

## Survey explores views of 400 climate scientists

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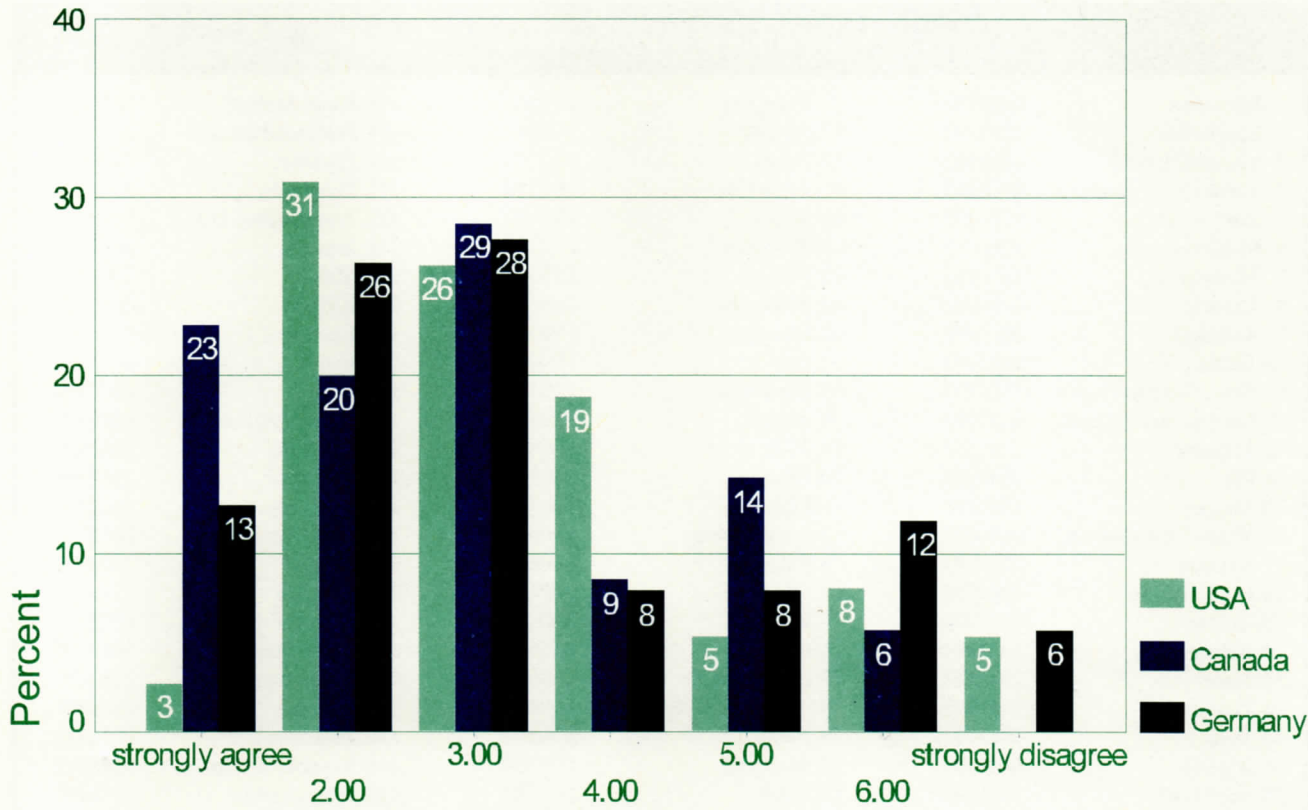
**T**he views of climate scientists about the prospect of global warming are naturally of vital concern to people participating in the climate debate. It is also interesting to know what climate scientists think about the inner workings of their science, including modeling, the relationship between climate scientists and policymakers, and the relationship between climate scientists and the media.

In an effort to quantify such views, we derived a set of questions from themes raised in a series of 43 in-depth interviews with climate scientists in Canada, Germany and the US. One thousand self-administered anonymous surveys were then distributed in a one-time mailing to 460 US, 40 Canadian, and 500 German scientists.

The North American sample was drawn from the EarthQuest mailing list. Since this list contains more than scientists involved in the climate sciences, we could not use a true random sampling technique, and instead selected names on the basis of institutional and disciplinary affiliation.

The German sample was drawn from a random sample of the Deutsche Meteorologische Gesellschaft mailing list, for reasons of confidentiality by the organization itself, resulting in a total of 450 subjects. A further 50 surveys were given to members of the Max Planck Institut für Meteorologie and the Meteorologisches Institut der Universität Hamburg, for a total sample of 500 German scientists.

The overall response rate was good, approximately 40%: 228 from Germany, 149 from the US, and 35



### We can say for certain that global warming is a process already underway

from Canada, for a total return of 412 completed surveys. Some of the results are presented below.

#### Strongly (dis)agree

We asked the scientists if they believe that "We can say for certain that global warming is a process already underway", a stronger formulation than the IPCC's "balance of evidence." We asked them to agree or disagree with the statement using a rating scale of 1 - 7, with 1 equal to "strongly agree" and 7 "strongly disagree".

With an overall mean response of 3.3, the majority of scientists who responded to the survey tended to agree that global warming is indeed a process already underway (see figure above). There were no statistically significant differences among the mean responses of Americans (3.4), Canadians (2.9), and Germans (3.3). However, the percentage of respondents "strongly agreeing" with the statement ranged from 3% in the

US to 13% in Germany and 23% in Canada.

Turning to the theory, rather than the detection, of climate change, we asked if "We can say for certain that, without changes in human behavior, global warming will definitely occur sometime in the future." The overall mean response of 2.58 indicates a relatively higher level of agreement that global warming will occur without changes in human behavior. The mean responses by country also clustered together quite closely.

There was also strong agreement that, regardless of whether climate change is apparent yet or not, there is a need for immediate policy decisions. With a value of 7 indicating a strong sense that policy decisions are needed, the mean of 5.6 indicates that policy decisions are perceived as being of immediate importance.

Finally, in an effort to explain the scientists' perceptions of the need for policy, they were asked "To what

degree do you think climate change will have detrimental effects for some societies?" With 1 representing "a great degree", the overall mean of 2.37 shows that respondents generally think that climate change would indeed result in negative impacts, perhaps explaining their support for policy decisions. □

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