

MOUNTAIN WOMEN AS A DECISIVE FACTOR IN SUSTAINABLE RESOURCE MANAGEMENT AND UTILIZATION: OBSERVATIONS FROM ROGHANI VALLEY HINDU RAJ MOUNTAINS NORTHERN PAKISTAN

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ABSTRACT: *In the northern mountainous belt of Pakistan—including the study area—women are not given participation in formulating resource management strategies, but in case of utilization the role of women is far more crucial than men. This study is focused on the Hindu Raj Mountains of Northern Pakistan and attempts to investigate and quantify the role of mountain women in natural resource based activities and household food security. Data was collected through observations, questionnaires and interviews. Frequent visits were conducted to the field during sowing and harvesting seasons and in winter when womenfolk were involved in the extraction of forest products. It was found out that women labor dominates almost all the activities related to the utilization of natural resources. The outmigration of male labor force overburdens women in the form of extra activities and outdoor responsibilities. However, in policy making and implementing resource management strategies, women are neglected.*

Key Words: Gender division of labor; household chores; natural resource management; Roghani Valley; Hindu Raj Mountains

INTRODUCTION

The role of women cannot be undervalued whether it is national or international politics, issues of local interests or global concerns, public or private services, household management, food and nutrition security or economic activities. One way or the other, the contribution of women is vital in every sector of life [1, 2]. Gender division of labor and participation rate of women in natural resource based activities vary from region to region in the northern mountainous belt of Pakistan. Women are mostly involved in repetitive indoor activities such as cleaning houses, cooking food, child rearing, washing clothes, kitchen gardening, collection and processing of fruits, caring children and the elderly members of the family and fetching drinking water etc.[3]. Most of the studies conducted on the issue reveal that women usually work more than men in terms of time and activities [4, 5, 6, 7].

In addition to the indoor activities and responsibilities, mountains' women play an important role in the utilization and conservation of natural resources [8, 9, 10, 11, 12, 13, 14]. Similar to most other mountainous regions of the world, natural resources play a vital role in livelihood subsistence of the communities inhabiting the mountainous areas of Pakistan [15]. Agriculture, collection of forest products and animal husbandry are the major natural resource based economic activities of the people of this region. Traditionally, these activities are divided on gender basis and the responsibilities of both the sexes are clearly defined. For instance, repairing fields and fences, construction of retaining walls, plough and threshing are the responsibilities of male members of the households, whereas, weeding, looking after the crops, storing the grains and caring livestock are predominantly performed by women [16, 17, 18, 19]. Some activities, such as collection of fuel and fodder from the forests and rangelands, irrigation and harvesting the crops are jointly tackled by men and women [20, 21, 22].

Women play a substantial role in agro-pastoral activities and work side by side with men in sowing and harvesting [23, 24], as well as looking after and irrigating the crops.

However, due to certain gender gaps, the role of women is unrecognized and unpaid. In spite of doing more work and spending longer hours in basic household and primary economic activities, the importance of women's contribution to the economy is neglected. The main factors for the neglect of women role are: more focus on usage value than the exchange value; non-market economic activities; lack of ownership rights in resources and assets; and less or no participation in household decision making. Another important aspect is the misconception of not including basic household and indoor work in economic activities, which are predominantly carried out by womenfolk.

Although, the issue of women contribution to household economy and food security has gained importance in the recent decades, more detailed studies are needed to be conducted to have an insight into women's life and the work they perform. The activities and economic contributions of women should be measured and recognized properly. In-depth and detailed field based studies from different areas having different socio-economic, cultural and physical setup can provide a factual scenario of 'how important role is performed by women in livelihood security of household and earning income'. The same effort has been made in the present study. The researcher has made an attempt to quantify the involvement of womenfolk in different domestic as well as economic activities. The study focuses on mountains' women, based on the observations taken in Roghani Valley, which is located in the Hindu-Raj Mountains (off-shoots of Hindukush Mountain Range), Northern Pakistan.

STUDY AREA

This study was conducted in Roghani Valley located in the Hindu Raj Mountain, between 34°54'33" to 35°00'28" N

latitude and $71^{\circ}55'35''$ to $71^{\circ}00'13''$ E longitude. The valley stretches northward from the right bank of River Panjkora in the Lower Dir district and reaches up to the high mountains in Upper Dir district. The valley ranges from 500 meter altitude in lower parts up to above 3,000 meters in the upper mountains. The whole valley is divided into eleven villages (Fig 1). There is a prominent watershed between Shalkani Bala and Umar Kot villages, which divide the valley into upper and lower parts. The wide altitudinal variation

determines the uneven distribution of forests and other resources in the valley. Jailar is the northernmost village and the highest in altitude among all villages of Roghani valley covered by thick natural forests. Highest density of forest cover is found in Umar Kot and Gato while other villages located in the northern/upper part of the valley have relatively low forest cover. The villages in the southern/lower part of the valley are almost are having sparse natural vegetation cover.

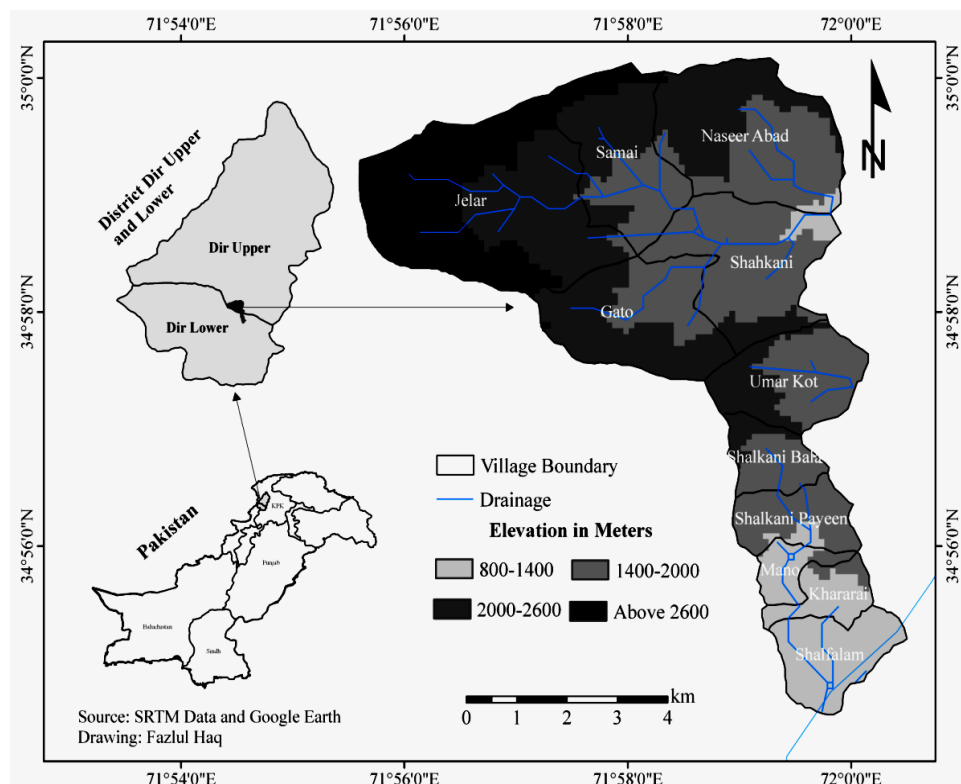


Figure 1: Location and Physiography of the Study Area

The study area is inhabited by Roghani tribe which is divided into four main clans and each of them is further divided into three sub-clans making a total of 12 groups. The sub-clans are divided into a number of lineages and households. The inhabitants of the area have introduced an indigenous tenure system in order to ensure equal access of all the shareholders to the unevenly distributed natural resources. Each of the four clans is given equal rights in all the resources in every village. Ownership rights are automatically transferred to the next generation by inheritance under this system. However, traditionally men are the owners while women only have usufruct rights to the resources owned by the male members of family.

METHODOLOGY

This research is entirely based on primary data collected through focused group discussions, questionnaire survey and field observations. In first step detail field visits were carried out in order to observe the participation of women in different activities such as agriculture, utilization of water,

extraction of fuel wood and fodder from forests and rangelands etc.

In second step, questionnaire survey was conducted from the household heads, asking questions about their dependency on women folk and the involvement of women in different activities. For questionnaire survey the stratification designed under the indigenous tenure system was followed. The whole valley is divided into four segments called *tal* namely Jailar *Tal*, Samai *Tal*, Shahkani *Tal* and Shalkani *Tal*. Questionnaire survey was conducted through stratified proportional random sampling with an overall sample size of 10%. The overall sample size was kept constant in order to avoid over or under representation among the villages. The number of households representing each village i.e. 10% was proportionate to the total number of households in that village. The sample households were randomly selected from each village of each *tal*. In this way, a total of 265 questionnaires were filled out of the total 2641 households in all villages of the valley.

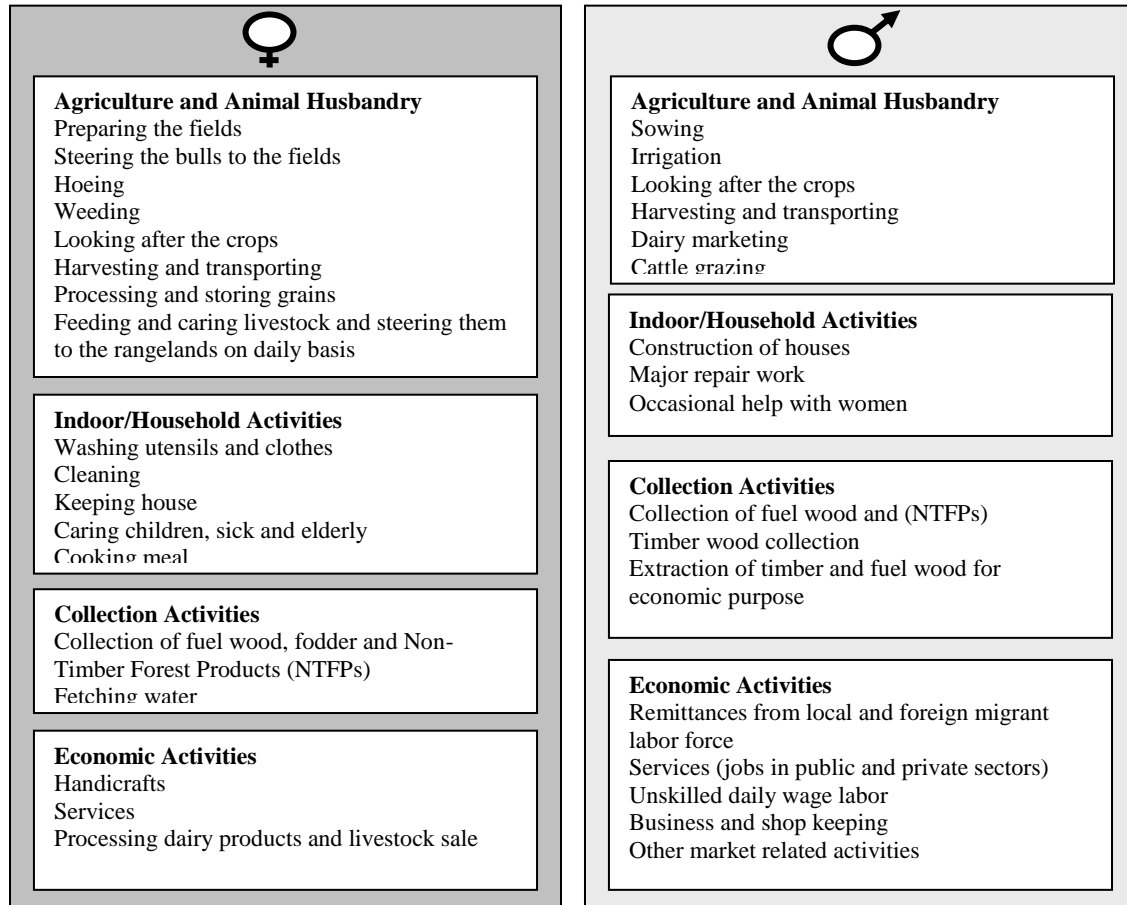
RESULTS AND DISCUSSIONS

Gender Division of Labor in Different Activities

The responsibilities of men and women in various activities regarding household economy and food security are traditionally well defined and understood (Fig 2). This division of labor ensures the smooth running of household. In the study area, the resources are held, managed and utilized under an indigenous tenure system known as *wesh*, which is introduced by the local inhabitants [25, 26, 27, 28]. Traditionally, women are excluded from ownership rights under this system. Only men are entitled shares in land, property and resources, which pass through to the next generation by inheritance. Nevertheless, women possess

usufruct rights to the resources owned by the household to which they belong. This tenure system and local customs have restricted the participation of women in formulating resource management strategies.

The traditional labor division keeps on changing with modernization and the transformation of socio-economic setup. It is evident from a number of research studies carried out in different parts of the world that the trend of women participation in outdoor paid activities is increasing day by day [29, 30]. Traditionally, women have been the domestic workers performing the unpaid housework.



Modified from [31]

Figure 2 Gender Division of Labor in Different Activities Related to Household Economy and Food Security

However, currently the involvement of women in paid work and earning cash income through employment and outdoor activities has gained more importance. The traditional and current gender division of labor in different activities in the study area is shown in fig 3. It was found out in the discussions and interviews, that women’s work was restricted to the basic household chores, farm activities and collection of forest products (Fig 3).

All these activities were unpaid and were not considered as contribution to the household economy. Men monopolized paid work and were considered as household income earners. However, currently women can also be seen engaged in

outdoor economic activities and services (Fig 3). This change has resulted into the overburdening of women as they have to perform the second shift of work in the form of indoor household activities when they are back from their jobs.

Comparison of Male Female Population

Tal-wise distribution of population by age and sex reveals that in the study area, children (0-14 years) dominate population figures followed by adults (15-59 years) in almost all the communities except Shalkani Tal where aged group is dominant (Table 1). Sex composition of population shows that overall females dominate the demographic structure. Sex ratio (Female per one thousand male) is highest in Jailar Tal

which is 1064 female per one thousand male and lowest in Samai *Tal* which is 1034. This shows that female outnumber male in every age group in all the *tals*.

Activities	Traditionally	Currently
Indoor Activities		
Washing clothes		
Cleaning		
Keeping house		
Caring children and elderly		
Cooking meal		
Outdoor Off-Farm Activities		
Fetching water		
wood & fodder collection		
Market activities		
Earning income		
Services		
Livestock Keeping		
Feeding the livestock		
Milking and weaving		
Cleaning livestock sheds		
Steering the livestock		
Agriculture		
Preparing fields		
Sowing		
Hoeing		
Weeding		
Irrigation		
Harvesting		
Processing the products		
Kitchen gardening		

Figure 3 Traditional and Current Division of Gender based Activities

The active labor force (15-59 years) constitutes about 40% of the total population. This group is also dominated by female in almost all the villages (Table 1). The imbalanced gender composition of population affects the traditional gender division of labor. Women contribute more than men in almost all sorts of work as they dominate the population structure. Besides indoor work, the local natural resource based activities are predominantly carried out by women folk.

Migration of Male Labor Force

Another important consideration is the availability of male members in working age-group at home. The data reveals that a large portion of male labor force is migrated in search of employment. In every *tal* the number of migrant labor is three

times greater than that of available at home (Fig 4). The discussions with the elders revealed that, the trend of male labor migration has increased manifold in the past few decades. The working people are either migrated to the main urban centers or abroad for employment and earning income. Most of the people have established businesses in the big cities like Karachi, Peshawar and Lahore etc. Other unskilled laborers are working on daily wages in different parts of Pakistan as well as in the countries abroad, particularly UAE and Saudi Arabia. On the other hand, the recent few years have observed a considerable increase in the migration of youngsters towards the urban areas in search of education. This large scale out-migration of men has affected the traditional gender division of labor involved in agriculture and other activities. Similar to other localities in the northern mountainous belt [32, 33] the women of the study area are overburdened, taking the responsibility of domestic as well as farming activities and looking after the livestock. Moreover, this has totally transformed the pattern of livestock rearing and farming practices.

Involvement of Women in Agro-Pastoral Activities

Like most of other mountainous regions of Pakistan, mixed mountain agriculture i.e. the combination of agriculture and animal husbandry is a striking feature of the study area [34, 35, 36, 37]. Agriculture is an important activity related to the use of natural resources as it is purely based on local inputs. Women play a significant role in farming and associated activities in the study area. The involvement of female labor force in agriculture is more than 70% in three *tals*. It means that agriculture is predominantly tackled by women. Except plough, which is exclusively done by male, almost all other activities are performed by womenfolk. Nevertheless, during plough, women are responsible for steering the bulls to the fields, hoeing, borrowing and cleaning the fields as well as preparing and carrying meal to the fields. It can be seen that during plough a man is assisted by 2, 3 or even more women of the household. Weeding – a back biting job – is exclusively done by women often on collective basis and reciprocity. Up to the harvesting season, women are involved more than men in looking after the crops. In harvesting, the contribution of males is a bit higher as compared to other activities. In case of the villages where irrigated agriculture is practiced, the contribution of women, is relatively low (Table 2). However, the women belonging to male deficient households, have to take the extra responsibility of irrigation along with fetching water for drinking and other domestic uses.

Table 1 Population structure of the selected household by age and sex. M= Male; F = Female; S.R = Sex Ratio (Male per 1000 female)

Tal Name	S.R	0-14			15-59			60 and above			Total		
		Both	M	F	Both	M	F	Both	M	F	Both	M	F
Jailar	1064	304	143	161	277	134	143	131	61	73	712	345	367
Samai	1034	288	143	145	262	127	135	114	55	59	664	328	339
Shahkani	1062	91	46	45	73	35	38	36	17	19	200	97	103
Shalkani	1043	165	80	85	173	84	89	85	43	42	423	207	216

Source: Field Survey, 2011

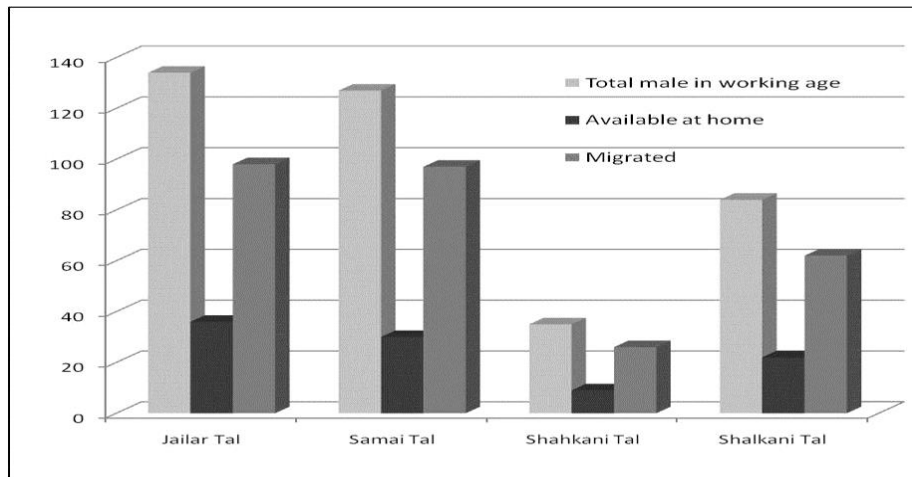


Figure 4 Availability of Active Labor Force at Home out of the Total Male in Working Age

Table 2 Study Area: Women to Men Ratio (W / M) and the Percentage of Women out of Total Labor Involved in Agriculture Activities

Activities	Jailar Tal		Samai Tal		Shahkani Tal		Shalkani Tal	
	Ratio (W / M)	%age of women	Ratio (W / M)	%age of women	Ratio (W / M)	%age of women	Ratio (W / M)	%age of women
Sowing	138/66	68	123/71	63	72/50	59	78/33	70
Weeding	97/13	88	86/10	90	75/5	94	80/8	91
Irrigation	14/56	20	6/80	7	3/36	8	13/31	30
Harvesting	146/73	67	118/75	61	71/36	66	83/37	61
Storing grains	90/0	100	83/6	93	70/0	100	49/4	92
Total	485/208	70	416/242	63	291/127	70	303/113	73

Source: Field Survey, 2011



Figure 5 A Women with a Head Load of Fodder

The role of women gains more importance due to the out-migration of men and limited availability of male labor force. The participation of women in agriculture is intensified by the fact that women are more interested in livestock keeping and collection of fodder. Usually women take the responsibility to look after and graze the animals. In summer, the whole family or part of it shifts to the high altitude pastures. Mostly the animals are steered by women to the grazing land in the morning and back to the shelters in the evening. Besides rearing the animals, they collect grasses when they come back to home (fig 5). Those grasses are dried

and stored in order to feed the livestock in winter when the pastures are closed. Similarly, in the lower villages, the women steer their animals to the nearby rangelands on daily basis. Here too, they collect fuel wood or fodder while coming back from the rangelands. Hence the collection of forest products such as fuel wood and grasses is women dominated activity (Table 3).

CONCLUSION

The mountains’ women are mostly involved in primary economic activities related to natural resources like agriculture, animal husbandry and collection of forests and rangelands products. Being confined to homes, their involvement is rare in secondary and tertiary activities like government and private services, commercial and industrial sector and trade, etc. Therefore, women rely more on natural resources for their economic purposes. They are actively engaged in agriculture and associated activities along with men in order to produce local grains for household consumption. Male labor force is either engaged in off-farm activities or migrated outside to earn income as the local production is not sufficient to support the nutritional needs of the household. This factor further increases the involvement of women in local resource based activities. Besides indoor activities and agriculture, women perform the duty of keeping livestock both for dairy and economic purposes. Hence, the responsibility of rearing animals and collection of fodder also

Table 3 Study Area: Women to Men Ratio (W / M) and the Percentage of Women out of Total Labor Involved in the collection of forest products

Activities	Jailar Tal		Samai Tal		Shahkani Tal		Shalkani Tal	
	Ratio (W / M)	%age of women	Ratio (W / M)	%age of women	Ratio (W / M)	%age of women	Ratio (W / M)	%age of women
Fuel wood collection	112/16	80	98/21	82	66/6	92	81/7	91
Fodder extraction	89/22	80	84/17	83	55/10	85	67/0	100
Total	201/38	84	182/38	83	121/16	88	148/7	95

falls on the shoulders of women. It results into more association of women with forests and rangeland resources.

In remote mountainous areas, forest wood is the major source of fuel. The collection of fuel wood is predominantly carried out by women due to the shortage of male labor force. The involvement of women is much greater in the extraction of fuel wood as compared to men. In this context, the role of women is very important as they are the major suppliers of fuel wood for domestic uses. However, in the absence of male monitoring group, women get an open hand in the exploitation of forests. The community rules and regulations for the protection of communal forests are not properly implemented. As a result, the natural vegetation cover has severely been degraded in the past four to five decades.

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