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Environmental Journal

There's consensus on climate change

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One of the nation's leading climate change scientists told business leaders here last week that the majority of the world's scientists who are serious and have their work published in peer-reviewed scientific journals agree that climate change is happening and it is primarily a "human-caused phenomenon."

What's more, he said, scientific academies in the United States and around the world have done their own assessments and come to the same conclusions.

The observations came from Jerry M. Melillo, senior scientist and director emeritus at the Ecosystems Center of the Marine Biological Laboratory in Woods Hole, Mass., and a professor of biology at Brown University.

Melillo was asked to address the Rhode Island Science & Technology Advisory Council, a state sponsored collaboration of local business leaders and scientific institutions working to cultivate advances in science and technology to help improve the state's economy.

David Farmer, dean of the University of Rhode Island's Graduate School of Oceanography and co-chair of the council, said climate change needs to be taken into account when doing planning and education. He said it also presents an opportunity for the council to look for ways to respond intelligently.

Council members asked Melillo why he thinks there has not been a stronger response from business and political leaders and what he thought of the very loud chorus of climate change deniers.

"What troubles me is the tyranny of even-handedness," Melillo said. "There could be 10,000 people on one side and five on the other, and some give equal time to both sides."

"I'm also not happy about all the non-experts promoting the truth as they see it," Melillo added. "In the 1990s, we talked about projections. Now we have decades of observations to stand on."

Melillo has been the co-editor-in-chief on two comprehensive assessments of the U.S. Global Change Research Program. He was also a lead author of the United Nation's first two Intergovernmental Panels on Climate Change and served in the Office of Science and Technology Policy for the Clinton administration.

Current projections show global average temperatures will increase from 2 to 11.5 degrees Fahrenheit by the end of

the century, Melillo said. If nothing is done to reduce outputs of carbon dioxide and other gases that contribute to climate change, Melillo said temperatures will reach the upper end of the range.

Carbon dioxide levels in the atmosphere are already 30 percent higher than they have been in the last 800,000 years, he said.

Average temperatures in New England are 1.5 degrees Fahrenheit higher now than they were in 1970, Melillo said.

If current trends persist, he said, New England could face a month of 90-degree days every summer.

Using data he developed with the Union of Concerned Scientists, Melillo said even if emissions are reduced somewhat, Rhode Island faces summers similar to those in central Virginia by the end of the century.

If a higher rate of emissions occurs, Rhode Island's summers will be like those on the Georgia-South Carolina border.

Those are summers that southerners used to come to Rhode Island to avoid, Melillo pointed out.

The latest research projects sea levels will rise by three to four feet by the end of the century, Melillo said.

"It's in our hands and it's happening now," said Melillo. "It's not just an environmental issue. It's about people."

For more about the advisory council, go to: <http://stac.ri.gov>.

For more on Melillo's climate change report, go to: www.globalchange.gov/publications/reports/scientific-assessments/us-impacts.

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