

Atmospheric temperatures rise to record levels as glaciers disintegrate

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3 July 2015

Two new reports show that global warming and climate change are becoming larger threats than ever before. The first is a study showing increased danger of Antarctic ice shelf melting, and the second is news that the average concentration of carbon dioxide in the atmosphere has reached new record levels.

In 2002, the northern and central parts of the Larsen B Ice shelf (LBIS), which covered approximately 1,250 square miles, disintegrated over a six-week period (this event can still be viewed in phases on NASA's web site). Scientists were then able to perform a natural experiment by comparing the glaciers bordering the portion of the ice shelf that had fallen away with those still buttressed by the segment of the LBIS that remained. They found that ice shelves play an integral role in regulating the volume of ice that is regularly discharged into the ocean.

Initially, researchers agreed that the southern surviving part of LBIS appeared relatively unchanged and that the remaining ice shelf was serving as a sufficient buttress. However, new analyses, based on data collected through airborne laser altimetry, show that two glaciers located upstream were reduced in thickness by 15 to 20 meters between 2002 and 2011, a period when the flow of both glaciers and the remnant ice shelf accelerated.

Researchers hypothesize that these changes are a result of the reduction in buttressing previously provided by LBIS. They also warn that current glacial conditions exhibited by the remnant of LBIS are "reminiscent" of the events preceding the 2002 disintegration. In their conclusion, they state that "the final phase of the demise of LBIS is most likely in progress." This means larger losses of ice mass to the ocean and subsequent increases in sea levels.

While the collapse and disintegration of LBIS

remains unprecedented, it was neither the first nor the last shelf to rapidly break apart. Approximately 1,500 square miles of the northernmost portion of the Larsen Ice Shelf Complex, Larsen A, met the same fate in 1995, and the Wilkins Ice Shelf, which lies southwest of Larsen, broke apart in 2008. NASA reports that this was the tenth major ice shelf to collapse in recent times.

Another milestone in climate change is the reaching of a new greenhouse gas benchmark. In March, the monthly global average atmospheric concentration of carbon dioxide surpassed 400 parts per million (ppm), a threshold that was only initially crossed in 2013. Reaching this number as a global average, according to the National Oceanic and Atmospheric Administration (NOAA) is a "significant milestone."

Pieter Tans, one of NOAA's leading scientists, stated that "it was only a matter of time." He continued, "This marks the fact that humans burning fossil fuels have caused global carbon dioxide concentrations to rise more than 120 parts per million since pre-industrial times. Half of that rise has occurred since 1980."

Throughout 2014, the global average remained the same as 2013, due to a stalling of growth of global emissions. The fact that the average has now surpassed this new benchmark validates NOAA's insistence that "stabilizing the rate of emissions is not enough to avert climate change." Data show that the average growth rate of carbon dioxide concentration in the atmosphere between 2012 and 2014 was 2.25 ppm per year, which is the highest ever recorded over a three-year period.

James Butler, director of NOAA's Global Monitoring Division, said that it would be difficult to reverse increased CO2 concentrations. He argued, "Elimination of about 80 percent of fossil fuel emissions would essentially stop the rise in carbon dioxide in the atmosphere, but concentrations of carbon dioxide

would not start decreasing until even further reductions are made and then it would only do so slowly.”

These two developments would arouse, in any rational mind, a desire to address the processes that are causing the rapid rise in atmospheric temperature that threatens human existence on Earth. However, the United States Supreme Court does not seem to think any changes are necessary. On Monday, a 5-4 majority invalidated a plan created by the Environmental Protection Agency (EPA) to minimize emissions. The plans had already been enacted earlier this year and were expected to reduce toxic wastes entering the atmosphere from US power plants by as much as 90 percent.

The court majority claimed that the expenses of cleaning up power plant emissions outweigh the potential public benefits that could be derived from such an undertaking. Justice Antonin Scalia wrote that “it is not rational, never mind ‘appropriate,’ to impose billions of dollars in economic costs in return for a few dollars in health or environmental benefits.”

This pig-headed decision only demonstrates that the US ruling elite, like its counterparts around the world, is unwilling and incapable of taking any significant action on the worsening climate crisis. Private profit counts for more than human survival, according to the insane logic of capitalism.



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