



Reconnect with your environment

Learn about environmental issues, their effect on your community and actions for your involvement.



Check facts, expertise on climate change

By ANNA MCCARTNEY
Contributing writer

While we are drowning in a sea of climate-change information, the first step to becoming an informed citizen is having a healthy skepticism and an awareness of how easily we can be misled.

It's not a passive activity, but one that requires checking out claims before believing them. You also have to understand the telltale signs of propaganda and know to do basic fact-checking.

Highlight the qualifications and merits of scholars on opposing sides of an issue. If you don't know anything about the "expert," how can you decide if the argument is credible?

Contradictions should definitely be taken seriously when those making them can support their views with sound research they have conducted. Knowing how long the person has worked in the field, how many related research papers he or she has authored, and how many times the work has been cited by other scientists is extremely helpful.

Peer-reviewed scientific work and articles that have gone through a bruising process of critique by experts in the field are the only ones that get published by a reputable journal. Give more weight to journals like Science, Nature, The Proceedings of the National Academy of Science, or Physical Review Letters. They generally don't publish articles unless they believe they mark a significant breakthrough in their field. Furthermore they

don't want to retract articles that could ruin their reputation.

Forget about climate change for a moment. Ask skeptic and believer alike if by developing alternative energy sources, we still don't get enormous benefits. Any ulterior motives will become transparent when they answer these questions.

What's not to like about cleaner air, soil and water? And what's wrong with preparing for a time when we simply run out of fossil fuels?

Quantity and quality of media coverage and online resources are no small matters, since they affect public perceptions about the seriousness of the risks. Shouldn't they divulge when their chosen experts are paid by industries involved with fossil fuel? Shouldn't they be required to share the qualifications of their "experts?"

Finally, finding common ground so skeptics and believers stop demonizing each other can only help us solve the problems associated with a growing population, dwindling resources and irreparable harm to soil, air, water and wildlife.

For more about comparing credentials, visit: www.canada.com/news/Study+questions+credentials+climate+change+skeptics/3183069/story.html#ixzz1CS2LuD26.

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Instead of asking whether climate change is happening, shouldn't we be asking: Is it worth taking action in case the climate scientists' projections of increasing floods, droughts, melting ice caps, rising sea levels, ocean acidification and habitat destruction are true?

Believe it or not?

New tool helps size up climate-change debate

By ANNA MCCARTNEY
Contributing writer

Scientists must convince an overwhelming majority of their peers in order to advance their theories.

There is no debate among 97 percent of climate scientists who have been studying and doing regular research and painstakingly piecing together the case for climate change over decades. They've questioned and tested their data and conclusions and those of their colleagues again and again.

Wouldn't you agree that 97 percent is an overwhelming majority?

Yet many policy makers and a large segment of the public mistakenly perceive there is a debate among scientists. Those who deny climate change offer very little scientific proof that has been reviewed by the overall scientific community. Instead, these groups insist that climate scientists prove beyond any reasonable doubt that climate change poses an imminent danger before we take action as a society.

This is like saying we shouldn't buy car insurance unless there is absolute proof that we will be involved in an accident.

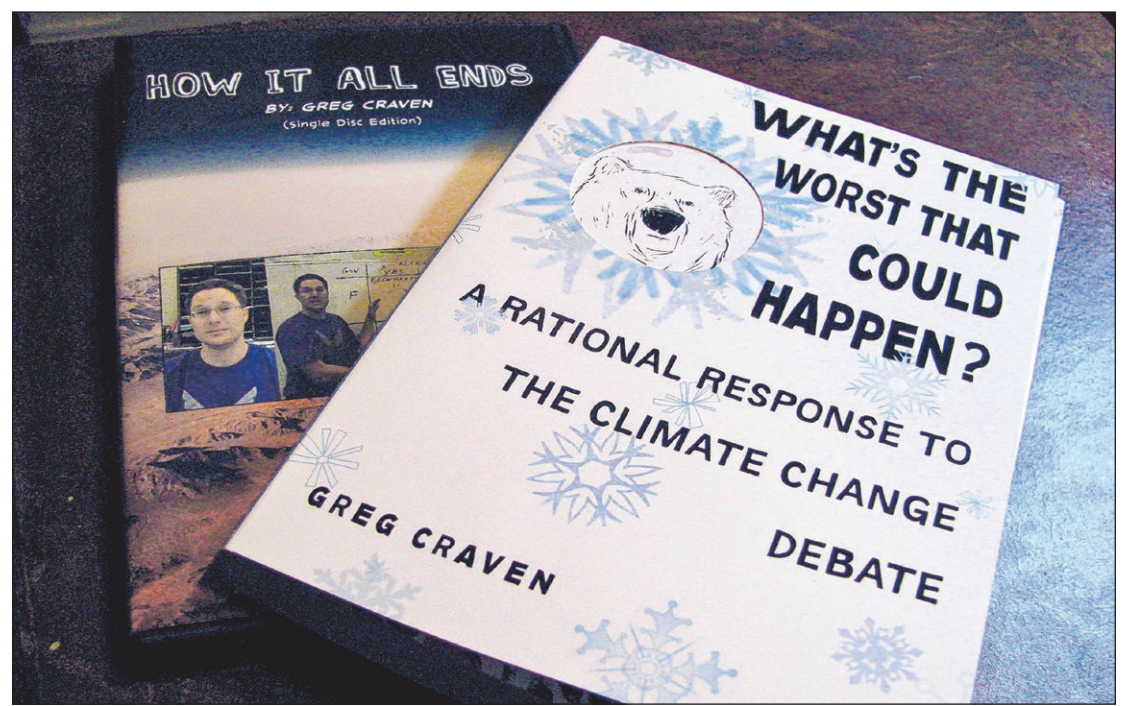
There are uncertainties in climate projections, and possible outcomes range from benign to catastrophic, but doing nothing puts all life at unnecessary risk.

Don't you think it's time to take a fresh look at how you deal with the science of climate change?

Instead of asking whether climate change is beyond doubt, Greg Craven, a high school physics and chemistry teacher in Oregon, thinks we ask: Is it worth doing anything about climate change in case it's true?

Craven, who became a YouTube sensation because his videos about climate change attracted almost 10 million viewers, takes a refreshingly different take on climate change. His students suggested the title for his video, "The Most Terrifying Video You'll Ever See." The video led to a book and more videos to provide rebuttals to pretty well all the arguments climate-change deniers use to avoid dealing with the situation.

His book, "What's the Worst That Could Happen? A Rational Response to the Climate Change Debate," and videos don't focus on what to think about global warming, but how to think about it. Craven shows how to end the



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Watch the video that made high school physics and chemistry teacher Greg Craven a YouTube sensation at http://www.youtube.com/watch?v=mF_anaVcXg or read his book to learn more about his simple risk management decision grid.

debate despite the uncertainties by thinking rationally and critically and by using a standard logic tool — the decision grid. It's actually a simple risk-management tool.

After being challenged to think in some detail about your current opinion on global warming, do you think it's a hoax? The biggest threat in human history? Or are you somewhere in the middle but inclined more toward one side or the other?

The first assumption Craven asks readers to make is that no one can predict with absolute certainty what the physical world will or will not do and that all reasonable people should be able to admit that here's a chance they might have a mistaken understanding. Therefore two possibilities exist: global warming is true or it's false.

Because the physical world is unaffected by our beliefs but instead reacts only to our actions, Craven changes the question from "Who should I believe?" to "What should I do?"

The decision grid takes out the discourse, and replaces it with a few scenarios. The simple true or false outcomes give you the power to answer this question by considering: What's the worst that could happen?

Here are the scenarios:
1. We take significant action

now and climate change is either a) false; b) true.

2. We don't take significant action now and climate change is either a) false; b) true.

Pick 1a: We spent the money, made laws but we acted needlessly.

Pick 1b: We didn't spend the money or increase regulation and we lucked out — human-caused climate change turned out to be false.

Pick 2a: We spent the money and increased regulation but it was worth it; we averted disaster.

Pick 2b: We didn't take action and because the climate scientists were right, we end up with destruction of life and the planet as we know it.

This simplified version makes more sense when you actually look at the grid, which makes the point that it's not about absolute right and wrong; instead, it's more about how much you're willing to risk.

Craven believes that because climate science is so complex it's impossible for lay people (including himself) to reach independent conclusions about it. He therefore also leads readers through confirmation bias, and introduces what he calls the "credibility spectrum" to focus on the integrity of information sources.

For instance, to judge credibility and sources, ask this question:

"If you have a broken leg, you'd go see a doctor and not an insurance salesman, right?" After all, where's the wisdom in ignoring the data and advice from climate experts, in favor of arguments from a science fiction writer, politician, newscaster or weather forecaster, or from anyone who is not a climate-change expert?

This tool and a heightened awareness of your own built-in biases can enable you to decide which information is worth keeping from the enormous array of sources on the Internet. It also helps you evaluate the echo chamber and which of their "experts" are really climate experts.

The real question, Craven argues, isn't about right and wrong, true and false, but about looking at what the most credible sources are saying and, from that, deciding on the best bet or most wise course of action.

So which mistake would you rather risk: taking action even though three percent of climate scientists deny climate change? Or would you rather not take action and possibly experience the upheaval that 97 percent of climate scientists warn us about?

ANNA MCCARTNEY, a communications and education specialist for Pennsylvania Sea Grant, can be reached by e-mail at axm40@psu.edu.



LEARN MORE

What: Visit the Tom Ridge Environmental Center between now and March 25 and receive a chance to win a guided tour of the Presque Isle Lighthouse on May 29.

Cost: No fees; participants must be 16 and older to enter.

When: 10 a.m. to 6 p.m. daily

For more information, contact: Stacey Marendt at 217-9638

What: Outside the Window pre-school program for kids ages 3 to 5 with an accompanying adult can explore the natural world with books, crafts and outdoor activities.

When: 10 a.m. to 11 a.m. on the following days: Feb. 12 and 18: Groundhogs, March 12 and 25: Animals Wake Up, April 9: Frogs, May 14: Plant a Garden

Where: At the Tom Ridge Environmental Center and other Presque Isle locations (dress for outdoor activities)

Cost: \$3 per child per class; registration required

For more information, contact: the Park Office at 833-7424



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JrPLEWA members discuss issues related to pharmaceutical and personal care products with State Rep. Pat Harkins.

Students ask Pa. lawmaker about pharmaceutical bill

When we met with State Rep. Pat Harkins, we had a wonderful meeting where we talked about environmental issues. From the meeting, we took new knowledge about the political side of the environment. We discussed an important pharmaceutical bill, and how we can help get it passed.

Chloe Boughton | Meadville Area Middle School, Grade 8, JrPLEWA/Earth Action

On Sunday, Jan. 16, students in Jr. PLEWA met with State Rep. Pat Harkins, of Erie, D-1st Dist., to learn about the Pennsylvania pharmaceutical bill the Pennsyl-

vania House is working on. Rep. Harkins revealed how to put an opinion and idea into the bill. This bill will require pharmacies to take back unused medicine.

Jr. PLEWA is currently working on an Earth Action Pharmaceutical and Personal Care Products project to promote the passage of a state pharmaceutical bill and to educate the community on how prescription and personal care products (PPCPs) affect the environment. The students plan to meet with other legislators in the next few months.

Lauren Pierson | Collegiate Academy, 10th grade, JrPLEWA/Earth Action

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Check out these websites to learn more

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www.education.noaa.gov/
www.seagrant.psu.edu/extension/climatechange.htm

What are your sources for information about climate change? Which does the best job of including peer-reviewed data and experts who have done recent research in the field of climate science? Is that research posted? Can you tell where each source gets its funding? Considering the risks associated with climate change, do you think our government is doing enough? Send your thoughts to axm40@psu.edu.

