

**EVOLVING ROLE OF WOMEN IN THE CONTEXT  
OF MALE OUT-MIGRATION: A STUDY IN A HILL  
DISTRICT OF UTTARAKHAND**

*Final Project Report*



*Submitted by*

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*In partial fulfilment of the requirement for the*

**Degree of Masters of Arts in  
Sustainable Development Practice**

*Submitted to*

**Department of Policy Studies  
TERI School of Advanced Studies**

May 2019

**DECLARATION**

This is to certify that the work that forms the basis of this project “*Evolving Role of Women in the Context of Male Out-Migration: A Study in a Hill District of Uttarakhand*” is an original work carried out by me and has not been submitted anywhere else for the award of any degree. I certify that all sources of information and data are fully acknowledged in the project report.



Prakriti Sharma

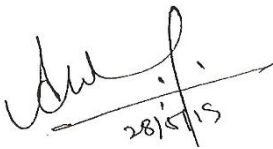
New Delhi, 28<sup>th</sup> May 2019

## Certificate

This is to certify that **Prakriti Sharma** has carried out her major project in partial fulfilment of the requirement for the degree of Master of Arts in Sustainable Development Practice on the topic “**Evolving Role of Women in the Context of Male Out-Migration: A Study in a Hill District of Uttarakhand**” during January 2019 to May 2019. The project was carried out in the **Integrated Livelihoods Support Project (ILSP)- Uttarakhand Gramya Vikas Samiti (UGVS)** and was supported under the IFAD-Universities Win-Win Partnership.

The report embodies the original work of the candidate to the best of our knowledge.

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**List of Abbreviations**

CDO *Chief Development Officer*

DFID *Department for International Development*

DM *District Magistrate*

FGD *Focused Group Discussion*

IFAD *International Fund for Agriculture Development*

ILSP *Integrated Livelihood Support Project*

MGNREGS *Mahatma Gandhi National Rural Employment Guarantee Scheme*

NGO *Non-Governmental Organisation*

OBC *Other Backward Castes*

PG *Producer Groups*

PRA *Participatory Rural Appraisal*

SC *Scheduled Castes*

TA *Technical Agency*

UGVS *Uttarakhand Gramya Vikas Samiti*

UPASaC *Uttarakhand Parvatiya Ajeevika Samvardhan Company*

VPG *Vulnerable Producer Groups*

## Abstract

*Excessive rates of male out-migration in the hill districts of Uttarakhand have led to changes in the rural production system and the sociocultural structures of the villages. There have been observable changes in the lives of these women left-behind; from the workload to the amount of responsibility they hold in the household and the livelihood options they follow. This research, using the Sustainable Livelihoods Framework, aims to delve deeper into this vulnerable context and map changes in the lives of women due to male-outmigration. Further, it aims to assess the role of the livelihood intervention - Integrated Livelihood Support Project (ILSP) by International Fund for Agricultural Development (IFAD) – India, in this dynamic setup. The study design adopted a case-control approach choosing three villages of Almora district. Mixed method was used for data collection which included household surveys, interviews with 80 women, focused group discussions and participatory rural appraisal tools. The analysis of data revealed that women and young girls were overburdened with reproductive roles that left them with no time to invest in productive activities. Although women were engaged in farm activities, in the absence of property rights and recognition as 'farmers', they were seldom able to exercise control over means of production. Their access to economic decision making was limited. The only difference was where women from households with out-migrated male members considered themselves as 'temporary household head' with the power to make decisions pertaining to household expenditure. Multiple livelihood projects like ILSP through its association with the vulnerable groups, helped the farmers connect to the market. This association was slow to scale up in the study areas due to absence of adequate processes and incomplete visualisation of the context and the asset sets. The women respondents perceived some benefit from the group association through enhanced social capital that could help them cope with stress conditions, particularly in the absence of male counterparts. The study further provides recommendations to fill the gaps observed.*

Keywords: out-migration, women left-behind, development projects



## I. INTRODUCTION

An intermix of push and pull factors in rural agrarian economies have led to high rates of out-migration and abandonment of agriculture (Jokisch, 2002; Hoffmann, et al., 2019). This phenomenon has multiple repercussions on these economies, as they affect the sociocultural organisations that sustain agriculture and restrict space for agricultural innovation (Mines & de Janvry, 1982; Black, 1993; Greiner & Sakdapolrak, 2013; Caulfield, et al., 2019). Studies show that this shift which is slowly being observed in multiple rural contexts has led to an imbalance between labour needs and availability, overall food production of an area and the production systems at large (Bren d'Amour, et al., 2017; Hoffmann, et al., 2019).



*Figure 1: Map of India*

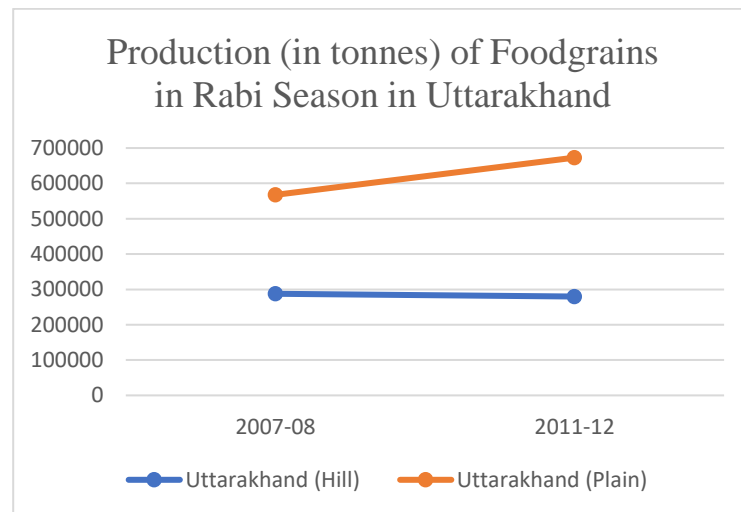
Similar observations have been made in rural India where there is an occurrence of distress-induced movement away from their primary source of livelihood - agriculture. Unprofitability from this livelihood source coupled with limited opportunities in the region act as chief push factors to physically and metaphorically drive populations away from their agricultural land. This distress has led to high rural out-migration rates in the country. In fact,

according to The Economic Survey of India, 2017, the magnitude of inter-state migration in India was close to 9 million. One of the States where this out-migration is found to be the highest in number is Uttarakhand. Uttarakhand is one of the recently formed states of India and constitutes of 13 districts and has a population of 10,086,292 people. About 69.77% of this population resides in rural areas (Census, 2011). More than 700 villages in the State have been affected by the phenomena of ‘ghost villages<sup>1</sup>’. The State is geographically divided into ten hill districts and three plain districts. However, this appalling phenomenon of out-migration is only restricted to the hill districts. This is because the development of the state has been found to be skewed or lopsided. It has centred mainly around

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<sup>1</sup> Villages which have been either completely abandoned or have a single digit population residing in them due to out-migration are termed as ghost villages.

the plain districts, will hill districts remaining far off the pace in this increasing prosperity of the State (GoUK 2012; GoUK 2014). This can even be observed in Figure 2 which depicts the difference of change in the production pattern of the two types of districts. Despite hill districts having more area, the production in the plain districts has risen over time. There have been scarce opportunities for livelihood diversification or income enhancement in these districts where subsistence agriculture is the primary source of livelihood. This skewed development is leading to erosion of human capital, especially of male members in the region. This loss is either leading to the relinquishment of farmlands or placing the burden of production on the few left-behind (Tiwari & Joshi, 2015; Mamgain & Reddy, 2016; Joshi, 2018).



*Figure 2: Changes in Production in Uttarakhand (Directorate of Agriculture, 2012)*

While multiple studies have focused on migrant status and remittance flows, there has been less emphasis on the impact of out-migration on women and children at the source site, and how it impacts the rural production system in general (Toyota, et al., 2007). Increased involvement of children in cattle rearing and cultivation has been observed due to a decline in human resource and enhanced wage rates in the labour market (Arya, 2015). These changes at the source site have created vulnerable conditions for women and children. Further, these changing dynamics have also captured attention to make way for multiple livelihood interventions. Recently introduced interventions such as Integrated Livelihood Support Project (ILSP) by IFAD India intend to change the face of this downfall in the hill districts (ILSP, 2017). It aims to “enable rural households to take up sustainable livelihood

opportunities integrated with wider economy” (IFAD, 2017) and is being implemented in 11 of the 13 districts of Uttarakhand.

Thus, the women of these hill districts are functioning in a context with changing human resources and forthcoming opportunities leading to changes in the role they play in the source locations. Using a gendered adaptation of the Sustainable Livelihood Framework, this research aims to assess not just the changes in the livelihood of women, but their strategies to cope with these changes leading to numerous positive and negative outcomes in their lives.

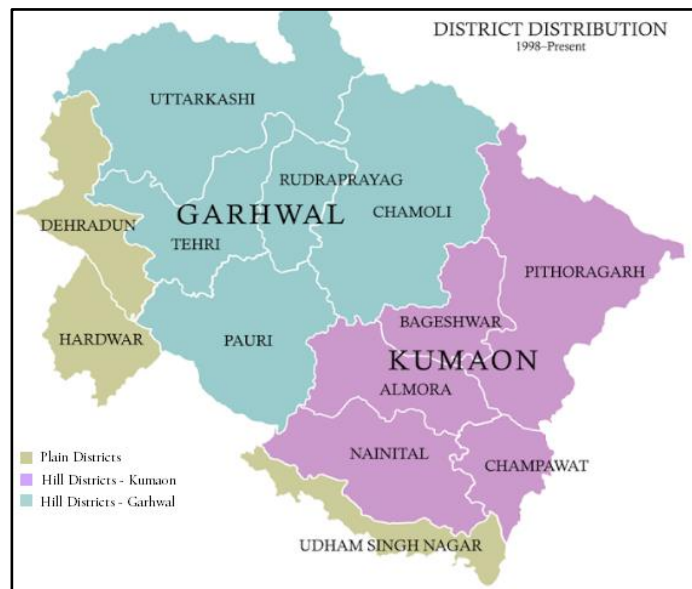
The report has been structured into six chapters. This first chapter sets the context and expectations from the research; the second chapter provides background, describes and compares relevant literature with respect to the research. The third chapter puts forward the conceptual framework used, objectives and methodology of the study and the fourth chapter presents results on primary data and the results derived from the same. The fifth chapter summarises the final conclusions and discusses policy priorities. The final chapter discourses possible limitations to derive the results of this research.

## II. BACKGROUND AND RATIONALE

A phenomenon recently gaining momentum in most of the agrarian economies in the world is the shift from agricultural practices. Countries like India and China have had stark differences over the years where population engaged in agriculture reduced from more than 50% in 2010 to less than 48% in 2018 (World Bank, 2019). This shift has resulted in changes in the social structures and power relations with respect to landholders, sharecroppers, marginal farmers and the landless (Pritchard, et al., 2017). The reasons behind this shift have mainly been found to be stagnation of farm incomes (Vaidyanathan, 2006; Taylor, 2011; Jannuzi, 2014) and decline in average land holding sizes (Pritchard, et al., 2014, p. 64). Thus, these reasons coupled with contextual problems of the affected areas have led to a physical and figurative movement of these agriculturalists away from their original livelihood activity. All of this has eventually led to the abandonment of agriculture. This movement in India is so massive that according to a study by Deshingkar & Akter (2009), it can be said that “up to 100 million rural Indians are estimated to be mobile in search of livelihoods”. With such glaring figures, these distress-induced livelihood changes in rural India (Sinha, 2007; Harris-White, 2008; Kundu & Chakrabarti, 2010) have been dramatic, to say the least. Adding to the aforementioned reasons for the shift, agrarian distress in India is also inclusive of debt burdens due to the introduction of high-value crops growing in mostly rain-fed agriculture. This is because technological treadmills associated with their growth are usually not accounted for and add to the existing load. Thus, opportunities with respect to the growth of these crops are also limited to certain geographical and social boundaries (Gruère & Sengupta, 2011).

In India, one of the biggest examples of this phenomenon can be seen in the rural economy of Uttarakhand. Agricultural production has declined drastically for a region which was once able to produce for both subsistence and surplus (Naudiyal, et al., 2019). In fact, the contribution of the primary sector which includes agriculture and allied services has gone down from 14% in 2011-2012 to approximately 10% in 2017-18 in the State (GoUK, 2018). This shift in Uttarakhand has been primarily due to out-migration of households /families in light of declining agricultural productivity and disinterest of educated youth to engage in agriculture, among several other reasons discussed later. Lowered productivity has been partly attributed to erratic rainfall patterns and rise in

conflict with wild animals (Bhandari & Reddy, 2015; GoUK, 2018; Naudiyal, et al., 2019). The physical shift away from agriculture can be observed from the information on out-migration in the State. More than a thousand villages from the total of 16,793 villages in the State are left with no inhabitants, turning them into what is popularly referred to as *ghost villages*. The decline in population in the *hill districts* (Figure 3 for reference) is matched with a sharp increase in the *plain districts* (Census, 2011). With Himalayan foothills of India characterized by subsistence agriculture, rural poverty and high vulnerability to natural disasters (Guha, 2000; Rais, et al., 2009; Satendra, et al., 2015; Mamgain & Reddy, 2016; Singh, 2017; Hoffmann, et al., 2019), there are various reasons for this phenomenon to occur.



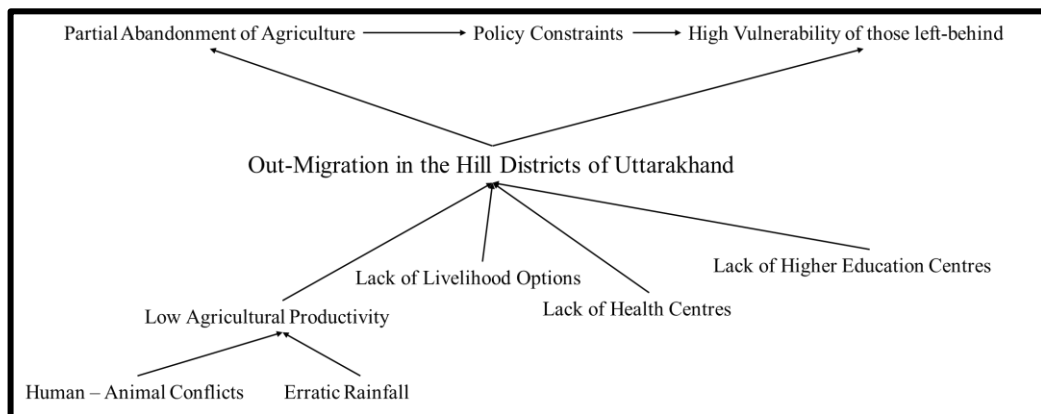
*Figure 3: Districts of Uttarakhand*

The reasons identified for hill out-migration are not just limited to lowered agricultural productivity and youth disengagement but also coupled with economic backwardness (GoUK, 2012; GoUK, 2014; GoUK, 2018). Economic backwardness when coupled with out-migration reinforce each other and create a vicious circle that further heightens economic underdevelopment in the region (Joshi, 1980). This economic backwardness in the districts has been reasoned due to the design and implementation of the development plan in the state, which has lacked the perspectives and specificities of these hills (Jodha, 2000; Awasthi, 2010). The resources present in these districts have been accrued to the advantage of urban centres and thus, have led to limited employment opportunities outside agriculture for the growing labour force in highlands (ibid). This relationship has

led to the creation of this low economic base due to which out-migration is employed as a coping strategy by various households. Thus, the unequal relationship between these districts, amidst a highly fragile resource base coupled with livelihood insecurities have led to out-migration as a response or a coping strategy.

This out-migration has also been put under the lens of the push – pull theory (Lee, 1966; Harris & Todaro, 1970), wherein push factors from rural spaces are recognised to be the aforementioned characteristics. Pull factors from urban centres include diverse and improved employment and educational opportunities and less social discrimination (Sridhar, et al., 2010). This is not just limited to the younger cohort, about 86% of these migrants from hill districts are males with 52.4% of the age group of 30-49 years. Further, about 71% of these migrations are long ranging from 6-12 months (Mamgain & Reddy, 2016).

Therefore, the following figure establishes the literature based problem-flow seen in these hill districts:



*Figure 4: Literature-based Problem Tree*

This phenomenon was first found out when the out-migrated numbers were not as high and Uttarakhand wasn't even made a separate State<sup>2</sup>. The migration at the time was dominant amongst the tribal population and was seasonal (Bora, 1996). Therefore, the earliest literature consisted of multiple field level studies that focused on the temporality or permanence of people migrating and did not constitute the understanding of the pattern and nature of migration.

<sup>2</sup> Uttarakhand was recognised as a separate State in the year 2000.

The consequences and repercussions of this occurrence have come up in recent literature only with a change in demography figures (as mentioned above). Multiple studies have identified agrarian distress in the region which has shown areas of deteriorating productivity of land and decline in the yield obtained (Nicholas, 2015; Shukla, et al., 2018). Widespread deagrarianisation (Bryceson, 1996) and abandonment of agricultural land is being observed (Tiwari & Joshi, 2015). Thus, these processes can further accentuate poverty and impact food security in the region (Pritchard, et al., 2017). Apart from the reduction in production, migration is also leading to a shortage of labour in agriculture. Remittances for households are not considered to be enough to compensate for this shortage because a greater portion of the migrated males are involved in low-paying, unskilled jobs (Shukla, et al., 2018). The most affected by these changing dynamics of the source site are the ones left-behind, which constitute mostly women.

The reproductive workload of women or their 'drudgery' has been discussed at length in earlier literature based in the region but it was not considered under the context of out-migration it has now become a part of (Byers & Sainju, 1994; Sharma & Banskota, 2006). With a high proportion of out-migrated male members, the phenomenon of women taking up agricultural roles is something that has only occurred over the past 10-15 years. With families only having enough to be able to send a limited number of members to migrate to other places and women having to participate in unskilled productive activities, the feminization of agriculture is happening by default (Vepa, 2004; Kelkar, 2007). With low education levels, limited skills and opportunities within the origin sites, women either by choice or no choice take up the responsibility of agriculture-based tasks (ibid).

Therefore, the changes through the impact of out-migration and the changing role of the women left-behind were highlighted much earlier but have found space in Indian literature only recently (Brown, 1983; Jetley, 1987). Most of the studies based in other regions on the globe implied that there has been a significant amount of change in the lives of women due to male-outmigration. However, the results are diverse due to contextual constraints, the disposition of the impacts and consequences. Some studies emphasise on the role of remittances as a source to stabilise the source sites by helping in provide income for farm and non-farm-

based wage labourers (Van Rooij, 2000). The irregularity of remittances and the cost of migration, however, is not considered. With remittances not enough, there is a possible rise in women's workload to suffice for household expenses (Paris, et al., 2005). The interplay of the economic sector is also discussed, wherein, there has been observed a rise in unpaid work for women in the absence of a male member in the household (Mendola & Carletto, 2009). Varied mixed results have been found with respect to changes in the division of labour, women's mobility and their overall empowerment due to out-migration (Chant & Craske, 2003; Mcevoy, et al., 2012).

With respect to studies based on the context of hills and impact on the left-behind (particularly women), the following themes have been identified in literature:

*Table 1: Theme-wise Himalayan literature*

	<b>Broad Themes</b>	<b>Literature</b>
1	Involvement of women in traditionally male-dominated domains of agricultural work; Rise in workload	(Nandini, 1999; Lokshin & Glinskaya, 2009; Maharjan, et al., 2012; Bhandari & Reddy, 2015)
2	Changes in women's role at the community level	(Nandini, 1999; Maharjan, et al., 2012)
3	Temporary effects on decision-making and mobility of women	(Tiwari & Joshi, 2015; Joshi, 2018; Desai & Banerji, 2008)
4	Women's involvement in economic activities; impact on livelihood	(Kandari, 2013; Adhikari & Hobley, 2015)

Thus, there is either a limited understanding of the impact of out-migration or only a part of the context is being put under view. This changing role of women who are at the receiving end of this phenomenon at the source site is not discussed at length in the literature. Despite multiple studies on economic contribution through remittances and changes in decision-making and mobility; woman 'left-behind' as an earning member and at the centre-stage of the local livelihood is not contextually built in. Within the mentioned literature, some believe that out-migration has helped improve women's access to education, market and has



enhanced their decision-making power, while also stabilising rural economies through remittances (Tiwari & Joshi, 2015). Some studies have found both positive and negative outcomes; with women having no financial control but an enhanced social status (Singh, 2018). While some consider that the availed economic benefits due to out-migration have not been beneficial and satisfactory at the source site (Bhandari & Reddy, 2015).

### **Rationale of the Study**

The gaps within the literature with respect to multiple roles that women have to take up and the opportunities and restrictions which are brought into their lives through out-migration are overlooked. This is what helps make this research of importance amidst such a dynamic setup. There is an absence of literature with respect to taking a holistic vulnerable context the women of these hill districts are in. With high-outmigration, changing environmental conditions and their current resource base, the strategies applied by them to muddle through and the outcomes obtained are disregarded. Further, with livelihood interventions like ILSP, it is important to assess its attempt to create enabling conditions and opportunities leading to changes in women's lives. Such an assessment will help to either replicate or create more impervious and successful models for similar contexts. Therefore, despite the acknowledgement of the changing roles of women and the opportunities they have, it is also necessary to determine if there are enabling conditions for them to hold on to those opportunities. Further, if those opportunities are the ones the women actually seek.

Considering the gaps, this study tries to contextualize and understand the vulnerabilities of the households in the hill communities and understand the impact of outmigration on women. Recognizing women 'left behind' at the centre stage of local/household livelihood, the study uses the Sustainable Livelihood Framework (Chambers & Conway, 1992; DFID, 1999) to understand the impacts of outmigration and the role of women in changing socio-economic context.

### III. OBJECTIVES AND METHODOLOGY

#### Conceptual Framework

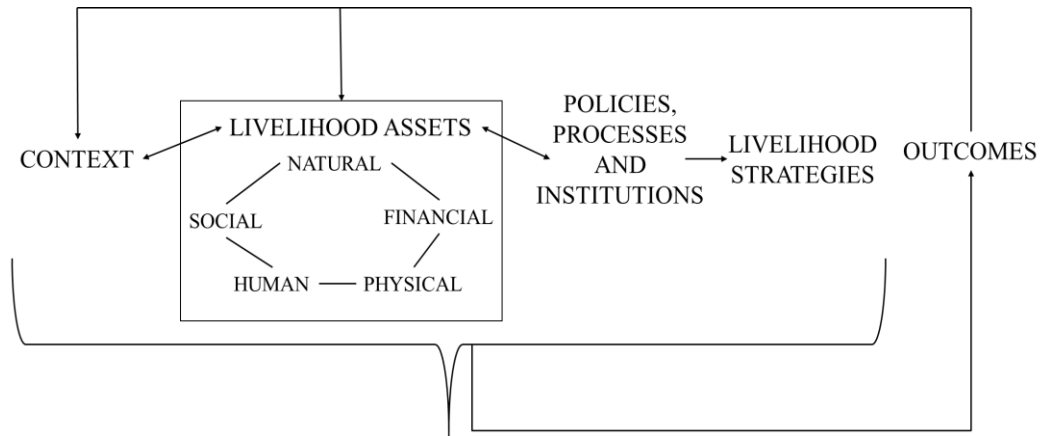
Multiple frameworks have been devised by different organisations ranging from multilateral bodies to international non-governmental organisations (NGOs) for approaching problems concerning rural livelihoods (Hussein, 2002). Introduced in 1999, Department for International Development (DFID)'s sustainable livelihood framework has been used widely and has been adopted by multiple organisations for research. It is considered to be people-centred, responsive and participatory, multi-level and dynamic.

Bringing women to the centre-stage, the Sustainable Livelihood framework has been adapted to determine the local context with a focus on women 'left behind', their asset base and the influence of formal and informal institutions on livelihood outcomes. The study is contextualized in hills districts where the ILSP programme (of IFAD) is implemented. ILSP attempts to bring strengthen livelihoods through women's participation in activities to ensure enhanced household income and food security. Table 2 outlines the adapted dimensions and indicators of the framework and Figure 5 explains the interlinkages of these dimensions.

Table 2: Sustainable Livelihoods Framework

DIMENSIONS	INDICATORS
<b>CONTEXT</b>	Socio-economic: Demography, Migration, Income Sources Physical: Rainfall, Natural Resources, Land Use
<b>POLICIES, INSTITUTIONS AND PROCESSES</b>	Formal Institutions: Policies and Laws Informal Institutions: Local customs and norms Perception of people on informal and formal institutions Intermediary role of intervening bodies Interventions and their processes
<b>ASSETS</b>	<i>Human Capital</i> : Livelihood activity, choice of livelihood, knowledge and skills required for that livelihood <i>Physical Capital</i> : the basic infrastructure needed to make a living; the tools and equipment that they use

	<p><i>Financial Capital:</i> savings, in whichever form; access to financial services; regular inflows of money; contribution to household income; remittances</p>
	<p><i>Natural Capital:</i> the natural resource stocks to draw for their livelihoods, including land, forests, water, air and so on</p>
	<p><i>Social Capital:</i> both vertical and horizontal relationships of trust, reciprocity and exchange that the poor can draw on in times of need, and that lower the costs of working productively together</p>
<b>LIVELIHOOD STRATEGIES</b>	<p>Migration</p> <p>Livelihood intensification</p> <p>Livelihood diversification</p> <p>Changes in Reproductive &amp; Productive needs and roles</p>
<b>OUTCOMES</b>	
<b>More Income &amp; Improved Food Security:</b>	<p>Control over use of income, Changes in production; food self-sufficiency;</p> <p>Improved purchasing power</p>
<b>Reduced vulnerability:</b>	<p>Ownership and control over assets; Access to &amp; decisions of credit; choice of livelihood</p> <p>Participation and contribution in institutional activities; Input in productive decisions</p>
<b>Increased well-being:</b>	<p>Workload (productive and reproductive); leisure time; ability to decide on career/education</p> <p>Freedom of movement</p>
<b>More Sustainable use of NR Base:</b> Changes in use of Natural Resources	



*Figure 5 Conceptual Framework*

## Research Objectives

- 1) To study the socio-cultural and economic context of the study villages in Almora district, a hill district of Uttarakhand
  - 1.1 What is the foundation of social organization in the village and how does it shape community access to resources and benefits in the village?
  - 1.2 What is the occupational status and livelihood strategies employed by the communities?
  - 1.3 What is the socio-economic profile of households where different livelihood strategies are employed?
  - 1.4 What has been the agricultural production pattern in the villages? How has the pattern changed in the past decade?
- 2) To study the socio-cultural and economic status of women in the context of male-out-migration at household and community level in the study villages
  - 2.1 What is the occupational, income and asset holding status among the communities with particular reference to the women?
  - 2.2 What is the status of the women with respect to education, health, livelihood strategies, political participation, access to institutions and village infrastructure?
  - 2.3 What are the cultural norms and belief systems of the community and how do they play a role women's access to resources and institutions?
  - 2.4 How does the role of women change at the household and community levels with respect to their reproductive, productive and community engagements/activities?

- 2.5 How do social and cultural norms and practices enable or restrict women's productive role and choice of livelihood engagement in the village communities? How have these norms changed over the last decade?
- 2.6 How has male-outmigration impacted women's access to and control over resources and decision making?
- 2.7 How have social networks and institutions enabled or restricted women to cope with the uncertainties and socio-economic vulnerability?
- 3) To study the role of livelihood interventions in enabling women to cope with livelihood uncertainties, particularly in the case of male outmigration
- 3.1 What are the ongoing government and non-government interventions in the villages?
- 3.2 How have the interventions impacted the role of women at the household and community levels with respect to their reproductive, productive and community engagements/activities?
- 3.3 How have the interventions impacted women's access to and control over resources and decision making at the household and community level?
- 3.4 How have the interventions impacted women's contribution to household economy/income and impacted production?
- 3.5 How have the interventions helped enhance or restrict the overall well-being of women and reduce their vulnerability?

## Methodology

### *Selection of Study Site*



*Figure 6: Map of Uttarakhand with Selected District*

For the purview of the proposed research, the following criteria were used to decide upon the district, block and village level study area:

Table 3: Selection of Study Area

Geographical Levels	Selection Criterias	Selected Areas	
<b>District Level</b>	High Out-migration	Almora	36,401 out-migrated farmers
	Duration of Intervention Activities		Active for 3 years
	Weather Feasibility		At lower elevation compared to other hill districts
<b>Block Level</b>	Away from Urban Centres	Syaldey	Remote Block; at Garhwal border
	High Out-migration		Active for 3 years
	Duration of prevalence of project activities Agriculture - Primary Livelihood Activity		
<b>Village Level</b>	High Out-migration	Intervention & Non-intervention villages	Mixed composition of SCs, OBCs and General Category
	Diverse caste groups		
	Agriculture - Primary Livelihood Activity		

Since out-migration was a phenomenon prevalent almost everywhere, the study villages were chosen as such to fulfil the mentioned research objectives and to obtain a comparative understanding with respect to the project. The selection was such that one village is where there is high-outmigration but no-implementation of ILSP and two villages are where there is high-outmigration but included under ILSP.

### Population and Study Sample Selection

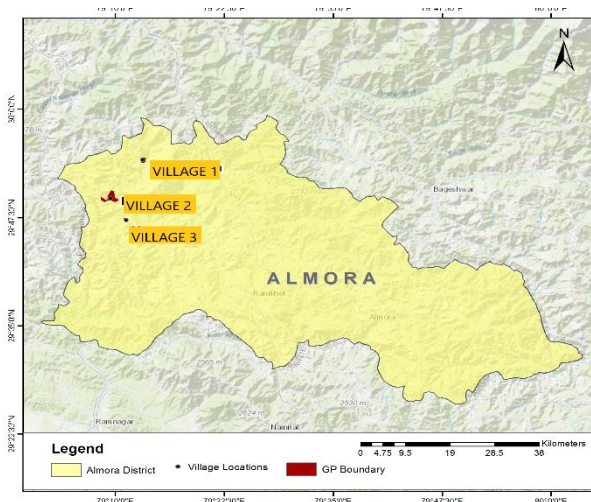


Figure 7: Map of Almora District with Study Villages

Using purposive sampling technique, data collection was undertaken over a period of three months. The primary respondents under the study were 80 women in the age groups: <20 years and between 20-50 years of age.

Some other respondents were a few male members of the household (where available), Village Pradhan; Technical Agents (TA) working with women or implementing livelihood programmes in these villages; District level project officials and the Chief Development Officer (CDO) and District Magistrate (DM) of Almora.

### *Collection of Data*

- Secondary Data: A detailed study of the census data, IFAD reports, UGVS's reading material and reports, State level reports and the available literature of the village/hill regions of Uttarakhand was undertaken
- Primary Data: Mixed method approach was followed to collect comprehensive data from the concerned stakeholders. Different tools such as household survey questionnaire, interview schedules, focused group discussions and different means of Participatory Rural Appraisal techniques which are discussed at length in the next section were employed.

### *Research Tools*

*Table 4: Research Tools Used*

<b>Tools Used</b>	<b>Information Extracted</b>		<b>Objective(s) fulfilled</b>
• <b>Basic household profiling survey questionnaire</b>	Basic understanding of the demography of the village; information on socio-economic background of the residents; different livelihood activities taking place in the village. Context of social capital added using World Bank's guide to analysing social capital in context (Dudwick, 2006).		1, 2, 3 and 4
• <b>Interview Schedules</b>	<u>Key-informant</u>	Semi-structured interviews with pre-determined thematic areas were modified as required during the interview; provide detailed information in understanding the perceptions of the interviewee	1 and 4
	<u>In-depth</u>	In-depth semi-structured interviews of stakeholders based on the research problem based on the pre-formulated thematic areas	1, 2, 3 and 4
• <b>Focus Group Discussions (FGDs)</b>	Discussions on migration and Division of labour; Remittances; presence & choice of other livelihood options; Decision-making in multiple areas of HH & Agri; Decision-making for migration of members; Sustenance with the help of community; Project activities and impact; Socio-cultural norms & effects on livelihood activities		1, 2, 3 and 4

In addition to these tools, participative rural appraisal tools were also applied to acquire a deeper grasp over the study prospects. The approach helps incorporate

information and views of the study population with the help of their participation in multiple stimulating and attention – grabbing activities.

### **Participatory Rural Appraisal (PRA) tools –**

*Table 5: PRA tools used*

<b>PRA tools used</b>	<b>Information Extracted</b>	<b>Objective(s) fulfilled</b>
<b>Community Mapping</b>	Helped produce an improved picture in terms of its spatial distribution of people of different castes and classes, distribution of resources like water, forests and social institutions like places of worship, health centres, schools etc.	1 and 4
<b>Seasonal Calendar</b>	Helped understand the seasonal activities of the local community related to both agricultural and non-agricultural activities	1, 2 and 3
<b>Daily Activity Clocks</b>	Determined all the activities carried out during a day and their durations; useful to understand the division of workload between the two genders	2 and 3
<b>Time-lines</b>	Aided in the understanding the life history of individuals, households and hence the community; identifying any event which had a major impact of the life of the community	1, 2, 3 and 4
<b>Spider-map</b>	It helped in assessing values given to different activities by women	1 and 2
<b>Vision-road map</b>	allowed participants to visualise their future and draw in concrete terms; also analysed their current circumstances/reality and map possible income generation streams or activities that could restrict them to achieve their vision	1, 2 and 3
<b>Give &amp; Take from community: whom do we look towards?</b>	Helped understand the dependence on communities for various needs	4



## **Data Analysis**

The mentioned tools and techniques applied for data collection were to obtain a clearer and thorough image of the narrowed objectives. The study may also facilitate in laying out any future intervention in the areas of focus identified.

The data and information were collected in the form of survey responses, field notes, photographic evidence, audio and video recording (keeping in mind the ethical considerations of the study) and the tools described in the previous section. The aim of data collection was to fulfil the objectives of the study and, also form a base for a comprehensive analysis of the same. To ensure the robustness of the information collected, regular revision and review of the notes were done.

Data and information collected were analyzed in the following manner –

1. Analysis of the field notes and PRA tools - The notes collected in regular time intervals were revised as mentioned before and thus, coded to organize and group similar data points using key-words. These notes further supplement the findings from other tools and techniques applied to gather data.
2. Quantitative Data Analysis – Using the software, Stata 14.2, household questionnaires were analyzed to obtain the necessary information.
3. Visual information – Data was analyzed based on all visual information collected, it will include maps, calendars, field notes, observations etc. The data so collected could be represented through graphs, pie charts for a better understanding.
4. Data triangulation – It helped in cross-checking the information gathered and thus determining the validity and reliability of the data.

## **Limitations of the Study**

1. The logistical arrangements of lodging and travel required extensive rapport and were only available for a short duration which made space for a limited amount of stay in the study areas.
2. At the initial stages, communicating with a few of the villagers was problematic due to unfamiliarity with the regional language.
3. The research was conducted in the winter months of February – March and the weather, at times, proved to be a hindrance for data collection.

## IV. RESULTS AND DISCUSSION

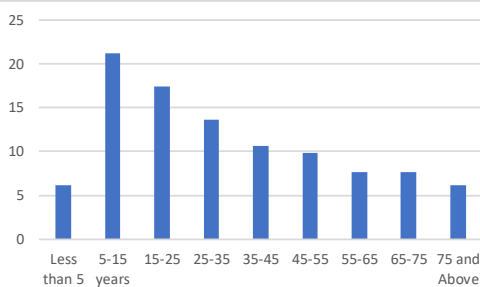
### 1. Building the Context

#### *Description of the Study Areas*

The study has been conducted in the Almora district of Uttarakhand. The population density of the district is of 198 inhabitants per square km (Census, 2011). The population growth rate from 2001 to 2011 has been negative (-1.73%) due to heavy out-migration from this hill district. The district is dominated with Hindu population (98.19 %) and population belonging to other religions (Muslims and Christians) is only nominal (ibid). About 45% of this population in Almora lives in and around the main Almora city (National Portal of India, 2009).

The district is divided into 11 blocks, out of which, Syaldey block is situated towards the left extreme end of the district and is away from most urban centres. Despite it being recognized as a part of Kumaon, the block being at the extreme end of the district touches the boundary of Pauri- Garwal.

*Table 6: Description of Village 1*

	Intervention Village 1	Data Source
No. of Households (Census, 2011)	123	Secondary Data
No. of Households estimated now	86	Primary Data
Caste-wise distribution	73.33% Gen; 10%OBCs; 16.67% SCs	
Sex	33.33% Males; 66.67% Females	
Age Groups		
Literacy	19.7% Illiterates; 80.3% Literates	
Occupations	Agriculture (31%) & Labour (15.2%) other occupations in varied numbers	
Households with out-migrated members	70%	

The reported population of the first project village amounts to 123 households (Census, 2011). However, the estimated population now is of only 86 households, where multiple households have either migrated to a close-by market space or have

abandoned their houses and left for cities. The main crops grown here are mustard, paddy, wheat, finger-millet and chilly. The village is further divided into two hamlets: Hamlet 1– about a kilometer away from the market space, surrounded by forests on top and the second hamlet towards the foothills. Hamlet 1 has experienced shifting of multiple households towards the other hamlet, Hamlet 2 due to the latter’s proximity to the road, schools and marketplace. These migrated households are trying to come up with new non-agricultural enterprises to make their own space in the marketplace.

*Table 7: Description of Village 2*

	Intervention Village 2	Data Source																				
<b>No. of Households (Census, 2011)</b>	143	Secondary Data																				
<b>No. of Households estimated now</b>	110	Primary Data																				
<b>Caste-wise distribution</b>	77.42% Gen; 22.58 SCs																					
<b>Sex</b>	41.77% Males; 58.23% Females																					
<b>Age Groups</b>	<table border="1"> <caption>Age Group Distribution Data</caption> <thead> <tr> <th>Age Group</th> <th>Number of Households</th> </tr> </thead> <tbody> <tr> <td>Less than 5 years</td> <td>6</td> </tr> <tr> <td>5-15 years</td> <td>25</td> </tr> <tr> <td>15-25 years</td> <td>23</td> </tr> <tr> <td>25-35 years</td> <td>11</td> </tr> <tr> <td>35-45 years</td> <td>12</td> </tr> <tr> <td>45-55 years</td> <td>8</td> </tr> <tr> <td>55-65 years</td> <td>7</td> </tr> <tr> <td>65-75 years</td> <td>4</td> </tr> <tr> <td>75 and Above</td> <td>3</td> </tr> </tbody> </table>		Age Group	Number of Households	Less than 5 years	6	5-15 years	25	15-25 years	23	25-35 years	11	35-45 years	12	45-55 years	8	55-65 years	7	65-75 years	4	75 and Above	3
Age Group	Number of Households																					
Less than 5 years	6																					
5-15 years	25																					
15-25 years	23																					
25-35 years	11																					
35-45 years	12																					
45-55 years	8																					
55-65 years	7																					
65-75 years	4																					
75 and Above	3																					
<b>Literacy</b>	27.2 % Illiterates; 73.8 % Literates																					
<b>Occupations</b>	Agriculture (24%) & Labour (9.8%) ther occupations in varied numbers																					
<b>Households with out-migrated members</b>	90.32%																					

The second project village and also, the biggest village of the study, with respect to area and population, the village has 143 households according to Census, 2011. There are now about 110 households in the village. Away from any market, the village is divided into various hamlets – these hamlets determine the livelihoods that people are involved in and showcase the differentiation of household locations based on caste. Therefore, the crops grown at the foothills in Hamlet 1 are mustard, wheat, corn, chilly, soybean, finger-millet and cucumber. Paddy is also grown here due to the availability of water as it is positioned right next to the local stream. Here, the name of the hamlet (undisclosed in the report due to confidentiality) is

based on the dominant caste that resides in the area. Two hamlets located close to this (Big hamlet and Small hamlet) and have been named based on the number of households each hamlet has, with the former having the highest number in the village. The crops grown in these two hamlets are similar to the previous one, except for paddy. The fourth hamlet is located right next to the road that passes through the village. Due to good connectivity, a few households from the earlier three hamlets have migrated here and have opened petty roadside shops. The final hamlet of the village is Untouchable/Dalit locality. Evident in the name, the hamlet only includes households belonging to the SCs. Despite a small region of it being adjacent to another small hamlet, the entrance of both the hamlets have been carved separately due to traditional norms pertaining to untouchability. The other part of this hamlet is way up towards the hilltop, closer to the forest. The people of these households are either dependent on livestock activities or non-timber forest products.

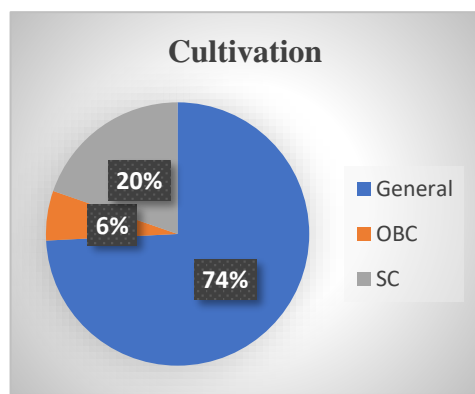
*Table 8: Description of Village 3*

	Non-intervention Village	Data Source																				
No. of Households (Census, 2011)	51	Secondary Data																				
No. of Households estimated now	19	Primary Data																				
Caste-wise distribution	78.95% Gen; 21.05% SCs																					
Sex	39.76% Males; 60.24% Females																					
Age Groups	<table border="1"> <caption>Age Group Distribution Data</caption> <thead> <tr> <th>Age Group</th> <th>Number of Households</th> </tr> </thead> <tbody> <tr><td>Less than 5 years</td><td>12</td></tr> <tr><td>05-15 years</td><td>12</td></tr> <tr><td>15-25 years</td><td>13</td></tr> <tr><td>25-35 years</td><td>12</td></tr> <tr><td>35-45 years</td><td>16</td></tr> <tr><td>45-55 years</td><td>5</td></tr> <tr><td>55-65 years</td><td>17</td></tr> <tr><td>65-75 years</td><td>10</td></tr> <tr><td>75 and Above</td><td>3</td></tr> </tbody> </table>		Age Group	Number of Households	Less than 5 years	12	05-15 years	12	15-25 years	13	25-35 years	12	35-45 years	16	45-55 years	5	55-65 years	17	65-75 years	10	75 and Above	3
Age Group	Number of Households																					
Less than 5 years	12																					
05-15 years	12																					
15-25 years	13																					
25-35 years	12																					
35-45 years	16																					
45-55 years	5																					
55-65 years	17																					
65-75 years	10																					
75 and Above	3																					
Literacy	28.9% Illiterates; 71.1% Literates																					
Occupations	Agriculture (15%) & Labour (18.6%) other occupations in varied numbers																					
Households with out-migrated members	73.68%																					

The third and the final village, a non-project village was seen to have the highest rate of migration. With Census, 2011 data claiming 51 households in the village, only 18 households were found to be left currently (See Table 8). Again, villagers had moved out either to the nearest market area adjacent to the village or had migrated to cities. With mostly elderly men and women, or younger wives and children left behind, the village reflected a great presence of out-migration in the

State. The crops grown in the village include wheat, mustard, finger-millet, garlic and chilly. With the decline in the productivity of agriculture and decreased human labour, the demand for farm and non-farm labour rose, making it the dominant source of livelihood in the village.

The settlement pattern of the villages indicated isolation of groups based on occupation and caste. This isolation further reflected on their access to village infrastructure and participation in village groups. Formal meetings like the Gram Sabha and self-led women groups like the Mahila Mangal Dal were dominated with the presence of the households in the vicinity of the infrastructure of these bodies and were mostly only accessible to dominant caste groups.



*Figure 8: Caste-wise Agriculture Involvement*

Households from General category had relatively bigger land holdings and practised cultivation (Figure 8). Scheduled Caste and OBC households reared livestock or worked as informal labour, owing to smaller landholdings. Further, Social/Caste-based discrimination was prevalent in the villages and often restricted communication and exchange within the villages.

The productivity of agriculture over the years has declined and there has been a shift away from it. This was attributed to reasons such as the increase in wildlife conflicts, erratic or untimely rain and missing market linkages. Thus, with limited livelihood opportunities, the households sought outlets outside the communities leading to out-migration. The left behind at the source site either fought the conditions they were left with to continue agriculture practices or looked for channels of livelihood diversification.

### ***Prevalence of Out-Migration***

In the backdrop of declining agriculture practice, the dominant livelihood strategy was of out-migration. Out of the total households surveyed, 78.75% households had an out-migrated member. Figure 9 depicts that 86.7% of the out-migrated members from the villages are men, and only 32.5% of their population still resides in the villages.

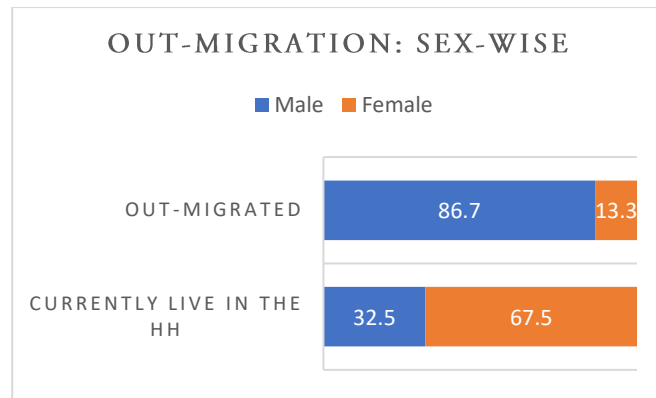


Figure 9: Sex-wise out-migration

**Out-migrated Men**

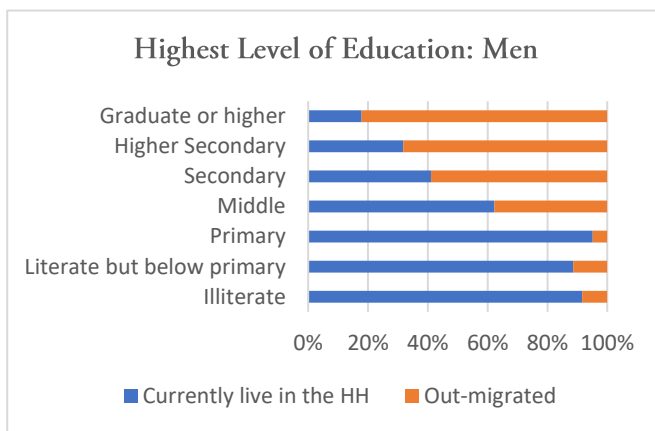


Figure 10: Level of Education - Men

With respect to the general profile of the out-migrated men, the prevalence of out-migration was higher amongst the educated youth. The out-migrated members were mostly who had completed secondary level education and above, and belonged to the productive

age-groups, as shown in Figure 9 and 10. This background of the mentioned groups depicted the nature of jobs at the destination sites. Despite working in private companies, the jobs were low paying and left little scope for remittances. Most jobs secured by the out-migrated men were in the hotel industry, within or outside the State.

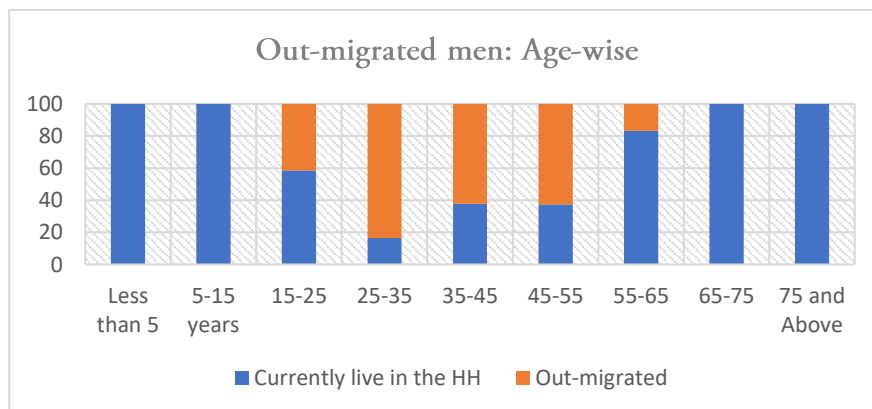
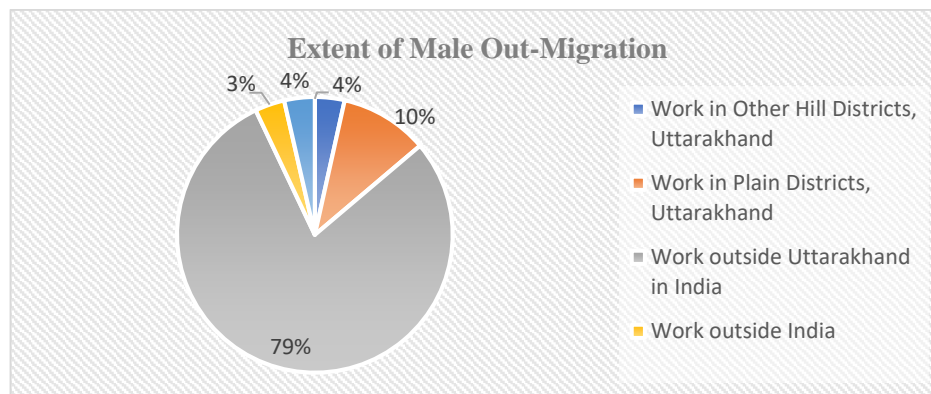


Figure 12: Age-groups – men

### ***Reasons for out-migration***

The reasons for out-migration included an intermix of push and pull factors. Migrants through their networks (which included either a family member, relative or known villager) used to look for employment opportunities outside the rural setup because of push factors such as – 1. There were limited available options for livelihood diversification; 2. The options available which were of a daily wage laborer since agriculture were not considered profitable and enough to sustain the household. This also led to a general disinterest of youth away from agriculture. Pull factors were the availability of employment opportunities and better education and health facilities at the destination sites. Other reasons for out-migration included improved education or moving with family. The duration of out-migration was dependent on the nature of jobs secured. As mentioned in previous sections, out-migration in the State has been happening for decades. This, over years, has led to the identification and rise of multiple networks and paths for those looking forward to step-out from these source or origin sites.

### ***Networks and Extent of Out-migration***



*Figure 13: Purpose and Extent of Out-migration*

The extent of migration varied from migration within the state to either hill or plain districts to outside the state and even the country. The highest number of out-migration was seen either to the plain districts of Uttarakhand or to the other northern states of India. Moving away to these distances required strong networks and assurance of fulfilment of objectives of this movement.

It was found that known extended or close family members, people from the village helped to ensure the availability of opportunities. This does not still surpass social stratification that is strongly inherent in the State which will be discussed further. About 79% of male members migrate out of the State to other parts of the

country, mainly northern India. A small percent of men migrated to the other plain districts of the State, which are considered to be more economically developed, as mentioned before.

For the people belonging to different castes, establishing networks of their own and find this as a strategy to leave low income generating activities is still considered a struggle. This is also evident through the following graph where out-migration in other caste-groups is reasonably low:

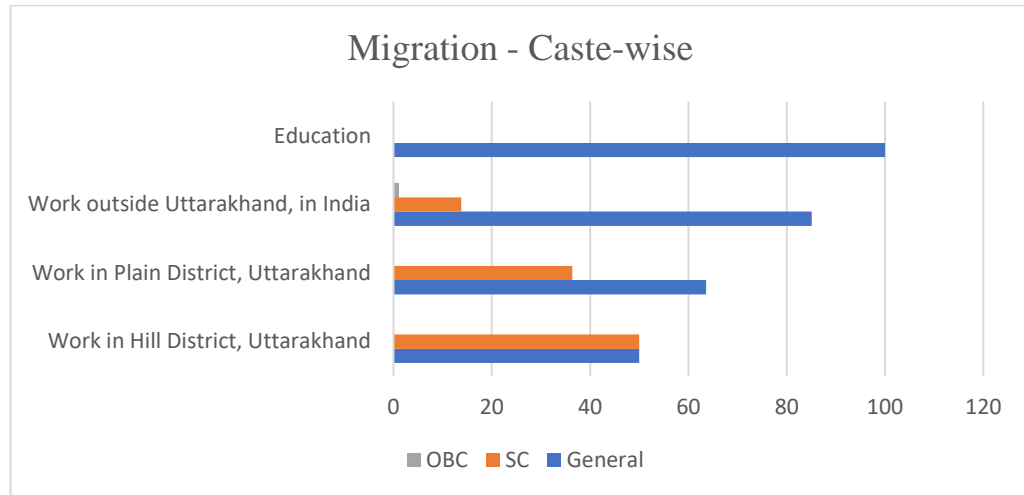


Figure 14: Caste-wise Out-migration

The information of possible opportunities is spread across known members of an area, yet logistical help at the destination site is limited to similar and related caste groups. Following is an excerpt from the interview of a male member of an SC household who is working as a chef in a restaurant in Dehradun. He talks about the struggles he has to face after coming out from an already repressive background for his caste group that doesn't leave his side even at the time of migration:

*“Yes, villagers who know us do tell us about possible opportunities, but the living arrangements are something we have to consider on our own. This was the reason why migrating to the cities was very difficult for us. Since it is the same people who see us as a lower caste member of the village informing us about the opportunities. They don't want to extend their hands for help in the cities as the same judgement migrates with them to the cities. My brother was able to go and make space for himself which gave me the opportunity to join him. However, it feels better when we are not treated differently in the cities”*



This disassociation from the caste-based differences offered in the destination sites also acts as a pull factor for migrants belonging to lower-caste groups.

### ***Perceptions towards Out-migration***

The communities considered this migration to be of utmost importance and as a means to acquire more income. The out-migrated members of the community were looked at with a sense of respect; their social status was considered to have gone up. Out-migrants themselves have their fair amount of struggle from the shift and sometimes, also fail to find stability. A woman on asking whether her husband, who was undergoing a similar struggle to find a job in Delhi and was thinking of coming back to the village to continue agriculture, should come back home was given the following advice by the wise old man of the community:

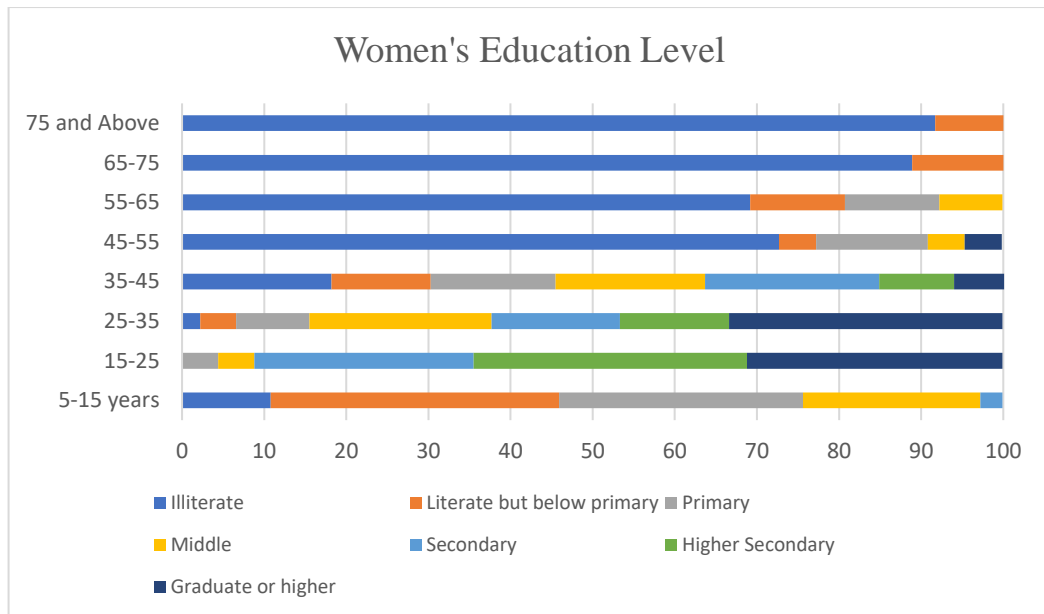
*“He has acquired some respect from the rest of the community ever since he moved out. People think that he’s doing well for himself and has been able to establish a life in the city for the future of his children and wife. If he comes back now, all of that will be gone. Please ask him to ensure that he stays there and keeps looking. Coming back home will be no less than a disgrace to the community and you’ll lose all that you have gained.”*

Therefore, apart from looking for employment opportunities, the pressure to maintain a social status and also shift away from the social norms of the village is another aspect that is of utmost importance to the households. Migration, which initially began as a way out for income enhancement had also now become a social expectation (Adhikari & Hobley, 2015).

## **2. Defining the Asset Base of: Women of the Households**

The women of the households hold a crucial position in this vulnerable context. With men out-migrated and limited livelihood opportunities, they are the ones working at the source sites to make ends meet. Their ability and capacity to cope with the uncertainties and the vulnerability of the hill settings are derived by the assets they have and the enabling conditions to be able to make use of those assets.

The respondents of the study were 80 women, which primarily included women who were a part of households with migrant members. The education level of these women and the women of their household was found to be as follows:



*Figure 15: Women's Education Levels*

As seen above, the education level of women rises from the ages of 15-35, where more than 30% women are either graduates or have studied beyond. Through qualitative interviews, it was found that this rise in education has been because the parents wish for the younger girls to stay occupied with studies until they find a groom who is “well-settled” in the plain district or cities. The explanation offered was that if they got them married to someone from the hill districts, their job will be limited to rural reproductive roles of “*ghaas kaatna, gobar saaf karna*” (cut grass, tend to livestock). The load of these tasks is reduced by moving to the plain districts. Therefore, the decisions regarding career and studies of women are not up for them to choose. These differences were also found since childhood where school going girls considered getting married without their permission as a barrier for them to not be able to achieve their goals. Whereas, for school going boys, these barriers were only limited to their own internal deficiencies, with no external factors affected their careers, dreams and aspirations. The following figure (Figure 15) depicts excerpts of school going girls from the field which read:

*“I want to be a police officer when I grow up. But the problem that we face is that we’re married off as soon as we are done with our studies. It is due to that we are not able to study further and become something in life”*

Further, these excerpts also help determine how these girls acknowledge the unproductivity and unprofitability of agriculture. The second quote (Figure 15) from the field reads:

*“My parents don’t have enough income to make me study further. My father is a farmer, because of which he is not able to generate enough income for the house”*

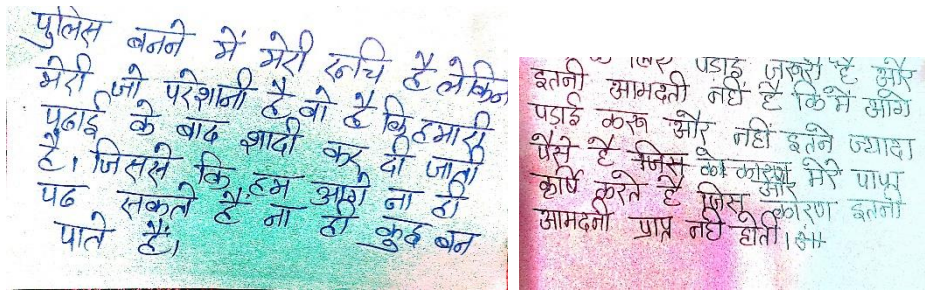
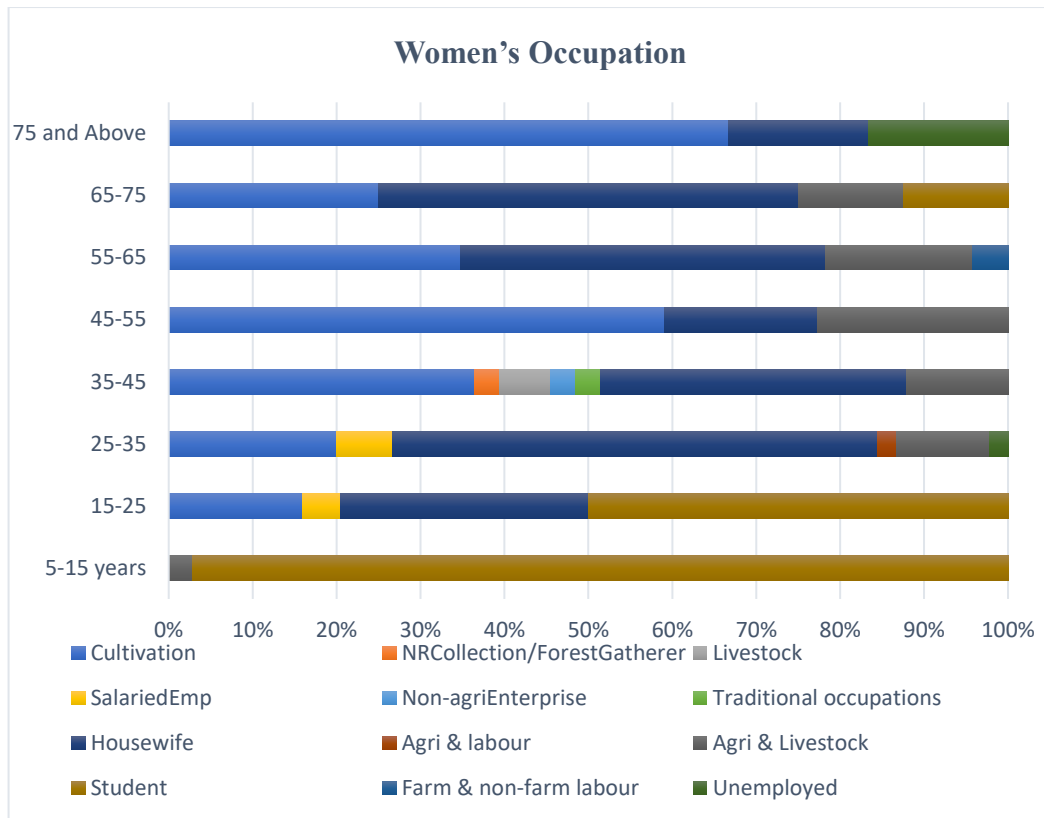


Figure 16: Factors affecting the aspirations of girls – Field Excerpts

### **Women’s Livelihood and Sources of Income**

Using the Sustainable Livelihoods Framework, the asset distribution helped understand why the women stayed behind in the villages, the livelihood options they took up and their current access to resources. Despite agriculture being the primary activity that most women engaged in, they recognized themselves as housewives. This was because agriculture was found to be unprofitable for the households. Due to out-migrated men, this activity was not taken up by choice (coerced) and was found to be necessary for them to engage in so that they can produce marginal income for the households. This led to default feminization of agriculture. With men out-migrated from the households, the task of taking care of the land and the family was placed on their shoulders. Limited availability of choice of livelihood coupled with limited knowledge and skills left them devoid of options they could further participate in. Therefore, we see a rise in their participation in informal farm and non-farm labour (Figure 17).



*Figure 17: Age-wise Women's Occupations*

This livelihood diversification strategy was employed to incorporate a new income source for the household due to the decline in the human capital of the household because of out-migration. Women belonging to the SC households were involved in rearing of chicken, hens and ducks, but could only find a limited market in the nearby petty shops.

Remittances were an additional source of income for some of these households. Yet, less than 50% of out-migrated men provided remittances and more than 70% women were dissatisfied with the remittances sent home. This was due to the irregularity and the amount of remittances, and were only provided in households with left behind wives and children to fulfil immediate household needs. They acknowledged that making a living in a new city has its own costs that they could only barely send anything back home. Smoking and liquor consumption were lifestyle habits that men carried with them to cities and often served as a barrier to savings from income resulting in low remittances. The households with elderly members also provided an income source through pensions.

Thus, women's recent contribution to the household income through informal labour and unavailability of male members in the household brought them in

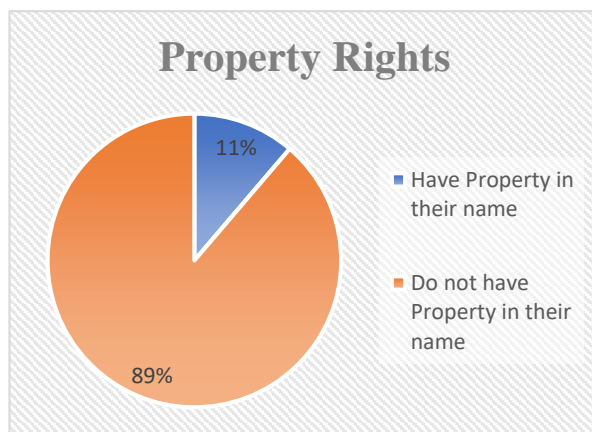
charge of the household expenditure. Due to this, they considered themselves the temporary household head who had the power to make decisions for the household. The women considered themselves to be the temporary household head if there was no elder in-law in the household. Yet the domain of control was restricted to decisions pertaining to household expenditures.

Changes in agriculture-based workload have created an additional burden on women. Ploughing and informal labour, which were considered to be a man's job in the villages have slowly infiltrated into women's lives and have become their responsibility. Involvement in informal labour is something that they now have to partake in due to insufficiency of remittances and unprofitable agriculture. But now, they also have to ensure labour availability for ploughing of fields which proves to be an added financial burden.

### ***Asset Holding Status***

There has been an overlap with respect to defining the context women are in and explicitly outlining the asset base that they have. Therefore, with respect to the given information, the following information explicitly adds on the asset set of women in these study areas:

With agriculture as the primary activity of most households, 60.25% households owned about 17,000 sq.ft. of land or less. 89% women did not have property rights over that land which restricted their control and ownership over land. This further



*Figure 18: Women's Property Rights*

restricted their access to credit. Traditional norms of sons taking forward the legacy of the household (patrilineal system) reinforced this asset distribution. The percentage of women who had the property rights over land were either the sole member of what once was a family or had joint property over land. Further,

due to declining human labour to work on fields, the entire fields are not being cultivated and cultivable land is forced to be left fallow.

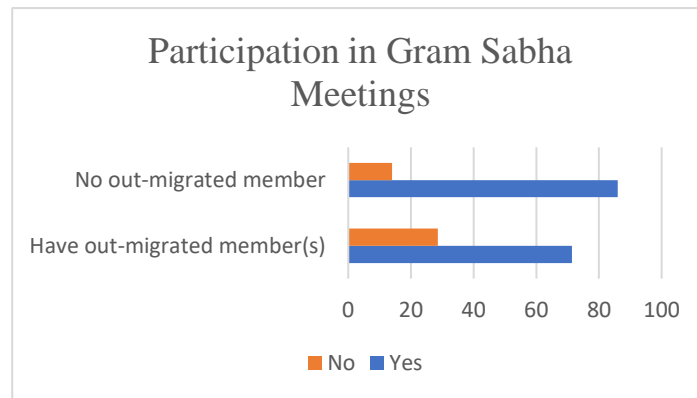
The women of the households of the village own oxen, cows, buffalos, roosters or goats. Oxen are a great asset for the owners in this agriculture-dominated area since they help in ploughing the cultivable land, however, only a few households put them on rent for labour purposes. About 75.2% households' own cows and buffalos which provide milk for household consumption. Only 28.5% households use livestock for commercial purposes due to market unavailability. Roosters and goats are used as a safety net, in case of financial emergencies. Since the residents were found to be extremely religious, goat sacrifice is prevalent and is considered as a sacred solution to end their problems. Therefore, goats are bought for sacrifice in large numbers during exigencies. With most houses owning livestock, the responsibility for looking after them was also of women and demanded a considerable amount of time from their daily schedules. The animal waste generated was then used as manure for the agricultural fields. Therefore, the processes of agriculture and rearing livestock were co-dependant for most households.

Women's access to training and education was 1. limited because of the unavailability of opportunities at the source site and 2. restricted due to the workload of productive and reproductive tasks they had on their shoulders. With their daily clocks loaded with work surrounding their household tasks that involved looking after the livestock, making food and taking after the children and the elderly, provided them with little or no time to ensure time to go out of their pre-assigned roles. These roles are pre-defined in the life cycle of a woman in the hills, which was evident through the daily clock cycles of children, where girls were expected to do attend to household chores, thus limiting their time towards education.

Women groups or *Mahila Mangal Dals* are still functional in the villages. These groups were famous for bringing multiple social issues to attention in the older days. Currently these groups are limited to organizing festivals; however, some groups also contributed towards resource development like maintenance of common resources, temples etc. There was also a presence of remnants of some self-help groups which were once formed through an intervention in non-project village which was slowly fading. Therefore, the institutionalization of these groups was considered necessary by women for the workings of the group to be taken seriously. They hoped that these groups, if are to function properly can help solve

multiple problems the community is facing, especially with respect to the animal conflicts.

Neighbors play a massive role in helping cope with uncertainties at the household level by bartering food and dairy needs. Immediate requirement of money for household expenditures is also dependent on these horizontal relationships who matched with their daily routines and have known them for life.



*Figure 19: Participation in Gram Sabha Meetings by Women*

Access to village infrastructure and community level decisions and information was something women missed out on due to out-migrated members. Women preferred accompanying men while attending Gram Sabha meetings or received information from male members with respect to these meetings since these meetings were mainly attended by men. With out-migration of these members and women's hectic schedule, their attendance in these meetings have gone down and the information received is limited. The participation decreased by 15% and the women also objected of not being taken seriously in these meetings. Further, political representation of women was limited in households where their husband stayed within the household and had a position of power. Such women were made fun of by the community and were called pawns/puppets of their husbands. This was because they were considered not to have any power of decision making. Despite about 98% women voting in elections, 82.5% were not aware of the elected representatives of their district or state. The decision with respect to voting was guided by the male members within or outside the household. The following statement regarding the dependence on men while deciding whom to vote for:

*“I make sure I tell her which button to press right before she goes towards the ballot”*

### 3. Livelihood Interventions & Sustainable Livelihoods: An Attempt to Reduce Vulnerability

Following governmental and non-governmental interventions were employed in the study sites, these interventions aimed to either provide other sources of livelihood or helped enhance the current source. They are discussed in depth later in the text:

*Table 9: Livelihood Interventions*

<b>Livelihood Interventions</b>	<b>Government Intervention</b>		
	<b>Labour-based</b>	MGNREGS	Employment opportunities provided twice or thrice in a year
	<b>Non-Government Interventions</b>		
	<b>Agriculture-based</b>	ILSP	Link to market and formation of social enterprises
	<b>Miscellaneous</b>	Sanjeevani	Provided options of Livelihood Diversification

#### ***MGNREGS***

The Mahatma Gandhi National Rural Employment Guarantee Scheme was functional in all three villages. It is a national Act which operates as a social security measure that guarantees ‘right to work’ through labour work in the community.

The frequency and duration of MGNREGS were found to be low. Therefore, despite having an income source in the villages, the opportunities to earn that income weren’t enough.

#### ***ILSP***

As established in the previous section, male-outmigration has increased the vulnerability and burdened women left-behind. There have been a few positive outcomes, but the lives that they are made to lead limit their capabilities to stabilize the current context. The movement towards growth is either extremely slow or



absent. Within this context, ILSP by IFAD – India aims to address these contextual problems and rising vulnerability by making amends in the current institutional setup by ensuring current missing links.

#### ILSP Activities

ILSP constitutes of four components: (1) Food Security and Livelihood Enhancement; (2) Participatory Watershed Development; (3) Livelihood Financing and (4) Project Management. The first and the third components are implemented by Uttarakhand Gramya Vikas Samiti (UGVS) and Uttarakhand Parvatiya Ajeevika Samvardhan Company (UPASaC) and are relevant to the study. The second component was not functional in the study district and the fourth component concerns with the overall Project Design and Management.

The first component includes plans for food security and scaling up, access to market, vocational training and innovation linkages. Thus, the component required the formation of groups at the village level. These groups are called Producer groups and about 97% beneficiary of these groups are women. Livelihood Collectives or Federations are made at the cluster level constituting these villages to ensure business and generate profits. Micro-irrigation projects are made and implemented by the construction of Low-Density Polyethylene (LDPE) tanks which aim to fulfil water availability for irrigation of crops. Further, chain linked fencing is provided as a solution to protect crops from wild and grazing animals.

For market access, small and big collection centers have been constructed to collect the surplus agricultural produce. Marketing facilities are provided through Kisan Outlets functional at State, District and Cluster levels.

The project also converges with various government departments to help acquire infrastructure and ensure insurance of crops and animals to the beneficiaries.

#### ***Sanjeevani***

This intervention was only functional in the first intervention village. The identification of beneficiaries was based on the health issues members of the household had and thus, were used to define their vulnerability. The project followed a needs-based approach and provided avenues for skill training exercises based on community demands. Further, it acknowledged the rise in fruitlessness and disinterest towards agriculture and provided other means of livelihood by providing livestock.

#### 4. Outcomes: Beneficiaries vs. Non-beneficiaries

With the context and asset holding status of women influenced by various institutions and processes and corresponding application of livelihood strategies, the following outcomes have been observed. The benefits of MGNREGS were identified by all respondents at some point because of its advent in all three villages which provided them with labour-based opportunities. However, the non-governmental interventions were limited to the first two villages and helped provide a comparison with respect to the outcomes generated within the set framework.

##### *Income and Food Security*

**Non-beneficiaries:** There was an observation of a marginal rise in income of households with out-migrated members providing remittances and elderly retired from government jobs was observed. With a consistent in-flow of money through pension, the regularity of remittances did not matter and helped reduce the load of expenditures in the household.

However, women's disposable income rose with their participation in informal labour. These participants in informal labour were mostly observed in households devoid of this pension in-flow and found it necessary to engage in these activities.

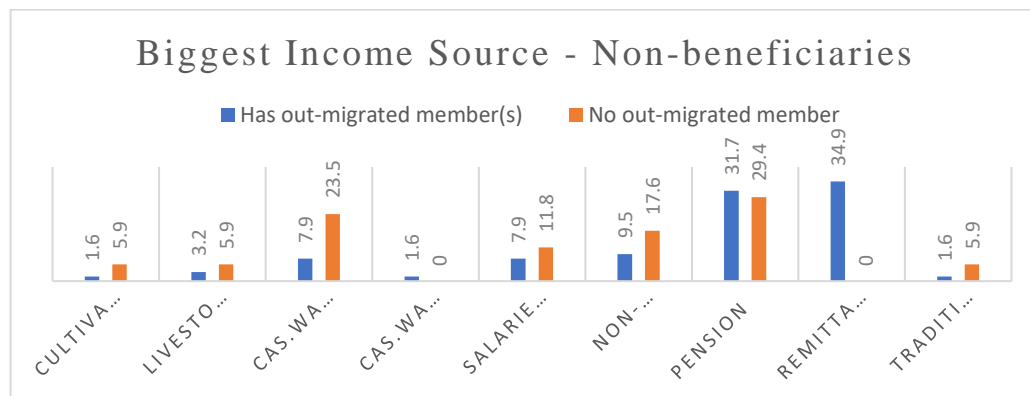


Figure 20: Biggest Income Source - Non-beneficiaries

Food productivity reduced over time due to reduced human capital, rise in wild animal conflicts and unreliable rainfall. Therefore, with limited members of the household not being to fulfil the labour needs of the available land, a good amount of land was being left fallow. There haven't been adaptation strategies with respect to production to fulfil the changing needs of the market.

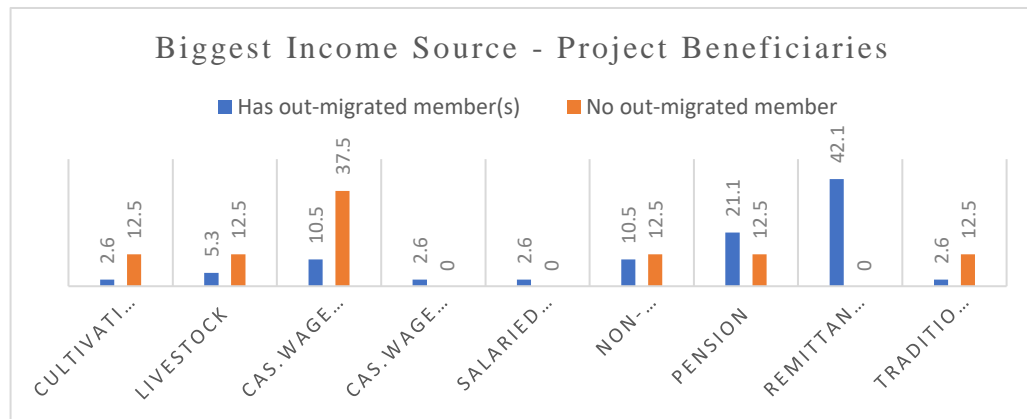


Figure 21: Biggest Income Source: Project Beneficiaries

**Beneficiaries:** The income generated through agriculture was increased when compared to non-beneficiaries, however, only marginally (Figure 21). The projects excluded households with retired or working government employees who had a regular cash flow.

This rise in income was also due to linking certain groups which did not have market access before. This marginal increase also helped them take care of their immediate household needs and fulfil food sufficiency. Yet, there was certain dissatisfaction and distrust within certain groups with respect to the project. This was seen amongst groups who were in touch with other middle men to sell their produce where they received better selling price and claimed that the project caused loss to their income. This skepticism accelerated with women not being aware of when and how the transfers were made into their group accounts since the handling of those accounts was found to be the responsibility of trusted men of the community. The rise in income was seen with alternate livelihood options that the intervention Sanjeevani gave. However, the short period of the intervention being in place has left scope for longer term analysis of the same.

The project intervention (ILSP) included making Food Security Implementation Plan that decided the value chains each group was supposed to follow. A few varieties of crops such as turmeric and potato were introduced. Despite the provision of these inputs, the low amount of surplus because of contextual issues

like wild animals and erratic rainfall proved to play a major part in not being able to reap the benefits of the same. However, there was found to be a marginal increase in this this surplus due to the constant supervision of the crops grown in the area which was maintained by Project Officials.

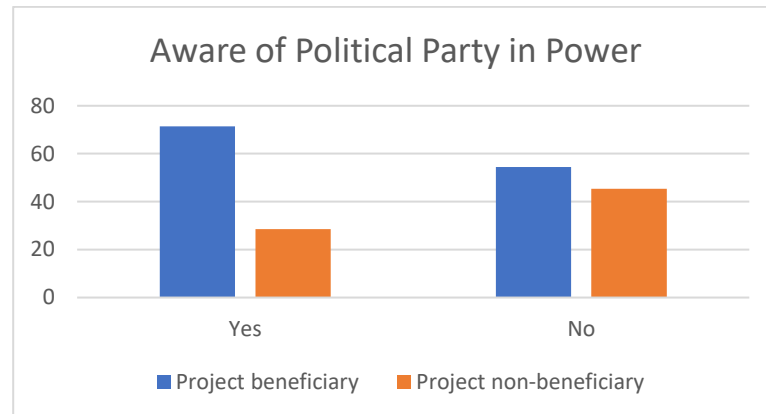
### ***Vulnerability***

**Non-Beneficiaries:** With the context of out-migration, women are left behind or burdened with multiple responsibilities which were once fulfilled by the men of the household. Despite being given opportunities to participate in productive roles, most of the work associated with it is coerced and not voluntary. With the reproductive responsibilities, added load of managing household level decisions are difficult to fare. However, this decision-making responsibility is valued the most and they pride in calling themselves the *Household Heads*, despite it being for a temporary duration. Despite them managing these roles, the decisions with respect to agriculture-based needs are also only limited to what to grow and where to sell. Due to no rights on property, the decisions with respect to land and the access to credit are both limited. With information being withheld due to reduced access to village infrastructure, there could be general unawareness towards available opportunities and scope for improvement.

**Beneficiaries:** With the formation of different groups, the intervention's strategy relied on the horizontal social relationships already present in the villages. Regular meetings provided women with opportunities to sit and converse with their neighbors and helped fill the information gap the out-migrated members generated. The women also now considered to have access to credit through monthly savings from the group and could rely on them for taking loans. The purposes loans were derived were to fulfil household needs, weddings and were treated as a point source of immediate financial help. However, they still lacked rights over property and control over the land they till. The third component of the project aimed to fulfil financial inclusion but the trainings for the same were provided only at the district and the block level, where most beneficiaries couldn't attend due to restricted mobility and time. The men considered women as scapegoats for the project who did not seem to derive any benefits from it but were obliged to be a part of it.

However, women were able to fulfil the information gap that had been created by male out-migrated members through cohesion of groups made by the project. This

was evident with respect to rise in the awareness with respect to the political party in power by women of the beneficiary households (Figure 21).



*Figure 22: Political Awareness*

### ***Well-being***

**Non-beneficiaries:** As mentioned in the previous chapters, the workload of women has increased due to male out-migration taking away time for leisure which further restricts access to training and education. Improvement was seen with respect to the ability to send children to school, especially girls. However, the output obtained through education was still low due to less time to study for them to share the workload of their mothers. Mobility was one of the most valued enhancement observed. Being able to sit with their neighbours and to be able to move around within the community without being answerable to anyone was relished by women. However, this mobility was limited within the community and they still required ‘permission’ to go anywhere outside.

**Beneficiaries:** Most women considered going to the meetings of the groups burdensome. They believed to have been provided with a third responsibility over their reproductive and productive roles as a beneficiary. The daily activities of looking after their household, household members and the livestock constituted their reproductive roles. Further to look after the fields with men out-migrated was also their productive responsibility. Some considered attending the meetings of the project as an added burden to the daily tasks. Acknowledgement of this fact, the project introduced hand tillers for ploughing the fields in the villages to reduce the load of this responsibility which was now bestowed on women. However, through its introduction, the project was able to solve the immediate problem but failed to notice the surrounding context with the same. Renting bulls and labour,

or hand tillers, both required monetary input. With renting bulls, the burden of ploughing the fields, which was never originally on women stayed away. Conversely, with hand tillers available on rent, it was considered a burden to carry the heavy machinery in the field on their own and carry out the tasks which not even traditionally considered theirs. The project enhanced exposure and mobility of women outside of their community which was still limited to women who are post-holders either in the federations or in the groups. However, these visits were treasured and valued by those who were able to go for the same. Women with children and elderly to take care of, especially with out-migrated members, usually could not participate in such activities. Due to the responsibilities given to them and the community perception of the woman towards her household.

Even these leadership roles were decided on the basis of who has the ability to avail banking facilities and is the most outspoken. These leaders who were ideally to be elected by the members were either made through peer force or were involuntarily informed about the same. However, for women who considered going to the bank as an added burden trusted respected men of the community to help take care of their savings from each month and deposit to the bank. This was also because of the distance of the village to the banks. The women in villages with banks in the vicinity were still able to visit banks and make these deposits on their own.

### ***Use of Natural Resources***

Highly contextual with respect to the location of villages. However, crops are grown in accordance with water availability, where water-intensive crops are grown only where there is an availability of a flow of water (rivers/streams). With the persistence of traditional and rain-fed agriculture, exploitation of land through excessive use of fertilisers, pesticides or insecticides does not take place. Fuel-wood and fodder collection from forests is unchecked since Van Panchayat in the villages had only become a nominal body.

With respect to the project, no significant change was observed in this dimension.

Therefore, the difference between the outcomes of beneficiaries and non-beneficiaries have been marginal. This is due to the gaps that have been highlighted in the next section.

With respect to income growth and food security, beneficiaries have been provided with market linkages which has further led to an increase in disposable income. Ensuring the food sufficiency and reduced dependence on labour needs, the income groups that require most help are identified. This identification has happened on the basis of households which do not have a constant in-flow of income through organised government sector jobs. There have been gaps with respect to lack of accountability which has fizzled out possible benefits of income enhancement in some communities. However, the projects through intensification or providing diversification options (Sanjeevani), have made space for higher contribution to household income by women.

With out-migration the autonomy in production and inputs in decisions with respect to production were managed by women of the households. However still, the need to look for other livelihood activities to earn income was reduced due to provision of activities by the projects. However, with respect to ILSP, this choice was limited since the activities were restricted to agriculture. Despite the existence of the interventions, the women were constrained to work in the same domain they had before. Yet, the information gap was filled due to group meetings and information exchange through the same. Thus, the overall vulnerability of women marginally changed.

The well-being of women was slightly affected as their workload increased due to male out-migration, and this was not catered to even by the livelihood interventions that added another load. Nevertheless, decision-making power with respect to education of their children and household expenditures were enhanced.

### **5. The Difference in Outcomes and Gap Identification**

With the coming of these development interventions, women in a vulnerable context had to play a dual role and cover the responsibilities and the expectations the household and those that the project has. This led to a compromise on either end. With out-migration, women of households where they only have either their children or themselves to take care of are more active members than those who also have elderly in-laws. The presence of elders in the household also helps reinforce the traditions and norms women have to follow.

With family members being brought up in different contexts, the same household is experiencing the process of deagrarianization and out-migration by the younger

generation and an upscaling of investment in agriculture through the ILSP project simultaneously. The livelihoods they follow are to generate belongingness and to eventually enhance social status, income and living standards.

Agriculture is a labour intensive activity and associated with unprofitability in these hill districts. ILSP, despite promoting agriculture by providing support through inputs and outputs, couldn't cater to the loss of human capital in the study villages. The incentive for women to continue with the activity and the project is also inadequate because of the inability of the domain of financial inclusion to reach the women. The immediate needs of the households may be identified but the solutions provided will only be short-lived if not taken within the context and if the current asset distribution is ignored. Women may be given the tag of 'backbone of the agricultural economy', but it is important to consider that this backbone may not be able to take any more load or may collapse anytime.

Thus, the development interventions pursue the implementation by only working on parts of a whole. The abandonment of agriculture in the hill districts has been identified by the project and it aimed to collaborate with the population left behind, which included mostly women. The information on their current assets, access to infrastructure and the background of the beneficiaries was found to be underutilized. Education status was looked at to merely identify leadership positions for access to banks. Therefore, the aims of the project could only be partially fulfilled according to the beneficiaries. The immediate problems regarding agriculture like wildlife conflicts and irrigation needs were addressed through the introduction of LDPE tanks and chain-linked fencing. However, access to this infrastructure wasn't ensured due to administrative issues.

Similarly, on the other hand, Sanjeevani was able to capture the coercion, disinterest and loss faced through agriculture and thus, helped provide alternatives. However, it did not contextualize the aspect of food security and only looked at the vulnerable population solely through the lens of health and not out-migration. This deemed unfair to the still vulnerable non-beneficiaries of the project, since the approach of selection was very specific and thus, restricted distribution of benefits amongst the community.

The lens through which women are looked at is still clogged at their reproductive roles. The acknowledgement of their position in agriculture has been recently



recognized. For women to be considered the earning members capable of growth will remain an uncertainty if the view isn't widened. To change the emphasis from just achieving the outcomes to essentially going through the processes governing those outcomes is important.

## V. CONCLUSION AND RECOMMENDATIONS

The fundamental purpose of this study was to provide the center stage of the sustainable livelihood framework to the left behind women of the hill districts of Uttarakhand. This helped explicitly identify the livelihood choices they made and how these choices and their lives overall were impacted by the context of male out-migration and influenced by the onset of development interventions.

This need for them to be given a center stage within a thinning economy losing out on human resources was because of the rise in importance of their roles and rising vulnerability. Further, it was important to understand their coping strategies which helped to interpret the long-term trends that may follow in the region. With the comparative analysis between intervention and non-intervention villages, the scope and potential of these interventions with respect to degrading hill economies could be comprehended.

Therefore, the rising trends of male out-migration may still continue over-time due to dormant conditions with respect to the identified push factors. With respect to the impact on women's lives, with the rise in their vulnerability, there also has been a minute rise in their mobility and decision making in a few aspects of their lives. Therefore, with a focus on their reducing their vulnerabilities in consideration of the resources they have is the need of the hour. Thus, what sustainable livelihoods would mean for them can be derived from a FGDs' field excerpt:

*“Humein kya aata hai? Hum yehi karte hai. Hum sheher mei kahan rahenge? Ab yahan zameen hai toh iska dhyan hi rakhenge. Agar koi kaam aata, toh wo karte. Bachon ko aur aage padhaate. Kheti mei ab fayeda nahi hota. Pehle hota tha. Agar bachche ache sey padhte, toh wo hume sheher leke jaate. Hamare paas kuch nahi hai, toh yehi toh karenge”*

*(What do we know? We just do this. What will we do in the cities? We have land here so we'll take care of it. If we knew anything else, we would've done that. We would've made our kids study further. Agriculture is not profitable anymore. It used to be. If kids would've had good education, they would've taken us to the cities. We don't have anything else, so we'll only do this)*

Therefore, the mentioned quote can help identify what sustainable livelihoods would mean for them. To be able to have a choice over what they do and to have

the skills over that choice that would help generate profits. The income generated that would fulfil their current means of living and would help their future generations to sustain themselves and grow would mean sustainable livelihoods for them.

If the focus is set on bringing in choice of the livelihood they follow, efforts to enhance or build the capacity of women farmers, women's effective rights to land and assets; and taking a holistic view of the beneficiary and not through a lens of outcomes, there can be large pay-offs. These pay-offs will not just be limited to the lives of women but will impact the development of the region.

Thus, if the development approach is followed taking this inclusive view, there may be a way which could lead to voluntary feminization of agriculture and not feminization of agrarian distress in these hill districts. Ensuring the reduction in the vulnerabilities of those left-behind may be able to ensure faith in the growth of these hill districts and may be able to generate sustained livelihoods. These interventions in the region with women beneficiaries also require support through other intersectional policies which are currently only restricted to reproductive roles (Women and Child Development Programmes).

Thus, considering the findings and conclusion of the study, the following recommendations have been made for livelihood interventions.

### **Recommendations**

Taking in view the flexibility of these livelihood interventions, a few arguments have been suggested:

1. The availability of more opportunities on the basis of the skill sets women have or skill building exercises may be able to pull women out of their current misery. For example, with rise in education which has happened due to traditional conventions are an opportunity to grab upon. Incentivizing education by giving the rise to a specific set of opportunities is one solution. This may help limit the dependence on the institution of marriage for a woman to sustain herself and not be considered a burden by her parents.
2. Emphasizing on the process of introduction of activities instead of coming up with direct solutions may help ensure long-term impacts on the lives of women and eventually, the hill districts of Uttarakhand.

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**Block 5: Household Characteristics**

Codes B10. Q.1- Kacha:1, Pucca:2, Semi-Pucca:3// Q.7- Garbage Collection:1, Burning:2, Composting:3, Dispose in River:3, Dispose in Vacant Space:4, Recycle:5, Wet/Dry Segregation:6:Pit without cover:7, Pit with cover:8,Other: 99

(1) Type of Housing	(2) Total No. of Rooms	(3) Do you have a separate room for yourself (1=Yes;2=No)	(4) Is there a separate kitchen? (1=Yes;2=No)	(5) Do you have access to electricity? (1=Yes;2=No)	(5.1) If yes, monthly bill:	(6) Do you have access to drinking water supply? (1=Yes;2=No)	(6.1) If no, source and distance of water	(6.2) If yes, Monthly water bill:	(7) What kind of waste disposal facilities does your household use?	(8) Do you have a toilet in your house? (1=Yes;2=No)	(8.1) If yes, mention the type	(9) Type of fuel used
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Q.8.1: Water-sealed sewer septic tank, used exclusively by household:1; Water-sealed sewer septic tank, shared by other households:2; Water-sealed, another depository, used exclusively by households:3; Water-sealed, other depository, shared by other households:4; Open pit:5; Closed pit:6; Other:99  
 Q.9: Firewood:1; Cow dung:2; LPG:3; Solar:4; Electric appliances:5; Other:99(specify)

**Block 6: Financial Assets**

(A) Does any member of household have: (1=Yes;2=No)

(1) Life insurance policy?	(4) Any outstanding loan?	(4.3) Who in the HH decided to take this loan?	(4.4) Purpose of taking this loan?	(7) In the last 12 months, if the HH is affected by Business bankruptcy; Unemployment /inability to work because of an illness/another reason; Bad harvest due to flood; Bad harvest due to drought; Loss of harvest due to plant illness; insects; animal invasion, etc.; Damage to houses/equipment; Theft of other goods; Sickness/theft of animals; Illness or injury of a member of the (small) household; Conflict/disagreement/legal suit? How did the HH deal w it?
(1.1) No. of members on which life insurance taken	(4.1) Is it a institutional or non-institutional loan?			
(1.2) Total insured amount	(4.2) Amt outstanding (pr-i)			
(2) Kisan credit card (KCC)?	(5) A PAN card?	M	F	
(2.1) Credit limit on KCC	(6) A bank account?			
(3) Other savings instruments	(3.5) Reason for saving			
Type	Type			
3.1	3.3			
3.2	3.4			

Codes B11 Q.3.1-3.4 1=National Savings Certificate; 2=Postal Savings Account; 3=Public Provident Fund; 4=Kisan Vikas Patra; 5=Bank account/Fixed Deposits; 6=SHG; 7=Microfinance; 8=Chit fund; 99=Other (specify)

Q4.1 Source of loan - 1=institutional; 2=non-institutional; 3=Both

Q4.4 1=Start/expand own/relative's income generation activity 2=Education (own) 3=Pay for future employment 4=Own Marriage 5=Relative's marriage 6=Household use 7=House repair 8=Emergency use (own/fam) 9=Medicine/hospitalization 10=Festival 11=Travel 12=Buy jewelry/ornament/gold 13=Acquiring land/assets 14=For repayment of borrowed money 99=Other

(8) Have you voluntarily changed your source of livelihood? Why?	(9) Have you involuntarily changed your source of livelihood? Why?
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**Block 7: Household Expenditure**

(A) What is your monthly expenditure on these household items?

(1) Food	(2) Housing (rent/maintenance)	(3) Education	(4) Transportation	(5) Health	(5.1) Decision made by & for:	(6) Smoking & Drinking	(6.1) Decision made by & for:	(7) Other (specify)
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	Bicycle	2-wheeler motorised vehicle	3-WMV	4 or More WMV	Tractor	Thresher	Harvester/Combine	Mechanized tiller/Harrow/Seed drill	Bullock/other cart	Processing plant for agri-commodities	Generator/Inverter	LPG/biogas	Geyser	Computer/Laptop
(1) Asset Owned														
(2) No. owned														
(3) Used for														
(4) Rec. govt benefit?														
	TV	Landline	Mobile Phone	Refrigerator	A/C	Cable/Dish TV	Radio	Other(specify)	Where do you get info regarding weather, farming needs etc.? What resource do you use?					
(1) Asset Owned									Are you stopped from accessing the resource? Why?					
(2) No. owned									In the past week, have you interacted with any other social groups?					
(3) Used for									Did you find difficulty in interacting with certain groups? Why?					
(4) Rec. govt benefit?														

Diff. wrt social groups

Block 8 Participation in public programmes				
1	Do you have a ration card? (1=Yes;2=No)			
1.1	Type of ration card(s)			
2	Do you have an Aadhar card? (1=Yes;2=No)			
3	No. of MGNREGA cards			
4	Did any HH memberwork under MGNREGA			Total days worked under NREGA
	2015-16	2016-17	2017-18	2018-19
	last yr (all members)			
5	Do children between 3-6 yrs of age go to anganwadi?			
6	Does any household member receive a pension?			
(6.1) S.No	(6.2) PID	(6.3) Type of pension	(6.4) Pension amount (Rs/month)	
1			Codes B6: Q1.1 1=Antodaya; 2=BPL; 3=APL; 99=Other (specify)	
2			Q6.3 1=Old age; 2=Widow; 3=Disabled; 4=Retired govt employee; 99=Other(specify)	
3				

Block 9 Infrastructure					
	(1)Are there 1/more of these here?	(2)How far is the facility?(in km)	(3) usual form of transport to reach this?	(4) Any improvement over years?	(5) No. why?
1' School					
2' School					
College					
Hospital/Ch em					
Relig. Inst.					
Water bodies					
Panchayat					
NGO					
Cemented Road					
Police Stn.					
Anganwadi					
Telephone					
Bank					
PDS					

Block 10 Political Involvement											
(1) Sl. No.	(2) Are you/any member a part of the village panchayat? Specify PIDs	(2.1) If yes, please specify the post	(3) What is the frequency of Gram Sabha meetings?	(4) Do you participate in Panchayat meetings? (1=Yes;2=No)	(5) Do you think you benefit from these?	(6) Have you ever raised any issue in these meetings? Why/not?	(7) Do you have a Voter ID? (1=Yes;2=No)	(8) Did you vote in the last elections? (1=Yes;2=No)	(9) Are you aware of the political party in power? (1=Yes;2=No)	(10) How often do the reps visit the village?	(11) How satisfied are you with the progress wrt infra. access in the village?
1											
2											
3											
(12)If there is a problem in the community, how likely is it that people will cooperate to try to solve the problem? What was your role in it?											
(13)In the past year, have you contributed any time to help construct or maintain any public good (church, community garden, public toilet, etc.)?											

**FGD**

(1) How much of the income earned through the project are you able to/have the power to spend?

(2) Changes experienced post project activities

	HH Level						Individual Level					NOTES
	Income	Food Security	Healthcare	Children's Education	Savings	Consumption	General Awareness	Decision-making	Independence	Confidence	Participation in public sphere	
Changes observed (+=positive ; -=negative)												
Component that induced this change												
Components having potential to induce bigger change												

(3) Is anyone in the HH a participant of VT programme?

(4) If yes, Duration of enrollment?

(5) Type of training provided:

(6) If placed, where?

(7) Changes observed due to VT programme: (skills, confidence, self-efficacy, better informed, independence/freedom of movement)

(8) Suggested Improvements:

Detailed List* (Agriculture):													
(1) Season	Rabi (Oct-Mar)												
(2) Crops	Wheat	Barley	Gram	Masoor	Mustard	Barley	Rai	Ginger	Garlic	Green leaves	Arbi		
(3) Input Reqd (seeds, fert., pesticide, labour)													
(4) Input cost													
(5) Prod. Obt.													
(6) Prod. Sold													
(7) Selling price													
(1) Season	Kharif (July-Oct)												
(2) Crops	Rice	Maize	Manduwa	Koni	Jhangora	Kulthi	Bhatt	Urd	Tur	Naurangi	Rajma	Sawa	China
(3) Input Reqd													
(4) Input cost													
(5) Prod. Obt.													
(6) Prod. Sold													
(7) Selling price													
(2) Crops	Phapra	Chaulai	Ogal	Uva	Onion	Tomato	Cucumber	Pumpkin	Beans	Potato	Eggplant	Chilly	Kodo
(3) Input Reqd													
(4) Input cost													
(5) Prod. Obt.													
(6) Prod. Sold													
(7) Selling price													
Horri (-2) Crops	Lemon	Elephant citrus	Mandarin	Pears	Peach	Nut-fruits	Almonds	Apple	Papaya	Mango	Plum	Apricot	Kiwi
(3) Input Reqd													
(4) Input cost													
(4) Input cost													
(4) Input cost													
(4) Input cost													

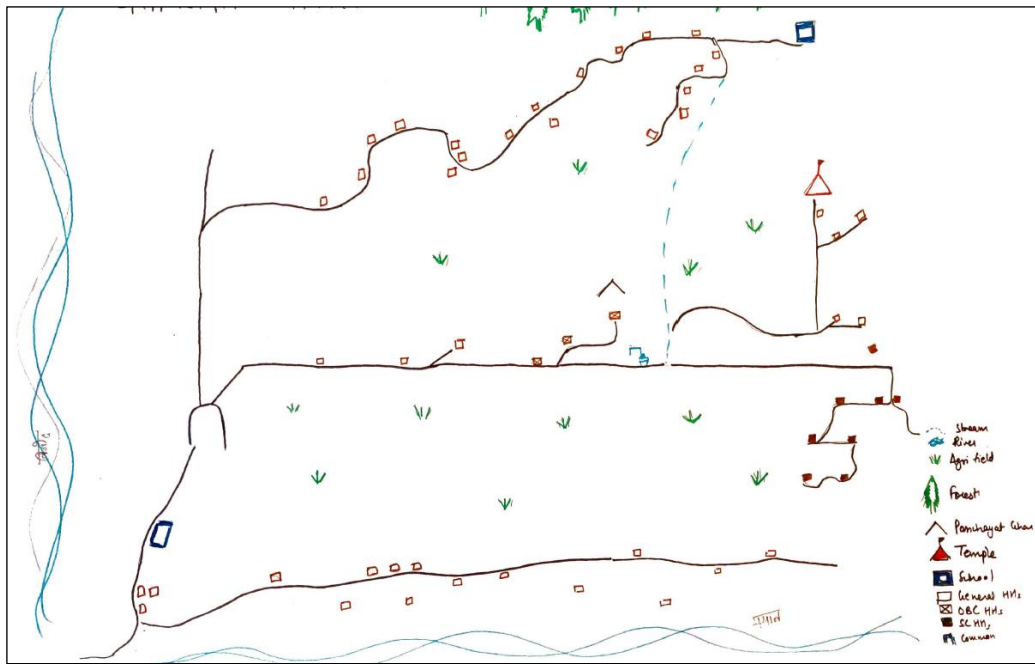


Figure 23: Village 1: Community Resource Map

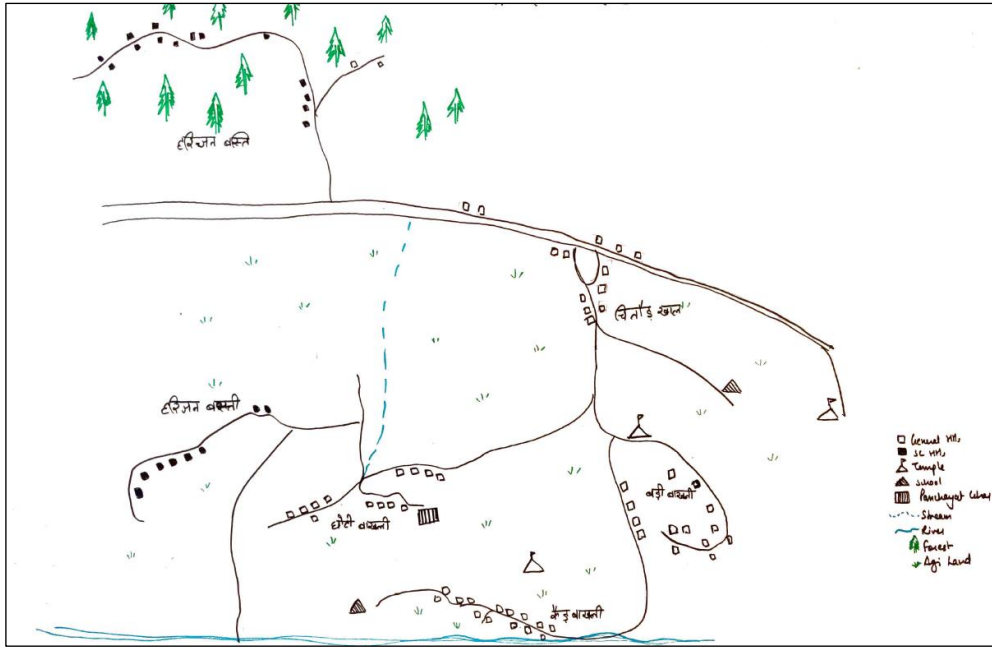


Figure 24: Village 2: Community Resource Map

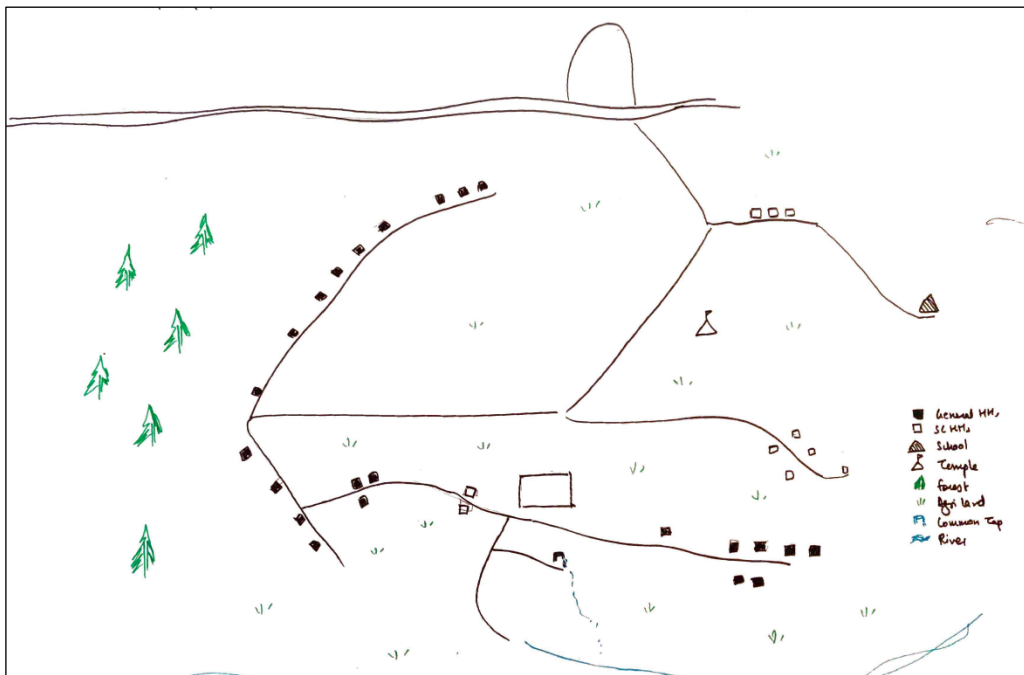


Figure 25: Village 3: Community Resource Map

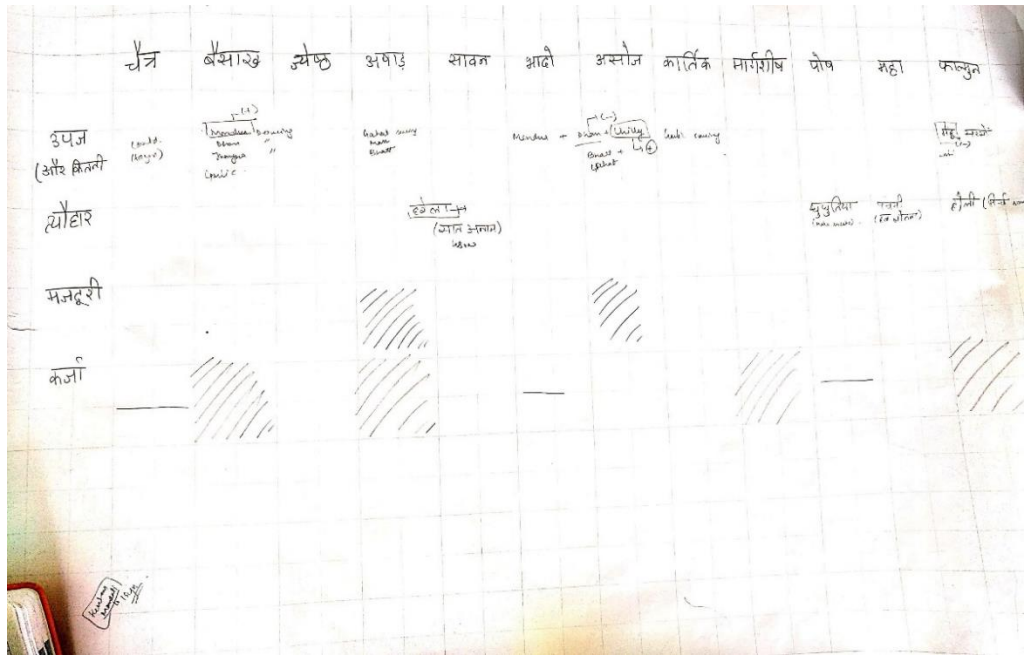


Figure 26: Seasonal Calendar 1

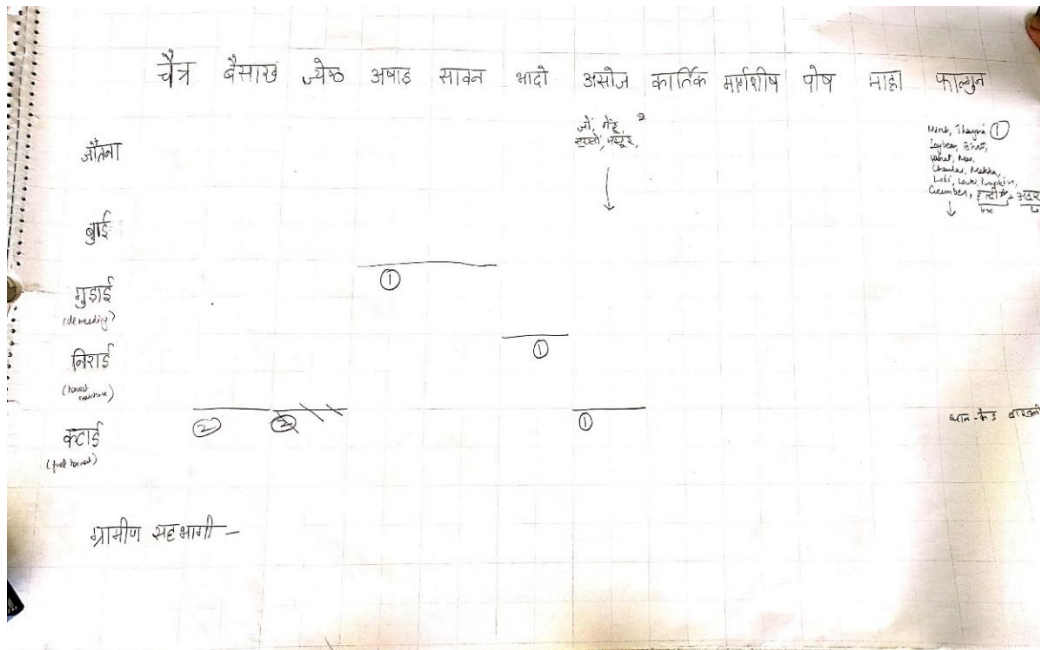


Figure 27: Seasonal Calendar 2

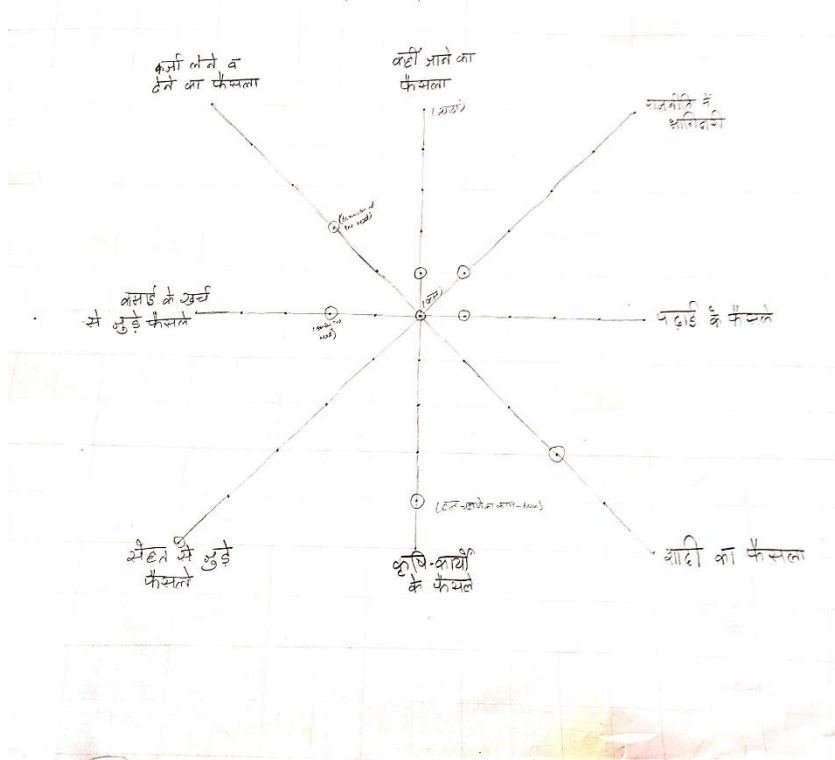


Figure 28: Spider Map 1

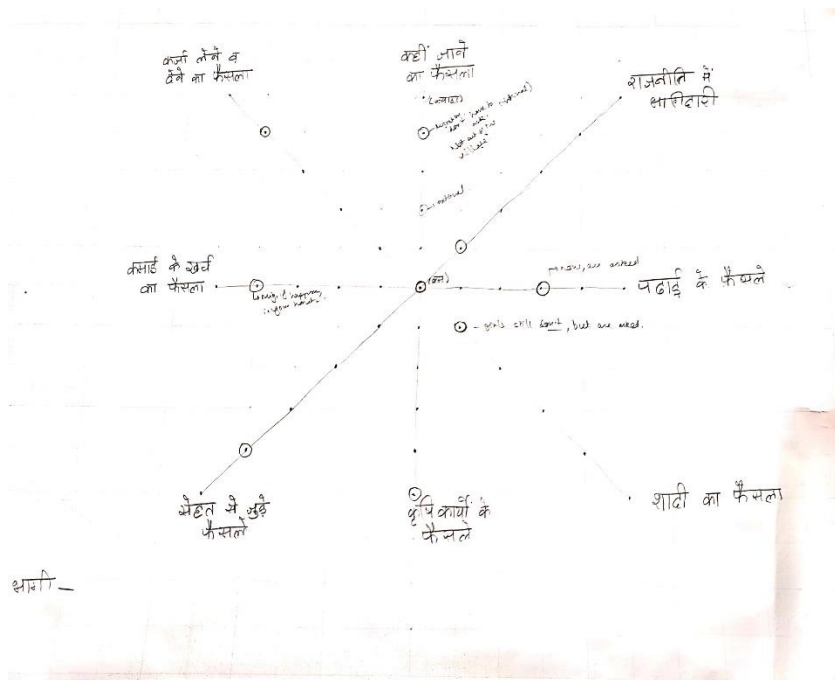


Figure 29: Spider Map 2

किस-किस काम को खपाने होगा?

जिनके पास- पढ़ाई सीखनेवाले बच्चे वाले कोठ और

① दुबसे सादा है ② थुबसे कम है ③ तेरे जितना है

पैसे	✓	□	□	✓
खाने का सामान				
कपड़े				
दवाइयाँ				
स्कूल के लिए सामान				
घर का सामान				
औजार होने वाले से				
तेरे	✓			✓
अमीरी और कौड़ी/खर	✓			
(असमान अर्थ/धन)				
घर के कामों में मदद				
कोठ और चीज				

Figure 30: Community - Give & Take

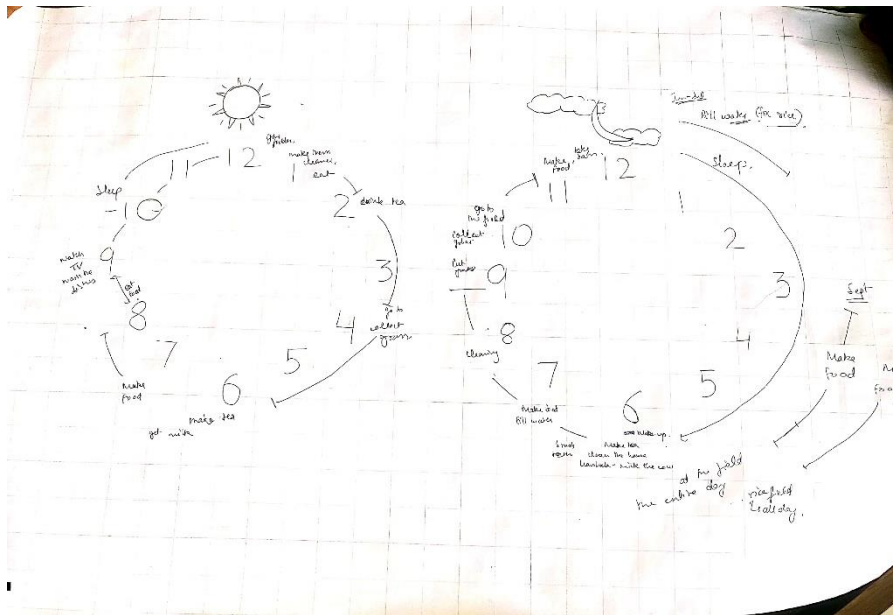


Figure 31: Daily Clock 1



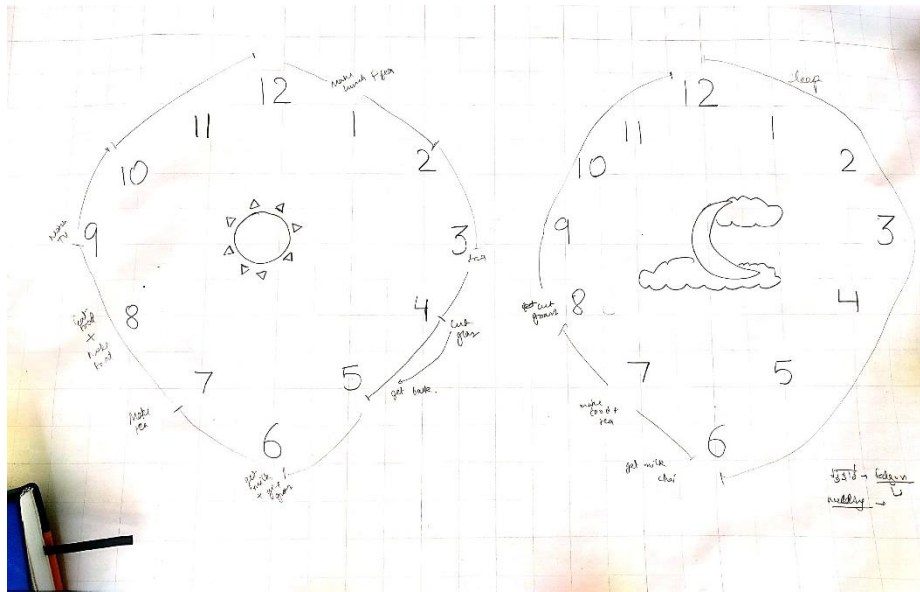


Figure 32: Daily Clock 2