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Research on climate earmarked

By THE DAILY HAMPSHIRE GAZETTE
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AMHERST - University of Massachusetts researchers hope an earmark of $650,000 in federal stimulus money will further their study of the climate's future - including potential effects of global warming.

The Climate System Research Center of the Department of Geosciences at UMass is slated to receive the money, pending approval of National Oceanic and Atmospheric Administration. It plans to buy laboratory and field equipment.

"It will be very helpful," said Raymond Bradley, director of the center and geosciences professor. "It will help us leverage additional funding."

The approval process could take several months to a year, he said. "A lot of people think these earmarks are just checks in the mail, but they're not," said Bradley. "You have work with the federal agencies."

The center relies completely on federal grants to finance its research, which includes work in its headquarters in the Hasbrouck building at UMass and labs in the Morrill Science Center, as well as in the field.

The staff of around 30 postdoctoral researchers, graduate students, scientists, faculty and a few undergraduates, have journeyed to Kilimanjaro, Peru, Norway, Antarctica, the arctic of Canada, Brazil and Bermuda, among other places, to collect climate data.

Their focus: studying past variations in climate patterns - and understanding why such changes occurred.

Sediments, lakes and oceans, ice cores, tree rings and cave deposits are sampled because they preserve information useful in understanding how the climate has changed, specifically regarding the atmosphere, oceans, biosphere, land surface, snow and ice.

Using those records, scientists also explore present and future climate model forecasts.

When looking at how the climate has changed historically, the researchers ask themselves, "Is it unusual and is it unique?" said Bradley.

Growing recognition

Over the center's 20 years, Bradley said he has seen the initial six- or seven-person staff grow, and their work now receives national recognition.

Several of the center's members were contributors to reports issued by the Intergovernmental Panel on Climate Change. Those reports earned the panel the 2007 Nobel Peace Prize shared with former Vice President Al Gore.

Bradley has also seen the center focus more on global warming.

"Of course, we're all interested in global warming, which is caused by humans, but we also want to know the underlying natural variability," he said.

Studying natural variability, how the climate has changed prior to possible man-made reasons, helps researchers determine how humans are affecting the environment.

Bradley said the work he has done makes him believe the Earth is warming and it is due to man's carbon dioxide emissions. "It's going to get warmer because of human effects on the climate," he said.

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Countering views

In recent weeks, a newspaper advertisement from the Cato Institute, a nonprofit public policy research foundation based in Washington, displayed more than 100 signatures of scientists who feel claims of global warming have been exaggerated.

"The case for alarm regarding climate change is grossly overstated," the ad said. "Surface temperature changes over the past century have been episodic and modest and there has been no net global warming for over a decade now."

However, according to Bradley, those who deny the warming scenario look selectively at scientific data. He believes the planet is not headed toward an ice age, as some scientists have claimed. "I think, as a whole, climate scientists agree the earth is warming," he said. "There is a very strong consensus."

Bradley said the researchers would like the university to invest in a new, larger center, but realizes that hope could be a ways away off, given the ongoing campus budget crisis.

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