

Cold winters don't mean global warming's not real, scientists say

Renee Schoof, Sacramento Bee, 1-31-11

Washington – Tree limbs snap, the power goes out, the car needs digging out again. Along with the grumbling about winter snow, there's also a common curiosity: So what does all this say about global warming?

How can the average world temperature be inching up and 2010 be tied for the warmest year ever, when places from North Carolina to New England get buried by whopper winter storms?

There are several scientific explanations that help sweep away the snow confusion.

But like everything else related to climate science, they're all rather muffled these days, at least in the nation's capital.

Those who don't accept climate science are vocal. Some of those who do accept it think it's better to talk about jobs or technology, rather than what's going on with warming oceans and atmosphere.

President Barack Obama, his Cabinet and Democrats in Congress who think it's important to reduce emissions of heat-trapping gases from fossil fuels have talked about how transforming our use of energy can produce jobs.

Climate change and dependence on fossil fuels get almost no mention.

In the State of the Union speech, Obama never uttered the words "climate change" or "global warming."

Scientists describe many effects of a warming climate if emissions continue unabated, and some of them have serious implications for fisheries, agriculture, habitation and health. But snow? Don't throw the shovels out.

Weather Underground founder Jeff Masters explained on his WunderBlog last week that big snowstorms don't indicate that global warming isn't happening.

The global average temperature has warmed an average 1.5 degrees Fahrenheit since 1880, with bigger changes nearer the poles. And there's more warming in the pipeline. "There will still be colder than average winters in a world that is experiencing warming, with plenty of opportunities for snow," Masters wrote.

The latest report on climate change by federal scientists, "Global Climate Change Impacts in the U.S.," says precipitation has increased by an average of about 5 percent in the past 50 years. It projects that northern areas generally will become wetter, and southern areas, especially in the West, will become drier.

Meanwhile, two current ocean and atmosphere patterns help explain winter cold and snow.

The climate phenomenon La Niña is linked to a cooling in sea-surface temperatures in the equatorial Pacific. Its opposite is El Niño, the warming of those waters.

La Niña is mainly responsible for this year's weather patterns, said Ignatius Rigor, an atmospheric scientist at the Polar Science Center at the University of Washington.

La Niña was expected to bring more snow to the Pacific Northwest, much of the Upper Midwest and New England.

"Even in a warming world, we will still have natural oscillations like day and night, winter and summer, and in this case El Niño and La Niña," Rigor said.

Another possible reason for colder winters and more snow is linked to the loss of Arctic sea ice and the effect that change has on the winds that circle the North Pole.

In 2010, the sea-ice cover in the Arctic at its lowest point in September was 31 percent less than the 1979-2000 average. It was the third-lowest year, after 2007 and 2008.

Open water and water covered by thin ice allow heat stored in the ocean to escape into the atmosphere. The autumn release of heat weakens the winds that normally circle the North Pole and act as a fence keeping cold air in. When the circle of winds, known as the Polar Vortex, breaks down, cold air spills south.

Scientists have observed that the past five years have been the warmest period recorded in the Arctic. Last month, temperatures were unusually high in areas that were ice-free in summer, including waters north of Alaska and also in Greenland.

This year, for the second time in row, a warm Arctic is again influencing the Polar Vortex, allowing more cold wind to escape to the south and bringing cold to the U.S. East Coast, East-Central Asia and Europe.