

GAO Highlights

Highlights of [GAO-13-732](#) a report to congressional requesters

Why GAO Did This Study

Conducting border and maritime R&D to develop technologies for detecting, preventing, and mitigating terrorist threats is vital to enhancing the security of the nation. S&T, the Coast Guard, and DNDO conduct these R&D activities and S&T has responsibility for coordinating and integrating R&D activities across DHS. The Centers of Excellence are a network of university R&D centers that provide DHS with tools, expertise, and access to research facilities and laboratories, among other things. GAO was asked to review DHS's border and maritime R&D efforts.

This report addresses (1) the results of DHS border and maritime security R&D efforts and the extent to which DHS has obtained and evaluated feedback on these efforts, and (2) the extent that DHS coordinates its border and maritime R&D efforts internally and externally with other federal agencies and the private sector. GAO reviewed completed and ongoing R&D project information and documentation from fiscal years 2010 through 2013 and interviewed DHS component officials, among other actions.

What GAO Recommends

GAO recommends that DHS S&T establish timeframes and milestones for collecting and evaluating feedback from its customers to determine the usefulness and impact of its R&D efforts, and ensure that potential challenges with regard to data reliability, accessibility, and availability are reviewed and understood before approving Centers of Excellence R&D projects. DHS concurred with GAO's recommendations.

View [GAO-13-732](#). For more information, contact David Maurer at (202) 512-9627 or maurerd@gao.gov.

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DEPARTMENT OF HOMELAND SECURITY

Opportunities Exist to Better Evaluate and Coordinate Border and Maritime Research and Development

What GAO Found

Between fiscal years 2010 and 2012, the Department of Homeland Security's (DHS) border and maritime research and development (R&D) components reported producing 97 R&D deliverables at an estimated cost of \$177 million. The type of border and maritime R&D deliverables produced by DHS's Science and Technology (S&T) Directorate, the Coast Guard, and the Domestic Nuclear Detection Office (DNDO) varied, and R&D customers we met with reported mixed views on the impact of the R&D deliverables they received. These deliverables were wide-ranging in their cost and scale, and included knowledge products and reports, technology prototypes, and software (as shown in the figure below). The Coast Guard and DNDO reported having processes in place to collect and evaluate feedback from its customers regarding the results of R&D deliverables. However, S&T has not established timeframes and milestones for collecting and evaluating feedback from its customers on the extent to which the deliverables it provides to DHS components—such as US Customs and Border Protection (CBP)—are meeting its customer's needs. Doing so could help S&T better determine the usefulness and impact of its R&D projects and deliverables and make better-informed decisions regarding future work.

DHS has taken actions and is working to develop departmental policies to better define and coordinate R&D, but additional actions could strengthen internal and external coordination of border and maritime R&D. S&T's Borders and Maritime Security Division, the Coast Guard, and DNDO reported taking a range of actions to coordinate with their internal DHS customers to ensure, among other things, that R&D is addressing high priority needs. However, work remains to be done at the agency level to ensure border and maritime R&D efforts are mutually reinforcing and are being directed towards the highest priority needs. For example, officials from university centers of excellence reported difficulties in determining DHS headquarters contacts, and officials from the primary land-border security R&D center reported delayed and cancelled projects due to the inability to obtain data. DHS could help ensure that the approximately \$3 million to \$4 million a year dedicated to the university Centers of Excellence is used more effectively by more carefully considering potential challenges with regard to data needs, access issues and data limitations before approving projects.

Examples of DHS S&T and Coast Guard Border and Maritime R&D Projects



Source: GAO.

Mobile Surveillance System Imager/Radar Upgrade, a retrofit kit developed by S&T BMD for CBP tested at the Arizona-Mexico border.



Source: USCG.

Shipboard Vessel Entanglement System developed by the Coast Guard and others for use on Coast Guard vessels.