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place more emphasis on development of such vehicles.

However, Richard Strombotne, director of DOT's fuel economy program, says that to think that DOT could impose a higher 1985 standard on an industry that has already invested billions of dollars to meet the present schedule of standards is just not realistic. But he adds that DOT now has studies under way that look to an increase in standards for model year 1986 and thereafter and that the department may have enough information in hand by next spring to support such an initiative.

Congress has done next to nothing about the auto fuel economy shortfall. Representative John Dingell (D-Mich.), chairman of the House Energy and Power Subcommittee, held a hearing in March that was supposed to have focused on this problem. But, as it turned out, Dingell, who is from Detroit and has a reputation of being protective of automobile manufacturers, was less interested in reforming fuel economy test procedures than in questioning EPA officials aggressively about fuel penalties associated with emission standards for pollution control—or so it seemed to observers from EPA and DOE.

The present automobile fuel economy situation falls into a familiar pattern. Congress passes a law that seems to promise great things. But as time passes, execution of the new programs mandated goes awry and delivery on the promise falls short. In light of this, the fuel economy shortfall and the absence of any special effort to correct it would not be especially surprising if the shortfall were not such an important setback to the Carter Administration's major policy objectives of conserving energy and reducing oil imports.

When Administration priorities are slighted by the agencies, it is up to OMB to knock heads and see that agency programs are set straight. Jim J. Tozzi, who serves under Cutter as chief of OMB's environment branch and as budget examiner for EPA, told *Science* that in the review of fiscal 1981 budget requests now beginning questions will be raised about the adequacy of the EPA and DOT commitment to the fuel economy program. "I think this thing will be a candidate for a change in agency priorities," he said.—LUTHER J. CARTER

U.N. Technology Meeting Lacked Clear Direction

The long awaited conference on technology and development produced few concrete proposals

As the United Nations Conference on Science and Technology for Development (UNCSTD) came to a close early this month, the Rev. Theodore M. Hesburgh, leader of the U.S. delegation, warned his fellow negotiators not to "give way to either discouragement or cynicism." After nearly 3 years of preparation, two grueling weeks of negotiations, and a final all-night session, many of the 4000 diplomats and technical advisers believed they had much to be cynical about.

They had gone to Vienna in search of new ways to apply the scientific and technological achievements of the industrialized nations to the social and economic problems of the developing countries. But in the face of such enormous problems as illiteracy and starvation that plague most of the nations of the world, the diplomats went home with pitiably little.

The gap between knowledge and its application to the developing world was hardly news to the participants. U.N. figures show that just six countries—America, Britain, France, Japan, Russia, and West Germany—account for nearly 85 percent of all spending and 70 percent of all manpower sources for research and development. Together the developing countries claim more than 72 percent of the world's population, but less than 3 percent of its expenditures on research and less than 13 percent of the scientists and engineers.

> No one would say who had made the decision to keep out the U.S. delegation but most participants assumed that the Group of 77 had had a hand in the matter.

To right the imbalances, the protracted negotiations among the 160 delegations at UNCSTD produced several dozen principles for using science and technology in development, but only a handful of concrete proposals. The recommendations in the conference's final plan of action are to be taken up by the U.N. General Assembly at its next regular session beginning 18 September. Among the most important parts of the plan are provisions to institute a new intergovernmental committee to oversee science and technology under the aegis of the U.N.'s Economic and Social Council (ECOSOC), a $25 million fund to support scientific and technological development projects over the next 2 years, and a study of a permanent financing system for future projects. In a separate resolution, the delegates called for the equal participation of both sexes in scientific careers as well as an equal division of the benefits of science and technology between men and women.

On the tough legal and political issues—such as a code of conduct for transnational corporations and new international patent agreements to share the fruits of new knowledge—the negotiators were not silent nor were they in agreement. By the time they had packed

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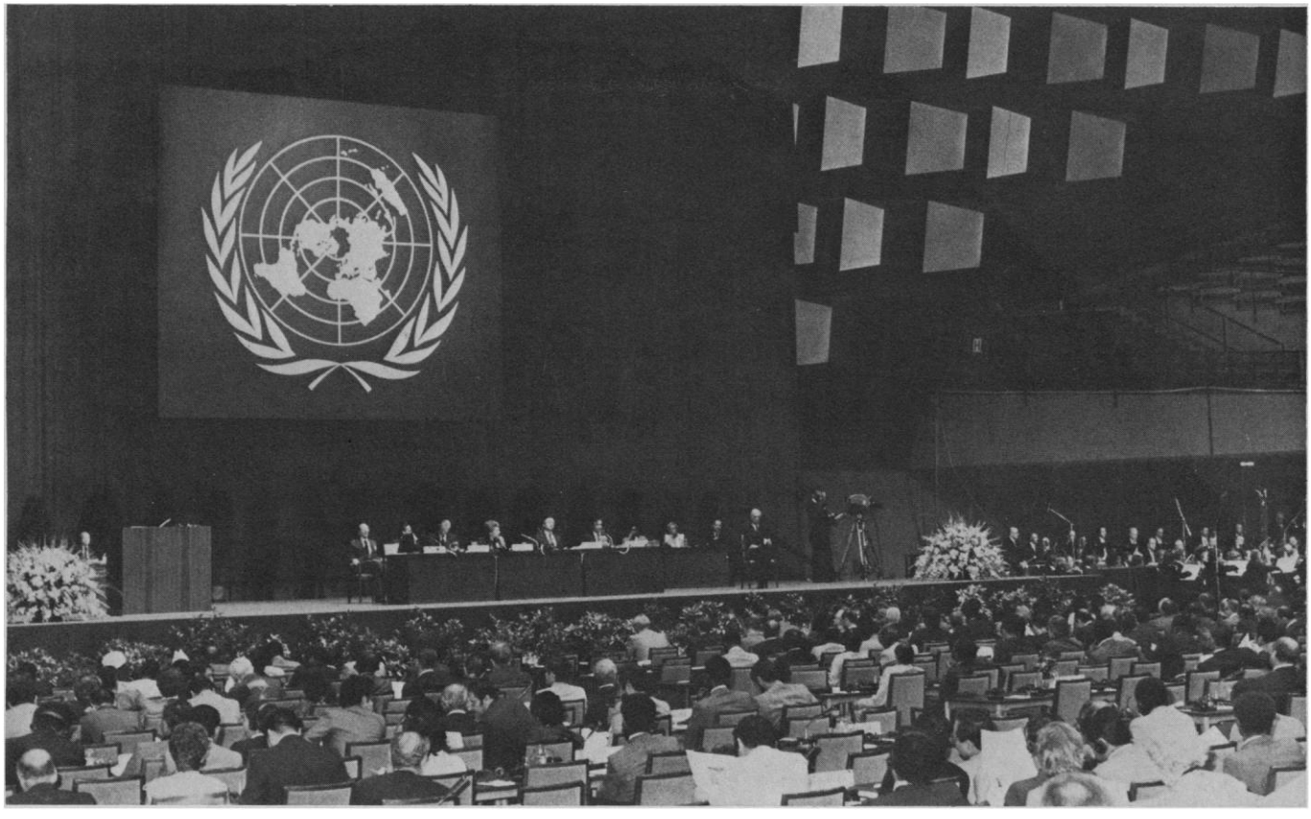

their bags to go home, most of the delegates had abandoned all hope of settling the most controversial issues, leaving them instead to the U.N. General Assembly and other international fora to resolve.

Spokesmen for the Group of 77 (a block of developing countries whose numbers actually exceed 120) said they were pleased that the conference had accomplished as much as it had, but they also expressed their disappointment that the industrialized countries had not been willing from the outset to do more to meet the needs of the developing world.

Abdel Aziz Ben Dhia of the Tunisian delegation spoke for the Group of 77 when he urged rich industrial nations to stop protecting the status quo and begin helping the underdeveloped countries become the "masters" of their own future.

The centerpiece of the Group of 77's demands, which had been mapped out at a strategy-building session in Bucharest, had been a development fund at least four times the size of the one the conference finally approved. Had the Group of 77 had its way, the fund would have been financed by a mandatory international tax rather than voluntary contributions. To usher in the "New Economic Order," which the developing countries espoused in 1974, the group also called for "free access" to technology, regardless of ownership, and the establishment of elaborate technological information banks. Some of these proposals, the industrialized countries claimed in response, were simply not practical, while others would not be politically popular back home.

With so much left unsettled, it was with a good deal of skepticism that many participants in the U.N. conference listened to the U.S. declaration that the Vienna conference "did not shrink from its responsibilities" and that it concluded with "the clear promise of a new beginning."

Rhetoric and cynicism aside, there was some evidence that the conference did make some headway in settling the so-called North-South conflict—the economic disputes between the rich, industrialized nations of the North and the poor, underdeveloped countries of the South.

In the first place, the negotiators were willing to attend to the business at hand with only a minimum of political sparring. There were, of course, occasional moments of nationalistic bravado. Forty delegations walked out, for example, when the Israeli delegate took the floor, and the East European delegations left when a representative of the ousted Cambodian Pol Pot regime addressed the meeting.

During the conference a working committee had been set up to draft a statement on "Science, Technology, and the Future." The scientists in the U.S. delegation, eager to see a strong statement on science emerge from the conference, tried to get on the committee but were denied admission, even to the room where the drafting was taking place. As a result, they spent most of their 2-week stay in Vienna in an anteroom, slipping proposals in and out of the meeting through the Canadian delegation. No one would say who had made the decision to keep out the U.S. delegation, but most participants assumed that the Group of 77 had had a hand in the matter.

The large contingent of scientists in Vienna, both at the U.N. meeting and at a colloquium on development the week before, was also a sign that at least some tangible results may follow the Vienna jamboree.

Advisers to the U.S. delegation included such heavyweights in the scientific and governmental arenas as Jewel Plummer Cobb, of the National Science Foundation Board; William D. Carey, executive officer of AAAS; Lewis Branscomb, vice-president and chief scientist of the IBM Corporation; Thomas Malone, foreign secretary of the National Academy of Sciences; Rodney Nichols, executive vice-president of Rockefeller University; Roger Revelle of the University of California at San Diego; Frederick Seitz, former president of the National Academy of Sciences: and Guyford

Stever, a former director of the NSF.

The colloquium—sponsored by the U.N. Advisory Committee on Science and Technology (ACAST) and attended by some 300 scientists, engineers, and physicians—heard encouraging news about what could be done in the area of development but also complaints that the discussions in Vienna were esoteric and far removed from the actual development process.

The group's final report, which called for increased research in such areas as food production, transportation, health maintenance, and alternative energy sources, admitted that its ideas had been "articulated in various fora during the past."

Unlike the ACAST report, the UNCSTD report on "Science, Technology, and the Future," to which the U.S. scientists struggled to contribute, did not contain specific recommendations but simply reiterated discussions that had taken place in the conference.

What finally emerged was a statement that reaffirmed that science and technology could provide powerful tools to overcome the worst aspects of poverty and dependence in all countries. The report mentioned the need for a "massive expansion" of the educational system in the developing world; it urged governments in the developing countries to create "attractive work environments" presumably to attack the problem of "brain drain"; and it asked both the developing and the developed countries to set up appropriate institutions to encourage young people to become involved in the development process.

A third meeting, the forum for nongovernmental organizations (NGO), was held simultaneously with the main U.N. conference and also produced a document. It was long on rhetoric about promoting UNCSTD's plan of action and building "new alliances" between developed and developing countries but short on specific proposals for how those goals might be achieved.

The problem, explained Karim Ahmed, chairman of the NGO forum, is that while 1400 individuals representing 366 nongovernmental organizations from 51 countries may have been interested in development in the large sense, each group had its own specific problems and goals that often have little direct connection with each other. Antinuclear groups, for example, are not likely to be interested in the same problems as women's rights groups.

U.S. officials see the Institute for Scientific and Technological Cooperation (ISTC), the new federal agency created this summer by Congress, as one mechanism for coordinating both the foreign development efforts of governmental agencies and the work of nongovernmental groups, including universities and scientific organizations. But most top-notch scientists in the United States have shown relatively little interest in the basic scientific and technological problems facing the developing world, preferring instead a highly technical, sophisticated brand of American science.

Nevertheless, many of the U.S. delegates when they left Vienna were optimistic that, if Congress provides the support for the new federal agency and restores some of the cuts it has made in travel budgets for scientific research, a good deal of attention can be focused on the problems of development.

The Carter Administration's plan for ISTC in the fiscal year that begins 1 October includes a $90 million budget, only about $25 million of which would go to new projects. An additional $66 million in ongoing research support would be shifted from the Agency for International Development (AID).

U.S. delegates returning home to lobby for congressional support also faced the prospects of a battle over the support they had committed to the new international fund. While the U.S. share of the $25 million fund will not have to be appropriated until fiscal 1981, a "pledging conference" is expected to be scheduled by the U.N. before the end of this year.

The battle to make good the commitments in Vienna does not promise to be an easy one. While a handful of U.S. congressmen were present at the conference, few have even heard of UNCSTD or what it proposes to do.

—ANNE C. ROARK

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Major Relaxation in DNA Rules

A proposal that would cause a major shrinkage in the scope of the NIH guidelines on recombinant DNA experiments was agreed to this month by the NIH committee which authored the guidelines. The proposal would in effect exempt all experiments in which *E. coli* K12 is the host for recombinant DNA molecules. Such experiments account for an estimated 80 to 85 percent of those covered by the guidelines.

The measure, which is subject to approval by the NIH director, passed the 25-member committee by a 10-to-4 vote. It will leave the complex NIH guidelines looking like a large head on top of a rather small body, but the body is growing under the present trend of using other host cells besides the standard bacterium *E. coli* K12.

The proposal to exempt *E. coli* K12 experiments was first made at a May meeting of the committee by NIH virologist Wallace Rowe. "It takes away a huge amount of nonsense and hairsplitting and paper work," Rowe says.

The basis of his proposal is the accumulating evidence that the K12 bacterium cannot accidentally be made pathogenic by inserts of recombinant DNA. Also, new techniques for inserting the DNA—on "non-mobilizable" plasmids—ensure that the molecules cannot escape to other bacteria.

Richard Goldstein of the Harvard Medical School, who voted against the proposal, believes the committee should have waited for the results of a new risk assessment study of *E. coli* K12 which the NIH itself had commissioned. Goldstein also believes that major changes in the rules should require the votes of at least half the committee's full membership.

NIH virologist Susan Gottesman regards the exemption as a natural extension and tidying up of the committee's thinking on *E. coli* K12 experiments. She voted against the proposal, however, although only narrowly, because she feels more thought should be given to the consequences of *E. coli* K12 bacteria programmed to produce hormones and antigens.

The new proposal offers effective but not total exemption from the NIH rules. Researchers must still notify their local biosafety committees of *E. coli* K12 experiments and conduct the work under P1 safety conditions.

The NIH committee at its meeting last month also endorsed provisions which extend the guidelines to industry. The Pharmaceutical Manufacturers Association agrees that the provisions provide adequate protection for commercial secrets revealed to the NIH committee.—NICHOLAS WADE

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