



Highlights of [GAO-08-999T](#), a testimony before the Committee on Homeland Security and Governmental Affairs, U.S. Senate

## Why GAO Did This Study

In April 2005, a Presidential Directive established the Domestic Nuclear Detection Office (DNDO) within the Department of Homeland Security to enhance and coordinate federal, state, and local efforts to combat nuclear smuggling domestically and abroad. DNDO was directed to develop, in coordination with the departments of Defense (DOD), Energy (DOE), and State (State), an enhanced global nuclear detection architecture—an integrated system of radiation detection equipment and interdiction activities. DNDO implements the domestic portion of the architecture, while DOD, DOE, and State are responsible for related programs outside the U.S.

This testimony provides preliminary observations based on ongoing work addressing (1) the status of DNDO's efforts to develop a global nuclear detection architecture, (2) the challenges DNDO and other federal agencies face in implementing the architecture, and (3) the costs of the programs that constitute the architecture. This statement draws on prior GAO reviews of programs constituting the architecture, and GAO's work on strategic planning.

## What GAO Recommends

GAO recommends that DNDO develop, in coordination with DOD, DOE, and State, a strategic plan to guide agency efforts to develop a more comprehensive architecture. In commenting on a draft of this statement, DNDO concurred with this recommendation.

To view the full product, including the scope and methodology, click on [GAO-08-999T](#). For more information, contact David Maurer at (202) 512-3841 or [maurerd@gao.gov](mailto:maurerd@gao.gov).

## NUCLEAR DETECTION

### Preliminary Observations on the Domestic Nuclear Detection Office's Efforts to Develop a Global Nuclear Detection Architecture

#### What GAO Found

According to GAO's preliminary work to date, DNDO has taken steps to develop a global nuclear detection architecture but lacks an overarching strategic plan to help guide how it will achieve a more comprehensive architecture. Specifically, DNDO has developed an initial architecture after coordinating with DOD, DOE, and State to identify 74 federal programs that combat smuggling of nuclear or radiological material. DNDO has also identified gaps in the architecture, such as land border crossings into the United States between formal points of entry, small maritime vessels, and international general aviation. Although DNDO has started to develop programs to address these gaps, it has not yet developed an overarching strategic plan to guide its transition from the initial architecture to a more comprehensive architecture. For example, such a plan would define across the entire architecture how DNDO would achieve and monitor its goal of detecting the movement of radiological and nuclear materials through potential smuggling routes, such as small maritime craft or land borders in between points of entry. The plan would also define the steps and resources needed to achieve a more comprehensive architecture and provide metrics for measuring progress toward goals.

DNDO and other federal agencies face a number of coordination, technological, and management challenges. First, prior GAO reports have demonstrated that U.S.-funded radiological detection programs overseas have proven problematic to implement and sustain and have not been effectively coordinated, although there have been some improvements in this area. Second, detection technology has limitations and cannot detect and identify all radiological and nuclear materials. For example, smugglers may be able to effectively mask or shield radiological materials so that it evades detection. Third, DNDO faces challenges in managing implementation of the architecture. DNDO has been charged with developing an architecture that depends on programs implemented by other agencies. This responsibility poses a challenge for DNDO in ensuring that the individual programs within the global architecture are effectively integrated and coordinated to maximize the detection and interdiction of radiological or nuclear material.

According to DNDO, approximately \$2.8 billion was budgeted in fiscal year 2007 for the 74 programs included in the global nuclear detection architecture. Of this \$2.8 billion, \$1.1 billion was budgeted for programs to combat nuclear smuggling internationally; \$220 million was devoted to programs to support the detection of radiological and nuclear material at the U.S. border; \$900 million funded security and detection activities within the United States; and approximately \$575 million was used to fund a number of cross-cutting activities. The future costs for DNDO and other federal agencies to address the gaps identified in the initial architecture are not yet known or included in these amounts.