

THE SOLUTION TO CLIMATE CHANGE

After reading the post titled “Melting Glaciers Drive Global Warming...and Wars“, a visitor left a comment asking what is being done to reduce the rate at which glaciers are melting – or stop it altogether. This is a simple enough question, and one that many people have wondered in recent years. The answer, on the other hand, is not so simple. The question of preserving glaciers is a question of reducing – or stopping – climate change. And this question is a rather difficult one to answer, as there is not any guaranteed method to reduce the effects of climate change. In fact, it’s still not universally accepted that human-induced climate change exists, let alone is something that can be slowed, stopped, or reversed.

Assuming climate change due to anthropological sources does exist, the most common methods for reducing these effects are ones that need to be utilized by individuals (that means you). Things like driving more fuel efficient cars (or just driving less), using less electricity, etc. These may seem like insignificant contributions on a person-to-person basis, but when added up – there’s roughly 7 billion people on earth – this would put a rather substantial dent in greenhouse gas emissions.

Aside from a lowered dependence on fossil fuels, increasing utilization of “green” energy is one of the more common (albeit generally broadly defined) plans to reduce our effects on climate. Keep in mind, however, that much of these energy sources don’t mean a complete break from fossil fuels, just a significant reduction...even wind and solar energy requires fossil fuels at some point.

Some of the more “out there” ideas have included plans like iron-seeding of the oceans, where the added iron would boost phytoplankton populations which, in turn, would “eat up” more CO₂ from the atmosphere. Will it work? Maybe. The official answer is probably even more vague. What turns my stomach is not that people come up with left-field ideas like this – crazy ideas can often times result in the greatest innovations – it’s that they’re often put into action before we know all the negative consequences which would definitely result for a

minute chance that it would *maybe* slow something which most people consider virtually unstoppable. In this iron-seeding example, the addition of large quantities of iron into the ocean would most certainly have implications in the ecosystem. Iron fertilization could cause blooms in toxic species which create red tides, or result in anoxic conditions in the ocean floor below where the iron seeding takes place. As with any topic in which there is little factual evidence and lots of speculation, there are strong arguments both for and against these actions.

Another suggestion on the stranger side was to paint the ground white in regions that would normally be covered by snow and ice. This is to mimic the reflection of light and radiant energy that would otherwise be absorbed by the bare ground – helping fuel warming conditions – and instead slow or even reverse the warming trend. This idea reminds me of a plan back in the 1970's designed to combat global cooling (yes, that was a big fear less than 40 years ago). At that time, scientists proposed to coat the ice caps with black soot, in an effort to warm the earth and save us from the impending ice age. Now...where would we be today had they implemented this plan and – worse – what if it worked!?! Would our global warming crisis today be all that much worse?

This now begs the question: if we were so certain back then that we were heading for an ice age, is it safe now to presume the opposite? The truth is, we don't really know what, if anything, will happen with many of our so-called "solutions". Sure, there's some evidence that it could work, but often just as much evidence that it won't or, as with the cases above, could have negative effects not worth the price.

In my own opinion, there's no real hard evidence to confidently say we are in a state of human-induced climate change. Geologic evidence suggests we were probably headed there on our way out of the last ice age anyway. **HOWEVER**, there is also evidence that we may have, if ever so slightly, increased that rate of warming with a dramatic increase in greenhouse gas emissions.

Is there any one solution to climate change? No. I fully admit the title of this post is a lie (please don't sue me). If we are to do anything, the one suggestion that has no negative effect is the one we started with: reduce your personal carbon footprint (here's a nifty tool to help). Pumping less CO₂ and other greenhouse gases into the atmosphere can't be a bad thing. It can't hurt. And even if you don't believe in all this climate change talk, you have to admit that being a little more environmentally conscience is always a good thing.

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