

Senate Slows Growth in DHS R&D

AAAS R&D Funding Update on R&D in Senate FY 2006 DHS Appropriations

Highlights

- **The Senate and the House would both slow recent growth in Department of Homeland Security (DHS) R&D funding. The Senate would provide \$1.3 billion for DHS R&D in FY 2006, a small increase of \$23 million or 1.9 percent (see Table), after increases of more than \$200 million in each of the past three years (see Figure 2).**

- The Senate would provide large boosts for DHS' top R&D priorities, but would slash funding in other areas. The biggest gains would go to the \$228 million radiological and nuclear countermeasures portfolio and the \$100 million chemical countermeasures portfolios, both of which would nearly double in the Senate bill. The Senate would allocate \$34 million for explosives countermeasures (up 72 percent) and \$110 million for R&D to counter portable anti-aircraft missiles (up 80 percent). The House appropriation would have similar increases for these priorities.

- Large increases for the top priorities would be offset by steep cuts in other areas of the DHS R&D portfolio, including threat and vulnerability assessments (down 39 percent to \$40 million), standards development (down 11 percent to \$36 million), rapid prototyping (down two-thirds to \$21 million), cybersecurity, and transportation security.

- The largest part of the DHS R&D portfolio would continue to be biological countermeasures with an investment of \$384 million in FY 2006, up 6.0 percent from this year (see Figure 1).

- The Senate would mostly agree with the FY 2006 budget proposal to finish the process of consolidating all DHS R&D into the Directorate of Science and Technology (S&T). In the FY 2006 request and House appropriation, R&D programs that transferred into DHS with the Transportation Security Administration (TSA) and the Coast Guard (CG) in 2003 would be moved out of those units into S&T at reduced funding levels, but the Senate would keep Coast Guard R&D in the existing CG structure.

DHS R&D in FY 2006 Senate Appropriations

On June 17, the Senate Appropriations Committee approved its version of the FY 2006 Homeland Security appropriations bill (HR 2360), following on the full House's May 17 approval of its own version. **The Senate Homeland Security bill would provide \$1.3 billion for DHS R&D in FY 2006**, a slight increase of \$23 million or 1.9 percent above FY 2005, slightly less than the 3.6 percent increase requested by DHS in February but more than the 1.3 percent increase in the House bill (see Table).

Both the House and the Senate would provide \$30.8 billion in discretionary funding for DHS in FY 2006, an increase of \$1.4 billion (excluding FY 2005 disaster relief supplementals and Bioshield funding) that represents a maturation of the homeland-security effort after the frenzied start-up phase of the last several years. The House and Senate appropriations appear to be \$1.3 billion above the \$29.6 billion White House request, but both chambers would reject the Administration's proposal for nearly \$2 billion in new user fees to finance airport security, leaving overall program funding below the request and necessitating difficult reductions in first-responder grants and other homeland security programs.

Although still a high priority in these uncertain times, the tighter FY 2006 DHS budget would require tough choices in DHS R&D funding. The DHS R&D portfolio mirrors the trends in the overall DHS

budget: after annual increases greater than 20 percent in the first few years of its existence, **growth in the DHS R&D portfolio would level off with an FY 2006 Senate appropriation of \$1.3 billion, up \$23 million or 1.9 percent and similar to the House allocation** (see Table). (For details of the President’s request for DHS R&D, please see Chapter 12 of *AAAS Report XXX: R&D FY 2006* or the February 25 DHS R&D Funding Update. For details of House appropriations for DHS R&D, see the June 3 R&D Funding Update).

R&D in the Directorate of Science and Technology

Currently, most DHS R&D programs have their home in the **Directorate of Science and Technology (S&T)**. This Directorate has responsibility for setting homeland-security R&D goals and priorities, coordinating homeland security R&D throughout the federal government, funding homeland security R&D, facilitating the transfer and deployment of technologies for homeland security, and advising the DHS Secretary on all scientific and technical matters.

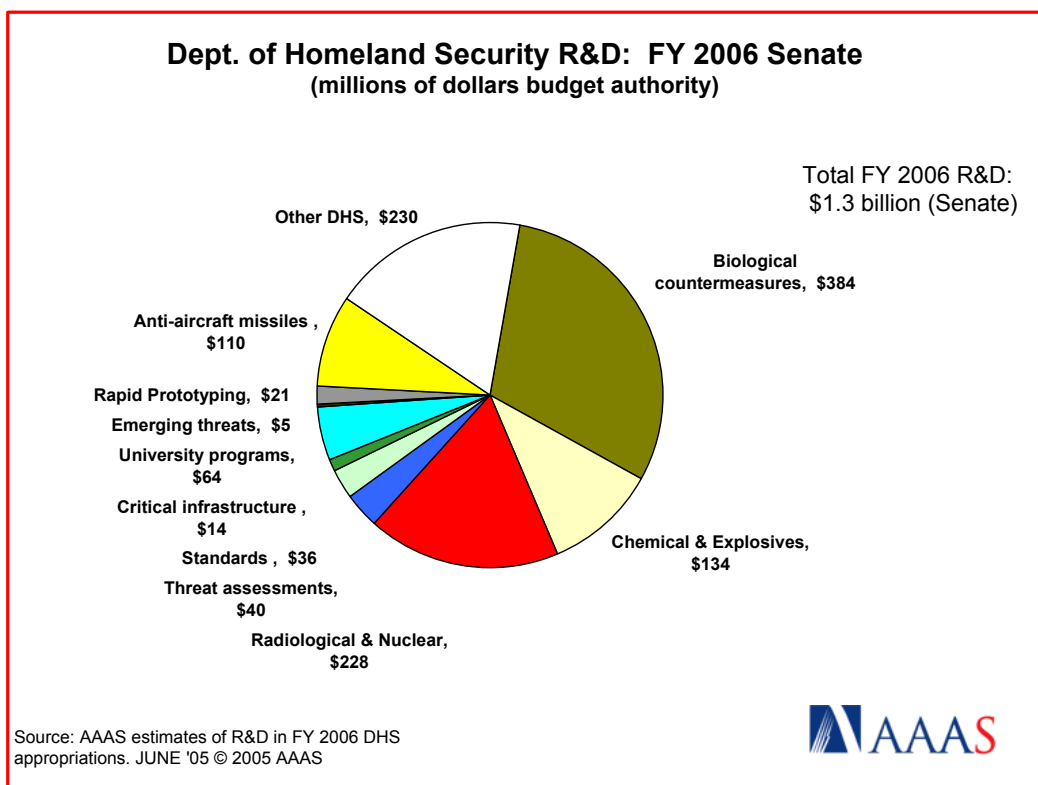


Figure 1. (click on the image for PDF)

In FY 2006, DHS proposes to finish consolidating all R&D activities within the S&T Directorate. Through this year, the Transportation Security Administration (TSA) and Coast Guard (CG), which transferred to DHS from the Department of Transportation (DOT) in 2003, have retained their own R&D programs, but in FY 2006 the House would agree with the proposal to have the S&T Directorate take over their R&D portfolios and become responsible for 100 percent of the department’s \$1.3 billion in R&D funding. The Senate would agree with the TSA transfer and not the CG transfer, preferring to keep Coast Guard R&D programs in the Coast Guard budget.

The FY 2006 Senate DHS R&D appropriation, with a 1.9 percent increase far smaller than past increases allowing every program area to receive more funding, would set clear priorities among DHS’ R&D program areas, mostly mirroring DHS’ own priorities (see Table and Figure 1). **The top priorities in the DHS R&D portfolio would be radiological and nuclear countermeasures (increasing 86 percent to**

\$228 million in FY 2006), including the establishment of a Domestic Nuclear Detection Office (DNDO); chemical countermeasures (climbing 89 percent to \$100 million); explosives countermeasures (up 72 percent to \$34 million), and R&D to counter portable anti-aircraft missiles (up 80 percent to \$110 million).

Both the House and the Senate would provide \$127 million in FY 2006 for a new Domestic Nuclear Detection Office (DNDO), down dramatically from the \$227 million request but still a significant start-up appropriation. The DNDO would develop, acquire, and support a domestic system to detect and report terrorist attempts to transport or use radiological or nuclear materials. DNDO will be staffed with a multi-agency team and will coordinate its efforts with the intelligence community, and hopes to fund R&D, develop new technologies, and transition these technologies to field use. Although Congress has been generally supportive of the proposal, members of Congress have expressed concerns as to whether the new office could realistically spend \$227 million in its first year and have thus reduced the request; there are also concerns as to how much authority the new office will have over other government units and who will perform the work. Thus, the Senate bill makes most of the appropriation conditional on DHS submitting a plan clearly outlining a multi-year budget, staffing, and organizational plan. The Senate also instructs DHS to staff the DNDO with federal employees and not contractors. DNDO would be funded as part of the radiological and nuclear countermeasures portfolio, which would jump 86 percent to \$228 million in the Senate, which does not include another \$125 million in non-R&D funds transferred from DHS Customs and Border Protection for the procurement and deployment of radiation portal monitors at U.S. ports.

The Counter MANPADS portfolio would nearly double in the request and both the House and Senate bills to \$110 million (up 80.3 percent). Man Portable Air Defense Systems (MANPADS) are shoulder-mounted portable air missiles that have been used (unsuccessfully so far) against passenger aircraft. Fears of a successful MANPADS attack against commercial aircraft have jump-started DHS' Counter MANPADS effort. The increased FY 2006 investment would allow DHS to develop, prototype, and test promising technologies in aircraft to better protect commercial aviation.

The largest part of the portfolio would continue to be biological countermeasures with an investment of \$384 million in FY 2006, up 6 percent from this year in the Senate. Although no money would be requested, construction of the National Biodefense Analysis and Countermeasures Center (NBACC) at Fort Detrick, Maryland would continue in FY 2006 with previously appropriated funds toward a target completion date of 2008. There would also be \$23 million in new funds to start construction of a new National Bio and Agrodefense Facility (NBAF), a \$450 million total project with a scheduled completion of 2010 to enhance DHS capabilities to respond to food or animal-borne terrorist threats and to replace DHS' existing facility on Plum Island, New York.

Large increases for the priorities above would be offset by cuts in other areas of the DHS R&D portfolio, including threat and vulnerability assessments (down 39 percent to \$40 million), standards development (down 11 percent to \$36 million), rapid prototyping (down 73 percent to \$21 million), cybersecurity, and transportation security. TSA R&D programs in transportation security, funded at \$178 million in FY 2005, would be consolidated within the S&T Directorate at \$100 million in the FY 2006 Senate appropriation, a dramatic reduction, although some TSA programs would move to the Explosives Countermeasures portfolio (such as a \$10 million air cargo screening technology program).

Both the House and Senate would agree with the request to make modest cuts to \$64 million for University Programs and Fellowship Programs, down from \$70 million in FY 2005 but still well above \$22 million last year. The program does not expect to spend \$45 million in FY 2005 funds by the end of this year, allowing total FY 2006 funding to exceed \$100 million. This program funds several university-based centers of excellence and is a funding source dedicated exclusively to funding university-based research. DHS has already designated four university-based centers for homeland security; the latest, awarded to the University of Maryland and its partners, will focus on behavioral and social aspects of terrorism. Another focuses on threat assessments and two focus on agro-terrorism. The fifth center, to be awarded this year, will focus on preparations and responses to terrorist attacks, and will be followed by three other centers to be awarded by the end of FY 2006..

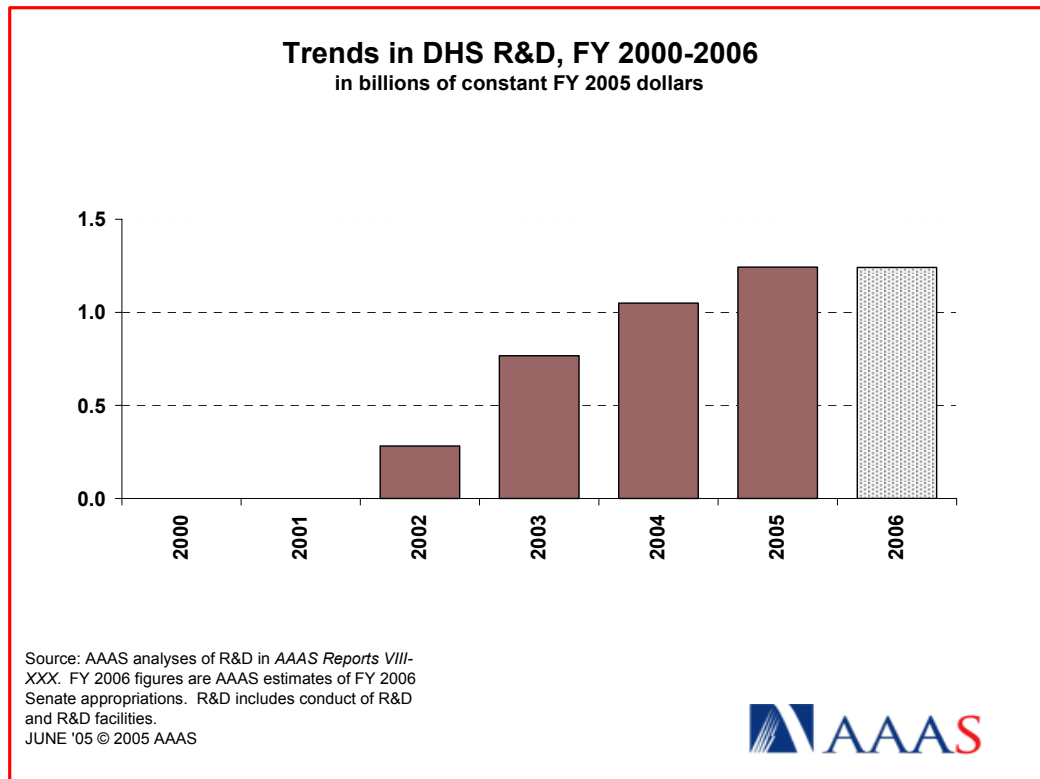


Figure 2. (click on the image for PDF)

The Senate DHS R&D appropriation represents a dramatic slowdown from recent gains in the DHS R&D portfolio (see Figure 2). In its short history, the DHS R&D portfolio has expanded from nothing to an approximately \$300 million transfer of other agencies' R&D programs in FY 2002 followed by dramatic gains in 2003, 2004, and 2005 primarily for the creation of new R&D capabilities. Now that the start-up phase of DHS appears to be complete, the department's R&D portfolio has entered a mature phase in which large increases are no longer assured.

Next Steps

The Senate Homeland Security bill is expected to go to the full Senate for debate and approval in the next few weeks. The House has already approved its version of the bill, so a House-Senate conference to hammer out the final version of the bill could be convened in July.

(This analysis is one of a series of AAAS R&D Funding Updates on FY 2006 congressional appropriations. The complete series of AAAS R&D Funding Updates, including continually updated analyses of R&D in FY 2006 appropriations, is available on the AAAS R&D Web Site (<http://www.aaas.org/spp/rd>) in the "FY 2006 R&D" or the "What's New" sections.)

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Table. DHS R&D in FY 2006 Senate Appropriations

**Table. Department of Homeland Security
Senate Appropriations Committee Action on R&D in the FY 2006 Budget
(budget authority in millions of dollars)**

	FY 2005 Estimate	FY 2006 Request	FY 2006 House	Senate Action				
				FY 2006 Senate	Chg. from Request Amount	Chg. from Request Percent	Chg. from FY 2005 Amount	Chg. from FY 2005 Percent
DHS R&D:								
Border & Transp. Security (TSA) 1/	178	0	0	0	0	--	-178	-100.0%
Science and Technology	1,047	1,287	1,259	1,247	-40	-3.1%	201	19.2%
- Biological Countermeasures	363	362	360	384	22	6.1%	22	6.0%
- NBACC 2/	35	0	0	0	0	--	-35	-100.0%
- Chemical Countermeasures	53	102	90	100	-2	-2.0%	47	88.7%
- Explosives Countermeasures	20	15	55	34	19	130.4%	14	71.9%
- Radiological & Nuclear Ctrmeas. 3/	123	246	146	228	-18	-7.3%	106	86.2%
- Threat & Vulnerability Assess.	66	47	47	40	-7	-14.9%	-26	-39.2%
- Standards	40	36	36	36	0	0.0%	-4	-10.6%
- Support of DHS Components	55	94	80	75	-19	-20.3%	20	36.6%
- University Programs	70	64	64	64	0	0.0%	-6	-9.1%
- Emerging Threats	11	11	11	5	-5	-49.8%	-5	-50.9%
- Rapid Prototyping	76	21	30	21	0	0.0%	-55	-72.5%
- Counter MANPADS	61	110	110	110	0	0.0%	49	80.3%
- SAFETY Act	10	6	10	6	0	0.0%	-4	-44.0%
- Interoperable Communic.	21	21	42	15	-6	-26.8%	-6	-28.6%
- Critical Infrastructure	27	21	36	14	-7	-33.7%	-13	-48.9%
- Cybersecurity	18	17	17	17	0	0.0%	-1	-7.2%
- R&D Consolidation 1/	0	117	117	100	-17	-14.5%	100	--
- Tech. Development & Transfer	0	0	10	0	0	--	0	--
Coast Guard 1/	18	0	0	19	19	--	1	2.8%
Total DHS R&D	1,243	1,287	1,259	1,266	-21	-1.6%	23	1.9%
<i>Selected non-R&D items:</i>								
Biodefense countermeasures (BioShield)	2,508	0	0	0	0	--	-2,508	-100.0%
Total DHS Discretionary Budget	31,980	29,555	30,846	30,846	1,291	4.4%	-1,134	-3.5%

AAAS estimates based on FY 2005 and FY 2006 appropriations bills. Includes conduct of R&D and R&D facilities.

FY 2005 and FY 2006 request figures based on OMB R&D data and supplemental agency budget data.

Figures are rounded to the nearest million. Changes calculated from unrounded figures.

BioShield funding has already been provided in FY 2005 advance appropriations.

1/ FY 2006 budget proposes to consolidate TSA and CG R&D within S&T Directorate.

2/ Construction funds for National Biodefense Analysis and Countermeasures Center.

3/ Includes \$227 mil. in FY 2006 request and \$127 mil. in FY 2006 House and Senate for the Domestic Nuclear Detection Office (DNDO).

FY 2006 Senate excludes transfer of procurement and deployment funds from Customs and Border Protection.

June 20, 2005 - AAAS estimates of Senate Appropriations Committee-approved bills.

These figures may be amended or rejected by the full Senate.