and engineering societies around the world. Professional societies in engineering and in the physical, biomedical, and social sciences and from industrialized and developing countries were represented in approximately equal numbers. The largest national delegations were from India, the United States, the Soviet Union, and the People's Republic of China. Twelve of the 22 U.S. delegates were from member societies of the AAAS Consortium of Affiliates for International Programs.

The seminar was cochaired by Kenneth E. Boulding, outgoing chairman of the Board of Directors, AAAS, and A. K. Sharma, president, ISCA. Three plenary speakers related the seminar objectives to the major disciplinary fields represented. Y. Nayudamma, chairman of the Committee of Science and Technology in Developing Countries (COSTED) of the International Council of Scientific Unions (ICSU), spoke for the physical and biomedical sciences; Boulding for the social sciences; J. Debelius, representing the Deutscher Verband Technisch-Wissenschaftlicher Vereine (DVT), spoke on behalf of the World Federation of Engineering Organizations and the engineering societies.

Participants spent most of their time in working groups where they identified the unique characteristics of the scientific and engineering societies in diverse economic and political structures and considered how the societies could help solve problems of development. Each working group presented its own report, including conclusions and recommendations. These were consolidated into a final report endorsed unanimously by the seminar in a final plenary session on 5 December in the India International Centre. The cochairman lauded "the spirit of New Delhi" as heralding a new era of participation in development initiatives by the national disciplinary scientific and engineering societies, with cooperation between East and West as well as North and South.

The report pointed out that it is in the interest of all scientists and engineers to encourage development, and emphasized the following six points:

1. Scientific and engineering societies should play a more active role in development and should be strengthened for that purpose when and where necessary.
2. Planning and evaluation for development purpose should be increasingly addressed by scientific and engineering societies as part of their activities.
3. Societies should expand and emphasize their contribution to the education and training of scientists, engineers, and technicians for solving development problems.
4. The ability of scientific and engineering societies to collect, evaluate, and communicate information should be more strongly focused toward development.
5. The United Nations, national governments, private foundations, and societies should together develop plans and funding mechanisms for bringing scientific and engineering societies into development projects where practicable.
6. The momentum created by the seminar should be maintained and a continuing committee chosen from the participants to coordinate follow-on actions.

The complete text of the report with the conclusions and recommendations will be published in a *Seminar Report. Proceedings* of the seminar, which will include the texts of the addresses and papers contributed by each participant, will also be printed and should be available later this year. Requests for copies should be addressed to the Office of International Science, at the AAAS address.

DENISE WEINER
Office of International Science

50-Year Members Acknowledged

Each year the AAAS expresses its appreciation to those persons who have remained members of the Association for 50 years. Upon reaching this anniversary, members receive a certificate of recognition and are exempt from further payment of dues.

AAAS members reaching the 50 year mark in 1981 are: Santiago E. Auerrevere of Chacao, Venezuela; Cazlyn G. Bookhout of Beaufort, North Carolina; Edward L. Bowles of Boston, Massachusetts; Helen B. Bromley of Stamford, Connecticut; Maurice Brooks of Mor-

Representatives from around the world met in New Delhi to discuss the role of science/engineering societies in development.

gantown, West Virginia; C. S. Butler, Jr., of Miami, Florida; Paul R. Cannon of Yorkville, Illinois; J. Gordon Carlson of Knoxville, Tennessee; Harold D. Caylor of Bluffton, Indiana; Robert Cockrell of Berkeley, California; Kenneth S. Cole of Woods Hole, Massachusetts; Robert I. Cowen of Verona, New Jersey; Homer Vince Craig of Del Rio, Texas; Roderick Craig of Berkeley, California; F. F. Dicke of Ames, Iowa; Tobias H. Dunkelberger of Pittsburgh, Pennsylvania; W. F. Dunning of Miami, Florida; Alexander C. Finlay of Old Lyme, Connecticut; John D. Guthrie of New Orleans, Louisiana; Harry F. Harlow of Madison, Wisconsin; Paul N. Harris of Indianapolis, Indiana; S. Edson Haven of Chagrin Falls, Ohio; William M. Hiesey of Camino, California; W. R. Hinshaw of Frederick, Maryland; James G. Horsfall of New Haven, Connecticut; Mabel S. Ingalls of New York, New York; Otto F. Kampmeier of Redlands, California; Charles E. Kellogg of Hyattsville, Maryland; John Austin Kerr of Washington, D.C.; Cecil H. Kindle of Nyack, New York; Wendell R. Koch of Dayton, Ohio; Paul J. Kramer of Durham, North Carolina; Edward Kurt of Royal Oak, Michigan; F. W. Light, Jr., of Jonestown, Pennsylvania; Rensis Likert of Kailua, Hawaii; Edward W. Lowrance of Columbia, Missouri; Louis J. Manniello of Syracuse, New York; M. G. Mellon of West Lafayette, Indiana; Harold Morris of Washington, D.C.; O. R. McCoy of Columbia, Maryland; E. S. McDonough of Milwaukee, Wisconsin; Ronald B. McKinnis of Winter Haven, Florida; Carroll V. Newsom of Danbury, Connecticut; Thomas Park of Chicago, Illinois; William M. Preston of Lincoln, Massachusetts; Carl W. Rehfuss of El Cerrito, California; Maurice Scheier of St. Bonaventure, New York; Beatrice C. Seegal of New York, New York; Eustace Seligman of New York, New York; Nathan W. Shock of Baltimore, Maryland; James Sinden of Worthington, Pennsylvania; Paul W. Smith of Oklahoma City, Oklahoma; A. K. Snelgrove of Largo, Florida; Bruce J. Thornton of Fort Collins, Colorado; Frederic L. Troyer of Toronto, Canada; Anita Tuller of Jamaica, New York; George L. Weil of Washington, D.C.; and Helen L. Wikoff of Columbus, Ohio.

AAAS and ISETAP

The AAAS Intergovernmental Research and Development Project has been under way since mid-1978. Coordinated by the Office of Public Sector Programs, the work has been in support of the National Science Foundation (NSF) and the Office of Science and Technology Policy in the Executive Office of the President.

The Intergovernmental Science, Engineering, and Technology Advisory Panel (ISETAP) was established by the National Science and Technology Policy Act of 1976. Its creation was intended to provide a policy focus for applying R & D to the solution of problems at the state and local levels and to expand the involvement of state and local governments in federal research and development activities.

Early in 1978, ISETAP began a program identification and consolidation process to identify and set priorities on state and local government problems which might be resolved or aided by science and technology. Following the consolidation of the problems into functional areas, the AAAS conducted for ISETAP and NSF a series of nine workshops to determine the science and technology components and implications of certain high priority state and local issues.

The task of the workshops was to prepare reports that analyzed the stated problem areas and their relationship to science and technology, characterized the state of research, noted the areas where available research seemed to be adequate but dissemination or transfer mechanisms were inadequate or absent, and identified areas for further research. These efforts were based on the idea that the incorporation of state and local perspectives in federal R & D planning and the exposure of their problems to the scientific and engineering communities would enhance the likelihood of useful R & D results being produced.

At the conclusion of the workshop series, ISETAP and NSF requested that the AAAS prepare analyses of the results and impact of three selected workshops and to perform a separate study on the use of science and technology by state and local governments. Preliminary results of the studies, conducted during the spring and summer of 1980, pointed to the need for wider discussion and review of a number of activities related to the utilization of science and technology by state and local governments.

At the same time that the AAAS was conducting its three workshop evaluations, the NSF and ISETAP were conducting assessments of their own. The purpose of these efforts has been to determine how effective principal programs have been and what improvements or changes might be made.

Also during the past 18 months, ISETAP has assessed the present state of federal intergovernmental science and technology activities and recommended improvements.

In summary, the work of ISETAP, NSF, and AAAS was to identify problems, establish priorities, translate priority problems into R & D needs, transmit R & D recommendations to federal agencies, and, finally, to evaluate the results. A preliminary review of the accumulated experiences of the 1970's was held by the AAAS at an Intergovernmental Science and Technology Conference in Fredericksburg, Virginia, 19-21 November 1980.

This conference brought together more than 100 scientists, engineers, and policy-level officials from federal, state, and local governments, universities, and the private sector. Their tasks were to review and analyze the experience and lessons learned in the 1970's on influencing federal R & D planning and performance, and on the utilization of science and technology by state and local governments. From the conference discussions, it was intended that goals and strategies for the 1980's be identified. A final report of that conference and the AAAS Intergovernmental R & D Project will be available in the spring of 1981.

The basic premise for AAAS involvement in the intergovernmental research and development activities is the belief that significant benefits will result to society as a whole, and the scientific and engineering communities in particular, from strengthening ties between the mainstream scientific and engineering communities and those concerned in various ways with intergovernmental programs and activities. Included as an important part are the federal, state, and local officials who must solve the many social problems besetting their governments.

There is also the long-term potential for developing capabilities within the scientific and engineering societies for more direct application of these capabilities to state and local problems. The AAAS role has been that of a convener and coordinator, bringing to bear the fundamental capabilities and expertise which lie in the various scientific and engineering disciplines and their related institutions.

For more information about the activities and publications described in "AAAS News," write to the appropriate office, AAAS, 1776 Massachusetts Avenue, NW, Washington, D.C. 20036, unless otherwise indicated.