(AASNEWSAASNEWSAASNEWSAASNEWSAAASNEWSAASNEWSAAASNEWSAAASNEWSAAASNEWSAAASNEWSAAASNEWSAAASNEWSAA

Climate Project to Produce

Research Guide

Questions concerning the effects which might be brought about by a climate change caused by a buildup of carbon dioxide in the atmosphere form the basis for the work being done by the AAAS Climate Project.

The Climate Project has received a grant from the U.S. Department of Energy's Carbon Dioxide and Climate Research Program (David Slade, manager) to involve the scientific and technical community in the preparation of detailed background material that will be used as a guide in research planning.

Roger Revelle of the Program in Science, Technology, and Public Affairs, University of California, San Diego, and former AAAS Board chairman, serves as project leader.

The project is divided into five topical areas, each of which calls upon experts in their field to assess a different facet of the CO₂ problem.

"Effects on the Cryosphere, Oceans, and Oceanic Biota" is being managed by Revelle. It includes descriptions of the issues involved and recommendations for future research concerning the effects of a climate change on marine life, the west Antarctic ice sheet, Arctic sea ice, permafrost, and ocean dynamics.

"Effects on the Less-Managed Biosphere," is led by Charles Cooper of San Diego State University. Areas covered include effects of a CO₂ climate change on grazing lands, wildlife, and animal husbandry; forest and freshwater ecosystems; human and animal health; and ecosystem response to CO₂ enrichment.

Sylvan Wittwer of Michigan State University coordinates the section on "Effects on Agriculture and the Managed Biosphere." Among the topics studied are effects on photosynthesis and agricultural productivity, water use efficiency, plant protection from pests, food crops in the lesser developed countries, and animal agriculture and livestock production

"Social and Institutional Responses" is managed by Elise Boulding of Dart-

mouth College and Stephen H. Schneider of the National Center for Atmospheric Research. Included in this section are analyses of the effects on international law and institutions, factors that affect the vulnerability of societies to environmental change, political and institutional decision-making in response to climate change, and the historical dimensions of the effects of climate on human societies.

Lester B. Lave of the Brookings Institution leads the unit on "Economic and Geopolitical Consequences." It looks at economic policy evaluations of CO₂ abatement, mitigating losses from disruptions caused by climate change, and planning for climate change.

Following extensive consultation and peer review, Revelle and the managers of the five subject areas will produce a comprehensive one-volume summary. One goal of the project is that this report will be used as a guide for planning future research in the area.

Increasing attention is being paid to the problem of CO₂ buildup in the atmosphere. Last year the National Academy of Sciences issued a report indicating that a warming trend "will eventually occur" with continued use of fossil fuels, but that the consequences of the trend are unknown. In early April 1980 the U.S. Senate Committee on Energy and Natural Resources convened a panel to discuss the effects of a CO₂ buildup. David M. Burns, staff director of the AAAS Climate Project, described to the Committee the ongoing work of the Association, including the research guide.

Members of the AAAS Committee on Climate, which directs the Association's activities in the area, are Roger Revelle, chairman; George E. Brown, Jr. (D-Calif.), U.S. House of Representatives; David Gates, University of Michigan; Robert Kates, Clark University; Nathan Keyfitz, Harvard University; J. Murray Mitchell, National Oceanic and Atmospheric Administration; William Nordhaus, Cowles Foundation for Research

in Economics; Harry Perry, Resources for the Future; Dean F. Peterson, Agency for International Development; David Pimentel, Cornell University; Walter Orr Roberts, Aspen Institute for Humanistic Studies; and Robert M. White, National Research Council.

The first major AAAS activity in this area was a workshop on "Environmental and Societal Consequences of a Possible CO₂-Induced Climate Change," held 2-6 April 1979 in Annapolis, Maryland (see *Science*, 3 August 1979, p. 481). The report of this workshop is available on request from the Climate Project office at the AAAS address.

Nuclear Arms Control Group Named

Following up on a resolution passed by the AAAS Council on 7 January 1980, a steering committee on nuclear arms control has been designated by the Board of Directors. The Council resolution pointed out the importance of science in human welfare and the dangers implicit in nuclear armament. It called upon the AAAS to support U.S. efforts to obtain effective bilateral nuclear arms limitations and completion of the Comprehensive Test Ban Treaty; to oppose the development of new weapons systems (by any country) which make verification more difficult or pose a firststrike threat; and to support, along with arms control, plans for a step-by-step conversion of all facilities for nuclear weapons production, research, and testing, into science and technology facilities for peaceful uses. The resolution further called for one major theme of the 1981 AAAS Annual Meeting to be "Directing Science Toward Peace" and for the establishment of a working group to help organize and mobilize resources toward nuclear arms control.

Committee members are George Rathjens, chairman, Massachusetts Institute of Technology; Ann Cahn, Arms Control and Disarmament Agency; Brewster Denny, University of Washington; Paul Doty, Harvard University; Lloyd J. Dumas, University of Texas at Dallas; Bernard Feld, Massachusetts Institute of Technology; Roger Fisher, Harvard Law School; George Ignatieff, Trinity College; Everett Mendelsohn, Harvard University; Charles Osgood, University of

Illinois at Urbana-Champaign; Wolfgang K. Panofsky, Stanford Linear Accelerator Center; Herbert Scoville, Arms Control Association; and Adam Yarmolinsky, Kominers, Fort, Schlefer, and Boyer, Washington, D.C.

Inquiries or suggestions for future activities should be sent to the Executive Office at the AAAS address.

Research and Bulletins on Science and Technology for the Handicapped

To enable physically handicapped persons, scientists, and consumers to enhance their communication with researchers, developers, and manufacturers of aids for disabled persons, the AAAS Project on the Handicapped in Science (PHS) will conduct workshops and produce newsletters on the subject. The project is being funded by the National Science Foundation's Program of Science and Technology to Aid the Handicapped.

The project will expand on the findings of an NSF-funded AAAS study which resulted in the publication of "A Research Agenda on Science and Technology for the Handicapped," which identifies priority research needs in science and technology for the handicapped.

The AAAS will conduct a series of regional workshops over the next 3 years to provide an opportunity for disabled and able-bodied scientists and engineers to participate actively in the process of identifying current research, outlining requirements for new and innovative developments, and proposing new programs of research in technological aids.

The workshop topics will change according to the needs recognized by the NSF and AAAS. The overall theme for 1980 is "Independent Living and Its Implications for Research in Science and Technology for the Handicapped." Workshop locations have been chosen where independent living activities are most concentrated—Boston, Houston, and San Francisco.

In conjunction with the workshops, and to serve as a vital link for joining the various target groups, quarterly bulletins will be published. The bulletins will report on workshop proceedings, contain notices of current and proposed research in technology, and announce details of new products and available resources. They will expand the exchange of information between the project headquarters



Philip H. Abelson, editor of *Science*, cuts cake marking the 100th anniversary of publication. The celebration was held 31 January 1980 in New York.

and the largest possible group of handicapped persons, scientists, engineers, consumer groups, government agencies, universities, small businesses, industries, and Congress.

Persons wishing to attend the workshops, to receive the bulletins, or to submit information for possible inclusion in issues of the bulletins should contact the Project on the Handicapped in Science, Workshops and Bulletins on Science and Technology for the Handicapped, at the AAAS address. Telephone—voice/TTY (202) 467-4497.

Note to AAAS Members

In our last large direct mail membership promotion, we were unable to get many of the lists we rented on computer tape to enable us to match them against our own membership list. We thus found ourselves in the awkward position of having a large number of our own members receive this mailing. The problem was compounded in this instance by the wording of the first sentence in the letter which said, "Recently, we found your name missing from the active member list of the American Association for the Advancement of Science. . . ."

First, we want to assure any member who received this mailing that your name is not missing from the AAAS membership files. Second, we want to apologize for the confusion that was caused by your receipt of the mailing. Large direct mail promotions have proved themselves to

be the most effective way of keeping the AAAS membership strong and viable, which we believe to be in the best interest of the entire membership. Unfortunately, difficulties such as these arise from the technical limitations of the system. We are doing our best to minimize the problems.

We appreciate your understanding in this matter, and we also ask for your help. If you should get any future AAAS membership promotion mailings, would you pass them along to a colleague who might find AAAS membership of value. You would be doing both the Association and your colleague a favor.

CSFR Reports Activities

The 1979 annual report of the Committee on Scientific Freedom and Responsibility (CSFR) features an introduction by committee chairman John T. Edsall of Harvard University discussing how the concept of scientific responsibility is changing as scientists are increasingly involved in controversial public policy choices relating to scientific and technical information.

Summaries of the two major projects initiated by the committee—the AAAS Clearinghouse on Science and Human Rights and the Professional Ethics Project—are included in the report, as are brief summaries of the CSFR subcommittee activities and interests. The subcommittees are concerned with issues such as legal protections for professional rights and obligations, the relationship between scientific freedom and human rights, scientific freedom and responsibility in science teaching, and the development of a set of principles of scientific freedom and responsibility.

Current activities of the committee include

- developing recommendations for the AAAS Board on specific items related to scientific freedom and responsibility;
- sponsoring symposia and workshops on issues of science and ethics;
- responding to government actions affecting the professional rights and obligations of scientists and engineers;
- reviewing individual cases involving infringements of scientific freedom and responsibility; and
- developing resource material to assist the professional societies and their members in areas involving professional ethics concerns, science and human rights, and other aspects of scientific freedom and responsibility.

The appendixes to the 80-page report include an article on whistle blowing pre-