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# A Gender Approach to Sustainable Rural Development of Mountains

Women's Successes in Agro-enterprises in the Indian Central Himalayan Region

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*In the context of mountain development—eg in the Indian Central Himalayan Region (ICHR)—the role of micro-enterprises in poverty eradication and extending employment opportunities with very low capital is self-evident. Micro-enterprises have been well established in promoting equity-based participatory development in rural areas in the ICHR. Women play a vital role through collective entrepreneurship in mountain regions for achieving socioeconomic equity and ecological sustainability. The Rawain Women's Coop-*

*erative Federation (RWCF) established in Yamuna valley, Uttarakhand, in the western part of the ICHR, has emerged as a role model of sustainable rural livelihoods. The diversification of agriculture in mountain regions according to the RWCF pattern has played an important role in ensuring participation of women in policy making, community-based interventions, and institutional support. With this experience women have been capable of visualizing and realizing the opportunities offered by globalization.*

## ICHR women in sustainable rural development

The Indian Central Himalayan Region (ICHR), spreading over an area of 53,485 km<sup>2</sup> and supporting a population of 8.4 million, is home to about 21.40% of the total population of the Indian Himalayan Region and 0.83% of the Indian Republic's population. The ICHR is synonymous with the newly constituted Himalayan state of Uttarakhand. Agriculture in the region is carried out with age-old technologies. It is incapable of providing income and employment throughout the year; consequently, large numbers of males of working age emigrate in search of a livelihood.

This structural peculiarity of the economy is apparent in the sex ratio: females constitute a very high percentage of the workforce, eg the census of 2001 revealed that 56% of cultivators are women. The

society in the ICHR is primarily a patriarchal one, in which land and other property is inherited by sons. Despite a high female literacy rate (60.26% against 54.16% for India overall) in the region, women work more than 15–18 hours per day caring for cattle, collecting fuel, fodder, and water, in addition to normal duties at home. Except for plowing fields, which is forbidden for women and is a symbol of male superiority, all other activities in agriculture are primarily the responsibility of women, who contribute more than 85% to various activities except animal husbandry.

This tradition of arduous work has inculcated the wisdom to rationally use, promote, and conserve the ecological system and biodiversity. Consequently, women have internalized the fact that conservation of the environment is a prerequisite for food security. From centuries of experience they have learned the art of



**FIGURE 1** A field of monsoon crops in the study area (Baranaza), where 7 to 8 traditional crops grow simultaneously in one field. (Photo by M.C. Sati)

maintaining their families practically without any cash income and with very feeble links and exposure to the outside world. However, market linkages and the spread of literacy have ushered in changes and women have shown that they are ready to face the challenges and can utilize the opportunities opened by the globalizing market economy.

### Organic production: a new opportunity

Recent demand for organic food has been increasing and provides an opportunity that could change both the mountain economy and the social and economic status of hill women. Women cultivators rarely use chemical fertilizers and high-yielding seed varieties, despite promotion of these inputs. Most of the arable land is rainfed, or, wherever the gradient allows, a small canal is drawn to water fields. Animals are the main source of power and manure supply. These traditional agricultural practices have ensured that grain, vegetable, and fruit crops produced in the ICHR are pure organic products.

Currently many groups of women in the region are actively engaging in and advocate the production of traditional organic crops. Some are engaged in the processing and marketing of these products in metropolitan areas of the country and even abroad, without jeopardizing the food security of their families. Women in the region traditionally harvest more than 12 grain crops and pulses as monsoon crops, with 7 to 8 crops raised simultaneously in one field (Figure 1). Their traditional knowledge of rainfed agriculture with associated practices such as mixed cropping and maintenance of soil fertility is ecologically practicable and economically viable. Traditional crop biodiversity in the region provides protection against total crop failure and is now opening new vistas of sustainable development.

### A comprehensive analysis

To examine the ongoing process of transformation from subsistence to market-oriented agriculture in mountain areas, specifically among women, a sample of 12 villages located between 1500–2000 m in the Yamuna valley, in the Nagaun and



**FIGURE 2** Villages in the study area (1800 m) known for traditional grain crops and pulses. (Photo by M.C. Sati)

Purola blocks of Uttarkashi District of the ICHR, was selected for a study (Figure 2). In selecting the villages, altitudinal location, distance from headquarters, market/growth centers and roads, and cultural specificities such as caste composition of the villages were given due representation. The study was based on case studies and experiences of the Rawain Women's Cooperative Federation (RWCF), a joint venture of self-help groups of women in the Yamuna valley. Data on income, employment, and empowerment-related issues were collected by interviewing the members of different self-help groups (SHGs) and women's enterprises, using open-ended interviews and guided dialogue techniques. As many as 20 SHGs and 200 women participated in the study. Focus group discussions and participatory rural appraisals by women were also carried out to ascertain the community perception of various issues related to grassroots empowerment and agro-enterprise management in the region.

### Women aiming for agro-enterprises

After attaining separate statehood in the Indian Republic in 2000, Uttarakhand was declared an organic state, and state patronage is being extended to it. This has provided momentum, and traditional cooperative groups of women have understood the benefits of collective action and management of indigenous knowledge sys-



**FIGURE 3** Left: members of the Rawain Women's Cooperative Federation providing advanced training on grading, packing, and processing to self-help groups. Right: members of the RWCF packing apple jam and amla pickles for marketing. (Photos by Kuldeep Uniyal, HARC)

tems. Women of different SHGs were willing to take up entrepreneurship but initially were not confident of their ability to do so. An NGO working in this area, the Himalayan Action Research Centre (HARC), played an important role by providing institutional support through different programs such as creation of self-help groups (SHGs). The Rawain Women's Cooperative Federation (RWCF) was formed by HARC in the late 1990s.

#### **The process of collective entrepreneurial innovation**

The success of any micro-enterprise depends on the selection of the right steps in a systematic and planned way. The Rawain Women's Cooperative Federation took up the challenge of developing collective entrepreneurship among women and built a strong network. To develop income-generating activities in the village, the women of the Federation conducted village-level orientation programs with SHGs and farmers. The selection of the activity was done on the basis of market demand and of the availability, quantity, and quality of local resources. After a series of multifaceted training and orientation programs, women of the Federation began income-generating activities, utilizing their monthly savings. Village-level workshops were scheduled every 3 months for women's groups to enhance their capabilities and skills in production, planning, and management-related issues. A production plan was formulated on the basis of market demand. To achieve the target of the production plan, an agree-

ment was signed with the various women's groups and cooperatives.

This systematic process helped to strengthen linkages and ensure a continuous supply of products in the market. The members of the Federation engaged in different income-generating activities such as collection of spices, pulses, and millet from SHGs at the RWCF office. With the help of HARC, the Women's Federation also provided advanced training in grading, packing, quality control, and processing of collected materials (Figure 3). Other members provided specific training for development of production plans, financial management, marketing, and negotiation skills. The Federation encouraged the farmers to adopt the crop cycle plan. Farmer interest groups and their associations were also given training and orientation in production planning and collective marketing. Exposure tours were conducted for the female farmers on quality control. These interventions helped to improve the quality of the products.

The Federation formulated a marketing strategy for appropriate market channels for proper product supply. The strategy was also formulated to increase the accessibility of the market and to understand the dynamics and trends of the market and bargaining skills. To create awareness about a product among the consumers, pamphlets, folders, leaflets, etc were distributed in the local market. To explore the market and identify good wholesalers of products, market surveys were also conducted. The RWCF signed an agreement with the traders to protect

them from market fluctuations. Using information technology, the Women's Cooperative Federation collected information on the daily sale prices at different *mandies* (ie organized and product-specific markets such as the vegetable market of Azad Pur Delhi, Sahranpur, or the vegetable and grain market) in the country through websites and provided this to farmers and SHGs. This enabled farmers to know the daily prices, and to choose and decide which was the appropriate *mandi* to sell their produce.

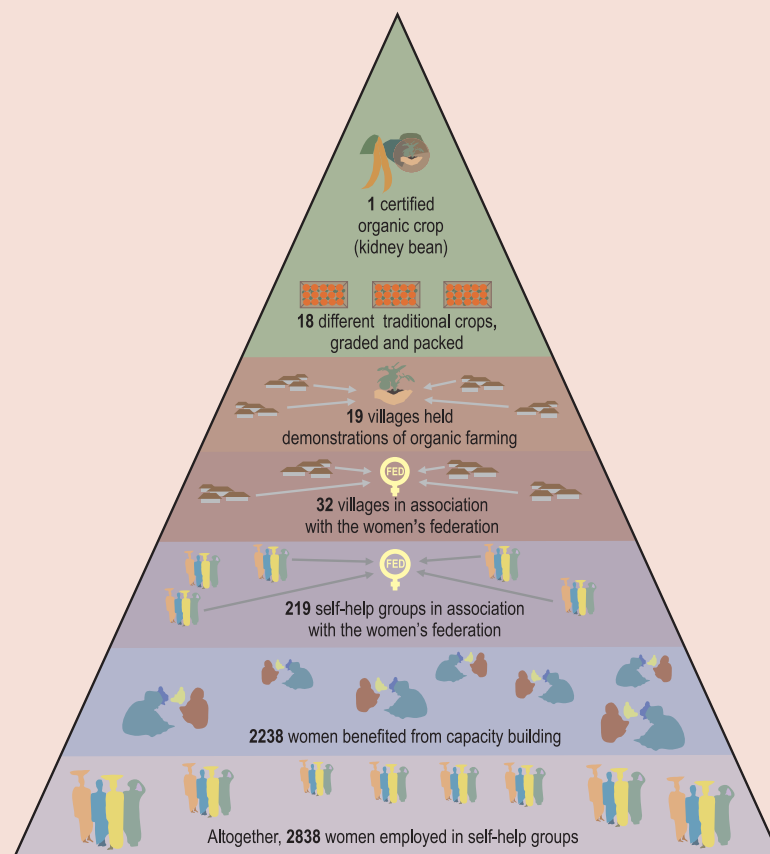
Entrepreneurial innovation, attitudes, and skills promoted in this manner by the Women's Federation, the SHGs, and individual farmers have supported women in implementing strategies effectively (Figure 4). Horizontal transfer of knowledge was found highly effective among farmers and gradually the entire society.

#### Macro estimates of production and income

Realizing the market importance of organic products, the Women's Federation encourages SHGs to cultivate traditional organic crops on the basis of voluntary consolidation. Pursuing these ideas, farmers and SHGs are cultivating many traditional crops such as buckwheat, horse gram, and foxtail millet at commercial scale. However, the area under these crops decreased by 80 to 100% in the last 2 decades, mainly due to the availability at cheaper rates of wheat and rice in the public distribution system.

After development of a strong marketing network, a multinational company, Yoshifoomi Kihata of Japan, has recently begun purchasing foxtail millet (*mandua*) in bulk from the Women's Federation for preparation of baby foods, due to its very high nutritive value. Given the unique selling property of the other traditional crops, the Women's Federation approached the Indian Institute of Organic Certification in Bangalore for certification of kidney bean as an organic product. If this materializes, it will give great credibility to the marketing strategy.

At present the products of the Women's Federation are available in 8 outlets, 14 *mandies*, and 16 cities in India including Delhi, Ahmedabad, Hyderabad,



and Mumbai. The Women's Cooperative Federation products have also been displayed at different national-level fairs and exhibitions, such as Agriculture Expo, International Trade Fair Delhi, National Women Farmers' Fair, Ahmedabad, Uttarakhand, Mahotsav Dehradun, and have achieved good market results.

The Mother Dairy in New Delhi purchases vegetables and traditional crops at market price directly from the Federation without any intermediaries on a weekly payment basis, paying women farmers through account payee checks to their Federation. This cooperative marketing pattern, estimating the ex-farm value of traditional crops, is worth about Rs 30 million (US\$ 760,000), along with an annual turnover of Rs 45 million (US\$ 1,140,000) per annum. The average annual return for each SHG is estimated at Rs 1–1.5 million (US\$ 25,000–38,000). Due to collective entrepreneurship, the annual employment of each farmer has increased 1.66 times. Previously, the average employment of

**FIGURE 4** Overview of the process leading to successful agro-enterprises run by women in the study area. (Sketch by Ulla Gaemperli)

farmers was around 6 months. With the establishment of market linkages and an almost assured market, especially for off-season vegetables, employment has increased substantially to around 300 days.

The annual farm value of production of traditional crops among RWCF members is estimated at around Rs 300,000 (US\$ 7600). This estimation is based on the price of various grains and pulses offered by the retailers. But marketed through the RWCF, after due processing and packing, the similar quantum of production fetches around Rs 450,000 (US\$ 11,400). This added value has been possible mainly because of organized marketing, processing, and packaging.

### Conclusion and policy implications

The Women's Cooperative Federation established in Yamuna valley, in the western part of the ICHR, has emerged as a role model of sustainable rural livelihoods. The women of the region are further empowered by institutional support and technical capabilities. More than 4000 members of the Federation have taken up the initiative to increase crop diversification, production, and quality control through agri-business activities in a systematic and planned manner.

The above discussion indicates that the economic empowerment of grass-

roots women in the management of agro-enterprises has tapped their potential only marginally. Diversification of agriculture in the ICHR using the patterns realized in the study area is an urgent task to ensure participation of women in policy making, community-based interventions, regional/multi-local networking of SHGs, and institutional support. Recently environmental sustainability, food security, and biodiversity-related issues have become important in the context of sustainable mountain development. If the entire state's organic farming patterns work on the patterns of the RWCF in the Yamuna valley, the expectations of marginal mountain farmers will be fulfilled and high premiums could be obtained through organic foods as well, as this will be a sustainable and eco-friendly approach in mountain development.

If the process of organic production is conserved and replicated in other parts of the state, it has the potential to make the process of globalization beneficial, at least in this state. However, there is an urgent need for state initiatives in this regard to take advantage of globalization opportunities. Ultimately this will decrease the work burden on women. Institutional reforms in land ownership, such as consolidation of holdings, are yet to be debated and experimented with seriously.

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### FURTHER READING

- Bennet L, Goldberg M.** 1993. *Providing Enterprise Development and Financial Services to Women: A Decade of Bank Experience in Asia*. World Bank Technical Paper No 236, Asia Technical Department Series. Washington, DC: World Bank.
- Oxaal Z, Baden S.** 1997. *Gender and Empowerment: Definitions, Approaches, Implications for Policy*. Briefing paper prepared for the Swedish International Development Cooperation Agency, SIDA Report No 40. Brighton, United Kingdom: Institute of Development Studies.
- Pokhriyal HC.** 2001. An institutional strategy for improving mountain farming: A study of Uttaranchal State in the Indian Himalaya. In: Tang Ya, Tulachand PM, editors. *Mountain Agriculture in the Hindu Kush-Himalayan Region. Proceedings of an International Symposium Held May 21 to 24, 2001 in Kathmandu, Nepal*. Kathmandu, Nepal: ICIMOD [International Centre for Integrated Mountain Development], pp 223–228.
- Samal PK, Dhyani PP.** 2006. Gender in the management of indigenous knowledge: Reflections from Indian Central Himalaya. *Current Science* 91(1):104–108.