Women in Science and Engineering Is Focus of Conferences

"To have a real long-term effect on the number of women choosing careers in science and engineering," said Marsha Lakes Matyas, director of the Project on Women in Science at AAAS, "we will have to work from elementary school to high school. Otherwise, we'll be doing stopgap measures for a long, long time."

Matyas' remarks came during a national conference, "Women in Science and Engineering: Changing Vision to Reality," held 29 July to 1 August at the University of Michigan, Ann Arbor. The conference, sponsored by the AAAS Office of Opportunities in Science (OOS), focused not only on barriers to full participation by women in science and engineering, but on a variety of ways to overcome those barriers.

Among the recommendations coming out of the conference were the intensification of recruitment programs by colleges and universities for female science and engineering students, increased mentorship programs, and more exposure to real-life female role models.

Recruiting young women into science and engineering careers is critical now, conference participants noted, because at the same time that the entire college population is shrinking, still fewer women are opting for science and engineering careers.

Betty M. Vetter, executive director of the Commission on Professionals in Science and Technology, stated that "affirmative action is not just a matter of moral responsibility now, it's a matter of national survival." With the potential pool of scientists and engineers in the United States dwindling, the country could well lose its competitive edge, she said, unless more women are encourged to follow scientific and technical career paths.

Vetter noted that, after 15 years of steady growth, the enrollment of women in science and engineering programs has started to level off, or decline. In engineering, for example, after a sharp increase from 1972 to 1983, the female freshman enrollment dropped slightly in 1984, remained at that level in 1985, and looks to have fallen farther in 1986. The number of women receiving doctoral degrees in the sciences has probably peaked, she said, since women's undergraduate enrollments have leveled off.

But not all the news is bad. Purdue University and the University of Michigan have programs in place that are aimed at bringing more women into science and engineering. Purdue's program, which focuses on women in engineering, has helped raise the school's female enrollment from 17 percent to 21 percent.

The program incorporates individual attention, which includes staff members calling every freshman woman enrolled in engineering to make contact, along with movies, newsletters, and—most important—women faculty members and scientists serving as role models.

At the University of Michigan, workshops are held for freshman women with a particular interest in science. "Moms in Science," featuring faculty members describing how they handle the sometimes conflicting duties of home and lab, is one of the most popular in the series.

Conference participants included working scientists and engineers, educational equity researchers, intervention program implementors, college and university faculty, teachers of mathematics and science at all levels, supervisors, administrators, policy-makers, and others concerned about the participation of women in science and engineering.

Along with recommendations put forward by the conference, an additional outcome of the meeting was the formation of a national network of those who work on and/or are concerned with educational and professional equity issues in science and engineering. The network, which will allow for a better exchange of ideas and information between researchers, educators, program implementors, and policy-makers, will be coordinated through the OOS.

The recommendations and strategies generated at the conference, along with presentations of major panelists and an analysis of the conference and its potential outcomes will be published by the AAAS. For further information on conference proceedings or the equity research network, contact Marsha Lakes Matyas, OOS, at the AAAS address or call 202-326-6676.

"Women in Science and Engineering: Changing Vision to Reality" immediately followed the fourth international Girls and Science and Technology (GASAT) meeting, also held at the University of Michigan, 24 to 29 July.

The GASAT meeting, which took place in the United States for the first time this year, brought together some 140 representatives from around the world, including those from Australia, India, Mali, the Netherlands, Nigeria, the People's Republic of China, the United States, West Germany, and the West Indies. The Fourth International GASAT Conference was entitled "Celebration of Diversity," and focused on the global diversity of issues regarding the participation of girls and women in science and technology, as well as the diversity this participation brings to advancement in those fields.

The GASAT conference attempted to accomplish, on an international level, what the AAAS conference did on the national level. GASAT conferees described barriers to women's education and participation in scientific and technological fields in a variety of cultures; summarized strategies of intervention that had worked in differing circumstances; and began an informal network of people and resources looking at issues of equity in science research and education.

Participants in both the AAAS and GASAT conferences came away with much shared knowledge about strategies that are improving the entry of women into science and engineering careers and classrooms. They also left Ann Arbor having established a network of colleagues who are tackling the same problems and a promise to continue their exchange of ideas.

PREP Prepares Volume on Theories in Population/ Resources/ Environment

The AAAS Population, Resources, and Environment Program (PREP) is coordinating the publication of a book, *Population, Resources, and Environ-*