

Problems and Challenges in Transhumance as a Livelihood Strategy: A Case Study of Van-Gujjar in Upper Yamuna Basin.

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Abstract

The natural environment and resources play a significant role in the livelihood of communities of any area. Many communities are still dwelling on natural resources for the livelihood and survival. Mainly, the tribal people come under the arena of such communities living in a symbiotic relationship with natural habitat. Van-Gujjar, a pastoral nomadic ethnic community of north-western states of India practicing transhumance in the Himalayan and adjacent lowland pastures in the summer and winter respectively. The present study intends to find out the problems faced by the community during the transhumance cycle and provide the possible way out for the well-being of the community. Upper Yamuna basin has been selected as the unit of analysis. The present study is entirely based on the primary sources of data-collected through intensive field survey. Groups have been selected on the basis of stratified purposive sampling. Schedule and observation methods have also been employed at three stages of transhumance cycle. The study shows a significant decrease in pasture land, resulting into decrease in quality as well as quantity of fodder and forage, leading into financial instability due to decrease in milk productivity. The study also observed that Van-Gujjars in the study area comes across plethora of multi-dimensional problems. These problems need to be resolved on time and livelihood options of the community should be diversified for the inclusive development of the community.

Keywords: Transhumance, Van-Gujjars, Livestock, Environment, Pastoralism, Multi-dimensional.

Introduction

Pastoralism has played a vital role in the development of human civilisation. Pastoral nomadism is one among the best ways of utilizing those parts of the earth which are unsuitable for cultivation and where resources are scarce (IIED, 2008). Pastoral nomads are livestock herders, practising transhumance in search of pastures to feed livestock. Pastoral nomads are engaged in livestock husbandry, practice transhumance, depend upon natural pastures to feed their livestock and stroll in search of fodder and water (Pratt, Gall, and Haan, 1997; Goyal 2005). It provides significant environmental services like reducing the chance of forest-fires due to grazing (Hull et al. 2015), seed dispersal (Wunderle, 1997), carbon sequestration and biodiversity conservation (IIED, 2008). Pastoralism remained a dominant mode of production and predominant livelihood strategy, but with the transition from pastoral economy to agrarian economy and then to contemporary industrial economy, nowadays pastoralism is on the minority side of livelihood activities. Climate change is threatening the development efforts due to its negative effects on agriculture, environment, health, and pastoralism especially in developing countries (IPCC, 2007). Natural and human induced catastrophes have immediate and direct bearing on pastoral communities inhabiting the area. The global land use change due to rapid human population growth and agriculture expansion has increased (Chapin et al. 2009). Extraction and exploitation of natural resources is another reason for the change in land use practices. This change in socio-ecological system brings disturbance and stress on the people whose livelihood directly depends on natural resources (Adger, 2000). Communities dependent on environment for their livelihood have been facing many socio-economic and political problems due to state policies and interventions, population growth, land use change and development efforts (Sternberg, 2008). Nomadic pastoral communities are among the most affected due to such changes as they are completely dependent on wellbeing of environment and livestock for livelihood. Such changes affect livelihood & livestock through disturbance in fodder quality and quantity, heat stress, water scarcity, disease & epidemics (Naqvi et al. 2012). Van Gujjar is also a nomadic pastoral community, facing many problems in present times owing to the changing socio-ecological conditions.

Van-Gujjar, a nomadic pastoral community inhabiting the northern part of the country consisting of UP, Uttarakhand, Himachal, Punjab, Haryana and Rajasthan. There are many views regarding the origin of Gujjars in India. In Sanskrit texts, the ethnonym 'Gurjar' has been interpreted as 'destroyer of the enemy'. 'Gur' meaning enemy and 'ujar' meaning destroyer (Wariko and Som, 2000). According to Sanskrit dictionary Shabd-Kaldrupam 'Guran' means enemy and 'Jar' means Vanishing. Therefore, name seems to be originated from Sanskrit word Gurjara. Nand_Mihir, the foster-father of Krishna, is claimed to be a Gurjar (Kennedy, J., 1907). The traditions of the tribe give little information about their origin and history. Cunningham claims Gujjars to be connected with Yuchi tribe of Eastern Tartars (Central Asia) who came to India around 1st century B.C and 1st century A.D. According to Smith, V. (as cited in Verma, 2000) Gujjars formed a branch of white Huns's, who invaded India in the 5th and 6th centuries, made their settlements in the Punjab and Rajputana tracts. In the early medieval times Gujar kingdoms established themselves as a prominent force on the political map of India. King Bhoja (840-890 A.D.) belonged to the Pratihara a Rajput clan of Gujar stock. The Gujjars spread from Kashmir to Gujarat and Maharashtra, who gave an identity to Gujarat, established kingdoms, entered the Rajput groups as the dominant lineage of Badgujar, and survive today as a pastoral and a tribal group with both Hindu and Muslim segments (Kumar Suresh Singh and Bhanu B.V. (2004).

The period of diffusion and migration of the Gujjars to Jammu and Kashmir is not known with certainty. According to one account they penetrated to hills after the loss of political power around middle of 6th century. Outbreak of serious drought and famine conditions in Gujrat and Rajasthan around 6th and 7th centuries were the main reasons for the migration of Van Gujjars.

These factors forced pastoral people to migrate into hills (Verma 2000). After continuous and repeated foreign onslaught and internal dissensions in medieval period there was division of Gujjar into the one who were able to retain power were called as Rajput's and those who were forced to migrate for security and grazing facilities for their cattle which resultantly migrated to hills (J&K). From Jammu and Kashmir Gujjars migrated to princely state of Chamba which is adjoining territory of Jammu and Kashmir, due to growing need of grazing pastures for their livestock. Negi puts their arrival to Chamba only two or three decades before 1881 census. According to legends Raja Shamsheer Prakash of Sirmour during his visit to Poonah (Jammu and Kashmir) on founding availability of excellent milk, invited Gujjars to Sirmour district (Negi, 1976). Therefore, it is believed that initial penetration of Gujjars in Himachal was in Chamba and Sirmour districts which later spread to other part of the state along with the Border States. The Van Gujjars herd animals like goats, cow and buffalo. Dairying is what their ancestors practiced and it is the trade they perform have to carry on, homeless and landless (H.P. Govt. 1994). Majority of the Van Gujjars are homeless and landless. According to a H.P. Govt report 88.17 percent of Van Gujjars are landless, not even a minuscule plot to raise a permanent structure to call their home (1983). Van Gujjars migrate to upper parts of Himalayas along with their herd during the summer season and back to the Shivalik foothills and plains with the onset of winters. During the transhumance cycle Van Gujjars comes across many challenges and problems. Slight changes in the habitat of Van-Gujjar can affect the livelihood. Due to changing discourse of global and national policies, the livelihood of Van Gujjars gets altered (Gooch, 2013). The Gujjars of Himalayan ranges are without sufficient food, fodder for their animals and lack of basic facilities like proper shelter, health, drinking water, education, etc. Moreover, most of the nomads are not aware of schemes operating by the state and central governments for their upliftment and poverty eradication (Koundal, 2012). Poor hygienic conditions, overcrowding in hutments, frequent forest visits and stay in caves during migration exposes to wild rats, thus increasing their susceptibility to plague and other communicable diseases (Goel, Gauri, Kaur, & Singh, 2014). According to a survey conducted by the Himachal Consultancy in 2006 almost 43,100 Gujjars in the state were the poorest, living in sordid conditions, had no access to education and highly vulnerable to food insecurity. Land use practices has changed over the time due to ever increasing growth of population resulting into expansion of agriculture land. Therefore, analysis of transhumance cycle and challenges at various stages of the cycle is done to better get understanding of the pastoral nomadism as a livelihood strategy.

Study Area

The upper Yamuna River basin where pastoral Van-Gujjars are in considerable numbers and practice transhumance as a livelihood strategy, has been selected for the present study. The study area lies between 30° 14' 27" N to 31° 25' 32" N and 77° 03' 25" E to 78° 37' 27" E. Partially Shimla, Solan and Sirmour districts of Himachal Pradesh and Dehradun, Uttarkashi and Tehri-Garhwal districts of Uttarakhand have been selected for the study due to the presence of transhumance activity in all districts. Study area is mainly drained by the Tons and Giri rivers which are the major tributaries of the Yamuna. Elevation profile of the study area varies from approximately 250 meters in lowlands to 5500 metres in highlands.

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Objectives of the Study

The proposed study intends to know the following objectives:

1. To examine the lifestyle of Van-Gujjar Community in terms of challenges faced due to changing dynamics of man-nature interactions.
2. To study the variations in problems at different stages of transhumance and to provide possible solutions

Methodology

The present study is entirely based on primary sources of data. A comprehensive field survey was conducted to understand the transitional lifestyle of Van Gujjars. Schedule and observation methods were employed for the data collection. Out of 40 groups in the study area, 8 groups of the community have been selected for the present study. The stratified purposive sampling technique has been employed, based on group size and location of highland and lowland pastures. The groups living at different locations of either highland or lowland pastures have been selected. Field survey was conducted at all the three stages of transhumance cycle i.e., Highlands (summer camps), transient stage and Lowlands (winter camps). Qualitative and descriptive techniques have been incorporated in the present study.

Transhumance Cycle: A Livelihood Strategy

The practice of moving livestock from one grazing ground or pasture to another in a seasonal cycle, typically to lowlands in winter and highlands in winter is called as transhumance. Van Gujjar practice transhumance to meet the fodder and forage requirement as well as suitable climatic condition for the livestock. Transhumance cycle is completely dependent on the availability of grass in the pastures, which depends on the climatic variables; temperature and precipitation. The falling temperature at highland pastures during the Autumn season reduces fodder availability forcing the Van Gujjars to move towards lowland pastures of relatively higher temperature and more fodder availability. During winter season when highlands are characterised by low temperature due to snowfall, Van-Gujjar graze livestock in low altitudinal (500-1500 metre) pastures to avoid the extreme low temperature condition in the highlands. As soon as spring season approaches temperature becomes suitable for both the fresh grass to grow and livestock to tolerate, which initiate the movement of livestock towards the highland pastures. In general, the transhumance cycle starts in around the second week of April from the lowland areas of altitude 500metre towards high altitude pastures to feed livestock, but it may slightly vary from group to group depending on various factors such as altitude and temperature, distance between highland and lowland pastures etc. The attributes of transhumance such as time period, elevation profile, livestock population, group size etc. vary from group-to-group. Elevation profile vary from about 500metre in lowland pastures to about 4000 to 4500 metre in highland pastures. After travelling for around 20 to 30 days and covering distance of 150 to 300 km, Van Gujjars along with livestock herds reach high altitude areas around first or second week of May. Around the last week of September after feeding livestock in high altitude green pastures for almost four to five months, Van

Gujjars start moving back towards lower tracts and reach by the last week of October right before the onset of winter season. Van Gujjars practice transhumance because of dependence on livestock for livelihood. Livestock mainly consist of Buffalos and cows as a source of income. Goats are also kept in few numbers by some families in the groups. Horses are used to carry the ration and other essentials items during the transhumance cycle. Transhumance cycle is completely dependent and decided by the geographical landscape and climatic conditions of the region. Van Gujjars move to highland pastures for the summer season as fresh green grass is abundant during this period of time which act a rich and nutritious source of fodder for the livestock. Moreover, the temperature in the low altitudinal areas is high during the summer months to which livestock breeds are not adaptive. Hence, both pull and push factors are responsible for the seasonal migration towards highlands. During the winter season highlands get laden by snow due to precipitation in the form of snowfall, which compel Van Gujjars a nomadic pastoral community to move to the lowland pastures in the Shivalik foothills and surrounding areas where climatic conditions are conducive for the livestock. Therefore, Van Gujjars along with livestock comes across various geographical landscape and climatic conditions varying from lowlands of high temperature, changing and rough terrain along the route to high altitude areas which are freezing cold and laden with snow during the winter months. Coming across varying geographic landscape conditioned by varying climatic conditions Van Gujjars faces various challenges and have to cope-up with numerous problems during the whole transhumance cycle.

Challenges and Problems at Various Stages of Transhumance Cycle

Van Gujjars like other pastoral communities, practice transhumance as a livelihood strategy. Livestock breeds possessed by the Van Gujjar community over the period of time had adapted to the transhumance cycle. Therefore, along with the necessity to fulfil the fodder and forage requirement, suitable climatic conditions for livestock also prompt the community to practice transhumance. Van Gujjars face various problems during the transhumance cycle, as a result the community is still underdeveloped and in the grip of vicious cycle of poverty. According to a survey conducted by the Himachal Consultancy (HIMCON) in 2006 almost 43,100 Gujjars in the state were the poorest, living in sordid conditions, had no access to education and highly vulnerable to food insecurity. Table 1 also reveals the similar results in the level of education. Majority of the population of the community is illiterate and only a few percent of the total population got the secondary and higher levels of education. The transhumance cycle is characterised by varying physical, climatic and social conditions which changes the nature of interaction of the community with the environment. The changing nature of interaction with the environment poses various challenges during the transhumance cycle. The nature and severity of challenges and problems keep varying at the different stages of the transhumance cycle. These variations can be distinctly observed along the route of transhumance cycle. The nature and severity of problems is different at highland pastures stage as compared to the lowland and transient stage of the transhumance cycle. The major problems and challenges faced by Van-Gujjars at various stages are mentioned below:

Problems and Challenges at Lowlands

Van Gujjars' stay is in plains or foothills of Shivalik and mid Himalayas. During the winter season due to snowfall in high altitude pastures, temperature falls below the freezing point i.e., below 0-degree Celsius. As a result, growth of grass is not possible in the highland pastures in winter months. Therefore, due to unavailability of grass and extreme cold Van Gujjar graze livestock in the low altitude pastures during the winter season. Altitude of lowland pastures vary from 300-1500 metre. depending on the location of the different groups. The average temperature varies from 2 degree Celsius during the night to 18 degrees Celsius during the day time. Therefore, temperature is always above the freezing point, hence, conditions in the lowland pastures are suitable for the livestock. Therefore, lowland pastures in the foothills of Himalayas and near-by plains are the nearest possible suitable destinations for the winter season. Any farther lowland pasture location increases the distance from the highland pastures. As productivity of pastures is conditioned by seasonal climatic variations, Van-Gujjars don't have the luxury to afford the long distance- time consuming transhumance cycle. The Van- Gujjar comes across various problems at the lowland pastures due to various reasons.

1. India has experienced significant loss of grasslands/shrublands and forests followed by the expansion of cropland as well as built-up areas during 1880–2010. A total of 26 million ha forest areas (from 89 million ha in 1880 to 63 million ha in 2010) and 20 million ha of grasslands/shrublands (from 45 million ha to 25 million ha) has decreased in India. In contrast, total crop land area has increased by 48 million ha (from 92 million ha in 1880 to 140 million ha in 2010). Majority of the cropland expansion has been resulted from conversion of forest (16.9 million ha), grasslands/shrublands (14.8 million ha) majority of the cropland expansion has been resulted from conversion of forest (16.9 million ha), grasslands/shrublands (14.8 million ha) (Tian et.al., 2014). Due to decreasing pasture land in low land owing to industrialisation, urbanisation, agricultural land expansion, formation of national parks and wildlife sanctuaries and construction of roads and railway lines, fodder scarcity is increasing year on year. As a result, animal feed and fodder are bought to compensate the decreasing fodder availability from pasture lands. Van-Gujjars have to arrange fodder stock for winter months from local farmers as there are no vast tracts of land available to feed their stock. Mostly Van Gujjars buy fodder from local farmers but sometimes they exchange cow dung (buffalo dung) and some milk product. Due to absence of land ownership, arrangement of fodder for their livestock becomes financially difficult for nomadic Gujjars. Therefore, it has been found in the study area that Van-Gujjars have more income in higher reaches where the community stay in summer during transhumance as compared to plains or lower tracts where stay is for winter months. This difference in income is due to easy availability of nutritious green grass in higher reaches during summer as a result milk productivity is more as compared to lower tracts during winter months. Due to insufficiency of green nutritious grass the milk productivity decreases. Gujjars have to buy grass and feed for winter months at the price of 7000-8000 per truck or have to take private owned land on rent for grass at the rate of 1000/bigha. Therefore, their stay becomes economically unviable in lower tracts due to increased investment on livestock. To manage increased expenses on

livestock sometimes they have to take loans from locals which they have to repay from the surplus income earned in higher tracts. Therefore, there is presence of debt cycle along with the cycle of transhumance.

2. Milk productivity of cattle also decreases in lowlands due to insufficient unavailability of nutritious grass and fodder which has direct impact on economic condition of the nomadic tribe. To increase productivity of milk Van Gujjars are left with no other option than to buy animal feed and fodder from market which increases the input cost. On an average rupee 2000-2500/milch cattle/month. Major part of earning from sale of milk is spent the feed. Therefore, due to high input cost net revenue from the livestock herding is very less compared to highlands.
3. Van Gujjars are not skilled according to the demands of modern industrialized society. Due to very low literacy levels, Van Gujjars are not suited to work in industries which require certain levels of skills. Farm mechanisation in terms of use of machines and other modern tools has reduced the scope of labour work especially in the plain areas. Use of machinery in the farms and fields is comparatively easy in the plain areas as compared to hilly terrains where manual labour is still prevalent. Van Gujjars rarely get any alternate work in lowlands. Owing to hilly terrain, the extent of use of machinery is still in initial stages in the villages of the Himalayan hills. Due to demand for labour work in the orchards, Van Gujjars are employed as temporary labourers. Due to availability quality nutritious grass as fodder, in the wide-open highland pastures Van Gujjar have ample time to work as labourer. This situation gets reversed in the lowland areas, where due to non-availability of fodder Van Gujjars are always engaged in collection of fodder for the livestock. Chances of encroachment into the surrounding fields are also more in lowland areas therefore, Van Gujjars have to look after livestock to stop the possible encroachment into the fields and protected areas. Therefore, Van Gujjars have both, time as well as work available in the highland areas, whereas they are well short of time and work opportunity in the lowland stage of the transhumance cycle. Therefore, earnings in the lowland areas are less compared to the highland stage of the transhumance cycle.

Problems and Challenges during Transient Stage

Transient stage is the seasonal movement of livestock between the highland pastures and the lowland pastures. Transhumance cycle starts with the movement of livestock towards highland pastures in the first half of the April month each year from the lowland pastures. On an average it takes 20 to 30 days to reach the highland pastures. After grazing in the open nutritious highland pastures for about 4 months Van Gujjars starts retreating towards the lowland pastures in the first half of the September month. During the transient phase Van Gujjars along with the livestock cover almost 250 kms distance to reach at the either ends. The social setup and physical conditions vary along the route length between the two destinations to a great extent. Altitudinal variation ranging from 300 to 4500 meters between the two ends poses changing nature of challenges along the route length. During the transient phase, many natural and man-made factors contribute to the hardships of the pastoral community. Van Gujjars faces various problems such as steep slope, difficult river crossings, narrow route, landslides, administrative boundaries, livestock theft, decreasing quantity of fodder due to Agri-industrial expansion along the route length and above all the lack of basic facilities.

1. There is a drastic decrease in milk productivity during migration due to continuous movement which consumes the most of the energy of cattle. Aggravated scarcity of fodder due to narrowing of route owing to agricultural and industrial expansion activities has emerged as a major cause of concern for the livestock dependent community. To adapt to the low fodder consumption and continuous movement cattle stop giving milk and hence, milk productivity reduces drastically from 5 litres per day to 0-1 litres per day. Therefore, in terms of economic aspect transient stage of the transhumance cycle is the least profitable to the community. During this stage input costs are high due to spending on feed, whereas earnings are zero due to low milk productivity. Therefore, the surplus income earned at highland pastures is utilised in the transient stage.
2. Some Van-Gujjar groups in the present study have inter-state route. Incidence of bribery are regularly reported at the border check posts. Cases of cattle theft along the border areas are also reported. Once the stolen cattle are taken across certain border limit, it becomes unattainable task to claim the stolen cattle. Therefore, administrative boundaries also pose a set of un-natural challenges in front of the community.
3. It takes almost a month to reach from lowland to high pasture land and vice-versa. Due to absence of mobile schools, it is infeasible for a backward and poor landless community like Van Gujjars to let children stay at lowlands for education. Therefore, transhumance in the absence of mobile schools has resulted into low levels of literacy and high dropout rate among Van Gujjars.
4. Health of Gujjar's is also compromised as during transhumance there is no visit of health officials to huts/deras. During transhumance health of pregnant mother and new born child is compromised as they are not able to visit nearby health centre frequently, although they are informed about vaccination schedule by local health officials and during stay in lower tracts in winters health officials visit huts/deras to vaccinate left out children. Sanitation of deras/huts is also a matter of concern as poor sanitation makes infants and others prone to infectious diseases, for example poor sanitation was one of the major causes of plague outbreak in 2002 among Van Gujjars in Jubbal area of Shimla district.

Problems and Challenges at Highlands

At the arrival of spring season, the climatic condition becomes suitable for the growth of grass at highland pastures in the Mid Himalayan ranges as snow melts. In the meanwhile, the temperature reaches above 30 degrees Celsius in lowlands pastures. Reduced pasture productivity due to high temperature and deficient rainfall at lowlands along with suitable temperature and fresh nutritious quality grass in the highland prompt the Van-Gujjars to move towards the highland pastures. Although the abundance of fresh and nutritious grass at highlands drastically reduces the input cost on livestock results in economic advantage, but many problems still persist at this stage of the transhumance cycle. Some major problems have been listed below:

1. Lack of basic facilities is the main problem that Van Gujjars face at highlands. Facilities like schools, primary health centres etc. are not available at highlands. Although for summer season highlands pastures are perfect match for livestock as fresh nutritious grass is abundant, which as a result increases health and productivity of livestock, but lack of basic facilities such as electricity, schools, communication devices and health centres etc. is a major problem for Van Gujjars themselves. Most of the highland pastures are above tree line where winter climatic condition is freezing and uninhabitable. Therefore, due to no human settlements there is absence of basic livelihood amenities as mentioned above. This has resulted into low literacy rate and poor health and hygiene among the Van Gujjars. Absence of schools in the highlands or mobile schools is the major cause of low levels of education among the Van Gujjars (Table 1). Dropout rate is also very high among the Van Gujjars. Illiteracy is itself cause of many problems such as due to illiteracy Gujjars have not been able to reap the benefits of advanced technology, ignorance towards unhygienic conditions in their deras/huts, due to illiteracy they have not been able to make the proper use of government institutions & schemes and are unaware of their rights.
2. Gujjars have to carry food items to highlands from far places. Electricity and communication services are not easily accessible at highlands. Due to absence of modern communication facilities during medical emergency and other climatic disasters many times timely emergency rescue and relief is not provided to the nomadic community on time which increases communities' vulnerability.
3. Due to lack of health and nutrition facilities like primary healthcare and Anganwadi, health of Van Gujjars is compromised. Cases of under nutrition and malnutrition are prevalent among the Van Gujjar children. Children and pregnant women are deprived of facilities such as mid-day meal and childcare supplements during migration and at highlands, which are available at lowland areas.

Findings and Observations

Nomadic pastoralism is a traditional and a time-tested livelihood practice, performed by various Pastoral nomadic communities all over the world. Throughout the historical time scale nomadic pastoralism has stood against the climatic disasters and emerged as an alternate climate resilient livelihood practice. Despite ecologically more sustainable livelihood practice as compared to agriculture and industrial practices, nomadic pastoralism is under great stress like never before. Van Gujjar a traditional pastoral nomadic community, completely dependent on livestock for livelihood is under great stress due to various reasons mentioned above. Transhumance cycle has turned into a vicious cycle of poverty owing to various socio-economic and administrative reasons. Transhumance as a source of livelihood comes at a great cost of underdevelopment for the Van Gujjar Community. In the modern industrialized and urban world, transhumance as a livelihood practice is becoming unviable and impracticable for the community. Transhumance owing to various reason has become a cause of socio-economic exclusion of the community. Van Gujjar community earns major chunk of their income from the sale of milk and milk by-products in the market close to their habitations at both highland pastures as well as lowland pastures. Although the total monetary value of milk and by-products sold is almost similar in highland and lowland but the spending is more in lowlands due to purchase of feed and fodder for livestock. Earnings are in surplus in highland phase due to zero spending on feed and fodder and extra income from labour work. Whereas, earnings are in deficit due to scarcity of feed and fodder resulting into high input cost on livestock feed in lowland and transient phase. The surplus income earned in the highlands is spent in lowland areas to buy feed and fodder for the livestock. Therefore, there is a presence of vicious cycle of poverty along with the transhumance cycle. Lack of time and work opportunity in the lowland areas aid to the vicious poverty cycle prevalent among the community. Therefore, out of the three stages, only one stage yields surplus income whereas, two stages yield negative income. The income from the surplus stage is lost in the other two stages in the form of high input on feed and fodder, proving the presence of vicious poverty cycle along with the transhumance cycle.

(PLEASE INSERT TABLE 1 HERE)

Prevalence of low levels of education and low literacy rate amongst the Van Gujjar community may be attributed to transhumant lifestyle along with inability of government to make provision of education facilities for the community. Education penetration has been lowest amongst the community as compared to the national level. Table 1 reveals that about two-third (74.12 percent) of the total population is illiterate and only 23.13 percent population completed the primary level of education. Dropout rate from elementary primary education to secondary education is strikingly high. The low level of education may be attributed to the low enrolment ratio and high dropout rate due to the nomadic lifestyle of the community. Due to continuous movement and no permanent stay at a place it becomes impossible for poor community to educate the children. Distance between highland pastures and lowland pastures ranges from 50 to 300 kms and therefore in absence of mobile schools, it becomes economically and geographically difficult for children to attend schools and get un-interrupted quality education. Therefore, nomadic lifestyle along with the inability of the state to provide necessary support is the major reasons for low literacy rate among the Van Gujjars. Due to low level of education, Van Gujjars could not take the advantages various welfare initiative and other modern technological developments and hence has remained underdeveloped. In the same way Van Gujjars are deprived of other services such as health care service such as Vaccination, regular health check-ups, emergency health assistance during pregnancy and other natural disasters. Food security is also compromised as at high altitude pastures not connected to motor able roads it becomes difficult for authorities to provide ration and other food supplements which are provided at subsidised rate. Therefore, being deprived of and neglected on almost all the aspect of development Van Gujjars are in poor state finding it difficult to sustain their livelihood through age old pastoral nomadic lifestyle. Transhumant lifestyle has resulted into social and political exclusion as well. Van Gujjars are always on the move along with livestock. There is a minimal participation of the community in the political arena. Poor economic condition and transhumant lifestyle hinder the community's participation in political and social life outside of their community. Van Gujjars can't afford the luxury of participating in social and political activities as community is always on the move along with livestock to sustain their livelihood. Not even a single member from the surveyed groups represented any

political organisation and was member of any elected body such as Panchayati Raj Institutions (PRIs) and urban local bodies. Therefore, there is a multi-dimensional deprivation and exclusion of the Van Gujjar community owing to transhumant lifestyle. Changing climatic conditions also poses a great threat to the livelihood of Van Gujjars. Frequency and intensity of natural disasters is witnessing its ever-increasing trend. Pattern of weather-related phenomenon is continuously showing fluctuations in recent years. Untimely events of rainfall, snowfall causes a great damage to the livestock dependent community. For instance, unseasonal snowfall on 23rd April, 2021 resulted in the death of livestock of various groups in the Shimla district during the transient phase towards the highlands. One such group heading towards Giri-Ganga reported loss of more than 20 livestock due to sharp fall in temperature below freezing point due to untimely snowfall. Similarly frequent events of landslides due to unseasonal rainfall have been reported by several Van-Gujjars which finally resulted into the loss of livestock. Hence, climate change has emerged as a threat of great concern to the livestock dependent pastoral community.

Solution and Suggestion

Provision of basic amenities such as drinking water, electricity and health facilities should be made on priority basis so that Van Gujjars are not deprived of their basic livelihood requirements. Schools at highlands or mobile schools during the transhumance cycle should be made available so that Van Gujjars can get quality education to improve their skills according to the requirements of modern industrialised world. Health facilities such as health vans should be provided to far flung highland pastures and along the tracks during transhumance cycle especially for pregnant and lactating mothers so that child mortality and under-nourishment of children and women can be improved.

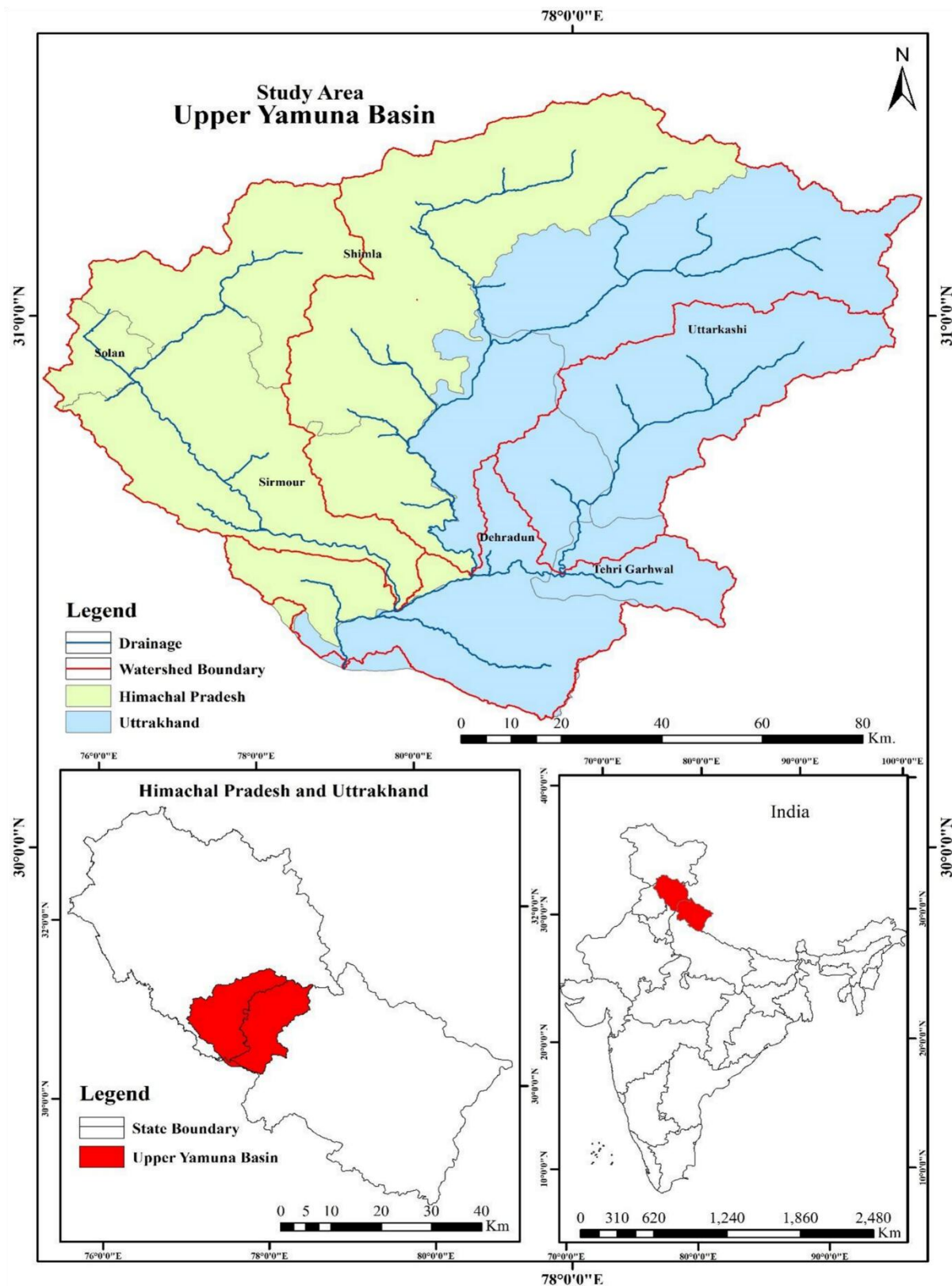
Provision of modern technology such as solar lights, battery and solar cookers should be made available on immediate basis as such interventions can have immediate positive effects in terms of improving nomadic lifestyle. Introduction of targeted govt schemes such as subsidy for purchasing feed and fodder, solar equipment and provision of health insurance of both Van- Gujjars and livestock to eliminate poverty and improve lifestyle. One nation one ration card facility for providing ration subsidy should be implemented.

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Source: Prepared by authors based on Census of India Maps.

Fig. 1

Table 1
Study Area: Levels of Education

| Groups | Levels of Education | | | | Total Members |
|--------|---------------------|-----------|--------|------------|---------------|
| | Primary | Secondary | Higher | Illiterate | |
| 1 | 23 | 5 | 1 | 35 | 64 |
| 2 | 7 | 0 | 0 | 37 | 44 |

| | | | | | |
|--------------|-------------------|-----------------|-----------------|--------------------|------------------|
| 3 | 34 | 4 | 1 | 94 | 133 |
| 4 | 3 | 0 | 0 | 20 | 23 |
| 5 | 9 | 0 | 0 | 26 | 35 |
| 6 | 6 | 0 | 0 | 38 | 44 |
| 7 | 9 | 0 | 0 | 29 | 38 |
| 8 | 2 | 0 | 0 | 19 | 21 |
| Total | 93 (23.13) | 9 (2.33) | 2 (0.49) | 298 (74.12) | 402 (100) |

Data in the parentheses are percentage to the total.

Source: Field survey January, April, May 2021.

