fossil fuels was essential to their economic development, and also voiced concerns over various issues of sovereignty.

Last month’s CliSciPol newsletter commented on how Bill Gates has recently recanted on his previous claims that the world faced a “climate disaster.” On December 9, 2025, the Wall Street Journal Editorial Board made clear that it is not a supporter of the Climate Crisis Movement writing, “One scandal of our age is the attempt to sell the public on the narrative of climate catastrophe.” (And see CliSciPol Science Topic: Greening World)



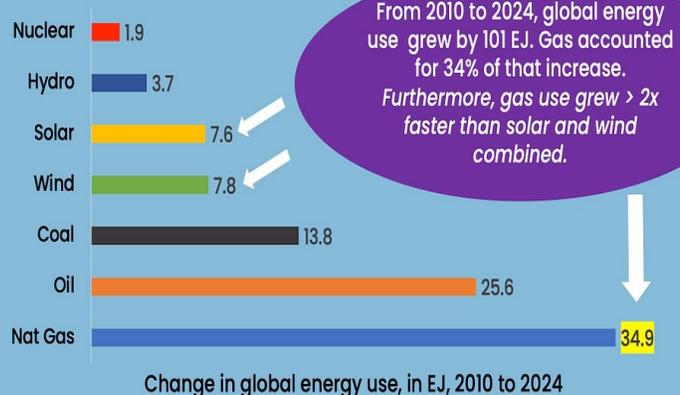
## FOSSIL FUEL USE

The COP30 result follows from the growing awareness that coal, gas, and oil are indispensable to sustain and raise the world’s standard of living. Collectively coal, gas, and oil provided 86% of the world’s total energy in the year 2024

While the use of wind and solar has been growing over the last 15 years, the use of fossil fuels has been growing much, much faster.

Net Zero by 2050, or by any other foreseeable date, will never happen.

## Since 2010, Natural Gas Has Grown Faster Than Any Other Type Of Primary Energy





## **The Journal Science Of Climate Change Is 5 Years Old and Is Now Experiencing Explosive Growth**

### **A JOURNAL FOR SO-CALLED “DENIERS”**

Supporters of the Climate Crisis Movement have been successful over the years at blocking the publication in various scientific journals of articles questioning the CO2 Control Knob Theory, the theory that the rising level of atmospheric CO2 is the principal driver of rising world temperatures and of increasing numbers of extreme events.

To counter this effort at censorship in 2020 the journal, Science of Climate Change, was founded. It specified that it was “open for scientific contributions which contradict the IPCC’s climate hypotheses.” Since 2020 this journal has experienced “explosive growth.”

Scientific progress emerges from the freedom to present challenges to old theories. The climate is so complex that there still is much to learn. Climate science is not settled. It is progressive, which is the reason the IPCC issues a new Assessment Report every seven years or so to present the advances that have been made since the prior report.

