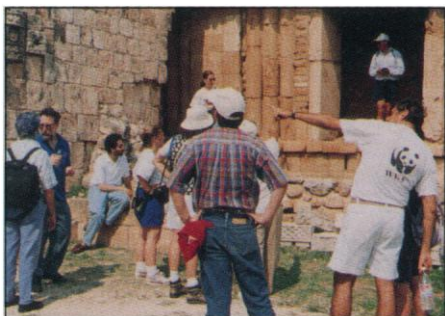


AAAS NEWS & NOTES

edited by S. L. BYRAND

Fine-Tuning a New Field of Science

A crucial question facing population and environment scientists today is how to frame their research so that it is useful in planning for sustainable development, especially since it merges a range of factors, from ecology to economics. To initiate a dialogue and settle on solutions, the AAAS Program on Population and Sustainable Development (PSD) recently organized a meeting in Mérida, Mexico, that focused on the best ways to address future research and its applications within Latin America. Victoria Dompka, director of PSD, called the meeting "a real turning point. Population and environment research, as one field, is relatively new, but it is blossoming. We recognized that it's time to analyze the research tools and methodologies being used and come up with standards to help move this scientific discipline forward."



Pointing to the past. Experts on Classic Maya guided attendees around local ruins.

AAAS coordinated the meeting with the International Institute for Applied Systems Analysis (IIASA), in collaboration with the National Polytechnical Institute's Mérida Campus of the Center for Advanced Studies. The Summit Foundation funded the meeting. AAAS and IIASA are collaborating on a book that will detail the conference's recommendations, such as the need to rely on participatory research, which integrates the perspectives of various stakeholders. "In every case, local people must be fully involved in the research

process, from soup to nuts," said Dompka. "Their aspirations and concerns have to be taken into account, by getting their input and taking it seriously."

Participatory research plays a key role in one of the case studies highlighted at the Mérida meeting. Funded by AAAS as part of the PSD's International Research Cooperation Project, which supports research in eight countries on four continents, the study investigates migration and land-use planning in the rural communities bordering the Calakmul Biosphere Reserve in Mexico. The study, conducted through a partnership between the World Wildlife Fund and Pronatura Península de Yucatán, is of particular relevance because it focuses on an "ecological municipality" that Mexico created in January 1997. "The creation of this unique entity sets a precedent within Mexico," said the study's coordinator, Jenny Ericson, a University of Michigan Population-Environment Fellow. "It demonstrates Mexico's commitment to furthering the goals of conservation. The region now faces the challenge of defining the role of an ecological municipality."

To help meet that challenge, Ericson and her colleagues will use their applied research to generate a dialogue between stakeholders. They hope to help establish a culturally and politically appropriate land-use planning process that takes into account both social and ecological issues, as well as the opinions of community members, regional authorities, and other relevant parties.

Science Is the Key

In addition to the Calakmul project, the conference discussed case studies from six other Latin American countries, as

well as IIASA's recent investigations on Mexico's Yucatán peninsula. IIASA's project focused on the interactions between changes in population variables, socioeconomic development, and the environment (PDE). It also built on the pioneer PDE study that IIASA conducted in Mauritius, an island nation with one of the highest population densities in the world. The Yucatán, however, presented a more complex landscape: it is a peninsula instead of an island and exhibits significant political, social, and ecological diversity. Wolfgang Lutz, leader of IIASA's Population Project, and his fellow researchers had to develop a new concept to define the various regions. Lutz is hopeful that their method, which uses "socio-ecological regions," will "present a useful addition to PDE analysis and to 'integrated assessment' in general."

Other activities in IIASA's Yucatán study included conducting multidisciplinary descriptive analyses of trends since the Classic Maya period, when the population density is estimated to have been much higher than it is today. However, after 800 A.D., the population quickly dropped. "Our synthesis of archaeological and climatological studies," said Lutz, "suggests it is wrong to use the Maya collapse as proof—and often the only example presented by doomsday prophets—that population growth by itself results in a collapse of civilization. It may have resulted in vulnerability, but the collapse itself was most likely triggered by climate change."

Given the rising stakes in issues in today's Yucatán, such as an unprecedented boom in tourism in Cancún, research could help to prevent a repeat in such vulnerability. Moreover, because the ideologies of stakeholders often clash—not only in Latin America, but throughout the world—objective analyses may provide the key for negotiation. Lutz, who has been nominated for secretary general of the Inter-



Setting priorities. Dompka and Lutz led conference on population and environment research.

tific Study of Population, said that science can take the discussions to a higher level: "I think that good scientific analysis can help to resolve this unnecessary controversy by giving a differentiated picture and providing well-structured empirical evidence."

Bringing the researchers a few steps closer toward that resolution, the Latin American meeting helped to formulate research priorities for the region and established a network among the participants. Recognizing that regions around the world vary in their needs, and that these variations can affect the applicability of specific tools and methodologies, Dompka plans to conduct other regional conferences in the next year. For more information on the AAAS Program on Population and Sustainable Development, contact PSD at 202-326-6658 or e-mail vdompka@aaas.org.

Reviewers Sought for Media Awards

Scientists are needed to review entries in this year's AAAS Science Journalism Awards program, sponsored by The Whitaker Foundation. The reviewers screen radio and television reports for scientific accuracy. If you would like to volunteer, and can be in the Washington, D.C., area sometime in September, contact Ellen Cooper at the AAAS News and Information Office (202-326-6431 or ecooper@aaas.org).

Report of the 1997 AAAS Council Meeting

The following reports were presented at the AAAS Council meeting on 16 February in Seattle, Washington:

Report on Board Actions

Jane Lubchenco, AAAS president, gave highlights of the AAAS Board's actions over the past year. She reported that the Board had sent a letter to the California Board of Regents expressing concern about recent decisions against affirmative action and stating the Board's belief in the positive impact of affirmative action on the enhancement of scientific research. She said that the Board had been very involved in oversight activities related to new online ventures—EurekAlert!, a service for the press and public information of officers; *Science's* Next Wave, aimed at career concerns of the next generation of scientists; and the online version of *Science* and its offshoots, *ScienceNow* and *Science News Service*. Lubchenco said that AAAS has begun planning for its 150th anniversary and that a history committee has been appointed by the Board. She reported that the Board had kept a close watch on the R&D funding situation throughout the year. Lubchenco stated that the Board had appointed a task force, chaired by Daryl Chubin of the National

Science Foundation, and had charged them to come back to the Board with recommendations for AAAS actions to deal with career concerns and other issues facing young scientists. Finally, she described a 3-day Board retreat held in December. She said that section officers, former Board members, and past presidents had been invited to provide their thoughts on issues facing science and society and their vision for the future of the scientific enterprise. She had been overwhelmed by the thoughtful responses. Lubchenco said the Board was developing a policy forum as an outgrowth of that meeting and was trying to find ways to follow up on the ideas generated by the retreat.

Report of Executive Officer

Richard Nicholson, AAAS executive officer, reviewed the financial performance of the Association. He noted that at the time of the move to the new building, not all the space had been leased, advertising sales were down, and membership renewal rates seemed to be slipping. He said that both advertising and membership renewal rates had rebounded strongly by the end of the year, 100% of the space had now been leased, the building had been finished on time and on budget, and AAAS had finished 1996 with an operating surplus. Nicholson announced that the Board has ap-

Constitution¹

Article VIII. Board of Directors. Section 2. Membership—The Board shall consist of ~~thirteen members~~: the Chairman of the Board, the President, the President-Elect, the Treasurer, the eight Directors elected for four-year terms, **up to two Directors appointed by the eleven Elective Officers for three-year staggered terms**, and the Executive Officer, ex officio, without vote. **Appointed Directors shall provide special expertise needed by the Board, and may not serve more than six years on the Board.** The Executive Officer shall serve as secretary.

Bylaws¹

Article V. Nominations & Elections. Section 2. Annual General Election Procedures—In an annual general election, slates bearing at least two nominations for each of the following positions...

(b) **Elected m**Members of the Board

Article VII. Board of Directors. Section 1. Meetings—**Seven A simple majority of voting members** of the Board shall constitute a quorum.

¹ Note: **Bold** denotes an addition. ~~Strike-through~~ denotes a deletion.

proved naming the new building in honor of William T. Golden, longtime treasurer of AAAS.

Report of the Committee on Sections

Mildred Dresselhaus, chair of the Council's Committee on Sections, reported on the group's activities. She noted that the Committee had focused on better communications between the sections, the Council, and the Board. Among the items discussed were the relationship between the sections and *Science*, the relationship between the sections and the annual meeting program committee, the composition of sections, and the interactions between AAAS and its affiliates. She encouraged the sections to bring their concerns to the committee. She indicated that the group had created a list of suggested topics to be covered at the section

business meetings and that the feedback from those officers had been very favorable.

Presentations to the Council

The Council had presentations on AAAS's new electronic ventures. They also had a brief report on the recommendations of the Board-appointed task force on career concerns for young scientists.

Next, there was discussion of the new AAAS program entitled "Dialogue Between Science and Religion." Audrey Chapman, director of the program, gave the history behind its creation; it had been initiated in November 1995 after the development of a concept paper and discussion by the Board. The program receives support from both the Templeton Foundation and the Pew Charitable Trust. The advisory committee has charged the program with

Fellowship Programs Expand Horizons

"This is an opportunity of a lifetime," said Maureen McCarthy upon recently accepting a 1997–98 AAAS Defense Policy Fellowship at the Department of Defense (DOD). A theoretical chemical physicist, McCarthy will join another new Fellow at the DOD—Joan Fuller, who specializes in inorganic chemistry. AAAS administers seven science policy fellowship programs that place postdoctoral to midcareer professionals in Congress, the State Department, and various federal agencies. Said McCarthy, "I had been looking

at the AAAS fellowship programs for years, going back and forth to see if this would be a good use of my science skills. When the DOD program came up, it was perfect for me."

The new program is the brainchild of Peter Fiske, a geoscientist who had himself applied for a AAAS fellowship. When he landed an appointment as a 1996–97 White House Fellow instead, he was assigned to the Pentagon; there, he learned that the DOD was looking for other ways to bring bright scientists on board. He recommended the AAAS fellowship programs and negotiated through

some bureaucracy to start up the program. "It's going to be a great opportunity for the DOD to host these outstanding scientists, who will bring new abilities and skills," Fiske reported. "It will produce a group of alumni who are familiar with the department and who will hopefully come back later in their careers."

As a new Defense Policy Fellow, McCarthy will lend her expertise to the Arms Control Implementation and Compliance Group. She is currently a midcareer scientist at the Hanford Site, which produced the plutonium for the bomb dropped on Nagasaki; it now focuses on

cleanup activities. "I've learned a lot about the destructive powers of nuclear weapons," explained McCarthy. "Now, I'm progressing to how we can use this knowledge to maintain a peaceful world."

Good Causes and Effects

During her fellowship, McCarthy looks forward to applying the skills she developed through volunteering for the League of Women Voters and representing that group on the Hanford Advisory Board. "Serving on the advisory board has given me a lot of experience in consensus-building and negoti-

focusing on issues of bioethics, evolution versus creationism, and environment. Chapman said that the program serves as a forum for bringing the religious and the scientific communities together and that its major focus is on education and outreach. She noted that the group was coordinating efforts on evolution with the National Academy of Sciences' panel on the same subject.

During the discussions that followed, Council members expressed concerns raised during their section meetings. Among the concerns were a desire for more working scientists on the advisory committee, a more formal review process for the program, and assurances that balance would be maintained by representation by a broad range of religious groups as well as nonreligious ethicists.

On behalf of the Board, Lubchenco assured the Council that the program's activities would be reviewed every 3 years and that their concerns regarding balance and representation would be taken into account.

Council Actions

The following actions were taken by the Council:

- Approved requests for affiliation by the Council for Undergraduate Research and the Society for Risk Analysis.
- Approved termination of affiliation with the American Ceramic

Society for noncompliance with AAAS bylaw requirements for appointment of representative.

■ Approved placement of a proposal for a constitutional amendment for appointment of up to two additional directors on the Board on the 1997 election ballot (see box on page 1440) and necessary changes to the bylaws resulting if the constitutional amendment is approved by the membership.

■ Approved Terms of Reference for the Committee on Sections.

■ Approved change to fellows policy requiring those nominating individuals for fellowship to be **current** members of AAAS.

■ Approved change to wording of AAAS Bylaw Article I, Section 3, which deals with an affiliate's membership in a section. The change was made to allow for the possibility of an affiliate belonging to more than five sections.

■ Approved suggested updates and changes to the charter for the Committee on Scientific Freedom and Responsibility.

■ Approved resolution dealing with human rights violations in Ethiopia (see box on this page).

New Business

Under this agenda item, Jane Lubchenco informed the Council of a letter that the Board was forwarding to all members of the Senate. The letter called for strong bipartisan support and ratification of the Chemical Weapons Convention before the 29 April deadline.

A resolution on human rights violations against scientists in Ethiopia whose cases are documented in the 1996 AAAS *Directory of Persecuted Scientists, Engineers, and Health Professionals*.

Whereas the fostering of scientific freedom and responsibility in the United State and in other countries is a basic objective of the American Association for the Advancement of Science;

Whereas the American Association for the Advancement of Science is deeply concerned about the arbitrary detention, detention without charge or trial, denial of freedom of expression, and dismissal from employment for political reasons of Ethiopian scientists;

Be it resolved that the AAAS Council considers the scientists listed below to have been among those arbitrarily deprived of their human rights and academic freedom, and respectfully requests that the Ethiopian government release the imprisoned scientists from detention and allow them to leave the country if they so desire, reinstate those professors who were dismissed from Addis Ababa University during term of coverage of valid contract, and comply with its obligation to provide them retirement and other benefits.

Scientists arbitrarily detained:

Alemayehu Teferra (civil engineer, president of Addis Ababa University, dismissed from university April 1993, arrested 2 April 1993, detained without charge)

Asrat Buli (medicine, arrested 15 February 1996, detained without charge)

Asrat Woldeyes (surgery, dismissed from university April 1993, arrested July 1993, sentenced to 5.5 years in prison)

Girma Bekelle (government official, sciences, arrested September or October 1994, detained without charge)

Mohamed Abdo Tuko (electrical engineering, arrested February 1995)

Mohamoud Ugas Mohamed Hashi (social sciences, arrested between March and July 1994, disappeared)

Taye Wolde Semayat (political science, arrested 30 May 1996, faces possible life sentence)

Teferra Wonde (medicine, arrested May 1989, disappeared May 1990)

Teshome Mutama (nursing, arrested/disappeared February 1996)

ating," she said. "That will help me in this DOD position as we work on the best ways to implement weapons reduction treaties."

The current class of AAAS Fellows recognized the benefits that come from volunteering long before the recent presidential summit; they have been making time to volunteer despite their heavy workloads at the fellowship assignments they started last September. "There's a lot we have to offer, not just as scientists,



Pitching in. Kirsten Vogelsong, a AAAS Diplomacy Fellow, volunteers at a river cleanup.

but as human beings," said Dan Dodgen, a Congressional Fellow who co-chairs the AAAS Fellowship Programs' public service committee with Lynne Cripe, a Diplomacy Fellow at the U.S. Agency for International Development (USAID). In the past few months, AAAS Fellows have—among other activities—served at soup kitchens, answered phones for a telethon, bagged trash at the Anacostia River, and conducted science programs at D.C. schools. In July,

AAAS Fellows are planning to work an entire day for Habitat for Humanity, building a house. "Volunteering," said Kirsten Vogelsong, a AAAS Diplomacy Fellow at USAID, "brings out the essence of the fellowship program, to contribute our skills to issues that matter."

Besides helping to coordinate various volunteer activities for the AAAS Fellows, Dodgen spends one lunch hour a week reading to an elementary school student, as do several other Congressional Fellows. "Sometimes it can be a real dose of reality to go to a high-risk school and meet with the same

child every week," says Dodgen. "It's a direct one-to-one correlation to what I'm doing as a Fellow." A clinical psychologist serving his fellowship in the House of Representatives, Dodgen summarizes and interprets information related to high-risk populations to help staff and members with their legislative efforts, such as the upcoming renewal of the Juvenile Justice and Delinquency Prevention Act.

For information about the AAAS science policy fellowship programs, call 202-326-6600 or e-mail science_policy@aaas.org.