

Institutional Constraints in Promoting IK: Community Access to Social Networks and Formal Institutions

In recent years, many international development agencies and non-government organizations have renewed their efforts to provide and promote indigenous knowledge orientation in development planning and practice. These efforts emphasize local knowledge systems and practices as valuable resources in global development. The four distinct aspects of indigenous knowledge oriented development interventions frequently debated are:

- **Documentation:** indigenous knowledge documentation, communication and adaptation;
- **Ownership:** local ownership of specific knowledge practices;
- **Reward System:** rewarding local knowledge innovations (through documentation and dissemination, cross-region recognition, global application and value addition); and
- **Access to Knowledge and Institutions:** linking modern and indigenous institutions for sustainable development and enhancing local community access to markets, government agencies, financial institutions, university based research centers and international development publications.

This study of local innovators in India reflects on the IK aspects outlined above, but emphasize the institutional access dimension in promoting innovative local approaches. Clearly, there are likely to be more similarities than differences between what is described here and the situation in other developing countries of the South.

Indigenous Knowledge revival and adaptation: Local community goals

Ongoing efforts to revive community and region-specific agricultural, health, education and economic livelihood practices in global development efforts point to the value of local knowledge initiatives in international development. In a series of interviews with local innovators conducted during

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an IK research study, the sixteen community members across two states in India outlined the goals of IK practice revival:

- (1) Addressing poverty and livelihood issues;
- (2) Cost and labor efficiency in agriculture production;
- (3) Environmental sustainability and conservation;
- (4) Managing seasonal externalities such as drought, floods, labor shortages;
- (5) Community self-reliance and preservation of values;
- (6) Improved socio-economic status and employment generation;
- (7) Women's representation; and
- (8) Community members' need to learn.

While outlining the goals of indigenous knowledge revival and adaptation, the local community members also pointed out a series of institutional constraints in adding value to local knowledge innovations.¹

(1) Family and community constraints: Many local innovators face opposition from immediate family members and/or broader community members. In some cases, such as ex-

perimental agricultural plots on existing farm land, family members feel hesitant to invest years of hard work as well as forgo immediate income without a clear sense of the final outcome of crop innovations. Community members do not adapt innovative farming and natural agriculture practices unless the benefits of mass-scale production are well-demonstrated in the short run and the innovative product is well-established in the market. In many cases, poorer local farmers also do not have access to farm land for seed and technology cultivation and knowledge of legal certification and appropriate marketing channels.

(2) Seasonal constraints: The greatest local constraint in reviving and modifying innovative local knowledge systems is seasonal factors. A group of local farmers in Tamilnadu and Gujarat states pointed out that their investments in agriculture and herbal farm experiments have often failed due to poor monsoons and consequent droughts, lack of drinking and irrigation water, loss of livestock and labor migration. Another critical dimension is understanding the historical context within which a traditional practice was viable, for example the size of land, land-people ratio, food patterns. Reviving certain traditions in contemporary times requires adaptation and modification in order to incorporate evolving context.

(3) Formal institutional constraints: The formal institutional constraints identified by community members reflect local people's lack of access to 'new social networks' such as agricultural technology and extension agencies, higher education and research institutions, financial institutions, political parties, NGOs and international organizations (as opposed to the village based and community specific traditional social networks).²

The following table summarizes the perceptions of local community members regarding institutional constraints in promoting local innovations and their efforts to overcome specific constraints. It outlines a series of institutional constraints identified by local innovators and other community members. These include their concerns pertaining to 'negative social capital', i.e., the cost of maintaining access to and participating within social networks, the 'exclusive' nature of certain dominant urban and rural networks and the burden of conforming to social networks (over-embeddedness, parochialism and rigidity).

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Institutional Constraints in Adapting Local Knowledge Innovations

Innovation [Maturation Stage]*	Institutional/Sector Constraints	Innovator Strategy	Outcome
Livestock Management Process [Advanced]	<ul style="list-style-type: none"> development planners and local communities' lack of faith in 'rural women's knowledge' the female innovator's lack of access to rural and urban institutional and social networks 	<ul style="list-style-type: none"> establishment and demonstration of the innovative practice to the village community and outside institutions educating the outside 'experts' and various development agencies 	<ul style="list-style-type: none"> *regional livelihoods transformation * the innovator's active participation in the emerging grassroots knowledge network
Energy Free/green Agricultural Technology , machinery [Advanced]	<ul style="list-style-type: none"> lack of commercial investments in locally developed machinery limited marketing and dissemination 	<ul style="list-style-type: none"> collaborative product development and marketing efforts with SRISTI 	<ul style="list-style-type: none"> regional and national demand for the products and growing sales
High-Yielding Organic Crop [New]	<ul style="list-style-type: none"> poor agricultural drought management mechanisms – lack of water government encouragement of commercial farming inputs and methods 	<ul style="list-style-type: none"> development of a range of innovative organic crops, seasonal innovations 	<ul style="list-style-type: none"> * rapid local dissemination of high-yielding and high returns organic seed varieties
New Organic Crop Varieties [Advanced]	<ul style="list-style-type: none"> lack of agricultural and scientific community interest and support politics of government managed 'seed' quality verification process lack of government sponsored and alternate employment during the drought seasons 	<ul style="list-style-type: none"> collaboration with an NGO network 	<ul style="list-style-type: none"> recognition of new varieties collaborative efforts to set up an experimental seed development farm and private seed testing agency
	<ul style="list-style-type: none"> lack of laboratory facility to standardize livestock herbal medication, need to experiment with diverse local medicines and dosage combinations Allopathy medicine doctors' lack of faith in local herbal treatment 	<ul style="list-style-type: none"> Collaboration with Society for Research and Innovations for Sustainable Technology and Institutions (SRISTI) herbal medicine research laboratory 	<ul style="list-style-type: none"> plan to distribute standardized herbal medication packages
Herbal healer [New]	<ul style="list-style-type: none"> Lack of certain processed organic/herbal dry raw materials(reliance on a commercial supplier) 	<ul style="list-style-type: none"> * herbal treatment focus on young dalit (scheduled caste) women's seasonal health problems 	<ul style="list-style-type: none"> * the female innovator's lead role in organizing poor dalit women's savings
Organic (Farm, Bio-Gas, Livestock) Management [Advanced]	<ul style="list-style-type: none"> long duration required to make a transition from commercial to organic agricultural practices financial losses incurred due to the past reliance on 'hybrid' goat varieties and commercial farming methods 	<ul style="list-style-type: none"> family involvement in the organic farm, livestock management and bio-gas enterprise participation in local social networks (farmer's association) networking with the district collector's office, organic farming organizations and national agricultural research institutions 	<ul style="list-style-type: none"> dissemination of organic farming methods the local farmer's association to support organic farming methods and self financing mechanisms for area farmers
Technology for De-husking Coconuts [New]	<ul style="list-style-type: none"> the growing urban demand for coconuts and limited seasonal labor available in the village timely management of coconut supply to the urban company lack of financial investment to develop the commercial products 	<ul style="list-style-type: none"> development of a single product to maintain consistent coconut supply and to overcome labor shortages 	<ul style="list-style-type: none"> * regular and consistent coconut product supply to urban companies
New Drought-resistant Paddy Crop Variety [Advanced]	<ul style="list-style-type: none"> lack of support from the government and ongoing conflict with 'expert agricultural scientists' competition with new modern varieties introduced by agricultural scientists legal actions taken by government to challenge the dissemination of the 'indigenous' variety in the market 	<ul style="list-style-type: none"> collaboration with the local NGOs to fight the legal case local demonstrations of the drought resistance, better quality and better tasting Paddy variety 	<ul style="list-style-type: none"> rapid and successful dissemination of the 'indigenous' and innovative paddy seeds and cultivation technique in the district
Organic Toy Die Making [New]	<ul style="list-style-type: none"> lack of returns in agriculture, need to diversify lack of certain organic raw material (lacquer) in the state lack of access to government development agencies 	<ul style="list-style-type: none"> development of the prototype line of organic toys (the use of organic die) collaboration with the local NGO and the marketing unit of SRISTI(GYAN) 	<ul style="list-style-type: none"> * ongoing research to ensure the supply of 'lacquer' from another state to develop the organic toy die
Farm Weed Cutter (New)	<ul style="list-style-type: none"> lack of finance to develop the product prototype competition in the market – a similar product introduced in the national market by a multinational corporation 	<ul style="list-style-type: none"> desperate search for an investor and ongoing collaboration with the local NGO based in Madurai city – Sustainable-Agriculture and Environmental Voluntary Action (SEVA) 	<ul style="list-style-type: none"> the innovator is now a member of the local innovators' network in Tamilnadu State partnership with local investors
Organic approach to livestock rearing	<ul style="list-style-type: none"> the hybrid livestock variety could not survive the tough mountain region conditions the government managed forests, local herders are struggling to find the fodder for the indigenous variety of the livestock 	<ul style="list-style-type: none"> reliance on the indigenous livestock breed conflict with the forest authority 	<ul style="list-style-type: none"> NGO intervention and mediation in the conflict between the government agencies and

* The financial aspects of local innovations were shared with the Researcher, the local innovators, however, requested that this information be kept confidential for personal and community specific reasons.

1 The local innovators identified a range of institutional constraints that reflect their limited access or the lack of access to established formal and informal institutions and associated social networks. Institutions represent organizational structures, ideologies, adherence to particular development approaches, internal and external networks and explicit as well as tacit value set and beliefs. Also, institutions follow established rules and regulations and adopt certain mechanisms to ensure the enforcement of rules.

“Institution builders can be diverse—such as policy makers, business people, or community members. Corporate, collateral, and bankruptcy laws are public institutions, as are the judiciary, tax collection agencies, and regulatory agencies. Banks, reciprocity between community members, and land inheritance norms are private institutions. Many private institutions exist under the aegis of public institutions. Private banks, for example, operate within the framework of public law. Social norms exist within (or without) formal laws.”

(*World Development Report 2000*, Box 1.2, p.6)

2 The notion of social capital refers to the actual and potential resources individuals obtain from knowing others, being part of a social network with them, or merely from being known to them and having a good reputation. The two distinct aspects of social capital are: an individual's ability to access resources given his positioning within a specific social network, and a communities' access to multiple social networks. “Both Bourdieu and Coleman emphasize the intangible character of social capital relative to other forms. Whereas economic capital is in people's bank accounts and human capital is inside their heads, social capital inheres in the structure of their relationships. To possess social capital, a person must be related to others, and it is those others, not himself, who are the actual source of his or her advantage. [.....] the motivation of others to make resources available on concessionary terms is not uniform. At the broadest level, one may distinguish between consummatory versus instrumental motivations to do so.”

This article is written by Preeti Shroff- Mehta and is based on her Ph.D. field research study conducted in India during 2000-2001. The research study documented personal narratives of sixteen local innovators and community members experiences in reviving and transforming Indigenous knowledge practices. The study was supervised by Prof. Anil Gupta at Society for Research and Innovations for Sustainable Technologies and Institutions (SRISTI) and Mr. P. Vivekanandan at Sustainable-Agriculture and Environmental Voluntary Action (SEVA). Ms. Shroff-Mehta is affiliated with the University of Maryland and will teach Indigenous Learning and Global Action courses starting Spring 2004.