

Our Government is Failing us on Global Climate Change

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COMMENTARY: Ten years ago I wrote an op-ed titled "The Science and Politics of Global Climate Change." Unfortunately, this op-ed can be republished today without modification. To look across the breadth of a full decade and realize how insignificant our progress has been on what was clearly then (and is still) a growing socio-economic and environmental catastrophe is unconscionable. Yes, over the last 10 years we have made significant progress on the science of climate change. But the most pressing issue 10 years ago was not the physical assessment of climate change impacts, but rather the creation of the political will and policy solutions needed to address or mitigate those impacts. Over the last decade the United States has been moving steadily away from a position of international leadership for crafting comprehensive policy frameworks. To be blunt, our government is failing us.

So we must acknowledge that we are failing ourselves. We are failing those in the world who do not have the means to adapt. We are failing all those who come after us. What will I think when I revisit this op-ed in February 2027? My stomach sinks just contemplating the possibility of squandering another decade. Here's my op-ed, which was published Feb. 2, 2007 in the Fort Collins Coloradoan following the release of the IPCC Fourth Assessment Report Working Group III:

It is hard to open up a paper these days without finding yet another article on global climate change. Editorials, letters to the editor, the City Council, and even the President have taken up the issue. The information comes so fast, from so many sources, and from so many directions, it must be all but impossible for even the most diligent to keep up. So I thought I would comment from what is probably the most under-represented perspective on this issue: the perspective of a mainstream climate scientist.

While a cursory read of the popular media would indicate otherwise, the scientific foundation of global climate change has continued to strengthen over the last two decades. Here is what we know: Carbon dioxide is a greenhouse gas, meaning that it tends to warm the atmosphere. Carbon dioxide levels are rising and are presently at concentrations higher than anytime in the last 650,000 years. The rapid rise in global temperature in the last 30 years cannot be accounted for without the inclusion of human influence through fossil-fuel consumption. All of this is to say that when we look to explain the rise in global temperature to date, we do not need to look much farther than ourselves.

As we look to the future, our climate models project an additional 3 F to 10 F of warming during this century. A warming of 3 F will definitely be noticeable and is something that we should be concerned about. A warming of 10 F will, in all likelihood, tear at the fabric of our society. Whether we find ourselves at the low end or the high end of these projections will depend primarily on whether or not we curtail our fossil-fuel consumption. Having developed climate model for the last 15 years, I have two bits of advice regarding these projections of global warming: do not take them as absolute truth and do not discard them as folly. These projections warrant serious deliberation when considering our future fossil-fuel consumption.

While we do know a great deal about the Earth's climate, we are far from a complete understanding. The role of clouds and aerosols in a changing climate continues to be a perennial problem. The amplitude of climate feedbacks that can both amplify and mitigate the impacts of our fossil-fuel consumption will continue to be an area of intense research. The Earth is a beautifully complex system, and science will continue to unravel and explain its complexity in the coming decades. But we need to be very clear here: complete, absolute knowledge is unattainable. An expectation that perfect understanding is a prerequisite for considering our future fossil-fuel consumption is unrealistic. At the same time, proceeding with the hope that the scientific consensus is wrong is, in my view, simply unreasonable.

We owe it to ourselves and to future generations to ask the following question: What if our present understanding of global climate change is correct? This question immediately leads to a long list of related questions, such as: What does this mean for our society? What will happen to water in the already arid West? What will happen to agriculture, both here and around the world? Can developing nations accommodate these changes? And if not, how will we deal with the climate-driven conflict that will surely follow?

The reality is that the questions scientists must answer to understand global climate change are easy in relation to the questions society must answer to deal with the potential impacts of global climate change. Curtailing fossil-fuel consumption strikes at many of our core values, so we should not expect answers to come quickly or easily. But that does not mean we should not try.

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