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Working with Communities in Hilkot Watershed, Pakistan

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Abstract

The more productive and sustainable use of the limited arable land and other natural resources is a key strategy to improve environmental conditions and local living standards in the middle mountains of the Hindu Kush-Himalayas. In late 1999 PARDYP began working to achieve this in the remote Pakistani watershed of Hilkot. It first carried out a socioeconomic survey and a gender and institutional analysis to see how local farming systems operated and how local common property resources were used and to identify improvement measures. PARDYP then began promoting a number of measures to improve local livelihoods and environmental conditions. It helped establish a network of separate social organisations for men and women that pool savings to spend on common problems. Skill development and income generating trainings have been run including on food and vegetable preservation, kitchen gardening, solar devices, and seedling nursery management. Women's community centres have been set up to run skill training courses. These initiatives have created awareness and motivated local women and helped them increase their earning power.

Background

Hilkot watershed lies in the remote hilly district of Mansehra in Pakistan's North-West Frontier Province. It has a population of 7500, an average literacy rate of 37%, an average household size of eight persons, and a per capita land holding of 0.05 ha (Khan and Shah 1998). It is a remote area where agricultural extension and outreach activities have only had a limited impact. Economic resources are few and most local people rely on agriculture, forest and local rangelands to meet their food and other livelihood requirements.

One of the area's main problems is forest degradation. The government owned forests are managed and controlled under the Forest Act, 1927 and the government's forest policy. These are considered to be oppressive and authoritative by forest users as they give local communities few rights over their forests. The lack of capacity of the forest department has led to the degradation of the vast tracts of forest under its jurisdiction.

The local population is made up of the two major tribes of the Khans (Swatis and Syeds) and the Gujars. The former are mostly agricultural landowners and the latter are tenants. Gujars make up all of the population or the majority in six of the area's settlements with Swati and Syed in the majority in the other two.

Socioeconomic Survey

In late 1999 PARDYP (the People and Resource Dynamics in Mountain Watersheds of the Hindu Kush-Himalayas Project) began work in Hilkot watershed to address the areas resource degradation and livelihood problems. The initial task was to survey the social and economic status of local people and local resource management institutions.

Table 15.1: **Distribution of ethnic groups in Hilkot**

Community	Gujar (%)	Swati (%)	Syed (%)	Total
Hilkot	-	100	-	100
Jolgran	100	-	-	100
Stangali	100	-	-	100
Kund	100	-	-	100
Mera	66	25	9	100
Kotani	76	20	4	100
Bojri	95	5	-	100
Syedabad	-	20	80	100

Source: Khan and Shah 1998

Table 15.2: **Land tenure status in various communities**

Community	Owner	Tenants	Owners cum-tenants	Total
Hilkot	90	5	5	100
Syedabad	70	10	20	100
Kandi	90	5	5	100
Jolgran	-	80	20	100
Kund	-	90	10	100
Mera	76	20	4	100
Kotani	20	60	20	100
Bojri	10	60	30	100

Source: Khan and Shah 1998

The survey mapped the distribution of the main ethnic groups (Table 15.1) and classified local households into income classes. The average land holding size for the poor class was taken as below 0.5 ha, middle class 0.5-1.0 ha, and rich class above 1.0 ha. Other sources of income than agriculture were found to be labouring jobs for poor class people, government service for middle class people, and government service, business, and income from overseas for rich class people. Forty four percent of households were found to be middle level, 34% poor, and 22% rich. In three of the eight communities, most people (60 to 90%) were landowners, whilst in Jolgran and Kund everyone was a tenant. In the other three communities between 10% and 25% of local people were landowners (Table 15.2).

The survey found that the local pattern of land ownership and the system of natural resource management has led to many conflicts. These usually take place between tenants, owner-cum-tenants, and right holders. They also sometimes arise between individuals within the same tenural class. The most common types of conflict happen over division of land, the demarcation of boundaries, the theft of livestock or grass and timber, the unjustified use of irrigation water, and the sharing of benefits from agricultural and grassland between owners and tenants. Conflicts between people of different socioeconomic groups over the violation of social norms were found to becoming rarer.

The survey identified the following user groups that exist for the local management of forests, grasslands, and irrigation systems.

Forest user groups — Forest user groups are made up of people who use the forests including owners and right holders, and those without any recognised rights. Hilkot's forest resources are either state owned or privately-owned guzara forests. The latter can be owned

by several people. In state-owned forests informal user groups exist whose members have rights to grazing, and to collect fuelwood, timber, and water. For privately-owned forests, forest tenants pay owners in cash or kind to use the forests for grazing fuelwood and fodder and timber. Other people who use the forests are migratory herders, illegal timber harvesters, medicinal plant collectors, and local people who illegally cut trees, graze their animals, and collect fuelwood.

Guzara forest owners association — This group is made up of private forest owners. It operates at district level and its main objective is to safeguard the interests of forest owners by liaising with the district administration and helping resolve conflicts.

Grassland users — Areas that produce good quality grass are harvested by either owners or tenants. Tenants pay for the grass in kind with commodities like ghee or butter (on an annual or biannual basis), milk (on daily basis), or animals, chickens and goats (annual basis). Grassland that does not produce good quality fodder is usually harvested by several families who pay the landowner annually in cash or kind.

Water user groups — Water user groups include landowners and tenants who use streamwater for irrigating their paddy land in the lower watershed, usually near the main streams. Another type of water user group includes people who use streams or springs for drinking water. They either have access to a spring or get their water from nearby water pipes.

Gujar Youth Forum — This once active forum is no longer very effective. It was established by young Gujars to help in their struggles against the authoritarian powers of the Swati landowners.

Gender analysis

Following these investigations a gender analysis was carried out to identify the work that men and women do (Table 15.3) and the control of men and women over the area's natural resources (Table 15.4). This showed a clear division between the tasks carried out by men and women and between the control over the various forest, agricultural, and other natural resources. The aim was to see how local forestry activities could be adapted to improve how men and women can work together and share work and benefits. It was necessary to carry out this exercise because of the strict separation of men and women outside the family which means that interventions have to go ahead gender-wise with training programmes and interventions organised separately. This information was summarised and led to the identification of proposed action areas (Table 15.5) with targeted programmes for men and women.

PARDYP's Interventions

Improving forest management

Improving the condition of local forests and introducing sustainable management practices was identified as a priority intervention area. The factors affecting forestry development in the area were identified by the PARDYP team and local people (Table 15.6). Following this a proposal was developed to try out the decentralised management of Hilkot's natural forests by developing joint forest management on an area of government forest. This aimed to bring the forests under sustainable use and protect them against degradation and to demonstrate how local people could provide for their basic needs from the forests on an equitable basis.

Table 15.3: **Activities carried out by women and men in Hilkot Watershed**

Location	Activity	Gender involved	Time
Homesteads:	Provision of plants	Male	Seasonal
	Planting fruit and forest trees	Female	Seasonal
	Protecting trees	Male	Anytime
	Watering plants	Female	Weekly
	Collecting firewood, fodder and tree fruit	Female	Seasonal
	Processing non-timber forest products	Male/female	Seasonal
	Livestock and poultry care	Female	Daily
	Vegetable growing	Male/female	Seasonal
	Processing and storing agricultural crops	Female	Seasonal
	House construction and repair	Female/male	Occasional
	Cooking and caring for children and old people	Female	Daily
Forests:	Collecting firewood	Male/female	Weekly
	Collecting water	Female	As needed
	Collecting grass and fodder	Female	Seasonal
	Grazing animals	Male/female	Seasonal
	Timber collection	Male	Occasional
	Collecting non-timber forest products	Male	Seasonal
Farmland:	Providing planting stock and planting trees	Male	Seasonal
	Plant protection	Male	Anytime
	Collecting firewood, fodder and tree fruits	Female	Seasonal
	Harvesting and transporting timber	Male	Occasional
	Land preparation for crops and sowing	Male	Seasonal
	Weeding	Male/female	Seasonal
	Crop harvesting and transportation	Male	Seasonal

Table 15.4: **Women and men's access to and control over resources in Hilkot watershed**

Resource	Benefit	Used by	Controlled by
Homesteads	Crops, firewood, fruit, vegetables	Men and women	Men and women
Agroforestry land	Firewood, fruit, fodder	Men and women	Men
Forest	Firewood, timber and grazing	Men and women	Forest owners/ government
Degraded lands	None	Men and women	Men
Non-timber forest products	Income and herbal medicines	None	None
Livestock	Dairy products, animal power and meat	Men and women	Men
Poultry	Eggs, meat	Women	Men
Agriculture	Food, fodder, fuel	Men and women	Women
Labour	Income	Men and women	Men
Cash	Household needs	Men	Men

Table 15.5: **PARDYP Pakistan's proposed action areas in Hilkot watershed**		
Programme area	**Involvement of men and women**	**Action needed to make improvements**
Afforestation on homesteads	Men and women both decide on growing trees on homesteads	Train women in afforestation techniques
Agroforestry	Only men make decisions about agroforestry	Target men through extension programmes to promote agroforestry
Management of existing forest	In private forests male tenants are the users but management decisions are made by owners and the Forest Department. In government forests men are the users and the forest is controlled by the Forest Department.	Men take all decisions in joint forest management committees for government and private forests
Livestock improvement	Men are the decision makers whilst women look after livestock	Train men in improved livestock breeding and women on better livestock care
Non-timber forest produce enterprises	Men take decisions and women do most processing	Involve men in enterprise development and train women in improved processing
Agriculture	Men are the decision makers whilst in some communities women help in agricultural activities	Involve men and women in on-farm improvement programmes.
Income generation training	Both men and women are involved	Train men and women

Table 15.6: **Factors affecting forestry development in Hilkot Watershed**		
Factor	**Constraints**	**Support**
Physical	Forest clearance, erosion, and low availability of seedlings	PARDYP undertaking afforestation. Men and women's community organisations
Social	Local culture limits women's role in natural resource management and decision making, and women's workload	Kitchen gardening and planting fruit and forest trees in homesteads
Economic	Poverty and lack of training facilities	Introducing high yielding varieties
Political	Landowner-tenant conflicts, legal constraints, and the disproportionate power of a few influential people	The government is beginning to promote community participation in forest management

This initiative went ahead by reviewing NWFP forest policies to understand the current policy and decision-making hierarchies relating to the area's forests. Then, meetings were held with forest department officials in Hilkot and other areas where joint forest management had been introduced. PARDYP identified the forest advocacy group, Institutional Transformation Cell (ITC) as a partner to help introduce joint forest management. This organisation is involved in promoting decentralised forest management in the local province and is pushing the government to introduce a new Forest Act.

PARDYP, ITC, and the forest department discussed introducing joint forest management and agreed on a plan of action. The first step involved collecting data on the social, economic and biological aspects of forest and user communities and other right holders. Also, preliminary discussions were held with another advocacy group, the Forest Management Center.

This led to the formation of community organisations in 1999 with eight for men and the same number for women. More have since been formed. They play an important role in managing local natural resources and are also working to empower women and build up skills. Regular meetings are held to discuss problems and solutions. Working through these groups has reduced class and gender based conflicts. These organisations have great potential to work alongside government agencies and other rural development organisations to improve the living conditions of local people. The monthly meetings and PARDYP-facilitated interactions are raising awareness about natural resource management problems issues and solutions.

The local social organisations are involved in collecting savings and providing credit. The women's groups are saving more money than the men's. The women have used their savings for buying sewing machines, developing handicraft production, and producing better quality honey. By 2003 the eight women's community groups had saved PR 10,000 (US$ 172). These women's organisations have started to share ideas about how to overcome their problems.

On-farm and livelihood support

Discussions between the PARDYP team and local communities identified the main problems faced by farmers and local households. In response PARDYP, in association with local line agencies, promoted and introduced the following interventions.

Figure 15.1a & b: **A farmer tour underway and a local tree nursery**

New varieties — The introductions of new varieties of maize and wheat that give higher yields and mature earlier to allow other crops to be grown. Local farmers preferred Inqilab-91, Fakhr e Sarhad, Noshera-96, Suleman and Tatara varieties of wheat; the Super 3203, Azam and Kissan varieties of maize, and JP-5 and Dilrosh rice. The introduction of sowing crop seed in lines has also led to better yields.

Off-season vegetables — The introduction of new types of seasonal and off-season vegetables, especially in higher elevation areas and rice fallow fields, which previously remained unused for almost half the year. Onion seed is being successfully grown on the rice fallow fields with farmers getting about 40 kg of onion seed from 0.05 ha of land.

Farmer's field days — The holding of annual farmer's field day separately for men and women where experts are invited to farmers' field trials and new techniques are demonstrated. These events provide a good opportunity for mutual learning. Farmer to farmer visits are held for the same purpose. Gender issues are incorporated into these awareness raising activities. PARDYP's female social organisers have frequent contact with local women. They attend the meetings of local women's organisations. The confidence of local women has increased and they now often contact the project to inform project staff about their difficulties and needs.

Food preservation training — Training courses have been run on food preparation and preservation and clothes making. Communities have shown a strong interest in food preservation because of the abundance of local fruit and the difficult access to market. A number of women have set up small enterprises. This has improved their socioeconomic status and led to them playing an increased role in decision making. These successes led the PARDYP team to increase its female support staff. It now has a female social organiser and a horticulturist.

Other training courses — Training courses have been run on plant propagation and nursery management, beekeeping, fish farming, livestock and dairy development, plant pruning, modern farming techniques, and mushroom cultivation.

Kitchen gardening — The project has supported local women to grow vegetables by training them and providing them with motivation and support such as advice and pesticides. The project promoted the growing of tomato, potato, brinjal, and other vegetables in the summer and spinach, radish, lettuce, coriander, karam (local spinach), and turnip in the winter. It established local demonstration plots of off-season peas, radish, turnip and mung, mash beans and onions. Most families used to spend large amounts of money buying vegetables. These gardens now provide year-round fresh vegetables at little cost.

Seedling production — The local production of forest and fruit tree seedlings has provided a valuable new source of income and has overcome the local shortage of these plants. Men and women have been trained in nursery management. The project established eight nurseries in Hilkot watershed, providing most inputs and technical guidance. The project buys the seedlings and distributes them for local planting.

Tree crops — The project holds field days in all Hilkot communities to promote the growing of plums, peaches, apricots, apples and walnuts. Local people have also been encouraged to plant more trees on their land to provide firewood, fodder and timber and for environmental protection. The project has provided them with tree seedlings and guidance on how to plant them.

Recommendations

The main recommendations arising from PARDYP's experiences in the Hilkot watershed are:

- sustainable natural resource management is not possible without the involvement of local communities;
- awareness building, motivation, and skills are needed to improve the way that communities manage their local natural resources;
- farmer to farmer visits are one of the best ways of improving awareness among farmers;
- at first farmers need incentives to adopt new interventions;
- involve women's groups in natural resource management and other on- and off-farm livelihood activities to improve the socio-economic condition of remote communities; and
- communities should be trained how to get maximum benefits from their local resources.

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Reference

Khan, M.; Shah, H. (1998) *PRA Survey Report of Hilkot Watershed*. Peshawar: Pakistan Forest Institute