

nature

SCIENCE BY EVERYONE:

**Building a world-wide community
research network**

UNESCO/ICSU

world conference on science

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'Community-based research' typically involves lay-people working with professionally trained scientists in a community-driven process.

Think of a typical 'scientist' and what image comes to mind? How about a housewife wearing blue jeans who tests local water quality when she is not taking care of her family's immediate needs? Across the earth, a quiet movement is gathering momentum to involve everyday citizens who may not even have attended secondary school in conducting research projects in response to community-defined needs.

Hog farming, for example, has become a boom business in Tillery, North Carolina (USA), an agricultural community of 3,000 people. But when farm waste began seeping from run-off lagoons, anxiety grew about the safety of local drinking water supplies. In response, the Tillery Groundwater Guardian Committee -- which includes citizens, businesspeople, farmers, educators, University of North Carolina scientists, and government representatives -- formed to champion a groundwater testing campaign and conduct research on the health effects of exposure to farm waste contaminants.

The test results indicated that wells in Tillery have high levels of lead and nitrate. As a consequence of the committee's work, more local residents have taken an interest in water quality and asked to have their wells tested. The community has participated in state legislative hearings and educational initiatives, and contaminated wells have been replaced with new potable water lines. In 1995, Friends of the United Nations recognized Tillery as a community that is exemplary in carrying out one of the UN missions: the self-development of people.

Pioneered several decades ago by practitioners in Asia and Latin America who challenged conventional top-down approaches to development, 'community-based research' typically involves lay-people working with professionally trained scientists in a community-driven process. Participants collaborate to define a research problem, conduct the research, interpret results, and finally use the results to effect constructive social and environmental change. Thus

community outreach and education are built directly into the research process.

During the 1970s, interest in community-based research grew worldwide. By 1997, the Fourth World Congress on Action Research in Cartagena, Colombia, included presentations on international community-based research projects. One example was villagers from Kenya, Cameroon, Nepal, Pakistan, Guatemala, and Colombia collaborating with non-governmental organizations in an ambitious attempt to conduct research that will strengthen community water management.

Meanwhile, the 13 Dutch universities have over the past 25 years created a national network of 38 'science shops' that address research questions posed by grassroots and public-interest organizations, trade unions, and local government agencies. Faculty-supervised students conduct most of the research projects, often resulting in master's theses and publications.

Because they are networked with one another, the various Dutch science shops are able to share information and make cross-referrals. The Dutch shops currently respond to about 2,000 annual research requests, and have inspired the creation of additional science shops in Austria, the Czech Republic, Denmark, England, Germany, Malaysia, Northern Ireland, and Romania.

The Loka Institute, a nonprofit organization in Amherst, Massachusetts, whose mission is to democratize science and technology, has begun to build a worldwide Community Research Network (CRN). Modeled partly on the Dutch network, the CRN serves both communities in need of research assistance and scientists wishing to pursue collaborative relationships with communities.

CRN members are working in exactly the kind of interdisciplinary partnerships that will characterize science in the 21st Century. Since its launch in 1995, the CRN has collaborated with European science shops and inspired efforts to establish new community research centres and networks across the United States and Canada, and in Israel and South Korea.

Despite its proven effectiveness, broad applicability, and growing popularity among scientists around the world, however, community-based research remains conspicuously under-funded and under-supported by most governments and major research establishments. The Science Agenda resulting from the World Conference on Science should include a strong commitment to this innovative and pragmatic approach to expanding popular understanding of science and to making science more responsive to social and environmental concerns.

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Further reading: Richard E. Sclove, Madeleine Scammell, and Breena Holland, *Community-Based Research in the United States: An Introductory Reconnaissance* (The Loka Institute, July 1998). Available via the World Wide Web as a free download from <http://www.loka.org>.

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