

Not Just a Number: Why 350 is the Key to the Global Climate Crisis

By Matt Vespa and Kevin Bundy of the [Center for Biological Diversity's Climate Law Institute](#)

TIANJIN, China – When it comes to ensuring the future of the planet – at least one that's habitable for people and many plants and animals – no number is as important as 350.

Scientists have been telling us for years that carbon dioxide must be limited to 350 parts per million in our atmosphere in order to avoid the most disastrous consequences of global climate change. 350 is the key “if humanity wishes to preserve a planet similar to that one which civilization developed and to which life on Earth is adapted,” according to Dr. James Hansen, one of the world's leading climatologists.

That number is a big reason why we're in Tianjin, China this week where world leaders will discuss how to address this unprecedented global crisis, prepare for more talks in Mexico later this year and, hopefully, take serious action to put us on a path toward reducing man-made carbon dioxide to safe levels.

CO2 levels have risen dramatically since the Industrial Revolution, jumping from 285 parts per million in the 1800s to around 392 today. As CO2 builds up, it traps the sun's heat close to the earth's surface. Global temperatures are already rising, along with sea levels worldwide.

The consequences of allowing the Earth's temperature to rise by even 2 degrees Celsius are dire: 97 percent of the world's coral reefs would disappear, billions more people would suffer from drought and limited drinking water; millions would be displaced by rising sea levels and cyclones; and agricultural yields would plummet.

In the Arctic, where summer sea ice could disappear by century's end, the survival of the polar bear, Arctic fox, Pacific walrus and other ice-dependent creatures would be in grave doubt. Sea ice also reflects heat back into space—heat that's absorbed by the oceans when the ice melts, hastening warming.

And scientists say the worst is yet to come. If greenhouse pollution continues unchecked, temperatures could rise by 6 degrees C by century's end.

To be honest, it's already too late to avoid some of the terrible effects of man-made global warming. Climate change already has caused tens of thousands of deaths, extinction of species, ocean acidification, loss of coral reefs, disappearing glaciers, vanishing sea ice, unprecedented heat waves and other extreme weather events..

But—if we act now—we still have a chance to rein in long-term CO2 emissions and put the planet's climate back on track.

That's where 350 comes in.

Climatologist Hansen and his colleagues have charted a path to 350 ppm by the end of this century. We must reduce greenhouse gas pollution to 42 percent below 1990 levels by the year 2020, dramatically cut fossil fuel emissions, phase out coal-fired power plants, end large-scale deforestation and reforest cut-over areas.

To reach 350, CO2 emissions must peak in the very near future and then begin a rapid decline. This won't be easy—but delaying action only makes the problem more difficult.

The science is clear that the window for meaningful action will close soon. World leaders met in Copenhagen last year but left with disappointing results.

Difficult questions of historical responsibility and international equity will be on the table in China. These questions must be resolved in order to reach an international agreement to avert the worst of the climate crisis. . Still, we remain hopeful that the end of 2010 will mark the beginning of a real and transformative shift toward 350 ppm or less. It can be done and has to be done. Too many future generations of people, plants and animals are counting on us.

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