

THE NEW RED DAWN

For centuries, mariners considered a red dawn as an omen of bad weather. The well-known rhyme “Red sky at morning, sailor take warning” was their reminder to not be fooled by a rosy sunrise, and to expect a storm to strike before the day’s end.

Today, there is a new warning on the horizon. Polar ice is melting, oceans are rising, drought is spreading, and monster storms are brewing. These are just a few of the signs that point to the changing global climate. But this is likely only the beginning. Unless we change our habits quickly, experts predict we will experience a tempest of hardship and upheaval yet unseen.

Scientists have been warning us about the dangers of global warming for decades. Only recently have more people begun to take the threats seriously. According to a survey by the Pew Research Center in October 2012, 67 percent of Americans said there is solid evidence of global warming.¹

It is important to point out that the Pew Survey was taken just before Hurricane Sandy struck the northeastern United States. The percentages will surely be higher when the survey is taken again.

Few events have made the advent of climate change more real to so many than that highly unusual October hurricane. Further evidence was provided by the fact that 2012 was the hottest year on record in the United States. Temperatures were consistently above normal between June 2011 and September 2012, which hasn’t occurred since the government began keeping such records in 1895.

Reporting in *Scientific American*, senior editor Mark Fischetti explains that warmer oceans provide more energy for storms, and a more humid atmosphere loads up hurricanes with rain, causing more severe flooding when the storms hit.

Fischetti also cites research that links the melting of Arctic ice to changes in the jet stream in the fall and winter that can cause late hurricanes.² Hurricane season does not normally extend deep into the fall, and the fact that Sandy struck when it did was a clear sign of the impact of climate change.

In a new report *Turn Down the Heat*, the World Bank warns that if global temperatures rise by 4 degrees Celsius by the end of the century, the world is in for a “doomsday scenario.” Among the impacts would be widespread crop failures, malnutrition, the dislocation of large numbers of people from areas inundated by the rising sea, and the complete collapse of some countries.

“There is no certainty that adaptation to a 4 degree world is possible” write the authors of the report. The scenario echoes a line from Shakespeare’s *Venus and Adonis*, which coincidentally also invokes a red dawn:

*Like a red morn that ever yet betoken’d,
Wreck to the seaman, tempest to the field,
Sorrow to the shepherds, woe unto the birds,
Gusts and foul flaws to herdmen and to herds.*

Unfortunately, the lines from this poem may become all too real. The Global Carbon Project predicts that a 3.5 degree increase in temperature is likely to be exceeded by the end of the century.

Notes:

¹ “More Say There is Solid Evidence of Global Warming,” Pew Research Center, October 15, 2012.

² Fischetti, Mark, “Did Climate Change Cause Hurricane Sandy?” *Scientific American*, October 30, 2012.

THE GLOBAL POLITICS OF

CO₂

The award-winning 2012 documentary film *Climate Refugees* brought into focus the reality that climate change is displacing people from their homes around the globe. The disasters causing this displacement include droughts, desertification, rising seas, and the more frequent occurrence of extreme weather events such as hurricanes, cyclones, fires, flooding and tornadoes. The result is mass global migration and border conflicts. Even the Pentagon now considers climate change a national security risk and “climate wars” could become a looming threat.

Most climate refugees are expected to come from Asia, Africa, Latin America and small island states. In 2010, 42 million people were made homeless worldwide by extreme weather, with India, the Philippines, Bangladesh, Indonesia, China and Pakistan being among the hardest hit. (Bangladesh alone has had 70 climate-related natural disasters in the past 10 years.) Some estimate that by 2050 the number of climate refugees could rise into the billions.

While climate change is considered “everybody’s problem,” the solution ultimately rests with developed nations. The United States has 4 percent of the world’s population. At the same time it emits nearly 20 percent of global CO₂. Our country’s heavy reliance of fossil fuels is the chief reason we are causing so much damage.

The high per capita emission rate in the United States raises equity issues with regard to who should bear the cost of impacts. We have benefited immensely from our fossil fuel-driven economy. It is only fair that we, along with other developed nations that have similarly benefitted, shoulder a greater burden of mitigation.

Fortunately, this idea is gaining momentum. During the 2012 UN Climate Change Summit in Doha, Qatar, an agreement was reached for the first time that rich nations should move towards compensating poor nations for losses due to climate change. How this compensation will occur is yet to be determined. However, many representatives from the developing world consider the agreement a significant breakthrough.

On the domestic front, progress is being made to curb CO₂. A regional program that has attracted considerable attention is the Regional Greenhouse Gas Initiative (RGGI). The RGGI is made up of a coalition of 10 Northeastern states, who in 2008 established the nation’s first carbon auction designed to reduce greenhouse gas emissions. Power generators in the participating states have been ordered to reduce their collective carbon dioxide emissions by 10 percent by 2018.

A November 2012 progress report estimated that the RGGI helped avoid the emission of 12 million tons of CO₂, (a reduction of approximately 30 percent). This amount is equivalent to 2 million passenger vehicles being taken off the road for one year. Energy customers are now also poised to save nearly \$1.3 billion in utility bills based on energy efficiency upgrades spurred by the RGGI. The program also created \$617 million in investments to increase efficiency among businesses and households and is accelerating the development of local clean and renewable energy sources.

Unfortunately, the RGGI has been under attack by industry groups, who claim profits have been impacted by the reduction in energy usage spurred by the initiative. One of the actors opposing carbon auctions such as the RGGI is the American Legislative Exchange Council, which has been providing legislative templates for states to adopt. One of the templates is entitled: “State Withdrawal from Regional Climate Initiatives,” which states: “...a tremendous amount of economic growth would be sacrificed for a reduction in carbon emissions that would have no appreciable impact on global concentrations of CO₂.”

In 2011, New Jersey’s Governor Chris Christie yielded to pressure to withdraw from the RGGI, which he called a tax gimmick. One year later, Hurricane Sandy slammed the New Jersey region, demonstrating that climate change was no gimmick. Fortunately, Sandy’s U.S. victims were aided by a \$60 billion federal relief package. This staggering figure brought home the true cost of our carbon-rich habits.



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