

## Global Warming Speech (excerpt)

Good afternoon, and thank you all for coming. I want to start by thanking the members of your board for sponsoring this panel discussion on global warming - a subject that deserves far more of our attention than it usually gets. And to thank them for inviting me to participate. I'm no Al Gore, but the subject is one I feel passionately about, and I am always happy to be a part of any forum that raises our collective awareness about the seriousness of the issue.

Officially, this is to be a panel discussion of the quote Global Warming Controversy unquote. Although I appreciate the value of such a provocative title in promoting attendance, it is somewhat misleading - in my opinion - and the main purpose of my opening remarks will be to try and convince you that there is, in fact, no controversy. The perception that there is a controversy is perpetuated mainly by the popular media whose striving to appear even-handed means they continue to print contrary opinions by increasingly marginalized scientists, thereby perpetuating the myth that there is an ongoing controversy about the facts and causes of global warming. This situation is worsened because the people who do have the facts - the scientists - don't seem to know how to communicate to the public, and the special interest groups who excel at swaying public opinion aren't doing so with the facts.

Whatever may have been true thirty years ago, today there is no scientific debate about the reality of - or the causes of - global warming. None. In fact, in a study published in

prestigious journal *Science*, scientist Naomi Oreskes analyzed all papers that have been published in peer-reviewed scientific journals with the key word “global climate change” over the decade ending in 2003 and found that none – not a single one – argued against the fact of “anthropogenic global climate change.” There are a few scientists and pseudo-scientific organizations still dithering about lack of evidence, but the scientific community is overwhelmingly in agreement that the evidence for human-induced global warming is clear and persuasive.

I want to briefly go over the evidence just so we can put that to bed and move on to the debate the country should be having, namely, what can we do about it.

So what is global warming and how do we know it’s happening?

The term global warming is generally used to indicate a rise in the average temperature of the planet’s surface, and there are several direct indicators that a major warming trend is in progress. The temperature record shows, for example, that the top 10 hottest years on record occurred since 1989. The record also shows that the average temperature has risen about one degree Fahrenheit in the last century alone, and that the temperature is rising even more rapidly at the two poles – there the average temperatures have risen to five degrees above average. Extrapolating these trends is a tricky business, but the scientific consensus is that the average temperature will rise another 2.5 to 10.5 degrees Fahrenheit by the end of the century. An average increase of 10 degrees doesn’t sound like much –

but the average temperature during the peak of the last ice age, when mile-thick glaciers covered much of North America, was only 5-10 degrees cooler than average.

Besides directly measuring the temperature, we know that global warming is happening because the consequences are already with us. Glaciers around the world are disappearing at such a rapid rate that we may have to rename Glacier National Park, as one wag put it, as The Park Formerly Known As Glacier. Scientists have recorded that numerous species have migrated away from the equator (or up the slopes of mountains) seeking cooler temperatures as their natural habitat ranges have heated up. The Arctic ice cap is dwindling at an alarming rate, both in area and in thickness, and the Antarctic ice sheets are racing to the oceans at unheard of speeds as melting ice lubricates their paths.

Why is global warming happening? Two words: human activity.

Certainly the most famous piece of evidence for the cause of global warming is the hockey stick graph. For those who haven't seen it, imagine a hockey stick lying on its side, so that the long handle is parallel to the ground. That handle represents the graph of global temperatures through the 1700s – in other words, temperatures were stable, and in fact were going down slightly. Then you get to the hockey stick's blade, which points upward at a sharp angle. This part of the graph represents global temperatures since the industrial revolution. Just a coincidence of timing? Not likely, and we certainly shouldn't bet the farm – or the planet – on it.

When the hockey stick graph was first published a decade ago, it immediately became the rallying point for people on both sides of the debate. The nay-sayers quibbled about the fuzziness of the data and some of the specific statements made by the authors. The scientists said the trend was unmistakable and compelling: right about the time we started dumping lots of carbon dioxide into the atmosphere, global temperatures started to shoot upwards and they haven't looked back.

Since the graph was first published, numerous scientific studies have validated and re-validated the basic shape of the hockey stick graph – even the government's National Academy of Sciences is now on board, despite obvious political pressures from the administration to obfuscate. The Intergovernmental Panel on Climate Change (the IPCC), which includes a consortium of top scientists in the field from around the globe, is on the record stating that recent global warming is of human origin.

Global warming is real, is alarming, and is caused by human activity.

So what can we do about it? Quite a lot, it turns out, and the solutions don't require any help from the graduates of the Hogwarts School of Magic.

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