Bush Cuts Crucial STAR Program in Education: Nation May Lose Huge Returns for Few Dollars

Crippling our future
At home and abroad, our nation succeeds at identifying environmental problems, and designing effective solution, because we have a talented community of environmental specialists. Economists, ecologists, engineers, and social scientists all contribute to our understanding of issues from global climate change to energy use planning to arctic ecosystem preservation. Tomorrow’s citizens may not be so lucky if President Bush’s proposed budget passes intact.

Despite Bush’s campaign pledge to place a high priority on sound science as a basis for effective environmental decision making, the proposed budget axes the STAR Fellowship, a one-of-a-kind program that provides support and training for graduate students working on applied environmental problem-solving. These students will become future leaders in all sectors of society: private industry, education, government, and not-for-profit organizations. The STAR Fellowship fosters innovation as fellows develop independent ideas and join a multidisciplinary community of researchers. It encourages fellows to address the challenge of integrating basic and applied science in targeted, meaningful ways that will contribute to society.

Cutting edge research applied to practical problems
STAR fellows have made important contributions to agricultural engineering, aquatic and terrestrial ecology, toxicology, risk analysis, public health, epidemiology, and resource economics. For example, STAR fellows have:

- Identified best management practices for agriculture to reduce phosphorus loading to the Cannonsville Reservoir, a major source of drinking water for New York City.
- Evaluated the capacity of forests and grasslands to sequester carbon and mitigate climate change.
- Investigated how legal and administrative decisions that limit developers’ site cleanup liability encourage or discourage redevelopment in polluted urban areas.
- Developed a new process to remove iron from acid mine drainage and acidic industrial wastewater without producing harmful by-products.
- Determined whether exposure to pesticides in a border agricultural community resulted from on-the-job hazards or more indirect routes that also affect children and families.

STAR stands for "Science To Achieve Results" and has been administered by the Environmental Protection Agency (EPA) since 1995. It is one of the top science fellowship programs in the country and one of the only ones aimed at solving real-world problems. It has funded over 800 graduate students. It is one of the only sources of federal funding available to graduate students in environmental fields ranging from economics to ocean chemistry to rural sociology to engineering to soil biology.

One way the STAR Fellowship program is unusual is that it brings together Fellows from different fields, encouraging interdisciplinary communication and collaboration. This creates a community of scientists with the skills and networks to address multifaceted, complex environmental problems.
A gem at a bargain-basement price
Perhaps most troubling and most puzzling, the STAR Fellowship program comes at a bargain-basement price. Lauded by many as one of the great success stories at EPA, the program accounts for less than one percent of EPA’s annual budget, which is itself small compared with many other Federal programs.

STAR Fellowships pay tuition and fees, and provide a $17,000 per year stipend, and a $5,000 per year research budget to recipients. For PhD students, the fellowships last 3 years; for Masters students they last 2 years. Since 1995, the EPA has awarded approximately 100 new fellowships per year.

Supporters rally; calls and letters flood the halls of Congress
Nothing speaks to the contrast between price tag and importance more loudly than the explosive response of students and faculty across the country. The National Council on Science and the Environment (NCSE) reports that April 10 (STAR Call-In day) produced a fantastic show of support for STAR Fellowships. In 24 hours, NCSE received copies of 229 letters written on behalf of STAR Fellowships. Phone lines to Congressional offices were busy all day with STAR Fellowship calls, to the point that some FAX lines were clogged. Since then, the count of letters received has increased to 497, and more seem to be arriving daily. It is not known how many letters were sent to Congress without copies to NCSE.

Kill the goose or hatch another golden egg?
The nation could reap even more benefits from this low-cost gem. Competition for STAR fellowships is intense, with a funding rate of less than 10 percent. If you go to the Ithaca, NY FEDEX office on the day these must be submitted, you will find a madhouse packed with graduate students, all of whom have STAR Fellowship applications in hand. This year EPA received 1,400 applications. With last year’s budget, 7% of these applicants could be funded. Under the Bush proposed budget, none would receive funding. Over 5,000 individuals – the applicants and those who wrote the required 3 supporting letters for each – will have wasted their time.

Because the number of high quality applications far exceeds EPA's ability to fund them, increased funding would lead to even greater rewards. In written testimony to the House Subcommittee which has purview over the EPA budget, a Nobel Laureate, a member of the National Academy of Sciences, a MacArthur Fellow, and more than 60 others from Universities across the country recommended: “We urge Congress to provide the STAR Fellowship program with $30 million, a budget sufficient to fund ~20% of applicants while maintaining the high standards of excellence that have characterized it to date.” With such a low price tag, this would seem a wise investment to solve pressing environmental problems and train the next generation of leaders in environmental science.

STAR Fellowships also contribute to national security
As observed by Democrats on the House Science Committee in their statement of views on the Annual Budget:
It is appropriate to remember the wise words of the Hart-Rudman Commission on National Security/21st Century, which completed a thorough assessment of the nation’s post-Cold War security challenges six months before the attacks of September 11, 2001. The report, which accurately predicted terrorist attacks on U.S. soil, emphasizes that the U.S. “has seriously under-funded basic scientific research” and recommends that federal R&D funding be doubled by 2010. This recommendation is more, not less, relevant in the wake of last year’s terrorist attacks and underscores the inadequacy of the FY03 civilian R&D request.” (http://www.house.gov/science/press/107/demviews.pdf)

Eliminating the STAR Fellowship program further aggravates the problem described by the Hart-Rudman Commission.

*Congress begins to respond; is it too late?*
Sherwood Boehlert, Chair of The House Science Committee, and Representative James A. Barcia, also of the Science Committee, have begun circulating a letter urging the Appropriations Committee to reinstate the STAR Fellowship program. If enough Congressmen sign the letter, it could influence the Appropriations Committee’s decision about whether to reinstate the STAR Fellowship.

In the meantime, EPA has treated the proposed budget as a done deal. The 1,400 applicants have received letters stating that no new fellowships will be awarded this year. Each applicant also received reviews of his or her proposal, explaining strengths and weaknesses and giving the proposal an overall rating. Current STAR fellows have received emails stating that in order to conserve funds and meet obligations to those already funded, the annual STAR fellows conference will be canceled, thus undermining the program’s ability to build a community of scientists from diverse disciplines. Previously, EPA had also suggested that the STAR Fellowship program had not actually been eliminated but transferred to the National Science Foundation (NSF). Yet officials at NSF and at the House Science Committee have stated clearly that this is not the case. In President Bush’s proposed budget, the STAR fellowship program has simply been eliminated.

It's a sad time when a win-win situation turns into a lose-lose story, but that's what could happen with the STAR Fellowship program.

For more information:

Description of the EPA STAR Fellowship Program
http://www.cnie.org/NCSE/SciencePolicy/?FID=1679

Update on The STAR Fellowship Campaign
http://www.cnie.org/NCSE/SciencePolicy/?FID=1741