



The Greening of Planet Earth—*Confirmed!* Video Series

Transcript: [Is Rising Atmospheric CO₂ Causing Dangerous Global Warming?](#)

Many people are concerned about the potential impacts of rising levels of atmospheric CO₂. For years they have been bombarded with claims that unless its concentration is slowed or even reduced, *dangerous* global warming will ensue, producing all sorts of undesirable consequences with little to no positive effects, including more frequent and severe floods and droughts, more numerous and stronger hurricanes, dangerous sea level rise, more frequent and severe storms, increased human mortality, widespread plant and animal extinctions, declining vegetative productivity, deadly coral bleaching, and a decimation of the planet's marine life due to so-called ocean acidification.

But what is the actual likelihood of these dire predictions ever occurring? To put it bluntly, *not at all*; and in this video segment I'll explain why.

At any given moment, Earth's temperature is a product of a multitude of forcing and feedback factors, carbon dioxide being only one of them. And although the air's CO₂ content is indeed rising, this one-carbon and two-oxygen molecule is not nearly as capable of raising global temperatures or initiating climate Armageddon as alarmists would have you believe.

Consider that, if CO₂ was indeed the all-important temperature control knob climate alarmists claim it to be, then changes in atmospheric CO₂ should always *precede* changes in temperature. And, because CO₂ is a so-called greenhouse gas, those changes should always be such that a rise in CO₂ should induce a corresponding rise in temperature, whereas a decline in CO₂ should induce a corresponding drop in temperature. Consistent observations to the contrary would prove that atmospheric CO₂ is nothing more than a bit player among the many factors that drive climate change. So, what *do* the records show?

It may be surprising for some of you to learn that the historic temperature and atmospheric CO₂ records do indeed violate the afore-mentioned principles, and they do so more often than they maintain them. Multiple peer-reviewed scientific studies, for example, have demonstrated that, following the termination of each of the past several global ice ages, air temperatures have always *risen* well in *advance* of the increase in atmospheric CO₂. In fact, during these glacial terminations, which represent the most dramatic warming events experienced on Earth over the past million years, the air's CO₂ content does not even *begin* to rise until some 400 to 2,800 years *after* planetary warming starts.

This figure illustrates the observed temporal lag in CO₂, as produced by a team of researchers examining Glacial Termination III, 245,000 years ago. In particular, note the temperature proxy shown in red, which has been shifted by the authors to the left so as to match the rapid

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rise in atmospheric CO₂ that followed 800 years later. And remember, this leading rise in temperature and subsequent lag in CO₂ increase, which relationship is *opposite* climate alarmist expectations, is a consistent and proven feature at the termination of *all* ice ages in Earth's recent geologic history.

Another violation of the principles of causation in the CO₂/temperature relationship is witnessed at the *onset* of Ice Ages. Here, scientists report that temperatures always *drop* first at the start of these glacial periods, and they do so well *before* the air's CO₂ concentration begins its *decline*. And like glacial terminations, these data also indicate that the CO₂ decreases observed at the beginning of the Ice Ages lag behind the temperature decreases, often by several thousand years.

Other equally problematic findings in the CO₂/temperature relationship have been discovered by scientists examining periods other than the onset or termination of the most recent Ice Ages, including (1) times when CO₂ rises and temperatures fall, (2) times when CO₂ falls and temperatures rise, or (3) times when a change in either of these two parameters evokes no change in the other. And once again, such changes in CO₂ are typically observed to *follow* changes in temperature from hundreds to thousands of years.

While the historic record of the CO₂/temperature relationship over the past half million years certainly proves problematic to global warming alarmism, in actuality, one need only examine the most recent 150 years to recognize there is little or no rigorous evidence that rising concentrations of atmospheric CO₂ are causing dangerous global warming.

One red flag that immediately pops up when focusing on this time period is the observation that, despite a consistent and near-exponential rise in atmospheric CO₂ over the past 150 years, temperatures fluctuated between periods of *both* global warming and global *cooling*. In addition, it is difficult—if not impossible—for climate alarmists to adequately reconcile the fact that the two largest warming events that occurred in this record (the first between 1910 and 1945 and the second between 1975 and 2005), experienced nearly identical rates and magnitudes of warming, despite an atmospheric CO₂ increase in the latter event that was *five times that* which occurred during the former event. Nor is it easy for climate alarmists to adequately explain without abandoning their CO₂-induced global warming thesis how a three-decade-long cooling event can follow a three-and-a-half-decade-long warming event, when the CO₂ increase during the cooling event was *twice that* which occurred during the preceding warming event. The only way to properly reconcile each of these contrary observations is for climate alarmists to admit they have overestimated the warming power of atmospheric CO₂. And if you haven't yet been convinced of this fact, consider the following additional evidences.

In this graphic, a record of historic temperatures over the past four ice age cycles is presented. Note that the peak warmth of the preceding four interglacial periods was between

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1 and 2°C *higher* than that observed during the current interglacial in which we now live, despite there being 45 percent *more* CO₂ in the present atmosphere. Thus, even if temperatures were to warm another 1 or 2°C above their current values in the near future, there is no way such warming can definitively be attributed to the additional CO₂ humans have added to the atmosphere in the modern era, because the higher temperatures in each of the past four interglacial warm periods occurred under CO₂ concentrations that are about *half* the value that they are today.

Another problematic issue for climate alarmists is the recent global warming *pause* or temperature *hiatus*. Despite an 11% increase in atmospheric CO₂ over the past two decades (which increase represents one-fourth of the total increase in CO₂ during the modern era), global temperatures have shown little, if any, warming. Not surprisingly, not one of their climate models predicted this temperature plateau. Expecting warming, they all failed to see it coming.

And speaking of the models, according to theory inherent in all climate models, CO₂-induced global warming over the past 40 years should show a unique fingerprint in the form of a warming trend that increases with altitude in the tropical troposphere, as indicated by the red and orange colors presented in the center of this figure and outlined in blue. Climate changes due to solar variability or other known natural factors *do not yield this pattern*. However, as shown in this image, real-world observations do not match this model-expected theory.

Each of the red bars on this graphic shows warming that *should* have occurred in the tropical upper troposphere over the period 1979-2017, as predicted by simulations from 102 different climate models. The average predicted warming rate over this nearly four-decade-long period, as shown by the black horizontal dashed line, is 0.44°C per decade. In contrast, radiosonde temperature measurements observed in this portion of the atmosphere, shown in blue, reveal that the *actual* warming rate is *three times smaller* than that predicted by the models.

This divergence between model projections and observational data is even more evident in this next figure, which plots both predicted and observed temperature anomalies of the upper tropical troposphere. Once again observational data reveal that the model-derived projections of CO₂-induced warming are running far too hot, so much so, in fact, that mathematical analyses confirm a statistically significant difference between the two temperature series. This key fact alone, is sufficient to provide more than enough of a credible, scientific basis for invalidating all of the climate models and their associated predictions.

In considering each of the several evidences presented in this video segment, it is truly disingenuous for anyone to claim with any degree of certitude that the modern temperature increase bears an anthropogenic fingerprint or that rising atmospheric CO₂ is causing dangerous global warming. There exists far too much data to the contrary. And because the

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models all fail in this regard, the global warming debate should really end here, for pretty much *all* of the additional ancillary climate-related predictions made by climate alarmists rely on the unrealistic temperature rise predicted by their invalidated models. And thus, there is no alternative but to conclude that rising concentrations of carbon dioxide are *not* causing dangerous global warming nor are they threatening life on the planet. Although atmospheric CO₂ is a greenhouse gas, it is certainly not the control knob that drives global temperature, nor will it ever be. Such facts should be quite reassuring to those concerned about the ongoing rise in CO₂.

Note: this video was [posted](#) on 25 November 2019