

## Energy Seminars Scheduled

Regional implications of the national energy plan and the development and management of energy resources on Indian lands will be the topics of two AAAS seminars this month.

**"The National Energy Plan: Regional Implications"** will be held 23 September at the Franklin Institute in Philadelphia. The seminar is being cosponsored by AAAS and Sigma Xi, the Scientific Research Society of North America, in cooperation with the Franklin Institute. AAAS and the Energy Research and Development Administration (ERDA) are providing financial support. The Philadelphia seminar is designed to provide viewpoints from independent experts in analyzing the Administration's national energy plan.

About 250 invited attendees are expected, including elected officials, leaders of area businesses, and representatives of scientific, engineering, industrial, civic, environmental, labor, and academic groups.

Keynoting the seminar will be Congressmen Robert W. Edgar (D-Pa.) and Edwin B. Forsythe (R-N.J.). Among other program speakers will be William B. Harral, Governor's Energy Council of the Commonwealth of Pennsylvania; Lester B. Lave, professor of economics, Carnegie-Mellon University; George Seidel, professor of physics, Brown University; Joseph A. LaSala, regional administrator, Federal Energy Administration; Roger W. A. LeGassie, assistant administrator for planning, analysis, and evaluation, ERDA; Stephen J. Gage, acting assistant administrator for research and development, Environmental Protection Agency; and Roland W. Schmitt, research and development manager (energy science and engineering), General Electric.

**"Energy Resource Development and Indian Lands,"** scheduled for 28-29 September in Billings, Montana, is cosponsored by AAAS, Montana State University, and the Montana Intertribal Policy Board, with funding from AAAS and

ERDA. Policy, planning, research, and technology as they affect Indian energy resource development, with a focus on Montana Indian coal development, will be the general subject of the seminar. Regional issues concerning oil, gas, water, and minerals on Indian lands also will be discussed. About 200 invited participants, including tribal leaders and representatives from the academic, corporate, federal, and state sectors, are expected to attend the conference, which will be held at the Holiday Inn West in Billings.

The following topics have been identified for discussion at the seminar: tribal sovereignty and energy resource development; Indian manpower training for resource development and management; the new national energy plan and its implications for Indian development; intertribal cooperation; Indian water and energy uses; Montana coal planning and Indian coal; economic and social repercussions of Montana Indian coal development; leasing and alternatives to leasing; conservation-preservation factors; opportunities in research and new techniques; and others.

## Technology Topic of Pacific Science Association Meeting

Appropriate technology was the theme of the third Inter-Congress of the Pacific Science Association held in Bali, Indonesia, 18-22 July. Comprising the official AAAS delegation to the congress were past president Margaret Mead; Beryl Bernay, who was the audiovisual producer for Asia for the United Nations Human Settlements Conference in Vancouver last year; John and Nancy Todd of the New Alchemy Institute, Woods Hole, Massachusetts; and Arthur Livermore, head of the AAAS Office of Science Education.

## CSFR to Meet

The next meeting of the Committee on Scientific Freedom and Responsibility will be held in Washington, D.C., 7 and 8 October. All meetings of the Committee are open to the public. Anyone who would like to attend the meeting should contact Rosemary Chalk, the Committee staff officer, at AAAS, 1776 Massachusetts Avenue, NW, Washington, D.C. 20036, for more information.

Indonesian president Soeharto was on hand to welcome over 300 participants from Indonesia, the United States, Japan, Australia, Korea, the Soviet Union, and a number of southeast Asian nations. Observers reported that the meeting made it clear that Indonesia is "intensely interested in this topic," citing as "rather impressive" the fact that Soeharto chose to deliver the opening address. His message was that Indonesia places great importance on science and technology in the solution of development problems. An eye for appropriate forms of technology, he said, can avoid aggravating the unemployment that modern technology sometimes brings as its by-product. He also stressed the importance of improving, but also of protecting, traditional technology.

The keynote address for the meeting was delivered by Sumitro Djojohadikusumo, Indonesian minister of science, who emphasized that technology is only one link in a chain of processes that comprise education, science, scientific research, and technology in a process that functions within a specific social framework. "Technology," he said, "must build on existing economic and social structures: it must be directed by the goals prevailing in the particular society; and it must reflect an effort at optimum use of resource endowments possessed by that society."

The congress agenda included working sessions on five subthemes: "The Role of Various Stages of Technology Relevant to Developing Countries"; "Appropriate Technology for Medium and Small Scale Industries"; "Generation and Diffusion of Relevant Technology"; "Man-

## Resolutions Invited for 1978 Council Meeting

The AAAS Council will hold its next meeting on 16 February 1978 in Washington, D.C., during the Association's 144th Annual Meeting. Organizations or individuals who wish to present proposals or resolutions for consideration by the Council at that meeting should submit them in writing to the AAAS executive officer *for receipt no later than 12 December 1977*, so that they may be reviewed in advance by the Committee on Council Affairs. The Committee asks that the following guidelines be observed:

1. All proposals and resolutions should be consistent with the objectives of the Association and deal with matters appropriate for consideration by the council of a scientific organization.
2. Resolutions should be written in the traditional format, beginning with one or more "Whereas" statement-of-fact clauses and concluding with a "Therefore be it resolved" paragraph which presents a position that follows logically from the stated premises.
3. Proposals and resolutions that deal with technical matters must be accompanied by substantive supporting data and references. The Committee on

Council Affairs will seek the advice of appropriate referees on proposals that require specialized knowledge for their consideration.

4. Any proposal involving substantial expenditure of AAAS funds—such as a recommendation for the establishment of a study or investigative committee—should be presented in the form of a research proposal, with budget included, so that the financial implications of positive action are clearly stated.
5. All proposals and resolutions adopted by the Council at its forthcoming meeting will be published in the Proceedings Issue of *Science*. Proponents who wish the AAAS to undertake any wider distribution are requested to submit with their proposals or resolutions the names and addresses of individuals, organizations, or publications to which they would like to have copies sent.

Open hearings will be held by the Committee on Council Affairs at 3 p.m. on 13 February in the Sheraton Park Hotel to give interested persons an opportunity to speak for or against resolutions or proposals that have been duly submitted to the Executive Officer, AAAS, 1776 Massachusetts Avenue, NW, Washington, D.C. 20036.

agement of Resources and Technology for Development"; and "International Cooperation on Problems of Appropriate Technology."

Keynoting the "Medium and Small Scale Industries" subtheme was E. F. Schumacher, the appropriate technology progenitor who founded the Intermediate Technology Development Group in Great Britain in 1965. Schumacher commented on the elimination of the human factor in production; the "law of the disappearing middle," which leads modern society either to stick to traditional technology or else to strive for the limits of sophistication; unemployment as a phenomenon of both rich and poor countries; the desirability of multiple urban centers for rural development, as opposed to national megalopolises; the urgent need to develop an appropriate technology information network; the roles of administrators, businessmen, communicators, and democratic organizations in the appropriate technology concept; and the need for work-based primary and secondary education and higher education geared to indigenous needs and resources.

At one of the working sessions, John Todd of the AAAS delegation described the extensive solar energy project of the New Alchemy Institute, which uses integrative design incorporating wind and

solar systems for intensive culture of aquatic and terrestrial foods and also for application in the development of human bioshelters.

Reports of the working groups and accounts of the plenary sessions are being prepared by the Indonesian Institute of Sciences.

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## French Association Meets in Brittany

For its 96th annual congress the Association Française pour l'Avancement des Sciences (AFAS) chose the historic city of Rennes, the educational and scientific hub of Brittany. The week-long session attracted many French scientists as well as scientists representing the United States, Switzerland, and Belgium. The foreign representatives were received by both the members and officers of AFAS and there was ample opportunity to discuss mutual problems facing scientists today.

In keeping with the site, the theme of the congress was: "The Natural Environment of Brittany" and, similar to our

own AAAS meetings, the conference was truly interdisciplinary. Part of each day was devoted to formal lectures, but the main work of the congress was carried out in small groups where each presentation prompted a vigorous discussion. In addition to lectures and papers, the congress featured technical and scientific exhibits as well as an attractive historical display emphasizing significant contributions of scientists from Brittany. Among those included were Rene Laennec (1781–1826), the inventor of the stethoscope, who was born in Brittany, and Lucien Daniel (1856–1940), a Breton who studied *phylloxera vitifoliae*, the grape aphid that nearly destroyed viticulture in France.

Next year's meeting will be held in Mulhouse (Alsace) and the newly elected president, Jean-Claude Pecker, an astrophysicist, plans to restructure the format of the meeting to allow greater public participation.

The AFAS is divided into approximately 25 sections and the organization does have provision for overseas memberships. Further information can be obtained from the AFAS Secretariat at 250, rue Saint-Jacques, 75005, Paris, France.

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