This is the print version of the Skeptical Science article 'They changed the name from 'global warming' to 'climate change'', which can be found at http://sks.to/name.

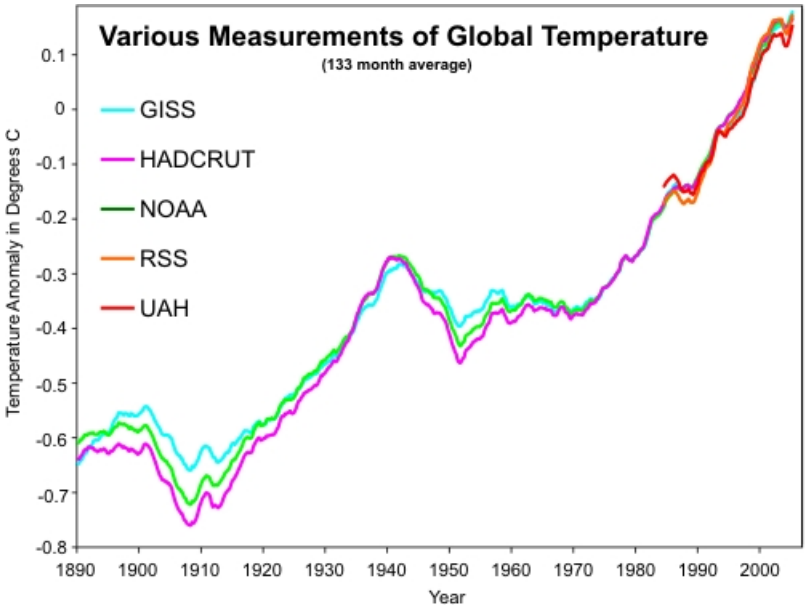
Global warming vs climate change

What The Science Says:
There have long been claims that some unspecificed "they" has "changed the name from 'global warming' to 'climate change'". In reality, the two terms mean different things, have both been used for decades, and the only individual to have specifically advocated changing the name in this fashion is a global warming 'skeptic'.

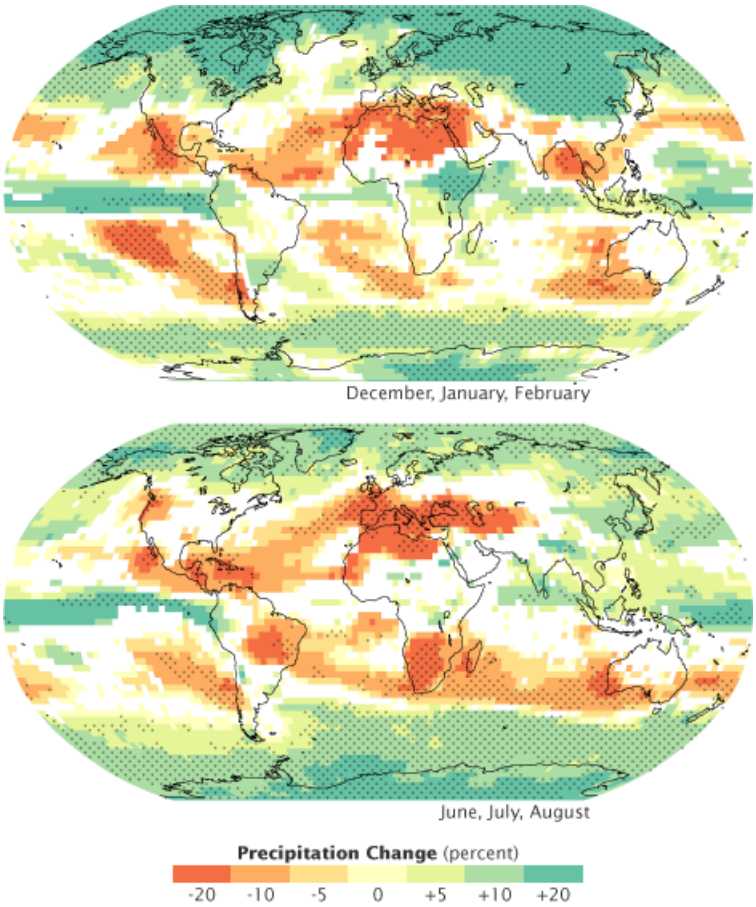
Climate Myth: They changed the name from 'global warming' to 'climate change'
They changed the name from “global warming” to “climate change” after the term global warming just wasn’t working (it was too cold)! (Donald J. Trump)

Global Warming vs. Climate Change

Both of the terms in question are used frequently in the scientific literature, because they refer to two different physical phenomena. As the name suggests, 'global warming' refers to the long-term trend of a rising average global temperature, which you can see here:



'Climate change', again as the name suggests, refers to the changes in the global climate which result from the increasing average global temperature. For example, changes in precipitation patterns, increased prevalence of droughts, heat waves, and other extreme weather, etc. These projections of future global precipitation changes from the 2007 IPCC report are an example of climate change:

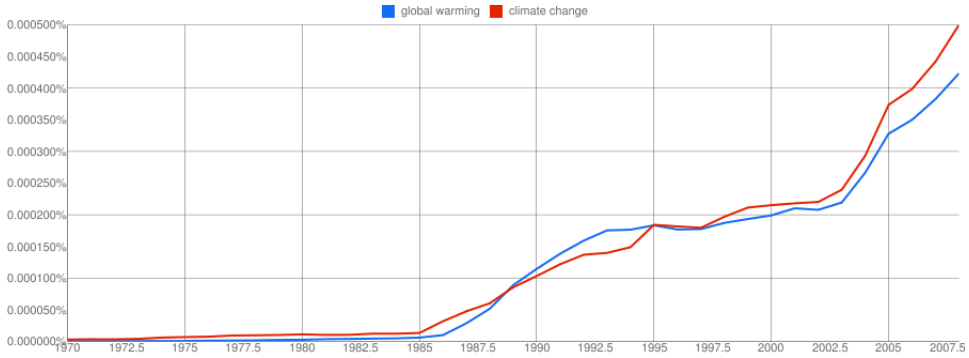


Thus while the physical phenomena are causally related, they are not the same thing. Human greenhouse gas emissions are causing global warming, which in turn is causing climate change. However, because the terms are causally related, they are often used interchangeably in normal daily communications.

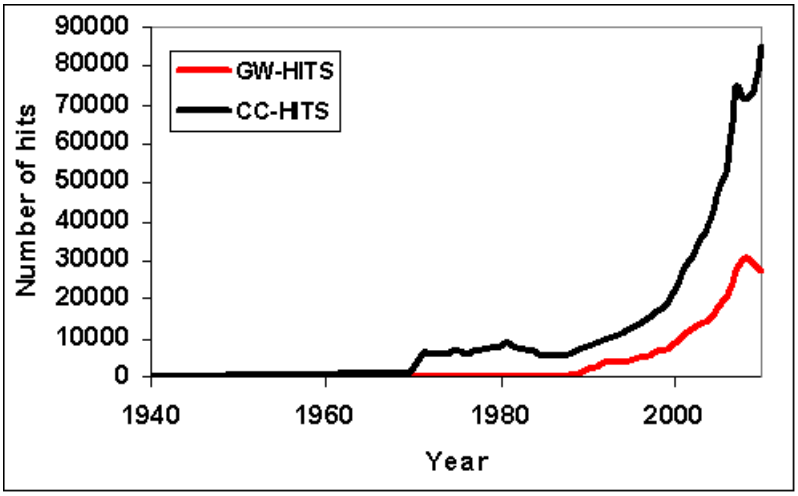
Both Terms Have Long Been Used

The argument "they changed the name" suggests that the term 'global warming' was previously the norm, and the widespread use of the term 'climate change' is now. However, this is simply untrue. For example, a seminal climate science work is Gilbert Plass' 1956 study 'The Carbon Dioxide Theory of **Climatic Change**' (which coincidentally estimated the climate sensitivity to a doubling of atmospheric carbon dioxide at 3.6°C, not far off from today's widely accepted most likely value of 3°C). Barrett and Gast published a letter in *Science* in 1971 entitled simply 'Climate Change'. The journal 'Climatic Change' was created in 1977 (and is still published today). The IPCC was formed in 1988, and of course the 'CC' is 'climate change', not 'global warming'. There are many, many other examples of the use of the term 'climate change' many decades ago. There is nothing new whatsoever about the usage of the term.

In fact, according to Google Books, the usage of both terms in books published in the United States has increased at similar rates over the past 40 years:



And a Google Scholar search reveals that the term 'climate change' was in use before the term 'global warming', and has always been the more commonly-used term in scientific literature:



No Reason to Change the Term

Those who perpetuate the "they changed the name" myth generally suggest two reasons for the supposed terminology change. Either because (i) the planet supposedly stopped warming, and thus the term 'global warming' is no longer accurate, or (ii) the term 'climate change' is more frightening.

The first premise is demonstrably wrong, as the first figure above shows the planet is still warming, and is still accumulating heat. Quite simply, global warming has not stopped.

The second premise is also wrong, as demonstrated by perhaps the only individual to actually advocate changing the term from 'global warming' to 'climate change', Republican political strategist Frank Luntz in a controversial memo advising conservative politicians on communicating about the environment:

> It's time for us to start talking about "climate change" instead of global warming and "conservation" instead of preservation.
>
> **"Climate change" is less frightening than "global warming"**. As one focus group participant noted, climate change "sounds like you're going from Pittsburgh to Fort Lauderdale." While global warming has catastrophic connotations attached to it, climate change suggests a more controllable and less emotional challenge.

Summary

So to sum up, although the terms are used interchangeably because they are causally related, 'global warming' and 'climate change' refer to different physical phenomena. The term 'climate change' has been used frequently in the scientific literature for many decades, and the usage of both terms has increased over the past 40 years. Moreover, since the planet continues to warm, there is no reason to change the terminology. Perhaps the only individual

to advocate the change was Frank Luntz, a Republican political strategist and global warming skeptic, who used focus group results to determine that the term 'climate change' is **less** frightening to the general public than 'global warming'. There is simply no factual basis whatsoever to the myth "they changed the name from global warming to climate change".

Basic rebuttal written by GPWayne

Update July 2015:

Here is the relevant lecture-video from Denial101x - Making Sense of Climate Science Denial

[*see video at* ***this link***.]

Additional video from the MOOC

Expert interview with Richard Alley

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Skeptical Science explains the science of global warming and examines climate misinformation through the lens of peer-reviewed research. The website won the Australian Museum 2011 Eureka Prize for the Advancement of Climate Change Knowledge. Members of the Skeptical Science team have authored peer-reviewed papers, a college textbook on climate change and the book Climate Change Denial: Heads in the Sand. Skeptical Science content has been used in university courses, textbooks, government reports on climate change, television documentaries and numerous books.

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