An Introduction to the Federal Budget

Kei Koizumi November 15, 2007 for the 2007 AAAS Leadership Seminar

AAAS R&D Budget and Policy Program http://www.aaas.org/spp/rd

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THE FEDERAL BUDGET: WHERE DOES THE MONEY GO? AND WHY SHOULD YOU CARE?

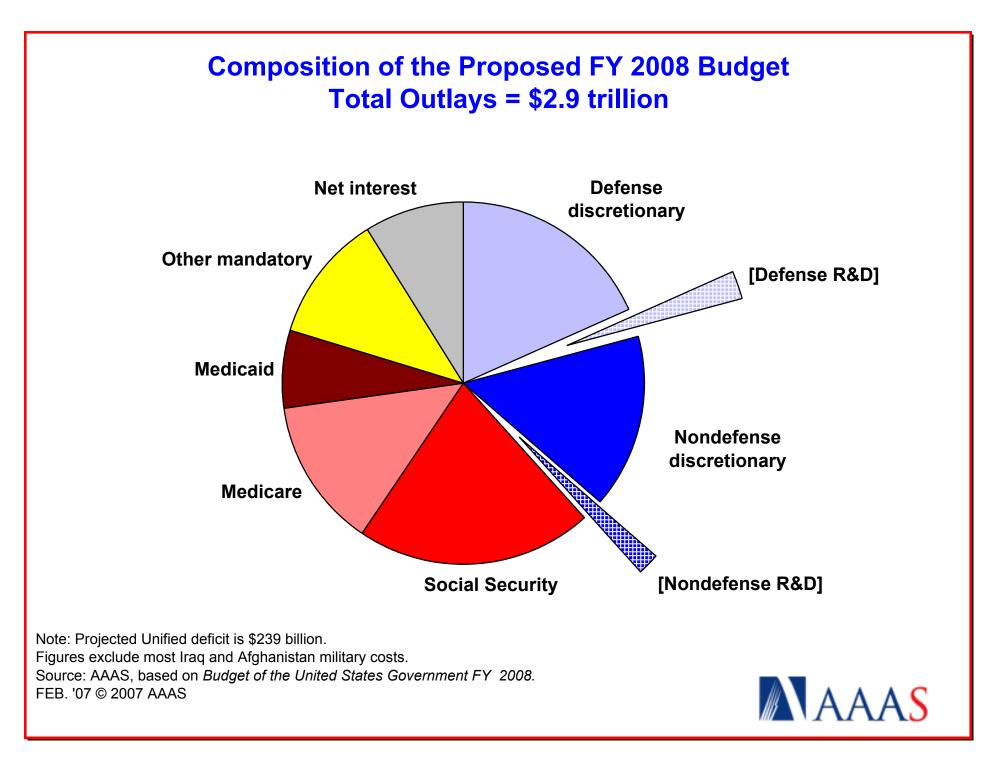
• It's a lot of money.

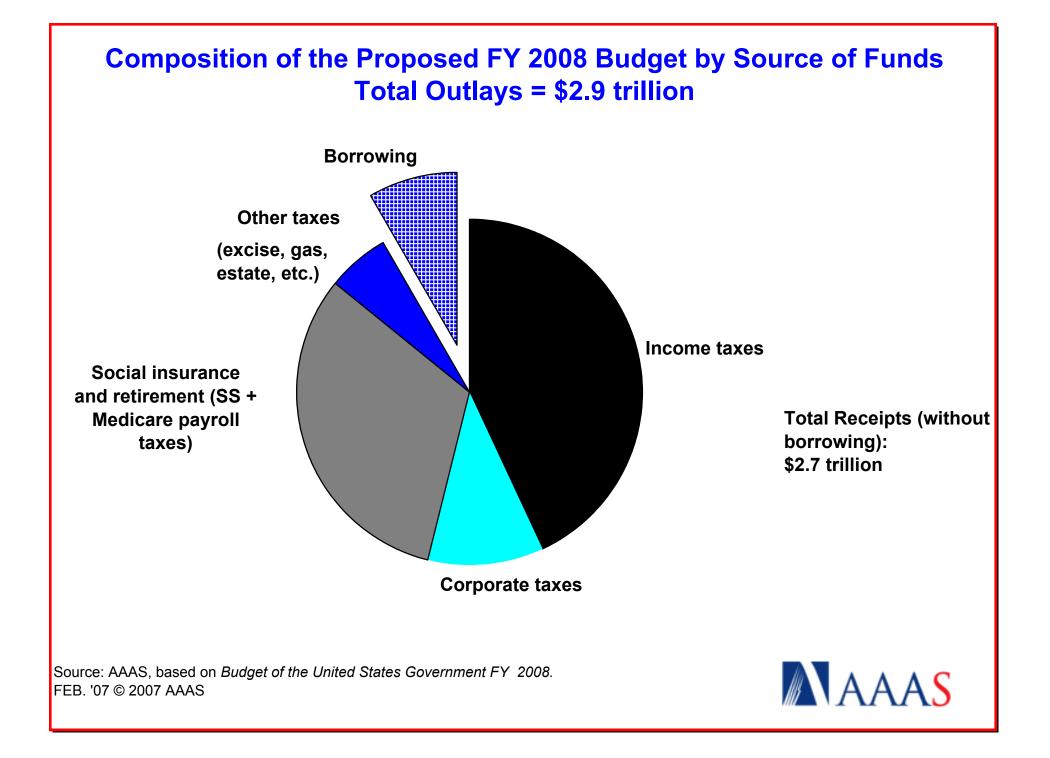
- The federal government spends \$2.9 trillion a year, 1/5 of the U.S. economy.
- More than 80 percent of the money comes directly from individuals through income taxes and payroll taxes.
- You can't do POLICY in Washington without MONEY.
 - Money makes policies possible; without money, policies can't be implemented.
 - In these times of budget deficits, every policy has to be considered in the context of its effect on the budget.
 - The federal budget process decides how the money gets spent.

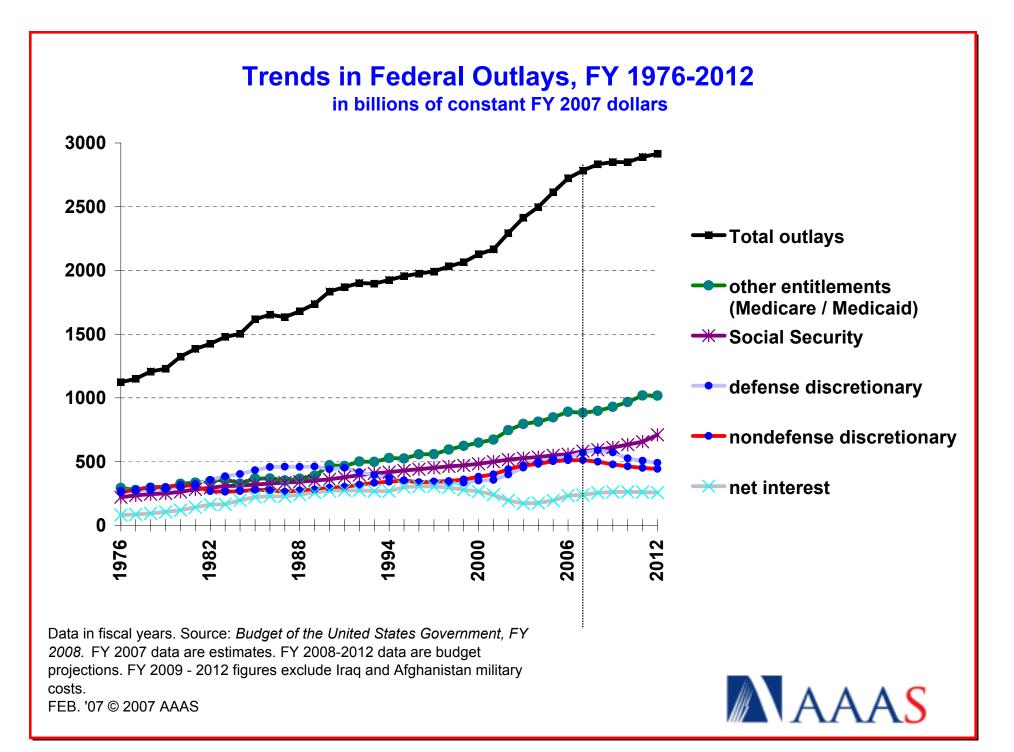


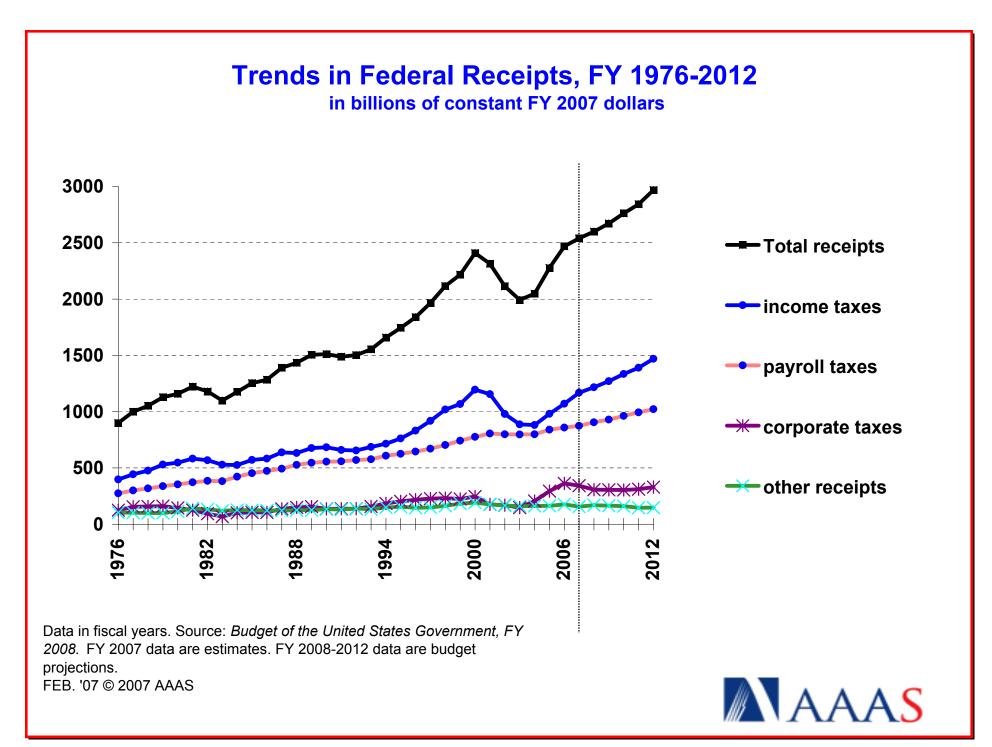
THE FEDERAL BUDGET: WHERE DOES THE MONEY GO? AND WHY SHOULD YOU CARE? (2)

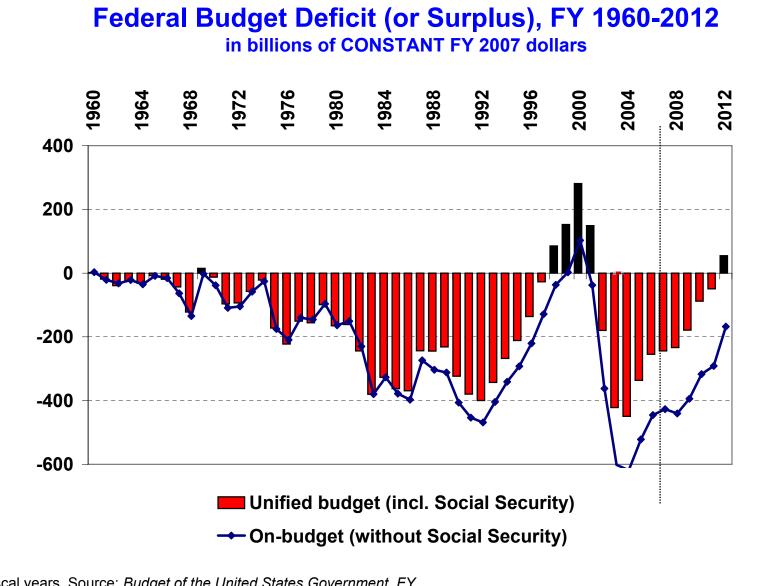
- The budget takes up a lot of time and effort on Capitol Hill and in federal agencies.
 - The budget has an annual cycle that affects nearly every decision in Washington.
- The federal budget determines the health of U.S. science and engineering education.
 - The federal government spends \$140 billion + a year on R&D.
 - The federal government funds 60 percent of all university R&D, and also supports fellowships, scholarships, student loans, and other aid.
 - R&D funding decisions are part of the federal budget process.











Data in fiscal years. Source: *Budget of the United States Government, FY 2008.* FY 2007 data are estimates. FY 2008-2012 data are President's budget proposals. FY 2009 - 2012 figures exclude Iraq and Afghanistan military costs. FEB. '07 © 2007 AAAS





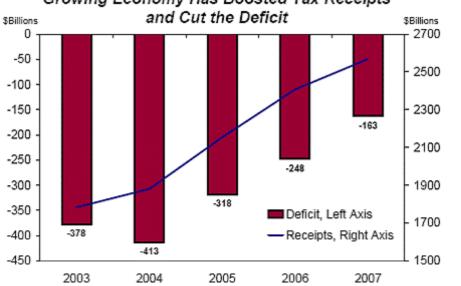
THE WHITE HOUSE

Office of the Press Secretary

For Immediate Release October 11, 2007

FY07 Results: Deficit Declining Towards 2012 Surplus Tax Relief Working - Economy Growing - Record-Level Tax Revenues

Budget numbers for Fiscal Year 2007 released today by the Department of Treasury and Office of Management and Budget show the Federal deficit declined by \$250 billion in the last three years. In February the Federal budget deficit for 2007 was projected to be \$244 billion. Today's numbers show that the budget deficit is now just \$163 billion. This is just 1.2 percent of the economy.



Growing Economy Has Boosted Tax Receipts

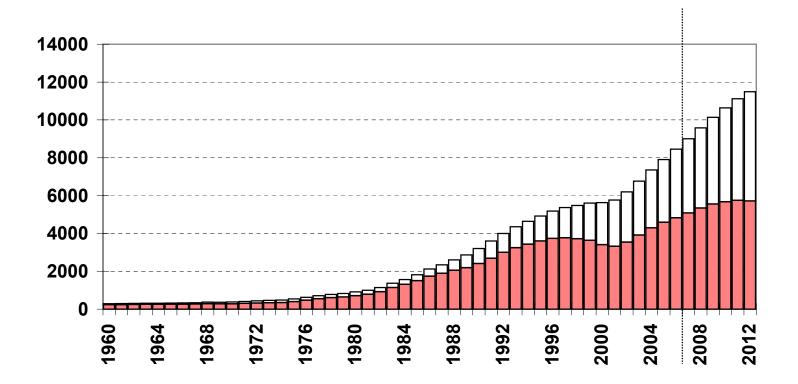
As a percentage of the economy, the deficit is now lower than the average of the last forty years. Tax cuts work to promote economic growth, and that economic activity brings in higher revenues to the Federal treasury. This year tax revenues grew by \$161 billion to reach \$2.568 trillion, the highest level of Federal revenues ever recorded. That's an increase of 6.7 percent. And it builds on the 14.5 percent and 11.8 percent increase in revenues during the last two years.

Democrats' "tax and spend" agenda threatens economic growth and a balanced budget. Democrats in Congress are proposing to:

• Spend \$205 billion more taxpayer dollars over the next five years than the reasonable and responsible levels proposed by the President.

The National Debt, 1960-2012

in billions of dollars (President's proposals)



Government-held debt (Social Security and other trust funds)

Debt held by the public

Data in fiscal years. Source: *Budget of the United States Government, FY 2008.* FY 2007 data are estimates. FY 2008-2012 data are budget projections. FY 2009-2012 figures exclude Iraq and Afghanistan military costs.



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asks Congress to raise U.S. debt limit - MarketWatch

http://www.marketwatch.com/news/story/treasury-asks-congress-raise-us/story.aspx?guid=%...



2:23pm 8/23/2007 U.S. stocks trim declines

How the Budget Becomes Law FY 2008 Proposal = \$2.9 Trillion

Net interest - automatic

Discretionary Spending -12 appropriations bills, plus war supplemental bill(s) from Appropriations Committees

Entitlements -Reconciliation bill, other bills from various committees (such as Medicare drug bill) (optional)

Revenues -Reconciliation bill, other bills from various committees (such as the energy bill) (optional)

Source: AAAS, based on Budget of the United States Government FY 2008. FEB. '07 $\ensuremath{\textcircled{O}}$ 2007 AAAS





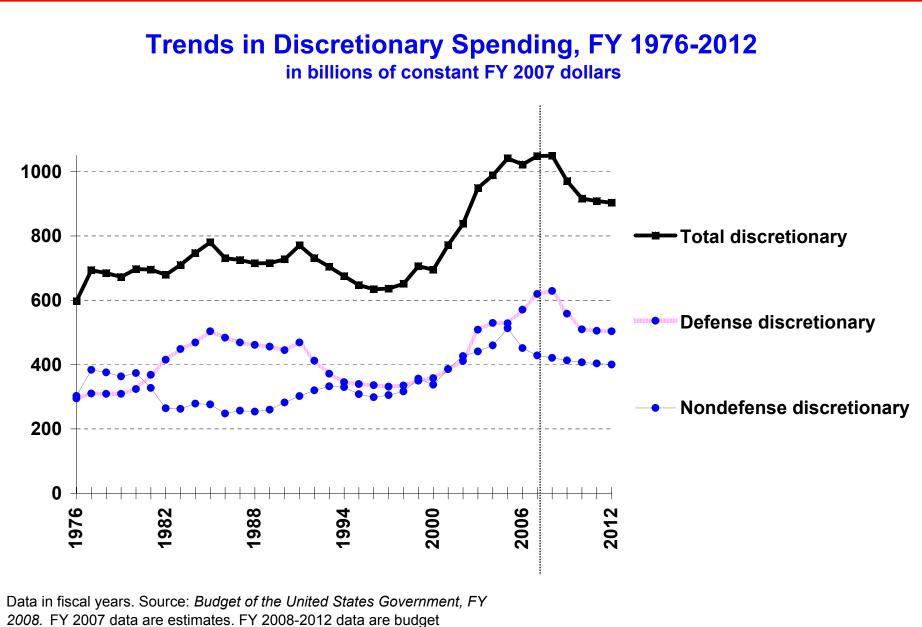
THE FY 2008 BUDGET PROCESS (1)

SUMMER 2006 – Agencies submit their FY 2008 proposals to OMB (Office of Management and Budget).
FALL 2006 – Agencies negotiate with OMB over their FY 2008 proposals.
January 2007 – Agencies finalize their requests.
February 2007 – President Bush releases his proposed FY 2008 budget.



THE FY 2008 BUDGET PROCESS (2)

- Feb. May 2007 Agency officials, public witnesses, and others testify at congressional budget and oversight hearings; authorizing committees try to write and pass authorization bills.
- Spring 2007 Congress approves its FY 2008 budget resolution.
 - Various committees receive instructions from the budget resolution to draft reconciliation bills.
 - Appropriations committees receive 302(a) allocations: total \$955 billion, \$23 billion more than the President's budget.
 - Appropriations committees determine 302(b) allocations dividing total discretionary spending among 12 bills.

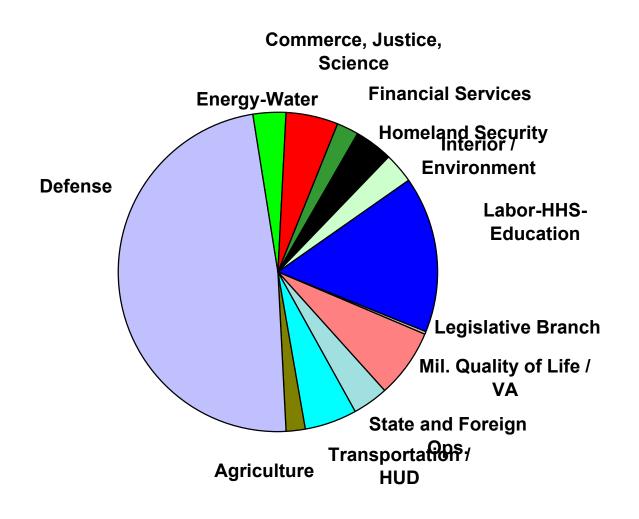


projections. FY 2009 - 2012 figures exclude Iraq and Afghanistan military costs.

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Discretionary Spending by Appropriations Bill FY 2008 House = \$955 billion



Source: Congressional Budget Office. Excludes supplemental funds for Iraq and Afghanistan military operations. OCT. '07 © 2007 AAAS





THE FY 2008 BUDGET PROCESS (3)

- Summer 2007 Appropriations subcommittees write appropriations bills. The full committees try to get the bills through the legislative process.
- September 2007 The House and Senate try to conference appropriations bills and send them to the President.
- October 1, 2007 FY 2008 begins. Discretionary programs must have a signed appropriations bill, or shut down. To allow more time, lawmakers pass continuing resolutions (CRs). (For FY 2007, 4 CRs were needed.)
- November 15 (today) the 1st CR expires tomorrow (11/16). 2nd CR extends through Dec. 14. 1 bill signed (Defense).
- Winter 2007-08 (?) Congress will probably pass an omnibus appropriations bill. (For FY 2007, a 9-bill omnibus was enacted Feb. 15).

U.S. BUDGET

Democratic Congress Begins to Put Its Stamp on Science

Six months into their rule on Capitol Hill, the Democrats have begun to make their mark on science policy. Many of their moves have underscored differences with the White House, including efforts to overturn the ban on federal funding for work on new embryonic stem lines, prominent accusations that the Bush Administration has politicized science advice, and proposals to increase and reshape funding for climate change research (see sidebar below). But as far as the Administration's most prominent science initiative is concerned, the new Congress has so far been more than supportive, at least in loosening the purse strings: It is poised to top the president's generous requests for the multiagency American Competitiveness Initiative (ACI), which is aimed at sharply increasing funds for the physical sciences.

It's unclear how the hyperpartisan atmosphere might affect Democratic budget aims, but the ambitious spending plans are helping balloon domestic spending bills. That's attracted White House threats of the veto pen. And looming over the whole process are yetto-be-written defense bills, which could be the big spoiler if war-related funding requires some across-the-board cuts later in the year.

In the past few weeks, House committees have approved most of the appropriations bills that contain funds for science, and a picture has started to emerge of how science policy is shaping up in the new Congress. Some highlights, agency by agency, of the action thus far: **National Institutes of Health (NIH):** There's not much relief in sight for NIH. An appropriations bill passed by a House panel and a companion measure approved by the Senate spend-

Budget Highlights

- Biomedical Research Both House and Senate are expected to provide a small increase over 2007, but not enough to keep pace with biomedical inflation.
- American Competitiveness Initiative Congress is likely to add to the president's request for physical science research. House bills would give DOE's Office of Science a 16% increase and NSF's education programs more than requested.
- Climate Change Research House bills include significant increases for research and \$50 million for a new commission that would bankroll new studies.

ing panel would both give NIH a small raise, reversing the president's proposed \$279 million cut. The Senate boost of \$1 billion, for example, would provide a 3.5% increase only half the amount biomedical research advocates are hoping for. That would bring NIH's total budget to \$29.9 billion, \$250 million more than the House has approved.

Even the Senate total is less than meets the eye, however. Both the House and Senate measures would add \$200 million to the \$100 million that NIH now transfers to the Global AIDS Fund, effectively cutting the Senate raise to only 2.8%. Still, even that meager increase would push the bill's total above the limit the White House has indicated would be

> acceptable. A provision that would permit federal funding for recently developed stem cell lines (see p. 1825) would further encourage a Bush veto. Congressional action "is only half the battle," says Jon Retzlaff of the Federation of American Societies for Experimental Biology in Bethesda, Maryland.

> **NASA:** The House appropriations committee has given a thumbsup to the president's \$3.9 billion exploration effort, to be run by NASA, but the committee also made clear that the agency's stressed science programs must thrive as well. Lawmakers added

\$60 million for data, research, and analysis in 2008, a slap at the agency's attempts to hold down such spending in order to pay for science project overruns and a new launcher. The House bill also directs NASA to ask the National Research Council to conduct a study of life and microgravity sciences, two areas the agency has virtually abandoned in recent years. The boosts in science, however, would come largely by deducting funds from NASA's tracking and data-relay satellite system, used to communicate with both military

NEW PRIORITIES FOR CLIMATE CHANGE RESEARCH

When Democrats gained control of the U.S. Congress, they made climate change one of their top priorities. But they quickly realized that putting into law caps on greenhouse gas emissions could take years of political wrangling—and possibly a new president. So while proposals for emissions controls have captured headlines (*Science*, 11 May, p. 813), key legislators have quietly focused on a more immediate goal: reordering priorities in climate change research to reflect the most pressing questions.

Budget bills now working their way through Congress (see accompanying story) include more than half a billion dollars for new applied energy research, a novel \$50 million climate research commission that would address regional impacts, and some \$17 million to spread the message on climate change through education and public outreach. Climate change research has sufficiently quantified anthropogenic warming, say Democratic aides. These new initiatives focus on "the causes, the impacts, and solutions," as a spokesperson for House Majority Leader Steny Hoyer (D–MD) describes them.

Some Democratic proposals have followed explicit calls—even requests for hardware—from the science community. Earth science researchers were

dismayed when a Pentagon review stripped climate sensors from an \$11.5 billion weather satellite system last year (*Science*, 16 June 2006, p. 1580), but Congress did little more than investigate. This year, a draft spending bill would set aside \$24.9 million for NASA and the National Oceanic and Atmospheric Administration to begin to develop two of the canceled sensors—both crucial for measuring Earth's heat balance—to bolt onto the crafts later if possible. The same bill calls for \$60 million to start developing a series of earth science missions at NASA in the precise order recommended last year by a National Academies panel that looked at needs and priorities for Earth observation over the next decade. The proposed educational funds also loosely follow that panel's recommendation to "improve scientific literacy" about Earth's climate.

Elsewhere, Democrats have set out on their own. Representative Norman Dicks (D–WA), chair of the Interior appropriations subcommittee, held a hearing in April on potential climate change impacts on everything from drought in the Great Basin in the western United States to insect populations that could ravage American forests. His subcommittee subsequently approved \$94 million for new climate research at environmental agencies and endorsed Dicks's proposal for a climate commission that one aide describes as "out of the box." Chaired by the president of the National Academy of Sciences, it would

R&D Budget and Policy Program

Current Status of FY 2008 Appropriations

November 15 update:

| * - reported out of Appropriations Committee; O - approved; X - rejected (click on the links to see the latest R&D Funding Update for each agency) | | | | Conference report | | | |
|---|------------------------|---|--|-----------------------|-----------------------|-----------------------|------------------------------------|
| Name of bill (Bill number) | Major R&D agencies | House Action | Senate Action | Conference done | House | Senate | President signed (Public Law #) |
| 1. Defense (HR 3222) | DOD | <u>0</u> 8/5 | <u>0</u> 10/3 | <u>O</u> 11/6 | <u>O</u> 11/8 | <u>O</u> 11/8 | <u>O</u> 11/13 |
| 2. Labor, HHS, Education (HR 3043, S 1710) | NIH, Education | <u>0</u> 7/19 | <u>O</u> 10/23 | <u>O 11/5^</u> | <u>O</u> 11/6^ | <u>O</u> 11/7^ | X 11/13 |
| 3. Commerce, Justice, Science (HR 3093, S 1745) | NASA, NSF, Commerce | O 7/26 (<u>NSF</u> , <u>NASA</u> , <u>DOC</u>) | O 10/16 (<u>NSF</u> , <u>NASA</u> , <u>DOC</u>) | | | | |
| 4. Energy & Water (HR 2641, S 1751) | DOE | <u>0</u> 7/17 | <u>* 6/28</u> | | | | |
| 5. Agriculture (HR 3161, S 1859) | USDA | <u>0 8/2</u> | <u>* 7/19</u> | | | | |
| 6. Interior and Env. (HR 2643, S 1696) | Interior, EPA | O 6/27 (Int, <u>EPA</u>) | * 6/21 (<u>Int</u> , <u>EPA</u>) | | | | |
| 7. Homeland Security (HR 2638, S 1644) | DHS | <u>O</u> 6/15 | <u>0</u> 7/26 | | | | |
| 8. Military Construction & Veterans (HR 2642, S 1645) | VA, some DOD | <u>0</u> 6/15 | <u>0</u> 9/6 | <u>O 11/5^</u> | <u>O</u> 11/6^ | | |
| 9. Transportation & HUD (HR 3074, S 1789) | DOT | <u>0</u> 7/24 | <u>O</u> 9/12 | O 11/13 | O 11/14 | | |
| 10. State & Foreign Operations (HR 2764) | AID | O 6/21 | O 9/6 | | | | |
| 11. Financial Services (HR 2829) | | O 6/28 | * 7/13 | | | | |
| 12. Legislative Branch (HR 2771, S 1686) | | O 6/22 | * 6/21 | | | | |



A DETOUR: SUPPLEMENTAL APPROPRIATIONS

Anytime – For unbudgeted needs, Congress and the President can pass supplemental appropriations bills outside the regular budget cycle in a compressed process. Usually for natural disasters and other emergencies, but in recent years Iraq and Afghanistan spending as well.

June 2007 – \$121 billion FY 2007 supplemental bill, mostly for war operations.

October 2007 – President Bush added to his 2008 supplemental request, bringing the total to \$196 billion. Congress will consider the request in January.

Often, this spending is designated as 'emergency' spending, meaning it doesn't count against budget resolution targets.

BREITBARTCOM

Bush seeks \$196 bil. for war on terror in Iraq, Ap Associated Press Afghanistan+

Oct 22 09:15 PM US/Eastern

WASHINGTON, Oct. 22 (AP) - (Kyodo)—U.S. President George W. Bush asked Congress on Monday to appropriate \$196.4 billion for antiterrorism operations in Iraq and Afghanistan as part of a supplemental budget request for fiscal 2008.

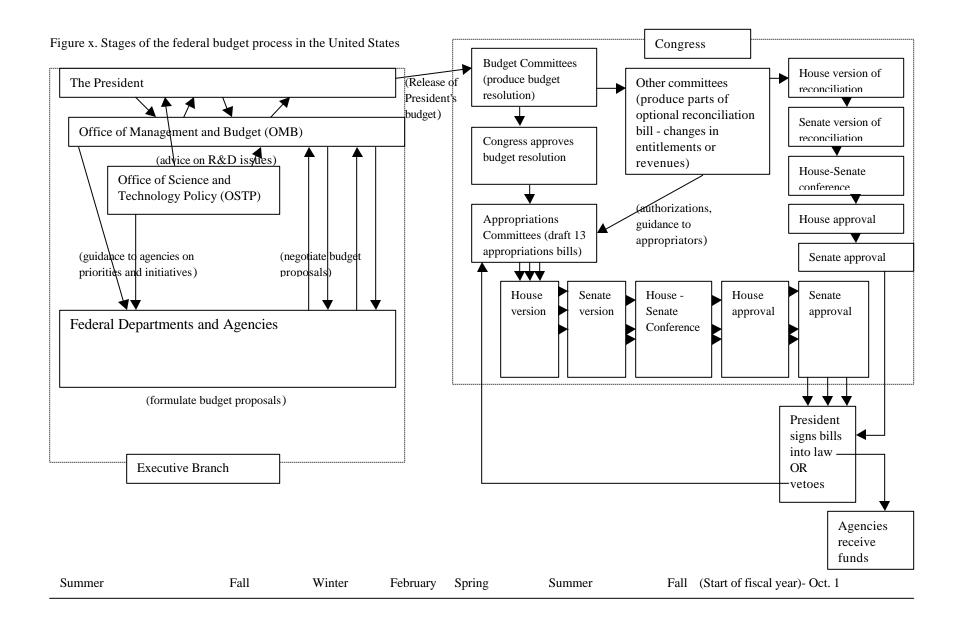
Bush said in a statement that his latest supplemental war funding request covers basic needs such as protection against improvised explosive devices and mine-resistant ambush-safe vehicles.

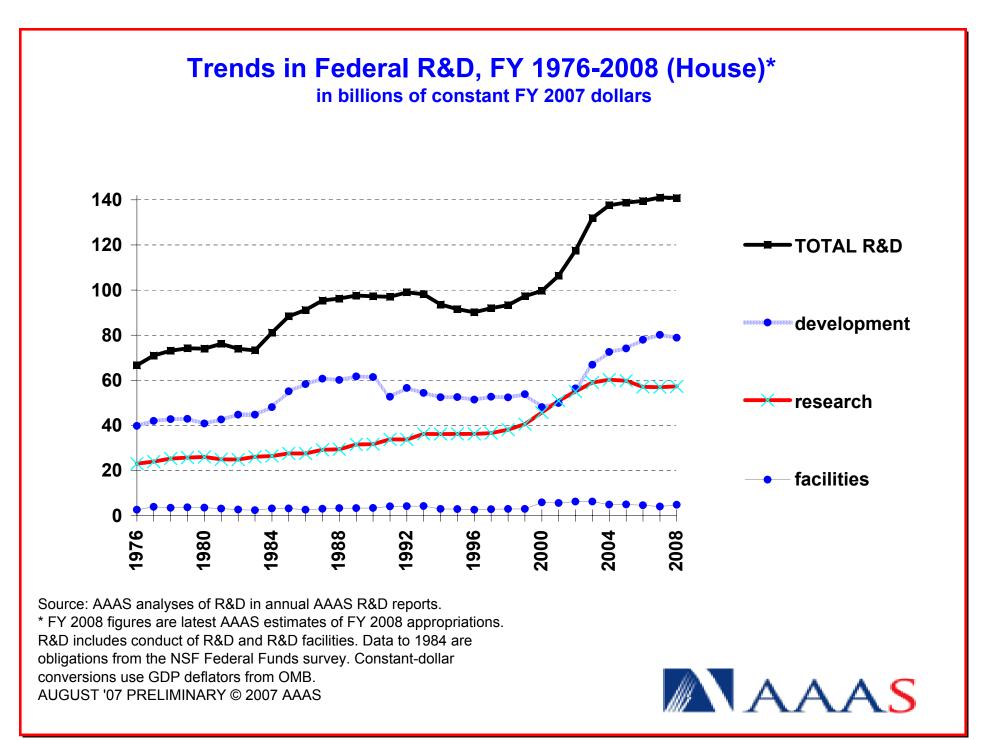
"I know some in Congress are against the war, and are seeking ways to demonstrate that opposition. I recognize their position, and they should make their views heard," he said. "But they ought to make sure our troops have what it takes to succeed.

"Our men and women on the front lines should not be caught in the middle of partisan disagreements in Washington, D.C.," he said.

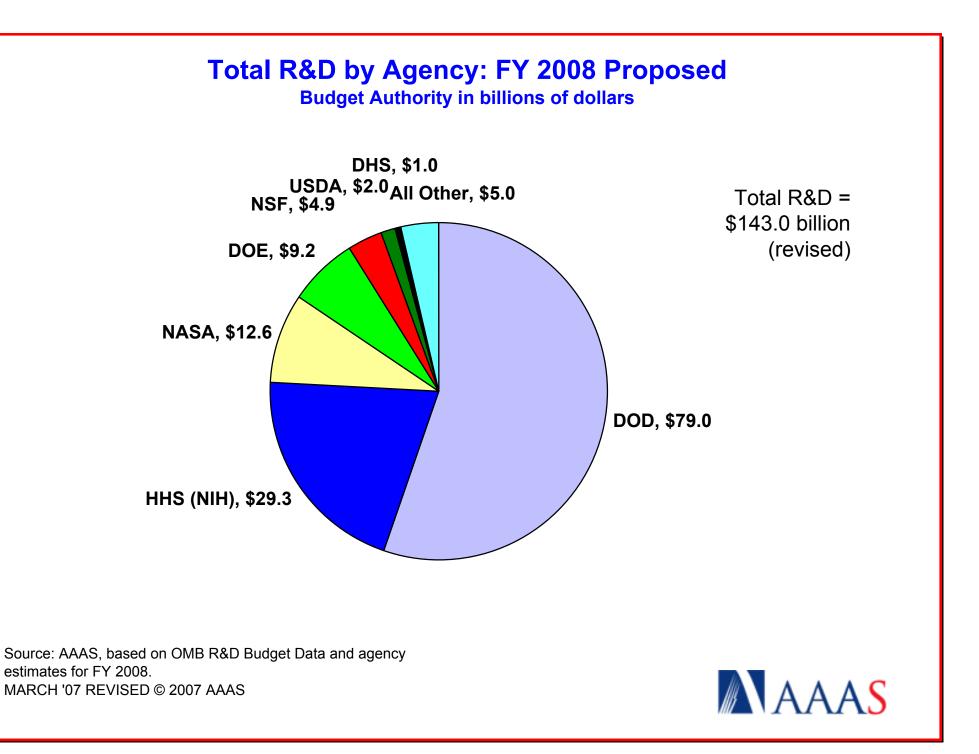
Senate Majority Leader Harry Reid, a Nevada Democrat, said he and his fellow Democrats are determined not to approve the measure.

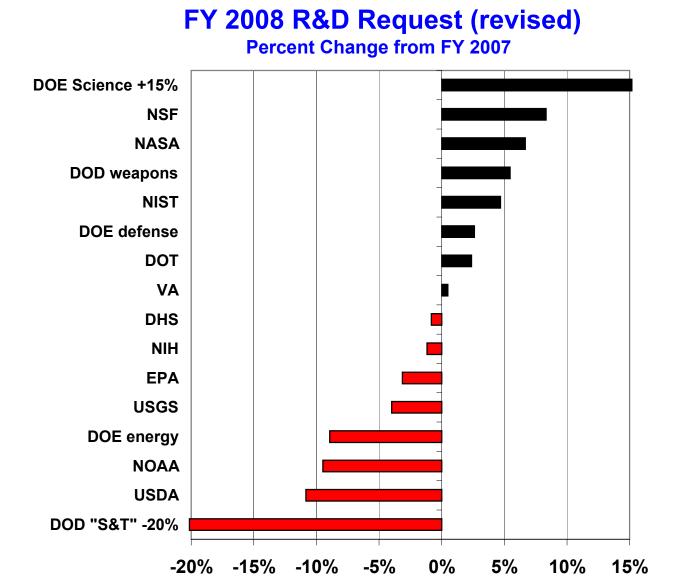
The Bush administration's funding request also includes \$106 million to provide heavy fuel oil or an equivalent value of other aid to North Korea on an "action-for-action" basis in exchange for the North's denuclearization measures.





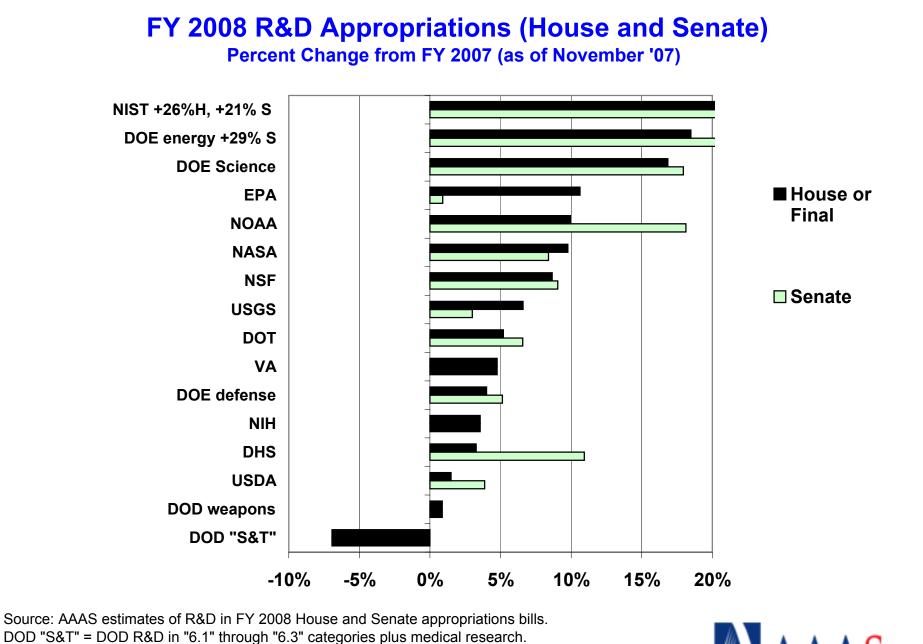






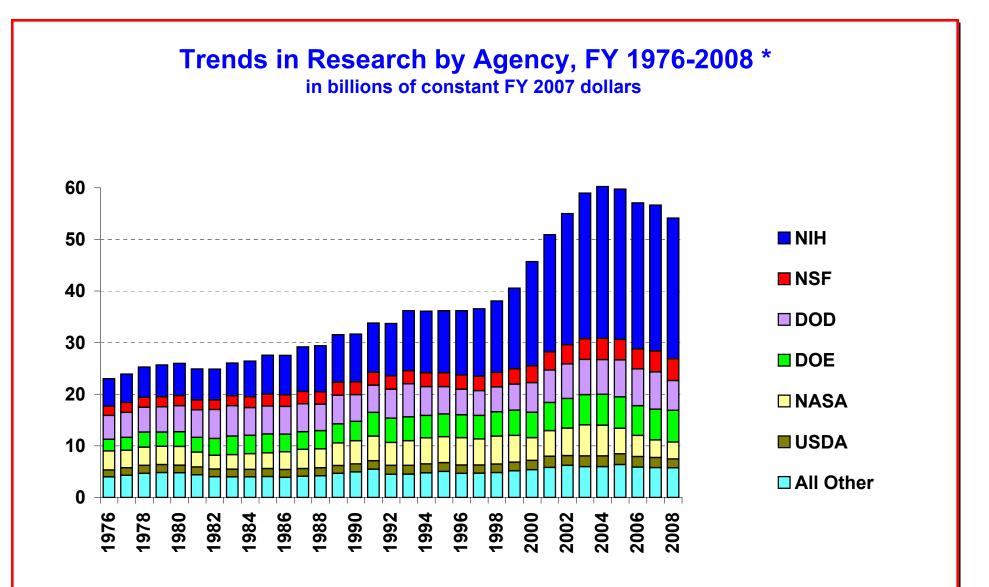
Source: AAAS, based on OMB R&D data and agency estimates for FY 2008. DOD "S&T" = DOD R&D in "6.1" through "6.3" categories plus medical research. DOD weapons = DOD R&D in "6.4" and higher categories. FY 2007 and 2008 figures include requested supplementals. FY 2007 = latest estimates of final appropriations. MARCH '07 REVISED © 2007 AAAS





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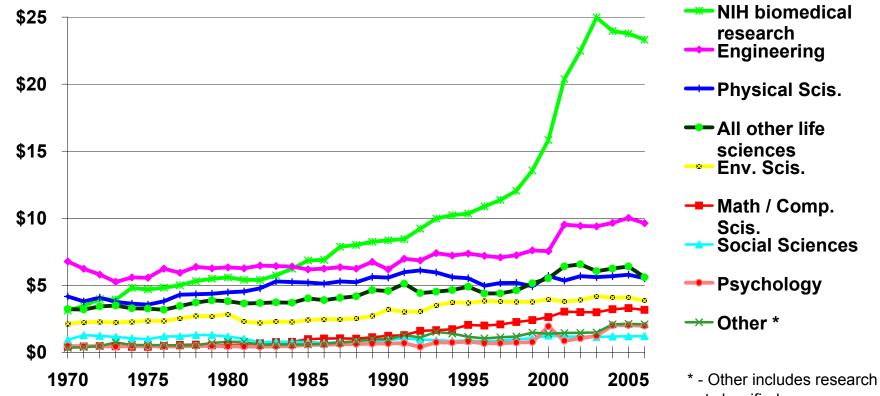


Source: AAAS analyses of R&D in annual AAAS R&D reports. * FY 2008 figures are President's request. 2007 figures are latest AAAS estimates of research in 2007 appropriations. Research includes basic research and applied research. 1976-1994 figures are NSF data on obligations in the Federal Funds survey. MARCH '07 REVISED © 2007 AAAS



Trends in Federal Research by Discipline, FY 1970-2006

obligations in billions of constant FY 2007 dollars



Life sciences - split into NIH support for biomedical research and all other agencies' support for life sciences.

Source: National Science Foundation, *Federal Funds for Research and Development FY 2004, 2005 , 2006,* 2006. FY 2005 and 2006 data are preliminary. Constant-dollar conversions based on OMB's GDP deflators. FEB. '07 © 2007 AAAS

not classified (includes basic research and applied research; excludes development and R&D facilities)



AAAS R&D Budget and Policy Program



NEXT...

Write your own appropriations bill!



COMMITTEE ON APPROPRIATIONS

Press Contact: Kirstin Brost, Full Committee, 202-225-2771 Gerry Griffith, Chairman Mollohan, 304-233-0621

SUMMARY: 2008 COMMERCE, JUSTICE, SCIENCE APPROPRIATIONS

This bill provides local communities with the help they need to keep our streets safe.

From 2001 to 2006 funding for state and local law enforcement grants was cut from \$4.4 billion to \$2.5 billion - 43%. Last year, the FBI reported that violent crime had its biggest increase in over a decade. This bill reverses those trends, making its biggest investments into restoring the state and local grants and funding for the FBI.

To keep our nation's economic preeminence in the world we need to stay on the cutting edge of science and technology. To that end, this bill makes strong increases into scientific research at the countries top agencies devoted to science.

It also tackles the enormous challenge of Global Climate Change, with \$1.86 billion for research and development projects to study what is happening, what could happen, and what we can do about it.

| Bill Total | |
|------------------------|------------------|
| 2007 Enacted: | \$50.344 billion |
| President's Request: | \$51.238 billion |
| Committee Mark: | \$53.551 billion |

KEY INVESTMENTS

JUSTICE

State and Local Law Enforcement and Crime Prevention Grants: \$3.3 billion, \$1.8 billion above the President's request and \$428 million above 2007. From 2001 to 2006 these programs were cut by \$1.9 billion (\$4.4 billion to \$2.5 billion). Last year, the FBI reported that violent crime increased in 2005 and 2006 for the first time in years.

• **Community Oriented Policing Services (COPS):** \$725 million, \$693 million over the President's request and \$183 million above 2007, to support local law enforcement agencies, including \$100 million for the "COPS on the Beat" hiring program, not funded since 2005. CRS estimates that 2,800 new police officers can be put on America's streets with these funds. The President's budget would have cut these grants by 94%.