

# Report calls for coordinated information on climate change

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A comprehensive national response to climate change should be informed by reliable data coordinated through climate services and a greenhouse gas monitoring and management system to provide timely information tailored to decision makers at all levels, says a report by the National Research Council. The report recommends several mechanisms for improving communication about climate science and responses and calls for a systematic framework for making and evaluating decisions about how to effectively manage the risks posed by climate change.

"Global climate change is a long-term challenge that will require all of us to make many decisions about how to respond," said Diana Liverman, co-chair of the panel that wrote the [report](#), co-director of the Institute of Environment at the University of Arizona, Tucson, and a senior research fellow at Oxford University. "To make choices that are based on the best available science, government agencies, the private sector, and individuals need clear, accessible information about what is happening to the climate and to emissions. We also need information on the implications of different options -- especially to assess whether policies are effective."

The federal government needs to establish information and reporting systems -- such as climate services and a greenhouse-gas accounting system -- that provide a range of information on climate change and variability, observed changes and causes, potential impacts, and strategies for limiting emissions or adapting to impacts. Although the report does not specify a particular agency to lead federal efforts, it

emphasizes the importance of coordination across the federal government and with state, local and private sector decision makers. Leadership might come through executive orders, existing units such as the Office of Science and Technology Policy, an expanded U.S. [Global Climate Change](#) Research Program, or new entities, the report suggests.

The new national system for providing climate services should inform decision makers and assist them in managing climate-related risks, the report says. It would coordinate data among several agencies and incorporate regional expertise. Information should be timely, authoritative, and based on rigorous natural and social science research and tailored to government- and private-sector users at the national, regional, and local levels, the report says. For example, agricultural producers trying to decide which crops to grow need timely seasonal forecasts, data on likely outbreaks of diseases or pests, and advice about long-term strategies for adapting to climate impacts; and forest and park managers need information to control fires and plan for longer-term ecosystem management.

The report identifies several key functions that should be included in climate services, such as enhanced observations and vulnerability analyses on a regional scale, sustained interaction with stakeholders and research to understand their needs, an international information component that provides data on global climate observations and impacts, and a central accessible web portal that encourages sharing of information. These functions might be overlooked if the services are based only on existing federal capabilities, the report says.

The proposed comprehensive greenhouse gas management system for monitoring, reporting, and verifying emissions should include a unified accounting protocol and a registry to track emissions at a detailed level. Monitoring is essential for developing effective emissions policies and verifying claims that emissions have been reduced, the report says. Such

a system could build on the existing expertise of agencies such as the U.S. Environmental Protection Agency and the U.S. Department of Energy.

These systems should also be designed to evaluate and assess state and local government and private-sector responses, many of which already are occurring. For example, more than half of Americans live in states, counties, and cities that have enacted a goal to reduce greenhouse gas emissions, and many private companies are taking significant steps to reduce their carbon footprints. Federal policies should not unnecessarily supersede measures already being taken regionally or locally, the report says.

To effectively manage the serious risks posed by climate change, decision makers need to account for many uncertainties about the severity of impacts and options for responding to them and be able to modify their choices based on new information and experience. Therefore, decision makers in the public and private sectors need to implement an iterative risk management strategy that adapts to new information, conditions, or technologies that could affect climate change policies, the report says. To that end, the government could also review and revise programs such as federal crop and flood insurance in the light of the risks of climate change. The study panel endorsed steps already taken by federal financial and insurance regulators such as the Securities and Exchange Commission to require disclosure requirements for climate change risks.

Although public beliefs and attitudes about climate often shift from year to year, recent opinion polls indicate that many Americans are concerned about climate change and want more information about the causes, consequences, and potential solutions, the report says. It identifies several barriers to communication about climate change and recommends some strategies for overcoming them, such as urging

federal agencies to support training for researchers on how to communicate complex climate change information and uncertainties to different audiences. In addition, a national task force of educators, government leaders, policymakers, and business executives should be established to improve climate change communication and education.

Consumers can play an important role in responding to climate change by choosing to reduce their energy use and selecting more energy-efficient products with lower emissions. The federal government should review and promote credible product standards and labels for consumers that provide information about energy efficiency and [greenhouse gas](#) emissions, the report says. The government should also consider establishing an advisory service on these issues targeted at the public and small businesses.

Provided by National Academy of Sciences

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