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NANOTECHNOLOGY

Accuracy of Data on Federally Funded Environmental, Health, and Safety Research Could Be Improved

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Highlights

Highlights of GAO-08-709T, a testimony before the Subcommittee on Science, Technology, and Innovation, Committee on Commerce, Science, and Transportation, U.S. Senate

Why GAO Did This Study

In March 2008, GAO issued a report entitled *Nanotechnology: Better Guidance Is Needed to Ensure Accurate Reporting of Federal Research Focused on Environmental, Health, and Safety Risks* (GAO-08-402). In this report, GAO reviewed the National Nanotechnology Initiative (NNI), a multiagency effort administered by the Office of Science and Technology Policy (OSTP). The NNI coordinates the nanotechnology-related activities of 25 federal agencies that fund nanoscale research or have a stake in the results. A key research area funded by some agencies related to studying the potential environmental, health, and safety (EHS) risks that may result from exposure to nanoscale materials. For this testimony statement, GAO was asked to summarize the findings of its March 2008 report, focusing on (1) the extent to which selected agencies conducted EHS research in fiscal year 2006; (2) the reasonableness of the agencies' and the NNI's processes to identify and prioritize EHS research; and (3) the effectiveness of the agencies' and the NNI's process to coordinate EHS research.

What GAO Recommends

In its March 2008 report, GAO recommended better guidance to improve the accuracy of data reported by the NNI. Although OSTP asserted that it provides extensive guidance, it agreed to review how the agencies respond to the current guidance. GAO is making no new recommendations in this statement.

To view the full product, including the scope and methodology, click on GAO-08-709T. For more information, contact Ms. Anu Mittal at (202) 512-3841 or mittala@gao.gov.

What GAO Found

In fiscal year 2006, federal agencies devoted $37.7 million—or 3 percent of the $1.3 billion total nanotechnology research funding—to research that was primarily focused on the EHS risks of nanotechnology, according to the NNI. However, about 20 percent of this total cannot actually be attributed to this purpose. GAO found that 22 of the 119 projects identified as EHS in fiscal year 2006 were not primarily related to understanding the extent to which nanotechnology may pose an EHS risk. Instead, many of these projects were focused on how to use nanotechnology to remediate environmental damage or detect hazards not related to nanotechnology. GAO determined that this mischaracterization is rooted in the current reporting structure that does not allow these types of projects to be easily categorized and the lack of guidance for agencies on how to apportion research funding across multiple topics, when appropriate. In addition to the EHS funding reported by the NNI, federal agencies conduct other research that is not captured in the EHS totals. This research was not captured by the NNI because either the research was funded by an agency not considered to be a research agency or because the primary purpose of the research was not to study EHS risks.

Federal agencies and the NNI, at the time of GAO's review, were in the process of identifying and prioritizing EHS risk research needs and the overall process they were using appeared reasonable. For example, identification and prioritization of EHS research needs was being done by the agencies and the NNI collaboratively. The NNI also was engaged in an iterative prioritization effort through its Nanotechnology Environmental and Health Implications (NEHI) working group. Through this process, NEHI identified five general research categories as a priority for federally funded research. GAO found that most of the research projects that were underway in fiscal year 2006 were generally consistent with agency and NEHI priorities. NEHI released its new EHS research strategy on February 13, 2008.

Agency and NNI processes to coordinate activities related to potential EHS risks of nanotechnology have been generally effective. The NEHI working group has convened frequent meetings that have helped agencies identify opportunities to collaborate on EHS risk issues, such as joint sponsorship of research and workshops to advance knowledge and facilitate information-sharing among the agencies. NEHI also has incorporated several practices that GAO has previously identified as key to enhancing and sustaining interagency collaborative efforts, such as defining a common outcome and leveraging resources. Finally, all agency officials GAO spoke with expressed satisfaction with the coordination and collaboration on EHS risk research that has occurred through NEHI. They cited several factors they believe contribute to the group's effectiveness, including the stability of the working group membership and the expertise and dedication of its members. Furthermore, according to these officials, this stability, combined with common research needs and general excitement about the new science, has resulted in a collegial, productive working environment.