

Media Bias and Sea Ice

My view that climate change is occurring and is not caused by humans and certainly not by their addition of CO₂ is constantly challenged. A frequent argument is that the number of stories in the media is clear proof that something is happening. People then assume that it is due to human activity because that is what they have been led to believe.

It is true there are more stories in the media, but all this shows is that there are more stories in the media. It does not mean more events or even more severe events occurring. We have all experienced being introduced to somebody after which we seem to meet them or hear about them quite frequently. The fact is they were always there they were just not part of our awareness. The media, frequently deliberately used by those who want to show humans are causing climate change, eagerly report on environmental events. The fact is the events were always occurring they were just not part of most people's awareness.

A second problem is western education about science and especially the environment assumes uniformitarianism. This is the concept that change is gradual over long periods of time. In fact, significant change occurs all the time. For example, the orbit of the earth changes every single year primarily because of the gravitational pull of the planet Jupiter, a scientific fact we have known for approximately 150 years, yet until recently most school texts said the orbit was a fixed unchanging slightly elliptical orbit. Similarly, few people are aware that four temperature trend changes have occurred since 1900. The world warmed from 1900 to 1940, cooled from 1942 to 1980, warmth from 1980 to 2000 and has cooled from 2000 to the present.

A third problem is created by our tendency to remember a media report as unconditional. I grappled with this problem for a long time because all science reports are conditional. No scientist is 100% certain about anything, which is why they talk about something having, a 95% or some other level, confidence limit. I realized over the years most media reports have the conditional words in the body of the article, but the headline is invariably active voice and without condition. It is what most people remember.

There are other factors involved in the distorted view of the world created by the media. For example, the ones identified above function in the climate on environmental hysteria that exists at present. This and subsequent articles will take specific media reports and identify the errors, distortions, lack of context, and speculation all designed to, "Grab a headline." I will do this with stories from print media, but similar practices occur in other media forms. As Marshall McLuhan said, "The medium is the message". For example, the classic portrayal of air pollution or pollution in general is the factory chimneystack spewing (notice the connotations of the word) material into the atmosphere. Nowadays, most of it is water vapor condensing to visible water droplets as it hits the cool air. You can see this visibly if you look closely because there will be a gap between the top of the chimney and the water droplets appearing. A common trick to enhance the effect is to backlight the conditions to make the steam appear menacingly black. It is a classic portrayal because television has few other ways of showing pollution.

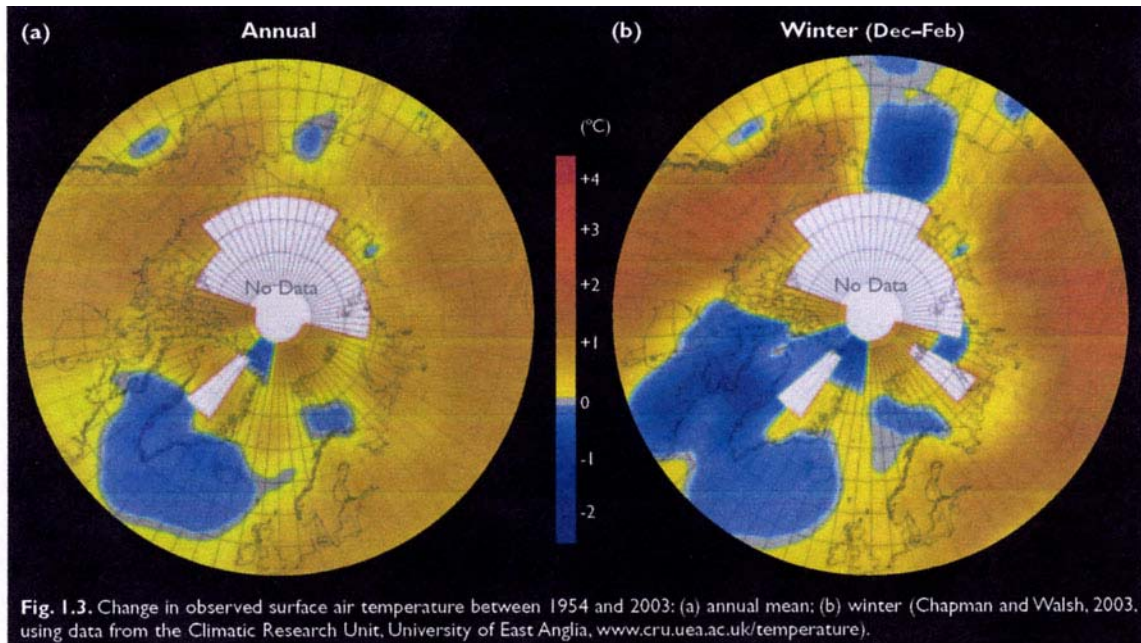
As a result of their machinations some intentional but most out of lack of understanding or political bias the media have created virtual reality. We have a situation where everything is presented out of context in space and time. Natural events are

identified or presented as unnatural. Normal events are identified or presented as abnormal. Speculation about more unnatural or abnormal events is self-fulfilling. On a regular basis I will dissect media reports identifying the errors, the misinformation and the bias.

Arctic and Antarctic regions and receive a great deal of attention for several reasons including, a) we know very little about these regions, b) they are regions where the greatest warming due to human CO2 is predicted, c) they contain animal species that have been used to exploit our emotions from Walt Disney's false representation of lemmings to Kevin Costner's "Dances with wolves" to Al Gore's complete misrepresentation of polar bears to the more accurate but very emotional portrayal of Antarctic penguins.

Direct observations and reports of the Arctic only effectively began in the 16th century. Limited reports exist but a measure of the problems is reflected in the fact that accurate determination of Arctic sea ice extent does not exist prior to 1979. Climate data for the Arctic Ocean simply doesn't exist as the map from the Arctic Climate Impact Assessment (ACIA) shows. Indeed, the fundamental argument made in that assessment for millions of research dollars was precisely because so little is known.

It is important to note that the findings of the ACIA were the basis of understanding, assessment and recommendations for the 2007 Intergovernmental Panel on Climate Change report.



The following story appeared recently on Canada Press (URL provided). The story appears in light blue my commentary is inserted in black.

The title for the Canadian Press article begins the deception. "Huge break off northern ice shelf may not be the last this summer: scientist." In fact, the piece of ice is not huge. It is approximately 20 square kilometers, while the Arctic Ocean is approximately 14 million square kilometers. Even if we consider it as a portion of the 440 square kilometer Ward Hunt shelf, it is approximately 4.5% of the shelf area. It is not huge by any measure.

Canadian Press Story

http://canadianpress.google.com/article/ALeqM5j0pbRGKmCne267H2MV7i_djYHzfw

Canada's largest remaining ice shelf could easily shrink further this summer even after losing a vast chunk of itself, say Arctic ice experts.

A classic opening to build the concern; it is not just any old ice shelf, but the "largest remaining"

that is in jeopardy. The word "remaining" is irrelevant except to suggest all the other nearly as large ice shelves are already gone. We also have our first conditional word "could" suggesting this is just the beginning as implied by the word "easily". Of course, it could just as easily not shrink, but this idea is dispelled as unlikely because the trend is set by the loss of, "a vast chunk of itself". The word vast is as inappropriate as the word huge in the title. Finally, all this speculative hyperbole is giving credence as the words of unnamed "Arctic ice experts." Who are these people? Only one expert is named in the article and no opposing views are provided.

It wouldn't surprise me to see more calving this summer," said Derek Mueller of Trent University, who's been studying the Ward Hunt Ice Shelf off the north coast of Ellesmere Island for years.

Again pure speculation, but given credibility because the author is an expert. In fact, he shouldn't be surprised because he would know like another expert, Dr. Warwick Vincent that the shelf has been shrinking since at least 1950. Another newspaper, the Globe and Mail, reported, it was "the largest on record since 2005 but still small when compared with others."

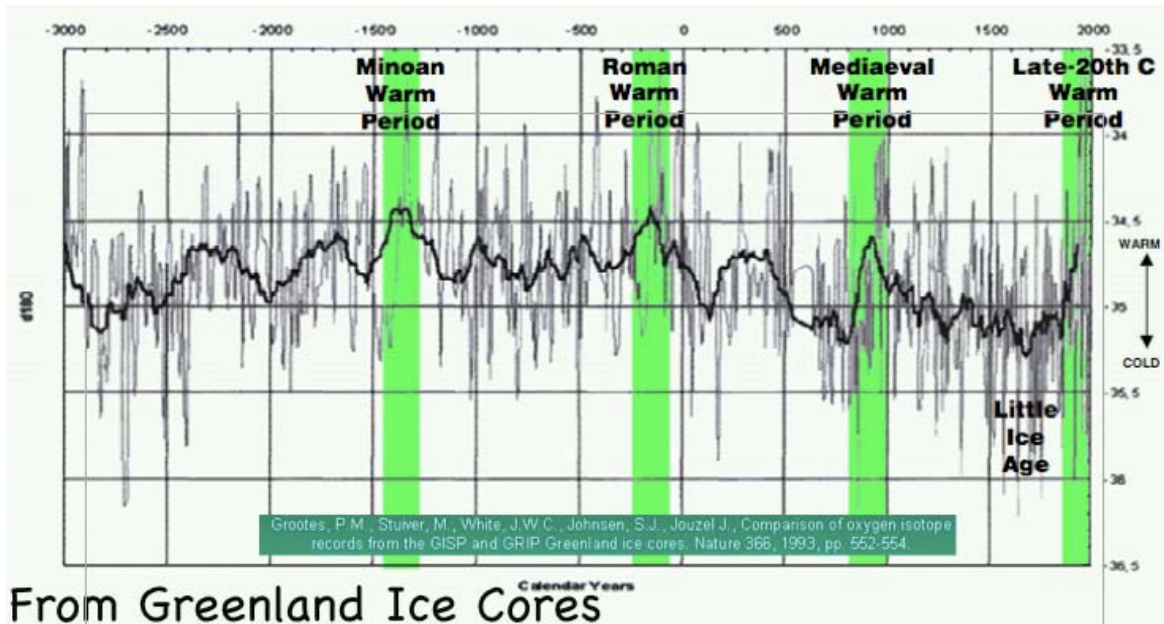
In a development consistent with climate change theories and happenings elsewhere in the Arctic, an enormous icy plain about 20 square kilometres in size broke free sometime last week and began slowly drifting into the Arctic Ocean. The piece had been a part of the shelf for 3,000 years.

What are the other developments consistent with climate change theories? If they mean conditions in the arctic are constantly changing then it is a redundant statement. The implication is that it is due to global warming, but another news outlet (Yahoo.news)

http://news.yahoo.com/s/ap/20080729/ap_on_re_ca/canada_arctic_ice_shelf

provides a different explanation from the same scientist. "Derek Mueller, a research at Trent University, was careful not to blame global warming, but said it the event was consistent with the theory that the current Arctic climate isn't rebuilding ice sheets."

Mueller's comment is logical if you know the extent of arctic climate changes, which generally parallel global changes. There is no argument about his statement that the current Arctic climate isn't rebuilding ice sheets. The world has generally warmed from the nadir of the Little Ice Age in 1680 and that is not conducive to building ice sheets. Many studies indicate much more severe ice conditions conducive to the building of ice sheets. These include assessments of sea ice conditions from Dunbar (1985) "Sea ice and climatic change in the Canadian Arctic since 1800", through Catchpole and Faurer (1983) "summer sea ice severity in Hudson Strait, 1751-1870", to most recently Bradley and England (2008). The issue is not whether warming generally occurred from 1680 to the present but what was the cause. This article assumes it was due to humans and then in a circular argument implies the story is proof. In a longer context, how did the ice shelves fare during more significant warming indicated on this graph of global temperatures derived from ice cores.



A crack in the shelf was first spotted in 2002. Last spring, a patrol of Canadian Rangers found the weakness had spread into an extensive network of cracks, some 40 metres wide and 18 kilometres long. The crack-riddled section of ice was like a jigsaw puzzle, with the pieces held in place only by each other.

Canadian Rangers are Inuit hired by the Canadian government to provide security in the Arctic. They would not have been surprised by the cracks in the ice. They know that both shelf ice and Arctic sea ice are constantly moving and cracking. Colorful prose such as "crack-riddled" simply heightens the imagery of failure and collapse; the "jigsaw puzzle" analogy implies a problem to be solved. There is no problem because ice, which is brittle, breaks naturally on an ice shelf either because the contributing land-based glacier is advancing or retreating, tidal or wave action, or changing wind patterns. A report last year by NASA showed that different sea ice conditions in 2007 were due to changing wind patterns.

It wouldn't have taken much to work a chunk of the shelf free, said Mueller.

"Further changes were likely given the right conditions. We had open water in front of the ice shelf. We had a favourable current and we probably had a favourable wind."

This statement simply confirms the NASA findings.

<http://wattsupwiththat.wordpress.com/2007/10/03/nh-sea-ice-loss-its-the-wind-says-nasa/>

Formed by accumulating snow and freezing meltwater, ice shelves are large platforms of thick, ancient sea ice that float on the ocean's surface. Ellesmere Island was once entirely ringed by a single enormous ice shelf that broke up in the early 1900s.

The first sentence is inaccurate. The main cause of shelf formation is when ice from a glacier or ice sheet, such as the one on the Ellesmere Island, flows out into the ocean. Accumulating snow and freezing meltwater subsequently affect it. This means the advance or retreat of the glacier or ice sheet affect the behavior of the ice shelf. The second sentence implies this has never happened before, but that is not the case.

At 440 square kilometres in size and 40 metres thick, the Ward Hunt shelf is the largest of those remnants - even bigger than the Antarctic shelf that collapsed earlier this year and seven times the size of the Ayles Ice Shelf chunk that broke off in 2005 from Ellesmere's western coast.

This is another misleading statement. What it should say is that the Ward Hunt shelf in total size is larger than a piece that broke away from the Antarctic ice shelf earlier this year. So what! It is presented with unnecessary hyperbole, such as "largest", "seven times the size", "chunk", "collapsed", to make the event sound far more

dramatic and supposedly extraordinary than it is.

Despite a period of stability in the 1980s, the Ward Hunt shelf and its characteristic corrugated surface has been steadily declining since the 1930s, said Mueller. Its southern edge has lost 20 square kilometres over the last six years.

The steady decline since 1930 is consistent with temperatures since then and stability in the 1980s was likely due to the global cooling that occurred from 1942 - 1980. A loss of approximately 3 square kilometers per year over six years is insignificant and likely well within longer-term changes in the extent of the ice shelf.

Mueller now believes the Serson Ice Shelf, in an exposed position off Ellesmere's western coast, could be the next to start breaking up.

"It certainly wouldn't surprise me if something happened on the Serson. It's exposed right now. There's no ice around it."

Speculation that is likely to be wrong if the cooling trend that started in 2000 A.D. continues as is expected.

Mueller is careful not to blame the Ward Hunt breakup specifically on climate change, but says it is consistent with the theory. The current Arctic climate certainly isn't reinforcing ice shelves.

"We're in a different climate now," he said. "It's not conducive to regrowing them. It's a one-way process."

It's the same all over the Arctic, said Gary Stern, co-leader of a major international research program on sea ice.

Speaking from the Coast Guard icebreaker Amundsen about 70 kilometres off the Mackenzie Delta, Stern said the Ward Hunt breakup is related to what he's seeing thousands of kilometres away.

What is he seeing thousands of kilometers away? From the NASA study we already know wind pattern

and sea ice conditions changed in 2007. However we also know that the amount of sea ice returned to above average extent in the winter of 2007 - 2008.

He hasn't seen any ice in weeks. Plans to set up an ice camp last February had to be abandoned when usually dependable ice didn't form for the second year in a row.

"Nobody on the ship is surprised anymore," said Stern. "We've been trying to get the word out for the longest time now that things are happening fast and they're going to continue to happen fast."

Stern is at best ingenuous. How would he explain this report from 1817?

In a letter from the President of the Royal Society to the British Admiralty reports;

It will without doubt have come to your Lordship's knowledge that a considerable change of climate inexplicable at present to us must have taken place in the Circumpolar Regions, by which the severity of the cold that has for centuries past enclosed the seas in the high northern latitudes in an impenetrable barrier of ice has been during the last two years greatly abated... This, with information of a similar nature derived from other sources; the unusual abundance of ice islands that have during the last two summers been brought by currents from Davies Straights into the Atlantic.

This is a far more rapid and expansive change than is currently occurring and long before human CO2 could be a factor.

Many scientists now believe that the Arctic will have ice-free summers by 2013 instead of 2030 as predicted by the International Panel on Climate Change. Annual ice loss since the 1970s has quickened from about 75,000 square kilometres every summer to about 1.4 million square kilometres, said Stern.

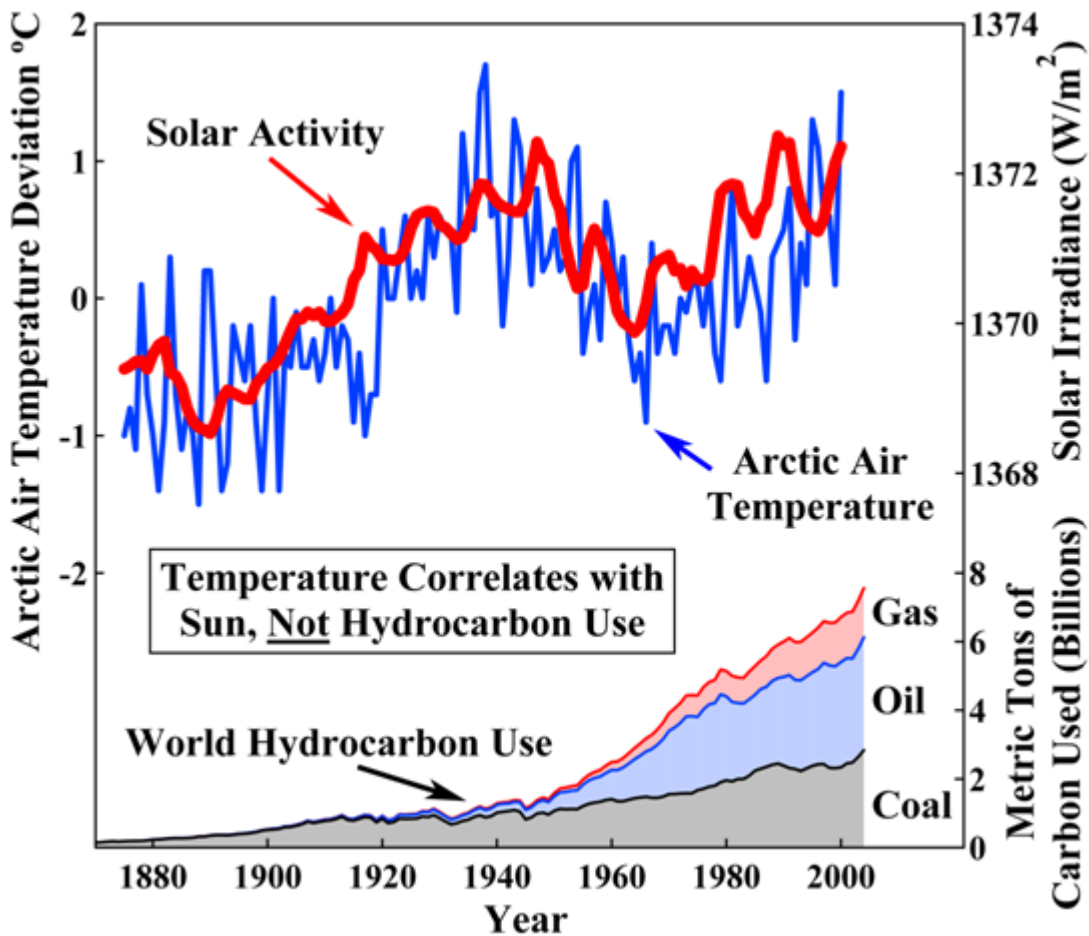
The Intergovernmental Panel on Climate Change

(IPCC) did not predict ice-free summers by 2030. Their report released in February 2007 said that unless a significant reduction in greenhouse gas emissions occurs, Arctic sea ice would "almost entirely" disappear by the end of the century. The 2030 prediction appears to originate from a story in the British newspaper *The Guardian* here:

<http://www.guardian.co.uk/environment/2007/sep/05/climatechange.sciencenews>

Dr. Mark Serreze, an Arctic ice expert with the National Snow and Ice Data Center, said: "If you asked me a couple of years ago when the Arctic could lose all of its ice, then I would have said 2100, or 2070 maybe. But now I think that 2030 is a reasonable estimate. It seems that the Arctic is going to be a very different place within our lifetimes, and certainly within our children's lifetimes."

It is not possible to determine "ice loss since the 1970s has quickened" because accurate satellite measures of Arctic ice only began in 1979. The fact ice extent reduced from then until 2000 is not surprising since global temperatures were rising during that period. Increase in loss stressed by the word, "quickened" needs context. Each year the change in ice extent is approximately 10 million square kilometers. In summer there is approximately 5.5 million square kilometers and in winter 15.5 million square kilometers. So there was an increase in the percentage melting from 0.75% to 14%, which although significant is not outside of a long term normal variability. For example, how much melting occurred during the Holocene Optimum between 5000 and 3000 BC when global temperatures were at least 4°C warmer than at present? How much melting occurred in the period from 1910 to 1940 when arctic temperatures increased more than they did in the period from 1980 to 2000 as illustrated below?

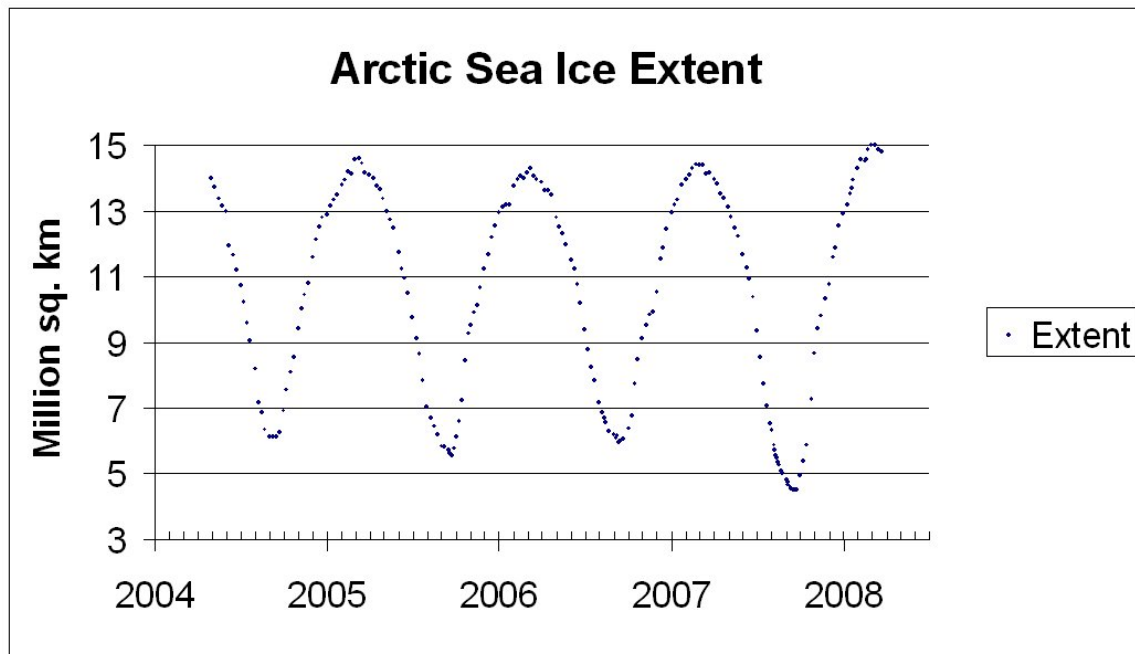


Source: <http://www.oism.org/pproject/s33p36.htm>

Ice disappearing by 2030 or 2013 are simple linear trends and so incorrect given the history of fluctuations. There has been slight cooling since 2000 and in the winter of 2008 global temperatures dropped 0.774°C, which exceeds the warming claimed by IPCC for at least since the beginning of the 20th century.

As of March 22, 2008 Environment Canada analysis indicates sea ice cover over the Northern Hemisphere has reached its maximum extent and is about 3% above maximum extent reached over the last

3 years.



Source: Environment Canada

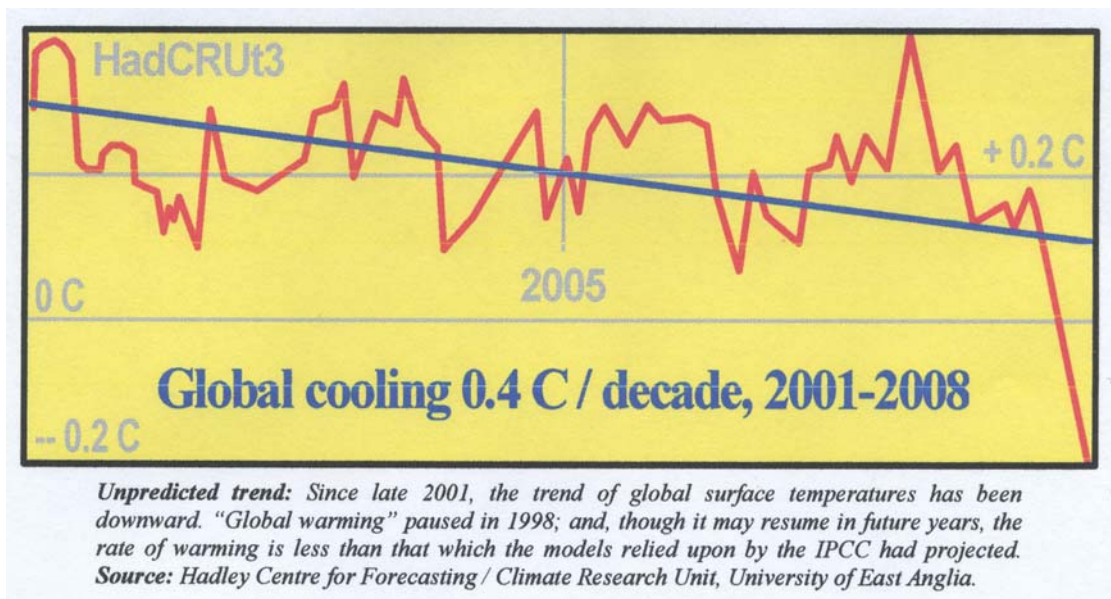
The National Snow and Ice Data Center reports a continuation of the sea ice recovery.

"Arctic sea ice extent on July 31 stood at 7.71 million square kilometers (3.98 million square miles). While extent was below the 1979 to 2000 average of 8.88 million square kilometers (3.43 million square miles), it was 0.89 million square kilometers (0.35 million square miles) above the value for July 31, 2007. As is normal for this time of year, melt is occurring throughout the Arctic, even at the North Pole."

"The pattern of ice melt is different in 2008 from that of 2007. Most of the melting has taken place in the Beaufort Sea and much less in the East Siberian and Laptev Seas."

"It's all connected to the warming climate. Everything is connected together."

This quote is from Gary Stern co-leader of the international arctic research program. It is simply incorrect. It is not connected to the warming climate, because since 2000 A.D. the world has cooled. Here is a plot from the Hadley Centre for Forecasting/Climate Research Unit (More commonly known as HadCRUT3) for the period from 2001 to 2008 inclusive. Phil Jones who produced the original claim of 0.6°C unprecedented warming since the beginning of the 20th century is the Director of the Climate Research Unit source of information for this graph.



Dr. Tim Ball

September 2008.