Research Influence on Public Policy: A Case Study

Promoting Traditional Knowledge

Indian NGO influences policy at the state, national, and international levels

The Society for Research and Initiatives for Sustainable Technologies and Institutions (SRISTI) has documented and disseminated more than 10,000 grass-roots innovations and traditional practices in India's agricultural sector. By enabling farmers to share their knowledge, SRISTI has deepened awareness of labour-saving techniques, and other innovations. At the same time, by introducing new ideas to politicians and bureaucrats, encouraging networking, and educating researchers, it has had an impact on policy at the state, national, and international levels.

Faced with rapid population growth, food shortages, and widespread poverty, many developing countries embarked on a "Green Revolution" in the 1960s by producing high-yield crop varieties, increasing irrigation, and expanding use of chemical fertilizers and pesticides. In India, the Green Revolution led to expansion of farmland, double-cropping, intensive irrigation, and hybrid seeds. In so doing, it swept aside much of the focus on traditional seeds and crop varieties, herbal pesticides, and organic farming.

While the changes helped India produce enough food to feed its people, they created new challenges. The new agricultural policies mainly benefited large commercial producers, which could afford to buy fertilizer and hold out for best prices, and which had better access to subsidized credit and irrigation. Traditional agriculture, and the farmers who practiced it, were largely left behind.

By 1989, an informal group of academics, farmers, scientists, and others known as the Honey Bee Network emerged. Just as a bee moves among flowers collecting and distributing pollen – doing good without causing harm – members of the Honey Bee Network moved among local innovators to document and disseminate their knowledge in local languages, ensuring the originator received any benefits.

At its heart, the Honey Bee Network sought to improve the socioeconomic conditions of knowledge-rich but resource-poor farmers and other rural dwellers. The Network believed it was crucial to acknowledge and, if possible, reward innovators for their creativity. Moreover, it believed that formal and informal science were complementary: traditional knowledge could expand the frontiers of science, which, in turn, could enhance or build upon local creativity.

By the early 1990s, the Network needed to consolidate and institutionalize its work, a desire that led to the founding of the Society for Research and Initiatives for Sustainable Technologies and Institutions (SRISTI) in 1993.

IDRC's partnership with SRISTI

Strengthening grass-roots capacity and innovation

IDRC provided core support for SRISTI's first phase (1993-96) through the auspices of the Indian Institute of Management Ahmedabad (IIMA), enabling the new nongovernmental organization (NGO) to evolve from a volunteer-based network of researchers and activists into a more structured and permanent organization. Phase I had four objectives designed to strengthen the capacity of grass-roots innovators: protect intellectual property rights, experiment to add value to innovators' knowledge, evolve entrepreneurial ability to generate returns from this knowledge, and enrich the cultural and institutional basis for dealing with nature.

By the end of Phase I, SRISTI was recognized for its innovative leadership. More than 1,000 groups had become members, including many farmers. SRISTI had documented and disseminated more than 5,000 innovative practices in six Indian languages through such tools as the Honey Bee Newsletter.

Expanding to the national level

Phase II (1997-2000) built on SRISTI's early work, emphasizing value-added stages of innovation, as well as material and nonmaterial incentives for innovators. It expanded the organization's scope beyond farmers to include natural resource management, rural production, and cottage industries. It also sought to pay more attention to women's knowledge.

"By the end of Phase II, SRISTI had documented an additional 8,000 local innovations and had validated or improved several of them, including herbal pesticides and veterinary and human plant-based medicines," says Leanne Burton, who evaluated the public policy influence of SRISTI's work. "SRISTI developed and tested various reward and compensation schemes, and had struck a royalty-sharing agreement with a private company interested in three veterinary drugs."

During Phase II, SRISTI also worked with the Government of Gujarat to scale-up grass-roots innovations by establishing the Gujarat Innovation Augmentation Network (GIAN). At the same time, to graduate its activities from the state level to the national level, SRISTI collaborated with the national government to set up the National Innovation Foundation (NIF).

Women, wisdom, and well-being

At the end of Phase II, an IDRC consultant evaluated the project, which helped identify limitations and gaps. As a result, in its current phase (2000-present), SRISTI's overarching theme is "Women, wisdom, and well-being: local knowledge and value addition of biodiverse resources of women in India."

The organization has challenged its members to develop innovative solutions to reduce the drudgery associated with women's work. To that end, it has worked with the Self-Employed Women's Association (SEWA) to distribute several labour-saving technologies, including a modified water pulley developed by a local farmer. In addition, as planned in Phase II, SRISTI is working with women's NGOs like SEWA to launch state-wide searches for female innovators.

In its 2002 interim report to IDRC, SRISTI noted it had documented several hundred traditional practices and innovations in Gujarat; supported further thesis work on women's knowledge; documented women's knowledge of vegetative crops, less well-known uncultivated foods, medicinal plants, livestock management, and human health; and organized women-only village meetings, among other activities.

Assessing policy influence

Research can influence public policy in several key ways: by expanding policy capacities, broadening policy horizons, or affecting policy regimes.

Expanding policy capacities

SRISTI has expanded policy capacities by improving the knowledge of key actors, developing innovative ideas, improving capacity to communicate ideas, and developing new talent for research and analysis.

By documenting and disseminating more than 10,000 grass-roots innovations and traditional practices, SRISTI has improved and expanded the knowledge of diverse publics. While its primary audience has been farmers, other innovators, students, and children, it has used media to spread its ideas both nationally and internationally. It has also invited different actors (politicians, academics, NGOs) to collaborate.

"It is impossible to know how much of this information is being absorbed by the various actors," says Burton. "However, there is evidence of some filtering through. SRISTI has put forward an agenda, with information to support it, and it is this framing of information that makes it useful and useable for policymakers."

With respect to innovative ideas, SRISTI continues to develop original concepts, as well as to test and expand them. For example, it has proposed ethical guidelines for accessing and exploring biodiversity, as well as a "prior informed consent form" to help innovators protect intellectual property.

Creative communication has been an integral part of SRISTI's strategy. The Honey Bee Newsletter combines technical and cultural information with the human appeal of personal stories, humour, and challenges. Beyond the newsletter, it has compiled databases on CD-ROM, and produced videos and posters in local languages. For illiterate villagers, it has produced interactive, picture-based computer kiosks. "SRISTI has learned the power of a story, and will often use these to impress upon more remote audiences the human face of its work," says Burton.

SRISTI has developed new talent for research and analysis by establishing the Sadhbav Sristi Sanshodhan Laboratory; this collaboration with the SADHBAV Foundation brings added value to local knowledge and green technologies. In addition, it set up an in-house herbal lab to conduct experiments with herbal pesticides.

SRISTI's success in expanding policy capacities has been often attributed to its storehouse of relevant research and empirical evidence. "Groundwork has been key to the influence of policymakers – documentation, providing evidence of the creative thinking happening at the grass-roots level, and scientifically validating this knowledge," affirms V. Sherry Chand, a professor with the IIMA.

Broadening policy horizons

"SRISTI works simultaneously at all levels of government," says Dr Sudershan Iyengar, a director and professor at the Gujarat Institute of Development Research and a SRISTI board member. "It has been able to identify issues requiring central government attention, those possible to address at lower levels, and has then pursued both courses simultaneously. By ensuring that there is a national element to its work, SRISTI makes the point that what is possible in one state is possible in all states of India."

At the state level, SRISTI has developed an effective relationship with the Government of Gujarat. In 1997, the organization invited government representatives to its International Conference on Creativity and Innovation at the Grassroots. Follow-up meetings with government led to the creation of the Gujarat Innovation Augmentation Network (GIAN), a registered trust with a 12-member board, including several state officials.

GIAN helps local entrepreneurs access funding by acting as a go-between for innovators and government/business institutions. Among GIAN's achievements, it has signed agreements with several national entrepreneurship schemes; pursued collaborations with educational, research, and training institutions, and NGOs; and mobilized resources (financial, technical, administrative) for more than a dozen innovations at various stages of the development and marketing process. At least another three GIANs are planned for various parts of the country.

At the national level, in response to appeals from SRISTI, the Department of Science and Technology established the National Innovation Foundation (NIF). It is closely linked with SRISTI and GIAN, and enhances the work of these two organizations. NIF acts as a national register of grass-roots innovation and traditional knowledge, and helps to develop and market innovations, linking innovators with formal science and technology.

At both the national and international levels, SRISTI has contributed to the debate about intellectual property rights (IPR) for biological resources. It has organized or taken part in various workshops and consultations on topics such as the Convention on Biological Diversity, and worked with Indian stakeholders to help the national Ministry of Environment and Forests develop a new policy for accessing and conserving biological resources. With respect to Trade-Related Aspects of Intellectual Property Rights (TRIPS), it co-organized a consultation in 1998 with the World Intellectual Property Organization and farmers on IPR protection.

SRISTI's renewed commitment to gender-based projects has had an impact on partners such as SEWA. "I have worked with rural women for a long time, but I am now beginning to appreciate how women do things differently and why," says SEWA's Reema Nanavaty. "Previously, SEWA's focus was on women's access to resources; now we are also considering how women use these resources differently and why. There is more critical analysis."

Another component of broadening policy horizons has been establishing networks between formal and informal science communities. NIF now has a Memorandum of Understanding with the Indian Council of Agricultural Research and the Indian Council of Scientific Research. In addition, grass-roots innovators have taken part in the Indian Science Congress.

Affecting policy regimes

SRISTI (and GIAN and NIF) has affected policy in India, but successes have resulted from the influence of its president, Anil Gupta, rather than specific lobbying. Professor Gupta's involvement with both SRISTI and NIF has helped the two organizations enjoy a close relationship. Following NIF's invitation to a pre-budget meeting to share ideas on how to support innovation, for example, Professor Gupta provided draft text for the Minister's 2002 budget speech, which announced the creation of a venture capital fund for grass-roots innovators.

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"SRISTI's policy impact has been at the level of ideas," suggests Sherry Chand. Several key officials at both state and national levels have expressed support for SRISTI's work, and acknowledged its impact on them personally. At the state level, the Ministry of Agriculture in Gujarat follows SRISTI's practice of rewarding innovators. At the national level, in addition to influencing the budgetary process, Professor Gupta helped draft India's biodiversity bill. At the global level, the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) now conducts research on several herbal pesticides that SRISTI helped identify.

Conclusions

"SRISTI has seen – and continues to see – policy influence as a means to an end," says Burton. "The organization's primary goal is to protect and value indigenous knowledge, and over time it has realized that sustainable and widespread progress on this front requires policy support."

For Burton, SRISTI has had intermediate policy influence in two fundamental ways. First, by working with partners and through its own experience, SRISTI has increased its capacity to conduct research, analyze information, and communicate with a variety of actors. Second, it has enriched the policy arena for others by introducing new ideas, encouraging networking, and educating researchers who have then taken up new positions in related areas.

"Both the state and national governments have created space for SRISTI to pursue its policy work," says Burton. "This is uncommon in India, and is concrete evidence of – if not widespread impact at the policy level – some impact on the thinking of policy officials, and perhaps the beginnings of a more meaningful government response."