

Increased Burden on Women and Male Out-migration : An Analysis of *Khul Gad* Micro Watershed of the *Kumoun Himalaya*

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Abstract In recent decades, as a consequence of environmental degradation and poor resource management in the marginal hilly areas of Utrakhand (India) forced the males of the region to out-migrate in search of better employment. Due to lack of off-farm activities in these hilly areas, the burden of livelihood directly falls upon the womenfolk, who are considered as a 'Milieu Managers'. This has been reflected in the increasing participation of women in the economy of the study area. The present paper focuses on the pattern of migration and its adverse impact of increasing workload on the women of the study area. The study uses primary data collected through household surveys in *Khulgad* watershed, Almora district of the Kumaun Himalaya, Utrakhand (India). Therefore, the key objective of the study is to analyse the increasing work participation of women operating at different sub-systems, impact of environmental degradation and role of women in sustaining the traditional agro-ecosystem in *Khul Gad* micro-watershed of the Kumoun Himalaya.

Keywords Environmental Degradation, Male Out-migration, Watershed, Increasing Workload, Milieu Managers

Introduction

Uttarakhand is one of the states marked by large number of population residing in the hills of the rural areas. These hilly rural areas offer most tough working and living conditions for its inhabitants. The areas do not provide conducive terrains for the development of industries or other sources of employment generation. The absence of industries and other sources of income and employment generation in these areas have always hooked its inhabitants towards agriculture and allied activities (Kandari, 2013).

The marginal areas of the Central Himalayas are plagued

with faulty development programmes whose biggest manifestations can be seen in the amount and intensity of out flux, rather than exodus of male members from the region (Singh, 2014; 2015). The basic reason being the absolute lack of off-farm practices and the infeasibility of agricultural pursuits in economic terms. The entire state of Uttarakhand has a considerable population residing in the rural hill environs, wherein the terrain offers the toughest working and living conditions. The area is not conducive for the development of any industrial landscape courtesy to the undulating topography and lack of market (Dyson 2008; 2014). Over the decades the population of these regions have been increasing at a steady pace has created an immense pressure on the land resources of the region and the poor carrying capacity of the region has triggered massive male out migration in search of better employment activities. The contribution of agriculture to the state's domestic product is about 22.4 per cent (Agricultural Statistical at a Glance, 2014).

The entire central Himalayas are known as a region supported by 'postal economy', as the working male members migrate to earn a better livelihood. Sociologically, this creates an imbalance which is often termed as the "missing gender" as all the work are left of the womenfolk of the region to perform. Despite the hardships, the women of the region have played significant roles in both the domestic and agricultural sectors and have also become the backbone of the region's economy. The present paper analyses the increasing work participation of women operating at different sub-systems, impact of environmental degradation and the role of women in sustaining the traditional agro-ecosystem in *Khul Gad* micro-watershed of the Kumoun Himalayas.

Methodology

The present paper has been based mainly on primary data but uses secondary data as well. The secondary data is

collected from the Census of India, 2011 for Almora district, as the watershed, the study area is a part of this administrative unit. For the study, population characteristics like distribution, literacy rate, working population, occupational status from the census were retrieved. According to the Census of India, 2011, the study area contains 33 Census villages.

A detailed primary survey of the study area had been conducted and the samples were purposively drawn using stratified random sampling technique. For the collection of data, a structured schedule was developed for women respondents only. Primary data had been collected by conducting interviews with 552 women in eleven selected villages located within the watershed.

Objectives of the Study

1. To assess the purpose of migration
2. How the process of male out-migration increases the work burden of women on selected villages.
3. Analyse the work participation of the women of the migrant and non-migrant households.

The Study Area

The Khul Gad watershed is spread over 25 km west from the Almora town in the Hawalbagh development block of Almora District in the Kumaun Himalaya of the Uttarakhand state. Khul Gad is a tributary of the river Kosi, which joins the Western Ram Ganga in the plains of Uttar Pradesh. Its peculiar spatial location has been one of the negative factors in the matter of development planning. Even otherwise, the area has been greatly exposed to the natural processes of slope insatiability and soil-erosion. “The notable demographic feature of the surveyed villages, which is related to the migration phenomenon, is the seemingly progressive sex ratio” (Table 1). According to the Census, 2011, the total population of the watershed is 10,207 consisting of 4895 males and 5312 females, that is, the female accounts for 52.04 per cent of the total population. The females exceeded the male only in the age group 15-59 years, whereas the male outnumbered the females in 0-5 years and 60 and above age groups. This corroborates with our observation that in all villages, the male members are either children or the aged, implying that the whole household responsibility, including caring for the children and the aged, lies on the women” (Singh, 2014: 56).

Table 1. Demographic Traits of Khul Gad Watershed, 2011

Households	2254
Population	10207
Male	4895
Female	5312
Sex Ratio	1085
Male Literacy	55.93
Female Literacy	44.07

Source: Census 2011

The land use (Table 2) of the region clearly depicts that the area under the forest cover in the village jurisdiction is nil while the maximum area of the villages lie under the other uncultivable land and uncultivable wasteland, which too remain generally barren but covered by uneconomic scrubs and grasses. The net sown area also lies on the steep slopes without contour bunding and those by the river tracts are small plots to be intensively cultivated.

Table 2. Land-use of Khul Gad Watershed, 2013

Indicators	Area in Hectare
Total Area	2262.03
Area not Available for Cultivation	313.95
Other Uncultivable Area	1038.84
Net Sown Area	909.24

Source: Field Survey, 2013-14

The cropping pattern and the yields significantly vary from one village to another within the watershed depending upon the location of the villages/fields on the slopes. The soil and moisture are relatively more suitable in the valley villages and in north south portion of the slope. At the bottom of the slopes, farmers have cultivated some irrigated fields wherein Gul, Gads and Gaderas are the main sources of irrigation. Millets occupy maximum portion of the cultivated field along with wheat. The main crops cultivated in the watershed are wheat, mandua, jhangora, maize, pulses and vegetables. Agriculture in the region is basically done for self-provisioning. Commercialization of agriculture in the region seems impossible due lack of irrigation and other infrastructural setups, which invariably leads to low yield. The entire watershed experiences massive male out migration in search of jobs, as there is no off farm activity in the region, especially in Nanital, so womenfolk are in charge of the entire agricultural pursuit (Singh, 2014). Therefore, the wage labour and income from services forms the major sources of income in the Khul Gad watershed.

The main source of fuel woods is of course the protected/reserved forests, which plays a crucial role in meeting the household demands. Villages lying by the roadside have a lesser dependency upon the fuel wood as they have access to LPG (Liquid Petroleum Gas) but its price increases away from the main contact road. The Khul Gad watershed also experiences acute water shortage, despite good monsoonal rains, the Gul, Gads and Gaderas of the region dry up especially during the summer season, which leads to conflicts upon the quota of water used by households for drinking and irrigation purposes. Land degradation is a prominent feature of the region and cultivation on slopes steeper than normal without any contour bunding or agro forestry has become the trademark.

The common property resources are diminishing rapidly and people are increasingly becoming dependent upon the reserved forests for their basic needs. As stated above, lack of off farm activities has induced a massive male out

migration. This creates a vicious cycle of poverty and satiating basic needs, which cries out loud for answers to the road of sustainable development. This has to come from public participation otherwise like many other watersheds the story would not be successful as has been the case throughout the country over the years. Unless and until the stakeholders are involved into the process of formulation, implementation and monitoring the entire endeavour would be futile.

Impact of Out-migration on Women

The area is characterized by immense lack of off farm practices and has witnessed massive single male outmigration over the decades. Once the working age group males go outside in search of job, the entire domestic and agricultural burden falls upon the left behind womenfolk. The following table shows a clear picture of the amount of out fluxes from the Khul Gad micro watershed.

Table 3. Out-migration Status of sampled villages, Khul Gad Watershed

Villages	Total no. of sample HH	No. of Migrant	% of Migrant from sample HH	No. of Non-Migrant	% of Non Migrant
Batgal Rautela	25	30	3.72	55	4.11
Salla Rautela	51	73	9.05	124	9.27
Syahi Devi	14	41	5.08	55	4.11
Naula	35	52	6.45	87	6.5
Bimola	110	177	21.96	287	21.46
Dhamas	135	145	17.99	280	20.94
Khunt	55	80	9.92	135	10.07
Jyuli	48	94	11.66	142	10.62
Kharkuna	11	5	0.62	25	1.86
Deolikhan	23	75	9.3	98	7.32
Bisra	15	34	4.21	49	3.66
Total	522	806	99.96	1337	99.92

Source: Field survey 2013-2014

It is important to note here that the no. of non-migrants contains the womenfolk, children and aged populations. So, if we analyze objectively the dependent population besides the women of the region compose the non migrants.

Table no 4 shows the distribution of migrants on the basis of age and purpose of migration. The study further shows that majority of the migration from these regions have been due to the unavailability of employment opportunities in them. The table depicts that majority of the migrants who have migrated from these regions fall in the age group of 15 to 30 years, and also from the age group of 31 to 50 years. This clearly signifies that these sections of the population which constitutes the main workforce of any section of the community has moved away from these regions resulting in the loss of human resource, which negatively has an effect on the economic development of these regions, which are itself surrounded with the number of problems.

Table 4. Purpose of Male migration, Khul Gad Watershed

Purpose of Male migration	0-15 Age group	15-32 Age group	32-50 Age group	Above 50 Age group	Total
Occupation	--	432	212	--	644
Education	34	128	--	--	162
Total	34	560	212	0	806

Source: Field survey 2013-2014

Women: Drudgery of Labour and Struggle

Women of the study area like any other rural women of the central Himalayas share the responsibility of earning bread for the family with the male counterparts. Agriculture and animal husbandry for the basic mainstay of this endeavour as the male members out-migrate in search of better employment practices. The women of Khul Gad watershed carry almost all the agricultural operations starting from tilling to harvesting, whereupon the success or failure of agricultural production depends solely upon the contribution made by women folk. Besides the agricultural work, animal husbandry and domestic chores are entirely women's' burden too. A detailed analysis of the disposal of daily time and percentage distribution of work done by women of the study area has been presented in the following Table 5.

Table 5. Additional Workload on Women of Migrant households (distribution in percentage of additional work in different activities)

Village	Agriculture	Animal Rearing	Collection of Water	Collection of Fodder & Fuel wood	Household Activities	Total
Batgal Rautela	25.00	9.52	10.02	22.12	33.34	100
Salla Rautela	17.65	18.08	12.34	39.43	12.50	100
Syahi Devi	35.29	17.65	10.76	20	25.53	100
Naula	32.00	8.00	14.45	25.55	20.00	100
Bimola	33.33	5.00	12.76	22.58	26.33	100
Dhamas	25.00	5.04	13.08	22.88	34.00	100
Khunt	28.58	14.09	10.45	21.35	25.53	100
Jyuli	18.18	16.67	13.07	24.84	27.24	100
Kharkuna	12.46	15.60	18.78	27.47	25.69	100
Deolikhan	20.29	18.08	10.34	22.46	30.05	100
Bisra	25.09	17.65	13.02	20.7	23.54	100

Source: Computation based on Field Survey, 2013-2014

Different types of additional activities were reported by the respondents, which they performed in the absence of their male members who have migrated. Table 5: shows the main types of works, which lead to additional burden on the womenfolk of the migrant households. As a result of migration of male members, the first and foremost additional burden of work on women, related to agricultural operations. The male member does not perform any agricultural activities except for ploughing.

There is a common belief that only the men are supposed to plough the field. Where adult male members are not available in the households, the women have either to pay money for ploughing work or to give their own labour to others in exchange of ploughing operation. Household activities like childcare and care of the aged person is another additional activity in which the women have to devote relatively more time as compared to the past when there were no migrants from the family. Some of the respondents of migrant households reported that they have to perform the activities of marketing as additional work. The marketing activities consist of purchases of necessary domestic's items, agricultural inputs, medicines and books for the children and stationeries.

A fundamental inference of the Table above highlights the drudgery of the hill women, whereupon 'a woman' on an average devotes around 16 straight hours every day doing her job and compensating the work that was supposed to be done by the missing gender (the male member). This finding corroborates with many previous studies (Singh, 2015; Bhattacharyya et al., 2011; Bhattacharyya and Vauquiline, 2013). It is important to note here that this 16 hours is an aggregate figure, the work done by womenfolk of the region varies from season to season (Bhattacharyya, 2009; 2013; Sarma, 2009). For example, in the summers, a woman has to travel less to collect fuel wood but has to travel more for collecting water and fodder. The household activities by far

remain the same in the entire year. The author feels important to mention here that within the womenfolk too, there is a huge disparity; the computation presented in the Table above reflects on the workload of the daughter-in-laws/wives not the daughters. The daughters too have to share the workload but theirs' is considerably low.

The process of migration in the entire central Himalayan region is basically a male dominant affair, so is the case with the study area, Khul Gad. As the working male population out migrates, their work has to be compensated by the left behind womenfolk. Therefore, besides outdoor work, the domestic work too increases as more time is supposed to be spent upon child and aged members' care.

The analysis of data pertaining to the working pattern of respondents and work load on them (women) according to migrant and non migrant households has been made in Table 5. When we compare the per woman total hours of daily work in migrant household with the hours of daily work in non-migrant households, it is found that a woman in migrant households works about 17.14 hours (averagely) in a day. Where's in nonimmigrant households a women has to work about 15.70 hours (averagely) in a day. In other words, the present paper revealed that a woman in migrant household has to devote about 1.44 hours more time than the women of non-migrant household in day to day activities as a result of out- migration of male members. The burden of work on women in the case of migrant households in all the villages under study is relatively more than that of non- migrant households. However, there has been variation in the magnitude of workload. The work variation of women between migrant and non-migrant households was found in village *Naula* followed by village *Bisra*, *Syahi Devi*. The hours of work differentials of women in migrant and non-migrant households were recorded lowest in village *Deolikhan* followed by village *Bagat Rautela*, *Salla Rautela*.

Table 6. Per women hours of daily work in migrant and non-migrant households

Name of Village	Migrant House Holds		Non migrant House Holds	
	No. Of respondents	Per women total hours of daily work	No. of Respondents	Per women total hours of daily work
Batgal Rautela	24	15.38	20	14.73
Salla Rautela	57	17.12	45	16.06
Syahi Devi	50	17.05	30	14.91
Naula	48	17.64	50	13.8
Bimola	60	18.66	50	17.02
Dhamas	45	18	58	17.41
Khunt	70	17.35	35	16.07
Jyuli	43	18.63	40	16.52
Kharkuna	44	17.05	30	16.25
Deolikhan	35	14.62	20	15.73
Bisra	25	17.12	15	14.25
Total/Average	501	17.14	393	15.70

Source: Computation based on Field Survey, 2013-2014

Conclusions

The process of development has no meaning, especially in the marginal hilly areas of the country, unless women are fully integrated in it. The status of women starts from the household where she takes birth grows and thus accordingly her outlook and perceptions are influenced. The work burden on females of the study area and their contribution to such work in rural areas of the hill region is very high and significant. Still the lack of economic and social independence marginalises her both domestically and socially. A woman has to take permission from the males for all the domestic and agricultural pursuit.

Gender equity emerges as a major variable in community related factors, which affects collective action by communities in decentralized governance. All across this Himalayan region, male outmigration has resulted in women being forced to perform the duties of the active labour force. Yet, their participation is not accounted for and even the government machinery labels them as marginal workers, their role in politics and governance is very low, with little or no involvement in decision making. Areas like the Himalayas, where conventional agricultural and industrial developments face severe constraints, there are still many obstacles impeding the inclusion and influence of different marginalized groups, especially women in politics and governance in mountain regions of India. (Agarwal, 1992, 2010)

Keeping in highest perspective the increased workforce participation of females in agriculture and low wage employment the government support becomes essential to such section of the population. The government support should focus on supporting the active female workforce through imparting skill development to get them involved in

the higher paid work or to step up in entrepreneurship development. The government should further act on removing the barriers in the female's workforce participation, which largely constitutes of the health problems. The other major emphasis should be on the supportive programs for the development of agriculture activities as the women constitutes the major workforce involved in agriculture. The changing trend in the increase in the female work force participation is a positive sign of initialization of the women empowerment process. Thus, the role of the government and other development actors like social activities, NGO's and others should be to promote the involvement of women in the economic sphere. The increasing participation of women and greater gains from it will not only economically make them independent but will also help in a long way in the overall development of such regions (Kandari, 2013)

Women in the Central Himalayas play an active role in the socio-economic life. The process of achieving gender equity is symbiotic with the process of political/social participation by the women in marginalised mountain regions. It is high time that not only the 'missing gender' but also the governments have to hear the voice of the hard working womenfolk of the region as they are not only the ultimate stakeholders but also the societal and environmental sounding boards of the Himalayan ecosystem.

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