

# Climate Change by the Numbers: Why 350ppm Matters

## by Bill McKibben

On Saturday the 24<sup>th</sup> of October, climbers on Mt. Everest will raise a huge “350” banner. The president of the Maldives will don scuba gear and lead 350 of his countrymen in the largest underwater demonstration of all time. In Sydney, Australia, ten thousand people will form themselves into a giant 3; in London, others will shape themselves into a giant 5; and in Copenhagen cyclists will circle in a giant 0.

We’ll see hundreds upon hundreds of actions across the United States that day too, in all 50 states—churches will ring their bells 350 times, packs of 350 bikers will head off in every direction, and farmers will mow huge 350s into their fields.

All in all, it looks likely to be one of the most widespread days of political action in the planet’s history. All on behalf of a number—350—that nobody even knew was important two years ago.

Here’s the story. In summer 2007, Arctic sea ice began to melt at an extraordinary rate, faster than scientists studying global warming had expected—much faster. And all around the planet they saw other escalating impacts: glaciers in rapid retreat. Intensifying droughts, as hotter temperatures evaporated more water in some places. And intensifying floods, as that water fell in deluges elsewhere. Even the chemistry of seawater was rapidly shifting, as the ocean acidified. Scientists were scared by what they saw.

America’s leading climatologist, NASA scientist James Hansen, published a series of papers beginning in January 2008 that stood old assumptions on their ear. Global warming was no longer a future problem, he said—instead, we were already dealing with devastating effects. And his team put a number on the crisis: any value for carbon dioxide in the atmosphere greater than 350 parts per million was “not compatible with the planet on which civilization developed or to which life on earth is adapted.” That’s scary news when you realize we’re already well past that level—the atmosphere currently contains 390 ppm carbon dioxide. Which is why the Arctic is melting. We’re already too high.

This new science means that we need a new politics. So far governments have reacted slowly and timidly to climate change, talking about carbon emission reductions by mid-century. But we can’t wait. We need dramatic action now. Instead of slowing the growth of carbon in the atmosphere, we need to stand on the brakes and throw the atmospheric system in reverse.

Nobody thinks this will be easy—fossil fuel lies at the heart of our economy, and replacing it with renewable power will be expensive and in some places wrenching.

But it needs to be done. Which is why some of us spent the last two years organizing 350.org, whose only goal is to spread that number and its meaning as widely as possible. It’s no easy task—there’s never been a campaign built around a scientific data point before. But this is the most important new piece of earth science data ever, arguably the most important number on the planet. We need to also make it the most well-known.

The response has been overwhelming. The world’s most important scientists have gotten on board, along with preeminent environmental economists. They understand that this is not a fight between political parties, industries or nations, but a negotiation between human beings on one hand, and the laws of physics and chemistry on the other. They understand that we’re playing for the highest stakes, that failure to cut emissions sharply to get us back to that 350 level, will quickly and dangerously alter our world.

They also understand that the climate change bill now in Congress falls woefully short of what is needed, likely to slow the increase of carbon dioxide in the atmosphere, but certainly not reverse it back to 350.

The fight will play out in final form in December, when the world’s nations meet in Copenhagen to negotiate a new climate treaty. But if those negotiators are going to truly tackle the problem, they’ll need a big shove from people around the planet.

That's why October 24<sup>th</sup> is so important. It's not political—it's educational. We're, trying desperately to let our fellow human beings know that we are pushing past the survivable limits for civilization.

How much fun to watch it come together—to see people in virtually every nation on earth join hands to spread the word. We'll be in New York City that day, flashing images from around the world on the huge advertising screens in Times Square. Wherever you are, a quick trip to [350.org](http://350.org) will show a rally or event happening near you.

If you've ever despaired about the future, here's the chance to try and shape it instead.

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