AAAS NEWS AND NOTES

edited by Coimbra Sirica

INTERNATIONAL

Radio Science Journalists Say Africa Needs More of Them

The 60,000 people now gathering in Johannesburg for the World Summit on Sustainable Development might well ask how the solutions they hope for will make their way to the rural and isolated villages whose people most need answers to problems of ill health and economic and environmental deprivation.

The most cited solutions are those provided by scientists and engineers, and Alpheus Lamola says he knows how best to communicate the ideas of science and technology to the people of South Africa

"Radio," said Lamola, a broadcast journalist at Thobela FM, a radio station based in Pietersburg, South Africa. "Radio is the only cheap source of information for the people, and it has the advantage of being portable."

The BBC World Service estimates that for every 1000 Africans, there are 198 radios, compared to 52 televisions and 12 newspapers. And recent studies note the importance of the radio in transmitting information on HIV prevention and in alleviating rural poverty.

None of this is news to Lamola or four of his fellow South Africans, all members of a group of journalists and scientists who spent the summer at AAAS in a program to train them to be radio science journalists and to become channels for disseminating crucial information to the South African population.

The program was launched in the summer of 2001, after a visitor from the South African Department of Arts, Culture, Science and Technology (DACST) asked AAAS to co-sponsor an effort to improve science communications in South Africa. The program has now trained 10 newly minted science journalists—five in July 2001 and another five this summer. A third and final group will be chosen to attend the program in July 2003.

"The South African government had figured out that a lot of people don't read, and that radio is a very popular means of obtaining information," said Corinna Wu, the producer of AAAS's Science Update who helps train the AAAS fellows.

Wu and her colleague Bob Hirshon, executive producer and host of Science Update, AAAS's radio broadcast program, traveled to South Africa last year, where they saw firsthand the need for the training they had been asked to provide.

"The facilities at the radio stations were great, but science is not really on the agenda," Wu said. "There is some health reporting, but few stations have anyone who really understands or covers science as news. But when we told them what we were planning to do, they were all very excited."

Jeanette Hewitt, who writes about science for an educational newsletter at Rhodes University, notes that radio reaches 95% of the population of South Africa. She plans to use the skills she had learned at AAAS to prepare broadcast pieces based on interviews with scientists who attend the upcoming 2002 World Summit on Sustainable Development.

"It must be our goal to get the message across in an effective and meaningful way, keeping in mind that in our developing nation, there are many cultures and languages," Hewitt said. "Informing them and educating them is the immediate challenge."

AAAS Science Radio Journalism Fellows (left to right): Jeanette Hewitt, Clinton Nagoor, Nobulali Ngozi, Merida Roets, and Alpheus Lamola.

CREDITS: BETH ELZER

SCIENCE AND HUMAN RIGHTS

Sustainable Development Linked to Human Rights

In an international collaboration that could strengthen the role of human rights in addressing the demand for scientific and technological solutions to poverty and environmental damage, AAAS and 17 other organizations are offering an educational workshop on 1 September in Johannesburg, during the 2002 World Summit on Sustainable Development.

Organizers hope to attract people who have never thought in terms of using human rights laws to question lack of access to clean air, productive soil, and adequate supplies of food and water.

"We are trying to increase awareness of the human rights dimensions in sustainable development, and to do it in an accessible way," said Sage Russell, a senior program associate with AAAS's Science and Human Rights Program. "Human rights, sustainable development, and environmental protection are tightly intertwined. It may be possible to separate them on paper; it is not possible to do so in real life."

Russell and her colleagues from the other nongovernmental organizations have planned a day-long program made up of seminars on a range of issues, including toxic waste, global trade and investment, corporate accountability, environmental justice, water, and food and agriculture. They believe their impact will be strengthened by their choice of keynote speaker; United Nations High Commissioner for Human

Rights Mary Robinson has agreed to address the workshop.

During the day, other speakers will discuss how to protect the rights of indigenous people and minorities, and how residents of countries that don't recognize procedural rights can gain a say in the decisions that will have an impact on their lives.

One of those who will speak about water rights is Michelle Leighton, director of international programs for the Natural Heritage Institute, a nonprofit law firm that specializes in environmental protection.

"If water becomes seen as a basic human right, then people can pressure governments to bring water to their communities," Leighton said. "That means that governments will then make access to water a priority."

Charmaine Crockett, with the New York-based People's Movement for Human Rights Education, was co-organizer of the workshop in Johannesburg with AAAS's Sage Russell. Like many of the people planning the workshop, Crockett hopes that participants will learn to use the legal tools of human rights advocacy in their work.

"We have to be visionaries for a better future," Crockett said. "Lots of people are starting to get engaged in furthering human rights as a way to get there."

INTERNATIONAL

Watershed Project Building Capacity

On the Kola Peninsula in northern Russia, a stark 60-kilometer landscape spreads out from a former nickel smelter. To a visitor, it resembles the imagined aftermath of a campaign with nuclear weapons.

"To picture the sight, take the worst industrial wasteland you can imagine, and multiply it by 1000," said Lars Bromley, program officer in the AAAS Office of International Programs.

Bromley's introduction to the Kola Peninsula came as part of the AAAS Science for Sustainable Development program. Established in 1999, the effort targets four watershed regions--the Plata Basin region in Argentina, the Lake Imandra Basin on the Kola Peninsula in Russia, the Mekong River in Asia, and a more recent project along the Niger Delta in Africa.

The idea, Bromley said, is to improve the management of natural resources in these four environmentally vulnerable parts of the world, while giving local communities and scientists the training and tools needed to decide how best to assess and address damage that human populations have had on the local watershed.

"We can't just go in and tell people what to do," Bromley noted. "If they have a scientific community that can deal with the situation, then our job is to back them up, and to get involved in both research and capacity building."

When Bromley talks about "capacity building," he refers to efforts to create a research infrastructure that will allow the application of locally developed technical solutions to local environmental problems.

AAAS focuses on watershed regions because of their high population density, and because they offer a useful structure for analyzing related ecosystems, natural resources, and political activity.

The scientists and engineers who designed the Science for Sustainable Development program are counting on the diversity of the four watersheds to help them draw conclusions and evaluate lessons learned from their research.

Bromley notes that in the last 5 years, the scientists working in the Kola Peninsula have found that the environment is healing faster than expected, although he cites concerns that the pollutants are traveling by air to other regions. He is most enthusiastic about the scientific cooperation that has taken place in the region between Russian and foreign scientists. Although the collaboration could serve as a model for capacity building in other nations, Bromley cautions that each region of the world presents its own barriers to scientific cooperation.

"The Russian scientists are extremely qualified," Bromley said. "The challenge is getting them to think about how things are done in the outside world, and how to overcome their distrust of outsiders."

SCIENCE EDUCATION

Education, Research Focus of Report on Science

A report presented to the 2002 World Summit on Sustainable Development in Johannesburg addresses one of the delegates' "biggest tasks"—it advises scientists and policy-makers on how to create an educational and research infrastructure in countries that currently have none.

The report on "capacity building" was produced under the leadership of Shirley Malcom, director of the AAAS Directorate for Education and Human Resources, with the help of a committee made up of other internationally renowned experts in science education and communication. Commissioned and published by ICSU, the International Council for Science, the report is one of a series ICSU has produced on scientific issues that relate to sustainable development. The Paris-based organization represents the national members of 98 academies of science of every nation, 26 international scientific unions and 26 interdisciplinary bodies. It collaborated with the World Federation of Engineering Organizations (WFEO) to produce the reports for the summit.

"We're trying to replicate globally what we have learned locally in communities around the world," said Malcom. "You take the strengths of the scientific community, and you work with educators to produce something that is good for the kids. That is the thread that runs through every one of the successful programs we have encountered."

The ICSU report on capacity building recommends action in three areas: education at the primary, secondary, and tertiary levels; research; and the communication of science. The suggestions target two audiences—the first is a group comprised of policy-makers; the second is the international community of scientists and engineers.

"We've been pushing to make capacity building a priority as a way of dealing with the north-south divide," said ICSU Executive Director Thomas Rosswall. "Our major point is that good decision-making requires good science. Technology must be developed to find local solutions, and to do that, all countries of the world must have this capacity."

Among its recommendations, the report encourages the scientific community to become involved in the development of curricula for local school children. It calls on universities to take the lead in helping scientists play this role, and in encouraging research that is generated in the countries "of the South."

It also suggests that international cooperation should be furthered by encouraging technological and educational exchanges between developing countries. It argues that greater emphasis should be placed on research that is relevant to those nations, and recommends enlisting in this effort the expertise of expatriate scientists who now live and work in Europe and the United States.

To improve science communication, the report recommends that journalists, scientists, and public information officers be trained in communicating scientific ideas to the public, and to understand "the goals and concerns of sustainable development—and of the potential impact of science and technology, both positive and negative, on these goals..."

Editor's note: This article and the others in this edition of AAAS News and Notes reflect some of the work that AAAS programs have done to address the issues raised in Johannesburg at the 2002 World Summit on Sustainable Development, which began on 26 August and will continue through 4 September.