

Perestroika and Détente Boost IIASA's Prospects

The East-West think tank has a grant from the U.S. government and is receiving renewed attention from the Soviet Union. The main priority is to bolster its scientific credibility

Laxenburg, Austria

SUPERPOWER DÉTENTE, the Chernobyl nuclear accident, and the departure from the Reagan Administration of Assistant Secretary of Defense Richard Perle have combined to offer a new lease on life to the International Institute for Applied Systems Analysis (IIASA), the much beleaguered research institution housed in a palatial 18th-century hunting lodge 15 miles outside the Austrian capital of Vienna.

Earlier this year, President Ronald Reagan overrode objections from members of the National Security Council and approved a proposal (already endorsed by Congress) that the National Science Foundation contribute \$450,000 toward a variety of research activities at the institute, ranging from studies of environmental monitoring to the spread of computer-integrated manufacturing.

In doing so, Reagan partially reversed a policy decision taken shortly after he entered office in 1981 to withdraw official U.S. support for the institute. Up to that point, the U.S. government had provided through the National Academy of Sciences about 25% of IIASA's funding of about \$10 million a year; a similar amount was contributed by the Soviet Union, with the remaining costs being shared equally among member institutions representing 14 other states, divided between the two sides of the Iron Curtain.*

The Soviet Union has remained a staunch IIASA supporter, and has always paid its dues on time (and in hard currency). In the past, however, it has sometimes appeared in Western eyes to be interested in using IIASA less as a bridge between two scientific communities than as a bridgehead for gaining access to sensitive economic and political information about the West.

According to several participants at a meeting held at Laxenburg last month to

celebrate the institute's 15th anniversary, the new generation of political leaders in Moscow has revealed a significantly higher appreciation of both the scientific and economic importance of systems analysis. This may reflect the fact that the success of the new Soviet economic policies is likely to depend critically on the effectiveness of the management systems that are put into place.

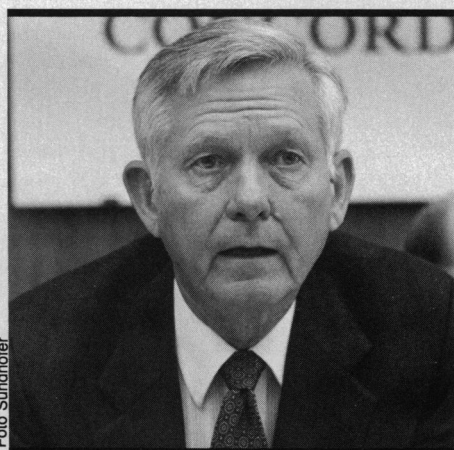


Foto Sundhofer

"The strength of the institute must rest on its intellectual resources, and at present these are not being made adequately available from all of our member countries."

**—IIASA director
Robert Pry**

The need for systems analysis has been further heightened by the Chernobyl nuclear accident. This not only revealed serious deficiencies in the way that the nuclear plant was being operated but has also given rise to a much broader debate about the social implications of energy planning than has occurred in the past.

IIASA director Robert Pry admits that the institute still faces major budgetary problems, and the clouds that, only a few

years ago, threatened the continued existence of the institute have therefore not entirely lifted. But its prospects are looking brighter than they have for several years.

IIASA was founded in the early 1970s in part as a gesture to East-West collaboration. Despite some substantial research achievements, its political origins have long dogged attempts to establish its scientific credibility. The problem was exacerbated when the institute's Soviet secretary was identified in 1981 as the contact for a Norwegian spy, an incident which sealed IIASA's fate in the eyes of critics such as Perle in the early Reagan Administration.

IIASA's return to favor in Washington is widely seen as reflecting the recent thaw in East-West relations rather than a reassessment of its scientific work. "The decision to approve the IIASA funding seems to reflect the overall shift in the Administration's attitude toward the Soviet Union" says Peter de Janosi, chairman of the U.S. Committee for IIASA and vice president of the Russel Sage Foundation in New York which, together with the Sloan and MacArthur foundations, has been helping to fund participation by U.S. scientists in the institute's activities over the past 6 years through the Boston-based American Academy of Arts and Sciences.

De Janosi says that the NSF money, together with that raised from the private foundations, will be sufficient to cover two-thirds of the United States' assessed dues for the current year. He is optimistic that the remainder will be found.

The main task now facing the institute is to develop its intellectual credibility, and in particular to overcome the reputation it has gained in the scientific community for combining some top-level research—both in the pure and applied dimensions of systems analysis—with some research that is widely seen as second-rate.

Attracting top scientific talent is not an easy task, admits director Pry. "The strength of the institute must rest on its intellectual resources, and at present these are not being made adequately available from all of our member countries," he says.

In some fields, IIASA has already established a solid international reputation. In the methodology of model-building, for example, its research is "state of the art," says Herbert Simon of Carnegie-Mellon University. Its applied studies have also produced important results, ranging from some of the first indications that natural gas is likely to play a much greater role than previously thought in replacing coal as a source of energy, to computer-based models currently being used to monitor the management of water resources or the spread of acid rain.

*IIASA has national member organizations in Austria, Bulgaria, Canada, Czechoslovakia, Finland, France, German Democratic Republic, German Federal Republic, Hungary, Italy, Japan, Netherlands, Poland, Sweden, U.S.S.R., and the United States. The Royal Society withdrew as Britain's representative in 1981.



Schloss Laxenburg. IIASA's converted 18th-century hunting lodge.

"IIASA has been a very important organization in advancing both the science of modeling and the science of systems analysis," says Simon. "Equally important, it has been a place where scientists from many countries, both East and West, can come together and work on their common interests."

Some of the research projects, however, have been widely seen as producing little of either intellectual or practical value. In some cases, this is said to have been the result of giving free rein to strong-minded individuals with an excessively zealous commitment to the claims of systems analysis. There has also been some concern that Eastern European states in particular, including the Soviet Union, have occasionally appeared to offer IIASA research fellowships to their scientists as little more than rewards for good behavior at home.

Recent attempts to solve the first of these problems range from the increasing use of outside peer review for research proposals, to the insistence that all research results should be published in refereed and internationally available journals.

As for the second, nobody appears keener to raise the intellectual level of Soviet and

Eastern European participants than the newly elected chairman of the IIASA council, Vladimir S. Mikhalevich, director of the V. M. Glushkov Institute of Cybernetics in Kiev and a member of the Supreme Soviet.

Mikhalevich has long been associated with one of IIASA's more highly regarded programs, that on system and decision sciences, which has been responsible for important work in fields such as optimization and decision theory. In particular, he is said, as head of the Glushkov Institute, to have been influential in ensuring that research positions on this program were allocated, where appropriate, to some of the brightest young Soviet mathematicians.

"IIASA is a very small institution. Its resources are limited, and they will never amount to very much," said Mikhalevich in an interview with *Science*. "This is one reason that we must take care to ensure the good quality of our work, particularly if we wish to broaden our attraction to young scientists."

The record of IIASA research in the past has, he says, been "variable," with some projects, such as those on basic methodology, having received "very strong" support from top scientists in both the East and the

West, while others have suffered from inadequate critical assessment. "The issues in IIASA must be more realistic, and we must, for example, establish closer ties with other international organizations," he says.

Mikhalevich admits that this new sense of scientific realism on the part of the Soviet Union is a reflection of the new spirit of "economic realism" in Moscow. He points out, for example, that one of the chief architects of Mikhail Gorbachev's reforms, his economic adviser Abel G. Aganbegyan, was one of the original IIASA fellows, and returned recently to deliver a lecture on perestroika.

Much of the public discourse about IIASA continues to reflect its early ambitions. A press release issued at the end of the anniversary meeting described how discussions had focused on "the application of scientific research to such world issues as nuclear disarmament, changes in the global climate and development in the Third World."

Within IIASA's research programs, however, there has been a shift away from global problem-solving toward a more pragmatic interest in topics of specific interest to its member organizations and their governments, such as the reasons for the successes and failures of joint East-West commercial ventures, or of environmental problems—like acid rain—which affect countries on both sides of the Iron Curtain. This trend, although criticized by some as turning IIASA into a "service agency" and away from its goal as a research institution, has been reinforced by recent moves to seek outside finance through consultancy contracts in order to make up for the budget shortfall caused by the withdrawal of U.S. funding.

It may also be bringing a new sense of reality to research goals. Jermen M. Gvishiani, chairman of the IIASA council for the first 15 years and director of the Soviet Academy of Sciences' Research Institute for Systems Studies, admits that IIASA has sometimes been too ambitious in the past. Although the institution has been successful at finding "creative problem statements," he told last month's meeting in Laxenburg, it may have been wrong "to try to achieve both the development of viable problem statements and strategies for their solution."

But Gvishiani expressed optimism about the future. "At present, we see a rapid change in the general international situation to a certain extent akin to what was happening at the time when the Institute was created," he said. "Let us hope that the new thinking and the new international reality will give [IIASA] new energy and new impetus."

■ DAVID DICKSON

Panel Completes Interviews in "Baltimore Case"

The National Institutes of Health's official panel of three immunologists who were called in to investigate a paper coauthored by David Baltimore, director of the Whitehead Institute at MIT, is said to have found no evidence of fraudulent research.

The committee met in Boston for 3 days last month and interviewed the principals in a dispute about the validity of data in a paper published in *Cell* in 1986 (*Science*, 1 July, p. 18). Joseph M. Davie of Searle, Hugh McDevitt of Stanford, and Ursula Storb of the University of Chicago have begun writing their report, which will be sent to the coauthors for review before it is released.

According to sources close to the NIH

investigation, the committee will report weaknesses in the controversial paper but will not accuse anyone of misconduct.

The *Cell* paper, which presented new data about the production of immune cells in transgenic mice, has been reviewed by researchers at MIT and at Tufts, where one of the principal authors is now. Each review allowed that the disputed data could be subject to more than one interpretation, but found the paper to be within scientific norms. However, two self-appointed fraud busters at NIH have raised enough questions to require a third analysis. NIH expects its report to be completed within a few weeks.

■ B.J.C.