R&D Earmarks Total $1.5 Billion in FY 2002

(This analysis is part of a new AAAS effort to enumerate congressionally designated, performer-specific R&D projects not appearing in agency budget requests (earmarks) in the FY 2002 appropriations process. The data in this analysis highlight AAAS interpretations of R&D earmarks in final FY 2002 appropriations, and updates an earlier October 2 report. The complete series of AAAS R&D Funding Updates, including continually updated analyses of R&D by agency in FY 2002 appropriations, is available on the AAAS R&D Web Site (http://www.aaas.org/spp/R&D) in the "FY 2002 R&D" or the "What's New" sections.)

FY 2002 R&D Earmarks in Final FY 2002 Appropriations

When the FY 2002 appropriations process in Congress concluded on December 20 with final passage of the last appropriations bills, it became clear that Congress remains committed to funding R&D earmarks. Within a record-setting $103.7 billion for total R&D in FY 2002, Congress appropriated $1.5 billion for congressionally designated, performer-specific R&D projects (R&D earmarks), far exceeding the amounts that the House and the Senate had earmarked in earlier versions of the appropriations bills. (For full details of total federal R&D in FY 2002, please see *Congressional Action on R&D in the FY 2002 Budget* and its accompanying preview, available on the AAAS R&D Web site).

Within federal appropriations for R&D are R&D earmarks of unrequested, congressionally designated performer-specific R&D projects contained in legislative language or committee report language attached to appropriations bills. These projects have been added to agencies' requested budgets as part of the annual give-and-take between Congress and the Executive Branch over the size and shape of agencies' budgets. As the Table and Figure 1 show, R&D earmarks totaled $739 million in the House versions of the FY 2002 appropriations bills and $853 million in the Senate versions. In the give-and-take between the House and Senate in negotiations over the final versions of the appropriations bills, give prevailed far more than take for a result of $1.5 billion in R&D earmarks in FY 2002, providing most of what each chamber wanted.

- **R&D earmarks total $1.5 billion in FY 2002.** Although these projects amount to only 1.4 percent of total R&D, they are concentrated in a few key agencies and programs (see Table 1). Four agencies (the U.S. Department of Agriculture (USDA; $369 million), the National Aeronautics and Space Administration (NASA; $233 million), the Department of Energy (DOE; $171 million) and the Department of Defense (DOD; $336 million)) receive three-quarters of the total R&D earmarks.

- The **USDA** earmarks include $107 million for more than 200 itemized extramural research projects, mostly in the Special Research Grants program, with another $96 million allocated in the Agricultural Research Service (ARS) for intramural research projects. Congress earmarks $162 million for intramural R&D facilities construction in FY 2002 for projects not in the agency budget request, although $73 million of that amount consists of emergency counter-terrorism funds added in the aftermath of September 11 for two facilities in Iowa and New York in order to boost their security and to upgrade their capabilities to handle potential bioterrorism agents. R&D earmarks total 20 percent of all extramural R&D in the Cooperative State Research, Education, and Extension Service (CSREES), and earmarks make up 21 percent of the total ARS budget.

- The **NASA** projects totaling $233 million are found in five programs within the agency's Science, Aeronautics and Technology (SAT) account: Space Science, Earth Science, Biological and Physical Research, Aero-Space Technology, and Academic Programs. Earmarks make up 28.9 percent of total R&D in Academic Programs, and smaller percentages in the other four programs. The final NASA bill includes 40 projects in Academic Programs totaling $67 million. Although all programs in this account are classified as R&D, the congressionally designated projects include funds for planetariums, science museums, education centers, and even a dormitory.

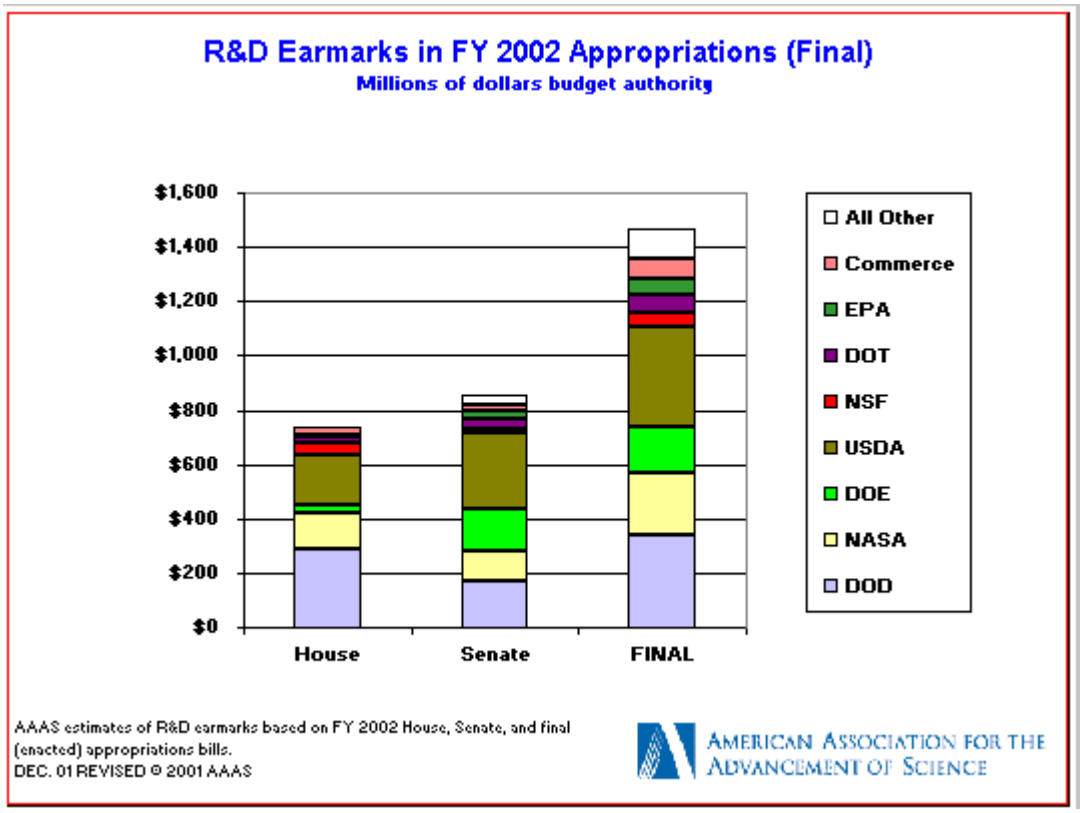

Chart 1. (click on image to view or download a full-size color PDF version of this chart)

- The **DOD** budget contains $336 million in R&D earmarks, a substantial amount but a small 0.7 percent of the total $50.1 billion DOD R&D budget. The earmarks are mostly small ($10 million or less) projects, and most are for research rather than development or R&D facilities construction. The **DOE** R&D budget contains $171 million in R&D earmarks throughout the budget, but there is a large concentration of $72 million for more than 50 projects in the Biological and Environmental Research (BER) program.

- Congress earmarks $50 million in funds for R&D in the **National Science Foundation** in the Major Research Equipment (MRE) account. The earmarks total 36 percent of the $139 million MRE appropriation. Congress added $35 million for the High-Performance Instrumented Airborne Platform for Environmental Research (HIAPER), an atmospheric research aircraft, in FY 2002 although NSF proposed to eliminate funding. The $35 million allocation is far above the FY 2001 funding level of $12 million for this project, for which NSF has never requested funding. The final NSF budget also contains $15 million for the IceCube Neutrino Detector project, a South Pole facility recently approved by the National Science Board but not yet part of NSF's budget plans. Research funding in the Research and Related Activities (R&RA) account includes no R&D earmarks; the Senate had proposed to allocate $10 million in R&RA funds to maintain the abandoned Homestake Mine in South Dakota in preparation for construction of a National Underground Science Laboratory for particle physics research. In the final FY 2002 budget, that $10 million earmark moved to the Department of Housing and Urban Development (HUD) instead of NSF. The final FY 2002 Defense bill transferred title of the mine from the mine owners to the state of South Dakota in exchange for liability relief from environmental hazards on the site. NSF is reviewing a proposal for the laboratory, and further funding for the project may be part of the FY 2003 budget or appropriations.

- Congress added R&D earmarks to other R&D funding agencies, including the Environmental Protection Agency (EPA; $62 million for 64 congressionally designated research projects), the Department of Transportation ($63 million, mostly for projects in DOT's smaller bureaus), the Department of the Interior ($14 million for projects in the U.S. Geological Survey), the National Institute of Standards and Technology in the Department of Commerce ($42 million in Construction of

Research Facilities account for 11 projects), the Department of Housing and Urban Development (HUD; $30 million for dozens of small projects not related to housing), and the Department of Justice ($29 million for three projects in a counter-terrorism R&D appropriation).

Because an analysis of FY 2001 R&D earmarks is not available, it is unclear to what extent FY 2002 earmarks compare with FY 2001 earmarks or with FY 2001 base funding. Although subtracting R&D earmarks from FY 2002 funding reduces the increases provided by appropriators for certain R&D programs, these programs most likely received similar levels of earmarked funding in FY 2001, so most agencies are likely to have received substantial year-to-year gains in non-earmarked funding.

Definitions: What is an R&D Earmark?

For the purposes of this analysis, R&D earmarks are defined as "congressionally designated performer-specific R&D projects not included in agency budget requests." The earmarks appear in either legislative language contained in appropriations bills, in which case they have the force of law, or appear in committee report language accompanying appropriations bills, in which case they are technically advisory. For all practical purposes, however, agencies usually follow the instructions from Congress contained in committee report language, including earmarks. When Congress designates a specific performer or performers for a particular R&D project, these are counted as earmarks; because AAAS definitions of R&D include investments in R&D facilities construction, the earmarks in this analysis also include funds provided to specific institutions for investments in R&D major capital equipment, and also construction funds for specific R&D facilities.

R&D earmarks do not appear in federal agencies' budget requests, which are released at the beginning of the budget process in February and reflect agency priorities. These budget requests contain detailed proposed distributions of agency funds by mission, allocation mechanism, and often by performer. Earmarks do not appear in agencies' own budget requests but are added to agencies' budgets by Congress during the appropriations process. Some projects not originally included in agency requests may be initiated by congressional action in earlier appropriations cycles and may be renewed at reduced funding levels in agencies' requests; funds added to specific performers by Congress above the amounts requested by the agency are counted as earmarks.

These figures include earmarks to all categories of R&D performers. While discussion of the earmarks issue tends to center on earmarks to academic institutions (the Chronicle of Higher Education publishes an annual comprehensive survey of academic earmarks; the latest survey of FY 2001 earmarks totaling $1.7 billion appeared in the August 10 issue), this analysis also includes R&D earmarks to other categories of performers, most prominently federal laboratories. While academic institutions receive the bulk of the earmarks in Table 1, federal laboratories, sometimes located on university campuses, also receive earmarks as well as some nonprofits and industrial firms.

The earmarks in this analysis do not include some categories of congressionally designated R&D projects that other observers characterize as earmarks. Because this analysis is limited to performer-specific earmarks, it does not include R&D funds that are unrequested by the agency but are appropriated by Congress for research on specific topics (for which the performers are not specified). The most prominent example of such earmarks is the Department of Defense's (DOD) medical research programs. Although DOD does not request funds for these programs, Congress annually provides funds for cancer research and other medical research. But because these funds are awarded competitively through peer-reviewed competitions, they are not performer-specific earmarks. (The Office of Management and Budget asks federal agencies to report on 'research performed at congressional direction' as part of the budget process; the latest survey was published in April as part of the federal budget. The $2.2 billion in FY 2001 earmarks identified in this survey include non-performer specific congressionally initiated research such as the above.) They also do not include language in appropriations bills reports that suggest 'favorable consideration' or 'active consideration' for competitive proposals by specific performers; these usually do not stipulate dollar amounts and have less weight than report language.

The earmarks counted in this analysis are a subset of R&D in the federal budget as tracked by AAAS. Thus, the earmarks in this analysis do not include non-R&D projects that may go to R&D performers, for example

educational or extension projects awarded to universities and colleges. They also do not include construction funds for non-R&D facilities, except when they are provided in R&D accounts.

Purpose of the AAAS Analysis

The analysis is intended to provide timely and unbiased information for further analysis and debate on the allocation of R&D resources in the federal budget process, and the R&D Budget and Policy Program undertakes this analysis to provide timely and relevant information for policymakers and members of the science and engineering community who are concerned about methods of allocating R&D resources. It attempts to provide additional information to supplement existing AAAS coverage of R&D in the appropriations process. The analysis is not a comprehensive inventory of earmarks; nor can the analysis break out earmarks by recipient or by state because of the difficulty in identifying and assigning locations to multi-performer research consortia or earmarks in which the actual performer is left intentionally vague. Also, because earmarks are somewhat in the eye of the beholder and are ill-defined (unlike the standardized, longstanding definitions for R&D used by AAAS and federal agencies) this analysis necessarily relies on AAAS interpretations and judgment calls on a project-by-project basis of what is or is not an R&D earmark.

This analysis does not take a position on the relative merits of agency requests vs. congressional earmarks, or of competitively awarded funds vs. earmarked funds.

Conclusions

Although Mitch Daniels, Director of the Office of Management and Budget (OMB), earlier this year made restraining congressional earmarks a high priority of the Bush Administration, his powers of persuasion were no match for congressional appropriators' jealously guarded power to determine the allocation of funds. Although Daniels argued against earmarks as part of a larger mission to restrain growth in discretionary spending after what he considered excessive spending growth in the Clinton Administration, events quickly overtook his arguments. As a result of the September 11 terrorist attacks, most spending restraints evaporated and the federal budget plunged back into deficit after four years of surplus. Including emergency appropriations, total discretionary spending in FY 2002 totals $726 million in budget authority, nearly 14 percent more than FY 2001, an increase far exceeding any increase during the Clinton Administration. The effort to restrain R&D earmarks also failed because of the Bush Administration style of being relatively disengaged from line-by-line negotiations on appropriations bills; both Daniels and President Bush eventually wound up giving free rein to appropriators to draft the details of bills as they saw fit, and threatened vetoes only for those bills which exceeded aggregate spending targets. This style was a contrast to a Clinton Administration, which inserted itself into the appropriations process in program-by-program negotiations. As a result, appropriators were free to rearrange priorities and insert earmarks as they saw fit, as long as they could meet overall spending targets which turned out to be extremely generous. For R&D earmarks, this meant that most House earmarks and Senate earmarks made it to the final appropriations bills; total funding simply grew to accommodate all of them, and the generous budget ceiling allowed appropriators to do so without sacrificing base funding.

(Further AAAS R&D Funding Updates on the AAAS R&D Web site will provide up-to-date information on R&D in FY 2002 appropriations.)

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Table 1. Congressional Earmarks for R&D by Agency and Program
Congressional Action on R&D in the FY 2002 Budget (FINAL - Dec. 26, 2001)
(budget authority in millions of dollars)

			Final Congressional Action		
	FY 2002 House	FY 2002 Senate	**FY 2002 Earmarks**	FY 2002 R&D	Earmarks % of R&D
Defense (military)	288	171	**336**	50,134	0.7%
(Army)	*111*	*32*	***120***	*7,064*	*1.7%*
(Navy)	*53*	*25*	***68***	*11,422*	*0.6%*
(Air Force)	*43*	*6*	***43***	*14,528*	*0.3%*
(Defense Agencies and Other)	*81*	*108*	***104***	*17,120*	*0.6%*
National Aeronautics & Space Admin.	132	113	**233**	10,301	2.3%
(Space Science)	*18*	*9*	***30***	*2,849*	*1.0%*
(Bio. And Phys. Research)	*5*	*0*	***15***	*714*	*2.1%*
(Earth Science)	*25*	*19*	***38***	*1,573*	*2.4%*
(Aero-Space Technology)	*48*	*32*	***83***	*2,490*	*3.4%*
(Academic Programs)	*35*	*53*	***67***	*231*	*28.9%*
Energy	30	152	**171**	8,122	2.1%
(Science programs)	*0*	*32*	***72***	*3,018*	*2.4%*
(Energy programs)	*5*	*84*	***27***	*1,310*	*2.0%*
(Defense programs)	*25*	*36*	***25***	*3,794*	*0.7%*
Health and Human Services	0	0	**31**	24,145	0.1%
(National Institutes of Health)	*0*	*0*	***0***	*22,822*	*0.0%*
National Science Foundation	50	10	**50**	3,527	1.4%
(Major Research Equipment)	*50*	*0*	***50***	*139*	*36.0%*
Agriculture	182	283	**369**	2,139	17.3%
(Agricultural Res. Service)	*86*	*176*	***257***	*1,234*	*20.8%*
(CSREES)	*91*	*100*	***107***	*532*	*20.1%*
(Forest Service)	*5*	*8*	***5***	*265*	*1.8%*
Interior	0	13	**14**	673	2.1%
Transportation	18	38	**63**	853	7.4%
Environmental Protection Agency	11	33	**62**	702	8.9%
Commerce	27	21	**72**	1,354	5.3%
(NOAA)	*18*	*0*	***31***	*836*	*3.7%*
(NIST)	*9*	*21*	***42***	*493*	*8.5%*
Education	0	0	**0**	265	0.2%
Agency for Int'l Development	2	5	**4**	204	2.0%
Department of Veterans Affairs	0	0	**0**	733	0.0%
Housing and Urban Development	0	10	**30**	69	43.6%
Department of Justice	0	5	**29**	104	27.9%
All Other	0	0	**5**	369	1.3%
Total	739	853	**1,470**	103,694	1.4%

AAAS estimates of R&D in FY 2002 House, Senate, and final (enacted) appropriations bills.

Includes conduct of R&D and R&D facilities.

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

"Earmarks" are AAAS interpretations of unrequested, congressionally designated, performer-specific R&D projects contained in legislative language or committee report language in appropriations bills.

Earmarks do not include non-R&D congressionally designated projects.

December 26, 2001 - based on enacted appropriations bills and report language.