

# Enumeration and Valuation of the Economic Impact of Female Labour in the Hills



**A Study of Indian Himalayan Region (IHR)**

*assigned by*

**NITI AAYOG, New Delhi**

*funded by*

**UGC, New Delhi**



*Submitted by*

**Indian Himalayan Central Universities Consortium (IHCUC)**

**February, 2022**



*(Thematic Study – I)*



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*Consolidated and prepared by:*

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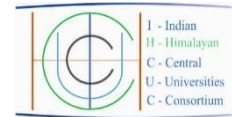
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**INDIAN HIMALAYAN**  
**CENTRAL UNIVERSITIES CONSORTIUM**  
(IHCUC)



Himalaya is the youngest and most sensitive mountain chain, having more than 15 thousand glaciers spread over 12 thousand square kilometers. Himalaya is a unique gift of nature for its freshwater, range of medicinal plants and biodiversity for humanity. Though the Himalayas are strategically important and a natural tool for climatic control, the recent rise in extreme natural events, depletion of natural resources, loss of livelihood, increasing natural disasters, and excessive migration of people to plain regions for livelihood and safety have raised an alarming concern for future generations. The Himalaya itself has been bleeding over the years due to various natural and anthropogenic factors, but the inhabitants living in this large Indian Himalayan Region (IHR) are now also paying the price of this damage. These problems are getting more complex with time. Therefore, to find a more humanistic solution, the concept of Indian Himalayan Central Universities' Consortium (IHCUC) was propagated by the HNB Garhwal University, Srinagar, Garhwal, Uttarakhand, in 2019 in the presence of India's National Security Advisor, Shri AjitDoval, Kirti Chakra, Former Union Minister of Education, Shri Ramesh Pokhriyal "Nishank" and the Chancellor of the HNB Garhwal University, Dr. YogendraNarain. The aim was to form a multi-institutional forum to develop joint multidisciplinary research and share knowledge and experiences on migration, employment, agroecology, tourism, and other common problems and resolution. In December 2019, in a meeting of four Vice-Chancellors, Professor AvinashKhare, VC Sikkim University, Professor S.K. Srivastava, VC NEHU, Professor D.C. Nath, VC, Assam (Silchar) University and Professor Annpurna Nautiyal, VC, HNB Garhwal University with the Vice Chairman of NITI Aayog Dr. Rajiv Kumar, the IHCUC formalized its aims and objectives by agreeing to work on five thematic studies on '*Enumeration and Valuation of the Economic Impact of Female Labour in the Hills*', '*Agroecology in the Himalayan States with special emphasis on Marketing*', '*Development of Eco-Friendly and Cost-Effective Tourism in Hills*', '*Opportunities of Livelihood to check Migration from Hills*', and '*Water Conservation and Harvesting Strategies*'. After a meeting with the Vice-Chancellors of 12 Central Universities of

IHR and the Director of CSIR-IHBT in January 2020, under the chairmanship of Dr. Rajiv Kumar, Vice Chairman, NITI Aayog, the IHCUC was officially launched by the NITI Aayog. With the sponsorship of NITI Aayog and the Ministry of Education, Government of India a grant of Rs. 2 Cr was allocated by the University Grants Commission, New Delhi, to work on the above thematic areas under the coordinator ship of Professor Annpurna Nautiyal, Vice-Chancellor, HNB Garhwal University, Srinagar, Garhwal, Uttarakhand. Her vision, sharing thoughts on each report with the teams, constant interest, dialogue, leadership role and a good coordination with all the Vice Chancellors as institutional partners and their team coordinators and members as well as the officials of the NITI Aayog and UGC helped immensely in the finalization of these reports. The inputs and suggestions provided from Dr. V.K. Saraswat, member NITI Aayog, CEO Shri Amitabh Kant and senior advisors Dr. Neelam Patel and Shri Avinash Mishra and others were very helpful in preparing the final report. The COVID-19 Pandemic hampered the pace of work, but now the five reports on the five thematic areas which have been consolidated and compiled by the team members of the HNB Garhwal University, are being presented to the NITI Aayog. This marathon exercise of submission of productive reports in each area became possible only with the support and inputs of the team members of the partner institutions representing their institutions and also on account of their Vice Chancellors' active interest in motivating their team members in the capacity of the main institutional Coordinator for each institution of the IHCUC.

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## Structure and Main Institutional Coordinators of IHCUC

Name	(IHCUC)	Designation	Institution Represented
Professor Annpurna Nautiyal	Convener & Chief Coordinator of IHCUC	Vice Chancellor	H.N.B. Garhwal University, Uttarakhand
Professor Avinash Khare	Coordinator	Vice Chancellor	Sikkim University, Sikkim
Professor V. K. Jain	Coordinator	Vice Chancellor	Tezpur University
Professor Saket Kushwaha	Coordinator	Vice Chancellor	Rajiv Gandhi University Arunachal Pradesh
Professor Pardeshi Lal	Coordinator	Vice Chancellor	Nagaland University
Professor G.P. Parasin	Coordinator	Vice Chancellor	Tripura University
Professor K.R.S. Sambasiva Rao	Coordinator	Vice Chancellor	Mizoram University
Professor S.K. Srivastava	Coordinator	Former Vice Chancellor	North-Eastern Hill University, Meghalaya
Professor Prabha Shankar Shukla		Present Vice Chancellor	
Professor Mehraj-ud-Din Mir	Coordinator	Former Vice Chancellor	Central University of Kashmir
Professor Farooq A. Shah		Present Vice Chancellor	
Professor Ashok Aima	Coordinator	Former Vice Chancellor	Central University of Jammu
Professor Sanjiv Jain		Present Vice Chancellor	
Prof. Kuldeep Agnihotri	Coordinator	Former Vice Chancellor	Central University of Himachal Pradesh, Dharmshala
Professor Sat Prakash Bansal		Present Vice Chancellor	
Professor D.C Nath	Coordinator	Former Vice Chancellor	Assam University Silchar
Professor R.M. Pant		Present Vice Chancellor	
Shri Jarnail Singh	Coordinator	Former Vice Chancellor	Manipur University
Professor N. Lokendra Singh		Present Vice Chancellor	
Dr. Sanjay Kumar	Coordinator	Director	CSIR-IHBT- Palampur, Himachal Pradesh

## Foreword

Women participation in productive work is always considered as a positive sign for a growing economy. It differs significantly across the countries of the world – be it a developed country or an underdeveloped country. Despite the fact, that in the last few decades India has made a substantial improvement in terms of educational attainment by initiatives like “*Education for all*,” “*Beti Bacho Beti Padhao*” STEP, (Support for Training and Employment Program for Women) for making education accessible to girls, but still a lot more needs to be done. Access to employment and earnings is fundamental for having control over resources as well as for participation in decision-making processes, both within and outside the household. The main challenge is the unequal access of women to gainful employment opportunities because of a number of complex and diverse reasons. As adverse geographical settings, poor soil and harsh mountain climates do not support more than a single major annual crop; mountain livelihoods tend to be highly diversified, with women contributing in significant ways to various unpaid support activities largely limited to primary sector and which ranges from weeding, manuring, harvesting and post-harvest work. The male migration puts extra burden on the female in these resource deprived rural regions with increased work load which includes farm and regular domestic duties ranging from fetching water to collection of wood and fodder for animal husbandry.

Economic contribution of women work force to the economy of rural areas of Indian Himalayan region has always been significant but their contribution and work is always underestimated or is left unaccounted. But in the past two decades or so the women work participation rate in the country has shown a nation-wide decline and also in the Himalayan states. Research reveals that major factors like educational attainment, fertility, marriage age, and social norms and the role of women in the public domain have always determined the female work participation and could have resulted in this decline of female labour participation rate. The other factor which could have led to this decline is the non-accounting of largely invisible female work.

The Indian Himalayan Central Universities' Consortium (IHCUC), with the sponsorship of NITI Aayog, New Delhi, Ministry of Education, and University Grants Commission (UGC), through this study aims to understand the impact of female labour force in the hills and suggest appropriate strategies, priority actions to bridge the gaps to give impetus for proper implementation of policies that aim to enhance female work participation in paid activities besides empowering them by recognizing their economic contribution in farm and off farm domestic territory. I hope the findings of this report will serve as an important tool for future research and exploration of alternatives.

I would like to extend my heartfelt thanks and gratitude to the Vice Chairman of NITI Aayog, Dr. Rajiv Kumar, who has been instrumental in guiding us to work in this direction. I wish to thank the team members for contributing to this timely and relevant study.



**Prof. Annpurna Nautiyal**  
**Vice-Chancellor,**  
**HNB Garhwal University, Srinagar, Garhwal**  
**Coordinator IHCUC**



## Acknowledgements

The genesis of this academic venture emerged from numerous academic interactions and discussions with several institutions and individuals over the past several months. We take this opportunity to acknowledge their crucial role in the producing this report. First and foremost, we thank NITI Aayog for proposing this study and setting up the Indian Himalayan Central University Consortium. We want to extend our heartfelt thanks to Professor Annpurna Nautiyal, Vice-Chancellor, HNBGU, and the Coordinator of the Indian Himalayan Central Universities Consortium for her untiring efforts to take this study forward.

We deeply acknowledge the unflinching moral and fervent support received from Professor Saket Kushwaha, Vice-Chancellor, Rajiv Gandhi University Arunachal Pradesh; Professor V. K. Jain, Vice-Chancellor, Tezpur University; Former and Present Vice-Chancellor of Assam University, Professor D. C Nath and Professor R. M. Pant; Professor Sat Prakash Bansal, Vice-Chancellor, Central University of Himachal Pradesh; Former and Present Vice-Chancellor of Central University of Kashmir, Professor Mehraj-ud-Din Mir and Professor Farooq A. Shah respectively; Former and Present Vice-Chancellor of the Central University of Jammu, Professor Ashok Aima and Professor Sanjiv Jain respectively; Professor Pardeshi Lal, Vice-Chancellor, Nagaland University; Professor Avinash Khare, Vice-Chancellor, Sikkim University; Professor G. P. Parasin, Vice-Chancellor, Tripura University; Professor K.R.S. Sambasiva Rao, Vice-Chancellor, Mizoram University; Former and Present Vice-Chancellor of North-Eastern Hill University, Professor S. K. Srivastava and Professor Prabha Shankar Shukla respectively; Former and Present Vice-Chancellor of Manipur University, Shri Jarnail Singh and Shri Lokendra Singh; Dr. Sanjay Kumar, Director, CSIR-IHBT-Palampur, Himachal Pradesh.

Our deepest gratitude to the team of experts of NITI Aayog, Dr. V. K. Saraswat, Member; Shri Avinash Mishra, Senior Advisor; Dr. Neelam Patel and other senior experts for providing valuable insights and suggestions. We would also like to acknowledge the support and guidance of Ms. Saloni Goel and Dr. Ashok Jain of the NITI Aayog. We are also grateful to the University Grant Commission (UGC) for the generous financial support to take this study forward.

We also wish to thank the authors of the chapters for their central role in this academic endeavor, for the quality of their analyses and for their positive responses to suggestions for revision. The academic backgrounds of the contributors have added diversity to the study of the core theme of this report and thereby added immense value to the outcome.

Our deepest thanks go to all the team members for their untiring efforts in putting together this report. Last but not the least, deepest appreciation for our Field Investigators and the respondents for their enthusiastic participation in the study.

**Prof. Vandana Upadhyay**  
**Prof. Niranjana Roy**  
**Dr. Prashant Kandari**

## Abbreviations

<b>APL</b>	Above Poverty Line
<b>BPL</b>	Below Poverty Line
<b>CSR</b>	Corporate Social Responsibility
<b>CPRs</b>	Common Property Resources
<b>ESNA</b>	Extended System of National Account
<b>EUS</b>	Employment and Unemployment Survey
<b>FHH</b>	Female Headed Household
<b>FLFPR</b>	Female Labour Force Participation Rate
<b>FWPR</b>	Female Work Participation Rate
<b>G.Ps</b>	Gram Panchayats
<b>HER</b>	Eastern Himalayan Region
<b>HH/HHs</b>	Household/Households
<b>HR</b>	Himalayan Region
<b>HWC</b>	Human–wildlife conflict
<b>ICAR</b>	Indian Council of Agricultural Research
<b>IHR</b>	Indian Himalayan Region
<b>KVK</b>	Krishi Vigyan Kendra
<b>LFPR</b>	Labour Force Participation Rate
<b>MHH</b>	Male Headed Household
<b>MNREGA</b>	Mahatma Gandhi National Employment Guarantee Act
<b>NCW</b>	National Commission for Women
<b>NEP</b>	New Education Policy
<b>NER</b>	Northeast Region
<b>NGO</b>	Non-Government Organisation
<b>NITI AAYOG</b>	National Institute for Transforming India
<b>NLM</b>	National livestock Mission
<b>Non-SNA</b>	Non-System of National Account
<b>NRLM</b>	National Rural Livelihoods Mission
<b>NSSO</b>	National Sample Survey Organisation
<b>NTFPs</b>	Non-Timber Forest products
<b>NYK</b>	Nehru Yuva Kendra
<b>OBC</b>	Other Backward Caste
<b>ODF</b>	Open defecation Free
<b>PHC</b>	Primary Health Centre
<b>SC</b>	Schedule Caste
<b>SHGs</b>	Self Help Groups
<b>STEP</b>	Support to Training and Employment Programme for Women
<b>SNA</b>	System of National Account
<b>ST</b>	Schedule Tribe
<b>TUS</b>	Time Use Survey
<b>WHR</b>	Western Himalayan Region
<b>WPR</b>	Work Participation Rate

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### ❖ Approach of the study

- Female labour force participation is a healthy sign of a growing economy. It varies considerably across developing countries and emerging economies, far more than in the case of men. Over the last decade or so, India has made considerable progress in making education more accessible to girls which is reflected in the increasing enrolment of women in secondary schools. However, job creation has not corresponded with the growing enrolment. Consequently, household incomes have not increased substantially, thereby potentially reducing women's participation, especially in subsidiary activities.
- In the present report, an effort has been made to study the involvement of the female workforce in both paid and unpaid activities, along with an assessment of the economic contribution from their engagements in the Indian Himalayan Region. The literature review provides insights into the research gaps for undertaking the study. A primary field survey in the twelve states in the IHR, namely, Assam, Arunachal Pradesh, Meghalaya, Manipur, Tripura, Nagaland, Sikkim, Uttarakhand, Himachal Pradesh, Kashmir, Jammu and Ladakh, were conducted. The IHR covers 5.37 lakh km<sup>2</sup> (0.537 million km<sup>2</sup>) and contains about 16.2 percent of the country's total geographical area.
- A total of 15,399 sample households were surveyed across 99 blocks in 150 districts in the IHR. A Stratified multi-stage sampling method has been used for selecting the sample respondents for the study.

### ❖ Socio-Economic profile of rural households and livelihood patterns

Across the Indian Himalayan Region (IHR), rural households depend on a combination of livestock activities, agro-forestry, and mixed farming for livelihood in which women play an important role. The adverse geographical settings, poor soil, and harsh climatic conditions of the mountains do not support more than a single major annual crop; therefore, the mountain livelihoods tend to be highly diversified, with women contributing significantly in various unpaid support activities in primary sectors like weeding, manuring, harvesting and post-harvest work. The male migration puts extra burden on the female in these resources deprived rural regions with increased work load which includes farm, non-farm duties as well as regular domestic duties. The majority of the people belonged to the BPL category, having a relatively low standard of living in terms of housing facilities and small or marginal operational landholdings, with low financial inclusion.

### ❖ Socio-Economic profile of Rural women

Though the economic contribution of the women workforce to the economy of the rural areas of the IHR has always been significant, however, it largely remains underestimated

or unaccounted for. Census 2011 shows that out of the top ten states in terms of women's work participation rate in the country, eight are Himalayan states. Further, the women's work participation rate as per the census 2011 is higher in the rural areas of the Himalayan states than the rural areas of most of the country's other states. The major issues that emerged from the study are the lack of skills, lack of finance, lack of market, and most notably, the unfair burden of domestic duties which seriously hinder the entrepreneurship or self-employment opportunities of women in the rural Himalayan region.

#### ❖ **Employment Status of the Rural women and FLFPR/FWPR**

The FLFPR for the entire IHR is estimated at 83 percent. Since only one female was surveyed from each sample household, the selected respondent was mainly a working woman. However, this does not detract from the fact that most women are part of the labour force, especially in household farms or enterprises. The WPR estimate is based on up to 30 days and more than 90 days in the 180 days period preceding the survey. A high unemployment rate is observed in most states where the 30-day WPR is high. A substantial proportion of women could get work for less than 30 days in the 180 days period. In respect of WPR for more than 90 days, there are large variations across the states in the IHR. The non-accountability of the invisible female work is a contributory factor for the declining female work participation rate. Agriculture sector is the main job provider to the females of the rural IHR. It has been observed that domestic duties and caregiving responsibilities affect women's workforce participation in the IHR.

#### ❖ **Paid and Unpaid women workforce**

Women in IHR are engaged in agricultural and non-agricultural activities. In the case of agricultural activities, 47.28 percent of the female workers produced only non-marketable outputs, whereas 44.35 percent produced both marketable and non-marketable products, and only around 8 percent of the women workers produced exclusively for market purposes. The analysis of both paid and unpaid activities, reflects that, women contribute immensely to the economy of the Himalayan region, which largely remains unrecognized and invisible. The imputed value of their produce is substantial in terms of their non-monetary contribution which acts as a major source of livelihood generation mainly for the lower income group households of these regions.

#### ❖ **Time use pattern of Rural women**

- The Time-Use Pattern of Women in the IHR provides details of the process of economic transformation currently underway and the changes in the sectoral composition of output and the occupational structure. It has highlighted the absence of gender-neutral transformation processes resulting in women having to shoulder a dual burden — both domestic responsibilities and also the burden of those tasks and activities traditionally performed by men. It was found that for the IHR as a whole, female participation in SNA primary activities was relatively high in crop farming at 66.93 percent, followed by animal



husbandry and animal care at 51.76 percent. As far as female participation in SNA secondary activities is concerned, it was found that only 7.52 percent participated in trade and business, and just 2.96 percent participated in manufacturing activities at the household level. Female participation was highest for SNA primary activities compared to SNA secondary and tertiary activities. The gendered participation rate in the IHR is highly skewed towards women. Even in the case of secondary and tertiary activities, the female participation rate was much higher than that of males in the IHR.

- The Female work participation in the case of Time Use Survey (TUS) in the IHR was found to be very high. The overall high WPR was mainly on account of higher female participation in SNA and Extended SNA activities, which were primarily performed in the agriculture and the allied sectors for self-consumption and also other non-marketable household activities. It is observed that most of these economies are only partial market economies.

#### ❖ Policy imperatives/policy focus for the future

- The study substantially contributes to the evolution of a policy framework aimed at enhancing female participation rate in paid activities besides empowering them by giving due recognition to their economic contribution that extends much beyond their domestic territory. The report is comprehensive and has critiqued the policy formulation with regard to female work participation. It gives crucial leads to furthering the government programs and implementation of policies that aims at enhancing female work participation. The findings shall serve as an important tool for future research and exploration of alternatives that would empower women by recognizing their immense contribution in the economic realm. For human resource development and educational attainments also, much needs to be done.

#### ❖ Way Forward

- The study recognizes the role and need of sustainable technological interventions along with models of rural development which are readily acceptable, economical and does not create a disconnect between women and environment.
- Reducing Human-Wildlife conflict and crop depredation and training women towards learning climate change adaptation strategies which will be crucial for sustaining their long term connect with environment while generating income and employment opportunities for them.
- Rural women should be trained towards updating their indigenous climate change adaptation strategies which will be crucial for sustaining their long term connect with environment.
- Technological interventions and bringing stakeholders, thereby building a robust linkage between the rural women and the external market for increasing their

accessibility to technology and larger market for selling and advertising their produce/products.

- Women sense of belonging and connect to forests leads to sustainable behavior of local communities which is also significant for their livelihood generation. It's highly important to give more power to women in Van panchayat system (Mainly towards decision making and policy framing). Women should be given more control over forests with their adequate representation in community participation-based management of resources. Further, in all schemes where beneficiaries are 'farmers', it should be mandatory to include women farmers.
- Identification and mapping of richness of available sources of green energy and promoting creation and usage of green energy with active participation of women. Solar farming along with usage of solar based utensils for cooking should be popularized in rural regions of IHR which will also play a crucial role in reducing women working hours.
- The revised school syllabus under National Education Policy (NEP) with focus on imparting the knowledge of our traditional knowledge system, mainly in the area of agriculture and environment conservation.
- The possibility of setting a Women Development Corporation at regional level needs to be explored in all earnestness to address women centric economic issues which includes recommending policy framework and dealing with Gender issues, awareness creation.
- Exhaustive, reliable, accurate and gender-disaggregated database on various aspects of economic activities and well-being needs to be created for effective policy-formulation.
- Government should focus on financial reviving and strengthening voluntary organizations such as *Mahila Samakhya* and others which deals with women empowerment through education and awareness.

#### ❖ **Creation of brand Himalaya**

To develop a unique market for the entire IHR, it is important to develop a unique identity for the Himalayan products. It is significant to create a Himalayan brand for different farm and non-farm products that possess the USP of being organic, regional-based, and women labor-intensive.

**BACKGROUND OF THE STUDY****Indian Himalayan Region and Women Labour**

A major corollary of gender discrimination in most societies in the world is manifested in the unequal access for women to gainful employment opportunities. Significant and multi-layered transformations in the Indian Himalayan region in recent decades have been redefining gender roles within and outside the household. However, there is also great diversity across the Indian Himalayan region in the pace; direction and nature of these gender roles. The key issue related to change is in employment pattern and gendered divisions of labour in the Himalayan region which has been addressed through a comparative study of women at work in the Indian Himalaya.

Traditionally the rural households in most sub regions in the Indian Himalayan region depends on a combination of livestock activities, agro-forestry and mixed farming for livelihood. As adverse geographical settings, poor soil and harsh mountain climates do not support more than a single major annual crop, therefore, mountain livelihood are highly diversified, with women contributing significantly in various unpaid support activities like weeding, manuring, harvesting and post-harvest work (Harriss-White et al, 2009; 2022). The male migration puts extra burden on the female which includes farm, non-farm duties and regular domestic duties (Mishra and Mishra, 2012; Upadhyay, 2020). In fact the economic contribution of women work force in the economy of rural areas of Indian Himalayan region has always been significant but their contribution and work is always underestimated or is left unaccounted. The social construction of women's work also has led to underestimation of the extent and importance of women's economic contributions. In mountain regions, the subsistence economy is typically marked by greater participation of women in productive activities. However, as traditional economies have modernized, the subsistence economy also gets growingly commercialized. Consequential changes take place in gender divisions of labour, and the social valuation of women's work. Through most of the Himalayan region, subsistence farming activities is sustained by low induction of technology and absorption of unpaid female labour on a very large scale. Census 2011 shows that out of the top ten states in terms of women work participation rate in the country, eight are Himalayan states. Further, the women work participation rate as per the census 2011 is higher in rural areas in the Himalayan states than in the rural areas of the other states of the country. But in the past two decades, the women work participation rate in the country has shown a decline, including the Himalayan states. Factors such as educational attainment, fertility, marriage age, and social norms, women's role in public domain coupled with non-accounting of invisible female labour participation could be responsible for decline in female labour participation rate.

The shift from farm to non-farm sector in the Himalayan states, significant improvement in the education and health status of females along with the changing composition of rural economies, development of infrastructural facilities and provision of remunerative work such as under MNREGA has also enhanced the aspiration levels of rural women and led to the decline in female participation in agriculture activities which are largely subsistence based (unpaid). The level of such shifts from farm to non-farm paid activities in some regions has been marginal while in others

it has been significant. This trend is thus both a reflection of development on one side but on the other side raises concern for working of other factors which could have limited income and employment generating opportunities for females in these regions. The present study has tried to analyze the economic contributions to paid and unpaid activities by the Himalayan women across the mountain states.

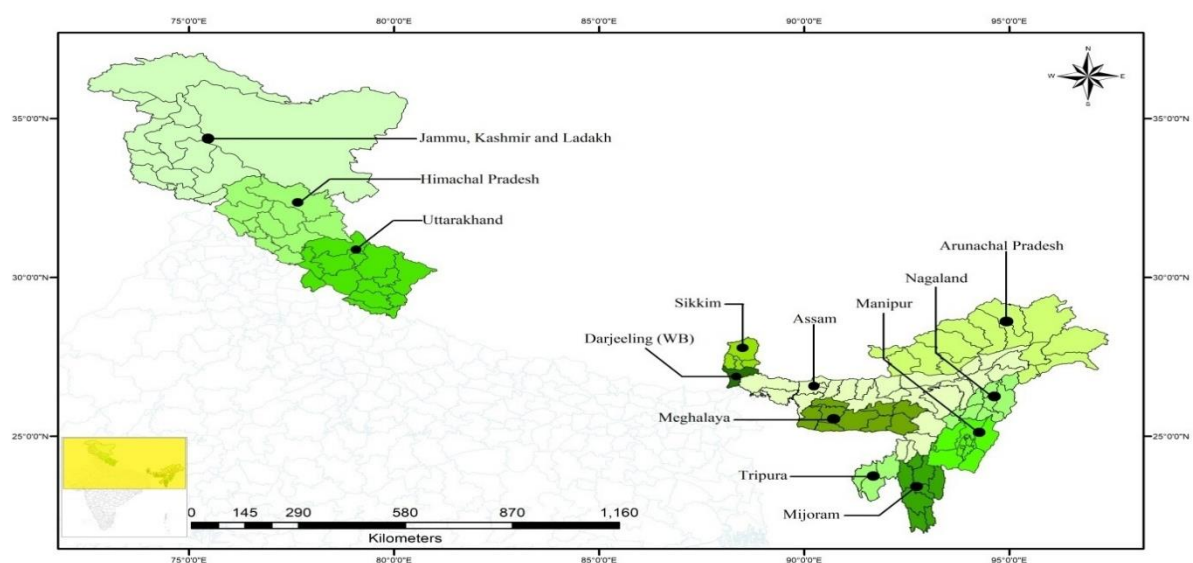
### Approach and Methodology

Indian Himalayan Central Universities Consortium (IHCUC) has adopted a well-structured approach and methodology to enumerate and value the economic impact of female labour in IHR. To develop the holistic approach for economic empowerment of women in IHR, following objectives were envisaged.

- To study the distribution of female workforce participation in paid and unpaid economic activities and its determinants.
- To assess the value and economic contribution of paid female workforce and to assess the time devoted by them in unpaid economic activities.
- To study the demand and supply factors which drives women's work in the Himalayan region.
- To assess the status of the skill-education gaps of female labour and its impact on their work participation.
- To suggest economic policy- that would incentivize/improve the status of paid work by women of the Indian Himalayan regions and increase access to remunerative work or a business start-up (self-employment activities), widening their incomes and economic opportunities and thus, strengthening their socio-economic empowerment.

### Box 1.1: Map of Indian Himalayan Region (IHR)

#### Study Area



The Indian Himalayan region consist of 11 Indian states and two Union territories: i.e. Uttarakhand, Himachal Pradesh, West Bengal, Sikkim, Meghalaya, Manipur, Arunachal Pradesh, Assam, Nagaland, Tripura, Mizoram and two Union territories Jammu, Kashmir and Ladakh. From North-West to southeast Himalaya is classified as Punjab Himalaya, Kumaun Himalaya, Central Himalaya, and Eastern Himalaya. The part of the Himalaya which lies between Indus and Sutlej River is known as the Kashmir / Punjab and Himachal. The Ladakh region of the Kashmir Himalaya is dominated by cold desert conditions and also called Trans-Himalaya. The Division between Sutlej and Kali is known as Kumaun Himalaya and Garhwal Himalaya. This division stretches from Kali to Tista River. The major part of it lies in Nepal except for the extreme eastern Part-Sikkim Himalaya. The division that lies between Tista and the Brahmaputra River (Dihang) consists of Arunachal Pradesh state in India. On the southern border of Arunachal Pradesh, the North-South direction passing through Nagaland, Manipur, Mizoram, and Tripura is called Purvanchal which is joined by Meghalaya Plateau in the west. Vertically Himalaya is classified from south to north as Siwalik Himalaya, Lesser Himalaya, Higher Himalaya, and Tethys Himalaya.

The states which have been covered in the present study under theme-1 include Assam, Arunachal Pradesh, Meghalaya, Manipur, Tripura, Nagaland, Sikkim, Uttarakhand, Himachal Pradesh, Kashmir, Jammu and Ladakh.

### **Sample Selection and Size**

Sample selection in the present study is done through the participatory approach and in consultation with the Principal Investigators (PIs) of the thematic area. Rounds of meetings and discussions were held between the PIs to finalize the districts and other parameters to be considered while selecting households for data collection. This allowed the team to ensure a proper representation of the females across the social strata of IHR. The present study is based on both secondary as well as primary data. The primary data has been collected using a stratified multi-stage sampling method along with Proportional, Quota and Purposive sampling methods to ensure the overall representation for the study. The detailed process to collect the primary data was as follows:

**Table 1.1: Sample Selection Process**

Stage	Approach
1. District Selection	At district level: (50 % of total hill districts or 2 districts whichever was more) <ul style="list-style-type: none"> <li>• District representing all the geographical divisions of the state</li> <li>• District having higher migration rate</li> <li>• District having higher and lower population (census, 2011)</li> <li>• District having vulnerable population for eg: ST and SC in significant numbers</li> </ul>
2. Developmental Block Selection	At block level: (20 % of total development blocks or 2 blocks (whichever is more) were selected from each selected district) <ul style="list-style-type: none"> <li>• Blocks representing different geographical regions (Locational Elevation) within the district</li> <li>• Blocks having higher migration level</li> <li>• Blocks having higher or lower population within districts</li> <li>• Blocks having ST, SC population</li> </ul>
3. Village Selection	At village level: (9 villages from each selected block) Total 9 villages were selected on cluster basis of various population sizes from each development block. The villages from cluster were selected on the basis of the following criterion: <ul style="list-style-type: none"> <li>• Size of village population</li> <li>• Distance from urban/semi-urban centre</li> <li>• Villages representing all caste/religion/income groups</li> </ul>
4. Household Selection for Data Collection	At household level: (Min 15 households from each selected village) <ul style="list-style-type: none"> <li>▪ Households of all categories- landless, marginal land holdings, small holdings and large holdings.</li> <li>▪ Households representing different caste/religion/income groups were selected for the study.</li> </ul>

A total of 15,399 sample households were surveyed out of which 7141 was from the western Himalayan region and 8258 from the eastern Himalaya region.

### Secondary Data Analysis

To develop the socio-economic profile of the IHR, secondary data was collected from census reports, annual reports of the states/ UTs, economic surveys of the concerned state/UT, NITI Aayog reports and Skill related studies of NSD as well as studies carried out by research organizations/academic institutions and non-governmental organizations (NGOs), articles and research papers. The research team involved in the data collection further cross-examined the facts and figures reported in the secondary data to develop a more realistic picture of the IHR.

### Instrument Design and Primary Data Collection

Primary data was collected with the help of a detailed schedule prepared by using experience survey method and in consultation with the PIs of the concerned states so as to cover state-specific characteristics and requirements. To refine it further, pilot testing in all the states/UTs was done.

Field teams of well-trained researchers visited the villages and collected data from the households of the female's as well as the individuals. To extract more meaningful information, personal interview, group discussion and observation techniques were extensively used. Village heads were also approached to understand the dynamics of the place and for smooth entry in the village premises. The help of local people conversant in local language and culture was solicited to get the sensitive and highly important information. Primary data was collected on various parameters like socio-economic structure of the household, employment-unemployment status of the female, paid-unpaid status of various works such as agricultural work, allied activities performed by the female and time-used pattern of the females in various household and economic activities. For collecting qualitative data, open ended questions were also framed to cross-examine the information and for policy recommendations. This helped the IHCUC in detailed enumeration and valuation of economic impact of female labour.

### Data Analysis

To present a holistic picture of the female labour in IHR, data was classified into overall IHR category, Western IHR as well as Eastern IHR category. This was done to ensure the region-specific valuation and policy recommendations. Data was analyzed using appropriate statistic techniques like percentage, ratio and graphical presentation. To further analyze the relationship between various activities and socio-economic variables, regression analysis was also used.

**Table 1.2: Tools and Techniques Used**

Objectives	Tools and Techniques
Female workforce participation in paid-unpaid activities	Quantitative information is collected through the schedule, for qualitative data, personal interviews and discussions were initiated. Data was analysed and presented through descriptive statistics.
Assessment of the value and economic contribution of paid female workforce and time devoted in unpaid activities	Schedule and group discussion with the help of local enumerator were used and classification into paid-unpaid activities were done through percentage and ratio techniques. Share of both the activities is further done to present a clear picture of female work. Regression analysis was used to understand the association between various factors of employment.
Demand and supply factors of women's work	To know the preferences of females for work, qualitative information was sought through open-ended questions and was further examined in group discussion/personal interview. The responses were analysed using frequency distribution.
Assessment of Skill gap	Previous studies were also taken into consideration and qualitative data is used to assess the skill gap and to suggest the recommendations to bridge this gap.

### Review of Literature

Present study has been rationalised in the light of the previous works attempted. Literatures consulted has broadly been categorised in four subgroups:



### **a) Region specific Heterogeneity in the Female Labour Force:**

Standing (1981) observes that “any generalization about female labour force participation is liable to be misleading, since level, patterns, and trends vary widely between and within countries” (*op. cit.* Psacharopoulos and Tzannatos 1989). In the same context of heterogeneity, Chaudhary & Verick (2014) states that “individual countries display great heterogeneity in how female labour force participation rates change over time in response to both short and long-term movements in economic growth and other factors”. Female labour force participation, thus, requires analysis within the socio-economic and demographic context of an area under study.

### **b) Factors influencing Female Labour participation**

Sher Verick (2014) states that “the participation of women in the labour force varies considerably across developing countries and emerging economies; far more than in the case of men”. In the Middle East, North Africa and South Asia, less than one-third of women of working-age are in the working labour force, while the proportion reaches around two-thirds in East Asia and sub-Saharan Africa. This variation is driven by a wide variety of economic and social factors including economic growth, increasing educational attainment, falling fertility rates and social norms. There are various other studies that prove that individual characteristics such as age, health, and education are the major factors that affect female labour force participation (OECD 1989; Gustafsson *et al.* 1996; Gornick *et al.* 2008; Grunow *et al.* 2012). Female LFPR depends on their husbands' income, marital status and the economic status of the household (Hakim 2002; Matysiak and Steinmetz 2008). Other factors affecting FLFPR are marital status and includes divorce, number of children, and age of the youngest child (Kneip and Bauer, 2007; Vere, 2007). Wage rates, minimum wages and the male-female wage gap are other factors affecting female labour force in the region (Blau and Kahn, 2007; Attanasio *et al.*, 2008).

In India, social norm tends to attribute the primary responsibility in securing household income through employment to men, while women are expected to devote their time to domestic care (Das, 2006). In contrast to men, Indian women often remained less ‘skilled’ and educated. Women generally have lower access to land, credit and financial capital. These are known to influence their ability to find paid work. Norms affecting female participation often differ by region, religion and social group. Empirical evidence shows that women are predominantly engaged in work that can be regarded as an extension of their domestic responsibilities (e.g. maids, tailors, teachers and nurses). In addition, a large proportion of women prefer to participate in home-based work, which is more easily combined with domestic care responsibilities (Rani and Unni, 2009).

A prominent observation concerning the female labour supply in India is that participation by educational attainment follows a U-curve. Women with less education tend to have higher participation rates than women with primary or secondary education. This observation may be related to socioeconomic status, as women in poorer households may be required to complement their household's income through market work to meet minimum subsistence needs (Dasgupta and Goldar, 2005). As household income increases, women drop out of the labour force as domestic non-market work is perceived to have a higher status than market work. In contrast, women with higher levels of education and those living in affluent households also have higher participation



rates than women in middle-income households. Some authors suggest that these women benefit from increased investment in their human capital and may be able to obtain jobs with better working conditions and adequate remuneration (Klasen and Pieters, 2012).

### **c) Trends of Female labour participation**

Globally, women's participation in the labour force has remained relatively stable in the two decades from 1990 to 2010, at approximately 52 percent (ILO, 2014). At a more disaggregated level, the participation of women varies considerably across developing countries and emerging economies, far more than in the case of men. In the Middle East, North Africa and South Asia, less than one-third of women of working age participate, while the proportion reaches around two-thirds in East Asia and sub-Saharan Africa. In contrast, the global labour force participation rate for men has declined steadily over the same period, from 81 per cent to 77 percent, reflecting mainly an increase in education enrolment rates among the younger men. Nonetheless, the gender gaps in labour force participation persist at all ages except the early adult years in South Asia (UN, 2010).

In India, there has been a steady decline in the LFPR in rural areas from 1993–1994 to 2011–2012 in the age group of 5–9 years and 10–14 years indicating that the rural females of this age group are in the education space. Similarly, in the 15–19 and 20–24 age-cohorts, a decline in the LFPR is seen in 2009–2010 and 2011–2012. The LFPR reaches its prime in the age group of 30–49 years, but even among this group, except for 2004–2005, when there was a rise in labour force participation, the FLFPR is seen declining (Sanghi et.al, 2015). An almost similar trend has been observed from previous NSSO rounds namely 2009-10, 2005-06 and 1999-2000, that the female labour force participation rate has declined in India. It has also been suggested that 53 percent of this drop occurred in rural India within the 15 to 24 year age group (Andres et al., 2017). That the drop in FLP is sharper in rural India has also been confirmed by multiple reports (ILO, 2011) (Rawal and Saha, 2015). Using more recent data from the Labour Bureau EUS surveys, a similar trend of falling FLWP has been established for the last half-decade. As per estimates, around 7.3 million women left the workforce between 2013-14 and 2015-16. Around 79.4 percent of this drop took place in rural India (Abraham, 2017). The largest decline in employment was experienced in the primary sector. In the case of female labour force participation (through the usual principal status approach), by State, Chhattisgarh is the best-performing state in 2015 at 65 percent participation, followed by Mizoram at 54 percent. Himachal Pradesh on the other hand, which was among the best performing states in 2011, fell in participation rate between the NSSO and LB EUSs.

### **d) Decline in the female Labour participation & shift from farm to non-farm sector**

In India, four key factors have been responsible for decline in female labour force participation rate during recent years; (i) rising enrolment in secondary schooling, (ii) increase in household incomes pulled women out of the agricultural labour, (iii) mismeasurement of women's participation in the labour force, (iv) The lack of employment opportunities for women in the non-farm sector. Indian women with a graduate degree have a 30 percent higher chance of being in

regular salaried work in rural areas and a 20 percent higher probability in the case of urban areas in comparison to illiterate women (Dasgupta and Verick, 2016).

Sanghi et al, 2015 state that "with an increase in income levels of the households, a woman no longer prefers working as an unpaid worker or a helper or as a casual worker unless the work is remunerative (as in MGNREGA)". However, the limitations of paid work like MNGREA and other restraining factors like lack of skill or low skill levels (ibid) has constrained the generation of paid and formal employment opportunities in the rural non-farm sector. A decline in agriculture activities has eventually resulted in a decline in the fall of female labour force participation in rural areas.

Apart from domestic duties, women are involved in rural productive activities to varying degrees in farming systems across the world. An influential school of thought explains women's participation in agriculture as being defined by the nature of farming systems (Boserup, 1970). Boserup concludes that women engaged in shifting cultivation enjoy an elevated socio-economic position precisely because of their higher participation in work and productive activities. Bina Agarwal (1994) points to the regional variability of women's work participation as per the class/caste status of families. Work participation is highest among lower caste and tribal women and is lowest among the upper castes/classes. Bhagirathi Panda's (2017) work on North East region reveals "all through the four NSSO rounds, gender gap in NER has gradually decreased and has been much lower than the country as a whole". On the contrary, this gap has been continuously increasing on the national level. Lahoti and Swaminathan's (2013) findings further add to the FLPR in rural areas of NER suggesting it has increased in the non-farm sector mainly as casual labour.

Labour studies related to determinants of female labour force participation mainly in South Asia, confirms that cultural and societal norms not only limits their mobility but also significantly influences their decision to participate in the labour market. Further, these factors vary as per also the variables such as religion, caste and region; hence, restrict their participation in remunerative/paid activities. Thus, the females are largely left in the side lines of domestic duties or at large in the unpaid economic activities. (Das and Desai, 2003; Desai and Jain, 1994; Goksel, 2012; Jaeger, 2010; Panda, 1999).

Based on the above review of literature it has been observed that the existing research and survey data does not provide the comprehensive household data of female labour force participation in the hilly areas of the Indian Himalayan region. Moreover, the UN System of National Accounts considers the production of any good for own consumption as an economic activity, but NSSO considers only the production of primary goods for own consumption as economic activity. This results in the un-accounting of various economic activities by NSSO which may not have generated remuneration but would have generated necessary resources for survival.

The present study has analysed both paid and unpaid economic activities in which females are employed/engaged and has used the time use survey to determine the amount of time contributed by females in various unpaid economic activities.

## SOCIO-ECONOMIC STATUS IN THE INDIAN HIMALAYAN REGION

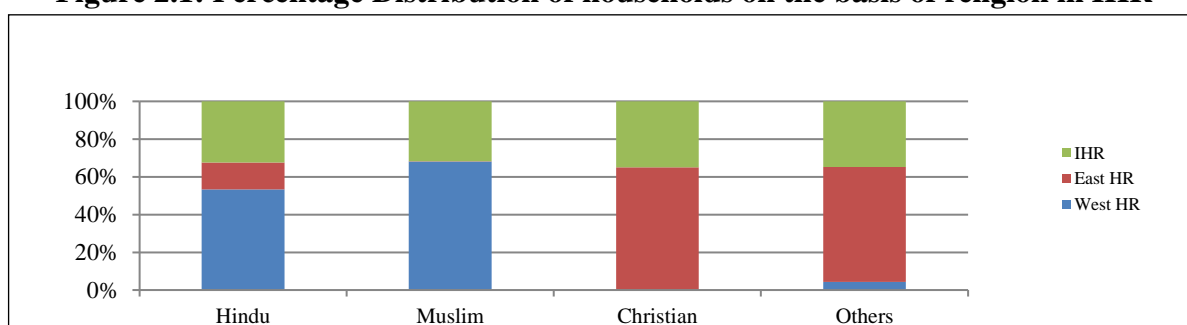
### Introduction

The socio-economic environment in which individual lives has a huge influence on the overall work environment of the region. This segment of the study presents the socio-economic status of households using the indicators such as age group, marital status, education, household size, caste, ration card, housing status, agricultural land, income sources, drinking water availability, electricity, and energy cooking sources, toilet facilities, vocational training, bank and post office account along with other amenities.

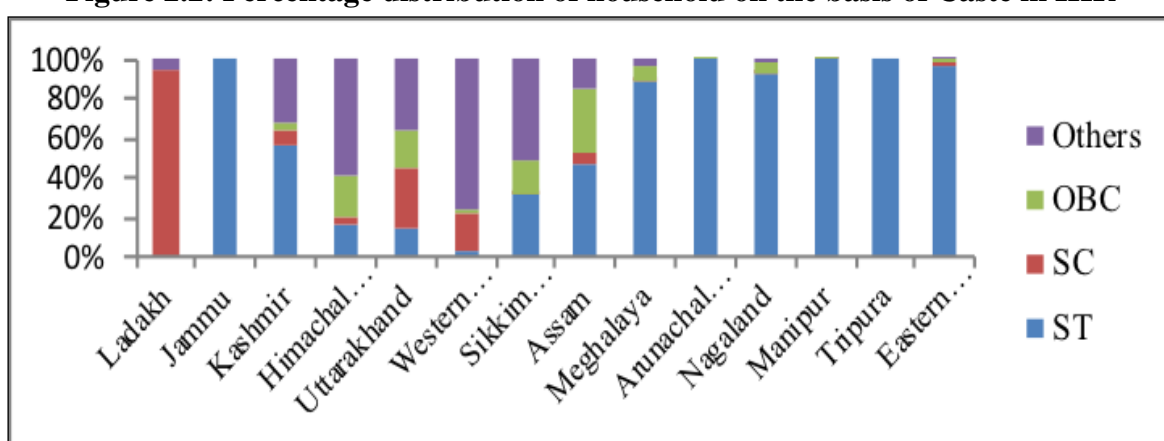
### Socio-Economic Status of the Households in the IHR

The majority of the surveyed family in IHR belong to Hinduism (34 percent), followed by Christianity (32.18 percent), Islam (19.64 percent), and other religion like Buddhism and the indigenous faith. In the Western Himalayan region majority of the population have been practicing Hinduism (56.03 percent) followed by Islam (42.21 percent), while in the Eastern Himalayan region majority practiced Christianity (60 percent), followed by Hinduism (14.94 percent), and other religions like Buddhism and the indigenous faith (refer Fig. 2.1).

**Figure 2.1: Percentage Distribution of households on the basis of religion in IHR**



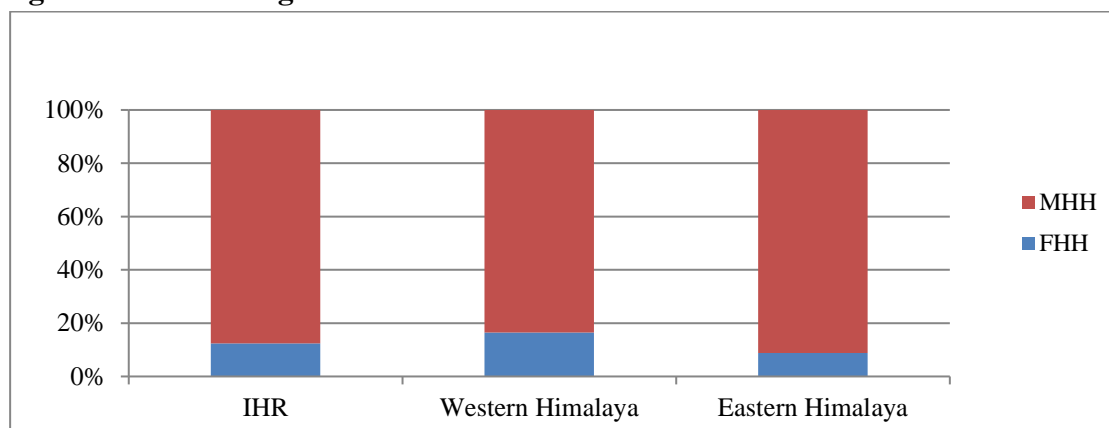
**Figure 2.2: Percentage distribution of household on the basis of Caste in IHR**



So far as caste category as depicted in Fig. 2.2, a majority of the population in IHR belonged to the ST (60.82 percent) followed by the other category (23.94 percent), SC category (7.88 percent) and OBC category (7.35 percent). Nearly two-thirds of the population belonged to the ST category

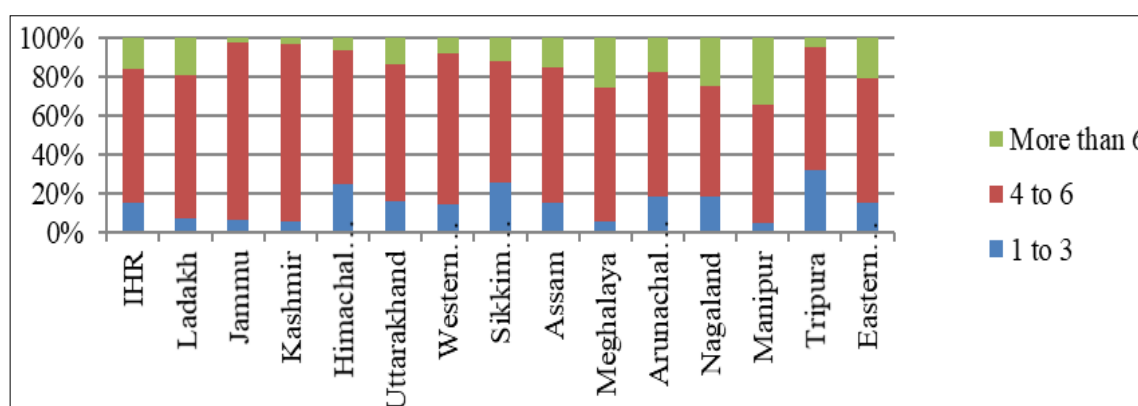
in the entire region. On the other hand, in the western region majority of the population belonged to the other category (76.24 percent), followed by the SC category (20.11 percent) and the ST category (2.74 percent). At a disaggregated level in Jammu and Kashmir, majority of the population belonged to the ST category while in Himachal Pradesh and Uttarakhand to the other category. On the other hand, in the Eastern Himalayan region, 96.75 percent belonged to the ST, followed by SC (1.75 percent) and OBC (0.88 percent). In the eastern region in most states like Meghalaya, Arunachal Pradesh, Nagaland, Manipur, and Tripura, more than 90 percent of the population belonged to the ST category.

**Figure 2.3: Percentage distribution of household on the basis of Caste status in IHR**



In the IHR 87.54 percent of the surveyed households were male-headed households (MHHs) and only 12.46 percent belong to female-headed households (FHHs) as shown in Fig.2.3. While in the western Himalayan region, nearly 83.45 percent of households were male-headed, and only 16.55 percent were female-headed, in the eastern Himalayan region, the male-headed households were higher at 91.23 percent, and only 8.77 percent of the households were female-headed. The majority of the female-headed households in IHR belong to the BPL category (12.58 percent) followed by the APL category (11.83 percent) and the Antodaya category (9.60 percent). In the western Himalayan region, most of the female-headed households were from the BPL category (17.79 percent) while in the eastern Himalayan region, they belonged to the Antodaya category (8.78 percent).

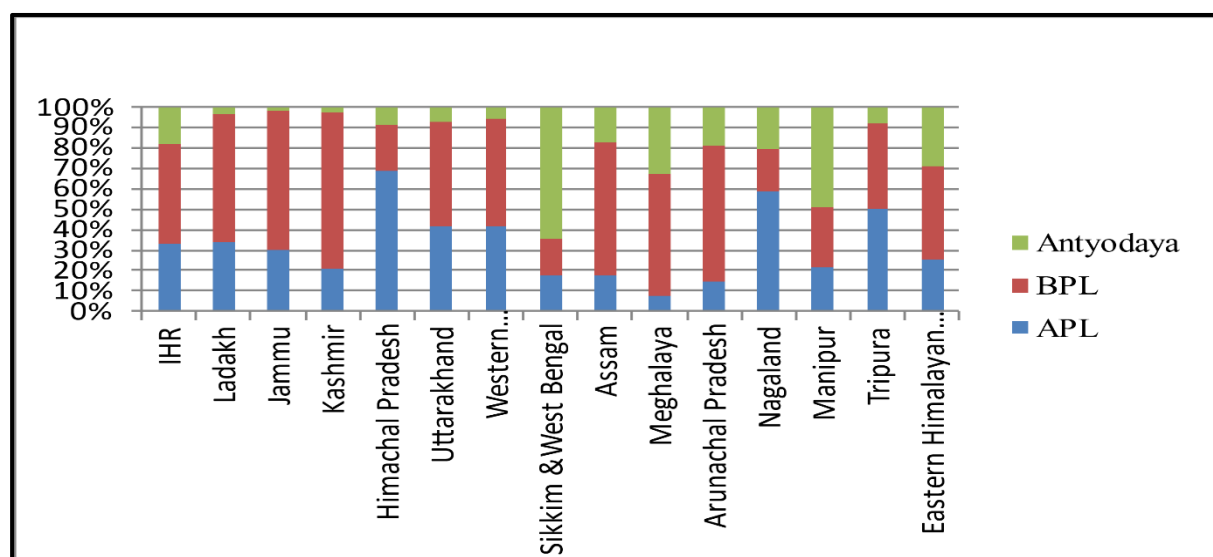
**Figure 2 4: Household size of the Surveyed Households in the Indian Himalayan Region**



The distribution of households according to the household size has been represented in Fig. 2.4. The majority of the households in the IHR were of medium size, comprising of 4 to 6 members. It was observed that 69.3 percent of the households in the entire region had around 4 to 6 members, followed by 16 percent with more than 6 members and 14.9 percent with 1 to 3 members. For the western and eastern Himalayan regions, households with 4 to 6 members were higher at 77.7 percent and 64.2 percent, respectively. However, regarding the households having more than 6 members, it was higher in the eastern Himalayan region at 20.6 percent compared to the western Himalayan region at 8.0 percent. In totality the number of households having more than 6 members was highest in Manipur (34.8 percent), followed by Meghalaya (25.8 percent), Nagaland (25.1 percent), and Ladakh (19.2 percent).

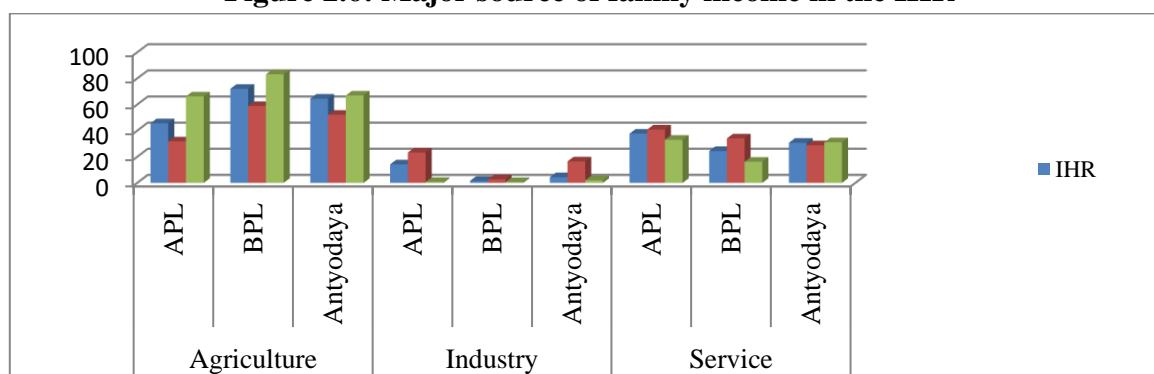
Across the IHR, it was observed that the majority of the households who had more than 6 members belonged to the BPL and Antodaya category, while in the case of households having 4 to 6 members, the majority of them belonged to the BPL category.

**Figure 2.5: Economic Status of the Surveyed Households in the IHR**



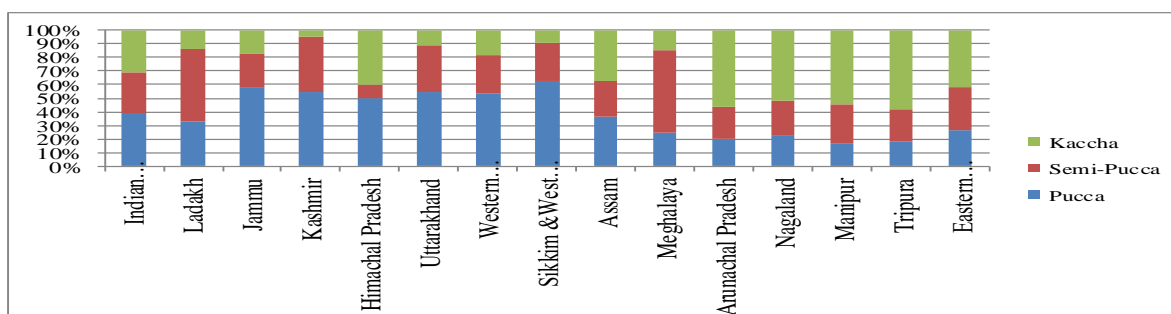
About 50 percent of the sample households belonged to the BPL category, 33 percent APL category, and 18 percent Antodaya category (refer Fig 2.5). In the western Himalayan region, around 53 percent of the household belonged to the BPL category, 41 percent in the APL, and only 5.31 percent in the Antodaya category. On the other hand, 46 percent of the households in the eastern region were BPL households, 29 percent belonged to the Antodaya category. In the western Himalayan region except for Himachal Pradesh (21.33 percent), all the other states had a moderately higher percentage of households in the BLP category. Kashmir recorded 76.33 percent BPL households, and Jammu 68 percent. In the Eastern Himalayan region, only in Nagaland and Tripura, the percentage of APL households was 50 percent and above. The percentage of BPL households was highest in Arunachal Pradesh (67 percent), followed by Assam (65 percent) and Meghalaya (60 percent).

**Figure 2.6: Major source of family income in the IHR**



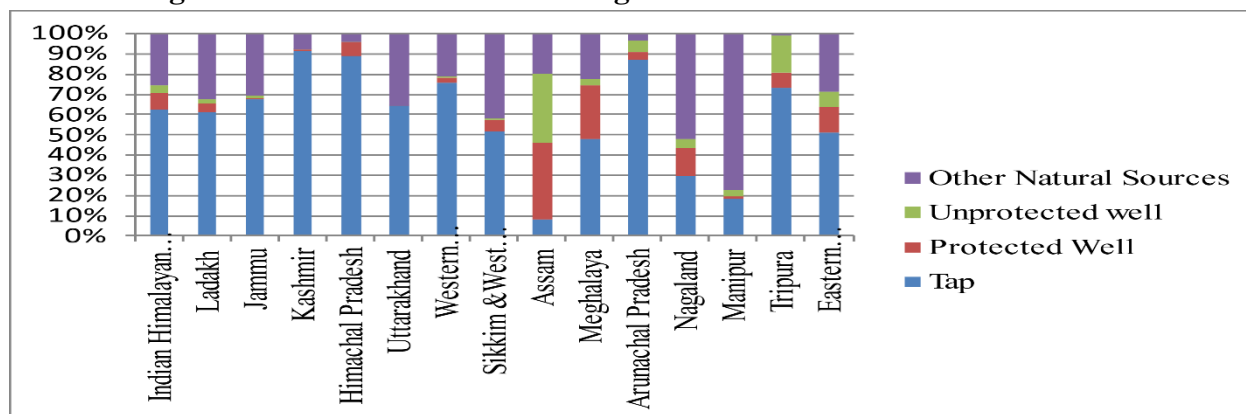
As shown in Fig. 2.6, the major source of household income across the Himalayan Region is agriculture for all three categories, APL, BPL and Antyodaya. Around 72 percent of the BPL category households are dependent on agriculture, 65 percent and 46 percent respectively in Antyodaya and APL category. The household also generates income from the service sector. Few households are marginally dependent on the Industrial sector. In Western Himalayan Region, around 67 percent of the APL category households from Uttarakhand are dependent on the service sector. 89 percent of APL cardholders in Kashmir are linked with agriculture, 99 percent in the BPL category and 100 percent in Antyodaya, category practice agriculture. In Eastern Himalayan Region, in Sikkim and West Bengal, more than 50 percent of the households from each economic class are dependent on the Service sector. However, for the rest of the states, agriculture is the main source of household income. In some states like Assam, Manipur, Tripura, Jammu and Kashmir handlooms and handicrafts play a major role in generating household income.

**Figure 2.7: Living Standards of the Households in the IHR**

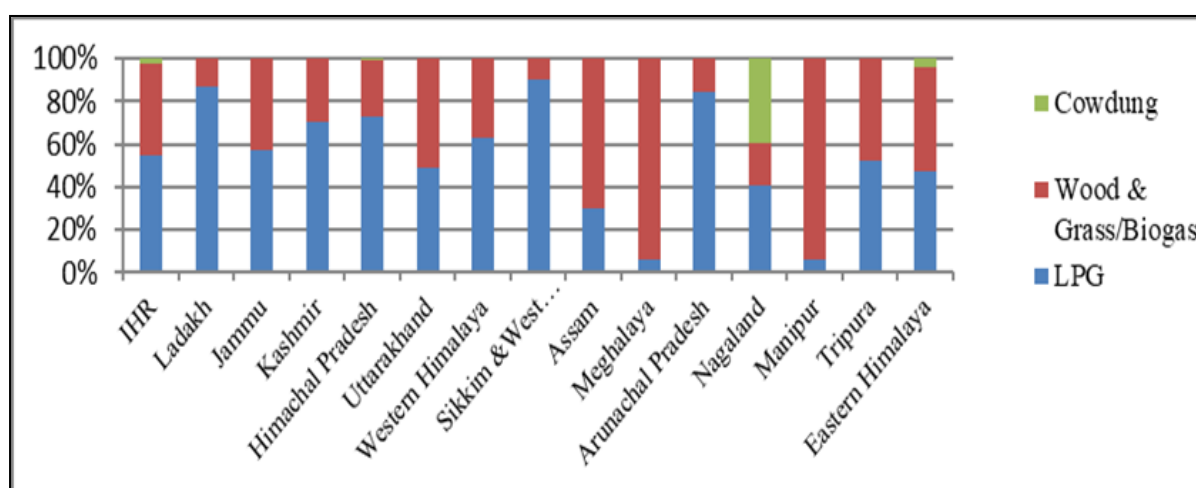


The living standard of the households is usually measured by the type of houses in which one lives, as demonstrated in Fig. 2.7. Pucca, Semi Pucca, and Kaccha were the three major house types in the Himalayan region. Around 39 percent of the households were pucca houses, followed by Kaccha (31 percent) and Semi Pucca (30 percent). In the Western Himalayan Region, more than 50 percent of the households were Pucca houses except for Ladakh, where around 51 percent lived in semi Pucca houses. However, in the Eastern Himalayan Region, Kaccha houses' prevalence is much more than pucca and semi-pucca houses. Among the eastern states, except Sikkim & West Bengal, Assam, and Meghalaya, the percentage of Kaccha houses was very high. In other words, the living standard of the eastern Himalayan region households is comparatively lower than the western Himalayan region.

**Figure 2.8: Main source of drinking water in the Households in the IHR**



As evident from Fig. 2.8, tap water is the main source of drinking water in the IHR. Around 63 percent of the households use tap water as their main source of drinking water, followed by other natural sources at 22.32 percent. A marginal percentage of the people were also dependent on drinking water from the unprotected well. In the western Himalayan region, more than 61 percent of the households are using tap water as their major source of drinking water, and 91 percent in Kashmir, followed by Himachal (89 percent). In the eastern Himalayan region, the major source of drinking water was Tap water for 51.11 percent, but other natural sources (27.33 percent) and protected well (12.36 percent) also account for a substantial percentage. The prevalence of using unprotected well as a source of drinking water was highest in Assam, around 33 percent, and tap water usage stood merely at 8 percent in the state of Manipur. Manipur is the only state where other natural sources are used as drinking water is highest (78 percent).



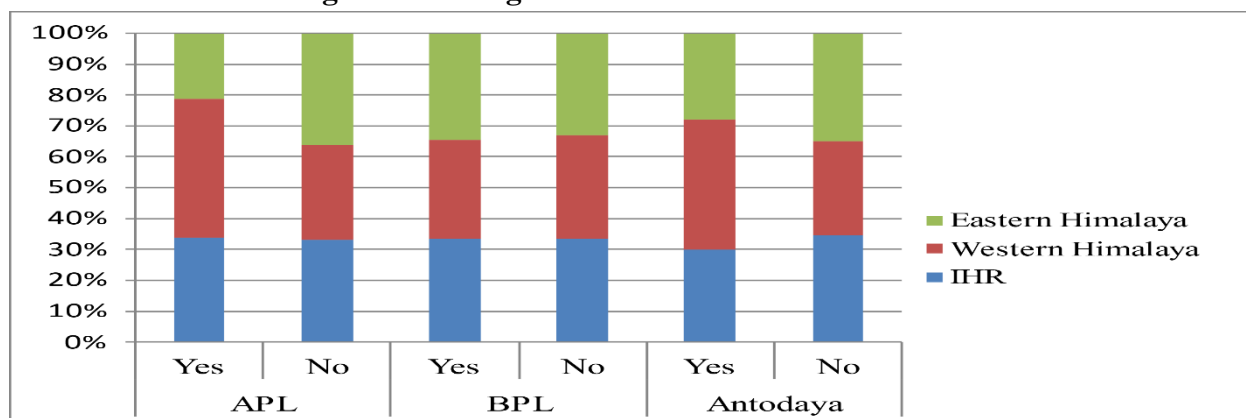
**Figure 2.9: Main source of fuel of the Households in the IHR**

In the entire Himalayan Region, around 55 percent of households are reliant on LPG as a medium for cooking, followed by wood & Grass (43 percent). In the western Himalayan region, the use of wood and grass was comparatively more in Jammu (43 percent) and Uttarakhand (51 percent) than in other states as more than 50 percent of the households are using LPG for cooking. In the Eastern Himalayan region, Nagaland is the only state where cow dung use is significantly higher at 40



percent, while in Meghalaya, the use of wood and grass is the highest, at 93.84 percent, followed by Manipur at 76 percent and Assam at 70 percent. In these states, the Ujjawala scheme was not so successful in reaching out to rural women.

**Figure 2.10: Migrant status from Households in the IHR**



It has been observed that only 21 percent of the rural households have experienced migration in the IHR. The APL households experienced the least, which accounted for 12.48 percent. Among the BPL households, the prevalence of migration was the highest at 26 percent. In the Western Himalayan Region, the state of Uttarakhand experienced the highest level of migration. The figure stood at 63 percent for the APL category, 54 percent for the BPL category, and 68 percent for Antodaya cards. In the Eastern Himalayan states, the overall scenario demonstrates that migration is limited to just 21 percent among the various class categories.

**Figure 2.11: Status of Operational agricultural land holdings in the IHR**

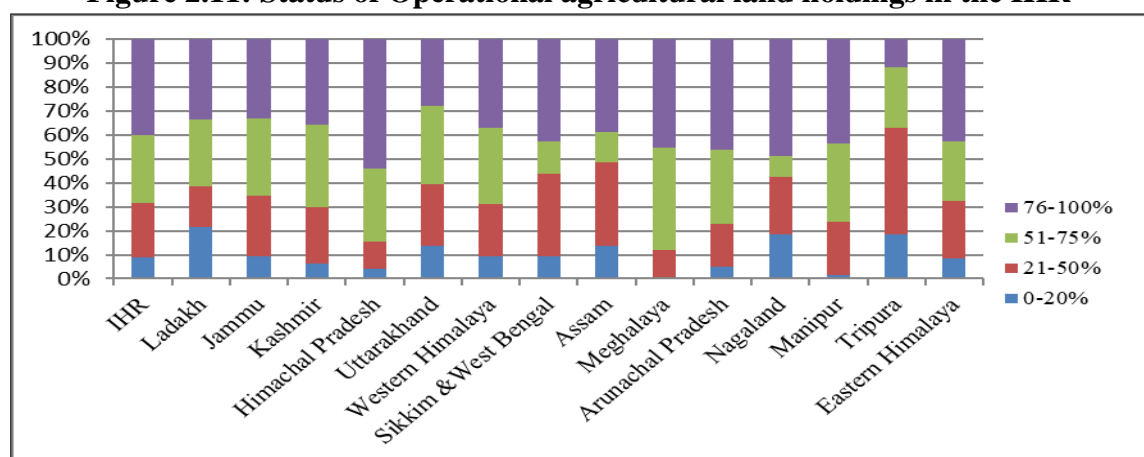


Fig. 2.11 reflects the Status of Operational agricultural land holdings in the IHR. The majority of the households operate in 76-100 percent landholdings. Moreover, the least number of households (9 percent) has been observed for 0-25 percent of landholdings. In the Western Himalayan Region, the majority of the households are operating in the operational land holdings category of 76-100



percent, followed by 51-75 percent of operational holdings. On the other hand, the 0-20 percent operational agricultural landholding category accounts for only 9.41 percent of the households.

**Figure 2.12: Educational Status of the females in the IHR**

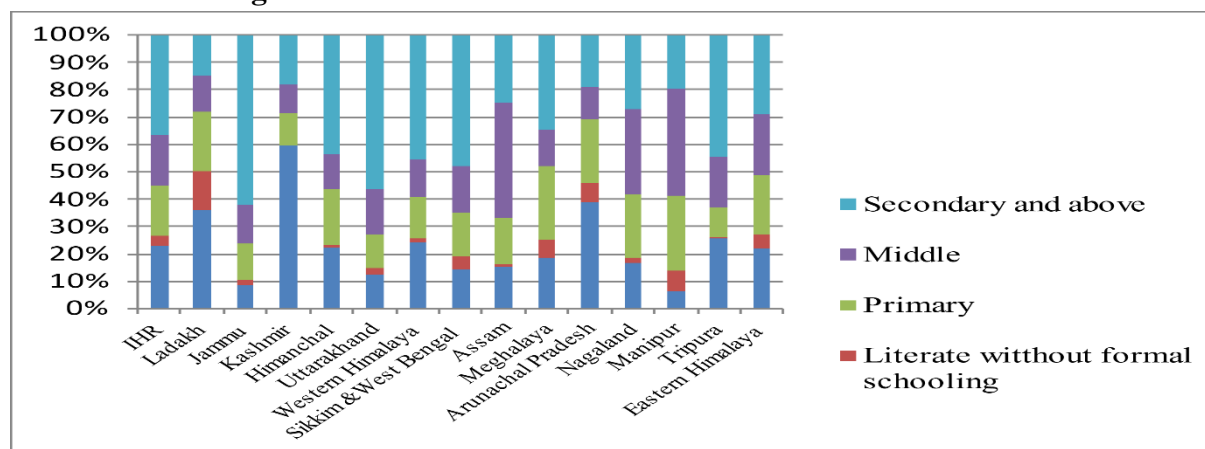
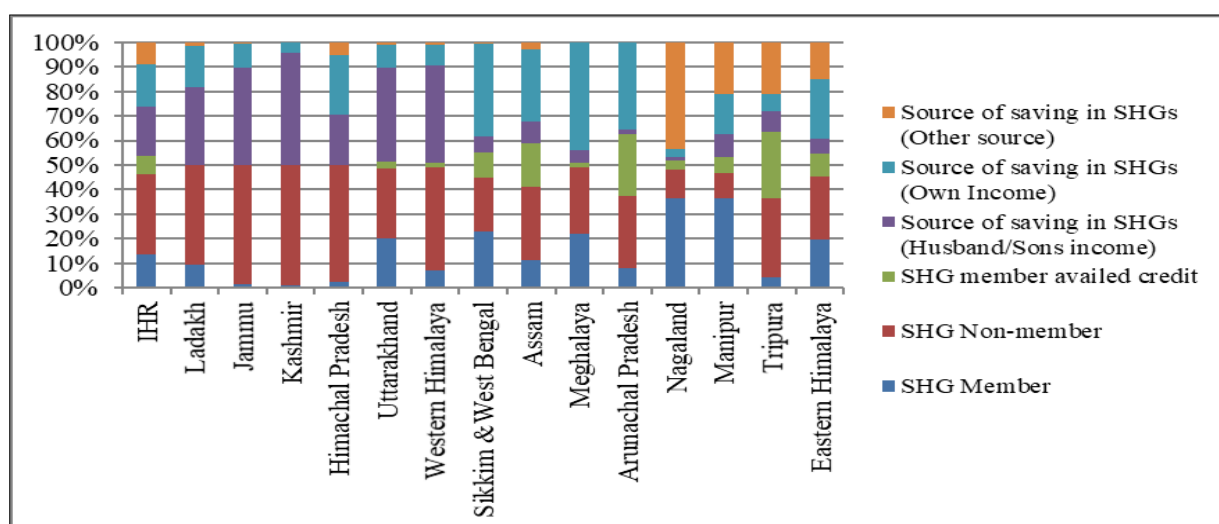


Fig. 2.12 demonstrates the educational attainment of the respondents in the IHR. Around one-fifth (23percent) of the respondents are illiterate in the IHR, about 4 percent were literate without formal education and the majority of respondents had attended secondary and above (36.68 percent) followed by primary (18.64 percent) and middle school (18.22 percent). In the western Himalayan region, illiterate respondents were the highest in Kashmir; (60 percent), the highest middle school completed respondents were found in Uttarakhand a (17 percent). In Jammu, it was 30 percent, followed by Uttarakhand 24 percent and Himachal Pradesh 20 percent. In Arunachal Pradesh 38.89 percent were illiterate, followed by Tripura (25.63 percent and Meghalaya at 18.59 percent). So far as technical education is concerned, it has been found that 99.16 percent of female respondents did not receive any form of technical education in the IHR

**Figure 2.13: Member of SHGs and Sources of Saving in the IHR**



Regarding the self-help groups (SHGs), in the entire Himalayan Region, the percentage of SHG members is 30 percent and among these members, only 17 percent had received credit from the self-help groups. However, at a comparative level, the percentage of SHG members was more in the Eastern Himalayan region (43.62 percent) as against (14.47 percent) in the western Himalayan

region as in this region Uttarakhand was the only state where the percentage of SHG members was as high as 41.47 percent and some members had also availed credit from the SHGs, in Ladakh, it was 18.30 percent. In the rest of the states, the percentage of SHG members was very low. The percentage of SHG members was significantly higher in the eastern Himalayan states. More than 75 percent of SHG members were in the state of Manipur and Nagaland. Though the percentage of SHG members was also low in states like Arunachal Pradesh (21.06 percent) and Tripura (11.49 percent), these states have recorded the highest percentage of credit disbursement from SHGs, around 75 percent in the case of Tripura and 68 percent in Arunachal Pradesh (Figure 2.13).

Regarding the sources of savings, it was observed that most of the respondents in the Himalayan region were saving from the income earned by their husbands and son. 18 percent of respondents from WHR were saving from their income, and 54 percent were in the eastern Himalayan region. This implies that the respondents' opportunities for self-income generation are comparatively more in the eastern Himalayan region than in the western region. In WHR, a good percentage of the respondents from Himachal (48.21 percent) and Ladakh (33.90 percent) were saving from their income, but in the eastern region, it was much higher at 95.60 percent for Arunachal Pradesh, 90.25 percent for Meghalaya and 84.54 percent for Sikkim & West Bengal. Among the eastern Himalayan region states, Nagaland was the only state where a major portion of the savings (90.48 percent) came from sources other than self-income or Husband or Son's income. The other sources mainly consisted of small income generating activities performed collectively by SHG members in groups like weaving, handicraft, preparation of value-added products, catering and field works.

### **Conclusion**

Majority of the households were dependent on agriculture for their livelihoods, across all the income groups in the IHR. It was further observed that a large number of the people belonged to below poverty line category, having a relatively low standard of living in terms of housing facilities and small operational landholdings. Further, the level of financial inclusion was found to be quite low in the entire Himalayan region. Hence, significant effort is needed for human resource development with special emphasis on educational attainments, skill formation with interventions towards enhancing financial literacy and awareness along with easier access to micro credit.

## EMPLOYMENT STATUS OF WOMEN IN THE INDIAN HIMALAYAN REGION

### Introduction

Access to employment and earnings is vital for having control over resources as well as for participation in decision-making processes, both within and outside the household. One of the fundamental aspects of gender discrimination, in almost all parts of the world, is the unequal access of women to gainful employment opportunities. A substantial section of women remains outside the job market and when they enter the job market, they typically have less access to the well-paid, secure jobs. A majority of women work in the informal sector with low levels of earnings and pitiable working conditions (Mishra and Upadhyay, 2004). While the underlying causes of such differences in access to employment are complex and diverse, unequal opportunities for learning and education, socially constructed barriers, along with patriarchal ideologies have been found to be responsible for women's unequal participation in income generating employment opportunities.

### Labour Force and Work Participation Rate

Women in the Indian Himalayan Region (IHR) participate in economic activities to a great extent. The present study focuses on women in the working-age group and finds that the female labour force participation rate (FLFPR) is much higher than those reported in the decennial Census or the Periodic Labour Force Survey of the National Sample Survey Organization (NSSO). However, a woman may be working, unemployed or out of the labour force at different times. So, this study considers at least 30 days before classifying a woman into a particular status. Thus, in the 180 days preceding the date of the survey, if a woman was working for a minimum of 30 days, she is considered employed; and if she was unemployed for at least 30 days, she is considered unemployed.

As reported in Table 3.1, the FLFPR for the entire IHR is 83 percent. In Eastern HR, it is 89 percent and is relatively lower at 76 percent in Western HR, with Jammu reporting the lowest figure at 62 percent. Sikkim and West Bengal reported the highest FLFPR, close to 99 percent. Meghalaya, Manipur, and Tripura are the other states with FLFPR above 90 percent. Since only one female is surveyed from each sample household, the selected female or respondent is usually a working woman. However, this does not detract from most women being part of the labour force, especially in household farms or enterprises.

### “Women in Indian Himalayan Region have very high Labour Force Participation Rate”

Two types of work participation rate (WPR) measures have been reported in Table 3.1. One is the WPR for up to 30 days only. This is the proportion of women working less than or equal to 30 days only. For the rest of the time, out of 180 days, they were either unemployed or out of the labour force. The figure is particularly high in Ladakh, Jammu, Uttarakhand in the Western HR and Arunachal Pradesh and Manipur in the Eastern HR. In addition, a high unemployment rate is observed in most states where the 30-day WPR is high. Thus, it is a matter of serious concern to note that a substantial proportion of women could get work for less than 30 days only in the 180 days preceding the date of the survey.

The other measure of WPR is for more than 90 days. This is more than half of the assessment period (180 days) and hence, the concept corresponds more or less with the usual principal status of NSSO or the concept of main workers of the Census of India. In this regard, there are large variations across the states in the IHR. For example, in Kashmir and Nagaland, the 90-days WPR is around 12 percent, thereby reflecting a very high unemployment rate in these two states. A similar situation is observed in Tripura. On the other hand, Sikkim and West Bengal reported that more than 81 percent of women worked for more than 90 days in the previous 180 days, and correspondingly, the unemployment rate is less than 3 percent.

### Unemployment Rate

Table 3.1 further reports the unemployment rate, which is the proportion of unemployed females out of the labour force. The unemployment rates present a worrying picture, particularly in Ladakh, Jammu, Kashmir, and Uttarakhand in the Western HR; and in Arunachal Pradesh, Nagaland, and Tripura in the Eastern HR. In the entire Indian Himalayan Region, one in four women were unemployed for at least 30 days.

**Table 3.1: Status of Women's Employment in the Indian Himalayan Region**

Region/State	FLFPR (minimum 30 days in 180 days period of assessment)	Unemployment Rate (minimum 30 days in 180 days period of assessment)	WPR (Less than or up to 30 days only)	WPR (More than 90 days only)	% of women who availed credit	% of women who received training	% of women willing to work at household premises	% of women willing to work outside household premises	% of women who changed economic activities (last 5 yrs)
1	2	3	4	5	6	7	8	9	10
<b>Indian Himalayan Region</b>	<b>83.04</b>	<b>25.78</b>	<b>16.42</b>	<b>37.52</b>	<b>6.49</b>	<b>12.55</b>	<b>78.95</b>	<b>48.39</b>	<b>7.53</b>
Ladakh	68.95	54.11	27.45	32.03	2.29	27.12	83.33	68.63	6.21
Jammu	62.31	46.48	34.21	34.32	0.57	27.88	84.66	14.42	2.91
Kashmir	88.24	57.08	7.47	11.91	0.00	0.00	60.36	23.21	0.00
Himachal Pradesh	80.74	7.48	4.10	63.53	5.58	2.51	72.71	40.23	7.81
Uttarakhand	78.27	21.29	21.18	23.15	3.44	10.89	81.26	34.35	1.98
<b>Western Himalayan Region</b>	<b>76.45</b>	<b>31.82</b>	<b>17.85</b>	<b>34.07</b>	<b>2.56</b>	<b>11.64</b>	<b>76.12</b>	<b>30.85</b>	<b>3.44</b>
Sikkim & West Bengal	98.76	2.88	1.11	81.60	16.79	18.02	57.53	19.88	9.88
Assam	89.38	11.19	8.00	53.38	9.69	13.85	89.85	71.69	13.08
Meghalaya	93.06	3.43	6.88	45.90	4.58	11.94	95.82	71.60	5.28
Arunachal Pradesh	80.09	27.80	22.27	38.84	8.63	4.21	70.32	55.56	7.31
Nagaland	85.23	34.49	16.18	12.62	16.19	35.41	84.73	90.78	34.45
Manipur	93.72	10.04	35.49	47.38	10.48	12.08	83.62	92.76	0.00
Tripura	93.00	50.94	2.63	21.13	16.00	0.25	97.25	43.00	6.38
<b>Eastern Himalayan Region</b>	<b>88.74</b>	<b>21.98</b>	<b>15.17</b>	<b>40.51</b>	<b>10.44</b>	<b>13.34</b>	<b>81.56</b>	<b>63.40</b>	<b>11.07</b>

Source: Field Survey, 2021

## Nature and Status of Employment

In Table 3.2, the distribution of female workers by the nature or status of their major employment is reported. In the entire IHR, 56 percent of women worked in household farms or enterprises as own-account workers and 24 percent worked as helpers. 70 percent were self-employed in the agricultural sector and less than 5 percent were in the non-agricultural sector. Thus, agriculture is still the mainstay of rural IHR. However, the proportion of women engaged in agriculture varies across the Himalayan states.

**Table 3.2: Percentage of Female Workers as per Major/Principal Status of Employment**

Region/ State	Worked in HH enterprise -Own account worker	Worked in HH enterprise -Helper	Self- employed own agricultur e	Self- employed own-non- agricultur e	Worked in HH enterprise -Employer	Worked as regular salaried/wag e employee	Casual wage labour in MNREG A	Casual wage labour in private work agricultur e and non- agricultur e
1	2	3	4	5	6	7	8	9
<b>Indian Himalayan Region</b>	<b>56.24</b>	<b>24.38</b>	<b>69.78</b>	<b>4.67</b>	<b>3.28</b>	<b>6.20</b>	<b>5.31</b>	<b>4.59</b>
Ladakh	50.65	20.26	57.84	3.59	2.61	11.76	9.48	5.23
Jammu	52.74	37.91	82.67	1.65	0.40	3.88	1.94	3.14
Kashmir	54.53	38.22	93.35	0.00	0.60	4.00	2.11	0.53
Himachal Pradesh	78.10	1.42	78.10	1.42	0.00	8.27	9.29	2.92
Uttarakhan d	58.78	34.54	90.94	2.38	0.68	4.30	0.91	0.79
<b>Western Himalayan Region</b>	<b>60.26</b>	<b>28.14</b>	<b>86.15</b>	<b>1.46</b>	<b>0.53</b>	<b>5.36</b>	<b>3.68</b>	<b>2.04</b>
Sikkim & West Bengal	67.01	0.77	50.58	15.96	4.73	17.77	5.37	4.35
Assam	53.11	11.09	55.78	0.55	6.42	9.53	11.48	8.37
Meghalaya	55.20	25.90	77.64	3.47	0.99	4.25	1.84	11.82
Arunachal Pradesh	34.44	40.56	35.97	9.12	7.08	5.51	6.16	6.25
Nagaland	79.85	3.38	78.27	4.21	5.79	7.07	1.20	2.71
Manipur	19.40	10.33	39.85	9.00	25.44	3.78	34.01	7.05
Tripura	54.25	20.38	48.82	10.01	1.25	4.75	11.25	8.13
<b>Eastern Himalayan Region</b>	<b>52.65</b>	<b>21.01</b>	<b>55.99</b>	<b>7.37</b>	<b>5.75</b>	<b>6.95</b>	<b>6.77</b>	<b>6.87</b>

Note: Figures for columns 2 and 3 are repeated in columns 4 and 5 as different categories.

Therefore, figures for each row will not sum to 100.

Source: Field Work, 2021

Most women have a subsidiary or minor economic activity. This is the activity in which relatively less time is spent than the main employment activity. The distribution by the subsidiary status of employment is reported in Table 3.3. In many states, the main subsidiary employment is provided

by MGNREGA. However, this is not the case in Kashmir, Assam, Arunachal Pradesh, and Nagaland. Women were also engaged as casual labourer's in private work during lean seasons to supplement household income. However, in Kashmir and Nagaland, household enterprises provide women with both principal and subsidiary employment opportunities.

**Table 3.3: Percentage of Female Workers as per Minor/Subsidiary Status of Employment**

Region/ State	Worked in HH enterprise -Own account worker	Worked in HH enterprise -Helper	Self- employed own agricultur e	Self- employed own-non- agricultur e	Worked in HH enterprise -Employer	Worked as regular salaried/wag e employee	Casual wage labour in MNREG A	Casual wage labour in private work - agriculture and non- agriculture
1	2	3	4	5	6	7	8	9
<b>Indian Himalayan Region</b>	<b>22.46</b>	<b>11.69</b>	<b>14.53</b>	<b>10.11</b>	<b>4.55</b>	<b>1.54</b>	<b>40.45</b>	<b>19.31</b>
Ladakh	21.27	9.70	13.03	16.48	1.49	2.61	59.70	5.22
Jammu	19.78	5.77	14.69	9.60	1.24	2.88	60.44	9.89
Kashmir	100.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00
Himachal Pradesh	18.89	0.51	18.89	0.51	0.00	0.00	80.61	0.00
Uttarakhan d	22.66	0.14	12.59	12.59	0.00	0.14	66.81	10.25
<b>Western Himalayan Region</b>	<b>23.29</b>	<b>1.91</b>	<b>19.01</b>	<b>6.50</b>	<b>0.36</b>	<b>0.88</b>	<b>67.85</b>	<b>5.70</b>
Sikkim & West Bengal	22.04	1.97	18.13	9.15	3.94	0.90	64.16	6.99
Assam	25.57	49.48	3.49	0.41	9.69	1.65	9.69	3.92
Meghalaya	1.12	4.86	4.58	1.40	0.28	0.37	72.15	21.21
Arunachal Pradesh	12.36	23.33	12.41	3.97	11.06	2.45	4.21	46.57
Nagaland	83.16	2.28	0.76	61.39	3.80	0.00	1.39	9.37
Manipur	18.95	11.93	42.71	5.32	6.67	5.26	47.37	9.82
Tripura	15.38	13.13	15.27	13.14	3.13	3.25	48.25	16.88
<b>Eastern Himalayan Region</b>	<b>22.12</b>	<b>15.68</b>	<b>12.92</b>	<b>11.41</b>	<b>6.26</b>	<b>1.81</b>	<b>29.28</b>	<b>24.85</b>

Note: Figures for columns 2 and 3 are repeated in columns 4 and 5 as different categories.

Therefore, figures for each row will not sum to 100.

Source: Field Work, 2021

### **Role of MGNREGA in providing employment**

Most women in the Himalayan states except Kashmir have job cards under the MGNREGA (Table 3.4). It plays an important role in providing subsidiary employment to women. As noted above, most women are engaged as own-account workers or helpers in agricultural fields. They are primarily unpaid, and hence, MGNREGA provides the much-needed cash income to women. Nevertheless, the implementation of the scheme is not uniform across the states. Assam, Nagaland and Manipur are states where a large proportion of women have sought work under MGNREGA but did not get work. This needs to be noted and dealt seriously by the respective state

governments. Kashmir stands out as the state where only 13.4 percent of the surveyed women have job cards and only 17.68 percent of them worked. This indicates that in Kashmir, women may not prefer or are not allowed to work outside their households. For Kashmiri women, both principal and subsidiary activity is household agriculture, with a minor percentage engaged in services, MNREGA, and other casual nature jobs.

**Table 3.4: Percentage of Females as per Status of MNREGA Job Card and Employment**

Region/State	MNREGA job card status		Employment under MNREGA		
	Have	Do not have	Worked	Sought but did not get work	Did not seek work
<b>Indian Himalayan Region</b>	<b>64.44</b>	<b>35.56</b>	<b>70.33</b>	<b>16.17</b>	<b>13.50</b>
Ladakh	70.26	29.74	53.02	16.74	30.23
Jammu	56.78	43.22	74.40	12.05	13.55
Kashmir	13.39	86.61	17.68	49.72	32.60
Himachal Pradesh	61.48	38.52	81.37	9.36	9.27
Uttarakhand	50.61	49.39	74.67	22.62	2.70
<b>Western Himalayan Region</b>	<b>47.62</b>	<b>52.38</b>	<b>73.64</b>	<b>16.50</b>	<b>9.86</b>
Sikkim & West Bengal	74.69	25.31	72.07	6.94	20.99
Assam	57.08	42.92	44.20	46.09	9.70
Meghalaya	98.26	1.74	85.77	1.63	12.60
Arunachal Pradesh	88.61	11.39	78.16	3.29	18.55
Nagaland	55.90	44.10	32.40	39.44	28.15
Manipur	79.87	20.13	17.66	73.21	9.13
Tripura	79.88	20.13	95.62	4.23	0.16
<b>Eastern Himalayan Region</b>	<b>79.11</b>	<b>20.89</b>	<b>68.59</b>	<b>16.00</b>	<b>15.41</b>

Note: The figures are as per 365 days assessment period.

Source: Field Survey, 2021

### Factors affecting work participation

In the present study, women were asked to state the reasons for not working or withdrawing from the labour force. Women stated various reasons, and the same is reported in Table 3.5. It is found that almost 84 percent of women stated their engagement in domestic duties as the significant factor affecting work participation. Nevertheless, half of those were engaged in the free collection of goods like firewood, fruits, vegetables, grass, fodder, etc. Thus, the lives of women of Indian Himalayan Region are inextricably linked with the forest ecosystems. Besides this, they are also engaged in tailoring, knitting, or weaving for household use. Although they may not be working according to the formal definition of work, they spend their time and energy to augment or supplement household income and improve household welfare. If such free goods were to be



purchased from the market, then the monetary expenditure of the concerned household would have been much higher.

**Table 3.5: Factors Affecting Women Work Participation (in percentage)**

Region/State	Attended educational institution	Attended domestic duties only	Attended domestic duties and was also engaged in free collection of goods, tailoring, etc. for household use	Pensioners, remittance recipients, etc.	Not able to work due to disability
<b>Indian Himalayan Region</b>	<b>11.53</b>	<b>42.62</b>	<b>41.00</b>	<b>3.19</b>	<b>1.67</b>
Ladakh	23.93	40.00	20.00	10.71	5.36
Jammu	10.86	45.63	31.04	7.63	4.83
Kashmir	6.08	52.44	38.65	0.00	2.82
Himachal Pradesh	0.62	76.54	18.95	3.47	0.42
Uttarakhand	25.14	26.90	43.68	2.17	2.11
<b>Western Himalayan Region</b>	<b>11.90</b>	<b>49.73</b>	<b>32.00</b>	<b>3.82</b>	<b>2.55</b>
Sikkim & West Bengal	6.06	87.88	3.03	0.00	3.03
Assam	15.33	52.17	26.00	6.50	0.00
Meghalaya	0.27	91.40	6.18	1.88	0.27
Arunachal Pradesh	1.57	10.88	87.55	0.00	0.00
Nagaland	0.19	86.02	12.62	0.00	1.17
Manipur	3.17	48.41	46.51	1.59	0.32
Tripura	73.62	3.80	5.69	12.33	4.55
<b>Eastern Himalayan Region</b>	<b>11.12</b>	<b>34.84</b>	<b>50.84</b>	<b>2.50</b>	<b>0.70</b>

Source: Field Survey, 2021

Each state has carried out an econometric exercise by running logistic regression to determine the contribution of various determinants to the probability of women being in the labour force or workforce. The prominent results are discussed below:

As we move from male-headed households to female-headed households, the odds of females getting into labour force and workforce increase in the majority of the states. This does not reveal the larger empowerment of females in the former, but it reflects the larger work pressure on females in such households since the households depend on them to a greater extent for earning subsistence. LFPR and WPR increase with age, reflecting the increasing responsibilities of women and the increasing workload in SNA activities. Odds of married and widowed/ separated females being in the labour force are higher compared to unmarried females due to increasing work pressure and sharing of larger responsibilities in contributing towards SNA activities. Higher education status leads to increasing LFPR in some states. However, in the majority of the cases, the increase in education status does not play a significant part in increasing the female WPR due to the increasing number of educated unemployed females. With an increase up to a certain level of monthly income, FLPR increases and thereafter it decreases in the majority of the cases. Also,

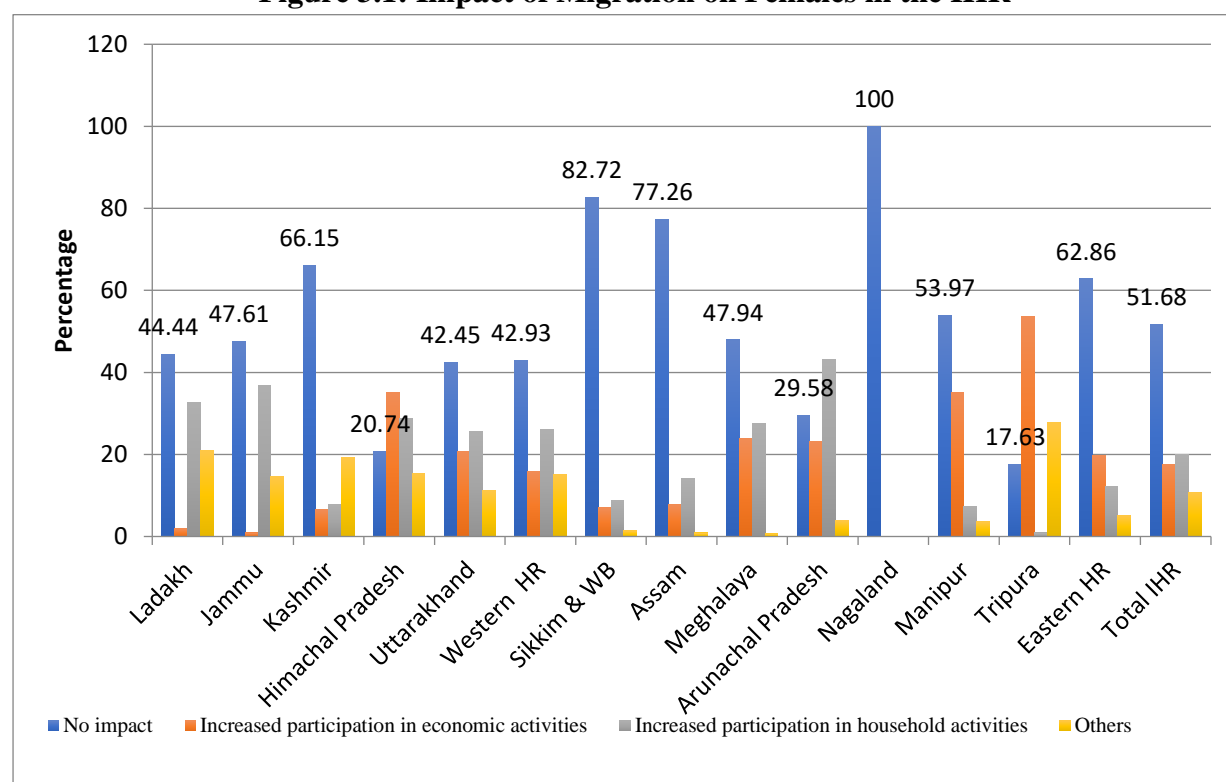


the odds of females getting into the labour force are higher among the BPL and Antyodaya families compared to the APL households.

### Impact of migration on females

About 23 percent of households reports that at least one member migrated out of the household for some reason or the other. Figure 3.1 shows the perception of women regarding the impact of migration on their work participation.

**Figure 3.1: Impact of Migration on Females in the IHR**



Source: Field Survey, 2021

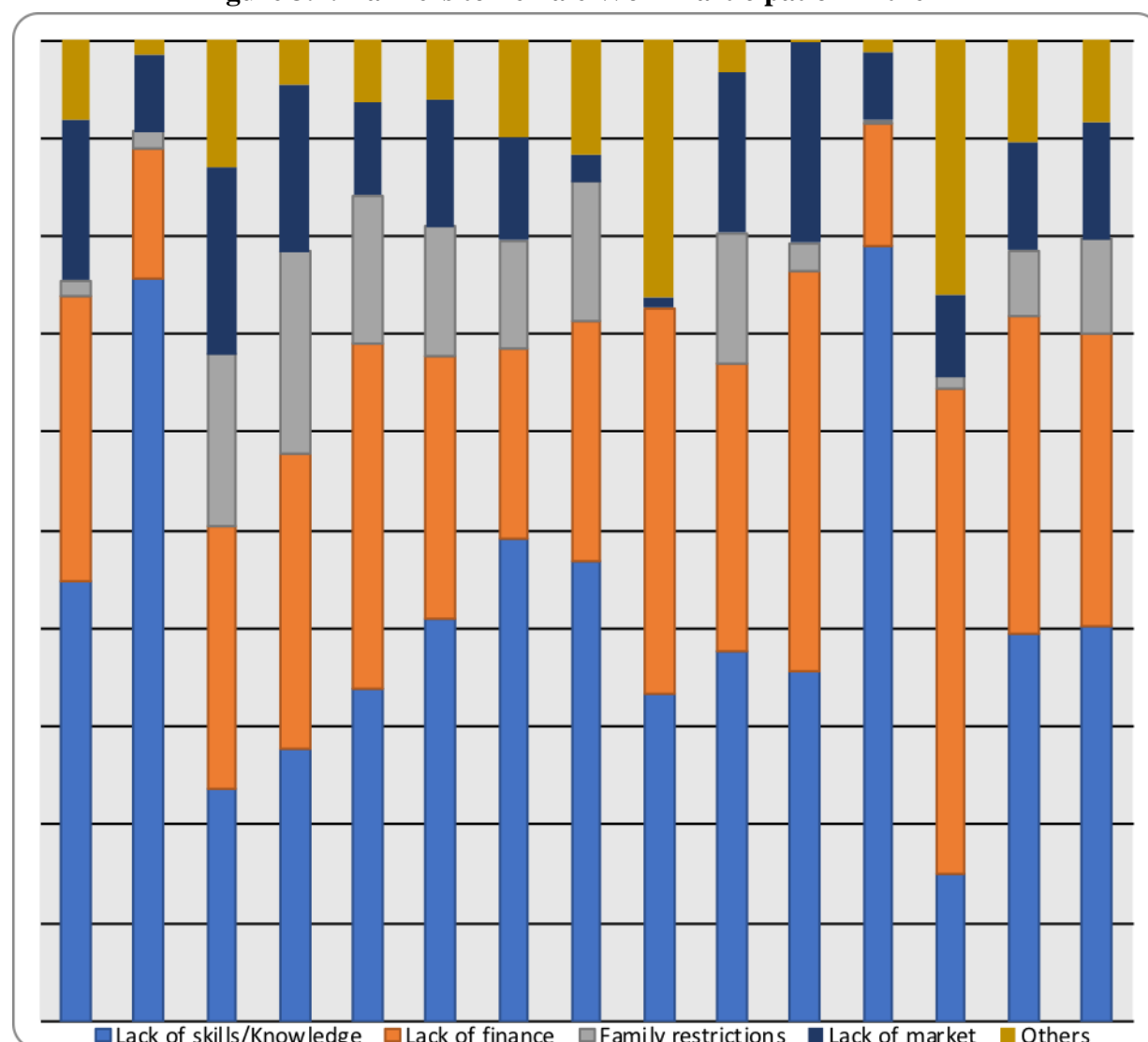
### Barriers to work participation

Women in the IHR face several barriers in the labour market. The major barriers are lack of skills, lack of finance, lack of markets, family restrictions, and other responsibilities (mainly domestic responsibilities). The significance of these barriers is depicted in Figure 3.2. There are variations to some extent as to the importance of these barriers in each state. For instance, more than 75 percent of women in Jammu reported lack of skills as the main barrier, while in Tripura, 50 percent felt that lack of finance is the main barrier. One-fifth of women in Himachal Pradesh reported family restrictions as the main barrier, whereas, women in Meghalaya face no family restrictions due to the matrilineal system prevailing in the state.

Domestic duties and caregiving responsibilities affect women's workforce participation as it is observed that less than half of women were willing to work outside household premises (Table 3.1). This is particularly evident in the case of Jammu, Kashmir, Sikkim and West Bengal. In

addition, socio-cultural factors play an important role in deciding women's participation in the labour force.

**Figure 3.2: Barriers to Female Work Participation in the IHR**



Source: Field Survey, 2021

### Availability of Credit

Results in Table 3.1 exhibit that very few women have availed credit for their self-employment activities. The problem is more acute in Western HR compared to Eastern HR. In Kashmir, none of the surveyed women have availed credit. Kashmir is popular for its handicrafts; therefore, women have engaged in textile-related activities for which they need not go out of their homes and carry out marketable non-agricultural activities in the state. Sikkim and West Bengal, Nagaland, Manipur, and Tripura show a relatively better picture as far as the proportion of women who availed credit is concerned.

The percentage distribution of women by the source of credit is reported in Table 3.6. Overall, we may say that credit comes from formal sources rather than informal sources when it is availed.

There are wide variations among all the states. Banks are an essential source except in Arunachal Pradesh and Manipur. The presence of Micro Finance Institutions is felt only in Tripura and the Cooperatives have a small role to play. The importance of Self-Help Groups (SHGs) in providing credit is observed in some states like Nagaland, Manipur, Sikkim, and West Bengal. From chapter two, we note that in the Western HR, it is only in the state of Uttarakhand where a substantial proportion of women (41.6 percent) were members of SHGs. In Eastern HR, the SHG movement is yet to take off in a big way in Assam, Arunachal Pradesh, and Tripura.

**Table 3.6: Percentage distribution of Source of Credit Availed by Females in the IHR**

Region/ State	Bank	Cooperatives	SHGs	MFIs	Landlord/employer	Money lenders	Traders	Friends/relatives	Any other
1	2	3	4	5	6	7	8	9	10
<b>Indian Himalayan Region</b>	<b>26.95</b>	<b>8.95</b>	<b>34.11</b>	<b>5.26</b>	<b>3.37</b>	<b>0.21</b>	<b>0.11</b>	<b>17.68</b>	<b>3.37</b>
Ladakh	42.31	19.23	38.46	0.00	0.00	0.00	0.00	0.00	0.00
Jammu	41.18	11.76	47.06	0.00	0.00	0.00	0.00	0.00	0.00
Kashmir	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Himachal Pradesh	61.22	0.00	0.00	0.00	0.00	0.00	0.00	38.78	0.00
Uttarakhand	33.82	4.41	61.76	0.00	0.00	0.00	0.00	0.00	0.00
<b>Western Himalayan Region</b>	<b>48.33</b>	<b>4.78</b>	<b>28.71</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>18.18</b>	<b>0.00</b>
Sikkim & West Bengal	17.04	11.85	68.15	0.00	0.00	0.74	0.74	1.48	0.00
Assam	52.31	24.62	20.00	0.00	0.00	1.54	0.00	1.54	0.00
Meghalaya	57.58	3.03	4.55	0.00	0.00	0.00	0.00	34.85	0.00
Arunachal Pradesh	3.23	5.38	13.98	0.00	17.20	0.00	0.00	54.30	5.91
Nagaland	14.29	0.00	82.42	0.00	0.00	0.00	0.00	3.30	0.00
Manipur	2.86	42.86	54.29	0.00	0.00	0.00	0.00	0.00	0.00
Tripura	30.47	0.78	13.28	39.06	0.00	0.00	0.00	0.00	16.41
<b>Eastern Himalayan Region</b>	<b>20.92</b>	<b>10.12</b>	<b>35.63</b>	<b>6.75</b>	<b>4.32</b>	<b>0.27</b>	<b>0.13</b>	<b>17.54</b>	<b>4.32</b>

Source: Field Survey, 2021

Most of the loans taken are of small amount, which is less than Rs. 50,000/- (Table 3.7). The number of women who borrowed more than Rs. 2 lakh is negligible. There are several problems that women face while availing credit. These problems are depicted in Figure 3.3. Lack of collateral and proper documentation are the major problems faced by women. Most women do not own property; hence they do not have collateral to borrow from banks or other institutions. Even in Meghalaya, where women own the property, land documents or title deeds are not available in the majority of the cases. Agriculture is carried out in common or community land in some cases. Another problem that the women face while availing credit is the documentation, as women in rural areas are barely educated. The authorities need to take note of this and simplify the procedures and documents required.

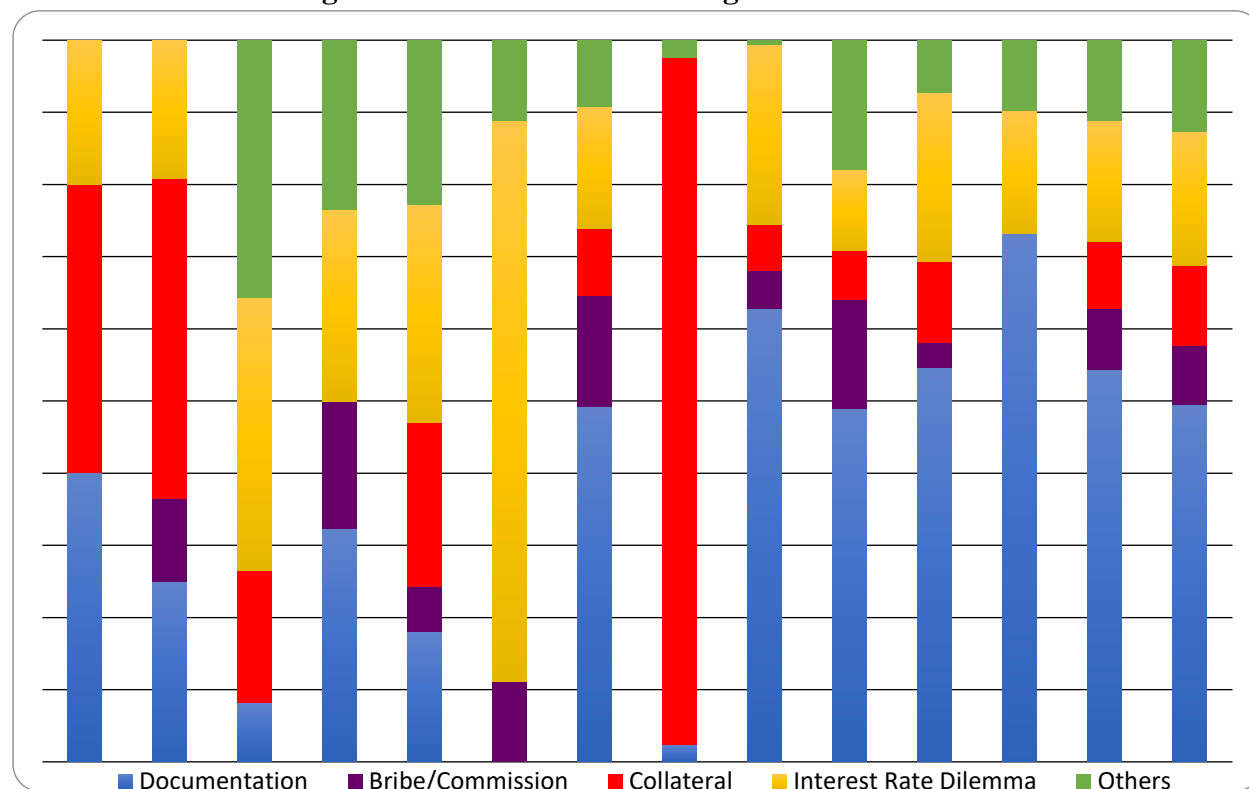
**Table 3.7: Percentage Distribution of Females by Amount of Credit Availed in the IHR**

Region/ State	Up to 50000	50000 to 1 lakh	1 to 2 lakh	2 to 5 lakh	5 to 10 lakh	More than 10 lakh
1	2	3	4	5	6	7
<b>Indian Himalayan Region</b>	<b>73.73</b>	<b>18.14</b>	<b>6.36</b>	<b>0.82</b>	<b>0.71</b>	<b>0.24</b>
Ladakh	50.00	25.00	25.00	0.00	0.00	0.00
Jammu	29.41	41.18	29.41	0.00	0.00	0.00
Kashmir	0.00	0.00	0.00	0.00	0.00	0.00
Himachal Pradesh	71.43	19.39	9.18	0.00	0.00	0.00
Uttarakhand	61.76	26.47	10.29	1.47	0.00	0.00
<b>Western Himalayan Region</b>	<b>63.64</b>	<b>24.06</b>	<b>11.76</b>	<b>0.53</b>	<b>0.00</b>	<b>0.00</b>
Sikkim & WB	67.74	15.32	8.87	1.61	4.84	1.61
Assam	96.83	3.17	0.00	0.00	0.00	0.00
Arunachal Pradesh	74.19	21.51	4.30	0.00	0.00	0.00
Nagaland	90.11	6.59	2.20	1.10	0.00	0.00
Manipur	95.71	2.86	1.43	0.00	0.00	0.00
Tripura	58.59	31.25	7.81	2.34	0.00	0.00
<b>Eastern Himalayan Region</b>	<b>76.59</b>	<b>16.47</b>	<b>4.83</b>	<b>0.91</b>	<b>0.91</b>	<b>0.30</b>

Note: Data are not available for Meghalaya.

Source: Field Survey, 2021.

**Figure 3.3: Problems in Availing Credit in the IHR**



Source: Field work, 2021

### Training Received by Women

As shown in Table 3.8, the proportion of women who received some kind of training is very small. In the entire Indian Himalayan Region (IHR), 12.55 percent of women have received or were receiving some form of training during the survey. The percentages are particularly low in Himachal Pradesh, Arunachal Pradesh, and Tripura, while it is zero amongst the sample women in Kashmir.

**Table 3.8: Percentage Distribution of Females by Type of Training Received in the IHR**

Region/State	Receiving Formal Vocational training	Received Vocational training formal	Received Vocational training non-formal hereditary	Non-formal self-learning	Non formal learning on the job	Others
1	2	3	4	5	6	7
<b>Indian Himalayan Region</b>	<b>16.65</b>	<b>29.55</b>	<b>6.51</b>	<b>17.73</b>	<b>7.78</b>	<b>21.77</b>
Ladakh	8.33	17.59	2.78	4.63	6.48	60.19
Jammu	5.76	28.27	1.05	5.76	6.28	52.88
Kashmir	0.00	0.00	0.00	0.00	0.00	0.00
Himachal Pradesh	9.09	52.27	9.09	27.27	0.00	2.27
Uttarakhand	10.23	41.86	1.40	6.05	6.98	33.49
<b>Western Himalayan Region</b>	<b>8.24</b>	<b>33.33</b>	<b>2.15</b>	<b>7.35</b>	<b>6.09</b>	<b>42.83</b>
Sikkim & West Bengal	21.92	58.22	1.37	10.96	6.85	0.68
Assam	7.78	10.00	40.00	33.33	8.89	0.00
Meghalaya	66.86	3.49	8.72	13.37	7.56	0.00
Arunachal Pradesh	23.08	21.98	3.30	9.89	1.10	40.66
Nagaland	3.60	27.97	4.03	36.44	10.17	17.80
Manipur	29.92	40.94	16.54	2.36	10.24	0.00
Tripura	0.00	0.00	0.00	0.00	100.00	0.00
<b>Eastern Himalayan Region</b>	<b>20.91</b>	<b>27.64</b>	<b>8.73</b>	<b>23.00</b>	<b>8.64</b>	<b>11.09</b>

Source: Field Survey, 2021.

Women's type of training varies across the states (Table 3.8). In Assam, it is mainly hereditary or self-learning or learning on the job. In Tripura, it is learning on the job. Formal training is accessed by less than half of the trained women in the entire IHR. The number of trained women is very less, and the number of formally trained women is abysmally low. Table 3.9 reports the number of women who have received or were receiving training in various fields to emphasize this point. It may be noted that this is not the total number of trainees in the respective states. It is the number of women out of the surveyed women who have received training. Again, it is pertinent to mention that lack of skills is one of the major barriers to work participation reported by the women themselves. Moreover, during the study, the women in the IHR expressed their need for training and skilling, which has to be provided on a large scale to enhance women's employment opportunities and uplift the economic conditions of the households.

**Table 3.9: Number of Females as per Field of Training Received or Receiving in the Indian Himalayan Region**

Field codes	Ladakh	Jammu	Himachal	Uttarakhand	WHR	Sikkim & West Bengal	Assam	Meghalaya	Arunachal	Nagaland	Manipur	EHR	IHR
01	0	4	0	0	4	1	0	0	0	0	0	1	5
02	0	0	0	0	0	4	0	0	0	0	0	4	4
03	5	10	18	12	45	12	0	0	2	0	0	14	59
04	0	0	0	1	1	3	0	0	1	0	0	4	5
05	0	0	1	0	1	0	0	0	1	0	0	1	2
06	0	0	0	0	0	0	0	3	0	12	0	15	15
07	0	31	3	25	59	18	9	14	3	98	94	236	295
08	0	0	1	0	1	1	0	4	0	21	0	26	27
09	0	0	5	28	33	23	49	7	5	56	0	140	173
10	0	0	8	5	13	0	0	0	0	54	0	54	67
11	3	4	1	7	15	8	23	97	36	78	5	247	262
12	1	2	1	19	23	10	1	34	0	0	0	45	68
13	51	145	0	5	201	2	2	5	0	35	6	50	251
14	0	0	0	0	0	14	0	0	0	16	0	30	30
16	4	0	3	14	21	10	0	1	1	29	4	45	66
17	0	0	0	0	0	2	0	0	0	4	0	6	6
18	0	0	0	0	0	0	0	0	0	2	0	2	2
19	0	0	2	7	9	9	0	1	16	31	17	74	83
20	0	0	0	0	0	1	0	0	0	0	0	1	1
21	0	0	0	0	0	3	0	0	0	8	0	11	11
99	11	110	1	92	214	14	45	6	26	28	0	119	333
<b>Total</b>	<b>75</b>	<b>306</b>	<b>44</b>	<b>215</b>	<b>640</b>	<b>135</b>	<b>129</b>	<b>172</b>	<b>91</b>	<b>472</b>	<b>126</b>	<b>1125</b>	<b>1765</b>

Note: The codes of the fields of training are: mechanical engineering trades -01, electrical and electronic engineering trades -02, computer trades -03, civil engineering and building construction related works -04, chemical engineering trades -05, leather related work -06, textile-related work -07, catering, nutrition, hotels, and restaurant-related work -08, artisan/ craftsman/handicraft and cottage based production work -09, creative arts/ artists -10, agriculture and crop production-related skills and food preservation-related work -11, non-crop based agricultural and other related activities -12, health and paramedical services related work -13, office and business-related work -14, driving and motor mechanic work -15, beautician, hairdressing & related work -16, work related to tour operators/ travel managers -17, photography and related work -18, work related to childcare, nutrition, pre-schools and crèche -19, journalism, mass communication, and media related work -20, printing technology-related work -21, other -99.

Source: Field Survey, 2021.

## **Conclusion**

This chapter discussed the Female Labour Force Participation rate (FLFPR), the Work Participation rate (WPR), the nature of employment, and the major factors that affect work participation positively or negatively in the Indian Himalayan Region. The major issues that emerge are the lack of skills, lack of finance, lack of market and domestic duties which serve as the major barriers that seriously hinder the entrepreneurship or self-employment opportunities for women in rural IHR.

## Paid and Unpaid status of Women's Work in the Indian Himalayan Region

### Introduction

Hill economies are typically characterized by greater participation of women in productive work (Krishna, 2012). The agricultural activities in the Himalayan region are sustained to a large extent by a high proportion of unpaid labour force (especially women) / in the form of *family labour* or *tenant labour*. As the mountain's economic formations are being transformed radically over the past decades, the economy is also being gradually commercialized (Mishra and Upadhyay, 2017; Harriss-White et al., 2009; 2022). Consequently, what has changed is not just the traditional gender division of labour; but also, the social valuation of women's work.

Thus, the study has analysed both paid and unpaid female labour engaged in economic activity in the Indian Himalayan region.

### Paid-Unpaid Status of Women's work in IHR

**Table 4.1: Females engaged in Agricultural and Non-Agricultural activities in terms of utilization of the Produce**

Region/State	No. of females engaged in Agriculture activities			No. of females engaged in non-Agriculture activities		
	Marketable	Non-Marketable	Mixed	Marketable	Non-Marketable	Mixed
<b>INDIAN HIMALAYA</b>						
<b>Indian Himalayan Region</b>	<b>8.37</b>	<b>47.28</b>	<b>44.35</b>	<b>35.38</b>	<b>24.27</b>	<b>40.35</b>
<b>WESTERN HIMALAYA</b>						
Ladakh	2.29	59.80	37.91	47.83	17.39	34.78
Jammu	1.74	47.43	50.83	49.26	24.02	26.72
Kashmir	15.13	65.73	19.15	66.27	17.16	16.57
Himanchal Pradesh	3.03	91.22	5.75	33.33	19.05	47.62
Uttarakhand	1.49	49.72	48.79	56.69	18.90	24.41
<b>Western Himalayan Region</b>	<b>5.44</b>	<b>62.77</b>	<b>31.79</b>	<b>53.70</b>	<b>21.14</b>	<b>25.16</b>
<b>EASTERN HIMALAYA</b>						
Sikkim & West Bengal	9.96	25.92	64.13	77.59	7.47	14.94
Assam	3.96	60.13	35.90	18.18	39.39	42.42
Meghalaya	11.02	0.23	88.75	6.76	1.84	91.39
Arunachal Pradesh	0.32	46.16	53.52	16.82	32.83	50.35
Nagaland	14.90	35.60	49.50	29.39	36.31	34.29
Manipur	9.56	48.83	41.62	45.17	30.53	24.30
Tripura	35.43	32.94	31.64	35.94	27.63	36.43
<b>Eastern Himalayan Region</b>	<b>10.72</b>	<b>34.84</b>	<b>54.44</b>	<b>32.47</b>	<b>24.77</b>	<b>42.76</b>

Source: Field Work, 2021

The percentage of women engaged in agricultural and non-agricultural activities concerning the use of the produce is reflected in table 4.1. In IHR, as high as 47.28 percent of the female workers



produced only non-marketable outputs in *agriculture-related activities*, whereas 44.35 percent produced both marketable and non-marketable products, and only 8 percent of the women workers produced exclusively for market purposes.

In the eastern HR, the female participation was 10.72 percent for marketable produce in agriculture, whereas for the western HR, it was just 5.44 percent. At a disaggregate level, in the western region for marketable produce, it was highest in the State of Kashmir at 15.13 percent, whereas in the eastern region, it was highest for the State of Tripura at 35.43 percent, followed by Nagaland at 14.90 percent and Meghalaya at 11.02 percent.

In the western HR 62.77, per cent of women produced only non-marketable products, and for the eastern HR, it stood at 34.84 percent. Under the non-marketable category, women in Himachal Pradesh contributed more than 90 percent in the western Himalayan region. In contrast, in the eastern Himalayan region, women from Assam contribute the highest at around 60 percent.

In the case of the mixed category, which comprises both marketable and non-marketable produce, the contribution of the females in the eastern HR was higher at 54.44 percent compared to their counterparts in the western Himalayan region, which stood at 31.79 percent. Thus, even though females contribute immensely in the agriculture sector, it is observed that it is mainly for self-consumption, and a tiny proportion is meant exclusively for commercial markets.

In the case of non-agricultural activities, in the IHR, the highest percentage of females sat 40.35 per cent, were engaged in producing in the mixed category (Marketable and Non-marketable), followed by 35.38 per cent producing marketable products and 24.27 per cent producing non-marketable products. More specifically, in the western HR in the state of Kashmir and Uttarakhand, as high as 66.27 and 56.69 percent of the women were producing marketable products, respectively. While on the eastern front, in the state of Sikkim and West Bengal, 77.59 percent of the women were engaged in producing marketable products. The females involved in the non-agriculture sector for non-marketable products in the IHR was only 24.27 percent. It was higher in the eastern HR at 24.77 percent compared to the western HR at 21.14 percent.

In the mixed category, comprising both marketable and non-marketable produce, female participation was higher at 42.76 per cent in the eastern HR, compared to the western HR at 25.16 percent (Table: 4.1).

Women engaged in paid activities in the overall IHR was found to be just 53.25 percent, even though they spend a considerable amount of their time in work-related activities. In the eastern HR 68 percent of the women were found to be engaged in paid activities, which were higher than the women of the western HR at 36.23 percent. At a disaggregate level, in the western HR, the state of Himachal Pradesh had the highest percentage of women engaged in paid activities at 62.62 per cent, followed by Uttarakhand and Ladakh. In contrast, in the eastern HR, the female participation in paid activities is much higher in states like Nagaland (98.37 per cent), followed by Sikkim and West Bengal (95.68 per cent) and Meghalaya (79.65 per cent). It was found that most of the women who were engaged in paid activities were mainly working in MGNREGA as casual workers (Table 4.2).

For the mixed category of the agricultural produce, in the western HR, women from Himachal Pradesh generated Rs. 2317.98, followed by Uttarakhand and Jammu, whereas on the eastern

front, women from the states of Meghalaya, Nagaland, and Arunachal Pradesh generated higher income at Rs. 3556, Rs. 2705.55 and Rs. 2304.84 respectively (Table 4.3).

**Table 4.2: Number and Percentage of Females engaged in paid activities in the Indian Himalayan Region**

Region/State	No. of females engaged in Paid activities	% of females
<b>INDIAN HIMALAYA</b>		
<b>Indian Himalayan Region</b>	<b>8318</b>	<b>53.25</b>
<b>WESTERN HIMALAYA</b>		
Ladakh	118	38.56
Jammu	622	28.73
Kashmir	88	6.51
Himachal Pradesh	1099	62.62
Uttarakhand	896	45.39
<b>Western Himalayan Region</b>	<b>2705</b>	<b>36.23</b>
<b>EASTERN HIMALAYA</b>		
Sikkim & West Bengal	775	95.68
Assam	163	25.08
Meghalaya	1147	79.65
Arunachal Pradesh	1313	60.79
Nagaland	1325	98.37
Manipur	345	32.83
Tripura	545	68.13
<b>Eastern Himalayan Region</b>	<b>5613</b>	<b>67.97</b>

Source: Field Work, 2021

### **Economic valuation of women's work in IHR**

The monthly imputed value of women's work for *marketable* produce in the *non-agriculture sector* in the western HR was the highest in the State of Uttarakhand at Rs.1783.56, followed by Himachal Pradesh at Rs. 1684.52 and Kashmir at Rs. 1467. While in the eastern HR, it was highest in Tripura at Rs. 3013.5 followed by Manipur at Rs.1251.47 and Nagaland at Rs. 1250.37 respectively. In the case of non-marketable products, in western HR, the imputed value of women's work was highest in Jammu at Rs. 2161.68, followed by Uttarakhand at Rs. 1401.04 and Himachal Pradesh at Rs. 1234.37 respectively. While in the eastern HR, in the mixed category (both marketable and non-marketable), the imputed value of women's time utilization was highest at Rs.3675 for Himachal Pradesh, followed by Jammu and Kashmir at Rs.2709.6 and Rs. 2588 respectively (Table:4.3).

**Table 4.3 Monthly Imputed value of women's work on the basis of utilization of the agricultural and non-agricultural produce**

Region/State	Monthly Imputed value of women's work based on utilization of agriculture produce in Rs.			Monthly Imputed value of women's work based on utilization of non-agriculture produce in Rs.		
	Marketable	Non-Marketable	Mixed	Marketable	Non-Marketable	Mixed
<b>INDIAN HIMALAYA</b>						
<b>Western Himalayan Region</b>						
Ladakh	1203.45	804.78	1055.91	655.15	498.54	1103.36
Jammu	2723.65	1551.75	1849.97	1078.08	2161.68	2709.6
Kashmir	3060	2604	1920	1467	2595	2588
Himanchal Pradesh	2287.5	1086.24	2317.98	1684.52	1234.37	3675
Uttarakhand	2531.25	1629.2	1986.2	1783.56	1401.04	1765.46
<b>Eastern Himalayan Region (EHR)</b>						
Sikkim & West Bengal	1723	1062	1707	1271	1564	11950
Assam	1581.67	2329.42	1402.19	1186.28	1426.82	1303.57
Meghalaya	3017	572	3556	1219	586	1447
Arunachal Pradesh	1792.83	1213.58	2304.83	1231.5	1410.57	1702.25
Nagaland	3906.53	1770.81	2705.55	1250.37	1280.171	3150.49
Manipur	1378.53	1169.54	1305.78	1251.47	1422.09	1502.91
Tripura	2234.5	2077.33	2678.66	3013.5	2316.5	3054.5

Source: Field Work, 2021

Thus, we observe that the monthly imputed value of women's work for agricultural and non-agricultural produce is mainly in the non-marketable and mixed category and a marginal portion in the marketable category. Most of the women's work falls under the category of unpaid work, and the produce is generally meant for self-consumption.

**Table 4.4: Monthly Imputed value earned under Service Sector/Wage Employment/Entrepreneurship**

Region/State	Monthly imputed value earned under the service sector/entrepreneurship/Wage employment (in Rs.)
<b>INDIAN HIMALAYA</b>	
<b>WESTERN HIMALAYAN REGION (WHR)</b>	
Ladakh	167.48
Jammu	681.12
Kashmir	1429
Himachal Pradesh	2018
Uttarakhand	743.75
<b>EASTERN HIMALAYAN REGION (EHR)</b>	
Sikkim & West Bengal	1730
Assam	1270.78

Meghalaya	2875
Arunachal Pradesh	1811.5
Nagaland	1750.5
Manipur	1781
Tripura	3075

Source: Field Work, 2021

When we compare the monthly Imputed value earned under the service sector, wage employment/ and entrepreneurship, we observe that it is much higher in the eastern HR compared to the western HR. It was highest in the state of Tripura (Rs. 3075), followed by Meghalaya (Rs. 2875) and Arunachal Pradesh (Rs.1811.5) in eastern HR and Himachal Pradesh (Rs. 2018) and Kashmir (Rs.1429) in the western HR.(Table 4.4)

In the overall IHR, only 9.91 percent of the women were paid in the *agriculture sector* and as high as 89.54 percent were engaged in unpaid activities. Most of the women worked in their farms for self-consumption. It was observed that the majority of the females in the western HR mostly worked in unpaid activities. For example, as high as 90 percent of the females engaged in the agriculture sector were unpaid workers, whereas, in the eastern HR, the figure for unpaid female workers stood at 87.70 percent.

At a disaggregate level in the western HR, it was found that in Himachal Pradesh, Uttarakhand, Jammu, and Union territory of Ladakh, more than 90 percent of the women worked as unpaid workers in the agriculture sector. In eastern HR, as high as 90 percent of the women in Arunachal Pradesh worked as unpaid workers in agriculture. While in the state of Sikkim, West Bengal, Assam, and Meghalaya, more than 80 percent of the women worked in the unpaid category.

**Table 4.5: Paid and Unpaid Status of Female work in Agriculture and Non-Agricultural Sector**

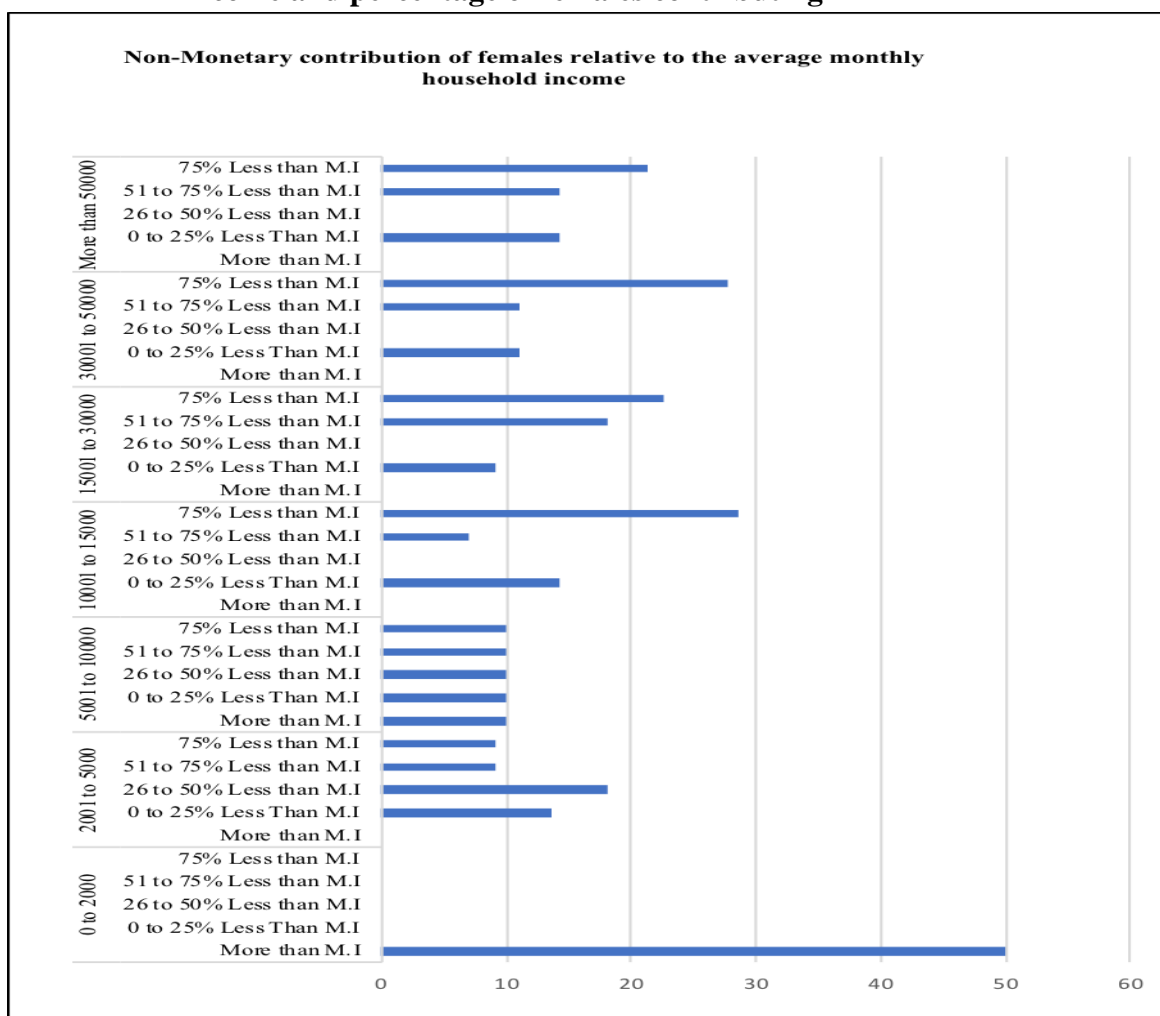
Region/State	Paid and unpaid status of females work in the agriculture sector		Paid and unpaid status of females work in the non-agriculture sector	
	Paid	Unpaid	Paid	Unpaid
<b>INDIAN HIMALAYA</b>				
<b>Indian Himalayan Region (IHR)</b>	9.91	89.54	13.10	86.00
<b>WESTERN HIMALAYA</b>				
Ladakh	7.95	92.05	5.86	94.14
Jammu	5.35	94.65	24.58	75.42
Kashmir	18.71	81.29	79.43	20.57
Himanchal Pradesh	8.78	91.22	57.14	42.86
Uttarakhand	3.42	96.58	11.24	88.76
<b>Western Himalayan Region (WHR)</b>	8.48	91.52	24.24	75.76
<b>EASTERN HIMALAYA</b>				
Sikkim & WB	14.68	85.32	14.68	85.32
Assam	10.79	89.21	10.79	89.21
Meghalaya	11.56	88.44	11.56	88.44
Arunachal Pradesh	2.13	97.87	2.13	97.87
Nagaland	14.80	85.20	14.80	85.20

Manipur	17.50	70.18	29.84	70.18
Tripura	28.78	71.22	28.78	71.22
<b>Eastern Himalayan Region (EHR)</b>	<b>11.24</b>	<b>87.70</b>	<b>12.24</b>	<b>87.70</b>

Source: Field Work, 2021

With regard to the paid and unpaid status of women engaged in the *non-agriculture sector*, in the overall IHR, 86 percent of the women worked in the unpaid category, and only 13 percent were engaged as paid workers. In the western HR, as high as 75.6 percent of the women were unpaid workers, and only 24.24 percent were paid workers, while in eastern HR, as high as 87 percent of the women worked in the unpaid category, and only 12 percent were engaged as paid workers. More specifically, the figures in the western HR show that in the Union Territory of Ladakh, around 94 percent of the women worked as unpaid workers, followed by Uttarakhand at 88.76 percent. On the eastern front, the state of Arunachal Pradesh had the highest percentage of women in the unpaid category at 98 percent (Table 4.5).

**Figure: 4.1: Non-Monetary contribution relative to the average monthly household income and percentage of females contributing**



Note: MI depicts the average monthly household income

Source: Table 4.6

**Table 4.6: Monetary and Non-monetary contribution relative to the average monthly household income and percentage of females contributing**

		Percentage of females* contributing in Non-monetary Form (imputed)			Percentage of females* contribution in Monetary form		
Region/State		IHR	West HR	East HR	IHR	West HR	East HR
0 to 2000	More than M.I	50	20	30	15	0	15
	0 to 25% Less Than M.I	0	0	0	10	5	5
	26 to 50% Less than M.I	0	0	0	0	0	0
	51 to 75% Less than M.I	0	0	0	15	5	10
	75% Less than M.I	0	0	0	10	5	5
2001 to 5000	More than M.I	0	0	0	3.3	0	3.3
	0 to 25% Less Than M.I	13.6	0	13.6	13.3	6.7	6.7
	26 to 50% Less than M.I	18.2	9.1	9.1	10	0	10
	51 to 75% Less than M.I	9.1	4.5	4.5	3.3	0	3.3
	75% Less than M.I	9.1	4.5	4.5	20	6.7	13.3
5001 to 10000	More than M.I	10	0	10	0	0	0
	0 to 25% Less Than M.I	10	5	5	14.3	7.1	7.1
	26 to 50% Less than M.I	10	5	5	0	0	0
	51 to 75% Less than M.I	10	5	5	14.3	7.1	7.1
	75% Less than M.I	10	5	5	21.4	14.3	7.1
10001 to 15000	More than M.I	0	0	0	0	0	0
	0 to 25% Less Than M.I	14.3	7.1	7.1	12.5	6.3	6.3
	26 to 50% Less than M.I	0	0	0	0	0	0
	51 to 75% Less than M.I	7.1	0	7.1	18.8	6.3	12.5
	75% Less than M.I	28.6	21.4	7.1	18.8	12.5	6.3
15001 to 30000	More than M.I	0	0	0	0	0	0
	0 to 25% Less Than M.I	9.1	4.5	4.5	7.7	3.8	3.8
	26 to 50% Less than M.I	0	0	0	0	0	0
	51 to 75% Less than M.I	18.2	0	18.2	7.7	3.8	3.8
	75% Less than M.I	22.7	13.6	9.1	34.6	7.7	26.9
30001 to 50000	More than M.I	0	0	0	0	0	0
	0 to 25% Less Than M.I	11.1	5.6	5.6	8.3	4.2	4.2
	26 to 50% Less than M.I	0	0	0	0	0	0
	51 to 75% Less than M.I	11.1	5.6	5.6	0	0	0
	75% Less than M.I	27.8	11.1	16.7	41.7	12.5	29.2
More than 50000	More than M.I	0	0	0	0	0	0
	0 to 25% Less Than M.I	14.3	7.1	7.1	16.7	8.3	8.3
	26 to 50% Less than M.I	0	0	0	0	0	0
	51 to 75% Less than M.I	14.3	7.1	7.1	0	0	0
	75% Less than M.I	21.4	14.3	7.1	33.3	25	8.3

Note: The results depict the monetary and non-monetary contribution of females relative to the total income of the respective households.

Source: Field Work, 2021

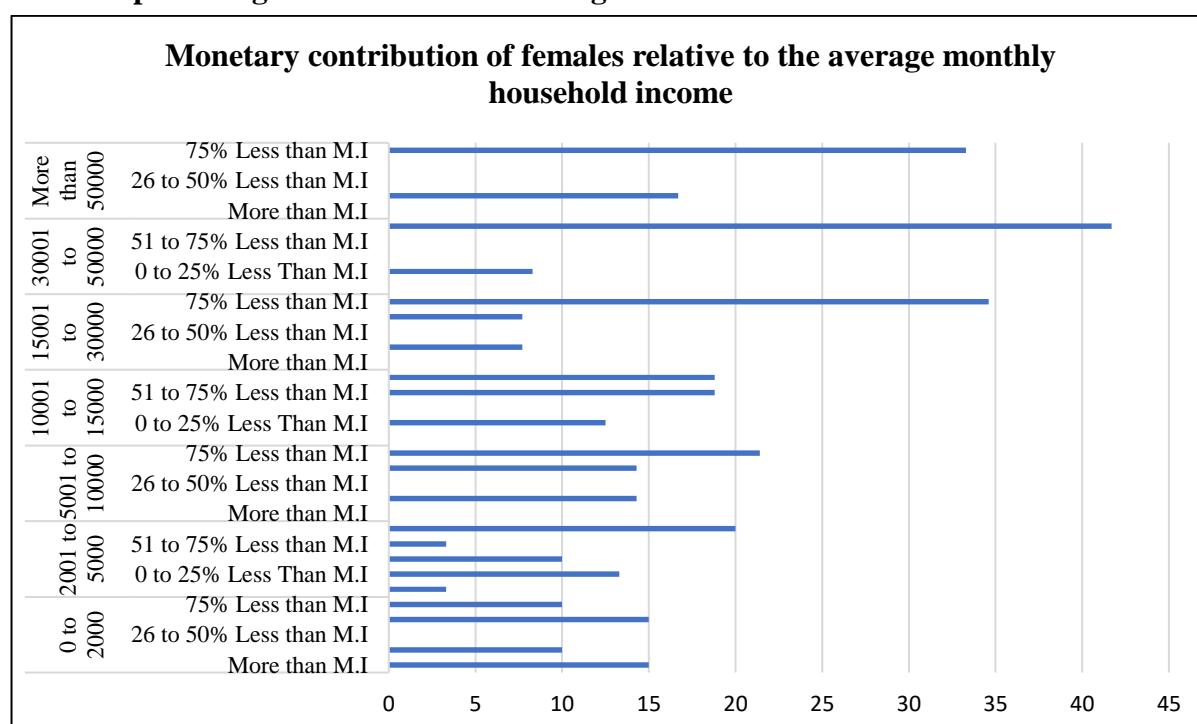
The survey results revealed that within the lower income group of 0-2000 rupees, about 50 percent of women who were only contributing in non-monetary terms, accounted for (in terms of imputed value of their non-monetary work) more than 50% relative to the total monthly average household income (received in monetary form) of the household. While in case of females who were earning in monetary form within the same income group households, their income contribution was invariably low which is depicted by the data which shows that only 15% of the females were contributing more than 50% relative to the total monthly average household income and the remaining 25% of female were contributing lesser than the average monthly household income.

*This indicates that among the very low-income group households a very high percentage of the women are contributing substantially in livelihood generation of rural households (even though that contribution is largely in non-monetary form).*

The results further show that significant number of females are contributing through their non-monetary efforts relative to the monthly household income. This trend is also observed even within the higher income group households.

The overall results reveal that a significant percentage of women are contributing substantially in livelihood generation which is either in monetary or non-monetary form. The only cause of concern is the lesser percentage of females who are contributing more than 50 percent to the total monthly average household income, in monetary or non-monetary terms.

**Figure 4.2: Monetary contribution relative to the average monthly household income and percentage of females contributing**



Source: Table 4.6

The monetary contribution of women relative to their average monthly household income was better in the eastern HR than the western HR in the income group of rupees 0-2000, where 15

percent of the women from the region earned more than their monthly average household income. For the income group of rupees 2001-5000, many women contributed 75 percent less than the household's average monthly income, and most of them were from the eastern HR. Further, in the rupees 5001-10000 income group, for both the eastern and western HR, the monetary contribution of women in the average monthly household income was found to be equal. However, around 21.4 percent of the women had monthly income less than 75 percent of the household income in the IHR, of which the maximum, i.e., 14.3 percent, were from the western HR. For other subsequent income groups, as we move higher, we observe that the monetary contribution of women from both the eastern and western HR tends to decrease.

Thus, we observe that women's average monthly income share in the non-monetary and monetary category is higher for women in the eastern Himalayan region for most of the income groups compared to their counterparts in the western Himalayan region.

### **Concluding Observations**

Thus, we observe that the economies in the Himalayan region are typically characterised by greater participation of women in productive work, so much so that 'Boserup' very aptly categorized the 'shifting cultivation system' as the 'female farming system' (Boserup, 1970). The analysis of both paid and unpaid activities, reflects that, women contribute immensely to the economy of the Himalayan region, which largely remains unrecognized and invisible. The imputed value of their produce is substantial in terms of their non-monetary contribution which acts as a major source of livelihood generation mainly for the lower income group households of these regions.



**TIME-USE PATTERN OF WOMEN IN THE INDIAN HIMALAYAN REGION:  
AN ECONOMIC ANALYSIS****Introduction**

The working patterns of rural women in the hills of the Indian Himalayan region are influenced by many factors. The mountainous terrain and the migration of male household members to urban centres searching for gainful employment create a difficult work situation for the women in the households (Mishra 2007; 2018; Upadhyay 2017; 2020). Although most women are engaged in work and contribute to the economy in one form or another, much of their work is not documented in official statistics (Hirway, 2015). Women plough fields and harvest crops, weave and make handicrafts. They are traditionally responsible for daily household chores (e.g., cooking, fetching water, collecting woods and vegetables from the forest, and looking after the children and sick and older adults). The contribution of women towards the households' food and energy security is immense, but there has been no measure as to how much they contribute towards it. Women's contribution in the form of both 'visible' and 'invisible' work can best be captured by investigating the time-use pattern of women's activities (Hirway, 2009). Hence, the study of women's unpaid labour through the time-use survey in the context of hill economies is crucial because (a) most of these economies are only partially market economies. Non-market transactions are still significant (Harriss-White et al., 2009; 2022). (b) the work that women do is often overlapping across sectors and activities. Women who work in agriculture, for example, also work in raising livestock, weaving, food processing, and even petty trading. Since most of these activities are neglected when a worker is asked about primary or secondary occupations, there is a need for a time-use survey. It will add unpaid labour of women who are not considered as 'employed' and the additional contributions of those women who are 'employed.'

Various other studies highlight the fact that women's work in subsistence economy is usually grossly undervalued, and the one possible way is to measure the time women spend on activities that do not fall under the category of 'economic activities' (Bhatia, 2002; Hirway, 2002; 2009; 2015; Shimray, 2004; Neetha and Palriwala, 2010, A. Mukherjee, 2012; Devi, 2012; Swaminathan, 2015; Mishra and Mishra, 2012; Upadhyay, 2014; 2020).

In the case of mountain economies of the Indian Himalayan Region, the time use survey (TSU) has an added significance, given the relative importance of subsistence production and low levels of commercialization of the economy. The underestimation of women's work is far more severe in the hilly regions. To investigate the gendered division of labour (in SNA, extended SNA and Non-SNA work) in the Indian Himalayan Region (IHR), primary data was collected using the Time Use Survey Method. In the time-use survey, both yesterday's approach and activity approach were used. Household information of individuals from randomly selected households in the villages of the various districts was collected through a structured questionnaire method. Informal discussions and personal observations supplemented this. Thus, using both qualitative and quantitative approaches, the average time spent on household work and agricultural activities by both men and women and the gendered division of labour has been examined through the time use survey.

**Table 5.1: Female participation in SNA Primary, SNA Secondary and SNA tertiary activities**

Region/State	SNA primary activities					SNA secondary activities		SNA tertiary activities		
	Crop Farming, Kitchen Gardening etc.	Animal Husbandry/ animal care	Fishing, Forestry, Horticulture Gardening	Processing and storage/ flour making/ husking/ making spices	Mining, quarrying , digging, cutting, rock breaking	Construction Activities	Manufacturing Activities (Household)	Trade and Business	Services	Community Organized Constructions and repairs: building
<b>INDIAN HIMALAYA</b>										
<b>Indian Himalayan Region (IHR)</b>	<b>66.93</b>	<b>51.76</b>	<b>4.73</b>	<b>3.36</b>	<b>0.58</b>	<b>7.52</b>	<b>2.96</b>	<b>7.52</b>	<b>2.96</b>	<b>1.83</b>
<b>WESTERN HIMALAYA</b>										
Ladakh	32.03	41.83	22.55	2.94	0.65	0.00	13.40	0.00	13.40	0.00
Jammu	40.88	57.13	1.71	0.29	0.00	0.00	5.42	0.00	5.42	6.84
Kashmir	49.48	0.96	0.00	0.22	0.00	0.22	0.22	0.22	0.22	0.00
Himachal Pradesh	91.91	93.11	2.28	0.00	0.00	53.79	1.54	53.79	1.54	0.00
Uttarakhand	56.08	88.75	0.51	5.78	0.00	0.00	1.87	0.00	1.87	0.46
<b>Western Himalayan Region (WHR)</b>	<b>58.87</b>	<b>63.42</b>	<b>2.09</b>	<b>1.83</b>	<b>0.03</b>	<b>13.26</b>	<b>2.27</b>	<b>13.26</b>	<b>2.27</b>	<b>1.81</b>
<b>EASTERN HIMALAYA</b>										
Sikkim & West Bengal	62.84	55.06	2.22	2.47	0.00	5.43	3.70	5.43	3.70	0.00
Assam	86.00	83.85	7.08	0.00	0.00	2.62	4.00	2.62	4.00	0.00
Meghalaya	90.14	39.31	0.00	16.04	0.21	0.00	0.00	0.00	0.00	0.00
Arunachal Pradesh	62.69	53.84	7.55	2.55	3.70	0.00	1.02	0.00	1.02	0.00
Nagaland	94.06	34.08	6.98	2.82	0.30	0.59	4.90	0.59	4.90	0.59
Manipur	59.66	22.65	13.61	4.09	0.00	13.51	3.24	13.51	3.24	13.80
Tripura	61.00	3.00	14.50	0.00	0.00	0.00	14.50	0.00	14.50	0.00
<b>Eastern Himalayan Region (EHR)</b>	<b>73.89</b>	<b>41.67</b>	<b>7.02</b>	<b>4.69</b>	<b>1.05</b>	<b>2.56</b>	<b>3.56</b>	<b>2.56</b>	<b>3.56</b>	<b>1.85</b>

Source: Field Work, 2021

Table 5.1 shows the female participation in SNA primary, secondary and tertiary activities. It was found that for the Indian Himalayan Region (IHR) as a whole, female participation in SNA primary activities was relatively higher in crop farming at 66.93 percent, followed by animal husbandry and animal care at 51.76 percent. When we consider the western and the eastern HR, we find that the number of females engaged in SNA primary activities is much higher in the eastern region at 73.89 percent in crop farming compared to the western region at 58.87 percent. While in the case of animal husbandry, it is higher in the western HR at 63.42 percent compared to the eastern HR at 41.67 percent. Women contribute to fishing, horticulture, husking, storage, and quarrying, but the time spent on these activities is less than the time spent on crop farming and animal husbandry. Female's contribution to fishing, forestry, and horticulture was higher in Ladakh (22.55 percent), Tripura (14.50 percent), and Manipur (13.61 percent). At a disaggregate level in the western HR, female participation in Himachal Pradesh is the highest in SNA primary activities, followed by Uttarakhand, Kashmir, Jammu, and Ladakh. Whereas, in the eastern HR, it is the highest in the state of Nagaland, followed by Meghalaya, Assam, Sikkim, Arunachal Pradesh, Tripura, and Manipur. (Table 5.1)

As far as female participation in SNA secondary activities is concerned, it was found that in the overall IHR, only 7.52 percent participated in trade and business, and just 2.96 percent participated in manufacturing activities at the household level. On the other hand, the contribution of females in the western HR in SNA secondary activities was higher at 13.26 percent compared to the eastern HR at 2.56 percent. However, at a disaggregate level in the western HR, it was higher in states like Himachal Pradesh in construction activities at 53.79 percent and Ladakh in manufacturing activities at 13.40 percent. In eastern HR, it was comparatively higher in Manipur in construction activities at 13.51 percent and Tripura in manufacturing activities at 14.50 percent. Regarding female participation in SNA tertiary activities, it was found that in the IHR as a whole, 7.52 percent of the females participated in trade and business, followed by just 2.96 percent in services and only 1.83 percent in the community organized construction activities. The participation of women in the tertiary SNA activities was higher in the western HR than the eastern HR. At a disaggregate level, in the western HR in Himachal Pradesh, female participation was highest in trade and business at 53.79 per cent. In Ladakh, it was highest in services at 13.40 percent. On the other hand, in the eastern HR, it was highest in Manipur in trade and business at 13.51 percent, and in services, it was highest in Tripura at 14.50 percent.

*Female participation in the Indian Himalayan region was highest for SNA primary activities compared to SNA secondary and tertiary activities. Most of the women in the hills of the Himalayan region work in their agricultural fields for their livelihoods, producing subsistence levels of output.*

**Table 5.2 Female Participation in Extended SNA (E-SNA) Activities**

Region/ State	Women per day minutes contributed in E-SNA activities (Fetching of fruits, water, plants, etc. Storing and hunting)			Women per day minutes contributed in E-SNA activities (Household maintenance and management and Care of children, the sick, elderly and disabled of own household)						
	Fetching fruit, grass, leaves	Collecting firewood	Carrying water	Cleaning	Washing Clothes	Repairing household goods	Cooking & serving	Child Care	Teaching Children	Caring sick
<b>IHR</b>	<b>104.73</b>	<b>109.23</b>	<b>68.51</b>	<b>71.38</b>	<b>68.3</b>	<b>47.05</b>	<b>154.94</b>	<b>91.61</b>	<b>63.28</b>	<b>67.48</b>
<b>WESTERN HIMALAYA</b>										
Ladakh	37	46.36	33.24	50.22	30.3	60.2	100	61.45	45	45.52
Jammu	57.68	90.55	72.27	66.44	40.22	80.2	130.33	82.55	85	60.11
Kashmir	69	125	106	132	120	40	310	133	36	85
Himachal Pradesh	39	61.2	31.2	40.8	50.4	30.6	178.2	46.2	40.2	21
Uttarakhand	87.68	120.4	81.27	56.61	37.1	72	112.06	94.25	86.67	68.57
<b>WHR</b>	<b>62.23</b>	<b>106.07</b>	<b>52.62</b>	<b>58.92</b>	<b>46.51</b>	<b>33.78</b>	<b>158.5</b>	<b>70.12</b>	<b>53.54</b>	<b>63.4</b>
<b>EASTERN HIMALAYA</b>										
Sikkim & West Bengal	51.87	48.98	63	39.85	66.07	60	59.38	94.5	76.25	70
Assam	177.76	176.53	200.63	128.34	121.31	115.48	213.53	161.3	125.25	154.76
Meghalaya	61.96	115.28	59.96	56.01	58.94	0	102.57	107.17	55.34	120
Arunachal Pradesh	94.2	78.85	65.63	80.32	121.03	55.52	167.12	124.54	83.03	76.36
Nagaland	235.41	143.82	100.78	91.06	55.37	45	227.14	99.76	1.39	3.41
Manipur	172	119	78	75	45	50	92	120	128	42
Tripura	0	145	45.36	140.45	60	0	160	55	0	0
<b>EHR</b>	<b>164.43</b>	<b>112.44</b>	<b>84.01</b>	<b>80.31</b>	<b>83.41</b>	<b>83.4</b>	<b>152.02</b>	<b>115.27</b>	<b>71.21</b>	<b>93.61</b>

Source: Field work, 2021

As regard to the extended SNA activities like fetching of fruits, leafy vegetables, wood, grass, water, and plants in the IHR, it was found that the participation rate of women was highest for collecting wood (39.61 percent), followed by fetching water (36.30 percent) and fruits and grass from the forest (35.59 percent). If we compare the female participation between the western HR and the eastern HR, it is found that it is much higher in the western region. At a disaggregate level in the western region, the participation rate was highest in Himachal Pradesh at 64.96 percent,

followed by Uttarakhand at 62.77 percent and Jammu at 42.42 percent in fetching of fruits, grass, and plants. As regard to collecting of firewood, it was highest in Uttarakhand at 58.31 percent, followed by Jammu at 53.14 percent and Kashmir at 50.89 percent. Further, with regard to fetching of water, the participation rate was highest in the state of Himachal Pradesh at 83.82 percent. In the eastern HR, for the collection of fruits and plants from forests the participation rate was highest in the state of Nagaland at 66.59 percent, followed by Assam at 66.00 percent. Whereas for collecting wood from the forest, the participation rate was highest in the state of Assam at 80.77 percent, followed by Arunachal Pradesh at 57.18 percent and Nagaland at 40.68 percent. Regarding fetching of water, the female participation rate in the eastern HR was highest in Arunachal Pradesh at 57.18 percent, followed by Meghalaya at 55.83 percent and Assam at 50.00 percent (Table: 5.2).

Thus, we see that despite the fact that the government has implemented *Ujjwala* Scheme, it was observed that in the hilly regions, the majority of the women still use wood as a medium for cooking both in the western and eastern regions. Lack of cash and irregular supply of gas cylinders were the main reasons to use wood for cooking purposes. Further, they also required wood for heating purposes to keep themselves warm during the winters. The outreach of piped water has not been implemented successfully in the Indian Himalayan region as women still walk long distances to collect drinking water in many of the surveyed states. The Jal Jeevan Mission (*Har Ghar Jal Yojna* scheme) could play an important role in delivering the piped water accessibility mainly to households residing in high altitude regions of IHR.

It was further observed that in the Extended SNA activities like household maintenance and management and as caregivers, the participation of women in the IHR was the highest in household chores like cooking and serving, followed by cleaning, washing, and as caregivers. The participation rate of women from the eastern HR in these activities was higher than their counterparts in the western HR. At a disaggregate level, in the western region, it was highest in the state of Himachal Pradesh, followed by Jammu and Uttarakhand. In contrast, in the eastern region, it was highest in the state of Meghalaya, followed by Sikkim & West Bengal and Nagaland (Table:5.2).

*The study observed that women spend a considerable amount of their time in collecting and producing the basic needs of the household in the form of food, water, and energy, which is vital for the survival of the households.*

They also spend a substantial amount of their time doing the household chores and as caregivers by looking after the sick, elderly, and children. Most of these activities are performed in the unpaid category, rarely recognized.

**Table 5.3: Overall participation of Females in SNA and E-SNA activities in IHR**

Region/State	Overall participation in SNA activities (in per cent)	Overall participation in E-SNA activities (in per cent)
	Total females in SNA activities	Total females in E-SNA activities
<b>INDIAN HIMALAYA</b>		
<b>Indian Himalayan Region</b>	87.89	93.42
<b>WESTERN HIMALAYA</b>		
Ladakh	47.39	42.48
Jammu	93.16	99.09
Kashmir	52.37	57.62
Himachal Pradesh	100.00	100.00
Uttarakhand	94.38	99.95
<b>Western Himalayan Region</b>	85.49	89.27
<b>EASTERN HIMALAYA</b>		
Sikkim & West Bengal	94.69	99.75
Assam	58.77	80.46
Meghalaya	99.51	100.00
Arunachal Pradesh	95.28	100.00
Nagaland	90.50	94.06
Manipur	97.81	99.90
Tripura	67.75	95.25
<b>Eastern Himalayan Region</b>	89.96	97.00

Source: Field Work, 2021

The overall participation rate of females in SNA (87.89 percent) and E-SNA (93.42 percent) activities in the IHR was found to be very high. The female participation in the eastern HR in both the categories was marginally higher than the western HR. At a disaggregate level, in the western region, it was highest in the state of Himachal Pradesh at 100.00 percent, followed by Uttarakhand at 94.34 percent and Jammu at 93.16 percent, while in the eastern region it was highest in the state of Meghalaya at 100 percent, followed by Manipur and Arunachal Pradesh (Table: 5.3).

#### **Gender-Based participation in the Indian Himalayan Region**

To know the gendered division of labour in the Indian Himalayan Region, it was essential to see the amount of time spent by both men and women in various economic and non-economic activities under the SNA, ESNA, and Non-SNA categories.

**Table 5.4: Gender-based participation in Primary activities**

Region/State	Gender-based participation of rural communities in Primary activities									
	Crop Farming, Kitchen Gardening etc.		Animal Husbandry/animal care		Fishing, Forestry, Horticulture Gardening		Processing and storage		Mining, quarrying, digging, cutting, etc.	
	F	M	F	M	F	M	F	M	F	M
<b>INDIAN HIMALAYA</b>										
<b>Indian Himalayan Region</b>	<b>66.97</b>	<b>34.89</b>	<b>52.52</b>	<b>12.62</b>	<b>3.88</b>	<b>1.92</b>	<b>3.05</b>	<b>1.07</b>	<b>1.53</b>	<b>1.40</b>
<b>WESTERN HIMALAYA</b>										
Ladakh	39.22	8.17	28.76	12.42	1.96	6.54	16.67	2.94	0.98	0.00
Jammu	45.32	16.93	55.70	7.24	0.57	0.57	2.74	0.74	0.29	0.00
Kashmir	49.48	30.70	0.96	0.52	0.00	0.00	0.22	0.07	0.22	0.07
Himachal Pradesh	91.91	40.80	93.11	18.92	2.28	1.08	0.00	0.00	0.00	0.00
Uttarakhand	56.08	29.18	88.75	6.99	0.51	0.00	5.78	0.00	0.00	0.00
<b>Western Himalayan Region</b>	<b>60.27</b>	<b>28.41</b>	<b>62.51</b>	<b>8.99</b>	<b>0.92</b>	<b>0.69</b>	<b>3.02</b>	<b>0.32</b>	<b>0.15</b>	<b>0.01</b>
<b>EASTERN HIMALAYA</b>										
Sikkim & West Bengal	62.84	31.48	55.06	22.10	2.22	0.25	2.47	0.00	0.00	0.00
Assam	86.00	61.23	83.85	13.08	7.08	2.77	0.00	0.00	0.00	11.85
Meghalaya	90.14	72.22	39.31	28.61	0.00	0.00	16.04	3.13	0.21	0.00
Arunachal Pradesh	62.69	25.74	53.84	13.10	7.73	1.06	0.00	0.00	3.70	1.67
Nagaland	83.00	29.18	32.81	5.05	0.97	0.74	0.00	0.00	0.30	0.22
Manipur	64.99	34.16	41.58	25.12	16.37	8.56	0.29	0.57	13.04	9.42
Tripura	61.00	42.75	3.00	1.38	14.50	12.88	0.00	11.38	0.00	0.00
<b>Eastern Himalayan Region</b>	<b>72.77</b>	<b>40.48</b>	<b>43.87</b>	<b>15.77</b>	<b>6.44</b>	<b>2.98</b>	<b>3.08</b>	<b>1.72</b>	<b>2.71</b>	<b>2.60</b>

Note: F= Female, M = Male

Source: *Field Work, 2021*

The gendered participation rate in the IHR is highly skewed towards women. In SNA primary activities, the participation of females is much higher than the male members of the household in crop farming, animal husbandry, fishing and gardening. Further, the participation rate of both the males and females in the eastern HR is much higher than the western HR. The gender gap in the participation rate is much higher in the western region than in the eastern region. At a disaggregate level, in the western region, the state of Himachal Pradesh has the highest participation rate for both genders. In contrast, in the eastern region, it is highest in the state of Meghalaya (Table: 5.4).

**Table 5.5: Gender-based participation in Secondary and Tertiary activities**

Region/State	Gender-based participation of rural communities in Secondary and Tertiary activities									
	Construction Activities		Manufacturing Activities (Household)		Trade and Business		Services		Community Organized Constructions and repairs of building	
	F	M	F	M	F	M	F	M	F	M
<b>INDIAN HIMALAYA</b>										
<b>Indian Himalayan Region</b>	9.55	8.81	3.12	1.68	8.13	2.91	13.33	5.08	2.99	1.54
<b>WESTERN HIMALAYA</b>										
Ladakh	0.00	0.00	13.40	3.59	0.98	0.65	1.63	1.31	14.38	6.86
Jammu	0.00	0.00	4.85	0.97	0.40	0.17	0.63	0.23	3.71	3.14
Kashmir	0.22	0.15	0.22	0.15	2.00	1.11	2.66	5.62	0.00	0.00
Himachal Pradesh	53.79	35.90	1.54	0.40	1.14	0.46	7.29	2.11	0.00	0.00
Uttarakhand	0.00	0.00	1.87	0.30	3.04	0.76	3.85	2.08	0.46	0.46
<b>Western Himalayan Region</b>	13.26	8.85	2.70	0.60	1.64	0.60	3.58	2.27	1.65	1.19
<b>EASTERN HIMALAYA</b>										
Sikkim & West Bengal	5.43	2.72	3.70	0.37	12.22	2.47	23.21	20.99	0.00	0.00
Assam	2.62	2.31	4.00	2.00	26.31	18.92	28.92	24.00	0.00	4.15
Meghalaya	0.00	0.00	0.00	0.00	4.58	1.39	66.94	3.47	0.00	0.00
Arunachal Pradesh	0.00	0.00	1.20	0.19	4.07	1.16	12.27	2.69	13.01	0.56
Nagaland	0.59	0.52	0.45	0.07	0.45	0.15	0.82	0.45	0.00	0.00
Manipur	43.20	56.80	7.90	8.75	56.04	10.66	8.09	8.56	5.90	10.75
Tripura	0.00	10.38	14.50	12.88	14.50	12.88	12.00	11.38	0.00	0.00
<b>Eastern Himalayan Region</b>	6.33	8.77	3.48	2.62	13.74	4.90	21.76	7.52	4.15	1.84

Note: F = Female, M = Male

Source: Field Work, 2021

Even in the case of secondary and tertiary activities, the female participation rate was much higher than that of males in the IHR. In the western HR, in all the activities, the participation of women was higher than that of the males, while in the eastern HR, apart from construction activities, the participation rate of females in all other activities was higher than that of males. At a disaggregate level, in the western region, the state of Himachal Pradesh had the highest participation rate for both males and females. In contrast, in the eastern region, it was the state of Manipur which had a high participation rate compared to other states of the region (Table: 5.5).



**Table 5.6: Gender-based participation of Rural Communities in E-SNA Activities**

Region/State	Gender-based participation of rural communities in fetching fruits, water& plants					
	Fetching fruit, grass, leaves etc		Collecting firewood		Carrying water	
	Female	Male	Female	Male	Female	Male
<b>Indian Himalayan Region</b>	<b>33.52</b>	<b>8.88</b>	<b>39.42</b>	<b>9.36</b>	<b>31.71</b>	<b>7.77</b>
<b>WESTERN HIMALAYA</b>						
Ladakh	37.58	17.32	13.40	5.56	10.46	7.19
Jammu	31.36	5.93	42.19	9.41	19.21	3.65
Kashmir	3.40	2.22	50.89	22.71	5.33	1.92
Himachal Pradesh	64.96	9.74	16.75	1.65	83.82	8.38
Uttarakhand	62.77	6.79	58.31	3.39	36.22	14.13
<b>Western Himalayan Region</b>	<b>43.27</b>	<b>6.89</b>	<b>40.81</b>	<b>8.19</b>	<b>36.79</b>	<b>7.53</b>
<b>EASTERN HIMALAYA</b>						
Sikkim & West Bengal	21.73	2.22	25.80	10.37	0.86	0.12
Assam	66.00	37.69	80.77	56.46	50.00	12.00
Meghalaya	9.58	2.43	7.50	4.17	55.83	7.99
Arunachal Pradesh	24.12	2.73	57.18	4.68	37.96	13.10
Nagaland	28.21	3.04	40.68	2.38	16.48	6.46
Manipur	40.63	26.07	47.19	19.51	3.24	5.04
Tripura	0.00	25.50	4.38	1.00	5.50	5.13
<b>Eastern Himalayan Region</b>	<b>25.08</b>	<b>10.61</b>	<b>38.22</b>	<b>10.38</b>	<b>27.32</b>	<b>7.97</b>

Note: F = Female, M = Male

Source: Field Work, 2021

Women in the IHR contribute immensely to the household's food and energy security. In the IHR, the gendered participation rate was heavily inclined toward female participation in the collection of food, firewood, and water. The participation of women was much higher in the western region than in the eastern region of the Himalayas. At a disaggregate level, in the western region, it was highest in the state of Himachal Pradesh, followed by Uttarakhand. In the eastern region, it was highest in the state of Assam, followed by Manipur (Table: 5.6).

Regarding the gendered participation in household maintenance and management, it was found to be heavily skewed towards women in the overall IHR. The participation of females in the eastern HR was higher than the participation of females in the western region. The gender gap in the participation rate was higher in both western and eastern Himalayan regions. It was highest in the case of Jammu, followed by Uttarakhand and Himachal in the western region, while in the eastern region, it was highest in Meghalaya, followed by Tripura and Assam (Table: 5.7).

**Table 5.7: Gender-based participation in Household maintenance and management**

Region/State	Gender-based participation of rural communities in Household maintenance and management							
	Cleaning		Washing Clothes		Repairing household goods		Cooking & serving	
	Female	Male	Female	Male	Female	Male	Female	Male
<b>Indian Himalayan Region</b>	<b>59.04</b>	<b>9.37</b>	<b>56.59</b>	<b>9.70</b>	<b>14.66</b>	<b>3.25</b>	<b>87.19</b>	<b>20.81</b>
<b>WESTERN HIMALAYA</b>								
Ladakh	31.37	3.92	37.91	6.86	14.38	10.13	34.64	17.65
Jammu	69.78	9.64	36.49	10.78	1.71	1.20	89.40	16.70
Kashmir	12.28	5.40	8.06	4.73	0.07	0.00	55.03	29.66
Himachal Pradesh	59.77	5.93	96.47	0.00	85.81	12.19	99.94	14.99
Uttarakhand	60.49	12.06	41.64	17.27	1.52	1.27	91.84	21.43
<b>Western Himalayan Region</b>	<b>52.22</b>	<b>8.35</b>	<b>47.33</b>	<b>8.61</b>	<b>22.56</b>	<b>4.08</b>	<b>83.81</b>	<b>20.08</b>
<b>EASTERN HIMALAYA</b>								
Sikkim & West Bengal	74.44	14.94	75.06	7.53	0.12	0.00	98.40	4.94
Assam	58.77	19.08	52.62	8.62	42.92	9.08	77.85	4.46
Meghalaya	99.79	9.72	92.50	6.46	0.00	0.00	89.86	28.82
Arunachal Pradesh	51.20	3.66	80.74	5.51	13.01	1.53	99.81	4.40
Nagaland	52.12	5.05	32.07	13.29	1.11	0.97	89.76	48.40
Manipur	50.14	16.56	56.04	10.66	6.66	9.99	125.02	41.48
Tripura	75.63	17.63	36.00	32.38	0.00	0.00	20.75	12.88
<b>Eastern Himalayan Region</b>	<b>64.93</b>	<b>10.26</b>	<b>64.60</b>	<b>10.64</b>	<b>7.82</b>	<b>2.54</b>	<b>90.12</b>	<b>21.43</b>

Source: Field Work, 2021

**Table 5.8: Gender-based participation in Care of child, sick, elderly and disabled of household**

Region/State	Gender-based participation of rural communities in Care of children, the sick, elderly and disabled of own household					
	Child Care		Teaching Children		Caring sick	
	% age of females participating	% age of males participating	% age of females participating	% age of males participating	% age of females participating	% age of males participating
<b>Indian Himalayan Region</b>	<b>42.05</b>	<b>9.79</b>	<b>4.80</b>	<b>1.77</b>	<b>12.33</b>	<b>3.53</b>
<b>WESTERN HIMALAYA</b>						
Ladakh	43.14	5.23	15.03	3.27	22.55	1.63
Jammu	61.35	3.93	2.85	1.43	9.18	1.94
Kashmir	5.84	2.51	0.22	0.00	50.81	20.27
Himachal Pradesh	96.75	11.62	12.82	2.56	21.20	4.05
Uttarakhand	49.34	7.45	1.37	1.06	17.73	2.68
<b>Western Himalayan Region</b>	<b>55.44</b>	<b>6.58</b>	<b>4.92</b>	<b>1.41</b>	<b>22.95</b>	<b>6.12</b>
<b>EASTERN HIMALAYA</b>						
Sikkim & West Bengal	21.11	4.32	4.20	0.86	3.21	0.37
Assam	3.38	5.23	4.46	18.92	10.31	8.15
Meghalaya	49.03	13.19	18.33	1.04	3.54	0.28
Arunachal Pradesh	33.66	14.17	0.60	0.09	2.55	0.56
Nagaland	18.19	2.75	0.74	0.59	1.11	0.15
Manipur	59.94	40.06	3.62	1.52	4.28	3.04
Tripura	2.00	1.88	0.00	0.00	0.00	0.00
<b>Eastern Himalayan Region</b>	<b>30.48</b>	<b>12.57</b>	<b>4.70</b>	<b>2.07</b>	<b>3.14</b>	<b>1.28</b>

Source: Field Work, 2021

As caregivers of children, elderly, sick, and disabled, females' participation was much higher than their male counterparts in the IHR. The participation was higher in the western HR compared to the eastern HR. At a disaggregate level, in the western region it was highest in the state of Himachal Pradesh, followed by Jammu, while in the eastern region, it was highest in Manipur, followed by Meghalaya (Table: 5.8).

### **Time contribution of Women in various SNA and E-SNA Activities in the IHR**

Women in the Indian Himalayan region spend a considerable amount of their time in agriculture-related activities. The agriculture practised in this part of the region is very labour intensive, hence it is found that the participation of women both in terms of time and numbers is very high (Upadhyay, 2011; Upadhyay and Gurung, 2016).

Table 5.9 shows the per day time distribution of women's work to SNA primary activities on an average basis in the surveyed Himalayan region of India. The data clearly shows that the women in the IHR contribute more than 9 hours in primary SNA activities. At a disaggregate level, they spend around 3 hours per day in crop farming, kitchen gardening, followed by 1.7 hours per day in animal husbandry related activities, another 1.5 hours in fishing, forestry, horticulture, gardening, and another 1.5 hours per day in processing and storage and further, around 1.4 hours in mining and quarrying activities. Thus, we see that a substantial amount of their time is spent in SNA primary activities, which is mostly under the unpaid category. When we segregate the data into the western and eastern HR, we find that the women in the eastern HR spend as high as 10 hours per day in SNA primary activities, whereas the women in the western HR spend close to seven hours per day in the said activities.

At a disaggregate level in the western HR, women spend around 1.9 hours per day in crop farming kitchen gardening followed by 1.7 hours in animal husbandry activity, 2 hours in fishing, forestry, horticultural related activities, and 1.5 hours in processing and storage. While in the eastern HR, on an average, women spend 4 hours per day in crop farming, kitchen gardening activities, followed by 1.8 hours in animal husbandry activities, 1.4 hours in fishing, forestry-related activities, 1.5 hours in processing and storage, and 1.4 hours in mining and quarrying.

Table 5.9 also shows the time distribution of women in the Himalayan region in percentage terms. In the IHR, we observe that women spend a significant percentage of their time, i.e., around 33 percent in crop farming, kitchen gardening, followed by 18.66 percent in animal husbandry, 16 percent in fishing, forestry, another 16.29 percent in processing and storage and 14.8 percent of their time in mining and quarrying related activities. On the other hand, in the western HR, women spend around 25 percent of their time in crop farming activities, followed by 23 percent on animal husbandry, 28 percent on fishing forestry, 20 percent on processing and storage, and around 2 percent in mining and quarrying related activities. In the eastern HR, women spend as high as near 40 percent of their time in crop farming-related activities, approximately 18 percent in animal husbandry, 13.67 percent in fishing and forestry, 15 percent in processing and storage and about 14 percent in mining and quarrying related activities.

*Thus, we see that women of the Indian Himalayan Region spend a considerable amount of their time in SNA primary related activities. While in the eastern HR, they spend a significant component of their time in crop farming, in the western HR, activities related to animal husbandry, fishing and forestry are more dominant.*

**Table 5. 9: Time distribution of Women in SNA Primary activities**

Region /State	Women per day Average minutes contributed in primary SNA activities (in minutes)					Percentage wise distribution of Women time contributed per day within primary SNA activities (%)				
	Crop Farming, Kitchen Gardening	Animal Husbandry /animal care	Fishing Forestry Horticulture, Gardening	Processing and storage	Mining, quarrying, digging, cutting, etc.	Crop Farming Kitchen Gardening etc.	Animal Husbandry/ animal care	Fishing, Forestry, Horticulture, Gardening	Processing and storage	Mining, quarrying, digging& cutting
<b>INDIAN HIMALAYA</b>										
<b>IHR</b>	<b>189.80</b>	<b>104.78</b>	<b>92.39</b>	<b>91.46</b>	<b>83.14</b>	<b>33.80</b>	<b>18.66</b>	<b>16.45</b>	<b>16.29</b>	<b>14.80</b>
<b>WESTERN HIMALAYA</b>										
Ladakh	10.12	42.3	101.23	32.25	0	5.44	22.75	54.45	17.35	0.00
Jammu	38.56	55.33	160.75	78.18	10.44	11.23	16.12	46.83	22.78	3.04
Kashmir	275	275	0	120	0	41.04	41.04	0.00	17.91	0.00
Himachal Pradesh	74.4	76.2	138.4	0	0	25.74	26.37	47.89	0.00	0.00
Uttarakhand	133.85	156.35	159	93.16	0	24.68	28.83	29.32	17.18	0.00
<b>WHR</b>	<b>114.37</b>	<b>102.20</b>	<b>127.07</b>	<b>89.02</b>	<b>10.44</b>	<b>25.81</b>	<b>23.06</b>	<b>28.68</b>	<b>20.10</b>	<b>2.35</b>
<b>EASTERN HIMALAYA</b>										
Sikkim & West Bengal	90.74	109.04	61.88	51.97	0	28.93	34.77	19.73	16.57	0.00
Assam	322.08	163.84	138.89	0	0	51.55	26.22	22.23	0.00	0.00
Meghalaya	352.6	60.21	0	60.52	360	42.31	7.23	0.00	7.26	43.20
Arunachal Pradesh	173.64	110.89	60.73	0	60.73	42.77	27.31	14.96	0.00	14.96
Nagaland	253.4	91.8	34.23	350	360	23.26	8.43	3.14	32.13	33.04
Manipur	227	112	121	172	0	35.92	17.72	19.15	27.22	0.00
Tripura	190.4	102.7	90.5	0	0	49.64	26.77	23.59	0.00	0.00
<b>EHR</b>	<b>241.78</b>	<b>108.17</b>	<b>83.48</b>	<b>92.29</b>	<b>84.81</b>	<b>39.60</b>	<b>17.72</b>	<b>13.67</b>	<b>15.12</b>	<b>13.89</b>

Note: IHR=Indian Himalayan region; WHR=Western Himalayan region; EHR=Eastern Himalayan region

Source: Field Work, 2021

**Table 5. 10: Time distribution of Females in SNA Secondary and Tertiary activities**

Region/State	Women per day time contributed in SNA secondary activities (In minutes)		Women per day time contributed in SNA tertiary activities (In minutes)		
	Construction Activities	Manufacturing Activities (Household)	Trade and Business	Services	Community Organized Constructions and repairs: building
<b>INDIAN HIMALAYA</b>					
<b>Indian Himalayan Region</b>	<b>316.70</b>	<b>151.04</b>	<b>219.09</b>	<b>193.47</b>	<b>89.13</b>
<b>WESTERN HIMALAYA</b>					
Ladakh	0	121.55	69.13	230.14	40.58
Jammu	0	160.55	135.55	300	110.52
Kashmir	85	96	209	367	0
Himanchal Pradesh	330	150	288	300	0
Uttarakhand	0	124.86	233.5	246.31	160.1
<b>Western Himalayan Region</b>	<b>329.22</b>	<b>143.81</b>	<b>225.95</b>	<b>292.24</b>	<b>91.75</b>
<b>EASTERN HIMALAYA</b>					
Sikkim & West Bengal	102.95	64	137.25	109.39	0
Assam	180	144.86	261.6	216.57	0
Meghalaya	0	0	333.64	131.86	0
Arunachal Pradesh	0	131.54	140.51	260.38	0
Nagaland	300	300	216.59	456.59	46.83
Manipur	0	34	145	142	0
Tripura	0	140.82	250	280	0
<b>Eastern Himalayan Region</b>	<b>144.78</b>	<b>156.03</b>	<b>217.82</b>	<b>179.25</b>	<b>46.83</b>

Source: Field Work, 2021

Table 5.10 shows the time distribution of women under SNA secondary and Tertiary activities, which consists of construction and manufacturing-related activities and trade and services. In IHR, women spent around 5 hours in construction and 2.5 hours in household manufacturing activities. In the western HR, women spent about 5.4 hours in construction and 2.4 hours in household manufacturing activities. At a disaggregate level, it is the women from the state of Himachal Pradesh followed by Kashmir, Jammu, and Uttarakhand who spend relatively higher number of hours in SNA secondary related activities. On the other hand, women in the eastern HR spent 2.4 hours in construction activities and 2.6 hours in-household manufacturing related activities. The women from Nagaland in the eastern region spend much more time in these activities, followed by Assam, Sikkim, and West Bengal.

The time distribution of women in SNA tertiary activities in the IHR shows that women spend around 3.7 hours per day in trade and business-related activities, followed by 3.2 hours in services and 1.5 hours in community-organized construction-related activities.

In western HR, women spend 3.8 hours per day in trade and business-related activities, 4.9 hours in service-related activities, and 1.5 hours in community-organized construction activities per day. At a disaggregate level, women from the state of Uttarakhand, followed by Himachal Pradesh, Kashmir, and Jammu, spend more of hours in SNA tertiary-related activities. On the other hand, in the eastern HR, women spent 3.6 hours in trade and business, 3 hours in services, and around 0.8 hours in community-organized construction-related activities per day. As far as the states from the eastern region are concerned, women from Nagaland spend the highest number of hours followed by Tripura, Assam, and Meghalaya in SNA tertiary related activities.

**Table 5. 11: Percentage wise distribution of Women time per day in SNA tertiary activities**

Region/State	Percentage wise distribution of Women time contributed per day in tertiary SNA activities (%)		
	Trade and Business	Services	Community Organized Constructions and repairs: building
<b>INDIAN HIMALAYA</b>			
<b>Indian Himalayan Region</b>	<b>43.67</b>	<b>38.56</b>	<b>17.77</b>
<b>WESTERN HIMALAYA</b>			
Ladakh	20.34	67.72	11.94
Jammu	24.82	54.94	20.24
Kashmir	36.28	63.72	0.00
Himachal Pradesh	48.98	51.02	0.00
Uttarakhand	36.49	38.49	25.02
<b>Western Himalayan Region</b>	<b>37</b>	<b>48</b>	<b>15</b>
<b>EASTERN HIMALAYA</b>			
Sikkim & West Bengal	55.65	44.35	0.00
Assam	54.71	45.29	0.00
Meghalaya	71.67	28.33	0.00
Arunachal Pradesh	35.05	64.95	0.00
Nagaland	30.08	63.41	6.50
Manipur	50.52	49.48	0.00
Tripura	47.17	52.83	0.00
<b>Eastern Himalayan Region</b>	<b>49.07</b>	<b>40.38</b>	<b>10.55</b>

Source: Field Work, 2021

Table 5.11 shows the percentage distribution of women's work time per day in SNA tertiary-related activities. In the IHR, women spend as high as around 43 percent of their time on trade and business-related activities per day. In contrast, they spend about 38 percent of their in service-related activities, time followed by 17 percent of their time in community-organized construction and repair activities. In the western HR of India, in a day, a woman spends 37 percent of her time in trade and business-related activities, 48 percent on service, and 15 percent on community-organized construction activities. Women from Himachal Pradesh, Uttarakhand, Kashmir, Ladakh, and Jammu spend a higher percentage of their time in these activities. On the other hand,

in the eastern front, women spent nearly 49 percent of their time in trade and business-related activities, 40 percent in services, and about 11 percent in community-organized construction and repair activities. Among the states from the eastern region, women in Meghalaya spend the highest percentage of their time in trade and business-related activities, followed by Sikkim and West Bengal. While in services, women from Arunachal Pradesh, followed by Nagaland and Tripura, spend a higher percentage of the time in these activities (Table: 5.11).

**Table 5.12: Time distribution of women in various E-SNA Activities in the Indian Himalayan Region**

Region/State	Women's per day time distribution in various E-SNA activities (in minutes)									
	Cleaning	Washing Clothes	Repairing household goods	Cooking & serving	Child Care	Teaching Children	Caring sick	Fetching fruit, grass, leaves	Collecting firewood	Carrying water
<b>INDIAN HIMALAYA</b>										
<b>Indian Himalayan Region</b>	<b>71.38</b>	<b>68.3</b>	<b>47.05</b>	<b>154.94</b>	<b>91.61</b>	<b>63.28</b>	<b>67.48</b>	<b>104.73</b>	<b>109.23</b>	<b>68.51</b>
<b>WESTERN HIMALAYA</b>										
Ladakh	50.22	30.3	60.2	100	61.45	45	45.52	37	46.36	33.24
Jammu	66.44	40.22	80.2	130.33	82.55	85	60.11	57.68	90.55	72.27
Kashmir	132	120	40	310	133	36	85	69	125	106
Himachal Pradesh	40.8	50.4	30.6	178.2	46.2	40.2	21	39	61.2	31.2
Uttarakhand	56.61	37.1	72	112.06	94.25	86.67	68.57	87.68	120.4	81.27
<b>Western Himalayan Region</b>	<b>58.92</b>	<b>46.51</b>	<b>33.78</b>	<b>158.5</b>	<b>70.12</b>	<b>53.54</b>	<b>63.4</b>	<b>62.23</b>	<b>106.07</b>	<b>52.62</b>
<b>EASTERN HIMALAYA</b>										
Sikkim & West Bengal	39.85	66.07	60	59.38	94.5	76.25	70	51.87	48.98	63
Assam	128.34	121.31	115.48	213.53	161.3	125.25	154.76	177.76	176.53	200.63
Meghalaya	56.01	58.94	0	102.57	107.17	55.34	120	61.96	115.28	59.96
Arunachal Pradesh	80.32	121.03	55.52	167.12	124.54	83.03	76.36	94.2	78.85	65.63
Nagaland	91.06	55.37	45	227.14	99.76	1.39	3.41	235.41	143.82	100.78
Manipur	75	45	50	92	120	128	42	172	119	78
Tripura	140.45	60	0	160	55	0	0	0	145	45.36
<b>Eastern Himalayan Region</b>	<b>80.31</b>	<b>83.41</b>	<b>83.4</b>	<b>152.02</b>	<b>115.27</b>	<b>71.21</b>	<b>93.61</b>	<b>164.43</b>	<b>112.44</b>	<b>84.01</b>

Source: Field Work, 2021



Table 5.12 shows the time contributed by women in the Himalayan region under the extended SNA activities in a day. On average, they spent around 13 hours a day in various ESNA activities.

It was observed that women in the IHR spend around four hours collecting water, wood, fruits and vegetables in a day. At a disaggregate level, they spend about 1.7 hours fetching fruits, grass, leafy vegetables from the jungle. Similarly, they also spend 1.8 hours collecting wood for household purposes and an additional 1-hour for fetching water.

In the surveyed villages of the western H.R it was found that women spent 1-hour fetching fruits, grass, another 1.8 hours in the collection of firewood for the household, and approximately 1-hour carrying water for household purposes. At a disaggregate level, the highest amount of time in these activities was spent by women from Uttarakhand, followed by Kashmir, Jammu, and Ladakh. On the other hand, women in the eastern HR spend 2.7 hours fetching fruits and grass, 1.9 hours collecting firewood and 1.4 hours carrying water for the household. The contribution of women in extended SNA activities in terms of time was highest for the state of Assam, followed by Nagaland and Manipur in the eastern HR.

Table 5.12 also shows in detail the time women spend on household chores and as caregivers at home in a day in the IHR. They spend around 9 hours a day on these extended-SNA activities. At a disaggregate level, they spend 1.19 hours per day cleaning the household, around 1.14 hours washing clothes, and around 0.78 hours repairing the household. Further, the women also spend about 2.5 hours per day cooking and serving food, 1.5 hours in child care, 1 hour in teaching and guiding children, and another 1.1 hours as caregivers for the sick and elderly persons in the household.

In the western HR, the females spend approximately 1 hour in cleaning related activities, 0.7 hours in washing clothes, around half an hour in household repairing activities, about 2.6 hours in cooking and serving related activities, 1 hour in child care and teaching children, and approximately 1 hour as caregivers. While in the eastern HR, women spend 1.3 hours each in cleaning and washing clothes and repairing household goods. Further, they also spend 2.5 hours in cooking and serving food, 1.9 hours in child care, and around one and half hours teaching their children and as caregivers in the household.

*Thus, we see that both in the eastern and western Himalayan region, the contribution of women in terms of time in the extended SNA activities is found to be very high.*

Table 5.13 shows the overall time spent by women in SNA and E-SNA related activities in the Indian Himalayas. In general, in Himalayan region, women on average, spend 2.7 hours per day in the SNA activities and another 1.6 hours in E-SNA activities. At a disaggregate level, the figures reflect that women of the eastern HR spend more time in SNA and E-SNA related activities than women from the western HR. The figures show that in the western HR of India, women, on an average in a day, spend 2.2 hours in SNA activities and 1.4 hours in E-SNA related activities. On



the other hand, in the eastern HR of India, they spent around 3.1 hours in SNA related activities and 1.9 hours in E-SNA activities.

The percentage distribution of time spent by women in SNA and E-SNA-related activities in the IHR shows that women spend 62.28 percent of their time in SNA and 37.72 percent of their time in ESNA-related activities in a day. In the western HR, they spend 61.74 percent of their time in SNA and 38.26 percent in ESNA-related activities in a day. In particular, in the state of Jammu and the union territory of Ladakh, women usually spend more than 60 percent of their time in SNA related activities. Further, women in Himachal Pradesh and Uttarakhand spend more than 50 percent of their time in ESNA-related activities per day. While women in the eastern HR spend 62 percent of their time in SNA activities and 37.95 percent in ESNA-related activities. In Nagaland, Meghalaya, Manipur, and Tripura, women spend more than 50 percent of their time in SNA related activities. On the other hand, women in Arunachal Pradesh, Assam, Sikkim & West Bengal spend more than 50 percent of their time in ESNA-related activities per day (Table: 5.13).

**Table 5.13: Overall time per day (in minutes) and Percentage distribution of time contributed by Women in SNA and E-SNA activities in IHR**

Region/State	Overall, per day time (in minutes) contributed by Women in Various activities		Percentage-wise distribution of time contributed by women within SNA and E-SNA activities	
	SNA activities	E-SNA activities	SNA activities	E-SNA activities
<b>INDIAN HIMALAYA</b>				
<b>Indian Himalayan Region</b>	<b>161.41</b>	<b>97.75</b>	<b>62.28</b>	<b>37.72</b>
<b>WESTERN HIMALAYA</b>				
Ladakh	185.9	116.6	61.45	38.55
Jammu	343.26	220.5	60.89	39.11
Kashmir	292	203	58.99	41.01
Himanchal Pradesh	347.5	393	46.93	53.07
Uttarakhand	253.95	368.4	40.81	59.19
<b>Western Himalayan Region</b>	<b>133.96</b>	<b>82.99</b>	<b>61.74</b>	<b>38.26</b>
<b>EASTERN HIMALAYA</b>				
Sikkim & West Bengal	331.78	374.8	46.96	53.04
Assam	272.02	310.64	46.69	53.31
Meghalaya	457.75	317.58	59.04	40.96
Arunachal Pradesh	232.37	319	42.14	57.86
Nagaland	434.54	234.74	64.93	35.07
Manipur	383.16	347.18	52.46	47.54
Tripura	328.58	245.5	57.24	42.76
<b>Eastern Himalayan Region</b>	<b>183.25</b>	<b>112.08</b>	<b>62.05</b>	<b>37.95</b>

Source: Field Work, 2021

The SNA and E-SNA activities in the Himalayan region are mostly unpaid. Women in the entire Himalayan region spend 4.3 hours per day in both SNA and E-SNA activities on a typical day. In

western HR, women spend 3.6 hours in both the SNA and E-SNA activities in general. Further, in western HR, the time spent by women in the activities varies from one state to another. For example, women in Himachal Pradesh and Uttarakhand spend more than 10 hours in these activities. In eastern HR, women spend around 5 hours in SNA and E-SNA activities per day. In the state of Meghalaya, Sikkim & West Bengal and Nagaland, women spend more than 10 hours a day in both these activities (Table 5.14)

**Table 5.14: Total time contributed by females in SNA and E-SNA activities**

Region/State	Total minutes contributed in SNA and E-SNA activities
	SNA activities + E-SNA activities
<b>Indian Himalayan Region</b>	<b>259.16</b>
<b>WESTERN HIMALAYA</b>	
Ladakh	302.5
Jammu	563.76
Kashmir	495
Himachal Pradesh	740.4
Uttarakhand	607.87
<b>Western Himalayan Region</b>	<b>216.95</b>
<b>EASTERN HIMALAYA</b>	
Sikkim & West Bengal	706.58
Assam	585.19
Meghalaya	773.1
Arunachal Pradesh	551.37
Nagaland	670.28
Manipur	496.27
Tripura	574.08
<b>Eastern Himalayan Region</b>	<b>295.33</b>

Source: Field Work, 2021

#### **Female Work participation rate based on Time Use Survey (TSU)**

The Female work participation in Time Use Survey (TSU) in the Indian Himalayan region was high. The overall high WPR was mainly on account of higher female participation in SNA and Extended SNA activities, which were primarily performed in the agriculture and the allied sector for self-consumption and in the household doing domestic chores and as caregivers, and a variety of other non-marketable household activities.

In the context of the Himalayan region, it is observed that most of these economies are only partially market economies. **Non-market transactions** are still significant in these regions. The work that women do or perform is often overlapping across sectors and activities. Women who work in agriculture, for example, also work in raising livestock, weaving, food processing and even petty trading. Apart from this, other subsistence forms of secondary occupation, such as a

helper mainly in agriculture and allied activities, have also contributed immensely to increasing the percentage of FWPR.

The overall workforce participation rate based on the time use survey, across all the surveyed regions, reveals that it was above 90 percent in nearly all the states, both in the western and eastern HR. In addition, the effective workforce, i.e., who were engaged in economic activity for more than 4 hours a day, was also found to be very high in the Himalayan region. (Table: 5.15).

**Table 5.15: Female Work participation rate based on Time Use Survey (TSU)**

Region/State	Female Work participation rate based on TUS		
	For more than 0 but less than 4 hours	For minimum 4 hours and More	Overall WPR
<b>Western Himalayan Region (WHR)</b>			
Ladakh	39.3	51.14	92.8
Jammu	53.4	72.22	96.34
Kashmir	45.9	54	99.9
Himachal Pradesh	27.52	72.48	100
Uttarakhand	42.6	51.74	94.37
<b>Eastern Himalayan Region (EHR)</b>			
Sikkim & West Bengal	56.2	38.1	94.3
Assam	13.75	84.75	97.5
Meghalaya	4.17	95.35	99.51
Arunachal Pradesh	28.33	56.72	85.04
Nagaland	3.08	90.52	93.6
Manipur	5.27	92	94.06
Tripura	61	80.35	95.1

Source: Field Work, 2021

As per the economic status of the households, it was found that the contribution of women in terms of their time was higher for women who belonged to the BPL and Antodaya category. However, in the States of the eastern HR, it was observed that across the income category, in terms of time, the participation of all women was on the higher side (Table: 5.16).

Table 5.17 shows the time distribution of females as per their economic status in SNA and ESNA activities. It shows that it was higher across all the three income categories in the Himalayan region, namely APL, BPL, and Antodaya. Both in the western and eastern HR, it was high across the three categories, but it was much higher in the eastern HR. This is mainly because the *jhum*

agriculture practised in this part of the Himalayas is very labour intensive, and women in a big way participate in all the agriculture-related activities.

**Table 5.16: Female's per day work time distribution as per their Economic status**

Region/State	Females per day work time distribution as per their Economic status		
	Above Poverty Line (APL)	Below Poverty Line (BPL)	Antodaya
<b>Western Himalayan Region (WHR)</b>			
Ladakh	45.45	320.12	112.11
Jammu	98.38	401.15	202.11
Kashmir	215	290	250
Himachal Pradesh	734.4	753.6	754.2
Uttarakhand	585.59	617.78	668.23
<b>Eastern Himalayan Region (EHR)</b>			
Sikkim & West Bengal	732.29	368.77	654.62
Assam	225.51	135.27	228.86
Meghalaya	746.52	765.02	794.26
Arunachal Pradesh	581.62	566.1	617.96
Nagaland	725.13	256.63	246
Manipur	711.24	245.01	355
Tripura	350.58	266.18	380.4

Source: Field Work, 2021

**Table 5.17: Female's per day work time distribution as per their Economic status in SNA and E-SNA activities**

Region/State	Females per day work time distribution as per their Economic status					
	APL		BPL		Antodaya	
	SNA	E-SNA	SNA	E-SNA	SNA	E-SNA
<b>Western Himalayan Region (WHR)</b>						
Ladakh	45.15	46.23	320.12	185.9	112.11	121.55
Jammu	98.38	150.19	401.15	399.44	201.11	180
Kashmir	245	185	265	195	275	198
Himachal	338.4	396	363.6	390	373.2	381
Uttarakhand	241.22	357.16	261.28	372.26	276.94	406.9
<b>Eastern Himalayan Region (EHR)</b>						
Sikkim & West Bengal	376	356.3	164.83	203.94	290.45	364.17
Assam	306.26	344.03	295.23	328.17	235.26	340.97
Meghalaya	413.84	332.68	445.06	320.99	491.77	307.74
Arunachal Pradesh	111.65	469.97	116.3	449.8	129.07	488.89
Nagaland	216.75	520.5	105	265.5	107	235.5
Manipur	210.24	488.37	112.01	288.34	112	232
Tripura	230.75	456.5	256.58	218.2	306.3	204.2

Source: Field Work, 2021

### **Concluding observations**

In the Himalayan region, the economic transformation has brought about changes in the sectoral composition of output and the occupational structure. Still, this transformation has not been a gender-neutral process for several reasons. Although the overall work participation of females in the Himalayan region has declined, it is too early to say whether it is on account of better educational facilities for women or due to the gradual marginalisation of women from productive activities. Many studies have revealed that women in the hills spend more labour days in farm operations than men. Also, their weekly average time in primary agricultural activities is much more than men in recent years. The women disproportionately share the responsibility of maintaining subsistence agriculture and other allied activities like animal husbandry in the hills. Further, they are also burdened with those tasks and activities that were traditionally performed by the menfolk.

The inadequate recognition of women's contribution in the formal data collection exercises is the most acute in the Himalayan States. The present study is an important intervention which has analysed the gender issues in the region in terms of their work both in the rural and semi-urban areas in terms of work participation rate, well-being and survival, educational attainments, employment patterns and participation in the decision-making process. For various reasons, the economic contribution of women remains systematically under-reported in the official data systems. Women's work is mostly not visible or partially accounted for in the data on workforce participation. Their work also differs according to age, gender, income, occupational group, location, size and family structure. As women's work is primarily for self-consumption, much of their work is not recognised as 'work' in the national income statistics. Through this study, an attempt has been made for the enumeration and valuation of the economic impact of female labour in the hills and to understand the workforce participation, division of labour and women's position in the hills of the Himalayan region.

The study will contribute to the evolution of a policy framework to enhance female participation rate in paid activities besides empowering them by giving due recognition to their economic contribution that extends much beyond their domestic territory.

**THE WAY FORWARD TOWARDS ECONOMIC EMPOWERMENT OF WOMEN****Major concerns and recommendations, suggestions, policy analysis and approach towards economic empowerment of Women****Major concerns in the Indian Himalayan Region (IHR)**

Amidst cultural and ethnic diversity, the Indian Himalayan Region requires an area-specific approach due to the geographic similarities within the region that make it unique from other parts of the country to a great extent. The Himalayan states' geographical, infrastructural, and other vulnerabilities are further aggravated by climate change. The existence of patriarchy has resulted in significant negative impacts on the more vulnerable groups, including the women workforce of these regions (Harris-White et. al., 2009 and 2022). The females play a significant role in livelihood generation and household management through their efforts which are marginally rewarded with monetary gains. However, these efforts are mostly hidden but often result in indirect savings of the rural households. The study has identified various factors which impact the women workforce and labour force and hence act as hurdles in their overall empowerment even after playing a significant role in economic activities. The study identifies the following major concerns which inhibit the income and livelihood generation opportunities for rural women and hinder their economic empowerment.

**Fall in agriculture activities and importance of animal husbandry**

There are emerging issues and concerns in crop farming in the hills beside the age-old problems of price fluctuations and marketing problems. The prominent ones are the intrusion of animals/destruction of agricultural crops (Pandey, L. et.al., 2019), loss of traditional agricultural practices leading to genetic erosion (Maikhuri, R.K. et.al., 1997), and the impact of climate change which has resulted in waning interest towards crop farming further leading to migration. All these factors have limited agricultural activities. In most cases, they have forced the villagers to limit it to areas close to their habitations (to keep a constant watch to avoid crop depredation by animals). They have thus led to a fall in operational landholdings. Hence there is a higher preference among females towards animal husbandry for livelihood generation in the region.

**Higher inclusion but lesser financial integration of rural women**

An issue common in all the Himalayan states, which the study has highlighted is that a very marginal proportion of the female labour force has availed credit facilities (for productive purposes) from formal sources even after having bank account. Access to credit along with its utilization is important to increase self-employment or entrepreneurship and income-generating opportunities for female workers and to further transform their unpaid SNA activities into paid activities. The lack of financial integration even after larger financial inclusion reflects the lack of financial literacy and awareness, which creates issues for females in developing a positive attitude towards availing formal credit for productive purposes. The problems such as documentation and lack of collateral are the other prominent factors behind this lack of financial integration, which

hinder females in these regions from associating themselves with microcredit. Lack of usage of credit facility could also be attributed to under performance of the self-help groups (SHGs) in this region (mainly in the Western Himalayan region) towards facilitating them financial support. Delay in sanctioning of loans and financial mismanagement by SHGs aggravates the problem and restricts the success of credit delivery for females. Further the study identifies that along with financial literacy and inclusion the females should have the need or a valid reason for availing productive credit from formal sources. This need is based on possessing entrepreneurship idea, level of skill and expertise, a plan and its execution power/freedom which is lacking among the females of these regions.

### **Lack of training and skill gaps**

The study observed lack of skills and the presence of substantial skill gaps and low educational status on the one hand, and the existence of underemployment and unemployment among females who have attained higher education on the other. Furthermore, the study shows that low proportion of females have availed training from different sources (government and non-government). A lesser proportion of trained women labour force indicate towards two issues, firstly, the lack of accessibility of such skill enhancing and training course and secondly, the lack of interest towards such courses and programs.

### **Lack of market**

Additionally, with the lack of skills and existence of skill gaps, the study observed the lack of market and inaccessibility to it as a major issue that acts as a barrier in employment and income generation of females in IHR. Furthermore, the study shows the lack of awareness towards the available government support and training, skill generating system/sources, which acts as a major hurdle in extending such services to the rural women of IHR.

### **Increasing domestic work pressure and time poverty**

The domestic work pressure is largely in the form of greater time spent in outdoor and indoor extended-SNA activities where male participation is meager. This further leads to heavy and lengthy working hours for females in areas that do not directly lead to monetized gains. Climate change has also increased the women's time in extended-SNA activities, including fetching water for drinking or domestic use; collecting firewood and fodder for animal husbandry. Drying up of natural water resources, increased forest fires, deforestation, and decrease in fodder has pushed females to work extra hours to meet daily domestic needs, which eventually decreases their time in SNA activities, leading to their being an unpaid workforce. The other concern emerging from the study is the active participation of adolescent girls in such outdoor E-SNA activities along with participating in agriculture and animal care activities which hinders their school education. The study further observes higher participation of females in unpaid activities, which falls in both farm and non-farm sectors.



### Women's workload

The higher time contribution of women in IHR towards carrying E-SNA activities such as fetching water, collecting fodder, fuel wood etc. reduces their time in other economic and non-economic activities, resulting in time poverty. The government has addressed the issue of time poverty with introduction of a popular scheme *Pradhan Mantri Ujjawala Yojana* to reduce their time contributed in collection of fuel wood along with addressing two health concerns *firstly*, associated with carrying heavy work load (in fetching fuel wood) and *secondly*, cooking through fuel wood (higher exposure to smoke).

- The study shows that the Pradhan Mantri Ujjawala Yojana scheme has reached every corner of the rural IHR but still, its effectiveness is reduced (*study shows lesser usage of LPG and higher dependence on fuel wood for cooking*) due to certain factors revealed by the respondents. These factors include higher cost of refills and their lesser paying capacity; delay in supply of LPG cylinders in interior rural regions of IHR and traditional approach towards saving income through usage of freely available fuel wood.
- The study observes the prevalence of traditional social community-based practice among rural women to fetch wood and fodder for animal husbandry, on almost daily basis. This requires social transformation along with awareness generation to limit or reduce such practices.
- The study shows the lack of adoption of green energy alternatives, which could be possible alternatives to LPG and wood.
- Some of the districts in IHR face water shortage which puts an extra work burden on females and children and thus affects their active participation in economic activities or education (mainly in case of children).

### Social concerns

The existence of patriarchy especially in rural regions of West H.R. acts as a hindrance in social empowerment of women. Lack of decision-making, lack of confidence and social dogmas, limitations of property and forest rights limit their decision-making power and affect their participation in the workforce and awareness creation towards government support system developed for their empowerment. The participation of women has increased through government reservation to them but still the inclination of decision making towards males and lack of involvement of women in policy framing (even after being close to natural resources and also facing the direct negative impact of their deterioration) raises concern.

### Climate Change and its Impact

Decrease in fodder availability, lack of fuel wood availability, scarcity of water has enhanced the women time and effort in the activities of collecting/fetching them, which not only impacts their health but also reduces their participation in other income and livelihood generating activities. Climate change has further increased the Human Wild life conflict resulting in crop depredation which again has adversely reduced their interest in agricultural activities. Climate change have



severely impacted the food and nutritional security mainly for the most vulnerable and marginalized groups which includes Women, Children, poor and landless. This further leads to increase in social, economic and gender inequality in these regions.

### Disconnect between women and Natural resources

Rural women in IHR traditionally holds a symbiotic relationship with the natural resources, the study observes the increasing disconnect between them, which has impact on both women and sustainability of natural resources. This disconnect has been largely due to the lack of freedom and consideration of women views in making policies for usage and conservation of natural resources (forest, water etc.) and also due to their decreasing control over the natural resources (mainly due to patriarchal inclination of entire system). This has led to decrease in sense of belonging among rural women towards natural resources and has led to impacts such as deforestation, forest fires, increase in unsustainable usage of forest resources, decrease in traditional methods of water harvesting and conservation etc. The required policy interventions should not be based towards entirely disconnecting the women and natural resources but should be towards making it more gainful for women (economically, socially) along with making it sustainable.

**Table 6.1: Women associated state Specific Issues raising concerns for Women in the Indian Himalayan Region (IHR)**

State/UT	Individual associated Concerns	External concerns and issues
<b>Ladakh &amp; Jammu</b>	<ul style="list-style-type: none"> <li>-Low level of literacy in women.</li> <li>-Lack of awareness of modern Farming techniques.</li> <li>-Lack of awareness about Govt. Schemes and financial assistance.</li> <li>-Higher financial integration but lack of financial inclusion of women in the micro sector.</li> </ul>	<ul style="list-style-type: none"> <li>-Unorganised production and Marketing.</li> <li>-Poor climate mitigation skills.</li> <li>-Average status of coverage of SHG but lesser impact of SHGs in terms of their livelihood generation.</li> <li>-Lack of technology and obsolete methods of wool and food processing.</li> <li>-Dominance of Informal intermediators.</li> </ul>
<b>Kashmir</b>	<ul style="list-style-type: none"> <li>-Very poor financial inclusion</li> <li>-Low literacy rate among rural women, lack of both education &amp; skills</li> </ul>	<ul style="list-style-type: none"> <li>-Poor coverage of SHG with no impact on economic activities.</li> <li>-Women lack the ability to market the local produce.</li> </ul>
<b>Himachal Pradesh</b>	<ul style="list-style-type: none"> <li>-Low participation in economic activities due to high involvement in domestic duties</li> <li>-Low level of education especially in case of decision-making group i.e. above 35 years of age.</li> <li>-Lack of knowledge/technical skills affecting women's participation in service/technical industry.</li> <li>-Poor financial accessibility for self-employment</li> </ul>	<ul style="list-style-type: none"> <li>-Family restrictions/ social pressure acts as a barrier toward employment outside the household/ village.</li> <li>-Inactive role of SHGs in employment generation activities.</li> <li>-High dependency of the family on women for agriculture or allied activities.</li> <li>-Lack of training/ skill institutes in the feeder town affects regular enrolment of the women</li> </ul>

State/UT	Individual associated Concerns	External concerns and issues
<b>Uttarakhand</b>	<ul style="list-style-type: none"> <li>-Poor financial integration of women, reflected in poor rate of micro credit usage.</li> <li>-Higher enrolment but low educational status due to lack of higher educational and technical institutions in hill rural regions</li> <li>-Lack of skills (mainly due to poor accessibility toward such programs)</li> <li>-Time poverty (largely due to meeting energy securities, fodder requirements and water shortage)</li> <li>-Low level of awareness which acts a barrier in their accessibility to government programs and support.</li> <li>-Lack of gender sensitisation.</li> <li>-Poor exposure of women towards enterprises, livelihood options along with lack of self-confidence and motivation</li> <li>-Poor Socio-Economic status of Single/Separated/widowed/disabled women</li> </ul>	<ul style="list-style-type: none"> <li>-Average status of coverage of SHG but lesser impact of SHGs in terms of their livelihood generation</li> <li>-Fall in agriculture and allied activities (mainly due to crop depredation by wild animals) and decreasing sources of livelihood generation.</li> <li>-Loss of traditional agriculture knowledge and crops</li> <li>-Poor climate impact mitigation skills.</li> <li>-Lack of market, and high transportation cost are the major reason for going towards opportunities of entrepreneurship.</li> <li>-Impact of climate change on fall in agriculture productivity, decreasing fodder reserves and supplies, fuel wood supplies and water scarcity.</li> <li>-Poor digital literacy and awareness towards its importance</li> </ul>
<b>Sikkim &amp; West Bengal</b>	<ul style="list-style-type: none"> <li>-Funding bottlenecks, lack of skill enhancement avenues and limited own funds.</li> <li>-Not very sure of the market concerns and access to it.</li> <li>-‘Fast pace changes’ in livelihood in recent is difficult to get along without institutional support</li> </ul>	<ul style="list-style-type: none"> <li>-e-market is good but limited to few, climate variability ushering in swift changes.</li> <li>-Moving to organic agriculture was promising but not profiting.</li> <li>-Introduction of newer species/varieties are mostly for those with relatively deeper pockets as they can absorb climate and market shocks better.</li> <li>-Local women entrepreneur needs synergetic efforts and more hand holdings in production and marketing.</li> </ul>
<b>Assam</b>	<ul style="list-style-type: none"> <li>-Domestic work load: Activities associated with cooking &amp; serving, child care, livestock care, tailoring, weaving, etc. for household use.</li> <li>-Lack essential educational qualification (education level up to middle school), lack of vocational skills and technical education.</li> <li>-Poor knowledge on credit facility and lack of credit facility and usage</li> </ul>	<ul style="list-style-type: none"> <li>-Females having MNREGA job card were not able to get work under MNREGA even after making an attempt to get the work.</li> <li>-Poor irrigation facilities in the fields. Poor knowledge of marketing skills.</li> <li>-Lack of technological transformation in agriculture.</li> <li>-Loss of crops due to improper post-harvest handling and lack of sufficient storage facilities.</li> <li>-Non-availability of fodder and lack of animal health care knowledge.</li> </ul>
<b>Meghalaya</b>	<ul style="list-style-type: none"> <li>-Lack of skills</li> <li>-Lack of credit</li> <li>-Overburdened with both domestic and economic activities</li> <li>-Separated, divorced or widowed women are usually the main or sole earner of their respective families</li> </ul>	<ul style="list-style-type: none"> <li>-Frequent diseases and deaths of reared animals (pigs and poultry)</li> <li>-Lack of water supply in household premises leading to more drudgery for majority of surveyed women.</li> <li>-Firewood is still the main cooking fuel in rural areas. Its increasing scarcity and costly refills of LPG cylinders as well as lack of refill centres compound the problem for women.</li> </ul>

State/UT	Individual associated Concerns	External concerns and issues
		-Lack of market for agricultural produce.
<b>Arunachal Pradesh</b>	<ul style="list-style-type: none"> <li>-High work burden of women in domestic chores and agriculture related activities.</li> <li>-Less representation in decision making bodies.</li> <li>-Very few trading opportunities due to distant and remote location.</li> <li>-Lack of trading facilities and opportunities.</li> </ul>	<ul style="list-style-type: none"> <li>-Discouraging income generation and livelihood experiences as a member of SHG.</li> <li>-Family constraints for participation in SHGs.</li> <li>-Limited subsistence agriculture production.</li> <li>-Limited areas for crop production.</li> <li>-Less opportunity for processing of goods and market.</li> </ul>
<b>Nagaland</b>	<ul style="list-style-type: none"> <li>-Lack of higher and technical education.</li> <li>-Poor status of vocational training.</li> <li>-Lack of finance and financial assistance.</li> <li>-Lack of skill and knowledge in production of quality products.</li> <li>-Major share of time spent in non-economic and non-marketable activities.</li> </ul>	<ul style="list-style-type: none"> <li>-Low engagement of women in MNREGA.</li> <li>-Shift from farm to non-farm activities due to falling agriculture production but being dependent on short term sources of livelihood.</li> <li>-Poor market linkages.</li> <li>-Lack of awareness of Govt. schemes.</li> </ul>
<b>Manipur</b>	<ul style="list-style-type: none"> <li>-Poor financial integration of women, reflected in poor rate of micro credit usage. Providing inclusive financial services, which is affordable is to be implemented in the rural parts of the state.</li> <li>-There is a need for minimum threshold of education that must be achieved before bringing about significant improvements in female autonomy. Of the literate women in India, 59 percent only have primary education or less. This level of education may not be sufficient to meaningfully improve the status of these women.</li> <li>-Lack of skills developments (mainly due to poor participation of rural women toward such programs).</li> <li>-Time poverty due to the unpaid household works including fetching fodder and water shortage.</li> </ul>	<ul style="list-style-type: none"> <li>-Average status of coverage of SHG in urban centers but lesser impact of SHGs in terms of their livelihood generation in rural areas (village levels).</li> <li>-Fall in agriculture activities (mainly due to low income returns) and decreasing sources of livelihood generation.</li> <li>-Loss of traditional agriculture knowledge and crops due to changing scenarios of livelihood.</li> <li>-Skills development among women is to be enhanced.</li> </ul>
<b>Tripura</b>	<ul style="list-style-type: none"> <li>-Poor financial inclusion amongst rural women.</li> <li>-Low literacy rate among rural women, lack of both education &amp; skills.</li> <li>-Poor status of vocational training.</li> </ul>	<ul style="list-style-type: none"> <li>-Average status of coverage of SHG but lesser impact of SHGs in terms of their livelihood generation.</li> <li>-Unorganised production and Marketing.</li> <li>-Lack of technological transformation in agriculture.</li> </ul>

## Major suggestions for the Indian Himalayan Region (IHR)

### Creating an environment for skill generation

To address the lack of guidance for female youth, counselling and consultation Centres for the younger age groups should be set up and facilitated. These Centres can assist them in obtaining adequate education and skills, as well as available opportunities for higher studies. School-going females of the adolescent age group should be provided adequate counseling to make them aware of the various opportunities after passing school and their respective fields in which they could work to excel. The active collaboration and handholding of local schools by regional higher

education and research institutions should create a counseling and consultation ecosystem. Practical exposure of school-going students to higher education and research centres and field exposure to manufacturing hubs/units and successful women-centric ventures in the rural areas is necessary to motivate and inculcate the aspirations among such youth.

### **Skill-set identification, facilitators and local resource mobilization**

With the initiative of the National Skill Development Mission, the skill gaps existing in the different districts of the IHR have been identified. This needs to be further augmented with periodic assessments for identified potential sectors for developing/creating income and employment opportunities for the female labour force.

- The systematic skill needs identification should be based on the community-based group discussions and through interactions with successful local entrepreneurs, organizations, NGOs and training or research centers and other stakeholders working in these regions. Online portal should be developed for voluntarily gathering the different training needs and training, skill enhancement program requirements for any specific region. Autonomous institutions and non-government organizations should be promoted in Mountain regions under STEP (Support to training and employment programme for women), Ministry of Women & Child Development with collaborations with regional Universities, Colleges, polytechnics, ITI's, KVKs and Local self-government.
- It is necessary to identify gaps in trainers' skills and availability in different regions and develop local and regional based human resources for delivering such training. National Skill Development Corporation with support of local NGOs and Academic and Research Universities should conduct such regular offline and online surveys to present the dynamic picture of skill need assessment.
- The framework of skill and training for females should focus on sustainable utilization of natural resources locally available in the region, thereby restricting too much dependency on the market for inputs. The skills should be improved by developing women-centric training centers (with support of STEP, Support to training and employment programme for women) in regional centers like Krishi Vigyan Kendra (KVK), ITI, regional research institutions, etc., and other skill development centers that should prepare a training framework which is need-based, regional resource-centric, and gender sensitized.
- To make the training structure more sustainable in approach, it is essential to catalog and map various indigenous traditional practices in the farm and non-farm sectors that are mainly practiced in the IHR and integrate and align such practices with technological interventions.
- Women's skill development and training centers should also be created in higher educational institutions by delivering skill courses envisaged under NEP. In addition, the successful local women entrepreneurs in different sub-sectors working in these regions should be identified and be mobilized for training purposes.
- In delivering training and skill to females, it is essential to focus on knowledge sharing and experience sharing sessions to a large extent. As a result, the locals have more acceptability to what has generally been successfully followed or practiced in the region. The Successful

women entrepreneurs, workers from different fields should be identified from each development block to support the training facilitators. Block Development Officer and Village Development officers should gather and disseminate such information to training facilitators or trainers.

- Experiences from Bangladesh suggest that direct one-to-one training methods are predominantly ineffective compared to the group and social meeting-based sessions with longer durations along with their implementation and frequent feedback and follow-up<sup>1</sup>. In this regard, the training programs for women should further be carried out in groups rather than one-to-one method and should have longer duration imprints and feedback loops rather than injecting short duration training programs/courses.
- The training should be clustered with technological interventions required to enhance the income-generating capabilities of women in the Indian Himalayan region, but that should be aligned with the traditional regional practices in the farm and non-farm sectors. The study supports the regeneration and promotion of local, traditional regional practices for livelihood generation, which are more sustainable and viable for these regions and directly impact women workers' effort, time and livelihood associated gains. The promotion of organic farm and non-farm produce and a sustainable approach towards utilization of natural resources is the need of the hour in the IHR. The study thus recognizes the role and need of sustainable technological interventions along with models of rural development which are readily acceptable, economical and does not create a disconnect between women and environment or increase their dependence on External markets/agencies for inputs and assistance.

### **Assistance required for enhancing capabilities and accessibility to available resources**

#### **Awareness creation**

- Awareness creation among women about various government schemes/initiatives/support.
- The outreach of MUDRA yojana should be enhanced by increasing the awareness among the women groups and entrepreneurs, which could augment the use of micro credit already available for micro-enterprises/entrepreneurs through micro-credit products such as *Shishu, Kishor* and *Tarun*.
- Mahila Shakti Kendra Scheme, model could play a major role in creating of awareness in rural regions of IHR.
- Women should be made aware and further trained towards methods for transforming their unpaid economic activities to paid activities.

#### **Training packages and facilitators**

- **Creation of integrated training packages which also include:**
  - ❖ financial awareness for easing credit accessibility and creating awareness towards government support/schemes towards a credit (MUDRA Yojana, advantages of Jan Dhan Yojana, etc.)
  - ❖ training them towards effective use and utilization of biomass/green energy.

<sup>1</sup><https://www.cgap.org/blog/has-microcredit-empowered-women-bangladesh-yes-not-itself>

### Training structure to be supplemented

- To make such training programmes more effective, a larger focus should be on knowledge/experience sharing related to livestock management (Success stories) among the villagers at G.P/block/district levels. The successful case studies in livestock should be identified at G.P/Block/District levels; the identified individuals/groups should be trained to be master trainers/community trainers (to lead discussion/experience sharing meetings between the villagers, organized in the form of micro livestock fairs/*melas*). This will have wider acceptability among females and the locals. These discussion/experience sharing meetings should be assisted by district-level agencies, experts and local research and academic institutions.
- The working structure or model of successful cooperatives (with a focus on local success stories) should be shared with the women cooperatives or women social organisations like Mahila Mangal Dal, etc., to develop functional cooperatives for the marketing of agriculture produce.
- The women should be made aware of the expertise of the successful regional institutions such as HARC (Himalayan Action Research Centre); Avani (Kumaon region, Uttarakhand) to develop market linkages and identify the successful strategies for generating livelihood.
- The efforts of organisations such as SEWA and local NGOs should be synergized towards creating trained local human resources in these regions, which can extensively work as community trainers and could support the training and awareness campaign at a mass level in these regions.

#### **Box: 6.1: A Case study on role of local women trainer for rural women empowerment through empowering SHGs**

Smt. Chandrakala Nautiyal (48) of Kolsun village in Chamoli district, Uttarakhand, has attained education up to 12<sup>th</sup> standard. After getting married, she started to take part in training programs organized by government agencies and NGOs, which motivated her to start an SHG in her village. Through it she helped many women to get training in learning new techniques in agriculture and animal husbandry and helped them to earn income through these new techniques. After her success in her SHG, she started to facilitate training to other SHGs with the help of NGOs and other local organisations. Presently, she is coordinating the activities of about 50 active SHGs of 24 Gram panchayats and providing them with the support towards their capacity building. She helps women to collectively market their products in local markets and fairs. She also takes the women of these SHGs to educational field visits to research institutions and successful enterprises. She also set an example for other women by transforming about 200 *Nali* agricultural wastelands (amidst critical scarcity of water) to major sources of earnings through horticulture. She has transformed the lives of many rural women through her hard work and has also shared or disseminated her experiences to other women in the region.

### **Financial integration, Micro Finance and Awareness campaigns**

Besides making them part of all training programs, larger independent awareness drives should be conducted to make women aware of various government women empowerment schemes and employment and livelihood generation programs.

- The awareness drives should focus towards enhancing financial literacy, developing numeracy skills, and train rural women to use of smartphones and IT-enabled equipment.
- The Bank *Sakhi* could financially play an essential role in integrating the female labour force. Bank *Sakhi* should be motivated and leveraged to increase the awareness of rural women towards available credit facilities/formal sources, besides assisting and training them in the primary documentation process required for availing various banking services. Financial literacy should include delivering basic numeracy skills in home budget management or household finance management, online banking methods/processes, increasing savings and practical or productive use of savings.

*Financial inclusion by popularizing microfinance among rural women has strong, successful evidence from Bangladesh. However, the massive success of microfinance is not only contributed by the more extensive acceptability and usage of microcredit but is equally accompanied by the necessary supportive services to females.*

- The supportive services range from community participation-based training to developing entrepreneurship and leadership abilities, which suggest integrating the microcredit with training packages and other assistance (such as awareness creation, assistance in financial transactions etc.) required for running a micro-enterprise which covers the stage of inception of idea to running an enterprise.
- Our study shows that women prefer work in homemade self-employment and lack confidence and awareness of the existence and usage of microfinance sources and their basic rights and power.

*Access to microcredit assists women in livelihood generation, and women who have availed microcredit have larger participation in household decision making. Better control over savings was observed among women borrowers of microcredit (Li, Xia, Christopher Gan, & Baiding Hu., 2011).*

Therefore, SHGs in these regions should be made more viable and functional with collective mobilization of motivation and experience sharing drives for them.

- Revitalizing the SHGs through an experience-sharing model should be done regularly. The district/block level *melas/meets* for SHGs should be conducted to help the different regional SHG members meet and share their stories. This will allow each member to discuss with successful SHGs members, learn from their experiences, and

provide them with the opportunity to make clusters or linkages with such successful SHGs. The successful SHGs should be awarded and acknowledged in such meets/*melas* with the support of district administration.

- The viability of SHGs could not be achieved further unless strong market linkage support is provided to them. This requires learning the marketing strategies and developing clusters and larger regional cooperative formation. Along with such marketing skills, females should be trained to create collection centres/storages and basic accounting skills. Adequate support is also required to create local and regional emporiums in the state by promoting them as a part of cultural and regional/village tourism.

### **Revisiting social transformation approach towards social empowerment of women**

The *Beti Bachao Beti Padhao* program has effectively worked in these regions as reflected by the higher enrolment and lower girl child dropouts from school education. There is a further need to reduce the work burden of young girls mainly from outdoor SNA and E-SNA activities through awareness programs. Simultaneously this section of the young population should be technologically enabled to have easier access to online education. The study observed the lack of stable internet connectivity many villages in IHR, which should be dealt with by promoting private mobile companies with adequate government support.

Although the entire IHR reflects the dominance of patriarchy (based on the number of male-headed households and other factors), its impact has been more noticeable in Western Himalayan Region, especially in Kashmir. Gender sensitization and personality development programs for women is essential in these regions and should be a mandatory part of all the training and skill development programs. To deliver financial aid to households, the government should provide financial or other support in the name of adult female household members as nominated by the household members.

Decision-making capabilities could be enhanced with progress and strengthening of SHGs, women cooperatives, and their stake in land, property rights along with more say in decision making related to natural resources. Further enabling them towards availing credit facility is important for empowerment of women. *Many studies conducted in rural Bangladesh reveal that in the case of women who are borrowers of microcredit their participation in household decision-making is higher.* Furthermore, larger focus and investment in agriculture and household microenterprises gives larger opportunities to perform and develop their capabilities which are essentially required to make them an integral part of the decision-making process within the household and in public platforms.

### **Climate change and approach required**

Rural women face the direct impact of climate change, and they find it hard to adequately respond to its challenges. This reduces their income-generating capabilities and pushes them towards poverty and dependency on employment and income sources that are not aligned to their interest. Rural women use traditional practices for mitigating and adapting to climate changes which often



are not adequate to deal with impact of climate change. To deal with this issue it is important to assist these women with adequate interventions so that traditional practices could be remodified towards dealing with impact of climate change. Rural women should be adequately trained for climate change adaptation strategies with cost effective interventions. Further, to meet the challenges of climate change, it is highly important to make future generations more inclined towards sustainable livelihood approaches. To revive the traditional practices of livelihood generation which are the part of Indian Knowledge system, it is significant to map, catalogue and pass them to future generations in an organized manner. To attain this, it is important to include the knowledge of such practices into the school education curriculum (through revised course structure under NEP).

### **Access to Forests: Its Impact on Women's Empowerment**

Women's nutritional status in the region is linked to their participation in forest-related activities and access to forest resources. Women's access to forests and other Common Property Resources (CPRs) is intrinsically linked to their micro-level strategies for risk minimization, mutual support and solidarity in a high-risk ecological economic context. Along with gradual privatisation of these resources, the food and nutrition security prospects of households in general and the access of women and girls to food and nutrition in particular need to be carefully monitored in future. Thus, we see that access to forests and jhum lands is central for ensuring food, nutrition, livelihood and energy security in IHR. Privatization, commercialization and degradation of forests, all lead to women losing their access to these resources. Women hardly have any control over the money that comes from commercial exploitation of the forests (Upadhyay, 2005). Hence, deforestation has increased the work burden of women in general and poor women in particular (Mitra and Mishra, 2011; Mishra and Mishra, 2012; Upadhyay, 2017 & 2020). Access to these resources along with increase in women control over them goes a long way towards empowering them along with supporting them for earning livelihood.

### **Promoting Integrated farming**

Integrated farming is a sustainable method of generating livelihood with benefits of cost-effectiveness, and also increases the participation of women in income-generating activities. Animal husbandry has always been a women-dominated sector in IHR, and hence integrating it with crop farming will increase the significance and role of women in rural regions. In some cases, integrated farming is helping to boost the productivity and income of farmers, especially in regions that are stressed up due to the larger impact of climate change.

#### **Box 6.2: Paddy-cum-fish cultivation in Arunachal Pradesh: A case of integrated farming**

Apatanis are a relatively small tribe living in and around a compact valley in the Lower Subansiri district of Arunachal Pradesh. They had developed a fairly sophisticated system of wet-rice cultivation. Their land-water management system is a multi-purpose water management system, which integrates land, water and farming methods by protecting soil, conserving water for irrigation and paddy-cum-fish culture which is done mostly by women. Every stream rising from the top of the hills is tapped soon after it emerges from the forest, channelised at the rim of the valley and diverted by a network of primary, secondary and tertiary channels. The first diversion from the stream takes off at a short distance above the terraces. The feeder channel branches off at angles which lead water through the series of terraces so that by blocking or opening the channels ducts (huburs) any field can be flooded or drained. To prevent trash and migration of fish, a semi-circular wooden/bamboo net is installed at the inlet and to reduce beating action of flowing water resulting in soil erosion, wooden sticks or planks are put at the outlet. The huburs are installed about 15 to 25 cm above the bed level of the fields in order to maintain proper water level. They are made of plank or pine tree trunk or bamboo stems of different diameters. Thus, the Apatani tribes' land-water and forest management system brings out the important features of the traditional resource management practices and highlights the traditional integrated farming system prevalent in Arunachal Pradesh.

#### **Reducing women workload and time**

- As already pointed out, the follow up impact of Pradhan Mantri Ujjwala Yojana has been lower among lower income groups due to issues such as delays in supply of LPG in interior rural regions along with problem of one-time payment for new cylinders which often becomes very unaffordable for them. Based on suggestions of locals to make the scheme more acceptable and viable the present study recommends to provide options to rural women to purchase lesser weight LPG cylinders or providing them LPG refilling facility according to their paying capacity.
- The alternate approach towards reducing women dependence solely on forest for fuel wood should be towards popularizing usage of biogas and other sources of green energy which sustains the interaction of locals with available natural resources. The biogas, an alternate solution to energy securities in the rural Himalayan regions has health benefits, social and gender merits and environmental benefits (reducing pressure on forests for wood) along with generation of organic fertilizer, increase crop productivity and promoting organic farming<sup>2</sup>. Further the usage of biogas is largely based on the inputs readily available in these regions which sustains the connect between the rural communities and environment. Government schemes such as GOBAR-DHAN Galvanising Organic Bio-Agro Resources Dhan under Swaccha Bharat Mission could be popularized and leveraged to develop alternative energy sources in rural regions with adequate financial support and training.

*Electricity generation is feasible through pine needles and biomass but to attain a goal of clean cooking fuel, pine bricks need better research for making it ecology friendly as well as sustainable for household purposes mainly in rural regions of IHR<sup>3</sup>.*

- Simultaneously with the support of the Ministry of New and Renewable Energy, REDA (Renewable Energy Development Agency), promoting solar farming and increasing the usage of solar cookers should be encouraged among rural females, thus making renewable energy another economical substitute for firewood.
- The study suggests towards increasing awareness among women regarding negative impact of smoke for them and their family members. The government should promote/popularize the declaration of smokeless houses/villages in the same pattern as ODF free households or villages. There is a need for massive drive towards smokeless household/village mission (In same design as done for successful venture- Swaccha Bharat Mission) which should focus on awareness creation through local educational institutions and NGOs.
- Jal Jeevan Mission (JJM) could play an important role in delivering piped water facility in villages which are under severe water deficit. Government should also support towards regenerating traditional water harvesting and conservation techniques to take care of water deficit in IHR. Rainwater harvesting could be a best practice that should be popularized and implemented in mountain regions of IHR.

### **Development of local markets**

There is a need for development of local markets for women's produce with larger collaborations of locally based SHGs along with imparting them marketing and retailing skills. This is already being done under NRLM and needs to be further strengthened.

- Each Community and Rural development block and nearby urban regions should have at least a few SHG markets which provide the platform to SHG members to market their produce. The local government and administration should facilitate such platforms to the self-help groups which engages in community participation-based marketing of their produce. For personable goods collection centres should be further developed and strengthened with support and collaboration with larger vendors in nearby towns and processing centres.
- There is a need to connect these markets with local women and SHGs through the internet so that they could easily gain the access and services and respond accordingly to the required demand and supply in those markets. Mahila-E-Haat Scheme has very marginal foot prints in IHR and needs to be made more penetrative in rural regions of IHR.
- The government should further support facilitating digital markets to the produce of rural women through assisting them in collaborating with digital marketing platforms. (Recent adopted initiatives such as MoU with Flipkart under NRLM along with formation of "The SARAS collection", an initiative under Government e-Marketplace (GeM) should be further strengthened. The accessibility and usage should be made easier for rural women who are still short of digital

<sup>3</sup> Khuman, Y.S.C., Pandey, R., Rao, K.S., 2011. Fuelwood consumption patterns in Fakot watershed, Garhwal Himalaya, Uttarakhand. Energy 36, 4769–4776. <https://doi.org/10.1016/j.energy.2011.05.011>

<sup>3</sup> Singh, Manya & Ahmad, Laraib & Kumar, Manish. 2020. Feasibility Assessment of Biogas and Evaluating other Alternate Energy Sources in the Mid Mountainous Region of Uttarakhand Final Project Report. 10.13140/RG.2.2.20823.34725.

literacy and usage of technology. There is a need to train the women in usage of internet for collaborating with internal and external markets and suppliers. Mahila Shakti Kendra Scheme model should be used to make aware and train rural women in using digital technology.

### Box 6.3: All Women Market in the Indian Himalayan Region

The best example of success of local market is **Saras Bazar**, which has helped in sustaining the woolen cottage industry in the Munsayari region of Pithoragarh districts of Uttarakhand state. The market also sells herbs, local agricultural products and locally made souvenirs mainly produced by local rural women. Under NRLM-NULM the same model has been adopted and developed in other Community and Rural development blocks such as Bin, Pithoragarh, which will serve rural and urban women, by giving them market for their products along with opportunity to run it on their own.

**Ima Market** in Imphal, Manipur is probably the only market in the world that is totally run by women; a place where equality is preached and practiced. Approximately 6500 women are in the 500-year-old market. Today the shops are no more in the open shed, they have been shifted to three newly constructed government buildings: Ima Market, Laxmi Bazar and the Linthoinganbi Bazar. Khwairamband Bazar is also known as Ima Keithel. In Manipuri Ima means mother and Keithel means market. So, it is known as the mother's market. This unit of women represents the strong foothold of women in the Manipuri society. They stand as glorifying example of an equal society. Any woman irrespective of her background, religion or community can set up a store here. A world that is so intolerant should stand up and take a note from these Imas. Backed by the Imphal Municipality Corporation these newly housed shops have power back-up facilities, banks, food stalls and drinking water. The shift was celebrated with traditional rituals and a religious procession.

**Table 6.2: State specific major recommendations for empowerment of women in IHR**

State/UT	Target area	Recommendations
Ladakh	<ul style="list-style-type: none"> <li>-Training of women and awareness creation towards available sources of support for them.</li> <li>-Financial literacy and microcredit.</li> <li>-To reduce women's time poverty</li> <li>-To provide skill-based training for yak breeding and sheep rearing.</li> </ul>	<ul style="list-style-type: none"> <li>-Female workers need to be made aware of the local, regional and national schemes.</li> <li>-Local NGOs can be helpful in creating awareness.</li> <li>-The Government should facilitate digital markets for promoting women's produce.</li> </ul>
Kashmir	-Training and Micro Credit	<ul style="list-style-type: none"> <li>-Women need training to market the handicrafts, need training regarding modern organic farming.</li> <li>-UT spends approximately 900 crores on egg import annually. As a result, chicken farming is a viable option.</li> <li>-Women need digital literacy, the government through various institutions can organise digital literacy programmes to educate women.</li> <li>-Sunday market is well-known in Kashmir. Similar weekend markets could be set up by the UT government. The market should be dedicated to women.</li> <li>-Women need awareness about various micro credit schemes.</li> </ul>

State/UT	Target area	Recommendations
		-Women of the region should be imparted skill-based training to enable them to be employable in various service-oriented organisations.
<b>Himachal Pradesh</b>	<ul style="list-style-type: none"> <li>-Self-employment/ Entrepreneurship</li> <li>-Activation of dormant SHGs</li> <li>-Developing technical skills</li> <li>-Exclusive microcredit to individual women for agriculture/ animal husbandry</li> <li>-MNREGA</li> </ul>	<ul style="list-style-type: none"> <li>-Exclusive Entrepreneurship Development Programmes (EDPs) for women may be run to boost self-employment and ensure participation in entrepreneurial activities.</li> <li>-SHGs play a significant role in the economic as well as social empowerment of the women, hence, need to be activated dormant SHGs and ensure an active role in employment generation like agri-production, handloom, and handicraft activities.</li> <li>-To exploit the growth opportunities of service sectors like banking, telecommunication, health, education, etc., developing skills especially technical at the access points is the need of the hour. Special drives at the village level under the Skill-India campaign may be run.</li> <li>-MNREGA is generating significant employment opportunities in rural areas which in turn empowers women economically. Hence, working days especially for non-employable families may be increased.</li> </ul>
<b>Uttarakhand</b>	-Skill set requirements and need identification	<ul style="list-style-type: none"> <li>-Identification of skills sets and their regional mapping to have a cluster-based delivery of such skills.</li> <li>-An online portal for rural regions which helps the youth to upload their training requirements and skill needs to run an enterprise. The same portal could assist the trainers and government agencies to directly get the update list of skill needs along with assisting them to develop clusters for delivery of such skill sets.</li> <li>-Local higher educational institutions should be imparted the extension work- community connect program (Under <i>Unnat Bharat Abhiyan</i> etc) for not only creating awareness among the local women but to also identify the skill set requirements and areas in which they require training for improving their livelihood opportunities and income</li> </ul>
	-Skill development and promotion of entrepreneurship (with focus on utilisation of locally available resources).	<ul style="list-style-type: none"> <li>-Integrated self-employment and livelihood generation packages with emphasis on delivery of micro credit along with required skills.</li> <li>-Skills should be towards effective utilisation of available resources and not on resources supplied from external market which increase their market dependency for inputs apart from being costly and not acceptable with locals in long term.</li> <li>-Focus on vocational educational at school level under New Education policy.</li> </ul>
	-Financial literacy and micro credit.	<ul style="list-style-type: none"> <li>-Delivery and easing the accessibility of micro credit.</li> <li>-Financial literacy is needed mainly for women along with easing the delivery of micro credit (delivery of micro credit at doorstep and on the spot) along with easing the repayment of loan for the villagers for developing a habit of repayment.</li> <li>-All skill and training courses should be followed with adequate awareness about and facilitation of instant micro credit and subsequently facility of regular repayment.</li> </ul>

State/UT	Target area	Recommendations
	To reduce women 'time poverty' and increasing energy securities and easing fodder accessibility and availability.	<p>-Larger promotion of solar farming (in barren and uncultivable lands) for reducing women dependence on fuel wood and on LPG.</p> <p>-Focus on solar energy- solar cookers etc.</p> <p>-To popularise and make easy the usage of bio-gas through proper training.</p> <p>-Fodder development through diverting MNREGA activities at largescale towards fodder plantation on common lands.</p> <p>-Implementation of fodder bank at Gram panchayat levels and convergence of <i>Mukhya Mantri Ghasyari yojana</i> with it.</p>
	-Women health and awareness towards harmful impact of smoke and motivating them towards use of clean fuels like LPG.	<p>-Locals consider collection and usage of wood as part of their custom/traditions and also consider the food to be healthier and tastier if cooked by using fuel wood.</p> <p>-Awareness should be increased towards harmful impact of smoke and towards traditional beliefs which not only impact health of women but also save them from time poverty.</p>
	-Climate Change Impact mitigation	<p>-Training of rural women towards climate mitigation strategies- should be brought in education system under NEP 2020.</p> <p>-Developing master trainers at regional level/Gram Panchayat/CDB/village-local level who should be trained towards skills to mitigate the climate change effect.</p>
	-Linkage with markets and developing networks (focus on digital literacy).	<p>-To help women reap the benefits of carrying out their marketing activities in group it is important to develop their networks with other local/regional cooperatives/SHGs etc for which local NGOs and societies could play an active role. Further such networks could also be developed voluntarily by individual women/groups/cooperatives through digital connectivity.</p> <p>-The awareness and knowledge towards using digital technology will has also played an active role in connecting rural women to directly connect with external markets for marketing (positioning and selling) their products.</p>

**Policy Model for Uttarakhand- recommendation for developing Markets for women entrepreneurs and workers:**

Mountain women has progressed well and are involved in various production and cultivation activities but amidst it are dealing with **two major issues**:

**1. Marketing issues** (Where to sell, when to sell, whom to sell and how to transport the produce to the business buyer or directly to consumer)

**2. Lack of networking** (Majority of SHGs are still working in isolation and thus lacks the advantage to enjoy the benefit of group production, processing and selling)

**3. Dealing with the pressure of marketing and producing:**

To deal with these issues there is an urgent need to shift the focus of implementing agencies:

**Shift in approach required:**

**1. Shift of focus from grow & grow/Produce & produce towards Produce and sell:** Women of these regions recognises the livelihood opportunities in mountain regions and are engaged in different areas of livelihood generation at different levels, but what restrain them from fully utilising those opportunities is lack of market accessibility and knowledge about it. There is a strong need to equally divert the focus of implementing agencies towards marketing and selling rather than just focusing towards creating the opportunities to grow and produce more. In majority of the cases the cultivators and producers mainly women have accepted that the lack of awareness about market, inaccessibility to market, timely connect with market and further in adverse situations the transportation cost often jumps more than the cost of production eventually cutting off their potential profits.

**2. Networking of small SHGs at block levels** – The small SHGs at village/Gram panchayat/block level engaged in similar production, cultivation, processing activities, etc should be brought under one umbrella and a network should be developed between them through implementing agencies (Local NGOs could act as implementing

State/UT	Target area	Recommendations
<p>agencies). The major aim of such activities is to develop a common market for all the producers/cultivators/sellers for easing the B2B or B2C approach.</p> <p><b>3. Producer should be separated from the burden of being a marketer</b> – The problems in marketing have always acted as a barrier in developing the entrepreneurship in the mountain regions of the state. The extra burden of marketing not only reduces the production capabilities and capacities of the producer but also refrain them from reaping the benefits of increasing the production levels. There is a need for putting the entire burden of marketing of produce over producer/grower.</p> <p><b>Policy Recommendation:</b></p> <p><b>One specific small commercial/trade centre at Community block level:</b> The study recognises the building of one commercial area in each Development block which have the easy accessibility for all the gram panchayats along with better digital connectivity. Government should come up to develop/facilitate such land (largely non-cultivable land available) which could be availed on lease, if required. These commercial areas should support the development of women micro start-ups (Dealing with different raw produce, agro-based products, non-agricultural products, processing, packaging etc) along with carrying out the retailing, whole selling and also working as enablers to develop a strong connect between the local producers and external markets (across country).</p> <p><b>Marketing enablers at block level:</b> Majority of NGOs and other stakeholders working in these regions are dealing with areas such as training, awareness, inputs availability etc while there is a lack of enablers who can help the locals in marketing of the produce. There is a strong need of developing a network of such enablers who work at block levels with the local groups while being connected with the enablers of different blocks of the districts.</p> <p><b>E-commerce platform for promoting Himalayan products:</b> Although various successful digital platforms are working towards providing marketing platform to rural communities (Such as <a href="http://www.marketmirchi.com">www.marketmirchi.com</a>, The saras collection-on the Government e-Marketplace (GeM) portal, etc ) are available which provides digital marketing platform to the rural communities but still there is a strong need of developing a separate digital platform for IHR not only due to uniqueness of the products of these regions but also to build a brand which provides a separate identity and separate accessibility to the produce of these regions. The Higher education institutions should develop one such digital e-commerce platform for entire IHR which not only connects buyer to buyer, consumer to buyer but also facilitate the easy transport service providers to and from these regions.</p>		
<b>Sikkim &amp; West Bengal</b>	<ul style="list-style-type: none"> <li>-Market oriented female entrepreneur who shall work in tandem in production of goods and services by the female workforce.</li> <li>-Service, sector, health &amp; hospitality &amp; agriculture.</li> </ul>	Setting up/identifying women farming captain, transport & Tourism captains, and branding of women only banks branches and police stations, LPG agencies, petrol pumps, grocery shops, women run hotels & homestays etc.
<b>Assam</b>	<ul style="list-style-type: none"> <li>-Improvement of education level.</li> <li>-Skill upgradation and capacity building.</li> <li>-Vocational training.</li> <li>-Promotion of micro entrepreneur.</li> <li>-Use of clean energy for cooking.</li> </ul>	<ul style="list-style-type: none"> <li>-Field demonstration and training on new infrastructure and hybrid cultivation suitable in the hilly agro-climatic zone.</li> <li>-Short term training programme for upskilling.</li> <li>-Rising awareness for clean cooking fuel adoption for better health, economic, safety, environment benefits.</li> <li>-Education on climate change impacts and adaption measures.</li> </ul>



State/UT	Target area	Recommendations
	<ul style="list-style-type: none"> <li>-Shifting towards natural farming based on indigenous practices.</li> <li>-Climate resilient practices in the fields of forestry, agriculture livestock and bio-resource conservation.</li> <li>-Adaptation against climate change at local level</li> </ul>	
<b>Meghalaya</b>	-Skill development, training and promotion of entrepreneurship	<ul style="list-style-type: none"> <li>-More training centres should be set up and training programmes in various sectors and subsectors should be conducted.</li> <li>-Awareness programmes should be conducted extensively.</li> </ul>
	-Financial literacy and providing credit.	-Awareness programmes should be conducted extensively
	-To motivate them to return to traditional organic farming with adoption of modern technology and techniques.	-Awareness programmes should be conducted extensively
	-Abandoned, separated or widowed women need special support	<ul style="list-style-type: none"> <li>-Amount of pension for widows should be increased from the current amount of Rs. 500/- per month.</li> <li>-more coverage of this scheme with better targeting of BPL widows.</li> <li>-Training programmes for widowed/ separated women for self-employment generation.</li> </ul>
<b>Arunachal Pradesh</b>	-Training and Capacity Building	-Inclusive development of the women must be taken into the consideration for making them empowered socially, economically and politically.
	<ul style="list-style-type: none"> <li>-Entrepreneurship development.</li> <li>-Educational enhancement.</li> <li>-Health Improvement</li> <li>-Civic Participation</li> <li>-Political Participation</li> <li>-Arts and Crafts</li> <li>-Awareness on Women Rights</li> </ul>	<ul style="list-style-type: none"> <li>-This can be done by launching specific projects and imparting regular knowledge for capacity building.</li> <li>-Local thematic areas and their strength must be given important place in the developmental programmes.</li> <li>-Accordingly, regular training must be imparted on organic cultivation, handloom and textile, wood carving etc.</li> <li>-Proper exposure visits and brainstorming must be conducted.</li> </ul>
<b>Nagaland</b>	-Skill development and vocational training for employment generation and greater employability.	-The Industries and Commerce Department need to be strengthened to coordinate among various stakeholders for research and development on skills and entrepreneurship.
	<ul style="list-style-type: none"> <li>-Greater accessibility to technical education.</li> <li>-Technological intervention in production of quality local products.</li> <li>-Financial literacy and micro credit for taking up entrepreneurship.</li> <li>-Popularization and increasing the marketability of local products.</li> </ul>	<ul style="list-style-type: none"> <li>-Emphasis on production of quality local products for higher marketability and visibility.</li> <li>-Skill and vocational training and assistance to women group in growing high value native crops, medicinal plants, animal rearing and health care and food processing.</li> <li>-Setting up of adequate training centres in all the district headquarters with an aim to empower women for income generation activities both in farm and non-farm sector.</li> </ul>



State/UT	Target area	Recommendations
	-Development of markets to encourage both home and domestic non-economic work to be converted to marketable/paid activities.	-Promotion of successful women entrepreneurs as role model.
<b>Manipur</b>	-Training and awareness. -Financial literacy and micro credit. -To reduce the 'time poverty' among women. -Women health. -Climate Change Impact.	-Developing the training camps for remote villages. -Awareness programs for micro credit facilities. -Need for social awareness to reduce the gender disparity in rural areas. -Awareness programmes through Asha workers in the inaccessible areas in the absence of health centres. -Alternative means for livelihood sustenance.
<b>Tripura</b>	-Training women for poultry management, goat rearing, farming, sericulture and fisheries. -Skill development and promotion of entrepreneurship. -To motivate them to return to traditional organic farming with adoption of modern technology and techniques.	-More training centres should be set up and training programmes in various sectors and subsectors should be conducted.  -Awareness programmes should be conducted extensively.  -Financial literacy is needed mainly for women along with easing the delivery of micro credit along with easing the repayment of loan for the villagers for developing a habit of repayment.

### Sector wise specific priority interventions and action for economic empowerment of Rural women in IHR

The following table reflects the state specific sectors and the major areas which should be targeted for empowerment of women in these regions. The table further highlights the major recommendations for approaching these sub-sectors under the major potential areas which could assist in women empowerment in different states of IHR.

**Table 6.3: Major potential areas for livelihood and employment generation for women in the Indian Himalayan region (IHR)**

State/UT	Sector/Sub sector	Suggested targeted areas under sector/sub-sector which could assist in	Recommendations
<b>Ladakh</b>	Handlooms and Handicrafts	-Weaving. -Embroidery. -Paintings-fresco Painting (Thanka Painting), Dragon painting. -Ladakhi garment making Hosiery/ Hand Knitting etc.	-Female workers need to be made aware of the local, regional and national schemes.  -The government should facilitate digital markets for promoting women's produce.  -It can be developed as a spiritual tourism destination and women be made an important stakeholder.

State/UT	Sector/Sub sector	Suggested targeted areas under sector/sub-sector which could assist in	Recommendations
	Agriculture	-Traditional regional Crops -Medicinal farming -Processed products	
	Animal Husbandry	-Ladakhi Yak and Bacterian Camel. -Fibre –Pashmina	
	Tourism	-Centre for spiritual wellbeing and tourism.	
Jammu	Handlooms and handicrafts	-Block printing of Samba. -Jute articles manufactured in Jammu region. -Papermache. -Miniature painting and Basholi art.	-Female workers need to be made aware of the local, regional and national schemes. -The government should facilitate digital markets for promoting women’s produce. -Kathua can be developed as a tourist destination with water adventures. -There are unexplored temples and shrines which can boost the spiritual tourism destination. -The processed food industry can prove to be a boon for the region and need to be supported and promoted.  -Women can play an important role in the revival of ancient scripts of the region “Sharda Lipi”
	Agriculture	-Traditional regional Crops. - Medicinal farming. - Processed products-honey, pickles, dried vegetables. -Organic farming.	
	Animal Husbandry	-Diary -Poultry -Pisciculture -Apiculture	
	Tourism	-Unexplored archaeological sites. -Religious and spiritual destination. -Contemporary tourist destination	
Kashmir	Agriculture	-Organic farming.	-The state should focus to cultivate exotic vegetables and herbs such as broccoli, lettuce, celery and parsley to make farming more profitable. Besides cabbage, cauliflower, potatoes, beans and peas. The region has huge scope for the establishment of cold storages, warehouses and growth of food processing sector.  -Government intervention is required to minimise the influence of intermediaries.
	Animal Husbandry	-Animal husbandry (both cattle and poultry), dairy farming, dairy technology, bee keeping (both native and exotic species).	
	Handicrafts	-Handicrafts: the region has tremendous potential for some of its unique crafts like papier mache, traditionally	

State/UT	Sector/Sub sector	Suggested targeted areas under sector/sub-sector which could assist in	Recommendations
		woven carpets, crewel embroidery, pashmina, namda carpets, gabba rugs, Pashmina spinning and weaving, and Kani shawl weaving, and Wood carving.	<p>-Women can be trained to increase the shelf life of some vegetables by converting some vegetables into pickle, similarly tomatoes can be used to make tomato soup.</p> <p>-The primary producers of fresh milk in Kashmir are rural households. A government or privately-owned pick-up vehicle can gather fresh milk from rural areas and sell it the open market.</p>
Himachal Pradesh	Horticulture	<p>-Organic fruits and vegetables</p> <p>-Fruit processing, processing of medicinal/herbal plants like Rhododendron, Fiddlehead Fern, Persimmon.</p>	-Impart fruit processing training to women like Food and Vegetable processor, Refrigeration mechanics, Fruit and vegetable sorting, and packaging operator etc. through skill development institute at SHGs/ GP level.
	Agriculture/ Animal Husbandry	<p>-Organic Vegetables and Milk products.</p> <p>-Organic fertilizers</p>	<p>-A basic level training programme about organic farming and certification process for women needs to be initiated at gram panchayat/ SHGs level.</p> <p>-Organise at panchayat level melas/ virtual meets for women to share experiences and knowledge of the women engaged in organic farming.</p>
	Handloom and Handicraft	-Rural handloom and handicraft products like Woollen, Chamba Rumaal, Kangra Painting, Food Grade Plates, Brass carving and Wooden Utensils.	<p>-Training programme for women only.</p> <p>-Development of clusters to provide markets for the handloom and handicraft products.</p>
	Service Sector	<p>-Rural banking</p> <p>-Rural healthcare sector</p>	<p>-Appointment of educated rural women as <b>Bank Sakhi</b> to ensure delivery of banking services and to provide large scale employment to the women.</p> <p>-Training regarding tele-health services to the educated girls/women may also open up the doors for income generation opportunities/ women empowerment as the case is with the <i>Asha Workers</i>.</p>

State/UT	Sector/Sub sector	Suggested targeted areas under sector/sub-sector which could assist in	Recommendations
	MNREGA	<ul style="list-style-type: none"> <li>-Cultivation of Aromatic and Medicinal plants.</li> <li>-Preservation of forest reserves</li> </ul>	<ul style="list-style-type: none"> <li>-Coverage of activities under MNREGA may be extended to provide sustainable employment opportunities to the women of the state and days may also be increased depending upon the social and economic conditions of the women.</li> <li>-Launch Special plantation drive under MNREGA exclusively for women to plant medicinal/ herbal plants.</li> </ul>
Uttarakhand	Animal Husbandry	Poultry, goat farming, Dairy, apiculture and fisheries.	<ul style="list-style-type: none"> <li>-Formation of cluster of SHGs- Bringing SHGs under one umbrella and identifying the products they could deliver collectively for the market (Local societies, NGOs could be brought in MoU to look after the formation and working of these clusters along with linking the these SHG clusters with markets-enterprises, wholesalers, retailers etc)</li> <li>Himmatthan model (Registered society) is a good case of working of such SHGs in groups.</li> </ul>
	Agriculture	<ul style="list-style-type: none"> <li>-Organic Farming.</li> <li>-Promoting women farmers for moving towards cultivation of the traditional agricultural products.</li> <li>-Aromatic and Medicinal Plants.</li> <li>-Horticulture and processing of produce.</li> <li>-Floriculture and processing.</li> </ul>	<ul style="list-style-type: none"> <li>-Creation and production of cluster-based agriculture products under single brand name emerging from group of SHGs.</li> <li>-Training the SHGs members about processing and packaging the agriculture produce.</li> <li>-Supporting the SHGs cluster towards providing them marketing platforms- both physical and digital.</li> <li>-Training towards implementing climate smart agricultural practices</li> </ul>
	Non-agricultural products	-Handloom and Handicraft	-Training and supplementing it with new technology to enrich the production of traditional and local resource-based products
	Service sector	-Tourism	-Prioritizing delivery of Training and subsidized credit to women towards starting and managing home-stays mainly in regions located nearby hill stations and popular tourist places. (Training should focus on digital literacy for managing e-marketing of their home stays, local cuisines, traditional culture and customs and local handicrafts and handlooms)

State/UT	Sector/Sub sector	Suggested targeted areas under sector/sub-sector which could assist in	Recommendations
		-Health Sector	-ASHA workers and local rural women should be trained to assist the locals towards delivery of tele-health care. -Private sector healthcare providers could provide such tele-healthcare services to the locals under CSR with the support of such local women health workers.
		-Beauty & Wellness	-Due to growing impact of media there has been a huge demand among young females towards being trained in area of beauty and wellness- the training towards such courses is available under PMKVY but what is required is to regularly conduct such training courses through short term camps at gram panchayat or block level. -Additional services such as awareness about credit facility for starting own enterprise and about the availability of beauty and wellness centre available in the nearby urban, semi-urban township regions should also be delivered.
		-Eateries	-Training of rural women towards running eateries (focusing on preparation of local cuisines and their presentation) in rural regions along with home stays. -Helping the locals to promote them along with home stays through social media and digital technology which required further training them towards usage of it.
		-Tailoring	-Women should be delivered training towards modern tailoring techniques along with latest technology.
<b>Sikkim &amp; West Bengal</b>	Horticulture, Floriculture, Medicinal plants.	-Oranges, Kiwi, Guava, Passion Fruit, Pears, Banana / Flowers including orchids, rhododendrons / Ginger, ginseng, herbs	-Fruit & Flower export, fruits, Flower & herbs-based beverages and candies etc -Demarcation of areas as Landscape Museum where regulated tourist's flows shall be allowed with priority to women as the tourists' captains, training centres for local herbs-based cosmetics, ethnic fashion trends
	Hospitality, Tourism & Fashion (Living landscape Museum Concept).	-Cultural & Landscape Tourism, cosmetic & main streaming ethnic fashion. -Yak, sheep & Goats, Poultry & Trout fish farming.	-Setting-up of trout spawning areas, Yak & sheep theatre (landscape). -Niche poultry initiatives (Like duck, Turkey, kadaknath, Grey francolin etc. farming).

State/UT	Sector/Sub sector	Suggested targeted areas under sector/sub-sector which could assist in	Recommendations
	Animal Husbandry & pisciculture		
<b>Assam</b>	Agriculture Horticulture Handloom and handicrafts Animal husbandry Micro Enterprises	-Aromatic and spices. -Orange, Pineapple and Jackfruit -Weaving and knitting, and Jute and bamboo handicrafts -Dairy, poultry and goat/piggery -Food processing	-Establishment of agro-processing units -Education on marketing skills and improvement of market infrastructure. -Skill development centres -Farmers Training Programme
<b>Meghalaya</b>	Agriculture	Spices Areca nut Cashewnut Fruits Vegetables Tea	-More Farmer Producers Organisations (FPOs) need to be set up so that the farmers can reap the economies of scale. -Agri-processing centres for value addition should be set up. -Intensify training in agri-processing.
	Animal husbandry	Piggery Poultry	-Current scale of production of each household is very small. So FPOs in this sub-sector should be set up. -More training in modern methods.
	Tourism	-Homestays -Tea and Food stalls	-Rural infrastructure should be improved so that tourism-related activities can flourish. -Training women in hospitality services.
<b>Arunachal Pradesh</b>	Tourism Handloom and handicraft Organic cultivation Horticulture  Household industry	-Home-stay tourism in tourist spot. -Local Carpet making, traditional clothes with GI tagging. -Organic spices, Ginger, turmeric and cardamom. -Pickle making industry with locally available fruits, bamboo, chillies.	-Proper training on hospitality management. -Machinery to be used in place of traditional tools. -Proper training on organic cultivation through Agriculture and Horticulture Department. -Marketing skills to be developed through training.
<b>Nagaland</b>	Agriculture	-Horticulture crops -Organic farming	-Popularising and improvement of local varieties for its indigeneity and promoting organic methods of cultivation. -Adoption of villages and regions by the govt for specific crops grown by the locals. -Standardising and identifying national and international markets
	Animal husbandry		-Conservation and improvement of local livestock breeds.

State/UT	Sector/Sub sector	Suggested targeted areas under sector/sub-sector which could assist in	Recommendations
		-Piggery -Poultry -Rabbit rearing	-Sustainable resource management for feed and fodder supply. -Strengthening of infrastructure development. -Making livestock-based food safe and affordable.
Manipur	Animal Husbandry	-Poultry -Dairy -Piggery	-The pisciculture is recommended for future income.
	Handicraft	-Shawls, ladies dress, bamboo made handicrafts	-The supply of the raw materials and collection centres for finished products should be placed in far flung areas.
Tripura	Agriculture	-Organic Farming. -Promoting women farmers for moving towards cultivation of traditional agricultural products. -Aromatic and Medicinal Plants.	-Creation of agro-processing units. -Development on marketing skills and improvement of market infrastructure. -More Skill Development centres. -Extensive Farmers Training Programme.
	Animal husbandry	-Piggery -Poultry -Goatry	-Conservation of local and hybrid livestock breeds -Sustainable resource management for feed and fodder supply. -Making livestock-based food safe and affordable.
	Handloom & Handicraft	-Weaving traditional dress like Risha & Rignai. -Bamboo based products.	-Training and supplementing it with new technology to enrich the production of traditional and local resource-based products.

The study highlights the major sectors which should be targeted in Indian Himalayan region for empowering women.

### Animal husbandry and livestock management

**Rationale:** The preference of females for livelihood generation towards animal husbandry in the rural areas of IHR is due to several emerging issues in crop farming in the hills as already discussed earlier. These issues or factors have eventually intensified rural female participation in animal husbandry for attaining food and nutritional security requirements and for gaining monetary rewards to some extent (Sati, Vishwambhar & Singh, R. 2010).

Animal husbandry has always worked towards sustaining agriculture. It delivers a rich source of organic manure and supports mixed farming system which is organic and sustainable. Animal husbandry is input cost effective as 50 to 70 percent of livestock feed is available from forests (Maikhuri, R.K. et.al, 2015) or a home garden which is largely managed by the females of these

regions. The recent trend towards developing a market-oriented economy emphasized the importance of dairy products, especially in areas falling in the vicinity of the urban centers. Further, the growing demand for livestock products due to changing consumption pattern and increasing population presents a better future prospect for this sub sector.

**Table 6.4: Major livestock produce/products and issues in different states/ UTs of IHR**

State/UT	Animal husbandry	Major Products/processed products/use for	Major Issues
<b>Ladakh</b>	Cattle, Yak, Camel, Equine, poultry Chanthangai Paschminagoat, Malra goat, Changluk Sheep, Malluk Sheep, crossbreed jersey	Milk, Meat, Fibre, Egg Medium of transport, tourism Paschmina Shawl pashmina and Seabuckthorn, are being sold as unfinished product Rich heritage in the form of Ladakhi Yak	❖ Lack of market ❖ Lack of processing facilities, value addition and lack of technology usage ❖ Lack of fodder- lesser fodder and grassland available ❖ Unorganised production and marketing
<b>Jammu</b>	Crossbred cows (Jersey and Holstein Friesian) and non-descript local cows, Buffaloes, Sheep, poultry, goat	Dairying, Meat, Egg, Paschmina Shawl	❖ Lack of value chain and value addition ❖ Lack of technology and obsolete methods of processing ❖ Lack of local cooperatives ❖ Exploitation in market by traders (monopsony)
<b>Kashmir</b>	Sheep, goat, poultry, beekeeping (both native and exotic species).	Dairying, Meat, Egg, Paschmina Shawl	❖ Obsolete technology for processing, and lack of knowledge for value addition ❖ Dominance of intermediaries in the distribution channels of raw pashmina and value addition
<b>Himachal Pradesh</b>	Cow, buffalos, sheep, poultry, goat, Himachali Pahari (indigenous cattle breed of the state)	Milk, Wool, Meat, Eggs	❖ Requirement of more effort towards formation of dairy cooperatives ❖ Poor quality of livestock ❖ Lack of veterinary services ❖ Lack of skill for developing quality fodder ❖ Lack of marketing skills, technology and value addition methods
<b>Uttarakhand</b>	Cattle (mostly indigenous), Goat, poultry, Buffalo, sheep, fisheries and api culture (region specific); Badri cow- first ever cattle breed certified by National Bureau of Animal genetic Resources (NBAGR)- Suitable for high altitude	Milk, eggs, meat, Wool (Sheep, Rabbit)- Paschmina, Lokh, Dairy products	❖ Lack of local market and connectivity to urban markets ❖ Lack of knowledge towards use of modern technology among local women artisans and lack of knowledge towards basic animal care ❖ Problems in availability of fodder and poor quality of livestock ❖ Lack of local cooperation in marketing ❖ Lack of awareness towards government support- mainly towards credit
<b>Sikkim &amp; West Bengal</b>	cattle, buffaloes, goats, sheep, pigs, yaks, horses, mules, ponies, and fowls/ poultry, Fisheries (rainbow trout), Apiculture	Milk, Meat, Wool, fish, honey	❖ Lack of fodder, lack of and deterioration of grazing land ❖ Problems of transporting and marketing ❖ Issues of Animal health



State/UT	Animal husbandry	Major Products/processed products/use for	Major Issues
			<ul style="list-style-type: none"> <li>❖ Reduction in Quality and quantity of milk</li> <li>❖ Impact of climate change</li> </ul>
<b>Assam</b>	cows (both indigenous and hybrid), buffaloes, goats, pigs, and poultry/ducks	Meat, Milk, egg	<ul style="list-style-type: none"> <li>❖ Lack of higher quality livestock</li> <li>❖ Lack of feed concentrate and green fodder</li> <li>❖ Unorganized and fragmented market for livestock produce</li> <li>❖ Issues of Animal health care</li> </ul>
<b>Meghalaya</b>	Pig, poultry, cattle, sheep, Fish, Bee keeping	Milk, Meat, Egg, Fish, Honey	<ul style="list-style-type: none"> <li>❖ Unregulated and inefficient market and poor access to market</li> <li>❖ Lack of knowledge towards scientific rearing</li> <li>❖ Shortage of fodder</li> <li>❖ Lack of awareness towards government support</li> <li>❖ Economies of large-scale production cannot be reaped due to very small scale of operation</li> </ul>
<b>Arunachal Pradesh</b>	Cattle and Buffalo, Sheep, Goat, pig, yak, poultry	Meat, Milk and Eggs	<ul style="list-style-type: none"> <li>❖ Lack of quality feeds and fodder</li> <li>❖ Lack of quality breeds</li> <li>❖ Exploitation by middlemen in market and lack of market accessibility</li> <li>❖ Reoccurrence of flood and disease outbreak</li> </ul>
<b>Nagaland</b>	Cattle, Mithun, Pig and Poultry	Meat	<ul style="list-style-type: none"> <li>❖ Lack of market linkage</li> <li>❖ Poor health management of livestock</li> <li>❖ High cost and unavailability of quality feed</li> <li>❖ Lack of processing knowledge and awareness</li> <li>❖ Natural health calamities</li> </ul>
<b>Manipur</b>	Cattle, buffalo, goat, pig, duck & poultry	Milk, Meat	<ul style="list-style-type: none"> <li>❖ Lack of fodder and high cost of green fodder</li> <li>❖ Lack of knowledge about scientific feeding</li> <li>❖ Lack of land for fodder development</li> <li>❖ Lack of good quality livestock and health care</li> <li>❖ Lack of modern slaughter house in rural regions</li> <li>❖ Unorganised market</li> </ul>
<b>Tripura</b>	Cattle, Buffalo, Fisheries, poultry	Milk, Meat, Egg	<ul style="list-style-type: none"> <li>❖ Lack of feeds and fodder</li> <li>❖ Lack of extension workers to perform AI</li> <li>❖ Lack of superior germplasm</li> <li>❖ Lack of market accessibility</li> </ul>

**Table 6.5: Overall framework (Skill gap/Skill set required/training area and support required along with major government schemes) for women under animal husbandry/livestock management**

Skill gaps and the Skill set/training	Support required	Some Existing schemes
1. Marketing (Collective marketing) - of processed products and livestock management skills	1. Development of fodder and Grassland reserves in cultivable waste land	❖ National livestock Mission (NLM)
2. Primary health Care of Animals (Based on the observations of behavioural and physical characteristics of livestock)	2. e-app for facilitating/delivering faster government/technical assistance in livestock management, AI facilitators	❖ Rastriya PashudhanVikas Yojana (RPVY) under national livestock mission and Rashtriya Gokul mission
3. Financial management	3. Entrepreneurship development programs in livestock	❖ National animal disease control programmes
4. Retailing skills	4. Development of Integrated packages (community participation-based training, financial awareness, literacy & support, marketing skills etc.) for development of entrepreneurship in livestock management and dairy development	❖ Grassland and fodder reserve development scheme
5. Processing of dairy products and creation of different dairy-based products for adding value	5. Increase in number of women local Master trainers at block/G. P level	❖ <i>Mukhayamantri Ghasyari Kalyan yojana- Fodder supply</i> (Uttarakhand)
6. Usage of Technology and Internet	6. Facility of veterinary clinics and placement of trained human resource to provide mobile assistance in rural areas.	❖ <i>e-Gopala app</i> - platform to farmers to provide them technical assistance in managing livestock
7. Awareness towards importance of hybrid varieties	7. Technical assistance for sheep rearing, poultry development, apiculture	❖ Doodh Ganga Yojana
8. Processing and production of dairy products, sheep rearing skills, garment making	8. Integrated Special training, financial assistance and awareness generation package for Tribal and Scheduled Caste women	❖ Brooder House for poultry-(Tripura)
	9. Development of Integrated market of SHGs at block level (based on community participation model)	❖ Integrated Dairy development Scheme- J&K
		❖ Breeding programs

#### Box 6.4: Innovative Poultry Farming of Tripura

Brooder House for poultry is a very popular and successful government program in Tripura. Block Level Brooder House program is going on all over the state. Brooder House is the concept of handling the newly born chicks without the aid of hens (artificially) through a temperature-controlled brooder (foster mother). This Brooder House has several advantages over the natural method, which are: Chicks may be reared at any time of the seasons, Thousands of chicks may be brooded by a single brooder. It can be a huge income-generating source of employment especially for women because it is easy to handle and manage the brooding system.

### **Training areas/skill set:**

- ❖ Training of women towards process of starting a startup and awareness creation towards available sources of support for them.
- ❖ Marginal female entrepreneurs should be mobilized through proper guidance to form producer/farmers cooperatives/societies. This requires training towards formation and management of such cooperatives. The formation of cooperatives and its value addition should be synergized through formation of clusters of such cooperatives.
- ❖ Training SHGs members for collective marketing of livestock produce and imparting marketing/retailing skills in them.
- ❖ Training of women towards providing primary health care to animals.
- ❖ Training of women towards usage/disseminating importance of hybrid varieties.
- ❖ Further skills towards processing of dairy products and creation of different dairy-based products for value addition along with marketing skills are required for adding to the value chain. The women should be trained towards developing their technical and business capacities to make them capable to run their own enterprises and explore income generating opportunities.
- ❖ Training for poultry management, goat farming and fisheries (focus on trout farming in specific regions where many success stories were identified) is also required for increasing the income generating opportunities for women in these regions.

### **Training packages and facilitators**

- ❖ Targeting SHGs and integrating them with government training programs in livestock management and development
- ❖ Development of female local Master trainers (*Pashu Sakhi* etc) at block/G.P. level. The local workers who have successfully carried out animal husbandry should be identified and could be further trained to become master trainers for their respective villages/G.Ps/Blocks.
- ❖ Gathering and compiling traditional knowledge system, which includes local resource based and sustainable livestock management practices related to fodder and disease management. Such traditional practices should be a made part of the training sessions to make farmers aware about the sustainable and economical practices.

### **Initiatives required**

- ❖ Development of integrated financial packages (with component of training, awareness and cooperative linkage) for women
- ❖ Diverting SHGs efforts towards development and popularizing animal husbandry as a source of income generation
- ❖ Leveraging linkage between women cooperatives/SHGs for formation of product processing centers and retailing enterprises
- ❖ Making livestock product-based macro clusters at block, village or at district levels.

### **Initiatives to be extended:**

1. Larger thrust on reducing women's time in collecting fodder and to address the issue of decreasing quality fodder and difficulty in accessing such resources to maintain livestock.

**Supplementary and sustainable approach:** The government should promote the females towards regenerating and utilizing local fodder which is more cost effective and sustainable and focus towards sustaining the symbiotic relationship between women and environment.

- Along with development of such fodder reserves it is also significant to develop community forests (energy plantation, fodder trees) in cultivable wastelands to reduce the pressure on females which they have to face in travelling long distances to collect fodder and firewood on a daily basis. The Fodder resource development plan prepared by ICAR- *Indian Grassland and Fodder Research Institute Jhansi* is a good way forward for sustainably developing the most important resources for development of this primary sub sector. Convergence of MNREGA work could further be an effective way to divert the human resource in an effective way towards development of such fodder reserves in the Himalayan region.
- The concept of ‘fodder bank’ could also be another sustainable approach which rather than disconnecting women from environment focuses on conserving the environment with larger recognition of women efforts. The exchange of fodder in such banks should largely be for fodder which is locally based.

The present study reflects upon a strong need for regeneration of fodder reserve areas, energy plantation, agroforestry, and common property resources to develop local resources for meeting the needs of fodder and firewood and decrease the women’s time in collecting the same from forest areas.

- The cultivable wasteland could be utilized at a large scale towards developing fodder reserves, fodder trees, grassland, and agro forestry in the Himalayan region. However, this usage of wasteland requires community support which could be brought in at a large scale through awareness drives and gender sensitization towards such initiatives.
  - The villagers should also be motivated towards plantation of trees at the outskirts of their villages, which restricts the animal intrusion to some extent and helps reduce the direct impacts of climate change and natural disasters/calamities. Afforestation and regeneration of grasslands with the help of community participation is a sustainable approach of development that has several direct and indirect positive impacts on livelihood generation of rural communities, especially women.
2. Creation of livestock district e-app (Such as e-Gopala-ahd.uk.gov.in) for registering women (enabling them to do so through livestock fairs/*melas*). Such applications could provide the local medical support, new schemes information and market availability for livestock for any specific region. The district local vendors/dairies/processing firms could also get authorised registration in the app to develop direct connection between them and local farmers.

#### Box 6.5: A success story in animal husbandry through increase in awareness and skills and with the support of Animal Husbandry Department

Smt. Vimla Devi established her dairy farm in Theog, Shimla in 2012 with three cows. Although ambitious with her goals, her efforts could not meet her expectations. She started with three cows but there was decline in production as well as reproduction. Despite her efforts, she could not move to the next level of the business which was suspended at an early stage of formation. Hardworking, ambitious and keen entrepreneur Vimla learnt the experiences of successful local dairy vendors and brought the following changes in her approach of business to make this farm a success in the coming years.

**Breeding:** The major challenge for the new farmers and entrepreneurs is the lack of understanding of the genetics of cows. They have to assess their animals in terms of purity, production and reproduction and then select animals with desired genomic traits in order to advance the farm. Understanding these parameters, Vimla procured the cows which were qualified on the above traits. This step has shown tremendous result in the milk production and reproduction too. **Feeding:** Initially Vimla was feeding traditional feed to the cows but after proper intervention of the Animal Husbandry department, she started feeding the high-quality feed and green fodder to the cow. As a result, not only the milk production but the quality of milk too improved which in turn increased her revenue. **Efficient Management:** By understanding the challenges of dairy business, Vimla started planning the production cycle. To manage the low production of milk at saturation stage and ideal period of reproduction, she bought a few more cows during the low production period so as to meet the market demand. Because of this initiative, Vimla has increased the supply of milk and is now meeting the required market demand efficiently along with earning income for her family.

#### Agriculture and NTFPs

Agriculture is a sector which is equally shared by men and women. It needs a thrust on specific crops and their further processing to enhance women's participation and income generation. The following are the major crops which should be focused upon for economic empowerment of women farmers:

1. Medicinal and Aromatic plants
2. Horticulture and floriculture
3. Regional traditional crops
4. Non-timber forest products

#### Support required:

- ❖ Training of women in processing of agricultural products in the rural areas
- ❖ Formation of federation of women cooperatives with focus on one product one region
- ❖ Training in marketing, packaging, branding and retailing of such products

- ❖ A special focus on development of supportive environment for processing of agri-products and NTFPs

There is a need to focus on traditional and regional crops along with aromatic and medicinal plants for revival and promotion of indigenous agronomic practices and imparting of marketing skills among females for harnessing the benefits of organic cultivation and traditional crops. There should be a thrust on promoting Agri processing like fruit processing techniques, spice processing methods and fragrance extraction techniques. There is a growing demand for organic traditional, regional crops (such as millet holds an important position due to its rich nutritious value adding to the advantages of food security and its usage for beverages and fodder). Barnyard millet is one of the millets which is largely grown in Uttarakhand region of IHR and holds huge demand in the urban market along with Finger Millet and others as they are the rich source of gluten free diet (Taylor et.al, 2006). They have specific advantages which includes endurance of pest attacks and could be easily stored for longer period without specific storage requirements. Mushroom cultivation is also emerging as a major area which is popular and increasingly practiced by the rural women.

#### Major processed products:

1. Juice, Pickle, Jam, Jelly, Cookies
2. Spices
3. Traditional Wines and beer
4. Bamboo and other natural fiber-based products
5. Incense sticks

**Table 6.6: Major agricultural products and issues in different states/ UTs of IHR**

State/UT	Agricultural products which could assist women in higher income generation	Processed products (only from agriculture, horticulture & floriculture)	Major issues in agriculture faced by Rural women in IHR
<b>Ladakh</b>	Apple, Walnut, Grapes (Resin type), Currants, Prunes and Drying varieties of Apricots; Barley, Wheat, Mustard, Green Vegetables; Potato, Pea; Wheat, sea buckthorn (Hippophae rhamnoides L.)	Local beer (Chang), tsampa, Oregano tea, Hawthorn cookies, Hazelnut cookies, Dry Apricot	Inadequate knowledge on the cropping pattern that is unique in the regions of UT, Lack of awareness about Govt. Schemes and financial assistance
<b>Jammu</b>	Wheat, Maize, Paddy, Pulses, oilseeds, fodder, vegetables, Mustard, Basmati rice, Apple, Pears, Cherry, Walnut, Almond, Chestnut, Grapes, Stone fruits (like Peach, Plum, Apricot), Mango, Citrus, Guava, Litchi, Bear, Amla, Grapes Pears, Pecan Nut, Black Caraway	Lavender essential oil, Juice, pulp, concentrate, oil, Pickles, Jam	Low level of literacy and pre-agricultural level of technology, Lack of seamless market mechanisms for perishables results in high losses and low-income realization, Informal market intermediaries often exploit the producers, no knowledge on the

	('zeera'), Spices, Medicinal& aromatic plants, Olive and Kiwi		extent to which the primary produce can be modified to increase the value, Lack of awareness about Govt. Schemes and financial assistance
<b>Kashmir</b>	Exotic vegetables and herbs such as broccoli, lettuce, celery, and parsley; cabbage, cauliflower, potatoes, beans, and peas; Apple; Almond, Plum, Apricot, Peach, Walnut, Saffron; Saffron, Pears, Cherry, Chestnut, Strawberry, Stone fruits, Grapes and Heeng (asafoetida), Spices, Medicinal& aromatic plants, cardamom (Elaichi), black cardamom (kali elaichi), black pepper (kali mirchi), White pepper (white mirchi), Black Cumin (Shah Jeera)	Juice, pulp, Spices, Landscape plants/nursery/pot plants, Pickles, Jam, Walnut Pastry	Lack of awareness of the modern farming techniques, supplements and extension services and product diversification, Lack of access to organized markets and meagre profits distract them from investing into improved technologies and quality inputs. Informal market intermediaries often exploit the producers, Lack of awareness about Govt. Schemes and financial assistance
<b>Himachal Pradesh</b>	Wheat, Maize, Rice, Barley, Organic fruits and vegetables, Exotic Fruits and Vegetables, Mango, Litchi, Guava, Loquat, Citrus Fig, Ber, Papaya, Jack Fruit, Plum and Pear, Strawberry, Almond, Apricot, Walnut, Persimmon, Hazel- nut, and medicinal/ herbal plants like Rhododendron, Fiddlehead Fern, and Persimmon	Apple Juice, Kangra Tea, Citrus, Fruit juice, Mango Papad, Pickle of Fiddlehead Fern, Frozen Peas, Black Cumin (Kaala Jeera), Leaf Plates, Button Mushroom, Mushroom Powder, Mushroom Pickle, Tomato Ketchup, Tomato Sauce	Marginal land holdings, high dependency on rain, intrusion of animal/ destruction of Agri/horticulture crop, use of pesticides leading to genetic erosion and damaging by-default organic image of the produce, Improper warehousing and preservation techniques of the final produce, lack of training to women about the cultivation of organic farming, medicinal/herbal plants, and processing techniques. In addition to these, certification process of organic produce, inaccessibility to market and high dependency on government support
<b>Uttarakhand</b>	Traditional and regional crops (Barnyard millet, Finger Millet) along with aromatic and medicinal plants- kutki (Picrorhiza kurroa), Amla (Indian gooseberry), Tejpatta (Bay leaf), lemongrass, Buransh (Rhododendron); Mushroom cultivation; Mango, citrus fruits	Aril wool, Fruit/flower juice, Herbal tea, Spices, jams, jellies, sauce, pickles, chutneys, Cookies	loss of indigenous farming practices; crop depredation by animals, marginal land holdings, climate change and loss of interest in farming, lack of market, lack of processing facilities, lack of cooperative farming practices, poor awareness towards government support and programs



<b>Sikkim &amp; West Bengal</b>	Persimmon, blueberries, strawberries, kiwi, avocado and oranges, etc., along with other cash crops such as tea, large cardamon, ginger, and turmeric, maize, green vegetables	Fruits pulp, juices, wines, squash, candies, Jam, fruit teas (Tea diversification), candies dried fruit chunks	Inadequate or no awareness about the non-traditional cash crops, its markets, seeds etc. Crop diversification and its marketing requires more hand-holding.
<b>Assam</b>	Paddy, ginger, chili, mustard, maize, sugarcane, tapioca, betel nut, bamboo, banana, mango, lemon, jackfruit Pineapple, Guava, Mango, Litchi, orange, and banana	Pickles (made from chillies, jackfruit, bamboo shoot, lemon, mixed fruits), turmeric powder, chilli powder, ginger powder, dry ginger, jaggery	Practice of traditional farming system, small land holdings, lack of modern agricultural tools and equipment, poor knowledge of marketing skills, appropriate government support in marketing, lack of sufficient storage facilities and post-harvest lost
<b>Meghalaya</b>	Fruits (mandarin orange, strawberry, pineapple, jackfruit, banana, lemon, guava, pear and plum), Green vegetables, potato, tomato, corn, mushroom, spices (turmeric, ginger, black pepper, bay leaf), plantation crops (tea, broomsticks, cashew nut, areca nut, betel leaf), and medicinal & aromatic plants	Fruit products (squashes or juices, jams, jellies, drinks, marmalade & canned fruits), grounded turmeric powder, tea, pickles, rice-based traditional snacks, honey and cut flowers.	Growing landlessness due to privatisation of community land. The rent for farmers who don't have their own agricultural land is unregulated and varies greatly; in some cases, it is as high as 50% of the produce. Lack of market, lack of processing facilities, lack of storage facilities, large fluctuations in prices, erratic and unreliable power supply in rural areas. Farmers have no bargaining power; they are at the mercy of the wholesale buyers. Lack of training in food processing and coping/adaptation strategies in the face of climate change.
<b>Arunachal Pradesh</b>	mandarin orange, Kiwi, apple, pineapple, banana, lemon, guava, pear and plum; horticulture, floriculture and medicinal plants, ginger, Turmeric and Cardamom (Elachi), black pepper and tea plantations	Processing of spices (mainly turmeric and Ginger) and juice processing (pineapple, oranges); Brewery - traditional wines	Lack of cheap and dependable sources of credit, Inadequate exposure and information asymmetry in the markets in which they interact, Lack of storage facilities, Marginal land holdings, Frequent extreme weather conditions, poor awareness regarding government programmes and policies.
<b>Nagaland</b>	cereals, oilseeds, and fruits like black rice, millets, flax, perilla, sesame, avocado, kiwi, oil nut; Naga king chili, sweet cucumber, colocasia, tree tomato, ginger, turmeric, mandarin, passion fruit; black rice, millets, flax, perilla, sesame, avocado, kiwi, oil nut, Inca nut, coffee, cardamom,	Pickle, dehydrated fruits and vegetables, squash, fruit wine, essential oils, herbal tea, green tea, fruit candies, fresh and dry flowers	lack of knowledge and skill for production of quality products, lack of awareness of modern farming techniques, lack of finance, awareness of Govt. schemes and about market and marketing facilities, poor processing facilities.



	black pepper; Aromatic and ethnomedicinal plants- Citronella, lemongrass		
<b>Manipur</b>	Amla, pine apples, Naga king chilies, black rice millet, bamboo shoots, kiwi, passion fruits, ginger, tejpatta, dry and fermented fishes, many types of lemon, avocado	Pickles, fermented and dry fishes, bamboo shoots pickles, Naga chilies, canned pine apples, mushroom, gooseberries- amla candy	Lack of training and finances, poor awareness about the government schemes
<b>Tripura</b>	Pineapple, jackfruit, tea, rubber, bamboo; Agar (Aquilaria agallocha), Medicinal plants- Arjun (Terminalia arjuna), Ashok (Saraca asoca), Bahera (Terminalia bellerica), Haritaki (Terminalia chebula), Amla (Emblica officinalis), Gamar (Gmelina arborea), Sajna (Moringa oleifera), Bael (Aegle marmelos), Gandhaki (Homalomena aromatica), Kalmegh (Andrographis paniculata) and Satamuli (Asparagus racemosus).	Fruit Juice especially from pineapple, Orange, Masoombi and jackfruit; Jams; Sauce; Pickles especially from bamboo shoots & Lemon; Bamboo shoots, making of baskets & Incense sticks; Mushroom; Rice-based traditional snacks; honey and cut flowers; Local Rice Beer; Handlooms especially Risa & Rignai and Handicrafts products	Low literacy rate; Traditional farming especially Jhum cultivation is declining; Marginal size of land holding; Less interested in modern plain land farming mainly lack of irrigation facilities; Lack of proper agricultural markets and processing facilities in rural hill areas; Inadequate transport and communication facilities; Lack of information and awareness of Govt. schemes/program and lack of Skill & training; Above all lack of financial support.

#### **Box 6.6: Women empowerment through learning agri-processing techniques**

Manju Devi of Kwiltha village, Rudrapur district, Uttarakhand took training of food processing from Mount Valley Development Association, a civil society body. After learning the trade, she not only started the work of agro-processing but also opened her retail shop along with marketing her products to different towns and cities. The training she received in enhancing her marketing skills has helped her to develop wider markets for her products. Her locally made products hold demand from different parts of the country and have become a major source of earning for her family. From her experience many other local women of the region have started the work of food processing with her able guidance.

#### **Box 6.7: A success story of a Women farmer through Natural farming**

Smt. Leena Sharma of Kharwar village, Hamirpur district in Himachal Pradesh, is an educated lady belonging to a simple family and takes care of all needs and requirements of her family members. There are four members in her family. Following her passion and interest, Leena started natural farming (Organic Farming) in her five bighas of land, which is rain-fed. She has a desi Pahari cow. She cultivates her fields by paying charges and does not own any machinery. Realising the potential of natural produces, she formed a group of 20 women in the village, all the women farmers work jointly and have covered an area of 80 bighas under natural farming in this village. More than one hundred farmers have also adopted natural farming in their surroundings after the success of Smt. Leena Sharma. **Trainings:** The journey of Leena started way back in 2018, when on behalf of Agriculture Technology Management Agency (ATMA), District Mandi, Himachal Pradesh, she had received a six-day training on Natural Farming from Padam Shree Shubhash Palekar in Kufri, District Shimla. She was very much motivated with the lectures and planned to set up the natural farming in her fields. She started production of various natural fertilizers used in natural farming like jivamrit, ghanjivamrit, beejamarit, khatti lassi, agniastara etc. in her *Sansadhan Bhandar*. Use of these fertilizers resulted in high yield which in turn motivated many women of her neighbourhood to learn and practice these methods of Organic Farming. **Achievement:** Presently, she is growing seasonal cash crops in her field throughout the year. Traditional techniques of farming practiced by Leena not only reduced the input cost but also increased the revenue. With the sales of produce, she is also marketing the seeds of these crops to the farmers of the area. Recognising the efforts of Leena Sharma, SDM and MLA Hamirpur conferred the award on the occasion of Independence Day to her on the recommendation of Agriculture Department. **Contribution:** Leena not only initiated the process of organic farming but also inspired many other females and farmers of the area to adopt Natural Farming. She is also imparting the necessary training to the aspirants. Teaching natural farming techniques to the children in schools and NSS Camps etc. and organising training sessions to the farmers of the Developmental Block is the routine of Leena. Farmers from nearby blocks and districts frequently visit her fields to understand the process. Leena Sharma's journey is inspiring many women of the state to unshackle the barriers of the hill society.

**Table 6.7: Overall framework (Skill gap/Skill set required/training area and support required along with major government schemes) for women under agriculture /horticulture/floriculture**

Skill gaps and the Skill set/training	Support required
1. Lack of awareness towards modern farming techniques.	1. Implementation of incentive-based mitigation strategy viz., payments to encourage coexistence (PEC) (Badola, et. al. 2021) to deal with issue of Human-Wildlife conflict and crop depredation
2. Lack of awareness about extension services, government support and product diversification	2. Training and technical assistance for developing agri-processing at village level- Fruit processing techniques, spice processing methods, fragrance extraction techniques etc).
3. Lack of adequate technology for agri-processing	3. Demonstration (local success stories) based training approach
4. Lack of marketing skills	4. Inculcating cooperative spirit in farming
5. Inaccessibility to credit due to lack of awareness, lack of banking skills/lack of financial literacy	5. Marketing skills with adoption of local success models
6. Less cooperative spirit in agriculture/marketing	6. Delivering integrated packages at SHGs/cooperative levels which includes training for women along with financial literacy and accessibility to credit
7. Loss of crops due to improper post-harvest handling	7. Branding and Packaging skills
8. Lack of packaging, branding skills	8. Developing clusters for regional products and adoption of one region one crop policy
9. Lack of awareness and knowledge about commercial use of NTFPs	9. Financial and technical support to border villages under BADP
	10. To develop linkage between border security forces and local produce of IHR
	11. Promotion of natural farming

Natural farming through government support has helped in changing the farming and lives of women farmers in IHR. Natural farming needs to be further extended with the support of programs such as the Bharatiya Prakritik Krishi Paddhati Programme (BPKP) under a centrally sponsored scheme- Paramparagat Krishi Vikas Yojana (PKVY).

## Handloom and Handicrafts

Handloom and handicrafts are the lifeblood of the rural and tribal communities of IHR, with higher participation of women. There is a need to develop and facilitate market linkages and intelligence to the local artisans along with provisions for fund availability through CSR and promotion and public awareness about different support schemes. Further, the artisans should be oriented towards raw material product mix and marketing techniques and training for customized market orientation.

For training the women in traditional crafts and use of modern technology in them it is very important to not only identify and develop regional cluster/centers but also to map the traditional zones of such trade in these regions. After identifying such region-specific local crafts, it is important to make the women aware of existing trends and patterns of market demand in such fields and train them in modern technology supporting such trade. Along with creating awareness towards existing technology, the rural women workers should be supported with technological interventions while being mindful not to lose traditional and regional art forms. Female workers in this sub-sector should be made aware of the local, regional and national emporiums/technologically equipped manufacturing centers and exposure of the females to these large centers should also be an important segment of their capacity-building program.

**Table 6.8: Major handloom and handicrafts in the states of Indian Himalayan Region (IHR)**

State/UT	Handicraft and Handloom products
Ladakh	Carpet Weaving, Ladakhi Garment Making, Embroidery, Namda Making, Fresco Painting (Thanka Painting), Basket Making, Dragon painting, Hosiery/ Hand Knitting etc.
Jammu	Wooden works, silver ware and Papier-mache, Pashmina Shawl, Embroidery, Carpets known as Gabba
Kashmir	Traditionally woven carpets, crewel embroidery, pashmina, namda carpets, gabba rugs, Pashmina spinning and weaving, Kani shawl weaving, and Wood carving
Himachal Pradesh	Woollen, ChambaRumaal, Kangra Painting, Food Grade Plates, and Wooden Utensils
Uttarakhand	Bamboo/Ringal and other natural fiber-based products-handicrafts, baskets, mats, boxes Handloom- <i>chutka</i> , <i>lava</i> , <i>shawl</i> , <i>asans</i> , <i>pankhi</i> , <i>gudma</i> and; Aipan traditional art-Aipan souvenirs
Sikkim & West Bengal	Handloom weaving, Carpet weaving, Blanket weaving, Thanka painting, Wood carving, Wooden mask, Bamboo and cane craft.
Assam	Pat, Eri, Muga Silk- mekhela chador, Gamocha and traditional towels, Cane and Bamboo Handicraft, Wood craft, Water Hyacinth handicrafts, traditional hand pottery
Meghalaya	Cane and bamboo products, textile weaving, carpet weaving, ornament making and woodcarving
Arunachal Pradesh	Handicrafts- handloom carpets, Cane and Bamboo making crafts
Nagaland	bamboo shoots and other bamboo products- basketry, wood carving, textile weaving, bead, jewelry, pottery
Manipur	loths embroidery, cane and bamboo, ivory, stone and wood carving, metal crafts, deer horn decorative and supari, walking sticks, dolls and toys shawls, waistcoats for men, purses, bags, wraparounds, and cushion covers
Tripura	Handloom-handloom items include riha, lungi, sari, chaddar, and scarves with Tripuri motifs, Cane and Bamboo crafts- furniture, pencil holders, lamp shades, trays, stools, baskets etc

### **Service Sector: Tourism, e-health services and others**

Tourism is one of the growing sectors in the IHR, which needs to be further explored for developing village and cultural tourism with the support of regional female human resources. Village and eco-tourism are essential for a vital female labor-intensive sub-sector for income and employment generation. Rural communities' promotion and capacity building towards village tourism development should be targeted near major tourist centers in the first phase.

- First, the cluster of such villages should be identified, followed by community participation-based discussions and feedback for voluntarily mobilizing the rural community towards village tourism development. The tourism activities should include promoting and delivering local cuisines, rural accommodation, exposure to local culture, art and craft, etc.
- Clusters based on common tourism products need to be established to facilitate women to exploit the latent opportunities of eco-tourism. These clusters can further be used as platforms to showcase the handloom and handicraft products manufactured by women.
- Exclusive training programs for women tourist guides through mountaineering institutes need to be started at the block level to provide better employment opportunities to the young and educated women of the state.
- It is equally important to impart culinary and hospitality skills with the essence of local culture and traditions.
- The training support also requires focusing on imparting skills to use the essential technology to market their region through practical internet usage. Training regarding the use of technology like social media platforms and the development of e-platforms/ apps through skill development institutes to women may change the face of village tourism.
- Numeracy and accounting skills and awareness about government assistance available to support tourism activities.
- Rural infrastructure like village pedestrian roads, traditional water resources, and common heritage places need to be revived to attract tourists and increase their stays at villages to provide more economic opportunities to the stakeholders.

The present study identifies the scope for developing basic rural health infrastructure through training of female human resources in e-health services which largely includes e-counseling and primary health care through support of higher medical centers located in urban regions.

- Rural females are increasingly participating in the basic health/nutrition system in these regions, which includes their active involvement as Anganwadi workers, ASHA workers, ANM workers. This trained women human resource and educated youth with basic required educational background should be trained in tele-health care and tele-health awareness to meet the deficit of primary health care facilities. This is because immediate and correct medical counselling by a health expert is lacking in these regions. These female health workers should be deployed in PHCs and could assist the rural population by being a medium of communication between the locals and doctors in urban centers. Government hospitals and private hospitals should assist registered rural health facilitators in delivering

such telehealth care (The private sector should be promoted towards delivering such services under CSR). Some state governments have initiated the services of tele-medicines (for example, in 2018, the first telemedicine center was founded in Tehri district, Uttarakhand, followed by another in Nainital, Uttarakhand). However, still there is a strong need for facilitating tele-health counselling local personnel and centers which aims to provide immediate health counseling and guidance to rural communities in remote regions of the state.

- The need for training women human resources towards the beauty and wellness area has also been identified in the present study as a major scope for entrepreneurship development. This needs to be supported with appropriate training in required skills.

### **Framework for Delivering Skills to the women in Agriculture, allied and non-farm sector**

The following government and non-governmental agencies can be nodal agencies in designing and organizing programs for imparting the required skills among women with regard to enhancing employability in time bound manner.

- Support to Training and Employment Programme for Women (STEP), Skill training of Rural Youth (STRY), Department of Animal Husbandry and Dairying (AH&D), Deendayal Antyodaya Yojana-National Rural Livelihoods Mission (DAY-NRLM), Indian Council of Agriculture Research, Ministry of Food Processing and Industries- Pradhan Mantri Kisan SAMPADA Yojana, Food Industry Capacity and Skill Initiative (FICSI), and other National and state-level organizations/departments/Schemes/programs are working in creating infrastructure and environment for delivery of required skills to rural women. NABARD also helps in facilitating training funds for the farmers.
- KVKs (Krishi Vigyan Kendra) play a major role in facilitating training to the farmers along with NYK (Nehru Yuva Kendra) and Training Centers affiliated with Food Industry Capacity and Skill Initiative (FICSI). To some extent, state agricultural universities and research centers provide training to women farmers. Pradhan Mantri Kaushal Vikas Yojana helps deliver of skills to women engaged in food processing and handloom and handicraft sector. Pradhan Mantri Kaushal Vikas further supports rural women in learning retailing and marketing skills. National Commission for Women (NCW) is also facilitating women's training in Dairying. Many NGOs also play a major role in training farmers in the region.
- In the line of Krishi Sakhi (Community Agriculture care Service Provider) and Pashu Sakhi, the successful women farmers and entrepreneurs should be trained to develop them as master trainers. KVKs, NYK along with regional Universities and research institutes should facilitate such training to develop master trainers in the rural regions.
- Awareness creation towards availability of such training facilities and facilitators should be done with the able support of Krishi Sakhi, Pashu Sakhi, Master trainers, NGOs and locally-based Higher education institutions as part of community extension services such

as National Service Scheme (NSS), Unnat Bharat Abhiyaan (UBA), etc. Awareness of credit availability and financial literacy should be done with the help of Bank Sakhi. The study also felt a need to demonstrate new machines (food processing, etc.) in training sessions to motivate women to adopt them.

- Pradhan Mantri Kaushal Vikas, Community Services Centers (CSC), along with Bank Sakhi should be mobilized towards imparting digital awareness and literacy to rural women to enable them to use it for marketing and for availing online government support.
- SHGs, women social groups such as Mahila Mangal Dal, etc., local women cooperatives and Panchayats have to play a major collaborative role towards successful implementation of all programs and schemes for the empowerment of rural women in these regions.
- Marketing facilities (E-haat model for Online marketing) should be provided by State governments along with facilitating adequate spaces in market area to rural women for organizing weekly markets.
- All integrated training packages and training programs for rural women should also include confidence-building and leadership skill modules for rural women. Further the community service extension activities by academic institutions should also focus on this important aspect along with gender sensitization and other social aspects significant for social empowerment of rural women.

**Table 6.9: Impact of major government schemes in the Indian Himalayan Region (IHR)**

State/UT	Government Schemes	Impact	Further impetus required/recommendations
Ladakh	Pradhan Mantri Ujjawal Yojna	<p>-Ladakh had LPG as an important source of fuel for cooking.</p> <p>-After the implementation of PM Ujjawala Yojana, the study shows that there has been an increase in number of rural households using LPG as a major source of cooking which depicts the positive impact of the scheme.</p> <p>-Further access to LPG has considerably increased in rural regions which was lower before the implementation of the scheme.</p>	<p>-Local NGOs Kargil development project, Leh nutrition project and SECMOL were contacted and they are doing a commendable job in creating awareness.</p> <p>-However, there is a need for direct inclusion of the female population in economic activities.</p>



State/UT	Government Schemes	Impact	Further impetus required/recommendations
	UMEED	-The aim of the scheme was to provide the rural population with a sustainable livelihood for self-reliance and self-dependence by promoting self-help groups. -Though it covers the inclusion of the female population yet financial integration of the female population is still to reach its full potential.	
	PM Jan Dhan Yojna	-The financial inclusion drive has a huge positive impact and has resulted in the financial inclusion of women but still, a lot needs to be done to strengthen their financial integration.	
	MKSP Mahila Kisaan Shasaktikaran Pariyojana	-This scheme entails 100% coverage of the female population across Ladakh towards sustainable climate change resilient agro-ecology. -However, crop-specific schemes for female empowerment need to be introduced.	
	SVEP Startup village entrepreneurship program	-Awareness is being generated for creating an environment for innovation, incubation, and entrepreneurship. -However data analysis shows a meagre female population is benefitted from the scheme and only countable start-ups have been initiated by female entrepreneurs.	
	NMDFC National minorities development & finance	-The corporation provides term loan scheme, virasat scheme, micro finance loan scheme, and education loan scheme to assist women belonging to the minority community. -However the benefits accrued are not commendable in financial inclusion of women.	
Jammu	Pradhan Mantri Ujjawal Yojna	-Jammu had LPG as a major source of fuel for cooking. After the implementation of PM Ujjawala Yojana, the study shows that there has been an increase in the number of rural households using LPG as a major source of cooking which depicts the positive impact of the scheme. -Further access to LPG has considerably increased in rural regions which were lower before the implementation of the scheme.	-NGOs from Jammu region National Development Foundation and JKWWS were contacted and they are doing a commendable job in creating awareness.  -However, there is a need for direct inclusion of the female population in economic activities.



State/UT	Government Schemes	Impact	Further impetus required/recommendations
	UMEED	<p>-The aim of the scheme is to provide the rural population with a sustainable livelihood for self-reliance and self-dependence. by promoting self-help groups.</p> <p>-Though it covers the inclusion of the female population yet financial integration of the female population is still to reach its full potential.</p>	
	PM Jan Dhan Yojna	-The financial inclusion drive has a huge positive impact and has resulted in the financial inclusion of women but still, a lot has to be done in their financial integration.	
	MKSP Mahila Kisaan Shasaktikaran Pariyojana	<p>-This scheme entails 100% coverage of the female population across Jammu towards sustainable climate change resilient agro-ecology.</p> <p>-However crop-specific schemes for female empowerment need to be introduced.</p>	
	SVEP Startup village entrepreneurship program	<p>-Awareness is being generated for creating an environment for innovation, incubation, and entrepreneurship.</p> <p>-However data analysis shows a meagre female population is benefitted from the scheme and only countable start-ups have been initiated by female entrepreneurs.</p>	
	NMDFC National minorities development & finance	<p>-The corporation provides a term loan scheme, virasat scheme, micro finance loan scheme, and education loan scheme to assist women belonging to the minority community.</p> <p>-However, the benefits accrued are not commendable in the financial inclusion of women.</p>	
<b>Kashmir</b>	PM Ujjwala Yojana.	<p>-As per the study almost 70 percent of the households use LPG as a source of cooking.</p> <p>-Women of the region have not participated in SHGs.</p>	<p>-Door to door awareness programmes should be organised to educate women about various women centred schemes.</p> <p>-Financial literacy as subject should be introduced at school education.</p>
	SHGs under NRLM		
<b>Himachal Pradesh</b>	MNREGA	-As per the finding of the study, more than 80% of women covered in the present study have worked under MNREGA.	-Coverage of activities under MNREGA may be extended to provide sustainable employment opportunities to the women of the state.

State/UT	Government Schemes	Impact	Further impetus required/recommendations
		<ul style="list-style-type: none"> <li>-This scheme empowers rural women economically.</li> <li>-During the hard times, MNREGA acts as a major employment provider to the women of the state.</li> </ul>	<ul style="list-style-type: none"> <li>-Number of days may also be increased depending upon the social and economic conditions of the women.</li> </ul>
	Pradhan Mantri Ujjawala Yojana	<ul style="list-style-type: none"> <li>-PM Ujjawala Yojana has played a significant role in women's empowerment in the state.</li> <li>-It has significantly reduced the women's time in the collection of wood for cooking in rural areas.</li> <li>-Further, it helps in improving the health of women in the hill state as prior to this scheme women were highly vulnerable due to traditional means of cooking.</li> </ul>	<ul style="list-style-type: none"> <li>-Although PM Ujjawala Yojana has considerably improved the lifestyle of the women but due to poor accessibility and the high cost of refilling is blocking the roads to achieve the desired objectives of this scheme.</li> <li>-Hence, subsidy to beneficiaries and timely delivery may be increased.</li> </ul>
	PM Jan Dhan Yojna	<ul style="list-style-type: none"> <li>-PM Jan Dhan Yojna has achieved 100% financial inclusion.</li> <li>-Now, women are connected to banking services and eligible for getting benefits of many government schemes like PMJJBY.</li> </ul>	<ul style="list-style-type: none"> <li>-Due to accessibility issues and associated costs women hesitate to transact with banks.</li> <li>-Appointment of educated rural women as <b>Bank Sakhi</b> to ensure delivery of banking services at doorsteps may give a boost to transactions and trust towards banks.</li> </ul>
	Mahila Swarojgar Yojna  Mahila Vikas Yojna  SABLA Yojna	<ul style="list-style-type: none"> <li>-The state government has launched these schemes for empowering the women of the state which have provided self-employment opportunities to them.</li> </ul>	<ul style="list-style-type: none"> <li>-Lack of awareness among the target beneficiaries about these schemes is the major issue.</li> <li>-Hence, an awareness campaign may be launched to make them aware of it.</li> </ul>
	Rashtriya Gokul Mission  NLM  Doodh Ganga Yojna  BPL Krishak Bakri Palan Yojna	<ul style="list-style-type: none"> <li>-To give impetus to animal husbandry, both central and state governments have launched these schemes in collaboration.</li> <li>-Women of the state have benefitted from these schemes.</li> <li>-Women of the state have also opted for self-employment under these schemes.</li> </ul>	<ul style="list-style-type: none"> <li>-Process of granting assistance under these schemes may be simplified.</li> <li>-Self-certification of many requisite documents may increase the number of beneficiaries.</li> <li>-Proper awareness program may be launched at Gram Panchayat Level.</li> </ul>
	Pradhan Mantri Ujjawala Yojana	<ul style="list-style-type: none"> <li>-As per census 2011 about 29% of rural households of Uttarakhand had LPG as a major source of fuel for cooking.</li> <li>-After the implementation of PM Ujjawala Yojana, the study shows that about 50 percent of rural households are using LPG as a major source of cooking which depicts the positive impact of the scheme.</li> </ul>	<ul style="list-style-type: none"> <li>-Study recommends to provide options to purchase lesser weight LPG cylinders or providing them LPG refilling facility in these regions according to their paying capacity.</li> <li>-Facilitation of refilling as per requirements should be up to the rural settlement to prevent</li> </ul>

State/UT	Government Schemes	Impact	Further impetus required/recommendations
Uttarakhand		-Further access to LPG has considerably increased in rural regions which was lower before the implementation of the scheme.	transportation cost which locals have to bear. -Supply of LPG should be made regular in rural regions while ensuring adequate delivery in terms of requirements. -To increase awareness among the women towards the harmful impact of smoke on health of individuals. Warning picture stickers on LPG cylinders and to effectively utilise ASHA workers to spread this awareness with regular follow ups.
	Financial Inclusion Drive and PM Jan Dhan Yojana	-Financial inclusion drive after 2014 has a huge impact and has resulted in almost 100% financial inclusion among the rural women of these regions.	-After attaining financial inclusion next major step should be towards enhancing financial literacy, digital literacy for using ICT for banking and transactions. -All above steps should be towards popularising micro credit among potential women entrepreneurs. - Easy delivery of credit.
	SHGs under NRLM	-Has helped in enhancing financial inclusion and generation of livelihood through micro credit. -The SHGs has helped the rural women to avail training facility while enhancing their habit of saving.	-Need is to foster the dormant SHGs through guiding them to start new enterprises which requires the active feedback loop and support with the help of local NGOs. -Training them towards starting and managing new enterprises with adequate regular follow up with implementing agencies is utmost needed. (Now more focus should be towards delivering skills to enhance their capability towards microenterprise development, developing market and network linkages through active usage of digital technology). -Further there is a need to increase participation of women in SHGs.
	MNREGA	-Has helped women to cross the social boundaries further developing courage and interest towards moving actively towards non-agriculture activities and to earn in monetary form. -It has also helped the women to earn income for meeting urgent needs.	-Larger Convergence of MNREGA activities with SHGs. -Increase in days of employment (average is around 30 days per year)
	National Livelihood Mission	Has helped mainly the women farmers to make animal husbandry as one of a major source of livelihood and food security, has increased the awareness	Livestock insurance accessibility and usage is still negligible mainly in distantly located villages of the state. Health care is required.

State/UT	Government Schemes	Impact	Further impetus required/recommendations
		level about the quality of livestock, health care etc	
	Support to Training and Employment Programme of Women (STEP) scheme	-Has helped marginalized women to some extent. -The rate of women who have availed training facility is relatively low.	-The access to scheme should be enhanced with larger awareness of rural women. -Training program should include delivery of micro-credit and also creating awareness and availability about it. -Training programs camps should be held regularly and training should be delivered in areas identified and suggested by majority of women.
	Health related Schemes	-Worked effectively in improving the health and awareness levels of rural women who were always devoid of better primary health care facilities (with support of PHC, CHC, ASHA, ANM etc).  -Pradhan Mantri Jan Arogya Yojana (PM-JAY) has been immensely supported the rural households	-More focus should be on distantly located regions with larger involvement of trained primary health staff which could be created from the available human resource in these regions. -Larger focus towards development of tele-health care with active usage of ASHA workers through training them in assisting locals in availing e-health care. Private health care providers should be asked to deliver such tele-health care to rural villages under CSR. -More hospitals should be brought under the NET of the Pradhan Mantri Jan Arogya Yojana (PM-JAY) mainly in Himalayan regions which lack adequate health infrastructure in rural regions. -Increase in number of Health and Wellness Centres (HWCs) in rural regions with availability of tele-healthcare facility.
	Creating Awareness-  women's equality  Education  Government schemes	-Rural women of the state lack awareness towards various government schemes and support system implemented by government	-The role of organisations such as Mahila Samakhyas which deals with women empowerment through education and awareness should be recognised and further strengthened and supported. -Mahila Shakti Kendra Scheme, model could play a major role in creating of awareness in rural regions of IHR.

State/UT	Government Schemes	Impact	Further impetus required/recommendations
	DBT	Has helped in financial empowering women and increasing her participation in income generating activities	
Sikkim & West Bengal	Border Area Development Programme	-Strengthening of Yak Farm Infrastructure, Tibetan Sheep Conservation and Construction of Hay Godown in North Sikkim.	-Awareness needs to be created.
	Animal Husbandry & Veterinary Services Department		
	Fodder Development activities under the component of Fodder seed procurement and distribution programme	-The Animal Husbandry & Veterinary Services Department under the fodder seed distribution program has distributed fodder seeds like Oat seed and Maize seeds so as to meet the green fodder deficit during prolong dry winter period.	-Awareness needs to be created
Assam	<ul style="list-style-type: none"> <li><i>Rashtriya Krishi Vikas Yojana (RKVY)</i></li> <li>Pradhan Mantri Ujjwala Yojana (PMUY)</li> </ul>	<p>-Scientists from KVK, subject matter specialist and progressive farmers from different parts of Dima Hasao discussed and decided that the horticulture crops especially pineapple can be taken up in a cluster based approach for the targeted areas.</p> <p>-The farmers have given practical field knowledge so that scientific knowledge and traditional farming knowledge can be amalgamated to make innovation for overall socio-economic upliftment.</p> <p>-In Dima Hasao and Karbi Anglong districts LPG Panchayats were held for free connections and distribution of sets to the beneficiaries under Pradhan Mantri Ujjwala Yojana (PMUY). It was informed to the The women participants were informed about the details of expanded Pradhan Mantri Ujjwala Yojana (PMUY) categories.</p>	-Awareness programmes need to be initiated.
Meghalaya	MGNREGA	-Has helped in providing subsidiary employment to a large number of women. This supplements their income to a great extent.	-Timely payment of wages is required.
	National Social Assistance Programme	-Has provided cash support to a large number of destitute women including the elderly and widowed.	-Amount of cash support needs to be enhanced. Better targeting and

State/UT	Government Schemes	Impact	Further impetus required/recommendations
			wider coverage of the scheme should be aimed at.
	-The Dept of Textiles has several schemes: -Strengthening of silk reeling units -Income generation programmes for weavers -Handloom weaving training	-Has supported the handloom weavers of the state to some extent.	-Scaling up is required.
	SHGs under NRLM	-SHGs have facilitated income generation activities for a large number of women.	-They should also be supported so that they become a dependable source of credit for women entrepreneurs.
	Training Centre for Self-Employment of Women	-The Social Welfare department provides training to destitute women and women in-need of care and protection in embroidery, tailoring, etc. for self-employment.	-Scaling up is required.
	Many other schemes under Agriculture Department, Housing Department, Health Department, etc. benefit women directly or indirectly	-Presence of many schemes along with lack of awareness about them.	-A convergence of various schemes is required for effective delivery and achievement of the intended objectives. -Awareness programmes regarding these schemes need to be conducted at regular intervals.
<b>Arunachal Pradesh</b>	Deen Dayal Upadhyaya Bunkar Yojana	-The Scheme has encouraged the women weavers to access affordable credit from banks for working capital requirements.	-Procedural delay in availing the loan should be minimized. -Prospects for market linkages must be included to facilitate women for trading. -Mechanism must be developed to disseminate it at the grassroot level.
	Chief Minister Krishi Rinn Yojana	-The scheme provided a facility of crop loans at zero interest rates for farmers in the state.	-Under Krishi Rinn Yojana, the government should provide crop loan facilities for farmers by making easy access to formal credit. -The scheme should use single window for fastest clearance of loan under within a time limit.

State/UT	Government Schemes	Impact	Further impetus required/recommendations
			<ul style="list-style-type: none"> <li>-The government should provide relief for the production of perennial food crop and plantation crop.</li> <li>-The farmers/ beneficiaries should be selected by involving local bodies.</li> </ul>
	Deen Dayal Swavalamban Yojan	-The scheme encouraged unemployed persons to have access to low-cost capital for entrepreneurship.	<ul style="list-style-type: none"> <li>-The programme should focus on Value addition in Agri-Horti &amp; Allied Sector.</li> <li>-Promotion of Eco-tourism – Home Stays / Tour Operators may also be focused upon.</li> <li>-Emphasis on tradition textile weaving can be given importance.</li> </ul>
	The Pradhan Mantri Ujjwala Yojana	-BPL families are provided with clean cooking fuel	<ul style="list-style-type: none"> <li>-Facility can be given to migrant and single family.</li> <li>-Youth must be engaged in supply chain for regular and smooth delivery in rural areas.</li> <li>-Local bodies must be involved in disseminating information as to how it empowers women and protects them from ill health.</li> <li>-In future, home connection facilities can be ensured to reduce hassle free transportation and dependency on others.</li> </ul>
	Women welfare programmes for Self Help Groups and Mahila Mandals	-Created awareness amongst the women entrepreneurs about various programmes of the State Government and Ministry of Social Justice and Empowerment, Ministry of Human Resource Development, Department of Women & Child Development with an objective of generating employment and making them self-reliant.	<ul style="list-style-type: none"> <li>-Exposure Tours for the women must be organised regularly.</li> <li>-Platform for showcasing their activities should be initiated.</li> <li>-Capacity building programmes for women.</li> <li>-Promotional and incentive activities may be launched.</li> </ul>
	Women Enterprises Development Scheme	-The scheme provided financial assistance to women entrepreneurs so that they can start their own ventures.	<ul style="list-style-type: none"> <li>-Skilled woman entrepreneurs must be engaged in viable income generating activity including small business trade.</li> <li>-There should be a single window for processing the application in time bound manner.</li> <li>-Subsidy should be given on promotion of local crafts and other ventures.</li> </ul>
	The Pradhan Mantri Jan Dhan Yojana	-Financial inclusion drive which hugely impacted and resulted in maximum financial inclusion among the women of the state.	<ul style="list-style-type: none"> <li>-Platforms for inculcating the habit of saving money must be provided.</li> <li>-Financial literacy, digital literacy for using ICT for banking and transactions.</li> </ul>



State/UT	Government Schemes	Impact	Further impetus required/recommendations
			-Popularising micro credit among potential entrepreneurs.
<b>Nagaland</b>	PM Jan Dhan Yojana	-After its launch in 2014, more than 3 lakh household in the state has been benefitted. -Of which 57.37% account holders are from rural areas.	-Expanding financial institutions concentrating particularly in backward areas, where government action is required. -Simultaneously tackling digital literacy by creating awareness, which will further increase the demand for financial services.
	SHGs under NRLM	-Under the NRLM program, through SHGs, there was upscaling of livelihood across 9000 households which facilitated multiple livelihood activities resulting in increasing the annual income of the households.	-Convergence with other line department could tap more resources, thereby, further improving the overall rural social and economic conditions of the people.
	Beti Bachao Beti Padhao (BBBP)	-BBBP scheme in Nagaland has performed quite well in its implementation and has been awarded a national award for best performing state under BBBP on January 24, 2019. -Wokha district also received two national awards- “effective community engagement” on January 24, 2019 and on September 6, 2019, it was amongst the ten districts in India felicitated for undertaking “good work in generating awareness and outreach activities.”	-Being denied quality education, most girls often drop out of school at a young age, further leading to the subordination of their role in the family and in the society. To empower these girls, focus is given on skill development which would enable their economic participation and empowerment.
	Van Dhan Yojana through VDKV (Van Dhan Vikas Kendras) through SHGs	-All together 3090 VDSHG were constituted with 61800 forest gatherers through TRIFED. -TRIFED plays a key role in imparting skill upgradation, training and providing necessary equipment and toolkits for processing, ongoing mentoring support etc.	-Through Department of Forest, Environment & Climate Change as Nodal Dept., Nagaland State Co-operative Marketing & Consumers Federation Ltd. (MARCOFED) should work tirelessly in-coordination with TRIFED in developing micro business enterprise based on forest products.
<b>Manipur</b>	Pradhan Mantri Ujjawala Yojana	-After the implementation of PM Ujjawala Yojana, the study shows that about 15 percent of rural households are using LPG as a major source of cooking, which depicts the positive impact of the scheme. -Further access to LPG has considerably increased in rural regions which was lower before the implementation of the scheme.	-The refueling of LPG is recommended by introducing small size of cylinders (14 kg to 5 kg) due to the high cost of big cylinders in the rural areas.



State/UT	Government Schemes	Impact	Further impetus required/recommendations
	SHGs under NRLM	-Has helped in enhancing financial inclusion and livelihood generation through micro credit.	-The SHG should be further extended to inaccessible/ remote hilly areas.
Tripura	SHGs under NRLM	-SHGs indeed helped women in earning income and empowering them.	-They should also be supported so that they become a dependable source of credit for women entrepreneurs.
	Deen Dayal Upadhyaya Bunkar Yojana	-Encouraged the women weavers to access affordable credit from banks for working capital requirements.	
	Pradhan Mantri Ujjawal Yojana	-Implementation of PM Ujjawala Yojana has tremendously helped rural household. -By using LPG as a major source of cooking the work burden of women in terms of collecting firewood has reduced considerably.	-Supply of LPG should be regular in rural regions.

## Way Forward

- Shift of focus from grow and grow/produce and produce towards produce and market.
- Focus on Traditional and regional crops and aromatic and medicinal plants with revival and promotion of indigenous agronomic practices
- Reducing Human-Wildlife conflict and crop depredation along with developing pasture/grazing land. Implementation of incentive-based mitigation strategy viz., payments to encourage coexistence (PEC-payment for ecosystem services) - to deal with issue of Human-Wildlife conflict and crop depredation.

*The intended beneficiaries (farmers) are to be paid for not cultivating on their land for a trial period of 5 years; which will sort the potential issue of crop depredation by wild animals for such farmers. These farmers will further be motivated to get land contract with herders (at mutually decided price) which they will then use for grazing their livestock. This will further help in reducing the livestock loss due to wild animal attack. The PEC (payment for ecosystem services) programme not only addresses the visible costs of HWC but also the invisible costs, and avoids the distress associated with relocation (Badola, et. al. 2021).*

- All the policies approach and interventions should be focusing towards maintaining/sustaining the symbiotic traditional relationship between women and natural resources. The study recognizes the role and need of sustainable technological interventions along with models of rural development which are readily acceptable, economical and does not create a disconnect between women and environment whether we are dealing with energy alternative sources, issues of fodder availability etc.

- Rural women traditionally follow sustainable practices and have learnt to adapt with changes in environment but in the current dynamic scenario of Climate change the rural women should be trained towards updating their indigenous climate change adaptation strategies which will be crucial for sustaining their long term connect with environment while generating income and employment opportunities for them.
- In parts of the Himalayan region (i.e., northeast India), collective property rights over land are replaced by male-selective privatization of rights (Harris-White et. al. 2022). In such cases, where private rights over land are being officially sanctioned, joint land ownership should be encouraged. In addition, all schemes aiming to improve cropping practices, training, and financial assistance should have a mandatory representation of women farmers. Wherever possible, women groups should be formed and/or encouraged to adopt collective farming practices, upscaling the SHG model for livelihood diversification.
- In all schemes where beneficiaries are ‘farmers’, it should be mandatory to include women farmers.
- Women sense of belonging and connect to forests leads to sustainable behavior of local communities which is also significant for their livelihood generation. It’s highly important to give more power to women in Van panchayat system (Mainly towards decision making and policy framing). Further women should be given more control over forests with their adequate representation in community participation-based management of resources. It is equally importantly to give higher value to women choices in such forums along with giving them more freedom to take decisions and play a role in drafting policies and plans for sustaining natural resources.
- Technological interventions and bringing stakeholders at a common platform, thereby building a robust linkage between the rural women and the external market. Leveraging rural communities towards plantation of natural fibers through Van Panchayats in community forests.
- Identification and mapping of richness of available sources of green energy and promoting creation and usage of green energy with active participation of women. Solar farming along with usage of solar based utensils for cooking should be popularized in rural regions of IHR which will also play a crucial role in reducing women working hours. Solar farming could also serve as a major source of income if channelized for commercial purposes with support of government through training and creating awareness about it. The barren agriculture land of the villagers could be utilized for solar farming.
- Convergence of Social activities of regional higher educational institutions community centers, services National Service Scheme (NSS), Unnat Bharat Abhiyaan (UBA) etc. should be towards targeted objectives. The community services of higher educational institutions have a huge impact, but they are so segregated and diverse in their approach and targets at a specific time. Therefore, the need is to ascertain a few selected need-based targets for some specific periods like six months, one year, or so for such community services so that their impact could be more effective and come out more collaboratively towards empowerment of rural women.

- The revised school syllabus under New Education Policy (NEP) with support of ICAR and other research institution should pave a way towards creating awareness and skill among rural women along with focus on imparting the knowledge of our traditional knowledge system mainly in the area of agriculture and environment conservation.
- The possibility of setting of a Women Development Corporation at regional level needs to be explored in all earnestness to address women centric economic issues which have the members from women cooperatives, local self-government, members from regional institutions and research centres along with government representatives. The corporation could further help in developing women development programs for these regions.
- Exhaustive, reliable, accurate and gender-disaggregated database on various aspects of economic activities and well-being needs to be created for effective policy-formulation.
- Education and Gender Issues- There is a need towards financially reviving and strengthening voluntary organisations such as *Mahila Samakhya* and others which deal with women empowerment through education and awareness. These organisations work towards creating awareness among rural women in area of legal awareness, legal rights and legal aid, counselling (education, skill etc.) of adolescents, creating awareness in society about the Gender issues and focusing on increasing the decision-making power of rural women.

### **Creation of brand Himalaya**

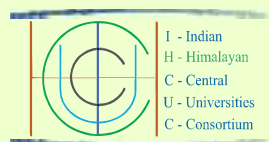
To develop a unique market for the entire IHR, it is important to develop a unique identity for the Himalayan products. It is significant to develop a Himalayan brand for different farm and non-farm products that possess the USP of being organic, regional-based, and women labour-intensive. The development of a market for women-made products should work on the e-integration/linkage of the local entrepreneurs/traders with different markets at local, state, national and international levels. This not only requires developing a platform economy for the regional products but also aligns the initiative with suitable exposure and training of the females in the active usage of smart phones towards using the technology and thus gaining benefits through such direct interface. The issue arising from transport facility and logistic support should also be taken care of with these services through e-platforms/digital platforms. Such a digital platform could be created by leveraging private partnerships. The same digital e-commerce platforms could support the promotion of village tourism and specific destinations of the rural regions of the IHR.

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