

Climate Change Warms Arctic, Cools Antarctica



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The Arctic and Antarctica are poles apart when it comes to the effects of human-fueled climate change, scientists said: in the north, it is melting sea ice, but in the south, it powers winds that chill things down.

The North and South poles are both subject to solar radiation and rising levels of climate-warming greenhouse gases, the researchers said in a telephone briefing. But Antarctica is also affected by an ozone hole hovering high above it during the austral summer, Reuters reported.

"All the evidence points toward human-made effects playing a major role in the changes that we see at both poles and evidence that contradicts this is very hard to find," said Jennifer Francis, an atmospheric scientist at Rutgers University in New Jersey.

An examination of many previous studies about polar climate, to be published May 6 in the journal *Eos*, "further depletes the arsenal of those who insist that human-caused climate change is nothing to worry about," Francis said in a telephone briefing.

In the Arctic, Francis and co-authors of the research said, warming spurred by human-generated carbon dioxide emissions has combined with natural climate variations to create a "perfect Arctic storm" that caused a dramatic disappearance of sea ice last year, a trend likely to continue.

"Natural climate variability and global warming were actually working together and they've sent the Arctic into a new state for

the climate that has much less sea ice," said James Overland, an oceanographer at the US National Oceanic and Atmospheric Administration. "There's very little chance for the climate to return to the conditions of 20 years ago."

In Antarctica, the ozone hole adds a new factor to an already complicated set of weather patterns, according to Gareth Marshall of the British Antarctic Survey.

The changes in air pressure that go along with depleted stratospheric ozone are responsible for an increase in the westerly winds that whip around the Southern Ocean, at latitudes a bit north of most of Antarctica.

These winds isolate much of the southern continent from some of the impact of global warming, Marshall said. The exception is the Antarctic Peninsula, which reaches northward toward South America. There, the effects of warming have been dramatic, he said, because the winds that protect the rest of Antarctica do not insulate the peninsula.

The stratospheric ozone hole, caused by the ozone-depleting release of chemicals found in refrigerants and hair sprays, is likely to fully recover by 2070 as less of these chemicals are in use, as a result of international agreements.

The ozone layer shields Earth from harmful solar radiation, but its recovery is likely to open the way for warming in central Antarctica, the scientists said.

Less Money Means More Pain

Lower-income Americans experience pain much more frequently than those making more money, according to a study that had nearly 4,000 people keep a diary in which they scored their feelings of pain on a scale of 0 to 6 for randomly selected 15-minute intervals.

People with household incomes below \$30,000 a year reported moderate to severe pain 20 percent of the time. Those making more than \$100,000 a year said they experienced pain less than 8 percent of the time, reported *HealthDay News*.

"The arrows point in both directions," said study co-author Alan Kreuger, a professor of economics at Princeton University, explaining the findings reported in the May 3 issue of *The Lancet*. "First, people with lower skills tend to do more physically demanding labor, and that leads to pain. Secondly, people who have a lot of pain in their lives find it hard to work."

Education also affected pain results. People with less than a high school degree reported

twice the average pain rating through the day as those with college degrees, the study found.

The pain study was an extension of work done in association with Arthur Stone, a professor of psychiatry and behavioral science at Stony Brook University in New York, Kreuger said. "We had been doing work on how people used their time and how they felt about it, and decided to add questions about pain to this national survey," he said.

The link between pain and lower income and socioeconomic status wasn't necessarily a surprise, Kreuger said. "We sort of expected to find that," he said. "But there was a much stronger relationship than I expected."

The nature of someone's work had a strong influence on the experience of pain. Blue-col-



lar workers reported higher rates of pain and more severe pain than those with desk jobs. And the 13 percent of people with work-related disabilities accounted for 44 percent of the time Americans spent in moderate to severe pain, the study found.

Some other survey findings were predictable. People were more likely to feel pain while alone, and those with pain spent almost 25 percent of their time watching television, compared to 16 percent for those experiencing less

discomfort.

And people felt more pain as they grew older, with the average pain rating increasing with the years. But there was a surprising temporary plateau between the ages of 45 and 75, after which pain increased, the study found.

News in Brief



Most High Blood Pressure In Developing World

More than 80 percent of high blood pressure disease occurs in the developing world, and mostly among younger adults, researchers said in a report that belies the image of hypertension as a disease of harried, overfed rich people.

They estimated that 7.6 million people died prematurely because of high blood pressure in 2001, with just over half of all strokes caused by the condition, Reuters reported.

More than one-third of all deaths in the lower-income countries of Europe and central Asia were related to high blood pressure, Dr. Carlene Lawes and colleagues at the University of Auckland in New Zealand reported.

"Overall, about 80 percent of the attributable burden occurred in low-income and middle-income economies, and over half occurred in people aged 45-69 years," they wrote in their report, published in the *Lancet* medical journal.

They used data from the World Health Organization's Global Burden of Disease Study to calculate that 418,000 people died of stroke and 109,000 died of hypertensive disease in 2000-2001 in high-income countries.

In low- and middle-income countries they calculated 2.5 million stroke deaths and 598,000 hypertensive disease deaths. There were many more deaths from other types of heart disease caused or worsened by high blood pressure, they added.



Cambodia Seizes Smuggled Snakes, Turtles

Cambodian authorities have seized nearly half a ton of live pythons and turtles that were being smuggled from Thailand to Vietnam, a wildlife conservationist group said.

The animals, which included 11 reticulated pythons, 13 Burmese pythons and 257 turtles, were confiscated in Battambang province, about 300 kilometers (180 miles) northwest of Phnom Penh, the Wildlife Alliance said, reported AFP.

Most of the animals had been "illegally collected (in Cambodia) and had been moved to a large-scale holding facility in Thailand before eventually being shipped to Vietnam through Cambodia," the group said in a statement.

Weighing 418.5 kilograms, the haul of creatures included Asian box turtles, Malayan snail-eating turtles, black marsh turtles, 12 threatened yellow-headed temple turtles, and two reared slider turtles.



Move to Save Indonesia's Forests Welcome

Environment group Greenpeace welcomed Unilever's backing of a moratorium on palm oil deforestation in Indonesia, saying the move will help save forests in the sprawling archipelago.

The Anglo-Dutch food and consumer goods company announced it would aim to use only palm oil from fully traceable sources by 2015 in an effort to reduce the rapid despoiling of Indonesia's carbon-rich forests and peatlands, AFP reported.

"The writing is on the wall--the pressure from the market will only increase as companies join this call for a moratorium on deforestation," Greenpeace advisor Arief Wicaksono said in a statement.

The multibillion-dollar company's support could also help put pressure on Indonesian authorities to place a moratorium on logging and the clearing of forests to make way for plantations.

US to Tighten Lead Emissions Standards

The US Environmental Protection Agency unveiled plans to significantly strengthen lead emissions standards, in the first revision of the regulations for 30 years.

The proposals would reduce the amount of lead legally allowed in the air from 1.5 micrograms per cubic meter of air to between 0.1 and 0.3 micrograms per cubic meter, the EPA said in a statement, AFP reported.

"By tackling lead emissions, EPA is keeping America's clean air progress moving forward," said the agency's administrator, Stephen Johnson. "With today's proposal, we can write the next chapter in America's clean air story."

The agency said it would also welcome comments on changing the lead levels to a range of less than 0.10 to 0.50 micrograms per cubic meter. Its proposals will be open for public consultation for 60 days.

The EPA estimates emissions of lead to the air have fallen nearly 98 percent nationwide since 1980, largely because of the phase-out of lead in gasoline, and levels are generally below the standard introduced in 1978.