Security Council Blocks NSF Grant to IIASA

A $500,000 grant that NSF approved 15 months ago has been turned down after a tortuous interagency review

In January 1986, the National Science Foundation gave its approval for a $500,000 grant to fund three programs at the International Institute for Applied Systems Analysis (IIASA), an East-West think tank based in Austria. On 27 March 1987, more than a year later, the National Security Council told NSF not to spend the money.

IIASA's supporters are incensed. They believe they had assurances that the Administration would look favorably on such grants. Disapproval of the NSF funds, they believe, could prejudice potential grants from other U.S. government agencies and make it difficult to raise foundation support for the financially troubled institute.

Launched in 1972 in the spirit of détente, IIASA was established to bring scientists from the United States, the Soviet Union, and other industrialized countries together to work on policy problems confronting industrial society. Seventeen countries eventually signed up as participating members, with the United States and the Soviet Union contributing half the organization's funds between them and the other members paying the rest. The U.S. funds were channeled from NSF through the National Academy of Sciences, which was the official American member organization.

Things started to go sour for IIASA in 1980, when a senior Soviet official on the institute's staff was accused of running an espionage operation. Although his illicit activities were unrelated to IIASA and its operations, the episode did nothing to endear the institute to the incoming Reagan Administration. Citing poor value for money—U.S. annual dues then amounted to about $2.3 million—the Administration announced in 1981 that it was no longer willing to provide government funds for IIASA membership. The formal cutoff came at the end of 1982.

In the meantime, supporters of IIASA in the United States mounted a rescue operation. The American Academy of Arts and Sciences took over from the National Academy as the U.S. member organization and funds were raised from foundations and corporations to maintain a reduced American contribution. Feelers were also put out to explore the possibility of obtaining funds from U.S. government agencies for specific IIASA programs.

In 1985, IIASA's supporters believed the way was clear for such funding. On 22 September 1985, Secretary of State George P. Shultz wrote to McGeorge Bundy of New York University that "Should a U.S. government agency wish to fund participation in an IIASA project because of its scientific interest to the agency, the Department of State will give sympathetic consideration to such requests." Six weeks later, a proposal was submitted to NSF for a $500,000 grant to support IIASA programs in environmental policy, problems of aging populations, and the development of computer techniques for decision-making in areas of uncertainty. The proposal was for fiscal year 1986; IIASA made it clear that it would submit proposals for similar amounts in FY 1987 and FY 1988.

The proposal was reviewed in-house by NSF and in January 1986 it was sent to the State Department for review for foreign policy considerations. Although NSF officials are careful to point out that this did not constitute formal NSF approval of the grant, Richard Green, the assistant NSF director in charge of international programs, concedes that it is "a fair assumption" that the proposal would not have been sent to State if NSF was not planning to fund it.

The proposal apparently ran into opposition from officials in the Department of Defense. At one point, Stephen Bryen, a DOD official in charge of export control policy, raised concerns about potential transfer of computer technology via IIASA to the Soviet Union. IIASA officials countered that computers used at IIASA are far from state of the art and in any case the institute abides by all U.S. export control regulations. The State Department eventually bucked the proposal to the NSC for a final decision.

An endless series of interagency meetings was held to discuss the matter, and "we were assured about once every 2 weeks that they were going to approve it in 2 weeks," says Harvey Brooks of Harvard University, who is chairman of the U.S. committee for IIASA. The NSC was apparently close to a decision last fall, but the Iran-Contra arms scandal broke, security adviser John M. Poindexter resigned, and the IIASA paperwork "sank without trace," says Chester Cooper, IIASA's Washington representative.

IIASA's supporters, meanwhile, took their case to Congress, which directed the Administration to provide $500,000 for IIASA programs, including specific language to that effect in reports accompanying appropriation bills for fiscal years 1986 and 1987. Senator Mark Hatfield (R–OR), then chairman of the Senate Appropriations Committee, and Senator Richard Lugar (R–IN), who chaired the Senate Committee on Foreign Relations, also wrote to Poindexter, urging him to make an expeditious and positive decision.

All this was to no avail. On 28 March, NSF was informed that the decision was "no." A document setting out NSC's reasoning, which has not been made public, states that national security considerations were "not paramount." The central factor, NSC said, is that the Administration prefers to

IIASA

Schloss Laxenburg. *IIASA's imposing quarters near Vienna.*

conduct exchanges with the Soviets through bilateral agreements rather than multilateral organizations.

IIASA has submitted proposals for smaller grants to other government agencies, but the fate of these is now uncertain. Moreover, some of the foundations that have provided funds for U.S. membership in IIASA have made it clear that their commitment is not open ended.

Also uncertain is the fate of a second proposal for another $500,000, which was submitted to NSF last November for FY 1987. This has been sent outside NSF for peer review, which is expected to be completed in the next few weeks. If it passes muster, it will then be subject to another round of policy review.

IIASA's supporters are looking for some help from Congress. A letter signed by Brooks, Carl Kaysen of MIT, who is vice chairman of the U.S. Committee for IIASA, and Howard Raiffa of Harvard Business School, a member of the IIASA council, has been sent to key members of the House and Senate. It says that if there are no national security grounds on which to disapprove the funding—which the NSC apparently concedes—the decision "appears to be an unwarranted intrusion by the NSC into normal NSF procedures." The letter suggests that a congressional examination of the NSC's action is warranted. IIASA officials are also scheduled to testify this week before the House appropriations subcommittee that handles NSF's budget.

Although the first $500,000 proposal appears to be dead, IIASA supporters are pinning their hopes on the FY 1987 proposal. If it is approved by NSF after external peer review, at least they would be on more solid ground in arguing that IIASA's work is worth supporting from a scientific standpoint. That could be important, for IIASA's most prominent piece of work so far, a major review of global energy strategies, has encountered some pointed criticism of the computer models that led to the study's conclusion that rapid development of all forms of energy—including breeder reactors and synthetic fuels—is required (*Science*, 4 January 1985, p. 34).

However, if the foreign policy review drags on as long as it did for the first proposal, IIASA could be in financial trouble. The letter from Brooks, Kaysen, and Raiffa spells out three possible consequences of the NSC decision: "the institution may unravel; it might limp along with an interim Western European or Japanese director; or it might even thrive without major U.S. participation." It adds: "All these alternatives are undesirable from the U.S. perspective." ■ COLIN NORMAN

Plutonium by the Ton

The fate of the defense production reactors hangs on the need for plutonium, and information on that is hard to find

As they were compiling a report on the defense nuclear program a few weeks ago, Senate staffers ran unexpectedly into Executive Branch censors.

"We had a graph without numbers—just a couple of trend lines" showing the military's need for fresh nuclear material, says Stephen L. Crow, senior staffer for the energy appropriations subcommittee. One line showed the production of new warheads in the 1980s. The other showed the rate at which old weapons were being retired. The demand for material for new weapons was roughly in line with the rate at which it is recovered from old weapons.

The graph will not be published. When Department of Energy (DOE) officials saw it, they said it contained secret information.

The graph was similar to others put out by DOE to show 20-year trends in explosive power in the U.S. stockpile, according to Crow. But this one illustrated a different point: that DOE's production reactors "are not the main source of material for weapons." Most of the material comes from old weapons being taken out of service. This applies to plutonium-239, which has a half-life of 24,000 years, not to the other component, tritium, which has a half-life of 12 years and must be steadily replenished.

This is a touchy subject this spring, not only because the Soviets may be interested. DOE's main plutonium production reactor, the N reactor at the Hanford Reservation in Washington, has been shut down since December for safety improvements. In addition, three other usable reactors based at the Savannah River Plant in South Carolina were cut back to one-half power in March, also for safety reasons (*Science*, 27 March, p. 1563). The output of material for nuclear weapons has been sharply reduced.

Senator Mark Hatfield. *Questions forecast for plutonium demand.*

DOE officials are engaged in an intense but unseen campaign to get these reactors running again, and they are urging members of Congress not to yield to constituents' demands that the N reactor be closed for good. On the other hand, members from the Pacific Northwest are asking the department to provide a strong justification for keeping the reactor on line. It was in just such a meeting between senators and DOE officials in March that the plutonium graph appeared and was promptly classified.

Although DOE's judgment is to be honored, some remain skeptical. Senator Mark Hatfield (R–OR), whose constituents live near the N reactor, wonders whether the graph was not offensive as much for its policy as for its technical implications. The question is whether the projected requirements for plutonium reflect real national needs or just a departmental agenda.

DOE officials are loath to discuss the issue in public for fear of violating security rules. However, speaking about the renovation of the N reactor at a press conference last December, DOE under secretary Joseph F. Salgado said, "I will tell you today that national security reasons do not allow the permanent shutdown of the N reactor." He said no more. More recently, Admiral Sylvester R. Foley, Jr., DOE assistant secretary for defense programs, told the *Charlotte Observer* that "a problem of increasing dimensions" has arisen because of the cutback in plutonium output. He reportedly said during a classified hearing in March that supplies could run out in 1991.

While officials were debating these claims and batting numbers back and forth in secret meetings, a private group on 22 April put out an authoritative guide to the whole subject, called the *Nuclear Weapons Databook*, volume II.* It is the second in what is

*Thomas B. Cochran, William M. Arkin, Robert S. Norris, and Milton M. Hoenig, Eds., *Nuclear Weapons Databook*, volume II, *U.S. Nuclear Warhead Production* (Ballinger, Cambridge, MA, 1987).