

Climate change tops Americans' environmental concerns, survey shows

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According to a recent MIT survey, Americans now rank climate change as the country's most pressing environmental problem-a dramatic shift from three years ago, when they ranked climate change sixth out of 10 environmental concerns.

Almost three-quarters of the respondents felt the government should do more to deal with global warming, and individuals were willing to spend their own money to help.

"While terrorism and the war in Iraq are the main issues of national concern, there's been a remarkable increase in the American public's recognition of global warming and their willingness to do something about it," said Stephen Ansolabehere, MIT's Elting R. Morison Professor of Political Science.

The survey results were released Oct. 31 at the seventh annual Carbon Sequestration Forum, an international meeting held at MIT that focuses on methods of capturing and storing emissions of carbon dioxide-a major contributor to climate change.

Ansolabehere's colleagues on the work are Howard Herzog, principal research engineer in MIT's Laboratory for Energy and the Environment (LFEE), LFEE research associates Thomas E. Curry and Mark de Figueiredo, and Professor David M. Reiner of the University of Cambridge.



The findings are a result of two surveys, the first administered in September 2003 and the follow-up in September 2006. Each survey included about 20 questions focusing on the environment, global warming and a variety of climate-change-mitigation technologies.

In designing and administering the surveys, the research team collaborated with Knowledge Networks, a company that specializes in Internet-based public opinion surveys. More than 1,200 people answered each survey (with no overlap between the two groups of respondents).

Comparing results from the two surveys provides insights into how public awareness, concern and understanding have changed-or not changed-during the past three years.

The environment continues to rank in the middle of the list of "most important issues facing the U.S. today." However, among 10 environmental problems, global warming (or climate change) now tops the list: Almost half the respondents put global warming in first or second place. In 2003, the destruction of ecosystems, water pollution and toxic waste were far higher priorities.

There is also an increased sense that global warming is an established problem. In the 2006 survey, 28 percent of the respondents agreed that it is a serious problem and immediate action is necessary-up from 17 percent in 2003. All together, almost 60 percent of the 2006 respondents agreed that there's enough evidence to warrant some level of action.

The other big change is a substantial increase in people's willingness to spend their own money to do something about it. In 2003, people were willing to pay on average \$14 more per month on their electricity bill to "solve" global warming. In 2006 they agreed to pay \$21 more per month-a 50 percent increase in their willingness to pay.



Could \$21 make a real difference? Assuming 100 million U.S. households, total payments would be \$25 billion per year. "That's real money," said Herzog. "While it cannot solve the whole problem, it can certainly make significant strides."

For context, Ansolabehere pointed out that the U.S. Department of Energy's budget for energy R&D is now about \$2 billion per year. "Another reading of this outcome is that people want not a little bit more spent but rather a lot more spent to solve this problem-and they're willing to pay," he said.

The MIT team undertook the original survey in 2003 to find out what the public thought about carbon capture and storage (CCS), an approach that Herzog and his LFEE colleagues had been studying for more than a decade. The team was not surprised to find that more than 90 percent of the respondents had never heard of CCS. The 2006 survey showed similar results.

In general, the respondents' understanding of climate change and possible mitigation technologies showed little change between 2003 and 2006. In terms of their technology preferences, in 2006 most still recommended using more wind and solar energy and increasing efficiency, but more were willing to consider CCS and nuclear energy as possible approaches.

"It's not that people have learned something fundamental about the science, but they've come to understand that this problem is real," said Ansolabehere. "It takes a prolonged discussion of a complex topic like this really to move public concern, and what's happened over the past three years has got to continue."

The researchers plan to analyze the survey results in more depth, in particular to test for correlations between answers to questions and the



economic, political, geographical and other demographic characteristics of the respondents.

This research was supported by the MIT Carbon Sequestration Initiative (sequestration.mit.edu/CSI/index.html). For more details about the surveys and their results, go to sequestration.mit.edu/research/survey2006.html .

Source: MIT, by Nancy Stauffer

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