



The “myth” of the boiling frog

Date:

Two frogs are _____ their own business in the swamp when WHAM— they’re kidnapped. They come to _____ in a kitchen, captives of a menacing chef. He boils up _____ and lobs one of the frogs in. But it’s _____ having none of this. The second its toes hit the scalding water, it jumps _____ the window. The chef refills the pot, but this time he doesn’t turn on the heat. He _____ the second frog in, and this frog’s okay with that. The chef turns the heat on, very low, and the temperature of water _____. So slowly that the frog doesn’t notice. In fact, it basks in the balmy water. Only when the _____ begins to bubble does the frog realize: it’s toast. What’s _____ this parable is that it’s not scientifically true... for frogs. In reality, a frog will detect slowly heating water and leap to safety. Humans, on the other hand, are a different story. We’re _____ to sit in the pot and slowly turn up the heat, all the while insisting it isn’t our hand on the dial, _____ about whether we can trust thermometers, and questioning— even if they’re right, does it matter? It does. Since 1850, _____ have risen by 1 degree _____. That may not sound like a lot, but it is. Why? 1 degree is an average. Many places have already gotten much warmer than that. Some places in the Arctic have already warmed _____. If global average temperatures increase 1 more degree, the coldest nights in the Arctic might get 10 degrees warmer. The _____ in Mumbai might get 5 degrees hotter. So how did we get here? Almost everything that makes modern life possible relies on _____ : coal, oil, and gas full of carbon from ancient organic matter. When we burn fossil fuels, we release carbon dioxide that builds up in our atmosphere, where it _____ for hundreds or even thousands of years, letting heat in, but not out. The heat comes from _____, which passes through the atmosphere to Earth, where it gets absorbed and warms everything up. Warm objects emit _____, which

should pass back out into space, because most atmospheric gases don't absorb it. But — carbon dioxide and methane— do absorb infrared wavelengths. So when we add more of those gases to the atmosphere, less heat makes it back out to space, and our planet .

If we keep greenhouse gases at our current pace, scientists predict temperatures will rise 4 degrees from their pre- levels by 2100. They've identified 1.5 degrees of warming— global averages half a degree warmer than today's— as a threshold beyond which the negative impacts of climate change will become increasingly . To keep from crossing that threshold, we need to get our greenhouse gas down to as fast as possible.

Or rather, we have to get emissions down to what's called net-zero, meaning we may still be putting some greenhouse gases into the atmosphere, but we take out as much as we put in.

This doesn't mean we can just keep emitting and sequester all that carbon— we couldn't keep up with our emissions through , and technological solutions would be prohibitively expensive and require huge amounts of . Instead, while we from coal, oil, and natural gas to clean energy and fuels, which will take time, we can mitigate the by removing carbon from the atmosphere.

Jumping out of the pot isn't an option, but we can do something the can't: reach over, and turn down the heat.

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