

Global warming ranks high as health threat

BY EVAN H. DELUCIA

In the shadow of war and concern over the SARS epidemic, another Earth Day came and went (April 22) with little fanfare. Yet one of the greatest threats to global security and human health continues to grow, largely unchecked by the government.

The combustion of fossil fuels and subsequent release of carbon dioxide into the atmosphere is warming the Earth, and this change in climate will influence our way of life. There is now absolute certainty within the scientific community that the world is warming at an alarming rate.

Leading climate scientists who

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make up the Intergovernmental Panel on Climate Change have concluded that this warming can no longer be blamed on sunspots and other natural factors. Human activities that produce carbon dioxide are the overwhelming cause. The National Academy of Sciences has joined international scientists in calling for the reduction of carbon dioxide emissions.

The IPCC estimates that if the increase in carbon dioxide in the atmosphere is unchecked, the

world could be as much as 10 degrees Fahrenheit warmer by 2100 than it is today. Since 1850, the planet has warmed by more than 1 degree, and the effects of this increase are becoming increasingly evident. Glaciers are retreating, the ice sheets at the poles are shrinking, sea levels are rising and the distribution of many plants and animals is changing.

While these changes may seem distant to Midwesterners, climate change is liable to have a serious impact on crops, rainfall and general storm activity.

In an experiment at the University of Illinois, my colleagues and I are exposing a soybean crop to elevated carbon dioxide to simulate the atmosphere in 2050. Our initial results were quite positive: The harvestable yield of beans increased about 15 percent. This was not too surprising because plants consume large amounts of carbon dioxide in the process of photosynthesis.

But last summer we made an unexpected discovery with potentially unpleasant consequences for farmers and consumers: Insects consumed more than twice as much foliage from plants grown under elevated carbon dioxide than beans grown under normal conditions.

It appears that leaves exposed to high carbon dioxide accumulated more sugars and were sweeter to insects. This suggests that insects will pose a bigger threat to agriculture, either reducing yield or forcing farmers to spray more insecti-



Fifth-grade students from Wait Disney Magnet School, 4140 N. Marine, mulch trees last month at Montrose Harbor as part of Earth Day activities on the lakefront. —AL PODGORSKI/SUN-TIMES

cides, increasing costs as well as damaging land and waterways with additional chemicals.

There are other threats. Mathematical models indicate that warming will speed evaporation from the soil and increase rainfall; the Midwest will suffer from more severe spring flooding and more serious summer droughts. Corn productivity is projected to decline by as much as 40 percent in the southern Great Lakes region.

Climate warming will also increase the frequency and intensity of storms. The Environmental Protection Agency already is working to help the insurance industry prepare for a costly future.

Earlier this year, the parliament

in Canada joined 97 other countries and endorsed the Kyoto Protocol, an international agreement to reduce carbon dioxide produced by fossil fuels burned in cars and factories. All the members of the European Community and Scandinavia have agreed to the accord. So have Mexico and most nations of South America.

The Bush administration steadfastly has refused to endorse Kyoto. Instead the White House has proposed a five-year plan to study climate change, conveniently putting any hard decisions beyond the next presidential election cycle.

As a scientist, I agree that many uncertainties remain, but the word from the scientific community is

clear and unambiguous: Humans are pumping more carbon dioxide into the atmosphere, causing the planet to warm ever more rapidly.

Combatting climate change requires the same aggressive steps by Washington as the more dramatic threats to our welfare from terrorist attacks or a nuclear arsenal. After all, what is the meaning of "global security" when the world's only superpower (and also the world's super polluter) refuses to take action against a threat that is well within its powers to defeat?

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