

The Impact of Migration on Land Use Pattern and Agriculture Production in Almora District with Special Reference to Salt and Bhikiyasen Blocks

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Abstract:

Migration, a multifaceted phenomenon characterized by the movement of people from one region to another, significantly influence land use patterns and agriculture production. It often results in the depopulation of rural areas. This study is related to achieve the knowledge about the change in land use pattern and change in agriculture production due migration in the Almora district.

CHAPTER 1

1.1. INTRODUCTION

Migration is defined as geographic or spatial mobility between two geographical divisions that generally involves a change in residence from a source of migration to a destination of migration (United Nations, 1958). Migration can be enduring or semi-enduring, and it can be intentional or unintentional. When schooling, nuptials, or occupation cause movement, it is referred to as voluntary migration, but migration caused by people trafficking or other illegal means is referred to as involuntary migration (Ravenstein 1885). In the case of migration, two terms are used: emigration and immigration. When a person leaves their current location or administrative region, they are referred to as an 'emigrant,' and when they enter a new location or administrative area, they are referred to as an 'immigrant. A person who leaves India for employment in the United States is referred to as an emigrant in India and an immigrant in the United States (Virupaksha 2014).

Migration has existed since the dawn of time. People have permanently moved in quest of better living conditions for themselves and their loved ones or to escape dangerous situations in their own countries (XPeditions 2005). These two critical drives were the foundations of Lee's 'push and pull' thesis, which included economic, environmental, social, and political elements pushing out from the individual's homeland and pulling him/her to the destination country (Parkins 2010). There are different motivations for migration, which vary from country to country and across time. Some essential factors motivate people to move from one underdeveloped area to another. It can be roughly classified into many areas, such as economic, social, political, and demographic issues. The reasons for migration can be split into two categories: pull and push factors (Van 2017).

Table 1.1: Push and pull factors that force people to move (Source 2013)

Push Factors	Pull Factors
Unemployment	Potential for employment
A lack of services or amenities	Better service Provision
Poor safety and security	A safer atmosphere
Concerns about high crime rates	Low crime rates
Crop failure	Fertile land
Drought	Good food suppliers
Flooding	Less risk of natural hazards
Poverty	Greater wealth or affluence
War	Political security
	A more attractive climate
	A more attractive quality of life

Migration is both a cause and a consequence. Migration is influenced by various pull forces and environmental factors such as demography, socio-cultural factors, and so on. Similarly, migration has both positive and negative consequences (Jayraj 2013). Positive elements of migration include innovation, rising living standards, and so forth, whereas negative aspects include damage and misery due to societal vulnerability. The three main components of migration are population change, mortality, and fertility. Industrialization and economic advancement in several countries have been accompanied by large-scale migrations of people from rural to urban regions, from one district to another, and from one state to another. However, migration has expanded in recent years (Cummings 2015). Migration is the movement of a human community from one geographical unit to another due to natural, economic, social and cultural causes. The rate of migration rises in tandem with technological advancement. The primary cause of population expansion in major cities is migration, not natural growth (Bora 1996).

1.2. DRIVERS OF MIGRATION

Many elements come together at critical points in people's life to promote migratory aspirations, which, given some feasible livelihood prospects, may result in temporary or permanent movements to another domestic or international destination (Czaika 2022). The factors that drive both migration intentions (and aspirations) and actual moves are numerous and multifaceted, and migration researchers have identified and described numerous factors and contexts that shape both individual migration trajectories and broader migration processes over the past decades.

Migration drivers are structural elements that permit and constrain social actors' exercise of agency in making certain decisions, routes, or destinations (Van 2018). The factors influencing an individual's decision to migrate can be classified as macro-elements (largely independent of the individual), meso-elements (more closely related to the individual but not entirely under the individual's control), and micro-elements (personal characteristics and attitudes) (Carling 2017).

Table 1.2: Complex drivers of migration: macro, meso and micro-factors Source: Foresight: Migration and Global Environmental Change (2011) Final Project Report the Government Office for Science, London, modified

Macro	Micro	Meso
Political	Individual characteristics	Obstacles/Facilitators
Conflict	Age	Political/legal framework
Insecurity	Sex	Social networks/ diasporic links
Discrimination	Ethnicity	Cost of moving
Persecution	Education	Technology
Demographic	Wealth	
Population density	Marital Status	
Population structure	Religion	
Diseases Prevalence	Language	
Environmental		
Exposure to hazard		
Food/water security		
Energy security		
Land productivity		
Social		
Seeking education		
Family obligations		
Economic		
Job Opportunities		
Income		
Producer/consumer prices		

The migration movement is now a structural phenomenon that will undoubtedly persist in the coming decades. While many migrants from low-income countries seek to reach more affluent areas of the world, it should be noted that a comparable, if not larger, number of people migrate to neighbouring low-income countries in the same geographical area (Goldin 2011). Migration is always the outcome of a complex interaction of macro, meso, and micro factors, the former at the societal level and the latter at the family or individual level. The relative importance of one component over another is unexpected. The main contributors to migration are inadequate human and economic growth in the origin nation, demographic increase and urbanization, wars and dictatorships, social problems, and environmental changes. These are the primary causes of international or internal forced migration (Castelli 2018). Land grabbing, communication technologies, and Diaspora linkages are among the 'meso-factors' that attach an individual to his or her ethnic group or religious community. Today, the role of communication technologies and social media in attracting people away from their home countries is undeniable (Fargues 2018).

Living conditions in the affluent world are sometimes excessively overstated, contributing to the image of Western countries as Eldorado. The ease of communication with Diasporas and family members who have previously relocated enhances the urge to escape poverty and start a new life abroad. 'Micro-

factors' such as education, religion, marital status, and personal attitude towards migration all contribute to an individual's desire to migrate (Cantu 2009).

The notion of the ignorant, impoverished migrant arriving at the borders of prosperous countries from the most remote rural areas does not hold water. The poorest people do not have the resources to flee conflict and poverty and hence remain imprisoned in their own or a neighbouring country (Lee 1966).

Personal attributes and choices, as well as some degree of entrepreneurship, educational level, and social and financial support, are usually required for international south-north economic movement. This phenomenon has a positive element, as migrant success and remittances increase, but it also has a bad aspect, as the most active part of the origin country may be drained, impeding local development (United Nations 2017).

Despite a higher prevalence of latent chronic infections ('healthy migrant' effect), freshly arrived migrants are usually in good health, even if generalization is inappropriate. However, marginalization in the host country may worsen such health status, a phenomenon known as the 'exhaust migrant' effect. Host countries, which may profit economically from migration in the medium to long term, must be prepared to receive migrants for the benefit of both the migrants and their local population (Dustmann 2014).

The increasing tendency of 'hilly terrains to plains areas' out-migration, which is responsible for demographic change, has had an impact on the whole quality of rural life, including social, cultural, and economic aspects, as well as increasing the obligations, difficulty, and workload of rural women. This study shows that most people travelled in quest of a better way of life and job, which was also taken into account by the Migration Commission in its most recent report in 2018 (Lal 2022).

1.3. VOLUME OF MIGRATION

- The volume of migration inside a specific territory varies with the degree of diversity in that territory, as does the volume of migration within that territory.
- The volume of migration is proportional to the complexity of the intervening variables. In other words the greater the number of intervening barriers, the lower the migration volume. The volume of migration varies with the state of the economy.
- Unless strict controls are implemented, the volume and rate of migration tend to rise over time. The volume and rate of migration vary according to the advancement of a country or region.

1.4. STREAMS AND COUNTER-STREAMS OF MIGRATION

- Migration typically occurs within well-defined streams; for each primary migration stream, a counter-stream develops; the efficiency of the stream (ratio of the stream to counter-stream or net redistribution of the population affected by the opposite flow) is high if the significant factors in the development of a migration stream are minus factors at the origin.
- The efficiency of the migration stream and counter-stream tends to be low if the places of origin and destination are similar; the efficiency of migration streams will be high if the intervening obstacles are significant; the deficiency of the migration stream varies with economic conditions, being high in prosperous times and low in times of depression.

1.5. CHARACTERISTICS OF MIGRANTS

- Migration is a selective process. Individuals respond differently to the conditions at the points of

origin and destination, as well as intervening impediments, due to variances in personal variables. Selectivity could be excellent or negative. It is positive when there is a high-quality selection of migrants, and it is harmful when there is a low-quality selection.

- To be positively selected, migrants respond mainly to the plus factors at the destination terminal.
- Migrants who respond primarily to negative factors at origin are more likely to be negatively selected; or, if the negative factors are overwhelming for the entire population group, they may not be selected for migration; in other words, migrants who respond primarily to negative factors at origin are more likely to be negatively selected.
- When all migrants are considered together, migration selection is bimodal.
- The degree of positive selection grows as the difficulty of the intervening obstacles increases.
- The increased proclivity to migrate at various phases of life is essential in the selection of migrants; the features of migrants tend to be intermediate between those of the population of origin and those of the population of destination.

Uttarakhand State has seen noteworthy changes in its demographic structure, mainly during the decade 2001-2011, a period of high economic growth, and it has registered moderate population growth (1.74% per year) during the decade 2001-11, which is moderately higher than the national average (1.47% per year). Similarly, the hilly region of the state experienced a substantially lower population increase (0.70%) than the plain regions (2.82%). Furthermore, rural areas in hill district experienced the slowest population growth of 0.38% between 2001 and 2011. Approximately 66.7% of people emigrated within the state's urban centers, primarily Dehradun and 33.3% emigrated to other states' urban centers (Sati 2016).



Plate 1: Abandoned houses in the study area

The current study investigates the relationships between rural out-migration and demographic patterns (changes) in the Almora district of Uttarakhand, where subsistence agriculture is the primary source of food and rural livelihoods despite severely limited arable land availability and crop productivity. The

limitations of the subsistence economy and basic facilities force a considerable part of the adult male population to leave the mountain region in pursuit of livelihoods, employment, and necessities.

1.6. OBJECTIVE OF THE STUDY

The main objectives of the study are as follows:

1. To study the demographic characteristics of migrant households.
2. To study the pattern of household income and employment.
3. To study the nature and extent of migration and employment.
4. To study the relationship between migration, employment production.
5. To pinpoint the reasons for migration and to give suggestions for the betterment of migrating workers.

1.7. HYPOTHESIS

1. Both push and pull factors of migration seem to prevail in district.
2. Migration and economic development are closely related to each other.
3. There is impact on agriculture production due to migration.

1.8. SCOPE AND IMPORTANCE OF THE STUDY

The current study aims to investigate the socio-economic and demographic aspects of migrant households in the Almora district. It investigates the migration trend and pattern, as well as the variables influencing migration and its impact on socio-economic position in the research area. According to a study released at the state's Rural and Migration Commission's second annual general meeting, migration from Almora has exceeded population growth in the district. The study emphasizes the district's migration threat, noting that Almora saw negative population growth (-1.64%) between 2001 and 2011. The study's conclusions will assist the State Government of Uttarakhand, the Central Government, and policymakers in prioritizing policy interventions for the state's growth. The study will also be helpful to universities and other research groups interested in migration-related studies, as it will provide insights for future research.

1.9. LIMITATIONS OF THE STUDY

The current study is no exception to the fact that all social science research has limitations. In India, the Census and the National Sample Survey (NSS) are the two most critical secondary data sources for migration. According to (Srivastava, 1998), the Census and National Sample Survey only include permanent or semi-permanent migration, with seasonal migration somewhat overlapping with the category of short-duration migration.

In their study, (Kundu and Gupta, 1996) state that even the criteria of permanent or semi-permanent migration used by the Census and the NSS do not include long-term migrants who do not change their place of residence as migrants. As a result, the coverage of these two data sets becomes so limited that both reflect diminishing out-migration patterns over time. Furthermore, the Census of India's delay in releasing data hinders interpreting migration trends in the state. The most recent National Sample Survey (NSS) on migration was conducted in 2007-08. Because no new National Sample Survey on migration has been conducted since 2007-08, the data from the 2007-08 survey has been used wherever possible.

Aside from the limitations mentioned above, the study had the following limitations: The investigation was constrained by the time and resources available to a single investigator.

- The elements covered in the study for deep inquiry under primary survey were also limited because it was not possible to study all areas in a short period.
- The study was limited to the Uttarakhand district of Almora. As a result, the study's generalization may be limited to places with similar conditions and may not have broader relevance.

1.10. CHAPTERISATION PLAN OF THE STUDY

The thesis comprises five chapters which are structured according to the following scheme:

Chapter 1: Introduction

Chapter 2: Review of Literature and research methodology

Chapter 3: Migration and its Pattern in Kumaon Region

Chapter 4: Socio-economic Profile of District Almora

Chapter 5: Socio-economic Profile of the study area

Chapter 6: Changes in Socio-economic Pattern of Migration in Livelihood

Chapter 7: Problems of Respondents

Chapter 8: Conclusion and Suggestions

The Bibliography section contains information about the studies, research articles, and reports used in this study. Appendices are included at the end. This section comprises information and tables that were not included in the main chapters of this thesis. It also includes a primary survey data collection instrument.

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CHAPTER 2

REVIEW OF LITERATURE & RESEARCH METHODOLOGY

2.1. INTRODUCTION

A literature review assesses studies identified in the literature relevant to the research topic. The review summarises, assesses and clarifies the relevant literature. It provides a theoretical foundation for the research and aids in determining the investigation's scope. This chapter critically examines the available literature, including articles from journals, books, and websites. The investigator has attempted to offer a brief review of research connected to the current study to provide context for the current research study and has done so under appropriate headings.

2.2. THE RECORD OF MIGRATION IN UTTARAKHAND

The migration history of Uttarakhand demonstrates that, before India's independence, the government focused on resource exploitation, including human labour. Even after India's independence, national security considerations overshadowed the development demands of Uttarakhand's hilly district; following the Sino-India War of 1962, the Hill area's traditional integrated livelihoods were severely disrupted and, over time, gradually disappeared. Following wars brought significant cash and employment opportunities to the hills district (Atkinson 1882). As a result, youth began to leave subsistence integrated agro-based livelihoods for work in the defence and public and commercial sectors. The vast majority of migration in Uttarakhand, including Almora Pithoragarh, is intra-state (Batten 1851). However, as education levels rise and movement networks expand, migration patterns are gradually moving to become interstate. The stagnant agriculture sector has been both a cause and a result of migration, resulting in large-scale land fallowing over the years (Pathak 2017).

The village economy was based on subsistence, with members producing food, shelter, medicine, etc. It included diverse agriculture, plentiful animal husbandry (animals used for dung, milk, meat, skin, and transportation), and cottage industries producing wool, wood, bamboo, masala (spices), and medicinal herbs. Potatoes, strawberries, and rajma (beans) were eventually added to the menu. Other rural needs were addressed through barter trading or by Bhotiya traders (Pangtey, 1992).

Trade took place not just with Tibet but also with western Nepal. Grain, Ghee, cheura gud, honey, Pahari pepper, sheep, goats, cows, buffalos, and ponies (taghans) were the primary imports, while oil, sugar, gud (jaggery), local tobacco, utensils, cotton, and metal material were the main exports. Trans-Himalayan trade and commerce were practised by the Bhotiya community, as were transhumance and a semi-nomadic style of life (Pant 1977).

Bhotiyas had an integrated way of life that included agriculture, animal husbandry, cottage industries, trading, and seasonal migration to lower places during the winter (Chand, 1996). They pioneered Indo-Tibetan trade and subsequent pilgrimage to the Kailash and Mansarovar regions, connecting the Indian plains with the Tibetan plateau through commodity exchange. Individuals from the Johar valley crossed into Tibet via the Untadhura Pass (Rawat, 2009) and those from the Byas valley via the Lipulekh Pass (Pant, 1982).

Jobs were available in the Survey, Forest, and Public Works Departments after 1860. The expansion of settlements (hill stations and cantonments), as well as the construction of dak bungalows, roads, bridges, canals (including the Upper Ganges Canal), and further development of tea gardens, provided employment opportunities for the local familiar people. The expansion and prosperity of various cities and cantonments in the region also opened the door for non-disabled young people to migrate (Becket 1874; Pant 1991).

Nainital, already the commissary headquarters at the time, later became the United Provinces' summer capital and the Bengal Command's headquarters (later renamed the Eastern Command), resulting in the establishment of a variety of employment in this hill station. With the enrollment of young men in the army, this period also saw the commencement of migration beyond the region. After 1890, the Kumaon foothills were connected to the railway (Pant 1992).

Haldwani-Kathgodam, Tanakpur, Ramnagar, Kotdwar, Haridwar, and Dehradun became British Kumaon, Tehri State, and Dehradun gates (Batten 1851). These advances not only offered jobs and possibilities for locals inside the region but also gave impetus for people in faraway communities to relocate in search of work. The process of non-disabled men's out-migration was hastened by the First World War (1914-1918) when a vast number of young people were recruited into the army and sent to various cantonments for training and to the battlefields of Asia, Europe, and Africa (Bhatt 2006). This tendency to work in the defence sector has been maintained to the present day. Several vehicle roads were built about this time, linking the remaining railway stations with adjacent towns, hill stations, and cantonments. This created the door for individuals from secluded villages to venture out into the world in search of work, ushering in the so-called 'money order economy,' which supported rural life for the next few decades (Pant 2009).

The Kumaon-Garhwal region experienced significant in-migration following India's independence. Independence was accompanied by the tragedy of partition, which resulted in many people becoming internally displaced (IDPs). In the Tarai-Bhabar area, IDPs were provided refuge and land. Large sections of the UP Tarai were seized or encroached upon during this time for various causes (Sanwal, 1969; Visharad, 1974). Pantnagar Agricultural University was founded in the Kumaon foothills region.

These developments indirectly impacted the traditional livelihoods of the region's mountain people. Areas encroached upon in the foothills were winter residences of inhabitants from the upper and outer Himalayan regions. People in the Himalayas lost their livelihoods due to disruptions in internal seasonal migration. During the summer, the Bhotiya community and other highlanders migrate to summer pastures (to Tibetan marts) and to Tarai/Bhabar in the foothills (Pant, 1935; Dabral, 1964). Therefore the highlanders had 2-3 sets of villages to maintain the transhumance character of their livelihoods, even though landholdings in the Bhotantik region were not as significant. This way of life, however, came to an end in the 1950s and 1960s.

2.3. WAR INDUCED MIGRATION

The wars of 1962 (India-China war), 1965 (India-Pakistan war), and 1971 (Bangladesh war) produced a need for services in the defence sector, which gave alternative livelihood opportunities for the inhabitants of Pithoragarh (after the destruction of their traditional livelihoods). According to Khanka (1988), 14,002 people from the Pithoragarh district were recruited in the army, navy and air force between 1977 and 1988, based on data from the Army Recruiting Office. This equates to 60% of all Pithoragarh district families having one or more individuals in the armed forces (as of the 1981 census). With the establishment of new defence institutions such as the Indo-Tibetan Border Police (ITBP), Sashastra Seema Bal (SSB), Cost Guards (CD), Central Reserve Police Force (CRPF), and Border Roads Organization (BRO) at the national level, there is greater scope for employment opportunities in the defence service, a traditional niche area for the local population in the region and particularly in the district.

Khanka (1989) further claimed that during the Jammu Kashmir war of 1947 and the Sri Lanka war of the mid-1980s, 374 troops and 311 war widows were from Pithoragarh district, out of 632 soldiers killed and 532 war widows from the three district (Almora, Nainital, and Pithoragarh). This demonstrates the disproportionate number of people employed in the defence sector from the Pithoragarh area of Uttarakhand. Families of fallen soldiers are given educational opportunities in towns and cantonments and scholarships for higher education. This has also enabled the younger generation to achieve their new dreams of working outside of their villages as government employees, scientists, doctors, engineers, journalists, social scientists, actresses, etc. Slowly, girls began to join in the changing process. Many of these young people went on to succeed in their careers and serve as role models for future generations.

2.4. DISASTER INDUCED MIGRATION

Uttarakhand is sensitive to natural disasters, including floods, landslides, ground subgroups, forest fires and earthquakes. Several earthquakes of magnitude 5 to 7 Richter scale occurred in the region during the twentieth century (1935, 1945, 1964, 1966, 1968, 1979, and 1980). According to geologists, the entire northern belt, including Dharchula and Munsiyari, western Nepal and the Malla Danpur district, falls inside the 'seismic gap area' and is especially prone to earthquake damage (Khattri, 1987). Human intervention, such as improper road construction, dam and tunnel construction and uncontrolled town expansion, hastens the incidence of these calamities (Valdiya, 1993).

The flood of 1970, Tawaghat landslides (1977 and 1978), Malpa landslides and flood (1998), La Jhakla cloud burst (2010), Garbyang village sinking over the last half-century, 2013 floods in all the rivers of the region and landslide in Bastari village (2016) are some of the massive disasters. All of these calamities have resulted in the loss of life and land, as well as the displacement of people and in some

cases, entire villages. The two settlements, Siddha-Garbyang and Kalyanpur in gram sabha Kalyanpur, are individuals displaced by natural catastrophes in Pithoragarh and Almora district. The people of the sinking Garbyang village (in Byans valley) and Dar village (in Darma valley) of the Dharchula Tehsil were given land in this location because their villages faced sinking/landslide threats. Families from the villages surrounding Almora Magnesite in Jhiroli (district Almora) were also resettled in Siddha-Garbyang and Kalyanpur (Atkinson 1982).

2.5. MIGRATION IN THE TWENTY-FIRST CENTURY

The twenty-first century began with the establishment of the new Uttarakhand State in November 2000, following a century of struggle and immense sacrifice by the region's people (Pathak, 1999). People in the district's mountain region had high hopes that their voices would be heard and their dreams would be realized. The new state attained substantial economic growth within one and a half decades of its inception, although the expansion was primarily limited to the plains - Dehradun, Haridwar and Udham Singh Nagar district.

The plains have seen new economic growth, health, and educational opportunities, resulting in disparities in growth across the state. Most mountain people are battling for a decent standard of living and a decent way of life. This has increased migration from the mountains to the plains and beyond. The 2011 census reflects the tremendous migration from the highlands to the plains. The state's overall population growth rate is 1.74%; however, the mountain regions experienced substantially lower population growth (0.70%) than the plains district (2.82%).

The decadal rate of population growth is high in Dehradun, Haridwar and Udham Singh Nagar (over 30% in each of the three areas) and Nainital (over 25%); moderately high in Champawat (14.5%) and Uttarkashi (about 12%); low (5% or less) in Pithoragarh, Rudraprayag, Bageshwar, Chamoli, Tehri Garhwal; and harmful in Almora and Pauri (Bahuguna and Belwal, 2013).

In 2011, Almora and Pauri Garhwal had 17,868 fewer people than in 2001. Similarly, between 2001 and 2011, 33 villages vanished from Uttarakhand's map. According to the census, 1053 of Uttarakhand's 16,793 villages have no people, while another 405 have populations in the single digits (Venkatesh, 2016). The number of 'ghost villages' has been estimated to be 3500 (Purnendu, 2012; Umar, 2012).

Out-migration has also impacted the demographic and socioeconomic makeup of mountain district such as Pithoragarh. Out-migration of certain caste groups from the mountains to the plains has resulted in a higher proportion of the scheduled caste population in the hills (Mamgain and Reddy, 2015), while male out-migration has resulted in the feminization of society (Mamgain, 2004). However, female labour force participation remains very low (only 19% of the total female population is employed) (DoESU, 2014). The phenomenon of 'permanent family migration' in Pithoragarh district grew in the twenty-first century. This was a change from the previous tendency of individual temporary migration.

The 'permanent family movement' trend concerns national security, cultural erosion, and uncontrolled urban growth. Border settlements in Pithoragarh Johar, Darma, and Byans valleys became 'ghost' villages as a result of the closing of the Indo-Tibetan trade, the war with China, and the granting of ST status to Bhotiya tribes prior to 1970. Because of unsuccessful development in mountain villages (which lack education and health services, roads, communications, and employment), migration has become more widespread among non-ST groups since 2000.

Though the Pithoragarh district did not have a negative population growth rate, the situation at the sub-district (Tehsil) level is more concerning. Between 2001 and 2011, the population of Tehsil Didihat in

Pithoragarh fell by -4.6% and that of Tehsil Munsiyari by -0.05%. The leading cause for the negative rate of population increase in specific locations is considerable out-migration. If the current pattern of people leaving villages continues, Tehsil Dharchula (7.54%), Gangolihat (2.21%), and Berinag (0.6%) will most likely have fewer people in 2021 (Chand, 2016).

2.6. PRESENT MIGRATION SITUATION

Since its inception in 2000, Uttarakhand has had excellent economic growth that has regularly exceeded the national average. Unfortunately, the government's efforts to promote rapid and consistent economic growth did not emphasize equitable distribution between areas. As a result, the plains district of Haridwar, Udham Singh Nagar, and sections of Dehradun and Nainital have seen most of the expansion in businesses and employment. Some hill district have fallen well short of similar expectations. In the modern era, this wealth and growth disparity has fueled massive migration from the highlands to the plains (Pathak 2017).

2.7. GROWTH OF INDUSTRIAL SECTOR IN THE PLAINS

Upon its establishment, Uttarakhand saw rapid development in gross state domestic product (GSDP) and per capita income. Since 2005/06, per capita income has exceeded the national average (DoESU, 2016). The proportion of poor people fell from 33% in 2004/05 to 11% in 2011/12 (DoESU, 2016). However, income disparities remained widespread across the state. Uttarkashi district has the lowest per capita income of INR 59,791 which is less than half of the highest per capita income district, Dehradun (INR122, 804). Pithoragarh ranks ninth in per capita income at INR 79,981 (DoESU, 2016).

Globalization and privatization have transformed the economy and modified the structure of the state's GSDP in the twenty-first century. Uttarakhand's impressive economic growth is mainly driven by expansion in the secondary and tertiary sectors. Between 2004/05 and 2012/13, agriculture's percentage of GSDP fell, while the secondary sector expanded and the tertiary sector stayed unchanged. Agriculture and commerce, hotels and restaurants (17%) were the most prominent donors in 2004/05, while trade, hotels and restaurants (23%) and manufacturing (21%), were the most significant contributors in 2012/13. The state's industrial policy, which provided many incentives to attract private firms, was credited with this exceptional growth (Mamgain and Reddy, 2015).

New industrial facilities were set up in Pantnagar, Sitarganj, and Selakui (all in the plains) with particular assistance in the form of (nearly) free land and tax breaks. During this time, new medical, engineering, management, and other educational institutions/colleges and universities were established throughout the state (again, in the plains). These educational institutions provided chances for local students and attracted many students from beyond the state. Both industrial development and educational possibilities have contributed to the state's economic growth and poverty reduction.

2.8. THE PATTERN OF DEMOGRAPHIC CHANGES DUE TO MIGRATION

The demography and ethnography of Uttarakhand's hill regions have been influenced by a massive in-migration from other parts of the mainland throughout the 11th and 12th centuries and afterwards (Atkinson, 1822; Walton, 1910). Throughout generations, natives and migrants worked hard to remove jungles and cultivate arable land for farming. During British control, the formation of Garhwal and Kumaon army regiments provided local youth with permanent employment in considerable numbers for the first time in the region. This entailed the out-migration of local young for a few years, following

which they generally returned to their villages. Males migrated from the upper hills to clear the jungles in the lower Shivalik hills on a seasonal basis (Walton, 1910).

This initial contact with the outside world significantly impacted the developing acceptance of a lifestyle based on migration. The situation has altered dramatically in recent decades, with many people leaving permanently, along with families from the state's Hill Region, primarily to better their children's futures. This has become a common occurrence in hill district, resulting in an outright reduction in population in a few district, such as Almora and Pauri Garhwal, and prolonged growth in other hill district over the last decade (Mamgain 2017).

According to Jangwan (2019) in his research paper State of migration in Uttarakhand: A case study of Rudraprayag District, migration is one of the significant dimensions in generating population dynamics in any place. Migration is frequently the result of several multifaceted reasons. These could be physical, economic, socio-cultural, or political causes or a combination of one or more. Economic concerns are currently the primary motivators for migration in emerging and underdeveloped countries. The entire Himalayan region is affected by migration, and the state of Uttarakhand is no exception, with an increasing tendency in intra-rural urban mobility since its inception in 2000. Rough topography, harsh climate conditions, and few employment prospects characterize the Rudraprayag region in Uttarakhand. The region's most significant share of migrants is owing to work and employment, accounting for 13.58% of all migrants. With 11.13%, education is the second most important region, causing people to travel to the region, particularly the younger population.

The fundamental issues of population geography are migration and demographic changes, and population dynamics are examined in terms of time and space. It is a geographical or spatial mobility between two locations that involves a change in residence from one to the other (UNDESA 1958). It has a substantial impact on socioeconomic and political factors that are related to population size (Goldscheider 1987). Migration is recognized as the primary factor influencing any region's population, and the demographic shift of any region is dependent on fertility (birth rate), mortality (death rate), and movement (emigration or immigration) (Lal 2022).

Higher births and immigration increase the human population of any location, whereas higher deaths and emigration lower it. As a result, it is widely assumed that migration plays a significant role in defining the shape of the population (demographic changes) in any area. In this globalization era and increasing connectivity, migration affects all countries more than ever before, making migration a high-priority issue for policymakers, while demographers struggle with its volatility when calculating population projections (IOM 2018).

On the other hand, people in mountainous areas rely on subsistence farming, livestock, and income creation from small-scale trade and wage operations to make ends meet. Subsistence agriculture is the primary source of food and rural livelihoods in the region, despite arable land being scarce and low crop productivity. The reliance on the subsistence economy and a lack of adequate local employment prospects force a considerable part of the adult male population to leave the mountain region in search of livelihoods and employment (Maithani 1996). The lack of basic facilities (communication, transportation, healthcare, educational and recreational facilities) and changing climate and natural calamities are critical reasons for rural working population outbound migration (Tiwari 2015).

As a result, migration from the Himalayan region is a popular and primary livelihood strategy for the majority of people in the mountainous rural areas, which include ten district: Almora, Pauri Garhwal, Bageshwar, Pithoragarh, Rudraprayag, Chamoli, Tehri Garhwal, Uttarkashi, Champawat, and Nainital.

In the 1990s, migration from the mountainous region was personal and temporary, with one or two people from each family working in various enterprises in urban areas or cities and sending the money earned by them by money order, which is why this system was known as the money order economy, and 42 to 57% of households having at least one migrant. However, compared to individual transitory migration, migration has grown in the contemporary context. Permanent family migration occurs when migrants move their families from rural areas to cities permanently, with 48% of households reporting out-migration, 34% reporting long-term migration, 16% reporting permanent migration, and 4% reporting short-term migration (Awasthi 2010).

As a result of this shifting migration pattern, a scenario of population decrease has formed in the study region's rural areas. The State Migration Commission classified some localities as ghost villages in 2018 due to the massive movement of the adult population. According to an analysis, the rate of population increase in two district of the state, Pauri Garhwal and Almora, has been negative decadal growth of -1.41 and -1.28, respectively, and three district, Pauri Garhwal, Rudraprayag, and Pithoragarh, have the highest number of empty villages.

The state has seen significant changes in its demographic structure, particularly during the decade 2001-2011, a period of high economic growth, and it has registered moderate population growth (1.74% per year) during the decade 2001-11, which is comparatively higher than the national average (1.47% per year). Similarly, the hilly region of the state experienced a substantially lower population increase (0.70%) than the plain regions (2.82%). Furthermore, rural communities in hill district experienced the slowest population growth of 0.38% between 2001 and 2011. Approximately 66.7% of persons emigrated inside the state's urban centres, primarily Dehradun, while 33.3% emigrated to other states' urban centres (Sati 2016).

2.9. CHANGING PATTERNS OF AGRICULTURE DUE TO MIGRATION IN UTTARAKHAND STATE FROM 2010-2020

Manufacturing and service sectors have developed in Uttarakhand in recent years, but agriculture remains the dominant industry, directly or indirectly engaging most of the population. Development in the agricultural and allied industries helps the secondary and tertiary sectors grow via a demand-supply feedback loop (State of Indian Agriculture 2015). Agriculture is a state topic; hence the burden of development and safeguarding the welfare and well-being of persons involved in the sector falls mainly on the state (Uttarakhand Economic Survey 2020). The state's difficulties are primarily due to its diverse landscape and varying ecosystem. As a result, any substantial policy initiative for agriculture and related industries will be regarded as growth-promoting. The sector's allocation from the state budget may have shrunk. This may endanger persons working in the sector and harm long-term economic progress.

The assignment thus highlights the sector's significance in propelling the State economy to new heights while also identifying the obstacles that have hampered the sector's growth and constrained the income and welfare of its stakeholders. According to the 2011 Census, 30.23% of the state's population is in urban areas, with the remainder living in rural areas. 86% of the overall geographical area of 53,483 square kilometres is hilly, with 63.42% under forest cover (38.12 lakh hectares in 2018-19). Because of the terrain, relatively little agriculture is practised in the state, and so the net sown area is slightly more than 11% of the total stated land area.

2.10. AGRICULTURAL PROFILE OF UTTARAKHAND

The majority of the state is covered by forests and wastelands, leaving only 7.41 lakh hectares (approximately 14%) of the total recorded area of 56.72 lakh ha for cultivation. Out of the total, around 89% are classified as tiny and submarginal. Because a vast number and area are under tiny and marginal ownership, economies of scale cannot be realized, and so the input cost per unit of output is higher. The Tarai region's soil is exceptionally fertile and supports a variety of crops. The indiscriminate use of chemicals and overexploitation of groundwater make the soil in this region less productive, reducing productivity sustainably. The hill region, on the other hand, is prone to frequent soil erosion due to steep slopes, making it less and less fertile, which may be avoided by implementing better management practises. Farmers in the state mainly use two types of agricultural practises: rainfed and irrigated. The majority of agriculture in the state is rainfed. The state's net irrigated area is 3.38 lakh hectares (2009-2010).

The state's net irrigated area to net sown area ratio is 45 per cent. Because of the enormous region covered by hills, irrigation is available mainly in the plains and valleys. As a result, alternate irrigation sources must be developed to enhance the net irrigated area, which will raise the state's cropping intensity. These alternatives include rainwater gathering, check dams, hydrams for lift irrigation, etc. Drip irrigation, sprinklers, and other water-saving technologies can also be utilized to improve water management. Food grain production growth varies significantly across the country. As a result, the agricultural scenario paints a conflicting picture.

On the one hand, productivity in the district of Udham Singh Nagar, Haridwar, Nainital (plain), and Dehradun (plain) is relatively high; on the other hand, productivity in the hilly area is inferior, even though the valleys are fertile. Plains and hill agriculture are opposed. While plains production can be compared to agriculturally developed sections of the country, hill productivity lags considerably behind. The Green Revolution benefited the farming system in the state's plains while neglecting the hilly region. Aside from the dangers, there are numerous potentials for boosting production and productivity, particularly in pulses and oilseeds, cultivable wasteland availability, and rainwater gathering activity conservation. There is also a good chance for organic farming, agricultural diversification, post-harvest technology, market intervention strengthening, and farm machinery utilization to make agriculture more profitable employment.

Table 2.1: Area, Production, and Yield Specifications Cropping patterns and agricultural commodity production

Crop	Area (000 Ha)		Production (000 Tonnes)		Yield (Kg. Per Ha)	
	2019	2020	2019	2020	2019	2020
Rice	256.0	247.0	617.6	658.4	2704	2705
Wheat	327.0	316.0	951.6	904.1	2910	2861
Cereal	192.0	182.0	251.7	265.8	1306	1335
Pulses	60.0	60.0	52.1	49.0	922	963
Total	835	805	1873	1877.3	7842	7864
Source: Ministry of Agriculture and Farmers Welfare, Government of India 2019 -20						

Agricultural development has been slow and has fallen short of keeping up with population increase. Uttarakhand's harvests of main food crops have been lower in recent years than in other South Asian countries and the state is now reliant on food imports. Because of land deterioration, crop productivity in

the hills has decreased. Modifications in agricultural practice (including crop and crop production modifications, as well as the effects of animal overgrazing) are having a significant and far-reaching impact on the natural environment.

2.11. STATISTICS AND KEY REASONS OF MIGRATION IN UTTARAKHAND

Migration from rural to urban is a major concern in Uttarakhand, with a comparison of 2001 and 2011 census data revealing a slow decadal population rise in most of the state's mountain district. Between 2001 and 2011, the population of Almora and Pauri Garhwal district decreased by 17868 people, indicating an outflow of people from several hill regions of the state. The state has two administrative divisions: 13 district, 102 Tehsils, 95 development blocks, 670 nyaay panchayats, and 7950 Gramm panchayats. There are 16793 census villages (2011 census), with 15745 inhabited and 1048 unoccupied. In the last ten years, 3,83,726 people from 6338 Gramm panchayats have relocated on a semi-permanent basis; however, they return to their villages on occasion and have not migrated permanently.

Table 2.2: Districts and age groups Migration Gram Panchayat Status (in Percentage) Segregation of migrants - youth, middle-aged adults with families, and senior retired people

S.No	District	Less than 25 years	26 to 35 years old	More than 35 years of age
1	Uttarkashi	30.68	36.56	32.77
2	Chamoli	26.71	43.49	29.79
3	Rudraprayag	28.97	41.83	29.2
4	Tehri Garhwal	29.26	40.92	29.82
5	Dehradun	38.41	34.47	27.12
6	Pauri Garhwal	29.23	41.67	29.1
7	Pithoragarh	28.32	42.58	29.1
8	Bageshwar	33.92	42.1	23.97
9	Almora	29.19	42.22	28.59
10	Champawat	25.23	45.49	29.29
11	Nainital	29.48	44.57	25.96
12	Udham Singh Nagar	16.66	43.34	40
13	Haridwar	13.99	52.79	33.22

Source: Rural development and migration commission, 2019

There have been 1, 18,981 permanent migrants from 3946 Gramm panchayats in the last ten years. Data show that semi-permanent migrants outnumber permanent migrants in all state district. According to a study of data from the Migration Commission's report, agriculture is the primary occupation of individuals residing in various communities throughout the state, followed by labour and government work. The Gross Domestic Product (GDP) of hill district such as Almora, Bageshwar, Champawat, Chamoli, Pauri, Tehri, Pithoragarh, Rudraprayag, and Uttarkashi is less than 40% of that of plain district such as Dehradun, Udham Singh Nagar, and Haridwar. This could be owing to their smaller population and primarily rural economy.

Rajendra When the approximate rate of growth of the state's gross domestic product is compared between 2009-10 and 2016-17, it has increased by about 2 or 2.5 times in the former district (i.e. hill district) and three times or more in the latter district (i.e. plain district). The primary sector contributed 14% in the fiscal year 2011-12, but this has reduced to 10.81% in the fiscal year 2018-19. The secondary sector's contribution to state GDP has declined from 52.13% to 48.28%.

The tertiary sector's contribution is expected to rise from 33.88% to 40.91%. (GoU Economic Survey 2018-19). At constant prices (2011-12), Dehradun has the highest District Economic Development at 7.62%, while Champawat has the lowest at 5.75%. Haridwar, Dehradun, and US Nagar had per capita incomes of Rs. 2, 54, 050, Rs. 1, 95, 925, and Rs. 1, 87, 313, respectively. (2016-17) all other hill district had per capita incomes that were lower than the state average, with Rudraprayag being the lowest at Rs. 83,521. (GoU Economic Survey 2018-19).

Table 2.3: A report on the situation of migration in Uttarakhand Gram Panchayats

District	Employment	Medical facilities	Education	Infrastructure	Poor agricultural produce	Followed the family that migrated	Destruction of agricultural produce by wild animals	Others
Uttarkashi	41.77	6.04	17.44	2.29	7.14	2.1	4.04	19.17
Chamoli	49.3	10.83	19.73	4.93	4.73	2.51	3.09	4.87
Rudraprayag	52.9	8.64	15.67	4.43	4.27	3.26	5.11	5.72
Tehri Garhwal	53.43	7.84	18.24	3.07	6.17	2.47	4.26	5.52
Dehradun	56.13	6.33	12.5	1.2	2.08	1.4	1.65	18.7
Pauri Garhwal	52.58	11.26	15.78	3.03	5.35	2.53	6.27	3.21
Pithoragarh	42.81	10.13	19.52	4.97	4.66	2.36	4.08	11.48
Bageshwar	41.39	9.09	14.49	4.32	2.18	1.45	3.42	23.65
Almora	47.78	8.61	11.75	3.81	8.37	2.68	10.99	6.02
Champawat	54.9	6.67	10.24	5.46	6.31	4.3	6.65	5.46
Nainital	53.7	7.79	10.37	4.96	4.94	2.1	6.38	9.76
Udham Singh Nagar	65.63	4.27	3.52	0.6	0.38	5.4	2.6	17.6
Haridwar	76.6	1.62	2.73	0.05	0.64	1.69	0.82	15.85

Source: Mamgain et al., 2005.

Despite a downward tendency, the primary sector contributes significantly more to the Gross Domestic Product of the hill district than the state average. This is proof of the hill areas' reliance on the primary sector, particularly agriculture and allied activities, for a living. In 2016-17, the primary sector contributed the least in Haridwar district, accounting for only 4.4% of DDP, while it contributed the most in Almora DDP, accounting for 30.2% (Source: 2011-12 to 16-17 District Domestic Product Estimates). Between 1981 and 2011, the decadal growth rate of individual district declined, with the figure being negative in Pauri and Almora and comparably extremely low in Tehri. The majority of

those who relocated did so for work, accounting for 50.16% of all migrants in the state. Education came in second place, accounting for 15.21% of migration.

Many scholars have focused their efforts on analyzing the influence of migration on agricultural developments (Jokish, 2002; Adhikari, 2001), and they have discovered that out-migration harms migrant-sending populations due to workforce loss, which has a detrimental impact on agricultural production. The scarcity of farm workers has been noted due to the youthful population out-migration. This workforce shortage may harm agricultural production and, as a result, agricultural productivity. Ravi, 2014 studied medium to low-fertility soils and inadequate irrigation; most mountain people are unable to raise enough food grains to meet their yearly household needs. As a result, many farming families have stopped farming in the last quarter century or so. According to (Kailash, 2018) research, migration is a big challenge to the state. According to a report, 1053 villages in the state of Uttarakhand have no people. Agriculture is one of the most essential areas of the Uttarakhand economy.

2020 (Ishwar, Balwant) Hill district experienced one-fourth of the population increase (0.7%) compared to plain district (2.8%), indicating massive out-migration from these (hill) areas of the state. It is worth noting that the type and patterns of out-migration have now cleared the way for long-term to permanent out-migration. Furthermore, a lack of job possibilities is causing dissatisfied out-migration to places inside or beyond the state, which has been a primary source of concern. The COVID-19 pandemic leave the most significant impact on short-term migrants, who have returned to their villages in desperation, causing melancholy and distress.

2.12. THE RURAL SOCIO-ECONOMY IN ORDER TO MITIGATE OUT-MIGRATION

In Uttarakhand, where more than 66% of the population lives in rural areas (more than 80% in hill district), the challenging mountain topography and dispersed population of the mountain regions continue to be critical challenges for development and poverty alleviation (Hunzai 2011). Rural development has increased in the state's plain district of Haridwar, Dehradun, and Udham Singh Nagar, leaving the hill district underdeveloped. In the steep terrain, land holdings are minimal and dispersed. Irrigation covers just approximately 10% of the land in hill district. The majority of the rural population in the hills relies on subsistence agriculture or migrates in search of better prospects (Negi 2019).

Infrastructure development in the hill district, such as electricity, roads, and irrigation, remains inadequate. The discrepancy in income and livelihood between the hills and the plains is exacerbated by inter-district infrastructure imbalance. Furthermore, the region's reliance on the non-farm industry has grown significantly. Out-migration from rural portions of the state's hill district has become a significant issue, resulting in numerous depopulated hamlets or towns with a drastically reduced population. The hill villages' static socioeconomic conditions pose a significant difficulty in addressing the problem of out-migration (Shashanka 2011).

Strengthening rural development and livelihoods has been seen as a crucial driver of change in Uttarakhand's rural areas, particularly in the hill district. The rural population relies heavily on agriculture and labour for a living. Strengthening the state's rural economy will be one of the most essential actions for halting out-migration from these areas (Bhide 2004).

2.13. RURAL OUT MIGRATION AND DEMOGRAPHIC CHANGES IN UTTARAKHAND

The fundamental issues of population geography are migration and demographic changes, and population dynamics are examined in terms of time and space. It is a geographical or spatial mobility

from one geographical location and another that involves a shift in residence from one location to another (UNDES 1958). It also has a considerable impact on economic and political factors related to population growth (Goldscheider 1987). Furthermore, migration is recognized as the primary factor influencing the population of any region, and the demographic shift of any region is dependent on fertility (birth rate), mortality (death rate), and movement (emigration or immigration) (Lal, 2021).

Furthermore, higher births and immigration increase the human population of any location, whereas higher deaths and emigration lower it. As a result, it is widely assumed that migration plays a significant role in defining the shape of the population (demographic changes) in any area, and in this globalization era and increasing connectivity, migration affects all countries more than ever before, and migration has become a high priority issue for policymakers. At the same time, demographers struggle with its volatility when calculating population projections (IOM 2018). On the other hand, people in mountainous areas rely on subsistence farming, livestock, and income creation from small-scale trade and wage operations to make ends meet. Subsistence agriculture is major source of food and rural livelihoods in the region, despite arable land being scarce and low crop productivity.

Because of the reliance on the subsistence economy and a lack of suitable local employment prospects, a considerable part of the adult male population leaves the mountain region searching for livelihoods and employment (Maithani 1996, Tiwari 2015). In addition, a lack of essential facilities (communication, transportation, healthcare, educational, and recreational facilities) and changing climate and natural disasters are critical drivers for rural working population outbound migration. As a result, migration from the Himalayan region is a widespread and core livelihood strategy for the majority of people in the mountainous rural areas, which include ten districts: Almora, Pauri Garhwal, Bageshwar, Pithoragarh, Rudrapur, Chamoli, Tehri Garhwal, Uttarkashi, Champawat, and Nainital (Sati 2016).

In the 1990s, migration from the mountainous region was personal and temporary, with one or two people from each family working in various enterprises in urban areas or cities and sending the money earned by them by money order, which is why this system was known as the money order economy, and 42 to 57% of households having at least one migrant. However, in the current context, migration has grown relative to individual temporary migration (Uttarakhand Economic Survey 2019).

Permanent family migration refers to migrants who move their families from rural areas to cities permanently, with 48% of households reporting out-migration, 34% reporting long-term migration, 16% reporting permanent migration, and 4% reporting short-term migration. 1 Due to this shifting migration pattern, a scenario of population decrease has formed in the study region's rural areas. The State Migration Commission classified some localities as ghost villages in 2018 due to the massive movement of the adult population. According to an analysis, the rate of population increase in two districts of the state, Pauri Garhwal and Almora, has been negative decadal growth of -1.41 and -1.28, respectively, and three districts, Pauri Garhwal, Rudrapur, and Pithoragarh, have the highest number of empty villages. Furthermore, the state has seen significant changes in its demographic structure, particularly during the decade 2001-2011, a period of high economic growth, and it has recorded moderate growth in its population (1.74% per year) during the decade 2001-11, which is comparatively higher than the national average (1.47% per year). Similarly, the hilly region of the state experienced a substantially lower population increase (0.70%) than the plain regions (2.82%). Furthermore, rural communities in hill districts experienced the slowest population growth of 0.38% between 2001 and 2011. Approximately 66.7% of persons emigrated inside the state's urban centres, primarily Dehradun, while 33.3% emigrated to other states' metropolitan centres.

Half of Uttarakhand's people's resources work on farms, and only a few have paying jobs. Since 2005, employment establishment has been sluggish, particularly for women. Women in Uttarakhand confront numerous impediments to advancement. The state has one of the lowest child-sex ratios in the country, and it is getting worse. Maternal mortality is high, and women are leaving the labour force in huge numbers.

Rural-to-urban migration is an essential part of structural transformation, yet, migration trends in India vary significantly by region. Rural households commonly migrate, according to a household survey performed in 18 villages around Uttarakhand. Long-term migration accounts for 73% of all migration.

Permanent migration is a concerning trend; 36% of upper caste households permanently left the studied locations in the previous ten years. Few people leave the state to work in manual labour, but the vast majority migrate for regular salaried jobs, much of it low-wage petty work. Remittances are unlikely to have a significant multiplier effect in the villages because they are mainly used for consumption, including health and education. The main factors of migration are low agricultural production and educated unemployed who refuse wage labour. It depicts the problems of village life in Uttarakhand's Hill Region in general, and women in particular, in the face of increased out-migration (Mamgain 2017). Because hundreds of villages still lack access to roads and other basics and are cut off during the winter, achieving financial inclusion in Uttarakhand may be more difficult. Most households we visited had at least one veteran in the family, allowing them to retain a decent standard of living thanks to government pensions. We discovered that pensions were the primary source of income for many households. The majority of residences had bank access. NREGA payout accounts accounted for 70% of these accounts, with voluntarily formed savings accounts accounting for the remainder. Because the standard of living in the area suggests that significant sums can be mobilized, private players can enter the savings market. Villagers currently spend their money on jewellery and houses. Almost every family had younger members who had left the neighbourhood in quest of better opportunities.

The younger members used the mail service or relatives to send money home. We recommend looking into the villagers' desire for efficient remittance services. Agriculture is the primary source of employment, despite its poor revenue contribution due to insufficient rainfall in non-monsoon seasons over the last three years. Because the area continues to receive rain during the monsoon season, this is inconvenient but readily remedied. Water harvesting tank loans have the potential to boost agricultural yield significantly.

Because deforestation has left a substantial percentage of the landscape desolate, plantation loans may be able to improve earnings while also improving the local ecosphere. Additionally, apples and potatoes are farmed as cash crops in the area; however, only a few insurance companies cover these commodities. Most households looked to be interested in this form of financial service, but due to geographic constraints, the list of service recipients is still limited to those who reside near a market or road (Kandpal 2020).

Pant 2020 performed a study in the Almora District's Bohara Gaon and Bhatkot Chaukhutia Blocks. According to the survey, 48% of people were migrating, 38% of families had migrated partially, 10% of families had migrated completely, and just 4% of families did not migrate at all or had elected to live eternally in the villages. The study also discovered a negative relationship between a family's land holdings and its members migrating. Unemployment, failure of agriculture and animal husbandry to provide desired income, lack of job opportunities, increasing wild boars and monkeys, increasing human-animal conflicts, poor state forest and land policy, lack of education and medical facilities, and

other factors were identified as significant push factors for migration from hills to plains. The study indicated that the risk of infiltration, human trafficking, and illegal trade across the border is increasing. The study also indicated that as the family's male migrated, the agricultural land became barren, increasing the responsibilities of women.

2.14. NATIONAL TREND OF MIGRATION

Rani (2012) highlighted current trends and patterns of internal migration in India utilizing National Sample Survey (NSS) data from 1999/00 and 2007/08 rounds, as well as 2011 census findings, in her study. Internal migration among males in India has steadily increased from 24.8 percent in 1993 to 28.5 percent in 2007/08. According to NSS estimates, more than half (56%) of rural-to-urban migration is linked to jobs, and the salaried/wage earning class has increased from 28 % in 1999/00 to 32 % in 2007/08.

Rajan (2011) claimed in his book *Migration, Identity, and Conflict- India Migration Report 2011* that inter-state mobility grew significantly between 1991 and 2001, coinciding with India's economic liberalization agenda, which began in 1991. The proportion of inter-district and inter-state migration was 24 and 13%, respectively. Inter-state migration surged by 54% between 1991 and 2001, compared to previous decades. Economically developed states like Punjab, Haryana, Maharashtra, Gujarat, and Delhi draw migrants from less developed states like Bihar and Uttar Pradesh.

Karan (2003) performed surveys in six villages (2 from each of the three district- Gopalganj, Madhubani, and Purnea) in 1981-82 and 1999-2000 for his study on "Changing trends and pattern of migration from Bihar." According to the report, migration increased from 28 percent to 49 percent between the two surveys. In terms of migratory patterns, more than half of the Other Backward Classes (OBC) households have migrated. Yadav, Koeri, and Kurmi castes were the least migrated among the OBC. 50% of the households were either landless or had less than one acre of land and sent at least one migrant. Those households with 1-5 acres of land have at least one migrant in the family. According to National Sample Survey (NSS) data, 75% of the poor were landless or near landless in 1999-2000.

In their analysis, Bhagat (2009) stated that utilizing census 2001 data on the location of the last residence, the volume of out-migration from Bihar is very high. According to inter-state migrant data, more than 5.2 million people relocated from Bihar in that census year, accounting for roughly 6.3 percent of the state's total population. Significant research has been conducted on the dynamics of poverty and employment in rural Bihar.

A longitudinal study conducted in selected villages of Bihar by the Institute for Human Development (IHD), Delhi (ihdindia.org), A. N. Sinha Institute, Patna, and the International Labour Organisation in 1981-83, 1999-2000, and 2009-10 revealed that the proportion of migrant workers to total workers increased from 15.7 percent in 1998-99 to 25.5 percent in 2009-10. According to the study, migration in Bihar is higher in backward district of North Bihar than in better-off district of South Bihar. Young males dominate the migration routes. Almost three-quarters of migrant workers are between the ages of 15 and 35. According to the IHD study, the nature of migration has moved from seasonal to long-term. From 1998-99 to 2009-10, the share of long-term employees in the migratory stream increased from 40.0 percent to 48.6 percent. Simultaneously, the share of households experiencing temporary migration climbed from 19.4 percent in 1981-83 to 22.6 percent in 1998-99 to 35.0 percent in 2009-10.

According to Karan (2003), 93% of upper-caste migrants travel for a more extended period, whereas just 7% migrate for a shorter period. In Bihar, poverty is mainly related to restricted access to land and

animals, poor education and health care, and low-paying employment and social status.

Deshingkar, (2006) reported comparable findings in her study on Migration and Remittances. It has been noticed that migrants are often unmarried men between the ages of 15 and 45. According to (Singh, 2011), substantial out-migration of the male population from rural to urban areas has increased at an alarming rate in recent years in India, particularly in the Indo-Gangetic regions of Uttar Pradesh and Bihar.

According to Singh (2016), most male out-migrants are illiterates, and a lack of education and technical skills restricts and limits the migrants' employment options at destinations, forcing them to labour in unorganized informal sectors. She went on to say that when the topic of employment-related out-migration comes up, there is a question about the availability of jobs and the level of development in the country of origin. According to Hansen (2001), among India's poorest demographics, Muslims found it easier to secure work visas for the Gulf countries. They come from the destitute states of Bihar and Uttar Pradesh to work in Mumbai, then to the Gulf countries.

Handral (2018) studied a population of over 1.2 billion people; India ranks second globally, accounting for over 30 million internal migrants. Furthermore, the current study tries to capture the shifting landscape of internal movement between rural and urban areas, using migration data from Chaiwa and Baiva. According to the findings, there has been an upsurge in worker movement in recent years. Statistics reveal that it is more common among men for work-related reasons.

Patnaik (2015) Migration is commonly defined as movement from one location to another, although the movement is driven by various social and economic reasons that differ by country or region. People are typically considered to be migrating for economic reasons, although this may not be the main factor influencing migration decisions. The report attempts to lay out the potential causes of migration and the overall influence on sending and receiving communities.

Sebastian (2015) Studied Migration is a new phenomenon, particularly in developing countries. The purpose of this paper is to make an internal observation. We will also try to focus on the increasing migration patterns and concerns that cause many complications when migration occurs in India. What has been attempted is to assess the social and economic impact of migration in India on both the source and destination regions. The article also compiles data on migration trends since 1991.

According to Singh (2016), the majority of male out-migrants are severely illiterate, and a lack of education and technical skills prevents and limits the migrants' employment options at their destination, forcing them to work in unorganized formal sectors. She also mentioned that when employment-related out-migration occurs, there is an issue with the accessibility of employment and the amount of evolution at the point of genesis. (Hansen, 2001) showed that among India's poorest demographics, Muslims found it easy to obtain work visas for the Gulf countries. They first migrate from destitute states like Uttar Pradesh and Bihar to work in big cities like Mumbai, then to Gulf countries. (Rainer, 2013) in his policy brief series on Demography and Migration: An Outlook for the Twenty-First Century. He claims that economic and demographic differences will shape skill and labour mobility in the twenty-first century.

2.15. INTERNATIONAL TRENDS AND PATTERNS OF MIGRATION

International migration happens when people transcend state borders and reside in the host country for a set period (PISA 2003). Migration occurs for a variety of causes. Many people leave their home nations in search of better economic possibilities elsewhere. Others migrate to be with family members who have migrated or to escape political unrest in their nations. Another factor for international movement is

education, as students pursue their studies abroad, albeit this migration is frequently temporary, with students returning to their home country once their studies are over (OECD 2007).

Hatton (1999) investigated International migration has been a significant occurrence in the United Kingdom. Over the last 50 years, migration in general, and immigration in particular, have emerged as critical policy issues. Economic reasons have always been present in the discourse, but they have always been subordinated to explicitly social and political issues. For this and other reasons, economic analysis of international migration, migrants' experiences, and their impact on the broader economy is less advanced than in other European and North American countries (Bailey 1992).

(Gulina 2016) investigated the recent migration policy in two former Soviet Union countries - Russia and Tajikistan - the current state of migration research, define the economic and demographic reasons of migration, its legal and political structure, and observed the newborn integration and inclusion programme. Gulina defined terms such as migration regime, migration processes, and migration rules to analyze the origins and distinguish between migration policies to send and receive countries. Russia's migration policy displays a mismatch between liberal principles/norms and their limited application. The underlying desire in Russia to limit the influx of "others" posed a severe threat to migration policy and the country's future economic development (Gulina 2016).

Based on labour patents, more than 1.5 million foreign workers are engaged in Russia each year (RIA Novosti 2015). Tajikistan, behind Uzbekistan, provides the second-largest number of labour migrants to Russia. Zhanna Zayonchkovskaya, a famous Russian demographic expert, predicts that by 2030, Tajik labour migrants will have surpassed Uzbek labour migrants as the largest ethnic migrant group on Russian Federation territory (Zayonchkovskaya, 2016).

Before the Russian rouble depreciation, more than 84% of all Tajik labour migrants chose Russia as their destination country, with the remainder heading to Ukraine, Kazakhstan, and other countries (Ryazantsev, 2016). With a large number of people of working age, a lack of infrastructure development, and a limited local labour market, 9% to 25% of Tajiks of working age move overseas for work. According to official figures from Tajikistan's Migration Department, 744 000 labour migrants were registered in 2013 (about 9% of the total Tajik population of 8 million). According to local experts, up to 2 million Tajik residents migrate overseas for varied periods, usually for labour (WHO Europe, 2014).

The bulk of them intend to travel to Russia as their final destination. In today's Russia, one worker leaving the country is replaced by 12 who arrive; in Tajikistan, one newcomer arriving is replaced by 600 who depart (Rayazantzev & Horie, 2011). This is unsurprising given that Tajikistan's average monthly wage in 2009 was 68.6 USD, the lowest in the Commonwealth of Independent States. In comparison, the average salary in Russia in 2009 was 689 USD. In 2013, Russia's unemployment rate was 5.5%, whereas Tajikistan's rate was 11.6%, the highest in the area (Ryazantsev, 2016).

Work abroad remains the most essential factor in the country's economic development, particularly among young people and women. Russia requires the labour force and demographic potential that immigrants bring, as it is one of the countries with a declining population, birth rates below replacement, and a rapidly increasing number of older people. According to the Russian statistics office, the number of working-age individuals has been declining since 2011 and will continue to decline sharply throughout the twenty-first century. Between 2011 and 2020, the number of working-age individuals will fall by 9 million, or 8-10% of the total (Klepach, 2013).

In 2014, the Russian Federation's Federal State Statistics Service published three probable demographic estimations for Russia, including low, medium, and high demographic scenarios that range significantly in terms of migration gain (the breakdown of migration inflow and outflow). According to the most optimistic scenario, Russia's population will be 145,404,600 by 2025, with a net migratory gain of only 211,800 individuals. The medium forecast shows a population of 148,341,600 people, with a migration increase of 338,900. The most optimistic scenario anticipates 150,704,000 individuals and a net migration gain of up to 466,100. Net migration is an essential variable in all three scenarios. The low and medium scenarios, on the other hand, predict a general depopulation (a decline of 490,000 in the low scenario and 36,900 in the medium scenario) and indicate migratory influx as a strategy to sustain the existing population level (Gulina, 2016; Federal State Statistics, 2015).

(Tay, 2014) writes in his research paper *Inter-State movement and Socio-Demographic Changes in Malaysia*, that internal movement has stressed the age-sex composition of the sending and receiving region/state's populations. The demographic pyramids of Perak (an out-migration sending state) with a fall in the young age population and an ageing population and Selangor (an out-migration receiving state) with a rapid growth in prime-age population demonstrated this. He also stated that internal migration resulted in disparate population growth and reallocation between states and areas between 1991 and 2000, with the population of Selangor expanding at an unusual pace of 6% per year. In contrast, the three states of Kelantan, Perlis, and Perak have annual growth rates of less than 1%.

As a result of history and institutional issues, there are significant disparities between China's rural and urban areas in practically every element, including income, education, and medical concerns. Such considerable inequalities have not only favoured urban dwellers but have also been a driving driver behind rural-urban migration in recent decades. As more rural inhabitants seek jobs in cities, the question of how and why migration affects migrant children's human capital accumulation has become increasingly significant in China (Ayoroa 2010).

In China, family migration has become a standard component of rural-urban mobility. As a result, an increasing number of rural youngsters are becoming migrants in cities. According to the Chinese Ministry of Education, the number of migrant children enrolled in compulsory education reached approximately 19 million in 2017 (MOE 2018). Meanwhile, the number of children left behind fell to around 15 million. Given that around 80% of migrant children are admitted to public schools (Chen et al. 2019), most migrant children may outperform their rural counterparts. According to Lv and Wang (2017), migrant children in China have more opportunities to complete compulsory school than left-behind and non-left-behind rural children.

The segmented Hukou system in China is the most significant impediment to child migration (Li 2020). Although parental migrations have occurred since China's economic reforms and liberalization in 1979, children of migrant parents were not permitted to attend urban public schools until 1998, when the State Council and Ministry of Public Security jointly issued a tentative policy allowing migrant children to attend such schools temporarily. However, tuitions were relatively exorbitant, and entrance procedures were complicated, resulting in the exclusion of most migrant children from urban public schools. The State Council of China announced in 2001 that migrant children's education should be handled by local governments at migrant destinations and finished mostly at full-time public primary and secondary schools (Liangweizhu in Chinese) (Li 2020).

The revised Compulsory Education Laws of China established the Liangweizhu Policy as a fundamental law for the compulsory education of migrant children in 2006. This approach has increased the number

of migrant children obtaining education. Furthermore, the Chinese government has committed to eliminating rural-urban disparities and the inequity encountered by migrant workers in rural Hukou. As a result, many migrant workers' children can now attend local public schools to finish their education at a low cost. Simultaneously, an increasing number of rural children, including previously abandoned children, are becoming migratory children. According to a 2015 poll, 80% of migrant children attended metropolitan public schools (Yang 2017).

Assimilation theory can explain the migration benefits of migrant children. According to sociology's classical assimilation theory, upward social mobility can reduce social disparities. Parental migration may result in good returns in terms of increased education and opportunity for their children (Warner and Strole 1945). On the other hand, the segmented assimilation theory contends that migrants may confront social exclusion from local cultures and the job market (Portes and Zhou 1993; Zhou 1997).

Using data from the United States, Xie and Greenman (2011) show that migrant children perform better in school but exhibit risky behaviour. Given the social backdrop of Chinese migrants, this may also occur in metropolitan settings. According to Xue (2018), migrant children are subjected to unfriendly attitudes from indigenous. In particular, China's split rural-urban household registration system (or Hukou system) can substantially impede migration and access to its benefits.

The supply of urban public utilities distinguishes the Hukou system as a narrowly defined local region. To enjoy the same rights as local citizens, a migrant must meet several prerequisites. As a result, many children of migrants who possess rural Hukou in nonlocal places cannot readily receive an education in cities, resulting in the dilemma of left-behind children. Recent research has attempted to identify whether and how migration influences the development of migrant children in China. However, because they employ various data sources, the conclusions are conflicting.

On the one hand, some study claims that family migration can improve children's educational achievement. The China Health and Nutrition Survey explained by Lu (2012) discovered that migrant children outperform their rural counterparts regarding education and health. Xu and Xie (2015) discovered that migration has extensive and favourable effects on children's development, notably in mathematics and health, using data from the China Family Panel Studies (CFPS).

According to Chen and Feng (2019), migrant children outperform native youngsters, implying that the former receive significant promotions over their rural counterparts. Some research, on the other hand, produces contradictory result. Wang (2017), for example, used self-reported data to show that children in urban private schools outperform their rural peers in rural public schools. However, this study solely considers migrant pupils who attend private schools for the children of casual labourers. As a result, the study may have overestimated the effects of child migration on academic performance.

Three challenges were encountered while researching the effects of family migration on children's accomplishments on a national scale in China. For starters, nationally gathered data are scarce. So far, most studies have relied solely on self-reported data from a few provinces or cities. As a result, the findings are not countrywide in scope. Furthermore, the self-collected data samples may not have been randomly chosen, resulting in biased result. Second, determining the causal relationship between family migration and children's performance is difficult due to the scarcity of relevant data. Finally, it is uncertain how migration affects children's performance. This study employs a sample from a representative national psychological database to determine how and why migration impacts the academic performance of migrant children (Li 2020).

The quality of life of China's migrant population is significantly worse than the national average living standard (Du 2019). The migrant population's degree of health education is often low (Shao 2021), and their health state is concerning. Furthermore, the adoption of health education is higher among China's urban migrant population than the rural migrant population (Yin 2021). A situation like this has drawn the attention of academia to public health education. Luque Fernandez 2022 discovered that standardized health education can increase the ability to respond to public emergencies and reduce epidemic mortality based on mortality statistics from Spain during the COVID-19 period. Zhao and Wang (2018) investigated whether the marginal benefit of boosting health education to promote individual health is more significant for young individuals, those without higher education, and those living in the central and western areas. According to Greenberg (2017), combining social-emotional learning (SEL) with other services can greatly improve community health.

Meanwhile, despite the fact that the number of health institutions, medical staff, medical resource assets, per capita hospitalization expenses, and insurance coverage population in China have all increased year by year Lv 2020, migrant population utilization of medical services remains low (Tian 2021). Following the COVID-19 epidemic, the perception of loneliness among older patients, particularly females living alone, has increased, their mental health has deteriorated dramatically, and their utilization of medical services has declined (Wong 2020).

It is suggested that rural people's ability to use mobile payment (Lv 2022) and the social security system (Chen 2016) be strengthened to increase the utilization of medical services for the rural population. On the other hand, excessive use of medical services is every day in many countries, potentially threatening public budgets and public health, particularly in low-income nations (Brownlee 2017).

Gui 2021 stated that the association between public health education and medical service utilization is low in Northeast China. It is agreed that attending public health education is beneficial to increasing people's awareness of their autonomy in nursing to obtain medical treatment that meets their needs (Falkenberg 2014). Furthermore, when Sang 2021 investigated the factors influencing consumers' propensity to use primary healthcare services, they proposed that improving health education on prevalent epidemics could increase primary medical service utilization efficiency. Furthermore, boosting health education and publicity is a crucial aspect influencing the migrant population's medical utilization (Li 2020). Lacks of health information and parents' active participation in their children's growth substantially impact children's health care (Tataw 2009). Although the existing literature provides a solid framework for future research, it pays little attention to the relationship between public health education and migrant workers' use of medical services.

Zhou 2022 investigates such relationships using 2017 CMDS data. First, the influencing elements of migrant workers' medical care utilization may expand research on public health services based on the unique perspective of public health education. Second, as instrumental variables of public health education, the number of provincial community service centres and the average acceptance rate of public health education to conduct an empirical analysis of migrant workers' medical service utilization behaviour, making the estimation result more reliable. Third, to validate the transmission mechanism of public health education on medical service utilization by analyzing the heterogeneity of public health education on migrant workers' medical service utilization.

The World Health Organisation defines "health literacy" of individuals to access, comprehend, apply health information and services to improve their health (Institute of Medicine 2004). According to research, health education is vital in developing health literacy (Vamos 2020), thereby enhancing

population health. A lack of health information, in particular, may result in poor use of disease-prevention services such as immunization and routine screening (Benjamin 2010). Higher health literacy will encourage migratory populations to access essential public health services (Yu, 2022). That is, there is a link between personal health literacy and medical service utilization.

Furthermore, fundamental public health education affects the migrant population's social network and social integration (Ford 2014). With the adoption of the notion of health and equity, the migrant population's integration hurdles will be reduced to some level (Yang, 2016), which is beneficial to the development of an individual's social network system. Furthermore, mutual-aid behaviour in social networks is associated with individual health conceptions, awareness, and status (Berkman, 1995). Furthermore, through public health education, the migrant population will learn more about local medical and health policies and will be better able to manage their health. This enables them to join in local activities and, eventually, to develop a stable social network link. According to studies, as social integration is promoted, migrant workers' utilization of medical services improves (Liang 2020). That is, as the migrant population becomes more acquainted with the local citizens and the local medical and health environment; they will be more likely to use these resources.

Receiving public health education can considerably improve the psychological integration of the younger generation of the migrant community in urban adaption, identity, and other elements, in addition to developing an excellent social network system (Liang 2020). Greater the migrant population's psychological integration, better integration with urban communions. The sharing of medical care resources and eliminating inequalities in social cognition with residents (Hu 2018).

Practical social integration comprises a high psychological identity of the migrant population with their settlement city (Li 2018), which increases the use of medical and health services and improves their health level, demonstrating the impact on their medical service utilization. Through collective education, the community's public health education allows migrant and residents to communicate on an equal footing, changes their psychological and behavioural bias to some extent, improves migrant workers' psychological adjustment ability, and allows them to better integrate into urban life. On the other hand, migrant workers with a higher level of psychological integration are more likely to recognize their living environment and medical services and are more likely to go to a clinic or hospital when needed (Zhao 2021).

This study review aimed to examine various research papers, abstracts, articles, and reports on migration and its impact on demographic, socioeconomic, and agricultural changes in general. These reviews assist the reader in comprehending the various facets of the effects of out-migration. The evaluated papers show that, while many studies on migration have been conducted, studies on the demographic and agricultural impact of out-migration are uncommon. More research studies are required to acquire a deeper grasp of the research.

2.16. MATERIAL AND METHODS

This chapter deals with research design, sampling procedure, variables and their measurements, data collection tools, statistical tests used, and analytical procedures followed in interpreting the present study's data. The details of the methodology followed in the present study are presented under the following heads.

2.16.1. RESEARCH QUESTIONS

The cornerstone of any good research is the research questions that arise in the researcher's mind before

deciding on the topic and taking up research. The following are the broad research questions explored in the study:

- a. What is the trend of migration in Almora?
- b. What is the nature and pattern of migration in Almora?
- c. Is there any impact of migration on demographic transition in Almora?
- d. Is there any impact of out-migration on agricultural efficiency in Almora?
- e. Does the out-migration impact the socio-economic status in Almora?
- f. What are the determinants of out-migration and its implication on socio-economic status?

2.16.2. RESEARCH DESIGN

The present study attempts to address the impact of migration on the rural economy. A comprehensive questionnaire was created to gather data on the criteria mentioned above. The research is exploratory because it also demands a clear description of the association between specific variables and data. A retrospective case-control study design was applied in this study. The cases were "migrants", and the controls were "non-migrant" households. A retrospective case-control study design is generally used in an epidemiological study. However, based on study requirements, it can also be used in Social Science research. A retrospective study retrospectively examines exposures to suspected risks about an outcome. Case-control studies are observational studies in which two existing groups were different in outcome are identified and compared based on some supposed causal attribute.

2.16.3. DATA SOURCES OF THE STUDY

Both primary and secondary data were utilized in this study. Primary survey data was collected through a specially structured interview schedule. Secondary data were compiled primarily from various books on microfinance that were available. References were made to numerous articles, newspapers, journals, Governmental websites and Census 2011.

2.16.4. PRIMARY DATA AND SAMPLING PROCEDURE

The Primary Survey was conducted between June to December 2022. First of all, local contacts were established. Further, the data collection was completed. The primary Survey was conducted using a three-stage stratified design with a randomized selection of Almora blocks (Salt and Bhikiyasen) villages. The data were collected randomly from Salt and Bhikiyasen blocks of the Almora district. The respondents were selected based on the available information related to migration, the feasibility of conducting the Survey, getting the required sample size, etc. Altogether 300 samples from both blocks of Almora district were collected, including 150 from Salt and 150 from Bhikiyasen.

Table 2.4: Details of Sample Selection in the Study Area

District	Block	Villages	No. of sample		
			Male Migrants	Female Migrants	
Almora	Salt	Random sampling	102	48	150
	Bhikiyasen	Random sampling	98	52	150
Total respondent					300

- The research uses multi stage sampling.
- In the first stage, purposive sampling was used.
- The first block(Bhikiyasain) we have chosen who have the most number of ghost villages as well as minimum decadal growth rate(-21.78%) in the district. The reason behind choosing second block

(Sult) where the number of migrating people is increasing day by day. (Statistical handbook 2020, Almora)

- At second stage Total 300 household were selected from both blocks which is divided into 150 for each block.
- At the third stage, we have divided the sample in 30 household according to the geography into 5 categories which are following:

1st category: Nearby block headquarter (Range upto 2 km.)

2nd category: Nearby the Streams (Range up to 1.5 km.)

3rd category: on an average distance and height. (Range between 3.5 km. to 4.5 km.)

4th category: roadside

5th category: Remote areas on hills (Range more than 5 km.)

In each category, we selected 6 villages randomly and 5 household from each village which is also selected randomly.

- Sampling Method: Simple Random Sampling.

2.16.5 ELIGIBILITY CRITERIA FOR THE SURVEY

For out-migrants, only those families were considered in which at least one family member had migrated to other places to work as casual wage labourers or self-employment in agricultural or non-agricultural enterprises for at least three months during the last one year. The households in which members had migrated for education purposes and marriages were not considered for the study. Similarly, for Non-migrants, only those households were considered who had less than two acres of land, including landless households, so that we can have parity in the socio-economic conditions of migrants and non-migrants

2.16.6. SAMPLE SIZE

Sample size was calculated by using the following formula given by (Lwanga and Lemeshow, 1991)

$$N = 3.84 P (1-P) / d^2$$

Where,

N = Calculated sample size

P = Anticipated male out-migration population proportion

D = Desired relative precision 5%

A rough estimate of P usually suffices in the absence of true population proportion. Since it is not possible to estimate P, the value of P is taken as 0.5; this is the "safest" choice for the population proportion since the sample size required is largest when P = 0.5

Thus, the anticipated male out-migration population proportion (P) is 50%

The sample size of 284 would be needed as calculated using the formula. Thus after approximation, a Sample size of 300 was decided.

2.16.7. STATISTICAL TOOLS

Data was collected from both migrant households to analyze socio-economic and agricultural changes. MS Excel and Graph Pad Prism 8.0 were used to analyze the data. The statistical mean and SE (standard error) were derived as descriptive statistics.

2.16.7.1. Measures of Migration

(I) Direct Measures of Migration:

Net Migration Rate (NMR): Expressed as increase or decrease per 1,000 population of the area in a year

$$NMR = \frac{(\text{Number of In migrants (IR)} - \text{Number of out-migrants (OR)})}{1000 \times \text{Population}}$$

or $NMR = IR - OR$

(II) Indirect Measure of Migration Estimates:

2.16.8. "T" TEST-The t-test determines whether or not the mean values of two groups are statistically distinct. It is reasonable to compare the means of the two groups. If the first mean value is less than the second, the t-value will be negative; otherwise, it will be positive. In this study, the P value and degree of freedom were computed to determine the relationship and differentiations between women's empowerment and the demographic features of women entrepreneurs.

2.16.9. CHI SQUARE P-VALUES- A chi-square test will provide a p-value. This will inform you if your test findings are significant or not. To do a chi-square test and obtain the p-value, you will need two pieces of information:

1. Degrees of liberty that are just the number of categories minus one.
2. The alpha value (α). You or the researchers choose this. The standard alpha level is 0.05 (5%); however, alternative values, such as 0.01, are possible.

2.16.10. PRESENTATION OF DATA

2.16.10.1. HISTOGRAM- It is a precise illustration of how the distribution of numerical data is distributed. The tabulated frequencies are graphically shown. The categories in a histogram are often defined as non-overlapping intervals of a particular variable.

2.16.10.2. PIE CHART- The arc length of each sector in a pie chart is inversely proportional to the amount it displays, as is its central angle and area in this circle's sectors, which reflect relative frequencies. The sectors add up to fill the disc. A pie chart sometimes called a circle chart, is a circular statistical graphic depicting numerical percentages through data slices.

2.16.10.3. PERCENTAGE-A percentage is a number written with the sign "%" and stated as a fraction of 100.

2.16.11. PREPARATION OF REPORT

The data collected through primary Survey and secondary data sources were compiled. The data were then cleaned, coded, tabulated, and analyzed. The result were then presented in tables and graphs to make the findings easily understandable. The findings were suitably interpreted, and necessary conclusions and inferences were drawn.

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CHAPTER 3

MIGRATION AND ITS PATTERN IN KUMAUN REGION

Migration is not new to Kumaun region, but the data of census 2011 and some other recent reports show that the rate of migration from hilly areas of Kumaun region has increased after 2000. Kumaun region has witnessed a spurt in migration from hills to plains over the past 5 years. Due to this heavy migration, the population of the plains of Kumaun region has increased by 30%. The fact is that, migration has led to a negative growth rate of population in Almora district (Negi and Bisht 2018).

Migration is a fundamental aspect of human societies and plays a significant role in shaping regions' demographic and socio-economic landscape. In the case of the Kumaun region, located in the northern Indian state of Uttarakhand, migration patterns have been influenced by a myriad of factors, including economic opportunities, environmental conditions, and cultural dynamics. The Kumaun region has a rich migration history, with ancient trade routes and pilgrim paths attracting merchants, monks, and travellers from distant lands. However, in recent times, there has been a notable shift in migration patterns. The region has witnessed both outmigration, where people leave the area, and in-migration, with individuals and families relocating to the region in search of better livelihoods, education, and improved living standards.

Economic factors have a significant impact on migration in the Kumaun region. Limited employment opportunities, particularly in rural areas, often drive the younger population to migrate in search of better job prospects. Tourism growth, particularly in hill stations like Nainital and Almora, has also attracted seasonal migrants seeking employment in the hospitality sector (Sati 2021). Additionally, environmental factors, such as recurring natural disasters like landslides and flash floods, can trigger temporary or permanent migration as people seek safer locations. Migration has profoundly impacted the demographic composition of the Kumaun region (Ogra and Badola 2015). Outmigration, particularly of young adults, has resulted in an ageing population and a decline in the working-age population. This trend has implications for the region's labour market, social dynamics and community structures. Moreover, in-migration has led to an influx of diverse cultures, contributing to the region's social fabric and economic development.

Migration in the Kumaun region poses both challenges and opportunities. The outflow of skilled labour can hinder local economic development, exacerbating the issue of unemployment and underemployment. On the other hand, in-migration can bring fresh perspectives, cultural exchange, and entrepreneurial opportunities. To maximize the benefits of migration, it is crucial to address the challenges by creating sustainable livelihood opportunities, improving infrastructure, and promoting inclusive policies that foster social integration and cultural preservation. Migration in the Kumaun region is a complex phenomenon influenced by economic, environmental, and cultural factors, shaping the region's demographic and socio-economic landscape.

3.1. HISTORICAL CONTEXT OF MIGRATION IN KUMAUN

The Kumaun region, located in the northern part of the Indian state of Uttarakhand, has a rich historical context of migration. Various indigenous communities have inhabited the region for centuries, but it has also witnessed migration from different groups and cultures over time. Here is an overview of the historical context of migration in Kumaun:

- 1. Ancient Period:** The Kumaun region has a long history dating back to ancient times. It was part of the Kuru Kingdom in the Mahabharata era and later came under the influence of various dynasties, including the Mauryas, Guptas, and Katyuris. During this period, there might have been migrations of people from different parts of the Indian subcontinent, as the region served as a strategic gateway between the northern plains and the Himalayas.
- 2. Medieval Period:** The medieval period saw the arrival of various ethnic groups and communities in Kumaun. One notable migration was that of the Chand dynasty, who migrated from the western Indian state of Gujarat and established their kingdom in Kumaun in the 10th century. They ruled the region for several centuries, significantly impacting the local culture and society. There might have been other migrations of groups and communities during this period, driven by political, economic, and social factors.
- 3. British Colonial Era:** The British East India Company established its presence in Kumaun in the early 19th century. The region became part of the British colonial administration, and significant changes occurred. The British brought administrative reforms, infrastructure development, and new economic activities like tea plantations. They also recruited people from other parts of India to work as labourers, soldiers, and administrators in Kumaun. This led to the migration of people from various regions to Kumaun during the colonial era.
- 4. Post-Independence:** After India gained independence from British colonial rule in 1947, Kumaun became part of the state of Uttar Pradesh. The region witnessed some migration within the state, with people from other parts of Uttar Pradesh settling in Kumaun for various reasons, including employment opportunities and better livelihood prospects.
- 5. Contemporary Period:** In 2000, Uttarakhand was carved out of Uttar Pradesh, and Kumaun became a part of the new state. This political change brought renewed attention to the region, and there have been efforts to promote tourism and economic development. As a result, there has been an influx of tourists, entrepreneurs, and professionals from different parts of India, contributing to the migration dynamics in Kumaun.

It is important to note that while migration has been a part of Kumaun's history, the region also has a strong sense of indigenous identity and cultural heritage. The migration patterns have contributed to the cultural diversity of Kumaun, shaping its traditions, languages, and customs over time.

3.2. SOCIO-ECONOMIC FACTORS INFLUENCING MIGRATION

Migration patterns in the Kumaun region have been shaped by many socio-economic factors that have influenced the movement of people within and outside the region. Over the years, these factors have significantly influenced the patterns, directions, and migration volumes in Kumaun. Understanding these factors provides insights into the dynamics of population movement and the socio-economic landscape of the region.

One of the key drivers of migration in Kumaun is the quest for economic opportunities and livelihood improvement (Chandra et al. 2018). The region's challenging terrain and limited agricultural land have constrained traditional farming practices. Reliance on rain-fed agriculture and the absence of agricultural diversification has led to income instability for many households (Qasim 2012; Hussain and Hanjra 2003). As a result, people have sought alternative sources of income beyond agriculture, driving migration to urban areas and other regions with better job prospects. Seeking higher incomes and more stable livelihoods, individuals would like to migrate to cities and towns in search of employment in industries, services, and other sectors that offer economic growth and better remuneration.

Industrial development and urbanization have also significantly influenced migration patterns in Kumaun. Establishing industries, commercial centers, and infrastructure projects has created employment opportunities, particularly in urban areas such as Nainital, Haldwani, and Almora (Daehnhardt 2019). These urban centers have acted as magnets, attracting migrants from neighbouring rural areas and other parts of India. The growth of industries and urbanization has transformed the demographic landscape of these areas, leading to an influx of migrants seeking better economic prospects and improved living conditions.

Access to education and skill development opportunities has emerged as another significant driver of migration in Kumaun. The region is home to various educational institutions, including schools, colleges, and universities. Pursuing higher education, specialized courses, and professional training has led many young people to migrate from their hometowns to educational hubs within and outside the region (Bednařiková et al. 2016). The desire for better educational opportunities and career prospects has fueled migration to cities and towns with renowned educational institutions. Students and professionals migrate to access quality education, gain skills, and enhance their employability in an increasingly competitive job market.

The quality and availability of infrastructure and services have played an important role in shaping migration patterns in Kumaun. Areas with well-developed infrastructure, including transportation networks, healthcare facilities, schools, and markets, have attracted migrants seeking improved living conditions and essential services. The presence of adequate infrastructure makes a location more desirable, as it enhances the overall quality of life and facilitates economic activities. Conversely, areas with limited infrastructure development may experience outmigration as individuals seek better living conditions and access to basic amenities elsewhere.

Natural disasters and environmental factors have also influenced migration patterns in the Kumaun region. The area is prone to various natural calamities such as floods, landslides, and earthquakes. These can cause damage to infrastructure, disrupt livelihoods, and pose threats to human lives. In the aftermath of such disasters, people may choose to migrate temporarily or permanently to safer areas. Environmental factors such as changes in climate patterns, degradation of natural resources, and loss of agricultural productivity can also drive migration as people seek more sustainable living conditions and economic opportunities (Warner et al. 2010).

Social networks and family ties have been instrumental in shaping migration patterns in Kumaun. Individuals often migrate to join family members or relatives who have already settled in a particular location. Family and community networks provide support systems that ease the transition and integration process for migrants. These networks can help find employment, housing, and other essential resources, making the migration experience more feasible and comfortable.

Political factors have also influenced migration patterns in Kumaun. Historical events, political instability, conflicts, and regional imbalances in development can impact people's migration decisions (Narayan and Singh 2016). Changes in administrative boundaries, as witnessed when Uttarakhand was carved out of Uttar Pradesh in 2000, can also influence migration patterns as people adapt to new political and administrative structures. Political stability, governance, and policies can create an enabling environment for migration or act as deterrents depending on their impact on economic opportunities, security, and social conditions.

Socio-cultural factors, including language, religion, customs, and traditions, have played a role in migration patterns within Kumaun and other regions of India. Migration often involves cultural and social dynamics, with individuals seeking areas where their cultural or linguistic identity is more prevalent or where they feel a stronger sense of belonging. Cultural and social factors can shape migration patterns, contributing to the region's cultural diversity and social fabric.

It is essential to recognize socio-economic factors. Migration patterns in Kumaun are influenced by a complex interplay of economic, social, political, and environmental factors. Each factor may vary depending on individual circumstances, regional disparities, and prevailing economic and social conditions. Moreover, migration is a multifaceted phenomenon influenced by individual choices, push and pull factors, and broader structural conditions.

3.3. DEMOGRAPHIC PATTERNS OF MIGRATION

The demographic patterns of migration was explained by several authors Greenwood 1988; Plane 1993 and Fargues 2008. In Kumaun exhibit distinct characteristics and vital demographic patterns observed in migration within the region i.e.,

- 1. Rural-Urban Migration:** One prominent demographic pattern is the migration of people from rural areas to urban centres in Kumaun. Limited agricultural opportunities, coupled with the allure of better employment prospects and improved living conditions, have led to a significant flow of migrants from rural areas to towns and cities such as Nainital, Haldwani, Almora, and Rudrapur. This pattern reflects the population shift from agricultural occupations to non-agricultural sectors, including industries, services, and trade.
- 2. Youth Migration:** Migration in Kumaun is predominantly driven by the younger population seeking education, employment, and skill development opportunities. Many young people migrate to urban areas within Kumaun or other regions of India to pursue higher education in colleges and universities, technical or professional courses, and job opportunities. The youth migration trend contributes to demographic changes in both the origin and destination areas, as it often involves a temporary or permanent relocation of individuals in their productive age group.
- 3. Male-Dominated Migration:** Historically, migration patterns in Kumaun have been male-dominated, with a higher proportion of men migrating compared to women. Men often migrate for employment opportunities, leaving their families behind in rural areas. They work in various sectors,

such as construction, industries, trade, and services. This gendered migration pattern has led to demographic imbalances in certain areas where the male-to-female ratio is skewed.

4. **Circular Migration:** Circular migration is common in Kumaun, particularly among seasonal workers. Many individuals migrate temporarily for specific periods, such as for agricultural activities, tourism-related work, or construction projects, and return to their home villages after the season or project is over. Circular migration patterns are influenced by the seasonal nature of work, where individuals seek employment during peak seasons and return to their home regions during lean periods.
5. **Migration for Education:** Kumaun region attracts a significant number of students from within the region and other parts of India due to the presence of reputed educational institutions. Students migrate to Kumaun for higher education, technical courses, and professional training. This migration pattern contributes to the diverse student population in educational hubs like Nainital, Almora, and Haldwani. While some students return to their home regions after completing their studies, others may settle in the region or explore further opportunities elsewhere.
6. **Migration for Government Employment:** Government employment opportunities have influenced migration patterns in Kumaun. The region has government offices, institutions, and establishments that offer job prospects in various sectors, such as administration, education, healthcare, and defence. People migrate to Kumaun from different parts of the state and country in pursuit of government jobs, leading to demographic changes and a diverse workforce in government sectors.
7. **Migration from Hill Villages to Lower Altitude Areas:** Some demographic patterns of migration in Kumaun involve movement from high-altitude hill villages to lower-altitude areas. Individuals from remote and geographically isolated villages may migrate to towns and lower-altitude regions seeking better access to infrastructure, services, and economic opportunities. This migration pattern reflects the push factors associated with the challenges of living in remote and inaccessible areas and the pull factors of improved facilities and prospects in more accessible regions.
8. **Migration for Self-employment and Entrepreneurship:** Migration for self-employment and entrepreneurship is observed in Kumaun, with individuals relocating to start their businesses or ventures. This pattern is driven by the desire for economic independence, the pursuit of specific business opportunities, and the aspiration to be their bosses. Migrants engaging in self-employment and entrepreneurship contribute to the local economy and employment generation.

It is important to note that while these demographic patterns provide a general overview, migration is a dynamic process influenced by individual choices, socio-economic factors, and changing circumstances. Demographic patterns may evolve due to shifts in employment opportunities, infrastructure development, educational trends, and government policies. Understanding these demographic patterns helps comprehend migration's social and economic dynamics in the Kumaun region.

3.4. RURAL-URBAN MIGRATION IN KUMAUN

Rural-urban migration is a significant pattern of population movement observed in the Kumaun region of Uttarakhand, India. This migration trend involves individuals and families leaving rural areas, typically villages, and relocating to urban centres in search of better economic opportunities, improved access to infrastructure and services, and an enhanced quality of life. Rural-urban migration in Kumaun reflects the broader global phenomenon of urbanization and the structural transformations occurring in

rural economies (Cattaneo et al. 2022). Understanding the dynamics and implications of this migration pattern is crucial for comprehending the socio-economic landscape of the region.

Push Factors from Rural Areas: Rural-urban migration in Kumaun is often driven by various push factors originating in rural areas. Limited agricultural opportunities play a significant role in prompting individuals to seek better economic prospects in urban areas. The region's mountainous terrain and geographical constraints result in fragmented land holdings and limited agricultural land. Moreover, dependence on rain-fed agriculture and traditional farming practices make rural livelihoods vulnerable to climatic variations and economic uncertainties (Adane et al. 2015). The push factors associated with limited agricultural opportunities contribute to the decision of many rural individuals to migrate to urban areas in search of alternative sources of income and livelihood security.

Additionally, low income from agriculture and the absence of diverse employment options in rural areas act as push factors. Traditional farming practices often yield meagre returns, and the lack of non-agricultural employment opportunities limits income-generation possibilities. As a result, rural inhabitants face economic challenges and perceive urban areas as offering better employment prospects and higher wages.

Employment Opportunities in Urban Centers: One of the primary attractions for rural migrants is the availability of diverse employment opportunities in urban centres. Towns and cities in Kumaun, such as Nainital, Haldwani, Almora, and Rudrapur, have witnessed industrial growth and the establishment of commercial hubs. These urban areas provide a more dynamic economic environment with a broader range of job opportunities. Migrants find employment in various sectors, including industries (such as manufacturing, textiles, and food processing), services (such as hospitality, healthcare, and education), trade, construction, and government sectors. The promise of better job security, higher wages, and the potential for career advancement are solid factors for rural individuals seeking economic improvement (Martin et al. 2007).

Better Access to Infrastructure and Services: Rural migrants are often attracted to urban centres in Kumaun due to the availability of improved infrastructure and services. Urban areas typically have better access to education, healthcare facilities, transportation networks, markets, and other amenities. The presence of well-established educational institutions, colleges, universities, hospitals, shopping centres, and transportation hubs offers a more convenient and comfortable living environment. Migrants perceive urban areas as providing better educational opportunities, improved healthcare facilities, reliable transportation options, and enhanced access to markets, essential for economic and social well-being.

Educational Opportunities: The desire for better educational opportunities is another significant factor driving rural-urban migration in Kumaun. Urban centres in the region house renowned educational institutions, colleges, and universities. Students from rural areas migrate to these urban areas to pursue higher education, gain access to quality educational resources, and benefit from experienced faculty. The availability of diverse courses, specialized programs, and academic disciplines in urban centres attracts ambitious students seeking broader career prospects and personal growth. Migration for educational purposes not only contributes to the demographic composition of urban areas but also plays a pivotal role in human capital development in the region (Baas 2019).

The shift from Agricultural Livelihoods: Rural-urban migration in Kumaun reflects the broader transition away from traditional agricultural livelihoods. Limited agricultural land, geographical constraints, and climatic challenges make rural agriculture vulnerable and economically unsustainable

for many households. Furthermore, the absence of agricultural diversification limits income opportunities. As a result, individuals and families choose to migrate to urban areas where non-agricultural employment options are more diverse and provide more excellent stability. The shift from agricultural livelihoods to jobs in industries, services, and other sectors offers the potential for higher wages, improved social status, and a more stable income source.

Improved Quality of Life: The pursuit of improved quality of life motivates rural individuals to migrate to urban areas in Kumaun. Urban centres typically offer a higher standard of living with better housing options, access to amenities, entertainment facilities, and a more vibrant social and cultural environment. The availability of recreational activities, cultural events, and a more comprehensive range of social networks contribute to an enhanced quality of life, often perceived as superior to rural living conditions. Rural migrants aspire for a better lifestyle, improved social status, and enhanced opportunities for themselves and their families by moving to urban areas.

Remittances and Economic Impact: Rural-urban migration has economic implications for the migrants themselves and the communities they leave behind. Migrants often send remittances back to their families in rural areas, which can contribute to the local economy and support rural households. Remittances are often used for household expenses, education, healthcare, and investment in agriculture or small-scale businesses in rural areas. The influx of migrants into urban areas also stimulates economic growth, job creation, and consumption. Urban centres benefit from the diversity of skills and knowledge brought by migrants, leading to the development of a more dynamic and vibrant economy.

Challenges and Implications: Rural-urban migration in Kumaun presents both opportunities and challenges for the region. While migration contributes to economic growth and urban development, it can also pose challenges such as increased strain on urban infrastructure, housing shortages, and unemployment in urban areas. Additionally, rural areas may experience a loss of human capital and labour shortages, affecting agricultural productivity and rural development.

Addressing the challenges associated with rural-urban migration requires a holistic approach focusing on balanced regional development. Policies should aim to improve agricultural productivity, promote rural non-farm employment opportunities, and invest in rural infrastructure to create conditions for sustainable rural livelihoods. Simultaneously, urban planning should emphasize inclusive growth, affordable housing, and the development of necessary infrastructure and services to accommodate the growing population. Promoting decentralized development and strengthening rural-urban linkages can help create a more equitable and balanced regional development framework.

Rural-urban migration in Kumaun reflects the broader global trend of urbanization and the socio-economic transformations occurring in rural economies. The push factors from rural areas, such as limited agricultural opportunities and low income, prompt individuals to seek better economic prospects in urban centres. The availability of employment opportunities, improved access to infrastructure and services, educational opportunities, and an improved quality of life act as pull factors attracting rural migrants to urban areas. Managing the challenges associated with rural-urban migration and promoting inclusive and sustainable development is essential for harnessing the potential benefits of migration and ensuring the overall well-being of both rural and urban communities in Kumaun.

3.5. SEASONAL MIGRATION AND ITS IMPLICATIONS

Seasonal migration is prevalent in the Kumaun region of Uttarakhand, India. It involves the temporary movement of individuals and families from their place of origin to other areas within or outside the

region for specific periods, typically linked to seasonal activities. Various factors drive seasonal migration in Kumaun and has significant implications for the migrants themselves, their communities, and the local economy. Understanding the dynamics and implications of this migration pattern is crucial for comprehending the socio-economic landscape of the region.

1. **Agricultural Seasonal Migration:** One of the primary forms of seasonal migration in Kumaun is related to agricultural activities. The region is predominantly agrarian, with agriculture serving as a vital source of livelihood for many rural communities. Agricultural seasonal migration involves individuals migrating from their villages to different parts of Kumaun or neighbouring regions to engage in farm work during specific seasons. These migrants often work as farm labourers, assisting local farmers with tasks such as sowing, harvesting, or tending to crops. The availability of additional labour during the agricultural season helps meet the demand for workforce-intensive activities and ensures the timely completion of farm tasks.

Various factors drive agricultural seasonal migration in Kumaun. Limited agricultural opportunities in certain areas, fragmented land holdings, and the absence of irrigation facilities act as push factors. Farmers or landowners with limited resources may not be able to hire permanent labour throughout the year, leading to the need for seasonal migrant labour during peak agricultural seasons. Economic factors such as low wages, unemployment, and underemployment in the place of origin also push individuals to seek seasonal work opportunities elsewhere.

2. **Non-Agricultural Seasonal Migration:** In addition to agricultural seasonal migration, Kumaun also witnesses migration for non-agricultural activities. Tourism, for instance, is a significant sector in the region, attracting many tourists throughout the year. During the tourism season, individuals from Kumaun may migrate to popular tourist destinations within or outside the region to work in hotels, restaurants or as tour guides. This form of seasonal migration allows individuals to capitalize on the economic opportunities generated by the influx of tourists.

Similarly, there may be seasonal migration for construction work, forest-related activities, and other temporary employment opportunities that arise during specific times of the year. These activities create a demand for labor, often fulfilled by individuals who migrate temporarily to the areas where these opportunities arise. Non-agricultural seasonal migration provides additional income-earning opportunities for individuals and allows them to diversify their skills and experiences.

3. **Economic Impact:** Seasonal migration has significant economic implications for both the migrants and the local economy in Kumaun. For the migrants themselves, seasonal work provides an additional income source, supplementing their livelihoods in their place of origin. Remittances sent by seasonal migrants back to their families contribute to household income and can be invested in various sectors, including agriculture, education, or healthcare. These remittances play a crucial role in supporting the well-being and development of rural communities.

In the local economy, seasonal migration fills labour gaps during peak seasons, ensuring the smooth functioning of agricultural and non-agricultural activities. The availability of temporary migrant labour helps address labour shortages and ensures that crucial tasks, such as planting, harvesting or catering to tourist needs, are completed promptly. Seasonal migration contributes to the productivity and efficiency of the sectors that rely on seasonal migrant labour, such as agriculture, tourism, and construction.

4. **Social Impact:** Seasonal migration can have social implications for the migrants and their communities in Kumaun. Migrants often leave behind their families and communities for extended periods, leading to temporary separations and changes in family dynamics. The absence of family

members during the migration period can affect the social fabric of the communities they leave behind. However, seasonal migration also allows migrants to build social networks and connections in the areas they migrate. They interact with individuals from different backgrounds and cultures, broadening their horizons and enhancing their social capital.

Moreover, seasonal migration can positively impact social development in the migrants' communities of origin. Remittances sent by seasonal migrants often contribute to local development initiatives, such as the construction of schools, the improvement of healthcare facilities, or investments in agricultural infrastructure. These investments can enhance the overall well-being and quality of life in rural areas, benefiting the entire community.

5. Challenges and Vulnerabilities: While seasonal migration offers economic and social opportunities, it also poses challenges and vulnerabilities for the migrants. Migrants often lack job security and face uncertain working conditions. They may be subject to exploitation or unfair treatment, including long working hours, low wages, and poor living conditions. In some cases, migrants may be vulnerable to human rights abuses or human trafficking. It is essential to address these challenges and protect the rights and well-being of seasonal migrants.

Additionally, the lack of access to essential services can be a concern for seasonal migrants, particularly those working in remote or isolated areas. Adequate healthcare facilities, educational opportunities for migrants children, and social protection measures should be in place to ensure the well-being of seasonal migrants. Initiatives focusing on skill development, capacity building, and ensuring fair labour practices can help improve the working conditions and livelihood prospects of seasonal migrants.

6. Policy Implications: Seasonal migration in Kumaun requires appropriate policies and interventions to harness its potential benefits and address its challenges. Efforts should be made to address the push factors that drive individuals to engage in seasonal migration. This includes improving agricultural practices, enhancing rural livelihood opportunities, and promoting skill development programs to create stable employment options in rural areas. Strengthening social protection mechanisms, such as access to healthcare and education, can mitigate the vulnerabilities associated with seasonal migration.

Policy interventions should also focus on promoting fair labour practices, ensuring decent working conditions, and protecting the rights of seasonal migrants. Regular monitoring and enforcement of labour laws can help prevent exploitation and abuse. Creating awareness among migrants about their rights and avenues for redress can empower them to assert their rights and seek assistance when needed. Strengthening institutional mechanisms to provide support and social services to seasonal migrants can enhance their well-being and contribute to more inclusive and sustainable development.

Seasonal migration is a prevalent phenomenon in the Kumaun region, involving temporary movement for agricultural and non-agricultural activities. It is driven by various push and pull factors, including limited agricultural opportunities, economic factors, and seasonal employment opportunities. Seasonal migration has significant economic implications, contributing to income generation and filling labour gaps in critical sectors. However, it also poses challenges and vulnerabilities for migrants, necessitating appropriate policies and interventions to protect their rights and well-being. Addressing the push factors, promoting fair labour practices, and ensuring access to essential services are crucial for harnessing the potential benefits of seasonal migration and fostering inclusive and sustainable development in Kumaun.

3.6. GENDER DIMENSIONS OF MIGRATION IN KUMAUN

Gender dimensions of migration in the Kumaun region of Uttarakhand, India, highlight how migration is shaped by and affects gender roles, relations, and dynamics. Migration in Kumaun exhibits distinct gender patterns, with both men and women participating in various forms of migration, each with their own experiences, challenges, and opportunities. Understanding the gender dimensions of migration is crucial for comprehending the social, economic, and cultural implications of migration in the region.

1. **Gendered Patterns of Migration:** Gender plays a significant role in shaping migration patterns in Kumaun. Historically, migration has been male-dominated, with a higher proportion of men migrating than women. Men often migrate in search of employment opportunities, leaving behind their families in rural areas. They work in various sectors, such as construction, industries, trade, and services. This gendered migration pattern has led to demographic imbalances in certain areas where the male-to-female ratio is skewed.

However, there has been a noticeable increase in female migration in recent years, with women seeking employment outside their communities. Women may migrate for work in the informal sector, domestic work, or as caregivers for the elderly or children. The changing socio-economic conditions, increased educational opportunities for women, and shifting gender roles have contributed to the emergence of more diverse migration patterns among women in the region.

2. **Push and Pull Factors:** These factors influencing gendered migration in Kumaun are shaped by socio-economic, cultural, and structural factors. Push factors for both men and women include limited economic opportunities, unemployment, underemployment, and poverty in their place of origin. These factors motivate individuals to seek better economic prospects and livelihood options elsewhere. The pull factors for men often revolve around employment opportunities in urban centres and other regions, while for women, the pull factors may include the need to provide financial support for their families or to escape oppressive social or cultural norms.

3. **Implications for Women Migrants:** Women who migrate in search of work face unique challenges and opportunities. They often work in low-wage, informal sector jobs, such as domestic work, construction labour, or agriculture. Long working hours, low wages characterize these occupations and often lack social protection measures. Women migrants are vulnerable to exploitation, abuse, and unfair treatment in their workplaces. They may also face difficulties accessing essential services such as healthcare and education.

However, migration can also empower women by providing them with economic independence, skill development, and social mobility opportunities. Migrant women often send remittances back to their families, which contributes to household income and decision-making power. Migration can also challenge traditional gender norms and roles by expanding women's social networks, exposing them to new ideas and experiences, and enhancing their self-esteem and agency.

4. **Left-Behind Women:** Migration also has implications for women who are left behind when their male family members migrate. These women often take on additional responsibilities and roles in their households and communities. They may have to manage agricultural work, household chores, and childcare on their own. Left-behind women face challenges related to increased workload, social isolation, and limited access to resources and opportunities (Jacka 2014). However, they also play a crucial role in sustaining rural economies and communities through their resilience and resourcefulness.

5. **Women's Empowerment and Social Change:** Migration can have transformative effects on women's lives and contribute to social change in Kumaun. Women who migrate for work gain exposure to new ideas, experiences, and networks, which can enhance their confidence, skills, and decision-making abilities (Daehnhardt 2019). Remittances sent by women migrants can improve the economic well-being of their families and communities, enabling investments in education, healthcare, and other development initiatives.

Migration can also challenge traditional gender norms and roles by providing women with greater economic independence and the opportunity to challenge social hierarchies and discriminatory practices. The presence of women in the public sphere, whether as migrant workers or as migrants returning with new skills and perspectives, can contribute to shifts in gender relations and promote women's empowerment.

6. **Gender-Responsive Policies and Interventions:** Address the gender dimensions of migration in Kumaun, it is crucial to implement gender-responsive policies and interventions that consider the specific needs and experiences of both male and female migrants (Aayog N.I.T.I 2018). This includes promoting safe and dignified working conditions, ensuring access to social protection measures, and addressing the vulnerabilities and rights violations faced by women migrants. It is vital to enhance women's access to education and skill development opportunities, enabling them to have better employment prospects and income-generating activities.

Promoting gender disparities and gender equality in origin and destination areas is essential. This involves challenging gender stereotypes and norms, improving access to healthcare, reproductive rights, and addressing issues related to violence against women. Additionally, efforts should be made to strengthen support systems for left-behind women, including access to social services, skills training, and income-generating activities. It is necessary to engage men and boys in discussions on gender equality and challenging traditional gender roles is also critical for promoting transformative change.

The gender dimensions of migration in the Kumaun region highlight the distinct patterns, challenges, and opportunities faced by men and women migrants. Migration has implications for gender roles, relations, and dynamics, influencing the lives of migrants and those left behind. Addressing the gender dimensions of migration requires gender-responsive policies and interventions that promote women's empowerment, challenge gender inequalities, and address the vulnerabilities and rights violations faced by women migrants. By recognizing and addressing these gender dimensions, migration in Kumaun can contribute to more inclusive and equitable development in the region.

3.7. ENVIRONMENTAL FACTORS AND MIGRATION

Environmental factors plays a significant role in shaping migration patterns in the Kumaun region of Uttarakhand, India. The region's unique environmental characteristics, including its mountainous terrain, susceptibility to natural disasters, and changes in climate patterns, influence the decision of individuals and communities to migrate. Understanding the relationship between environmental factors and migration is crucial for comprehending the complex interactions between human populations and the natural environment in Kumaun.

1. **Vulnerability to Natural Disasters:** Kumaun is prone to various natural disasters, including floods, landslides, and earthquakes. These disasters can cause significant damage to infrastructure, disrupt livelihoods, and pose risks to human lives. Environmental factors such as the region's geographical location, proximity to seismic zones, and high rainfall patterns contribute to the vulnerability of

communities to these natural hazards. In the face of frequent disasters, individuals and communities may choose to migrate to safer areas to mitigate the risks and protect their lives and livelihoods.

2. **Climate Change and Environmental Degradation:** Climate change and environmental degradation have become increasingly significant factors influencing migration patterns in Kumaun. The region has witnessed changes in temperature, precipitation patterns, and the availability of water resources, which impact agricultural practices, water availability, and overall ecosystem health. Climate change-induced events, such as droughts or erratic monsoons, can adversely affect agricultural productivity and contribute to economic challenges, leading to migration as a coping strategy.

Environmental degradation, including deforestation, soil erosion, and loss of biodiversity, also has implications for migration. These processes degrade natural resources and undermine the sustainability of livelihoods dependent on them. In response, individuals may migrate in search of alternative livelihoods and better environmental conditions.

3. **Agriculture and Livelihood Challenges:** Agriculture is a crucial economic sector in Kumaun, providing livelihoods for a significant portion of the population. However, environmental factors such as limited agricultural land, fragmented land holdings, and reliance on rain-fed agriculture pose challenges to agricultural productivity and sustainability. Changes in climate patterns, including erratic rainfall and changing temperature regimes, can disrupt agricultural cycles and affect crop yields. These challenges and vulnerability to natural disasters drive individuals to seek alternative livelihood options, often resulting in migration.
4. **Water Scarcity and Irrigation Challenges:** Water scarcity is a pressing environmental issue in Kumaun, exacerbated by changing climate patterns and the increasing demand for water resources. The region's mountainous terrain and dependence on rain-fed agriculture make it susceptible to water stress, particularly during dry spells. Water scarcity affects agricultural productivity, access to safe drinking water, and overall livelihoods. In some cases, individuals and communities may choose to migrate in search of regions with better access to water resources and irrigation facilities.
5. **Forest Resources and Forest-Dependent Livelihoods:** Forests play a vital role in the socio-economic fabric of Kumaun, providing various ecosystem services and supporting forest-dependent livelihoods. However, environmental factors such as deforestation, illegal logging, and forest degradation pose challenges to the sustainability of forest resources and the livelihoods they support. The decline in forest resources affects the availability of forest-based products, such as timber, non-timber forest products, and fuelwood, which are essential for local communities. In response, individuals may migrate to seek alternative livelihood options, contributing to changes in migration patterns.
6. **Tourism and Environmental Impacts:** Kumaun's scenic beauty and rich biodiversity make it a popular tourist destination. Tourism plays a significant role in the region's economy, generating employment and income for local communities. However, unregulated tourism activities can have adverse environmental impacts, including habitat destruction, pollution, and strain on natural resources. These environmental impacts can affect the quality of life for local communities and disrupt traditional livelihoods. In response, individuals may migrate in search of alternative employment opportunities or to escape the negative environmental consequences of tourism.
7. **Environmental Refugees:** Environmental factors, such as natural disasters and the impacts of climate change, can lead to displacement and the emergence of environmental refugees in Kumaun.

Communities living in areas at high risk of natural disasters or facing severe environmental degradation may be forced to leave their homes and seek refuge in safer regions. These environmental refugees face significant challenges in terms of losing homes, livelihoods, and social networks. Adequate policies and support mechanisms are required to address the needs and vulnerabilities of environmental refugees and ensure their protection and well-being.

8. **Policy Implications:** Addressing the relationship between environmental factors and migration in Kumaun requires comprehensive policies and interventions. Promoting sustainable environmental practices, including forest conservation, water resource management, and climate change adaptation strategies is crucial. Encouraging sustainable agriculture practices, such as water-efficient irrigation systems and crop diversification, can help mitigate the impacts of environmental challenges on agriculture and reduce the need for migration as a coping mechanism.

Investments in infrastructure, such as early warning systems, disaster preparedness, and resilient housing, can enhance the resilience of communities to natural disasters. Strengthening social protection mechanisms, such as access to healthcare, education, and social services, can support individuals and communities affected by environmental factors and reduce their vulnerabilities.

Furthermore, policies should create alternative livelihood opportunities in environmentally sustainable sectors, such as eco-tourism, renewable energy, and sustainable forest management. This can help alleviate pressure on vulnerable ecosystems, promote economic diversification, and reduce the need for environmentally-induced migration.

Environmental factors play a significant role in shaping migration patterns in the Kumaun region. Natural disasters, climate change, environmental degradation, and resource scarcity influence individuals' decisions to migrate in search of safer environments, better livelihood options, and improved access to resources. Addressing the complex relationship between environmental factors and migration requires a multi-dimensional approach that combines environmental conservation, climate change adaptation, sustainable development, and social protection measures. By recognizing and addressing these environmental factors, migration in Kumaun can be better managed, by ensuring the welfare of individuals, communities, and the natural environment

3.8. CONSEQUENCES OF MIGRATION ON SENDING AND RECEIVING COMMUNITIES

Migration has significant consequences for both the sending and receiving communities in the Kumaun region of Uttarakhand, India. The movement of individuals and families between these communities brings about social, economic, and cultural changes that impact various aspects of community life. Understanding the consequences of migration is crucial for comprehending the dynamics of population movement and its implications for the well-being and development of both sending and receiving communities in Kumaun.

For sending communities, migration has several consequences that shape their social, economic, and cultural fabric. Firstly, migration leads to demographic changes within these communities. The outmigration of individuals, especially young adults, result in an ageing population and a gender imbalance (de Haas 2003). The absence of young, working-age individuals can have implications for labor availability, agricultural productivity, and the overall economic well-being of these communities.

Economically, migration has a significant impact on sending communities. The outmigration of individuals, particularly those in their productive working years, leads to losing labour and skills. This can adversely affect local industries, agriculture, and the overall economy (Appleyard 1989). The

reduced labour force may result in agricultural challenges, such as declining productivity, labour shortages, and increased dependence on mechanization or outsourcing labour. Additionally, remittances sent back by migrants contribute to the local economy, stimulating consumption, investment, and the development of small businesses.

The social impact of migration on sending communities is also significant. The absence of migrants, especially family members, can lead to changes in family structures and dynamics. Left-behind families may experience emotional challenges, including loneliness, separation, and the burden of managing household responsibilities without the support of migrant family members. Furthermore, migration can affect social networks and community cohesion as individuals and families migrate, disrupting long-established relationships and social bonds.

Migration also brings about cultural changes in sending communities. The exposure of migrants to different cultures, languages, and ways of life can influence their attitudes, beliefs, and behaviors upon their return to their communities of origin. Migrants may introduce new ideas, practices, and perspectives, contributing to cultural exchange and the evolution of local customs and traditions. However, this can also lead to tensions and conflicts, mainly when there is resistance to change or a perceived threat to cultural identity.

Gender dynamics are also influenced by migration in sending communities. When men migrate, women often take on additional responsibilities and roles traditionally associated with men, such as managing agricultural work and making household decisions. This can lead to shifts in gender roles and empower women as decision-makers and economic contributors (Datta and Mishra 2011). However, it may also burden women, increasing their workload and the challenges they face in balancing household responsibilities with other obligations.

On the other hand, migration also has consequences for receiving communities in Kumaun. Economically, migration has a significant impact on these communities. The arrival of migrants fills labour gaps and stimulates various sectors of the economy. Migrants often work in industries, services, construction, and other sectors, contributing to job creation, innovation, and productivity. They also contribute to the local economy through their consumption patterns, increasing demand for goods and services in the receiving communities.

Culturally, migration brings diversity to receiving communities, enriching their social fabric and contributing to the cultural landscape. Migrants bring their language, traditions, customs, and cuisines, adding to the diversity and vibrancy of the local culture. Cultural exchange and interaction with migrants can foster understanding, tolerance, and appreciation of different perspectives, contributing to a more inclusive and multicultural society.

Migration can also have social consequences for receiving communities. The presence of migrants can influence social norms, values, and practices within these communities. Interaction with migrants can challenge stereotypes, foster social cohesion, and promote social integration. However, tensions and conflicts may also arise, particularly when there are perceived cultural differences or competition for resources and opportunities.

The influx of migrants may pressure local infrastructure and services in receiving communities. The increased population can strain existing infrastructure, such as housing, transportation, healthcare facilities, and educational institutions. The provision of adequate infrastructure and services becomes crucial to ensure the well-being and integration of migrants, as well as to prevent inequalities and social tensions within the receiving communities (de Haas 2009)

Migration can also have implications for social mobility within receiving communities. Migrants often arrive with aspirations for improved economic prospects and better living conditions. Through their hard work and determination, migrants may achieve upward social mobility, securing better jobs, education, and social status for themselves and their families. This can inspire and motivate members of the receiving communities to pursue their goals and aspirations.

The presence of migrants in receiving communities can lead to new social networks and relationships. Migrants bring diverse backgrounds, experiences, and connections, which can expand the social capital of the receiving communities. These networks can facilitate the exchange of ideas, knowledge, and resources, contributing to social and economic development.

Migration also promotes intercultural understanding and solidarity within receiving communities. The interactions and relationships between migrants and locals can foster empathy, respect, and appreciation for diversity. Receiving communities can learn from migrants' experiences, perspectives, and skills, enhancing their social and cultural understanding.

In conclusion, migration has wide-ranging consequences for sending and receiving communities in the Kumaun region. It impacts these communities' demographic structures, labour markets, economies, social dynamics, cultural landscapes, and infrastructure. Recognizing and understanding these consequences is crucial for developing policies and interventions supporting the well-being, integration, and sustainable development of sending and receiving communities. Addressing the challenges and harnessing opportunities associated with migration; Kumaun can strive towards inclusive, resilient, and harmonious communities that benefit from the contributions of migrants and local residents alike.

3.9. GOVERNMENT POLICIES AND MIGRATION MANAGEMENT

Government policies and effective migration management are crucial for addressing the challenges and harnessing the opportunities associated with migration in the Kumaun region of Uttarakhand, India. As migration continues to shape the region's social, economic, and cultural landscape, it is essential to have comprehensive policies and strategies that promote the well-being of migrants, protect their rights, and ensure the sustainable development of both sending and receiving communities. By implementing appropriate policies and adopting effective migration management practices, the government can facilitate safe, orderly, and productive migration in Kumaun.

- 1. Migration Governance and Coordination:** The government plays a central role in ensuring effective migration governance and coordination. Establishing clear institutional structures and mechanisms for migration management is essential. This includes formulating a comprehensive migration policy framework that addresses the diverse dimensions of migration, including labour migration, seasonal migration, and environmental migration. It is crucial to promote inter-ministerial coordination and collaboration among relevant government departments, such as labour, agriculture, social welfare, and education, to ensure a holistic and integrated approach to migration management.
- 2. Legal and Regulatory Framework:** A robust legal and regulatory framework is necessary to protect the rights and interests of migrants in Kumaun. The government should enact and enforce laws and regulations that safeguard migrants against exploitation, abuse, and discrimination. This includes legislation on labour rights, fair recruitment practices, and social protection measures for migrants. The legal framework should also address the specific needs and vulnerabilities of different categories of migrants, including women, children, and seasonal workers.

3. **Recruitment and Employment Practices:** Government policies should promote fair and ethical recruitment practices to protect migrant workers from exploitation and abuse. This includes licensing and regulating recruitment agencies, establishing grievance mechanisms for workers, and ensuring transparency in the recruitment process. The government should also collaborate with destination countries to negotiate bilateral or multilateral agreements that provide legal protection and promote the welfare of migrants working abroad.
4. **Skill Development and Capacity Building:** Investing in skill development and capacity building programs is crucial for enhancing the employability and productivity of migrants in Kumaun. The government should collaborate with relevant stakeholders, including educational institutions, vocational training centres, and industry representatives, to develop and implement skill development programs that align with the labour market demands. These programs should provide migrants with the necessary skills and knowledge to secure decent and sustainable employment opportunities, both within and outside the region.
5. **Social Protection and Well-being:** The government should ensure access to social protection measures and essential services for migrants in Kumaun. This includes healthcare, education, housing, and legal aid. Establishing migrant resource centres or help desks can provide information, support, and counselling services to migrants, facilitating their integration into the local communities. The government should also collaborate with civil society organizations and community-based initiatives to provide social support networks for migrants and address their specific needs, such as language training, cultural orientation, and psychosocial support.
6. **Environmental Management and Climate Resilience:** Given the environmental challenges faced by Kumaun, the government should integrate environmental management and climate resilience into migration policies and practices. This includes promoting sustainable agricultural practices, watershed management, afforestation, and water resource management to mitigate the impacts of climate change on agriculture and rural livelihoods. Environmental considerations should be integrated into urban planning and infrastructure development to ensure sustainable and resilient cities that accommodate the influx of migrants.
7. **Data Collection and Research:** Accurate and reliable data on migration is essential for evidence-based policymaking and effective migration management. The government should invest in robust data collection systems and conduct regular migration surveys and research to gather information on the profiles, patterns, and migration trends in Kumaun. This data can inform the development of targeted policies and interventions, monitor the impact of migration on communities, and identify emerging issues and challenges that require attention.
8. **Collaboration and Partnerships:** The government should foster collaboration and partnerships with various stakeholders to promote effective migration management. This includes engagement with civil society organizations, academic institutions, international organizations, and the private sector. Collaboration can facilitate knowledge sharing, capacity building, and the exchange of best practices in migration management. Public-private partnerships can also play a crucial role in promoting responsible business practices, creating decent employment opportunities for migrants, and supporting their integration into the local economy.
9. **Awareness and Outreach:** Government policies should be accompanied by awareness campaigns and outreach programs to educate migrants, communities, and relevant stakeholders about their rights, responsibilities, and available support services. These campaigns can promote a better

understanding of migration, challenge stereotypes, and reduce social tensions and discrimination. Information dissemination should be done through various channels, including mass media, community-based platforms, and digital platforms, to reach a wide range of audiences.

10. **Monitoring, Evaluation, and Feedback Mechanisms:** Regular monitoring, evaluation, and feedback mechanisms are crucial for assessing the effectiveness of migration policies and programs. The government should establish mechanisms to collect feedback from migrants, communities, and relevant stakeholders to identify areas for improvement and make necessary adjustments. This iterative process ensures that migration policies and practices remain responsive to the evolving needs and challenges of migrants and communities in Kumaun.

Effective government policies and migration management practices are essential for addressing the challenges and harnessing the opportunities associated with migration in the Kumaun region. Through comprehensive migration governance, legal frameworks, skill development, social protection measures, and environmental management, the government can ensure safe, orderly, and productive migration that benefits migrants and the communities they come from and contribute to in Kumaun. Collaboration with various stakeholders, data-driven decision-making, and awareness campaigns further strengthen the government's efforts in promoting inclusive and sustainable development in the region.

3.10. CONCLUSION AND RECOMMENDATIONS

In conclusion, addressing migration and its patterns in the Kumaun region requires a comprehensive and multifaceted approach. While it may not be feasible to stop migration completely, efforts can be made to mitigate the push factors that drive people to leave their homes and reduce the need for migration. Additionally, strategies can be implemented to create economic opportunities, improve living conditions, and promote social inclusion within the region.

To achieve these goals, the following recommendations are proposed:

1. Promote sustainable and inclusive economic development by diversifying the economy, attracting investments, and creating employment opportunities in various sectors.
2. Strengthen agriculture and rural development by investing in modern farming techniques, improving infrastructure, and supporting farmers to enhance productivity and income levels.
3. Enhance educational opportunities and skill development programs to equip the local population with the necessary knowledge and skills for diverse employment opportunities within the region.
4. Improve social protection measures to support vulnerable groups, provide access to healthcare, education, and social security, and create support mechanisms for left-behind family members.
5. Invest in infrastructure development, including transport networks, electricity supply, healthcare facilities, schools, and digital connectivity, to improve living conditions and attract investments.
6. Prioritize environmental conservation, promote sustainable land management practices, and develop climate resilience strategies to mitigate the adverse effects of environmental degradation and reduce the need for environmental migration.
7. Strengthen governance and policy interventions by developing comprehensive migration policies, ensuring transparency and accountability, and implementing effective migration management mechanisms.
8. Foster research, knowledge sharing, and stakeholder collaboration to inform evidence-based policy decisions and replicate successful strategies.

9. Promote partnerships and collaboration among government agencies, civil society organizations, private sector entities, and international development agencies to leverage resources and expertise for effective migration management.
10. Raise awareness and change perceptions through targeted awareness campaigns to challenge stereotypes, promote social integration, and create welcoming environments for migrants and their families.

Implementing these recommendations requires a long-term commitment from all stakeholders, including the government, local communities, civil society organizations, and the private sector. By addressing the underlying causes of migration, creating economic opportunities, improving living conditions, and promoting social inclusion, the Kumaun region can reduce the need for migration and ensure sustainable development and prosperity for its residents.

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CHAPTER- 04

SOCIO-ECONOMIC PROFILE OF DISTRICT ALMORA

4.1

District Almora forms nearly 5.78% of the state's total geographical area. The district has a population of 6,22,506, as per the census 2011, of which the male population is 2,91,081 and the female population is 3,31,425. District's population forms nearly 6.15% of the state's population and more than 90% of the population resides in rural areas. Population density of the district for 2011 census is 198, which has increased from 170 in 2001, making it a fifth most densely populated district in the state. Almora has a Sex Ratio of 1139, higher than the State and National average. The district has an average birth rate of 15.80 per thousand population and an average death rate of 6.00, as on 2016-17. (Source: Statistical Magazine, Almora)

4.1.1 Population

The district has experienced a negative decadal population growth of -1.64% for the census period of 2001-2011. For this period the population has declined from 6,30,567 in 2001 to 6,22,506 in 2011. The rural population constitute more than 90% of the total population and there has been an increase of 25.51% in the urban population during 2001-2011 census. The Sex Ratio for the rural region is 1177 and for urban regions it is 848 females per 1000 males. District Almora in one of the top districts with highest Sex Ratio in the country. The average birth rate and the death rate of the district is 15.80 and 6.00 per thousand population respectively for the year 2016-17.

Out of 11 Development Blocks 7 have negative population growth. Although the district's decadal population growth is -1.63%, but for rural population it is -4.20% clearly indicating that the rural population is migrating towards the urban centres. The majority of the population i.e., 39.35% is engaged in Agriculture, followed by daily wage labour (34.13%). According to the Commission's report on State's Migration Status, around 42.22% of the migrants fall into the age group of 26-35 years.

4.1.2 literacy

The district has a literacy rate of 80.47%, wherein the male and female literacy is 92.86% and 69.93% respectively. The decadal change in literacy rate is shown in figure 2.5 above. Within the district, Blocks Hawalbagh and Tarikhet have maximum literacy rate of 83.69% and 83.36% respectively

4.1.3 Economy

Almora is a hill district, majority of the economy depends on traditional agriculture, horticulture, livestock, forest & logging, and mining & quarrying. The size of the economy i.e., GDDP at Current Prices is estimated Rs.4,28,018 lakh in year 2011-12, Rs.4,90,303 lakh in year 2012-13, Rs.5,63,108 lakh in year 2013-14, Rs.5,58,426 lakh in year 2014-15, Rs.5,98,345 lakh for year 2015-16 & Rs.6,60,378 lakh for the year 2016-17. In terms of percentage growth, the size of the economy increases by 14.55% in year 2012-13, 14.85% in year 2013-14, -0.83% in year 2014-15, 7.15% in year 2015-16RE & 10.37% in the year 2016-17 with respect to previous year respectively. Growth of the economy i.e., GDDP at Constant Prices is estimated Rs.4,28,018 lakh in year 2011-12, Rs.4,58,385 lakh in year 2012-13, Rs.5,06,144 lakh in year 2013-14, Rs.4,88,369 lakh in year 2014-15, Rs.5,11,911 lakh for year 2015-16RE & is provisionally estimated Rs.5,45,139 lakh for the year 2016-17. In terms of percentage growth, GDDP at constant price i.e., economy registered growth of 7.09% in year 2012-13, 10.42% in year 2013-14, -3.51% in year 2014-15, 4.82% in year 2015-16RE & 6.49% in the year 2016-17 with respect to previous year respectively as compared to the state average of 7.9% in 2016-17. It has been reported in the HDR 2018 that the district has 30.7% of the population below poverty line as against the state average of 15.6%.

4.1.4 Agriculture

Although the share of agriculture in Gross District Domestic Product is declining, but still nearly 39% of the district's population is engaged in agriculture as its main occupation. The major crops in the district are cereals like Paddy, Wheat, barley, Maize, Mandua, Sawaan; Pulses like Urad, Lentil, Gram; Oilseeds like Mustard, Soybean, Sesame; Potato and Turmeric. Due to the hilly terrain large scale irrigation is not possible but still the valley parts of the districts are being irrigated by connecting rivers canals. A total of 5751.00 Hectare of area is under irrigation in the district. The Department of Agriculture has divided the agriculture land into two categories based on the availability of irrigation, viz. *Talau Bhumi* and *Upraru Bhumi*. The *Talau Bhumi* is an even area where irrigation facilities are present and the farmers can take Rabi, Kharif and Zaid crops. *Upraru Bhumi* is an unirrigated area where only Kharif crop is taken but not Rabi.

The land use pattern of the district. Nearly 51% of the total area is covered under forest and 10% of the land is either cultivable wasteland or kept fallow. Due to hilly terrain and unavailability of irrigation facilities, majority of the agriculture is rainfed, therefore the gross sown area is more in Kharif season. Other than irrigation, the farmers are facing problems with wild animals like monkeys, wild boars etc. As a result of which there is a dismal interest in agriculture amongst the farmers of the district.

4.2. Demographic profile of the study area

The presentation of data and how it is interpreted are critical components of not just research but also economic and commercial activities, as well as professional standards. It is necessary to make use of the data that has been acquired despite the fact that it is still regarded as raw data and has to be processed before it can be utilized in any application. The interpretation of the data and the making of decisions are both helped by data analysis, which also contributes to the resolution of the research topic. This may be accomplished with the use of data processing tools and software. The first step is to collect the data, after which comes sorting the data, various forms of data processing, and finally, data analysis. Due to the fact that raw data is necessarily lacking in completeness, it is much simpler to derive information from processed data. During the presentation of the data, graphs are utilized in order to provide a graphical representation of the data.

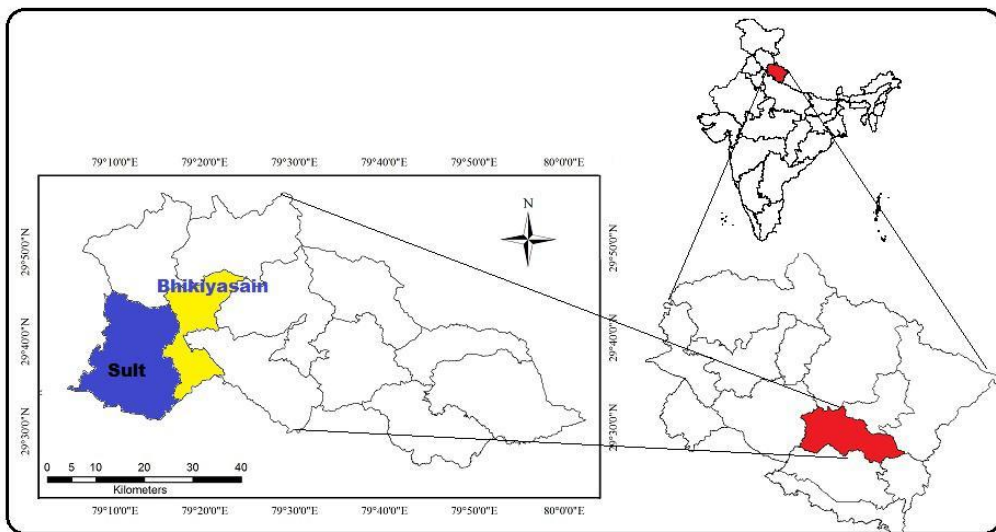


Figure 4.1 Location Map of the Study Area

4.2. Characteristics of the population in Salt Block, Almora district

The demographic included mainly respondents who belonged to migrant and non-migrant families. The demographic variables used in the study include group name, respondent's marital status, number of family members, number of migrant members, gender status, caste status, religious status, education qualification, etc. 300 respondents were used as a sample in this study. The frequency distribution for each demographic characteristic is constructed as follows:

4.2.1. Age group of Salt Block respondents

The demographic profile of the age of the respondents was captured in Table 4.1. The percentage of the age profile of the respondents has been used to analyze the data. It is observed from the below table that 11% of respondents are in the age group of 20-30 years, 23% of respondents belong to the age group of 31-40 years, 34% of respondents lie in between 41-50, 19% of respondents are in the age group between 51-60 and finally, only 13% of respondents belong to the age group of 61-70. So from this, it is evident that the maximum number of respondents is 41-50 years old.

Table 4.1. Age interval of Salt block respondents with percentile values

Sr. No.	Age	Respondents	Percentages
1.	20-30	17	11%

2.	31-40	34	23%
3.	41-50	51	34%
4.	51-60	28	19%
5.	61-70	20	13%
6.	Total	150	100%

Source: Primary Survey

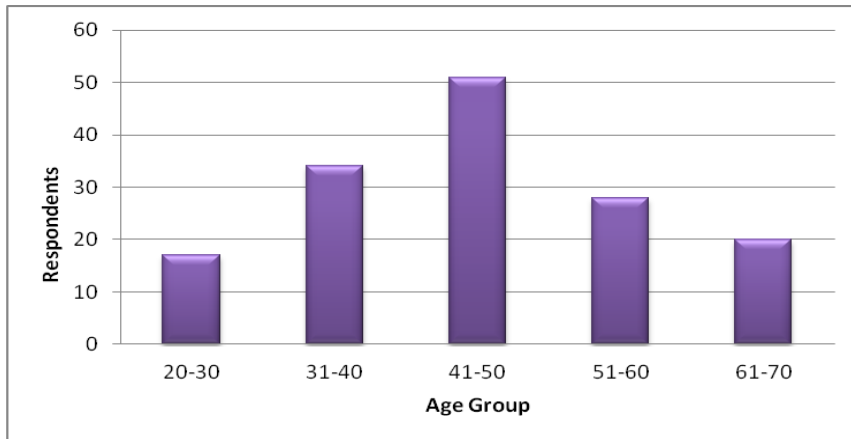


Figure 4.2. Demographic profile of Salt block respondents' age

4.2.2. Gender distribution in Salt Block of Almora district

The demographic profile of the gender of the respondents is shown in Table 4.2. The percentage of the gender profile of the respondents has been used to analyze the data. It is observed from the below table that 65% of respondents were males and 35% of respondents belonged to females during over research period.

Table 4.2. Gender categorization of Salt block respondents with percentile values

Sr. No.	Gender	Respondents	Percentages
1.	Male	98	65%
2.	Female	52	35%
3.	Total	150	100%

Source: Primary Survey

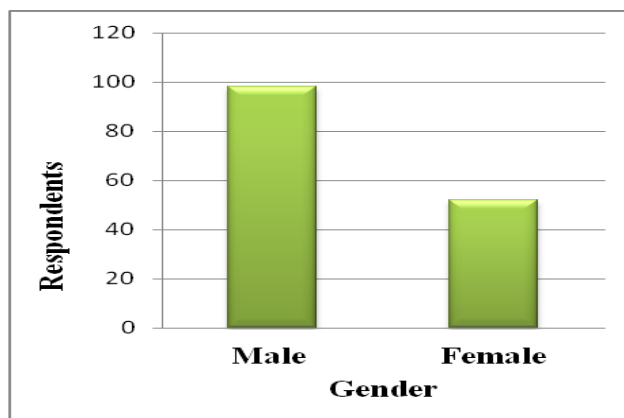


Figure 4.3. Gender categorization of the sample (respondents)

4.2.3 Caste status of Salt Block respondents in Almora district

The caste status of both male and female respondents had three categories general, other backward class and schedule caste. Around 57% of respondents belong to general categories and 11% of the total respondents belong to other backward classes (OBC). The scheduled caste (SC) respondents have 32% of the 150 respondents in the Salt block of Almora district (Figure 4.4 and Table 4.3).

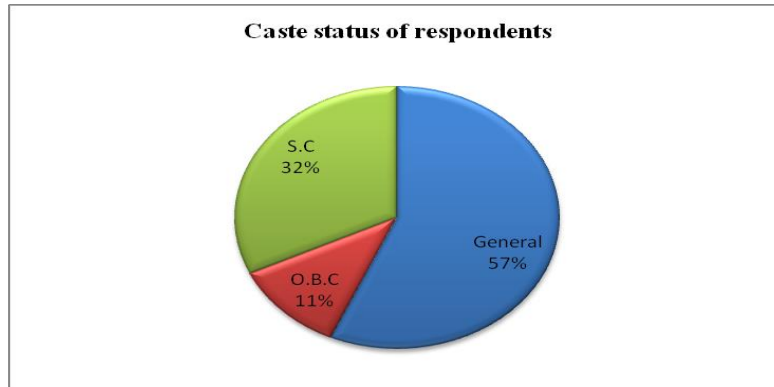


Figure 4.4. Caste distribution of Salt block respondents in Almora district

Table 4.3. Caste distribution of Salt block respondents with percentile values

Sr. No.	Caste	Respondents	Percentages
1.	General	85	57%
2.	OBC	17	11%
3.	SC	48	32%
4.	Total	150	100%

Source: Primary Survey

4.2.4 Religious position of respondents in Salt Block

The analysis of the data was done using a percentage of the religious distribution of the people who responded to the survey. Figure 4.5 displays the demographic profile of the respondents according to the religion of those who filled out the survey. According to the data shown in Table 4.4, throughout the course of the research endeavor, 93% of the respondents were Hindus and 6% of the respondents were Muslims. Christian religious respondents were 1% of the total Salt block demographic data.

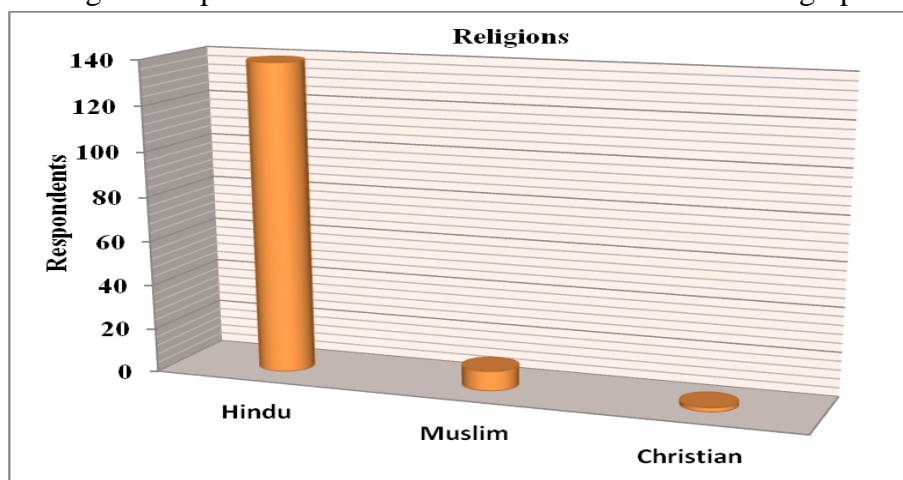


figure 4.5. Religion status of Salt block respondents in Almora district

Table 4.4. Religion status of respondents with percentile values in Salt Block, Almora

Sr. No.	Gender	Respondents	Percentages
1.	Hindu	139	93%
2.	Muslim	9	6%
3.	Christian	2	1%
4.	Total	150	100%

Source: Primary Survey

4.2.5 Marital status of the respondents in Salt Block area –

The processed data were used for determining the Salt block respondents' overall marital status. Table 4.5 shows that out of 150 respondents, 79% of the women respondents are married, 12% of those questioned were not married and lastly 9% of the respondents are widows or widowers. People who were married and people who were not married were included in this group.

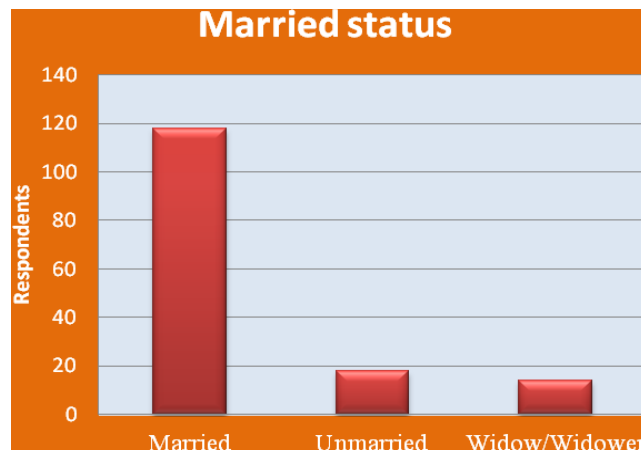


Figure 4.6. Salt block respondent's marital status

Table 4.5. Marital status of the Salt block (Almora district) respondents

Sr. No.	Married Status	Respondents	Percentages
1.	Married	118	79%
2.	Unmarried	18	12%
3.	Widows/Widowers	14	9%
4.	Total	150	100%

Source: Primary Survey

4.2.6 Respondent's education qualification in Salt Block, Almora district-

The Latin word Educare is derived from the English word education, which means to develop a person's ability to think. People's awareness of what's going on in the world may be raised to a higher level via the use of education as a kind of wake-up call. The following describes the educational position of Salt Block (Almora) during the research data collection period. A bar chart is used to illustrate the distribution of the respondents' addresses throughout the different geographic regions (Village). The following table reveals that out of 150 respondents, 3% of man and women respondents are illiterate, 21% of both respondents have not completed high school, 38% of the respondents have completed high

school, 26% of them are qualified up to the intermediate level, 10% of respondents have graduated, and only 2% of respondents have completed post-graduate studies. According to the data shown in Table 4.6, the vast majority of the women who participated in the survey had a high school level of education.

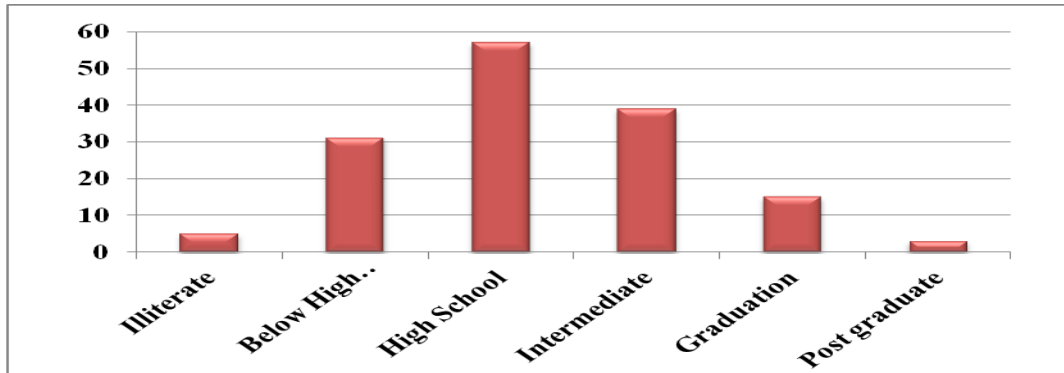


Figure 4.7. Education Status of respondents in Salt block, Almora

Table 4.6. Educational qualification of the Salt block, Almora respondents

Sr. No.	Education Qualification	Respondents	Percentages
1.	Illiterate	5	3%
2.	below High School	31	21%
3.	High School	57	38%
4.	Intermediate	39	26%
5.	Graduation	15	10%
6.	Post-graduate	3	2%
7.	Total	150	100%

Source: Primary Survey

4.2.7 Respondent's family member's status in Salt Block areas -

Figure 4.7 shows the number of household members of the respondents. 25% of the respondents have 5 members in their families, 26% of the respondents have 6 members in their families, 11% of the respondents have 7 members in their families, and 10% of the respondents in Salt Block have 9 members in their families. In the sample of Salt Block, there are only four members in the household of 6 respondents.

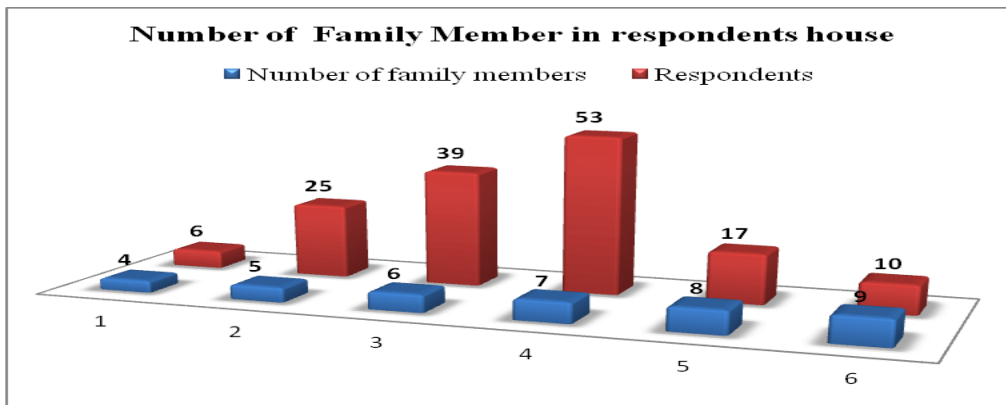


Fig. 4.8. Status of Salt Block respondents in a number of household members

Table 4.7. Status of number of dependents of respondents

Sr. No.	Number of family members	Respondents (Household)	Percentages
1.	4	6	4%
2.	5	25	17%
3.	6	39	26%
4.	7	53	35%
5.	8	17	11%
6.	9	10	7%
7.	Total	150	100%

Source: Primary Survey

4.2.8 Number of migrant persons in Salt Block of Almora district-

Table 4.8 reveals that out of 150 respondents in the Salt block of Almora district, Only 3 respondents have zero migrants during the study period. 38 (25% of the total respondents) respondent's families had one member who migrated from Salt Block, 60% of the respondent's families notified that only 2 family members migrated, and 8% of the respondent's families clearly responded that the 3 members migrated from Salt Block area. 4 family members migrate from the 5 % of respondents' families. According to the data shown in Figure 4.8, the vast majority of migrant persons belong to 90 respondent families who participated in the survey.

Table 4.8. Migrant individuals percentage in Salt block, Almora district

Sr. No.	Number of migrants	Respondents (Household)	Total Migrant	Respondents Percentages	Migrant Percentages
	0	3	0	2%	0%
	1	38	38	25%	13%
	2	90	180	60%	64%
	3	12	36	8%	13%
	4	7	28	5%	10%
	Total	150	282	100%	100%

Source: Primary Survey

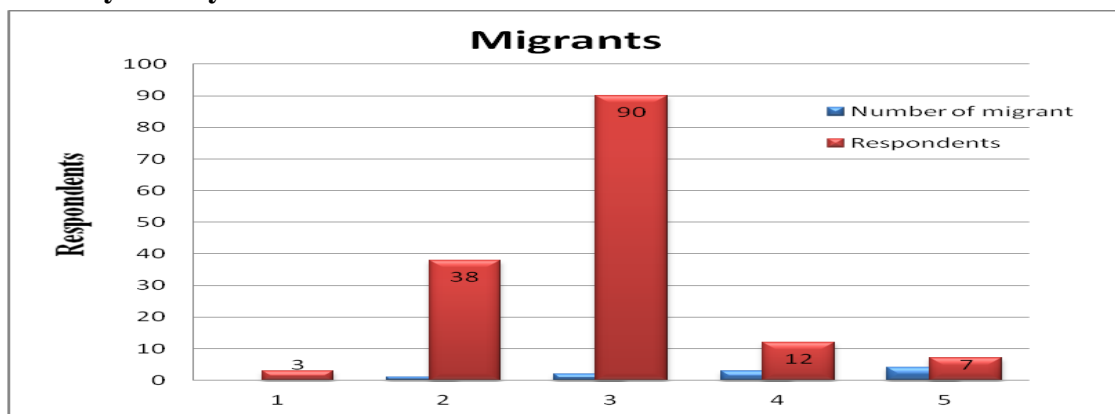


Fig 4.9. Migrants status of respondents in Salt Block, Almora

Table 4.9. Nature of Migrant in Salt Block

Inter-region Migrant	Temporary	Permanent	Total
63	107	112	282
22%	38%	40%	100%

Source: Primary Survey

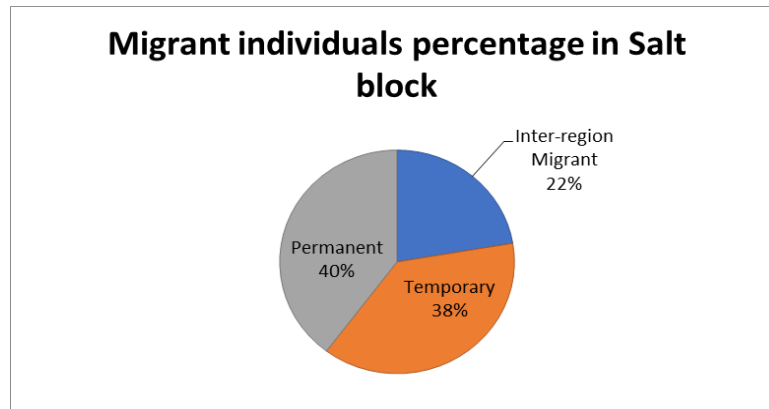


Fig 4.10. Migrant Individual percentage in Salt Block

4.3. Characteristics of the population in Bhikiyasen block, Almora district-

The demography mainly includes respondents from migrant and non-migrant families. Group name, respondent's marriage status, number of family members, number of migrant members, gender status, caste status, religious status, education qualification, and other demographic characteristics were utilized in the study. In the Bhikiyasen block, 150 respondents were used as a sample. Each demographic characteristic's frequency distribution is created as follows:

4.3.1. Age characteristics in Bhikiyasen Block, Almora district-

The data have been analyzed using the respondents' age distribution as a percentage. According to the table below, 14% of respondents are between the ages of 20 and 30 years old, 33% are between the ages of 31 and 40, 31% are between the ages of 41 and 50, 15% are between the ages of 51 and 60, and only 8% are between the ages of 61 and 70. This makes it clear that the age range of 31 to 40 years has the highest proportion of respondents (Table 4.9).

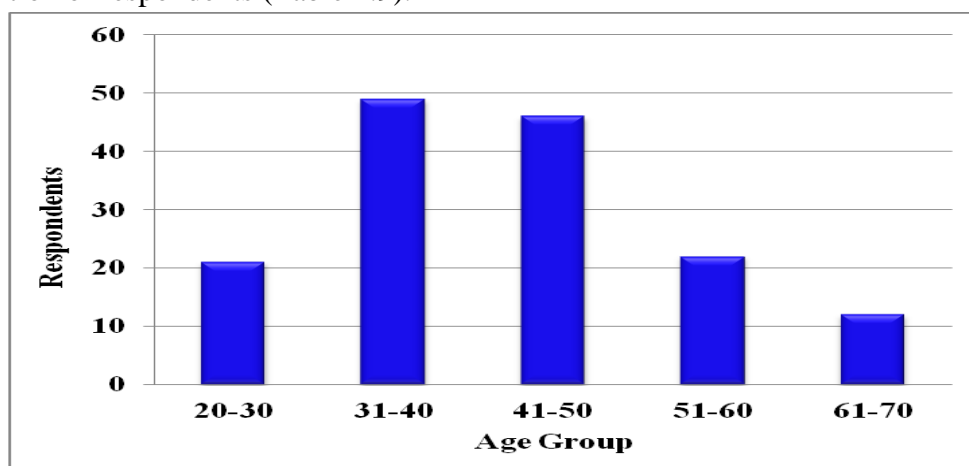


Figure 4.11 Illustrates the age demographic profile of female responders.

Table 4.10 Age range of Bhikiyasen Block, Almora district respondents

Sr. No.	Age	Respondents	Percentages
1.	20-30	21	14%
2.	31-40	49	33%
3.	41-50	46	31%
4.	51-60	22	15%
5.	61-70	12	8%
6.	Total	150	100%

Source: Primary Survey

4.3.2 Gender distribution in Almora district Bhikiyasen Block-

The demographic profile of the gender of the respondents is shown in Table 4.10. The percentage of the gender profile of the respondents has been used to analyze the data. It is observed from the below table that 68% of respondents were males and 32% of respondents belonged to females during over research period.

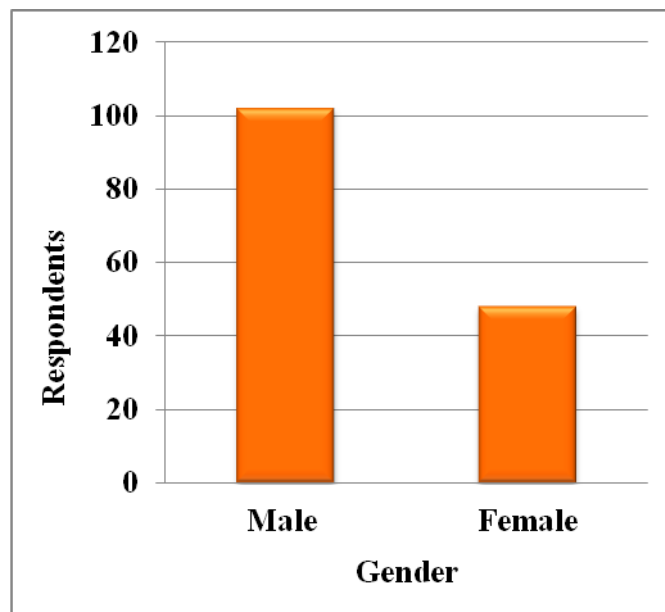


Figure 4.12 Shown the gender classification of the sample's responders

Table 4.11. Gender percentage of migrant household in Bhikiyasen block

Sr. No.	GENDER	Respondents	Percentages
1.	Male	102	68%
2.	Female	48	32%
3.	Total	150	100%

Source: Primary Survey

4.3.3 The Bhikiyasen Block respondents' caste status in the Almora district

In the Bhikiyasen block of the Almora district of the 150 respondents respondents' caste status was divided into four categories: general, other backward classes, schedule castes, and schedule tribes. 16% of all respondents are from the other backward class (OBC), whereas 57% of respondents fall into

general categories. The scheduled caste (SC) respondents make up 25% and ST has in 2% of the 150 respondents in the Bhikiyasen block of Alomra district (Figure 4.11 and Table 4.11).

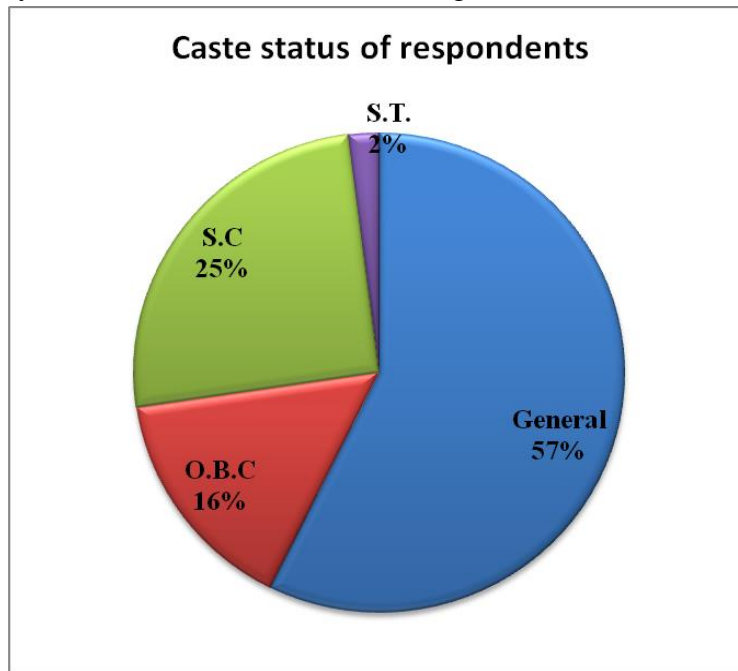


Figure 4.13 Depicts the caste distribution of respondents in Bhikiyasen block in Almora district.

Table 4.12. Caste percentage of migrant household in Bhikiyasen block

Sr. No.	CASTE	Respondents	Percentages
1.	General	86	57%
2.	OBC	23	16%
3.	SC	38	25%
4.	ST.	3	2%
5.	Total	150	100%

Source: Primary Survey

4.3.4. The interviewees' religious affiliations, according to Bhikiyasen Block

According to respondents' religious affiliations, Table 4.12 shows the demographic profile of the respondents. In order to analyze the data, a percentage of the survey respondents' religious makeup was used. According to the data shown in Table 4.12, throughout the course of the research endeavor, 77% of the respondents were Hindus and 17% of the respondents were Muslims. Christian religious respondents were 6% of the total Bhikiyasen block demographic data.

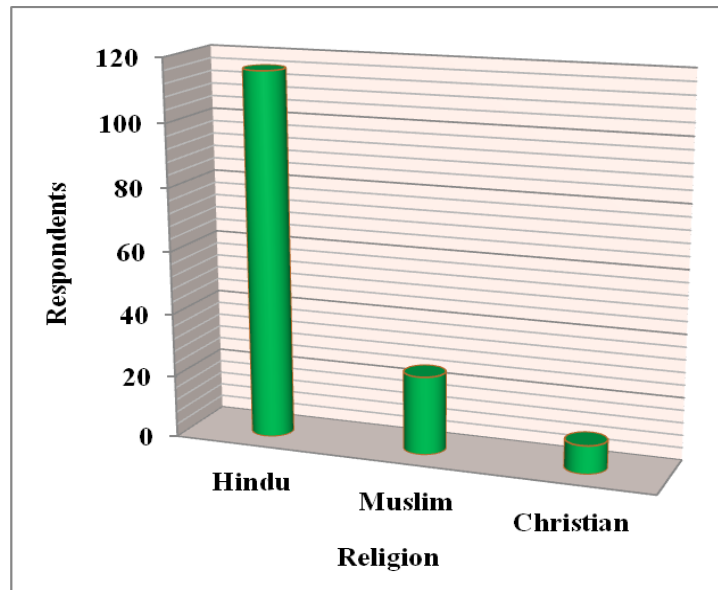


Figure 4.14. Bhikiyasen Block religious affiliations in the (Almora region)

Table 4.13. Bhikiyasen block religious affiliations and percentile values in Almora district

Sr. No.	Religion	Respondents	Percentages
1.	Hindu	116	77%
2.	Muslim	25	17%
3.	Christian	9	6%
4.	Total	150	100

Source: Primary Survey

4.3.5. Respondent's marital status in Bhikiyasen Block

The respondent data were used for determining the Salt block respondents' overall marital status. People who were married and people who were not married were included in this group. Table 4.13 shows that out of 150 respondents, 81% of the women respondents are married, 9% of those questioned were not married, and 11% of the respondents are widows or widowers.

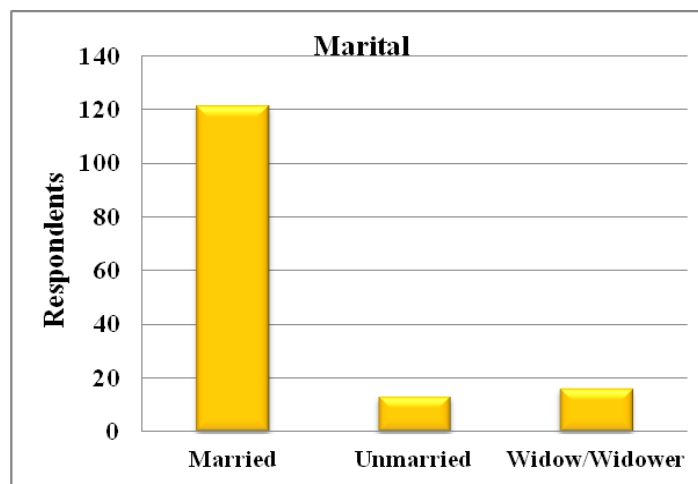


Figure 4.15 Marriage status of respondents in the Bhikiyasen block

Table 4.14. The marital status of those who responded from the Bhikiyasen block (Almora district)

Sr. No.	Educational Qualification	Respondents	Percentages
1.	Married	121	81%
2.	Unmarried	13	9%
3.	Widow/Widower	16	11%
4.	Total	150	1

Source: Primary Survey

4.3.6. Respondents' educational attainment in Bhikiyasen Block

People's awareness of what's going on in the world may be raised to a higher level via the use of education as a kind of a wake-up call. The following describes the educational position of Bhikiyasen block (Almora) during research data collection period. The findings are presented in the form of a bar diagram to illustrate the rate of literacy in respondents. The following table reveals that out of 150 respondents, 3% of man and women respondents are illiterate, 11% of the both respondents have not completed high school, 27% of the respondents have completed high school, 31% are intermediate-level qualified, 25% have graduated, and 3% have completed post-graduate studies. According to the data shown in figure 4.16 and table 4.14, the vast majority of the respondent who participated in the survey had an Intermediate level of education.

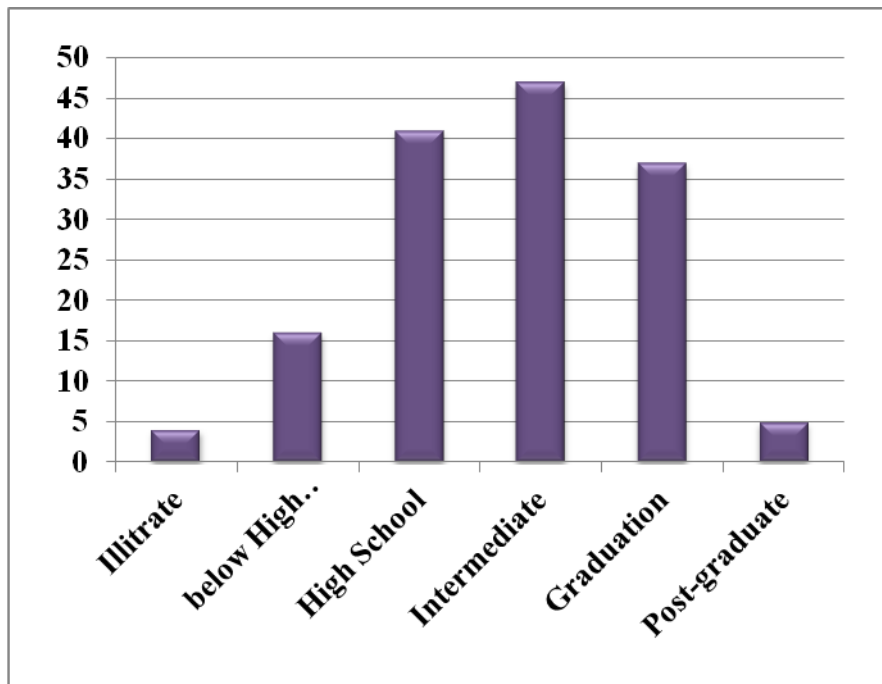


Figure 4.16. Educational status of migrant household respondents in bhikiyasen block

Table 4.15. The education qualification profile of migrant household respondents in Bhikiyasen block

Sr. No.	Education qualification	Respondents	Percentages
1.	Illiterate	4	3%
2.	below High School	16	11%
3.	High School	41	27%
4.	Intermediate	47	31%
5.	Graduation	37	25%
6.	Post-graduate	5	3%
7.	Total	150	100%

Source: Primary Survey

4.3.7 Status of migrant household respondents' family members in Bhikiyasain Block Area

Table 4.15 shows the number of household members of the respondents. In the sample of Bhikiyasen Block, there are only 4 members in the household of 17 respondents. 21% of the respondents have 5 members in their families, 26% of the respondents have 6 members in their families, 37% of the respondents have 7 members in their families, and 5% of the respondents in Bhikiyasen Block have 9 members in their families.

Table 4.16. Number of dependents of respondents in Bhikiyasen block

Sr. No.	No of family members	Respondents (Household)	Percentages
1.	4	17	11%
2.	5	32	21%
3.	6	39	26%
4.	7	55	37%
5.	8	7	5%
6.	Total	150	100%

Source: Primary Survey

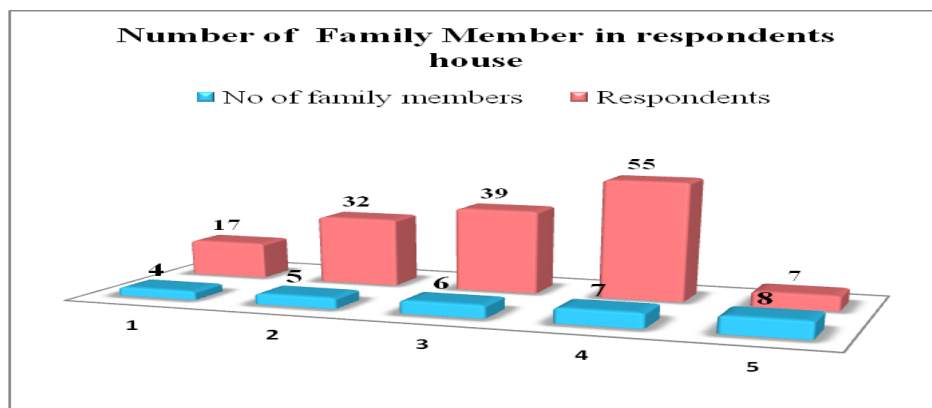


Figure. 4.17. Status of Bhikiyasen Block respondents regarding the number of family members.

4.3.8 Number of the migrant in Bhikiyasen Block of Almora district

According to Table 4.16, only 20 of the 150 respondents in the Bhikiyasen block of Almora district had no migrants throughout the study period. 68 (43% of total respondents) respondent's households had one member who migrated from Bhikiyasen block, 33% of respondent's families stated that only two family members migrated, and 8% of respondents' families stated that three members migrated from the Bhikiyasen Block area. 5% of respondents' families had four family members migrate. According to the statistics in table 4.16, the vast majority of migratory persons are members of 50 respondent families who took part in the survey.

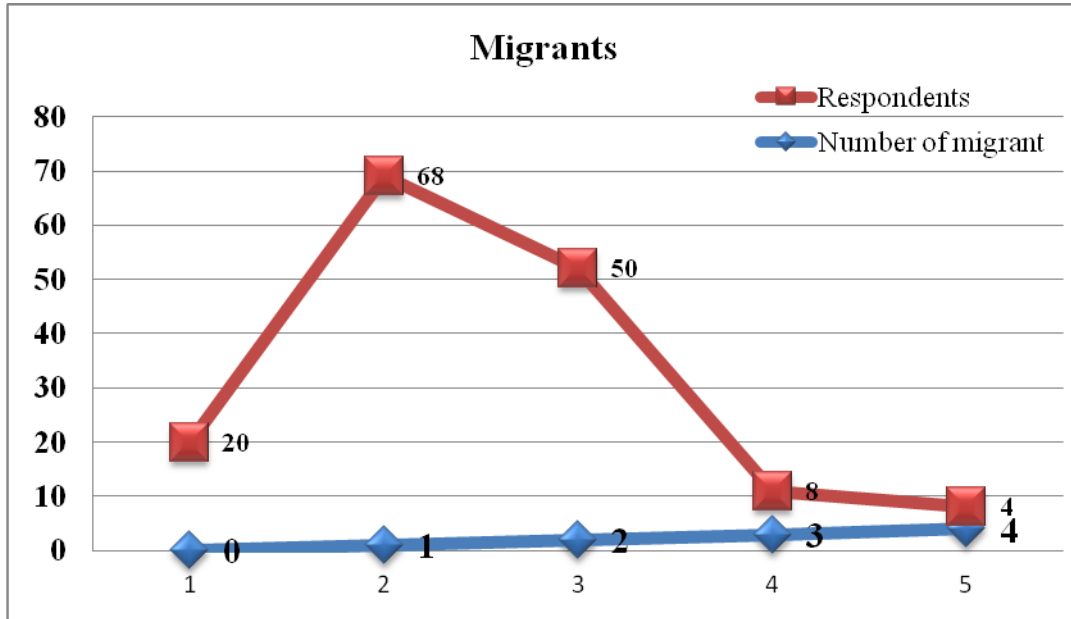


Figure 4.18. The respondents' household members migrant status in Bhikiyasen block of Almora district

Table 4.17. Percentage of Migrant Persons in Bhikiyasen Block of Almora District

Sr. No.	Number of migrant	Respondents (Household)	Total Migrant	Respondents Percentages	Migrant Percentages
1.	0	20	0	13%	0%
2.	1	68	68	45%	33%
3.	2	50	100	33%	48%
4.	3	8	24	5%	12%
5.	4	4	16	3%	8%
6.	Total	150	208	100%	100%

Source: Primary Survey

Table 4.18. Nature of Migrant in Bhikiyasain

Inter-region Migrant	Temporary	Permanent	Total
17	69	122	208
8%	33%	59%	100%

Source: Primary Survey

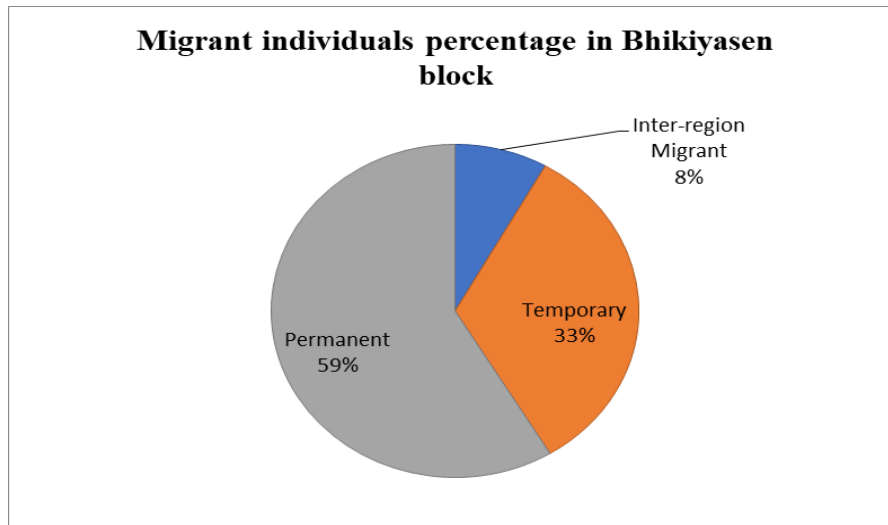


Figure 4.19. Migrant Individual Percentage in Bhikiyasen Block

CHAPTER- 05

SOCIO ECONOMIC PROFILE OF STUDY AREA

5.1. BEFORE MIGRANTION INCOME STATUS OF SELECTED BLOCKS OF ALMORA DISTRICT

To study the socio-economic profile of the area of investigation, we took income and employment as main indicators for socio-economic analysis.

The annual income profile status of the migrant household respondents is displayed in the given section. Table 5.1 indicates that 59 respondents earn less than Rs. 7,000 per year in the Salt Block area of Almora district. However, the number of migrant household respondents decreased to 31, who earned between Rs 40001-80000, followed by 34 respondents who earned between Rs 80001-120000. Seventeen migrant household respondents earned an amount of Rs 120001–160000 annually, and only nine migrant household respondents earned an amount above Rs 160000 annually before migrants.

In the Bhikiyasen block of Almora district, 53 of the people who answered earn less than Rs. 7000 per year. However, the number of foreign households that answered the survey went 34 respondents who made between Rs 40001- 80000, and then 36 migrants household respondents who made between Rs 80001- 120000. In all, 18 migrant households reported yearly incomes between Rs 120001 to 160000, while only nine reported annual incomes greater than Rs 160000.

Table 5.1- The income percentage values of the Salt and Bhikiyasen blocks of Almora district

Class interval/ before migration income status	Salt block Respondents	Salt block Percentages	Bhikiyasen block Respondents	Bhikiyasen block Percentages
below 40000	59	39%	53	35%
40001-80000	31	21%	34	23%
80001-120000	34	23%	36	24%
120001-160000	17	11%	18	12%
above 160000	9	6%	9	6%
Total	150	100%	150	100%

Source: Primary Survey

During the field study of selected Almora district block (Salt and Bhikiyasen), the distribution of migrant respondents' average annual income has been displayed in Figure 5.1 and Table 5.1. The annual family income of the migrant respondents was (73776± 3811) seen in Salt block while in Bhikiyasen block the average annual income of migrant family was seen (72189±3509) which is shown in table 5.2. When the data of annual income were compared of a migrant family, the two-tailed T-tests were not shown any significant difference ($t = 50.80, df = 5, \text{ at } P < 0.0001$).

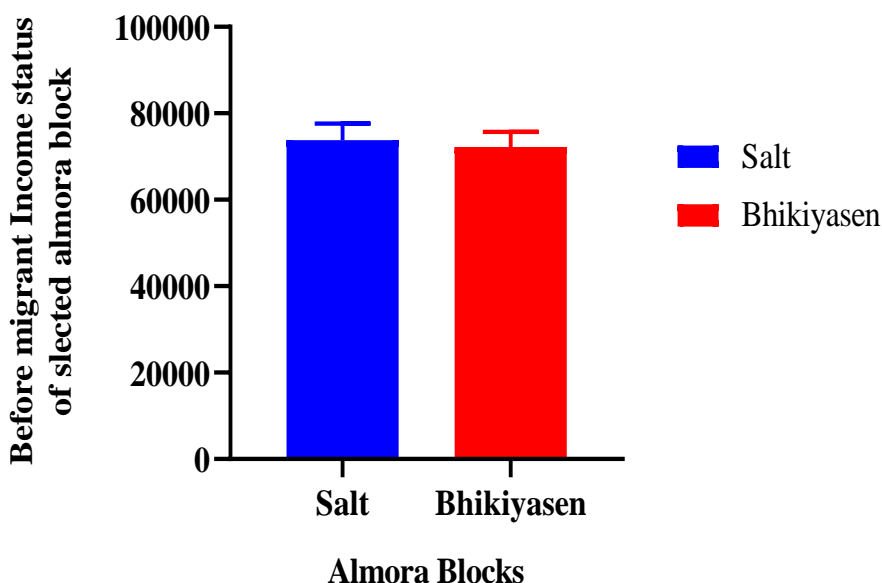


Figure 5.1. Average family annual income status of selecting blocks in Almora district

Table 5.2- The descriptive analysis of both Salt and Bhikiyasen blocks of Almora district

	Salt	Bhikiyasen
Number of values	150	150
Minimum	24000	24000
Maximum	198000	198000
Mean	73776	72189
Std. Error of Mean	3811	3509
Lower 95% CI	66245	65255
Upper 95% CI	81307	79123
Unpaired t-test		
P value	>0.7595	
P value summary	Ns	
Significantly different ($P < 0.05$)	No	
One- or two-tailed P value?	Two-tailed	
t, df	t=0.03064, df=298	

5.2. AFTER MIGRANTION INCOME STATUS OF SALT AND BHIKIYASEN BLOCK OF ALMORA DISTRICT

Per-annual income of the respondents' household after migration, 59% of respondents in the Salt block and 17% in the Bhikiyasen block earned less than Rs.7000 (Table 5.3). 17% of Salt block and 40% of Bhikiyasen block household respondents earned Rs 7001 to 14000. In Salt Block, 11% of the respondent households earned Rs 14001 to 21000, while in Bhikiyasen, only 15% of the migrant household respondents earned. After migration, in Salt and Bhikiyasen blocks of Almora district, the percentage is 11% and 25% of respondents, respectively, with an annual income of Rs 21001 to Rs 35000. Out of 35000, only 1% of migrant households responded, observed in Salt block, while in Bhikiyasen block, 4% of respondents come under this annual income of Rs.

Table 5.3- The income percentage values of the Salt and Bhikiyasen blocks of Almora district after migration

After migration, income/ year	Salt respondents	Percentages	Bhikiyasen respondents	Percentages
below 7000	89	59%	25	17%
7001-14000	26	17%	60	40%
14001-21000	17	11%	22	15%
21001-35000	17	11%	37	25%
above 35000	1	1%	6	4%
Total	150		150	

Source: Primary Survey

After migration, the mean annual family income of the migrant respondents was found to be (81394 ± 4120) in the Salt block, while in the Bhikiyasen block, the mean annual family income of the migrant respondents was found to be (96616 ± 3400) which is shown in table number 5.4. When the post-migration household annual income data of Salt block and Bhikiyasen block respondents were compared with two-tailed t-tests, it showed a significant difference (t = 2.849, df = 298 at p 0.0047).

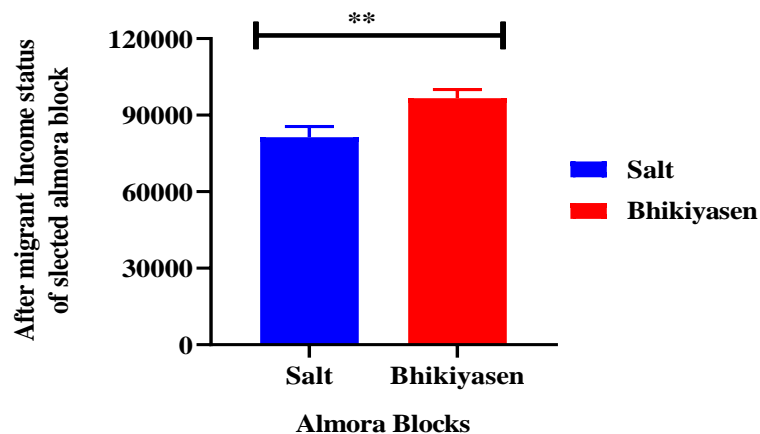


Figure 5.2- Average annual income status of respondents in Almora selected blocks, after migration

Table 5.4- Descriptive analysis of post-migration conditions, both Salt and Bhikiyasen blocks of Almora district

	Salt	Bhikiyasen
Number of values	150	150
Minimum	30000	31200
Maximum	215000	216000
Mean	81394	96616
Std. Error of Mean	4120	3400
Lower 95% CI	73252	89897
Upper 95% CI	89536	103335
Unpaired t test		
P value		0.0047
P value summary		**
Significantly different (P < 0.05)?		Yes
One- or two-tailed P value?		Two-tailed
t, df		t=2.849, df=298

Figure 5.2 represents the annual income of migrant households after migration. The annual income of beneficiaries has increased after migration. Migration provides an opportunity for the members to generate different self employments activities either selected in Government or Non- Governments private limited companies resalting rise in their income.

5.3. BEFORE THE MIGRANTION SAVING STATUS OF SELECTED BLOCKS OF ALMORA DISTRICT

Figure 5.3 and Table 5.5 show how much each migrant person saved on average each year during the field research in selected blocks (Salt and Bhikiyasen) of the Almora district. In Salt block, the average annual family savings of the respondents were found to be (81394 ± 4120), but in Bhikiyasen block, the average annual family savings of the respondents were found to be (96616 ± 3400) before migration. Under the comparison of Salt and Bhikiyasen block's two-tailed t tests before migration, the data showed a statistically significant difference (t = 2.849, df = 298 at P< 0.0047) in the household annual savings of the respondents.

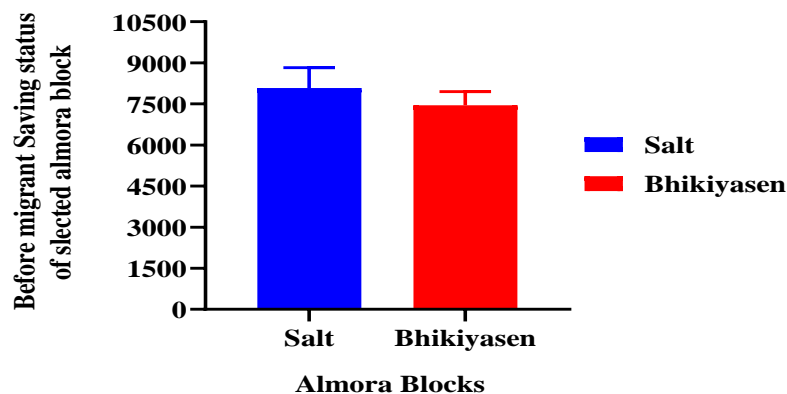


Figure 5.3. Before migration, average family annual saving status of Salt and Bhikiyasen blocks in Almora distict

Table 5.5- The descriptive analysis of both selecting blocks of Almora district

	Salt	Bhikiyasen
Number of values	150	150
Minimum	0	0
Maximum	36000	30000
Mean	8085	7448
Std. Error of Mean	738.6	498.2
Lower 95% CI	6625	6464
Upper 95% CI	9544	8432
Unpaired t test		
P value	0.4754	
P value summary	Ns	
Significantly different (P < 0.05)?	No	
One- or two-tailed P value?	Two-tailed	
t, df	t=0.7146, df=298	

5.4. AFTER THE MIGRANTION SAVING STATUS OF SELECTED BLOCKS OF ALMORA DISTRICT

Post-migration, the average amount that families saved each year in Salt Block was (16331 ±804.7); however, in Bhikiyasen Block, the average amount that families saved each year was (96616 ±794.1) shown in table 5.6. Using two-tailed t-tests to compare Salt and Bhikiyasen blocks post-migration, the data showed a statistically significant difference (t=2.410, df=298 at P ≤0.0166) in the amount of money saved by households each year. Figure 5.4 and Table 5.6 show the average amount of money each migrant saved every year after migration during a field study in selected blocks (Salt and Bhikiyasen) of the Almora district.

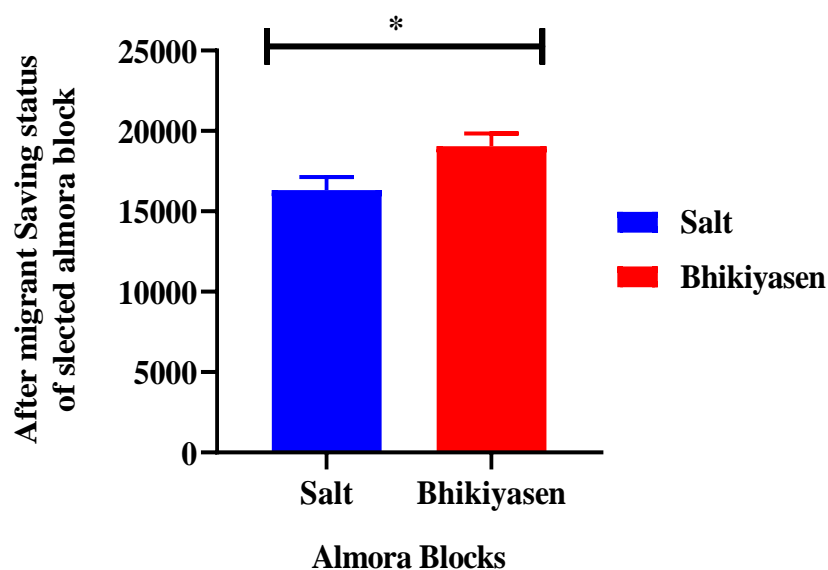


Figure 5.4. Average family annual saving status of Almora district (Salt and Bhikiyasen blocks) after migration

Table 5.6- Descriptive analysis of post-migration savings status in both Salt and Bhikiyasen blocks of Almora district

	Salt	Bhikiyasen
Number of values	150	150
Minimum	3500	2200
Maximum	40000	48000
Mean	16331	19055
Std. Error of Mean	804.7	794.1
Lower 95% CI	14741	17486
Upper 95% CI	17921	20624
Unpaired t test		
P value	0.0166	
P value summary	*	
Significantly different (P < 0.05)?	Yes	
One- or two-tailed P value?	Two-tailed	
t, df	t=2.410, df=298	

5.5. BEFORE THE MIGRANTION EXPENDITURE STATUS OF THE BLOCKS IN ALMORA DISTRICT (SALT AND BHIKIYASAIN)

The conducted field study within the Almora district, specifically in the selected blocks of Salt and Bhikiyasen, present the mean annual expenditure of individual migrants before their migration (Figure 5.5 and Table 5.7).

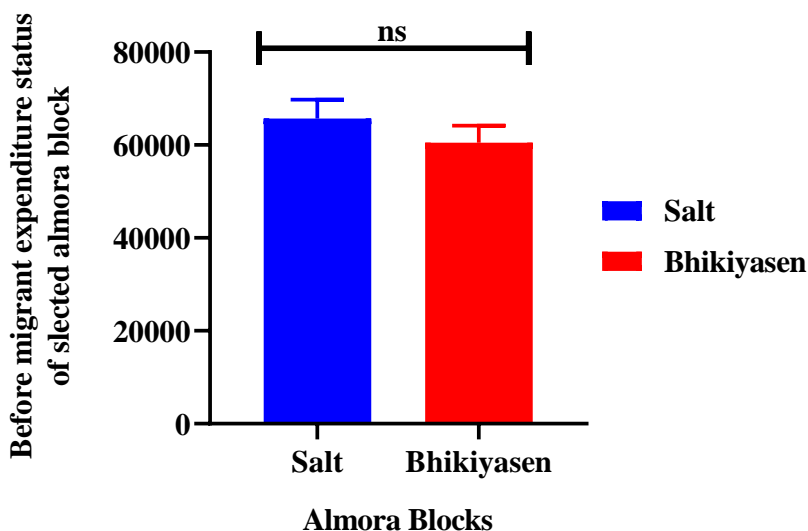


Figure 5.5- Per annual income status of respondents in both blocks, pre-migration

The annual family expenditure of the migrant respondents was (65691±4096) seen in the Salt block, while in the Bhikiyasen block, the average annual expenditure of migrant respondents family was seen (60513±3680). When the data of annual expenditure were compared of a migrant family, the two-tailed T-tests was not shown any significant difference (t = 9403, df = 298, at P<0.3478).

Table 5.7- Descriptive analysis of expenditure in pre-migration conditions in Salt and Bhikiyasen blocks

	Salt	Bhikiyasen
Number of values	150	150
Minimum	0	0
Maximum	198000	193000
Mean	65691	60513
Std. Error of Mean	4096	3680
Lower 95% CI	57597	53241
Upper 95% CI	73786	67786
Unpaired t test		
P value	0.3478	
P value summary	Ns	
Significantly different (P < 0.05)?	No	
One- or two-tailed P value?	Two-tailed	
t, df	t=0.9403, df=298	

5.6. AFTER MIGRANTION EXPENDITURE STATUS OF SLECTED BLOCKS OF ALMORA DISTRICT

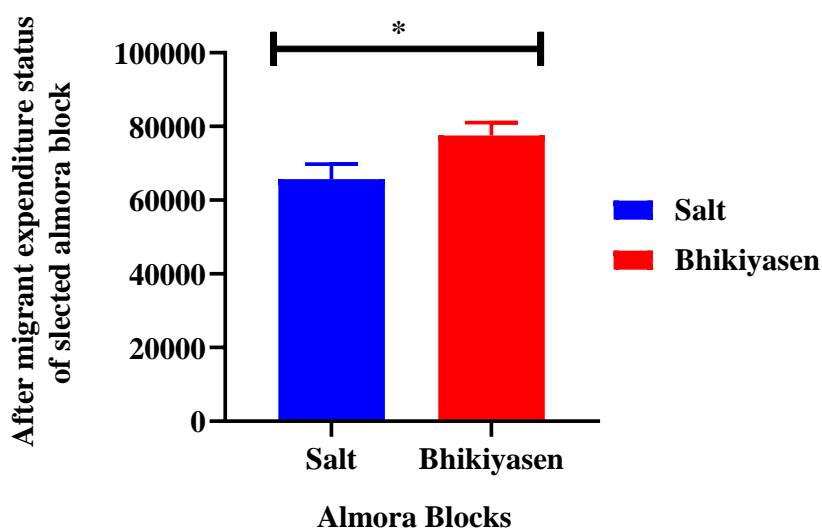


Figure 5.6- After migration, the expenditure status of respondents in both blocks

The average expenditure of respondents after migration has been showed in Figure 5.6 and Table 5.8. In post-migrations, it was observed that the households living in Salt Block spend an average amount of (65691±4096) annually. Conversely, families in Bhikiyasen block expenditure a significantly higher average amount (77561 ±3497) per year. The analysis employed two-tailed t-tests to compare the post-migration Salt and Bhikiyasen blocks. The result indicated a statistically significant disparity (t=2.204, df =298 at P ≤0.0283) in the annual expenditure of households.

Table 5.8- Descriptive analysis of expenditure status during post-migration conditions of both Salt and Bhikiyasen blocks in Almora district

	Salt	Bhikiyasen
Number of values	150	150
Minimum	0	0
Maximum	198000	200000
Mean	65691	77561
Std. Error of Mean	4096	3497
Lower 95% CI	57597	70651
Upper 95% CI	73786	84471
Unpaired t test		
P value	0.0283	
P value summary	*	
Significantly different (P < 0.05)?	Yes	
One- or two-tailed P value?	Two-tailed	
t, df	t=2.204, df=298	

5.7. EMPLOYMENT STATUS OF MIGRANT RESPONDENTS IN SELECTED BLOCKS OF ALMORA DISTRICT

The employment status and its analysis of migrant household respondents is shown in figure 5.7 and table 5.9 respectively. The employment status of some migrant household respondents was nil before or after migration, as was their livelihood status. The employment range of migrant household respondents is 0 to 20 in the Salt block, while 0 to 24 in the Bhikiyasen block. The average migrant household is (19.6 ± 0.245 per 30 individuals) in 5 groups (using the simple random sampling method) in the Salt block.

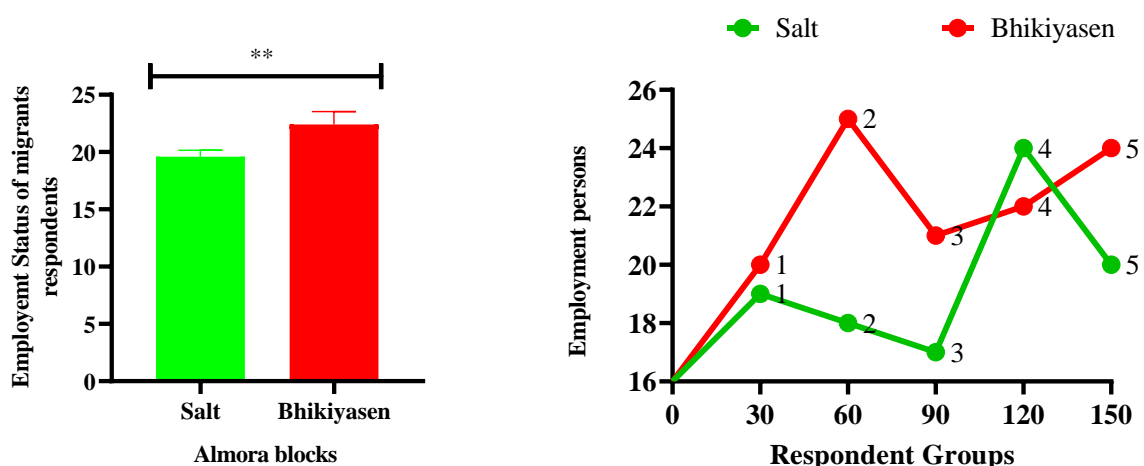


Figure 5.7. Comparisons of employment status of selected blocks

On the other hand, there is a significant difference between the employment data of migrant household respondents in Salt and Bhikiyasen blocks (Figure 5.7). The employment status of the migration collection data was analyzed using the unpaired "t"-test (two-tailed) (t = 4.950, df = 8). Thus, the result

shows that there is an increase in the employment status of migrant respondents in the Bhikiyasen block as compared to the Salt block.

Table 5.9. Analysis of respondent's responses in Salt and Bhikiyasen block for employment status

	Salt	Bhikiyasen
Number of values	5	5
Minimum	19	21
Maximum	20	24
Mean	19.6	22.4
Std. Error of Mean	0.2449	0.5099
Lower 95% CI	18.92	20.98
Upper 95% CI	20.28	23.82
Unpaired t test		
P value		0.0011
P value summary		**
Significantly different (P < 0.05)?		Yes
One- or two-tailed P value?		Two-tailed
t, df		t=4.950, df=8

5.8. GOVERNMENT AND NON-GOVERNMENT STATUS OF SALT BLOCK

Figure 5.8 and table 5.10 shows the migrant families members working in government and non-government sectors. Some migrant families did not have any means of employment of any kind. In Salt Block, the majority of migrant household respondents (4 to 7) were employed with the government community, while 12 to 17 migrant household respondents were in non-government employment. Salt Block has migrant households (5.4 ± 0.51) per 30 people in 5 government-employed categories. However, non-government-employed households are 14.2 ± 0.97.

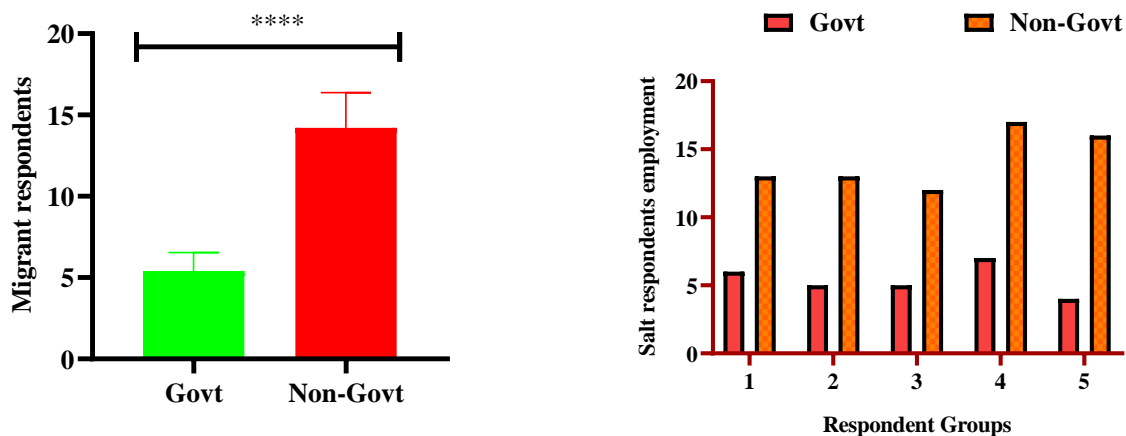


Figure 5.8 A comparison of job status (governments and non-government) of Salt blocks in Almora

Table 5.10 Employment status of migrant respondents in sult block (governments and non-government)

	Govt.	Non-Govt.
Number of values	5	5
Minimum	4	12
Maximum	7	17
Mean	5.4	14.2
Std. Error of Mean	0.5099	0.9695
Lower 95% CI	3.984	11.51
Upper 95% CI	6.816	16.89
Unpaired t test		
P value		<0.0001
P value summary		****
Significantly different (P < 0.05)?		Yes
One- or two-tailed P value?		Two-tailed
t, df		t=8.033, df=8

Compared to migrant collecting data for job status (government and non-government employment) was assessed using the unpaired "t"-test (two-tailed) ($t = 4.950$, $df = 8$), it shows a high degree of difference between government and non-government employment. The number of non-government employees is higher than that of government employees.

5.9. GOVERNMENT AND NON-GOVERNMENT STATUS OF BHIKIYASEN BLOCK IN ALMORA DISTRICT

In Bhikiyasen, the migrants families members working in government and non-government sectors analyses are shown in Figure 5.9 and Table 5.11. Some immigrant families lacked any work opportunities. In the Bhikiyasen block, the range (6 to 9) migrant household respondents worked for the government, whereas 14 to 18 migrant household respondents were non-government employees. Bhikiyasen block has (7 ± 0.55) migrant households per 30 people in 5 categories, are government employees; however, non-government employees are 15.2 ± 0.73 . The unpaired "t"-test (two-tailed) ($t = 8.947$, $df = 8$), when used to compare migrant data for employment status (government and non-government employment), revealed a significant difference between the two. More people work for non-government organizations than for the government.

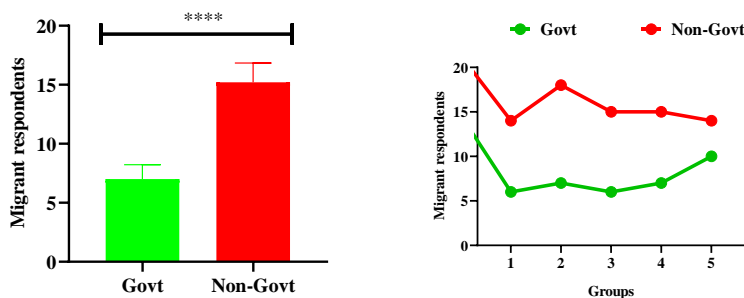


Figure 5.9. A comparison of the job status (governments and non-government) of a Bhikiyasen blocks in Almora

Table 5.11 Employment status of migrant respondents in Bhikiyasen block (governments and non-government)

	Govt	Non-Govt
Number of values	5	5
Minimum	6	14
Maximum	9	18
Mean	7	15.2
Std. Error of Mean	0.5477	0.7348
Lower 95% CI	5.479	13.16
Upper 95% CI	8.521	17.24
Unpaired t test		
P value	<0.0001	
P value summary	****	
Significantly different (P < 0.05)?	Yes	
One- or two-tailed P value?	Two-tailed	
t, df	t=8.947, df=8	

5.10 HYPOTHESIS (INCOME AND SAVING CHI FISHER EXACT TEST)

H 2.1: There is no significant difference between annual income and saving before and after migration of salt respondents.

Out of 150 Salt block respondents, the annual average income of the respondents before migration was 73776 Rs, and the average annual savings was 8085 Rs. Whereas, when migrant household respondent post migration conditions, their average income was 81394 Rs and their average annual savings was Rs. 16331 Statistical analysis of total migrant household respondents data was performed using the chi-square test (Fisher's exact test).

This shows a significant disparity before migration and post-migration annual income and savings at P<0.0001. The hypothesis is based on the significant differences "there is no significant differences between annual income and savings; before and after migration" is rejected.

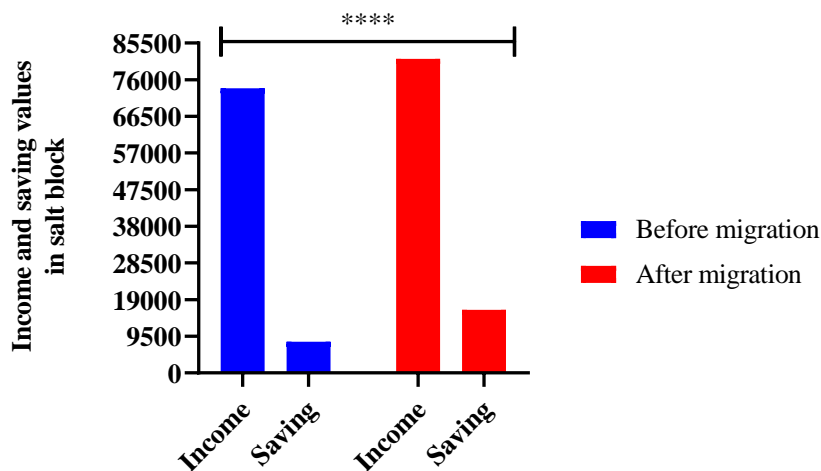


Figure 5.10 Shows chi square differentiation between income and saving status of Salt block

Table.5.12 Statement of statistical difference of data on income and savings levels of respondents belonging to migration

Test	Fisher's exact test
P value	<0.0001
P value summary	****
One- or two-sided	Two-sided
Statistically significant (P < 0.05)?	Yes

Table 5.13. Status of income and saving amount of respondents before and after migration

Data analyzed	Before migration	After migration	Total
Income	73776	81394	155170
Saving	8085	16331	24416
Total	81861	97725	179586

Source: Primary Survey

Hence its alternative hypothesis becomes "There is a significant difference between annual income and saving before migration and after migration of salt respondents."

Table 5.14 Profile of percentage of income and savings of respondents before and after migration

Percentage of income/saving	Before migration(%)	After migration(%)
Income	47.55%	52.45%
Saving	33.11%	66.89%

Source: Primary Survey

H 2.2: There is no significant difference between annual income and saving before migration and after migration of Bhikiyasen respondents.

Before moving, the average yearly income of the 150 Bhikiyasen block respondents was 72189 Rs, and the average annual savings were 7448 Rs. When migrant households were asked about their lives after moving, their average income was 96616 Rs and the average amount they saved each year was 19055 Rs. The chi-square test (Fisher's exact test) was used to analyze the data from all migrant households that answered the survey.

This shows a vast difference between the yearly income and savings before and after moving, which is P0.0001. Therefore, the theory that "there is no significant difference between annual income and savings before and after migration of Bhikiyasen block" is not valid.

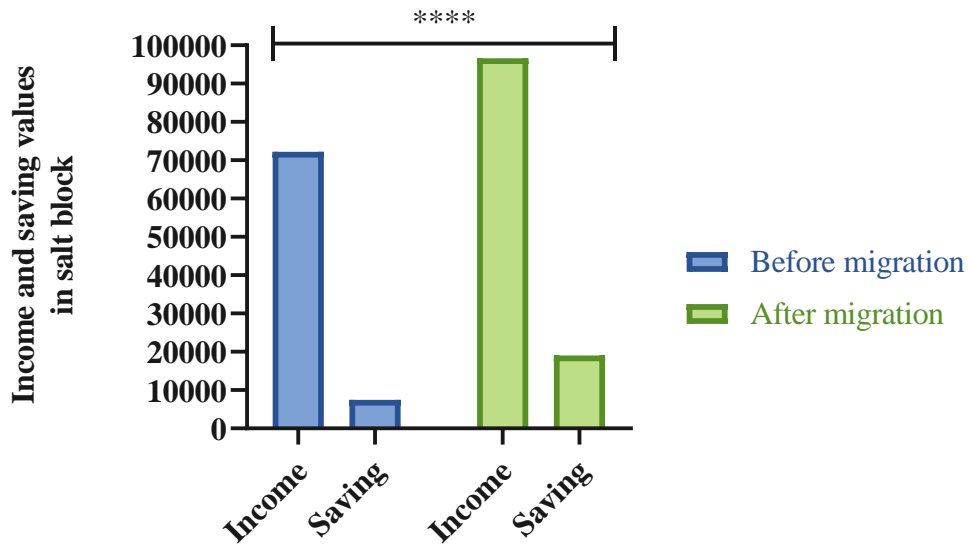


Figure 5.11. Shows chi square differentiation between income and saving status of Bhikiyasen block

Table. 5.15 Statement of the statistical differences in data on respondents' income and savings levels who belonged to before and after migration

Test	Fisher's exact test
P value	<0.0001
P value summary	****
One- or two-sided	Two-sided
Statistically significant (P < 0.05)?	Yes

Table. 5.16 Comparing respondents' pre- and post-migration financial situations with regards to income and savings

Data analyzed	Before migration	After migration	Total
Income	72189	96616	168805
Saving	7448	19055	26503
Total	79637	115671	195308

Source: Primary Survey

So, its alternative hypothesis is "There is a big difference between Bhikiyasen respondents' annual income and savings before and after they migrated."

Table. 5.17 Comparison profile of percentage of pre-migration income and savings to post-migration income and savings

Percentage of income/saving	Before migration(%)	After migration(%)
Income	42.76%	57.24%
Saving	28.10%	71.90%

Source: Primary Survey

CHAPTER- 06**CHANGES IN SOCIO ECONOMIC PATTERN OF MIGRATION IN LIVELIHOOD****6.1. CHANGES IN LAND USE PATTERN IN THE STUDY AREA TO UNDERSTAND MIGRATION**

The human population is responsible for the land use change on the Earth's surface. In the initial period of civilization, forest land was converted into agricultural land then agricultural land was converted into built-up land. It is a continuous process. First, we must understand the land use. There is one more term called 'land cover'. Land use and land cover refer to the physical and functional characteristics of the Earth's surface within a particular region. Their concepts are interrelated, but still, there is a difference between them.

Land Use: Land use describes how humans utilize the land for various activities, such as residential, agricultural, industrial, commercial, recreational, or conservation purposes. It focuses on human activities and the purpose for which land is used.

Land Cover: Land cover, on the other hand, refers to the physical or biological coverage of the Earth's surface, including natural and human-made features. It refers to the vegetation, water bodies, bare soil, impervious surfaces (such as roads and buildings), forests, wetlands, croplands, and other land features in an area.

Land use and land cover are often analyzed to understand the patterns and changes in the landscape. These concepts are essential for land management, urban planning, environmental assessment, and conservation efforts. By studying land use and land cover, researchers and policymakers can gain insights into the impacts of human activities on the environment and make informed decisions about resource management and sustainability.

If we talk about land use in Almora, it is rapidly changing. People are migrating from villages, so agricultural land use is also changing. In 2018-2019, the area of agricultural wasteland was 41552 hectares and 42819 hectares in 2020-2021. Land use change analyses play a crucial role in tracing out-migration patterns and understanding the factors that drive population movements. Land use change analyses provide valuable insights into migration dynamics by revealing the underlying environmental, social, and economic factors. Understanding these patterns is essential for developing effective policies and interventions to manage Migration, address its impacts, and promote sustainable development.

Land use and land cover help us understand the economic growth condition in any area. These are closely interrelated. For example, if agricultural land is converted into built-up land, we can observe that the primary sector of the economy is going towards secondary or tertiary. These small but essential changes help to understand the complete picture of the area of investigation.

Table 6.1: Area of agricultural Wasteland of Almora District

Year	Agricultural Wasteland (in hec)
2018-2019	41552
2019-2020	41594
2020-2021	42819

Source: Statistical Hand Book, Almora

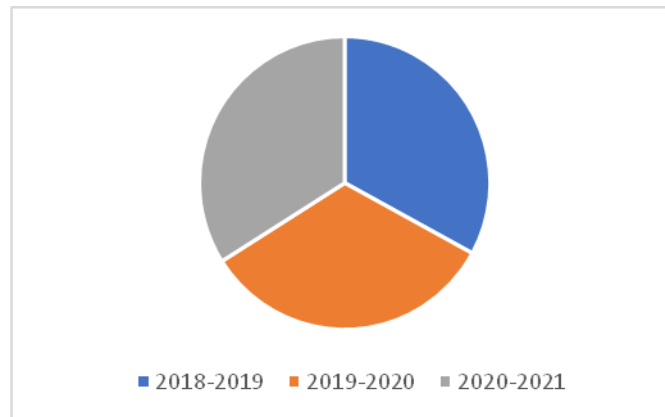


Figure 6.1: Area of Agricultural Wasteland (in hec) of District Almora

Table 6.2: Area of agricultural Waste land in Salt Block

Block	Year	Agricultural Wasteland (in hec)
Salt	2018-2019	11240
	2019-2020	11251
	2020-2021	11581

Source: Statistical Hand Book, Almora

If we analyze table number 6.2, which represents the area of agricultural wasteland in Salt block, is increasing yearly. The same thing is happening for the Bhikiyasen block in Table number 3. In the year 2018-2019, the area of 11240 hectares for Salt; this has been increased in 2020-2021.

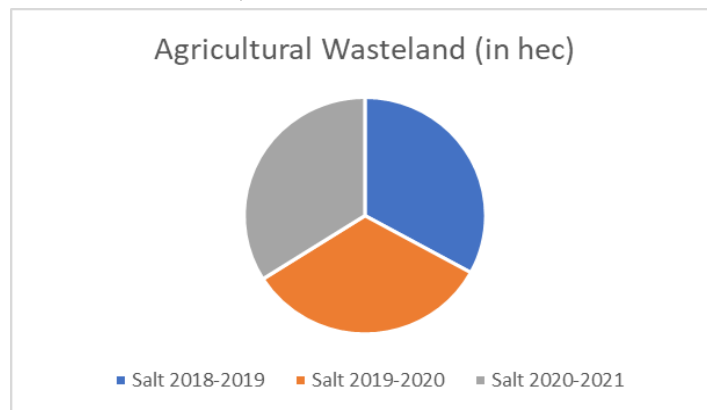


Figure 6.2: Agricultural Wasteland (in hec)

Table 6.3: Area of agricultural Wasteland in Bhikiyasen Block

Block	Year	Agricultural Wasteland (in hec)
Bhikiyasen	2018-2019	9426
	2019-2020	9436
	2020-2021	9712

Source: Statistical Hand Book, Almora

Table number 6.3 is clearly showing the increased area for the Bhikiyasen block in 2019-2020 & 2020-2021, respectively. If we analyze table number 6.1, the Agricultural wasteland area is increasing district as a whole.

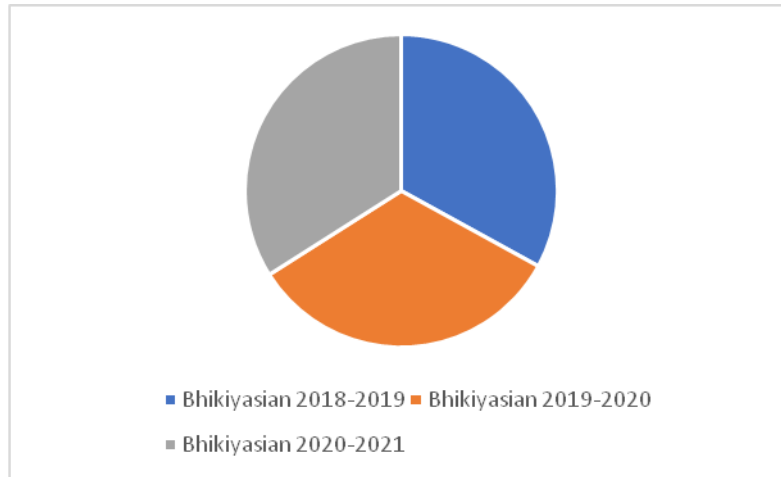


Figure 6.3: Agricultural Wasteland (in hec)

So, we can say firmly say that both the blocks have migration and people are changing their traditional occupation, i.e., agriculture. Researchers found in the study area that huge agricultural land was left barren during the fieldwork.

6.2. AGRICULTURAL PRODUCTION & MIGRATION

The Himalayas present challenging conditions for agriculture and resource utilization due to their rising heights, steep slopes, and harsh climate. These factors impose severe restrictions on the region's productivity and carrying capacity of natural resources. As a result, most of the population in the Himalayas relies on subsistence farming as the primary source of food and livelihood.

One of the primary challenges farmers face in the Himalayas is the limited availability of arable land. The steep slopes and rugged terrain make it difficult to find suitable areas for cultivation. Farmers often have to terrace the land and construct terraced fields to create flat surfaces for farming. However, even with these efforts, the amount of cultivable land remains limited, leading to small landholdings for most farmers. Low agricultural productivity can have a momentous impact on migration patterns. Here are several ways in which low agricultural productivity can affect Migration:

Economic Factors: Agriculture is often a primary source of income and livelihood for rural communities. When agricultural productivity is low, it can result in decreased incomes and limited job opportunities in the farming sector. As a result, people may be compelled to seek better economic prospects elsewhere, leading to rural-to-urban Migration or even international Migration.

Poverty and Food Insecurity: Low agricultural productivity can contribute to poverty and food insecurity in rural areas. Insufficient crop yields or failed harvests can lead to inadequate food supplies and increased vulnerability to hunger and malnutrition. In such situations, people may migrate for better access to food and economic opportunities.

Rural-Urban Migration: Low agricultural productivity can drive Migration from rural to urban areas. Urban centres often offer a more comprehensive range of employment opportunities in non-agricultural sectors, such as manufacturing, services, and construction. Individuals and families may move to cities for better-paying jobs and improved living conditions.

Land Degradation and Climate Change: Agricultural productivity can be vulnerable to land degradation, desertification. The adverse impacts of climate change, such as droughts, floods, and unpredictable weather patterns. These environmental factors can make farming less viable and push people to abandon their lands. Consequently, they may choose to migrate to areas less affected by such issues or to urban centers where alternative livelihood options are available.

Social Disruption: Low agricultural productivity can create social disturbance within rural communities. As people face challenges sustaining their livelihoods, social unity and traditional community structures may weaken. Sometimes, this can lead to conflicts over limited resources, land disputes, or social unrest, prompting individuals to migrate to escape such conditions.

It is important to note that low agricultural productivity is rarely the sole factor driving Migration. Migration decisions are influenced by economic, social, political, and environmental factors. However, the impact of low agricultural productivity on Migration should not be overlooked, as it can play a significant role in shaping migration patterns, particularly in rural areas heavily dependent on agriculture.

Table 6.4: Percentage of Different Reasons behind Migration in Almora District

Reason	Percentage
Employment	47.78
Medical Facilities	8.61
Education	11.75
Infrastructure	3.81
Poor Agriculture Produce	8.37
Followed by the family that Migrated	2.68
Destruction of Agricultural by Wild Animals	10.99
Others	6.02

Source: Rural Development and Migration commission, Uttarakhand, Pauri Garhwal

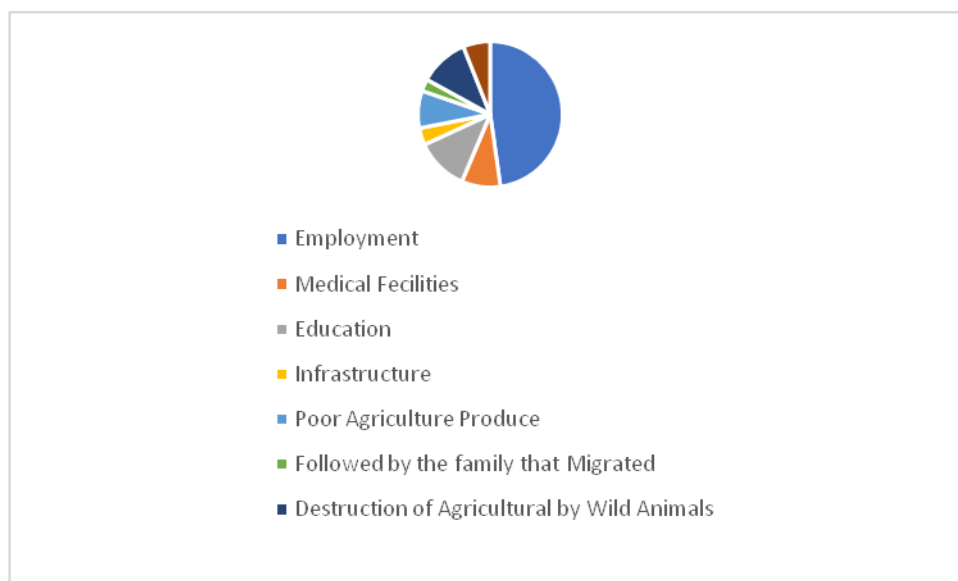


Figure 6.4: Percentage of Different Reasons behind Migration in Almora District

Table 6.4 shows the percentage of different migration reasons in the Almora district. If we study this table thoroughly, we can find that issues related to agricultural production are essential. A total of 19.26 % reasons are related to poor agricultural produce and the destruction of agriculture by wild animals. If we segregate this value, it is 8.37 & 10.99, respectively.

So, we can say there are many reasons to migrate, but reasons related to agricultural production are essential to reason in one of them because it is directly related to food security which is very important in a democratic society. Overall, while subsistence farming remains the mainstay of the Himalayan population, the limited arable land, low agricultural productivity, and dependence on other natural resources highlight the need for sustainable development strategies that can enhance livelihood opportunities and ensure food security in the region to check out Migration in the study area.

6.3. AGRICULTURAL PRODUCTION AND MIGRATION IN THE STUDY AREA

Two forms of agriculture can be seen in the Himalayan region. The first is irrigated, and the second is rainfed. Irrigated land is significantly less in amount, whereas a large amount of land is cultivated as rainfed agriculture. In mountainous regions, where agriculture depends on rainfall, the higher elevated areas are referred to as the "Uparanv" or "upland". The land where irrigation is practised is known as "Talaav" or "reservoir".

Table 6.5: Amount of Land under Different Food Grains According to Irrigated and Rainfed land in Bhikiyasain Block

Food Grains	Irrigated Land (Talav)	Rainfed Land (Upranv)
Wheat	382	2821
Paddy	384	1243
Mandwa (Ragi)	4	3235
Lentils		207

Source: Statistical Handbook Book (2020)

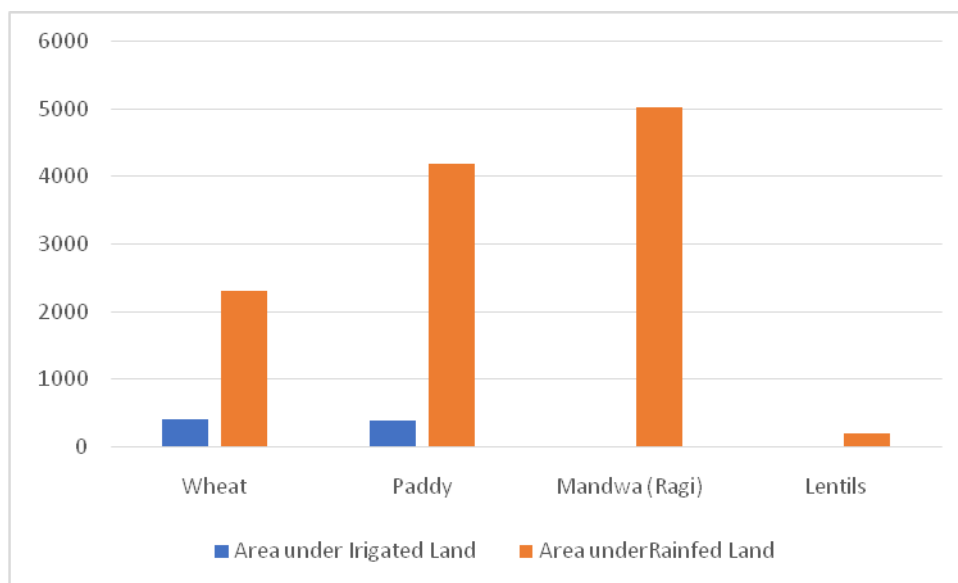


Figure 6.5: Amount of Land under Different Food Grains According to Irrigated and Rainfed land in Bhikiyasain Block

Table 6.6: Amount of Land under Different Food Grains According to Irrigated and Rainfed land in Salt Block

Food Grains	Irrigated Land (Talaav)	Rainfed Land (Uparanv)
Wheat	399	2304
Paddy	389	4190
Mandwa (Ragi)	07	5020
Lentils		197

Source: Statistical Handbook Book (2020)

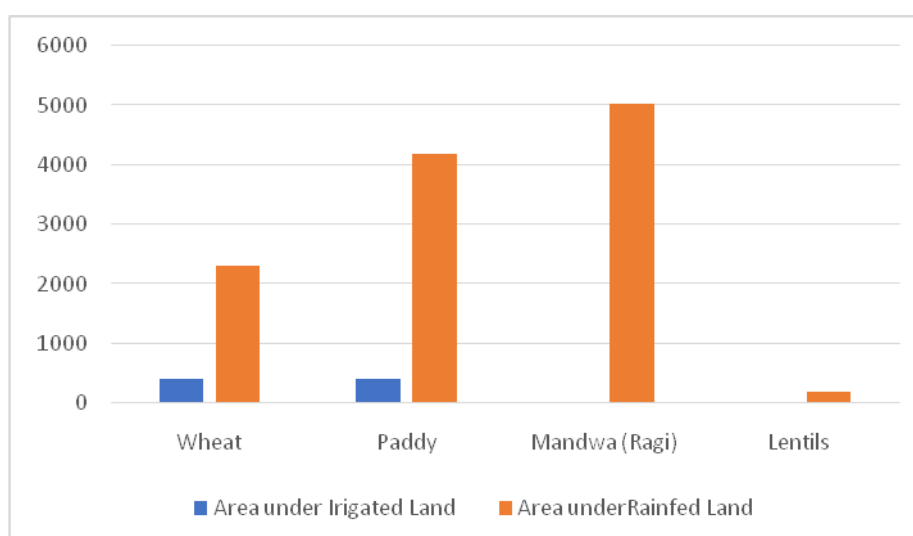


Figure 6.6: Amount of Land under Different Food Grains According to Irrigated and Rainfed Land in Salt Block

Table number 6.6 shows the total amount of land under rainfed and irrigated categories. Irrigated land is less in amount as compared to the category under rainfed. During the survey, the researcher found that production is also less in rainfed agriculture. People are leaving agriculture due to low productivity. The planning commission of Uttarakhand state also identifies this fact. According to the report of the migration commission, 8.37 % of people admit that low productivity is one primary reason in the whole state for Migration.

In mountainous regions, agriculture is indeed the primary source of livelihood. The possibility of commerce and trade is limited because agriculture in these areas primarily depends on weather conditions. However, in irrigated land, production is comparatively higher, allowing farmers to generate more income. Agricultural production is deficient in rainfed or non-irrigated land, and people rely solely on farming for their subsistence. In the present times, due to rapid population growth, agriculture is struggling to meet the needs of the people.

Table 6.7: Production of different Food Grains in Almora District in Quintal/Hectare

Year	Wheat	Paddy	Lentils	Mandwa (Ragi)
2014-15	12.94	11.89	7.56	11.67
2015-16	11.47	11.70	7.12	12.68
2016-17	4.93	10.90	8.44	11.97

Source: Statistical Handbook Book (2020)

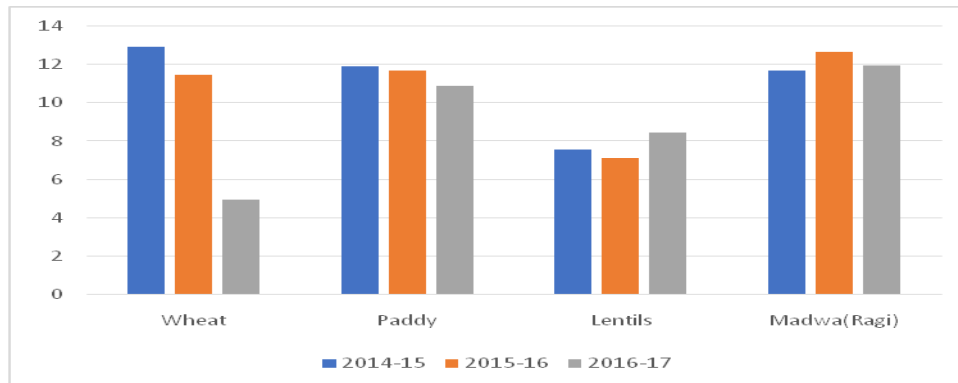


Figure 6.7: Production of different Food Grains in Almora District in Quintal/Hectare

According to table number 6.7 from 2014-2017, usually, a Decreasement is observed in agricultural production. It is subsistence agriculture from the past, but now this is impacted by climate change. Climate change has become one of the significant hurdles for decreasing crop production and productivity in the Himalayan region. Increasing temperatures, decreasing rainfall, and extreme weather conditions have been observed in the Himalayas. Agriculture is also destroyed by wild animals like monkeys and wild bears, forcing people to migrate.

A primary survey has been conducted by the researcher in both blocks with their inhabitants about agricultural productivity. A questionnaire was formed for the survey based on present and past agricultural productivity. It was done with 300 households in the area of investigation.

Table 6.8: Comparison of Production of Different Food Grains in 30 years' time span

SN	Food Grains	Average production Before 30 years in kg/Nali*	Average Production in Present in kg/Nali*
1	Wheat	40	2
2	Paddy	35	2
3	Mandwa(Ragi)	50	5
4	Lentils	10	1

Source: Primary Survey

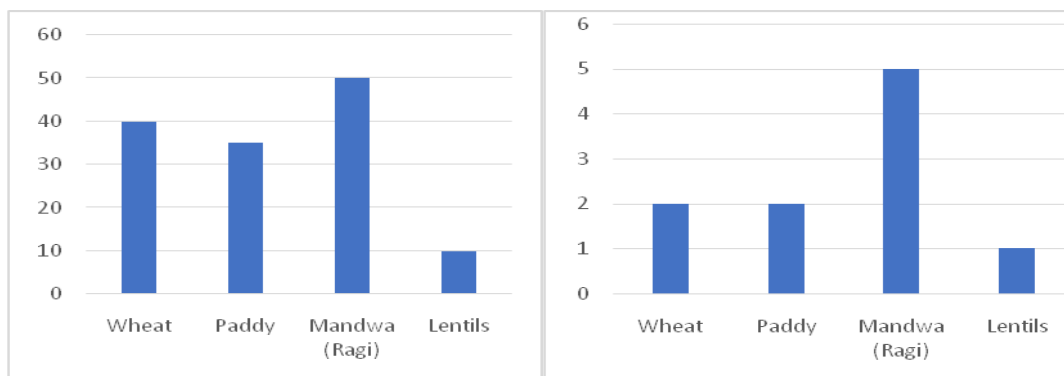


Figure 6.8: Comparison of Production of Different Food Grains in 30 years' Time Span

According to the table number 6.8, the production of different food grains is decreasing. Thirty years ago, people used to grow 40 kg wheat/Nali, which is now 2 kg/Nali only. This pattern is typical in the entire study area. Respondents told many reasons behind it, which are the following:

1. Destruction of crops by wild animals such as wild boars and monkeys.
2. Erratic rainfall.
3. Extreme weather events, i.e., Landslides and Cloud bursts.
4. Water resources are drying.
5. Unemployment
6. Gloomy Visions of State
7. Attraction towards urban centres.
- 8.



Plate2: A Dried Traditional Water Source' Naula and Agricultural Waste Land

Both pictures represent an example of Migration and its causes in the area of investigation. Drying up water sources and abundant land are fundamental indicators of Migration.

Climatic change has transformed many circumstances in the study area. Irregular rainfall patterns and extreme weather events are widespread in thrust areas.

1'Nali' is a local unit for land measurement & 1 Nali is equivalent to 2160 sq. Feet.

Therefore, low agricultural Production and Migration are closely related. Land use pattern is also being changed by Migration in the study area. Agricultural land is converted into wasteland or barren land.

Out-migration and land abandonment are the significant costs of declining agricultural production. Food security is another aspect Infront of them. Low productivity in agriculture creates the problem of food security in the Himalayas. So, people are migrating from their villages to big cities.



Plate 3: Researcher is observing the wasteland in the study area

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CHAPTER 7

PROBLEMS OF RESPONDENTS

Migration from rural areas is a significant issue in Almora. According to census 2001 and 2011, the population growth rate in the hill district is slowing. In addition, the population growth rate in the Almora district has decreased significantly between the censuses of 2001 and 2011. Moreover, this population rate reflects the migration occurring in the state's hilly parts. Moreover, this gesture of hilly terrain reveals the state's colossal migration problem. According to a report by the Rural Development and Migration Commission, the main reason for migration in the state is a lack of jobs, health care and education.

The government implemented numerous programmes to reduce migration from time to time, but the conditions of migration remained unchanged. Because of the state's lack of employment, persons in the youth group generally migrate from the village in search of work, leaving their family or family in the village. However, due to the covid epidemic in 2019, most migrants returned to their communities and family in the state, and some people believe they will not return now. However, due to a lack of jobs, most of the population was forced to return to the cities.

According to the Migration Commission's study, 1700 villages in the state have become haunted, and 3900 villages have migrated. Since the state's inception, over 49809 MSME industries have been founded. A total of 12,778 crores have been invested. Around 2.82 lakh people have found work as a result of this. Prior to the foundation of the state, approximately 14163 small enterprises were built in the state, with 700 crores spent, and 46 large industries were developed, but are now located in Dehradun, Haridwar, and Udham Singh Nagar district. Three hundred twenty-seven industries have been formed. Economic development is required for the state, which is unachievable without industrial development. Many in the villages would benefit financially from establishing small industries in the state's rural areas, but many are migrating from the mountainous areas to the state's larger district, such as Dehradun, Haridwar, and Udham Singh Nagar. Because industries have been built in certain state district, individuals from rural areas have migrated from the villages in search of work in these industries.

According to the study mentioned above, 48.9 percent of those who have moved have completed high school and higher secondary school, while 37.4 percent have graduated. This supports the notion that migration is one of the probable outcomes of a lack of employment opportunities in the organised sector. As a result, determining approaches to develop the organised sector in the state becomes intrinsic for us. Villagers' voices in Gram Panchayats have been reduced due to the massive migration of educated youth. Many of these Gram Panchayats cannot put their demands for development works and other services ahead of government activities. Politicians and development agencies rarely pay attention to their concerns. The positive evolution of such migration is related to the growing role of SCs in the political economy of Hill district, as well as their increasing population percentage (19.8 percent in 2001 to 20.9 percent in 2011). Because of the political ascendancy of these groups, forms of untouchability are no longer as severe as they were a few decades ago. With the increased penetration of market pressures and out-migration, village social institutions have deteriorated. In these villages, a new class of political leaders, contractors, and government employees is increasingly defining the new "class" boundaries. Most of them have settled their families in relatively better areas of the state, such as Dehradun, Rishikesh, Haridwar, Haldwani, and Kashipur in the plains. They do, however, dominate decision-making in the village.

Due to a dearth of employment alternatives outside of agriculture and accompanying vocational advice and training, youth power in the Hill Region is becoming increasingly idle and inactive. They are not interested in doing laborious agricultural work on their farms. Nepalese are cultivating fields in some areas for vegetable cultivation to supply the local market. Notably, these Nepalese labourers pay the villagers a small amount as rent. Local youth spend the entire day playing cards as a form of entertainment. Added to this is an increase in alcoholism and an apathetic attitude towards life and society. People have a massive fascination with salaried work, regardless of quality or duration, since they want to avoid harsh life. This is because launching self-employment businesses outside of agriculture has a significant level of risk and unpredictability.

7.1. IMPACT OF MIGRATION ON WOMEN'S WORK

The economy of the Kumaun region pivots around mainly to the agriculture sector. Animal husbandry is the second most important source of income for rural women. The main feature of animal husbandry in the Kumaun region is a large livestock population. The women respondent members could opt for agriculture activities easily because of the mastered skills and familiarity of women with agricultural

activities. Poultry farming can help alleviate poverty for women beneficiaries in the Kumaun region by providing money. Therefore, poultry farming is the most important predictor for lowering poverty. The potential for organic farming in the Kumaun region has increased consumer demand for organic goods. The Kumaun region's diverse agro-climate variation offers a high value in the market for the demand for in-season fruits and vegetables. The agricultural industry is viewed as a distinct source of income.

Remittances have no impact on reducing the workload of hill women. Every non-disabled woman works for an average of eight to ten hours per day in various productive activities like cultivation, fodder collecting, fuel collection, animal husbandry, cooking, and caring for children and the elderly in their houses. A hill lady spends 4 to 5 hours daily doing farm tasks, including animal tendering, fuel wood collection, and fodder collection. The next significant activity is food preparation and cleaning of the home and utensils, which takes another 2-3 hours daily.

In many situations, migration has overwhelmed women by requiring them to resume tasks previously performed by their spouses, such as agricultural and MNREGA employment. Women account for more than half of MNREGA work, and the strain of cooking and other domestic duties is lessened for women in joint families where relatively older women handle cooking and animal tendering. In contrast, their male counterparts work roughly four hours daily during the agricultural season, primarily ploughing, levelling, and repairing their fields and occasionally collecting fuel wood. Gender inequalities in workload are so pronounced that even a school-aged girl kid must share farm, animal husbandry, fuel and fodder-collecting activities with her mother more frequently than her brother. At home, girl children rarely have time to devote to their education.

In Uttarakhand, the network of cooperatives, commercial banks, regional rural banks, NABARD, NGOs, and HILANS is essential. Providing tools-savings, insurance, and emergency loans to lessen the vulnerability of people experiencing poverty and improve their risk management methods appears to be where microfinance is most effective. The government of Uttarakhand can perform more rather by NGOs and MFIs in reducing poverty by providing the rural areas with good infrastructure so that the rural women have substitute sources of financing without depending on only one moneylender that charges a higher interest rate. In Uttarakhand, various international project initiatives have dramatically increased during the past 15 years. HILANS is currently the most significant marketing platform in Uttarakhand. Members' economic endeavours for which they have taken out loans. Animal husbandry and poultry rearing are both included. However, this poll shows that traditional methods of animal husbandry and the marketing of dairy products have not significantly changed.

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CHAPTER 8

CONCLUSION AND SUGGESTIONS

Uttarakhand was established on 9th of November 2000 as it was declared the 27th State of India when it was separated of northern Uttar Pradesh. The state's geographical area is 53483 square km, with hilly topography covered under snow and steep slopes. Uttarakhand has a population of 10,086,292, making it India's 20th most populous state. The density of the state is 189 per sq km; out of the total population, 69.77% lives in rural areas and 30.23% lives in urban areas. The sex Ratio is 963, i.e. for every 1000 males, which is below the national average of 940 as per the latest census. In 2001, the sex ratio of females was 962 per 1000 males.

Uttarakhand is known for its natural environment, the Bhabar and the Terai regions. Uttarakhand has two divisions, Garhwal and Kumaon, with 13 district. Kumaun division comprises six district Almora, Nainital, Pithoragarh, Champawat, Bageshwar and Udham Singh Nagar, whereas Uttarkashi, Chamoli, Tehri, Pauri, Dehradun, Haridwar and Rudraprayag district lie in Garhwal division. The majority of the population in Uttarakhand, i.e. 55%, are engaged in agricultural practices and provide livelihood security to the state.

In India, agriculture is one of the most significant sectors of the economy of Uttarakhand. Important crops and fruits of agriculture sectors are wheat, rice, soybeans, groundnuts, coarse cereals, pulses, and oil seeds. Fruits are apples, oranges, pears, peaches, litchis, and plums which are widely grown and essential for the food processing industry. Uttarakhand is also a Agricultural export zones for fruits, herbs, medicinal plants, and rice. In 2010, wheat production was 831 thousand tonnes, rice production was 610 thousand tonnes and sugarcane was 5058 thousand tonnes.

The Uttarakhand state is the second fastest-growing state in India. The Gross State Domestic Product (GSDP) for 2023-24 (at current prices) of Uttarakhand is projected to be Rs 3.33 lakh crore, amounting to growth of 10% over 2022-23. Expenditure (excluding debt repayment) in 2023-24 is estimated to be Rs 66,179 crore, an increase of 10% over the revised estimates for 2022-23.

Though many studies have been undertaken on migration from Uttarakhand, there are very few studies on the impact of out-migration on the demographic and agricultural aspects of Salt and Bhikiyasen blocks of Almora district. It was interesting to know the impact of migration on the rural economy. This motivated the researcher to examine the trend and patterns of migration from Almora, the pattern of demographic and agricultural changes, the factors affecting the migration, and its implication on socio-economic status. Against this backdrop, this study titled "**Impact of migration on rural economy in Almora district**" was designed.

8.1. RESEARCH DESIGN AND SAMPLING PROCEDURE

Retrospective case-control study designs were applied in this study. Where the case was migrant households and control was non-migrant households. Both primary and secondary data were utilised in this study. Primary survey data was collected through a specially structured interview schedule. The two blocks of Almora district Salt have 98 male and 52 female migrants and Bhikiyasen has 102 male, and 48 female migrants, respectively. The two Blocks were selected on the basis of a three-stage stratified design. In the 1st stage, two blocks (Salt and Bhikiyasen) were randomly selected from the list of all the blocks in Almora district and in the 2nd stage; villages were randomly selected according to the five categories i.e. road side, near by streams, near by block headquarter, at average distance and height from roadside, remote area. In third stage we took 6 villages randomly from each category and then randomly selected 5 households from each village which makes a sample of 150 households from each block. Data was collected from 300 respondents/household, which included male migrants and female migrants from each of the two blocks. For the first and second Objectives, primary and secondary data sources, including census, government websites, economic survey reports and other published reports, were used. For objectives three and Four, primary data collected for the study was used.

8.2. VARIABLES AND THEIR EMPIRICAL MEASUREMENT

Dependent variables Migration is the dependent variable wherein migrant and non-migrant households were considered. Separate interview schedules were prepared for migrant and non-migrant households. The independent variables selected for this study were per capita land holding, household size, castes, type of household, occupation, average monthly income etc.

8.3. COLLECTION OF DATA

Various secondary data used in the study are Census, Sample Registration System (SRS), Annual Health Survey (AHS), National Sample Survey Organisation (NSSO), Statistical Handbook of Uttarakhand and research papers on the subject. Primary survey data was collected through a specially structured interview schedule. The interview schedule was pre-tested with a few respondents. Based on the experience gained in the pre-testing, the interview schedule was suitably modified wherever necessary. The univariate, bivariate and multivariate tables were generated using the statistical software Graph Pad Prism 8.0. Indices were calculated using the data. The findings of the study were suitably interpreted, and conclusions were drawn. The important findings have been summarised and presented below:

8.4. DEMOGRAPHIC CHARACTERISTICS OF MIGRANT HOUSEHOLDS

Bhikiyasen block, 150 respondents and 150 from the salt block were used as a sample. Each demographic characteristic's frequency distribution is created. Age characteristics of the respondents from Salt block were 11% are in the age group of 20-30 years, 23% of respondents belong to the age group of 31-40 years, 34% of respondents lie in between 41-50, 19% of respondents are in the age group between 51-60 and finally, only 13% of respondents belong to the age group of 61-70. So from this, it is evident that the maximum number of respondents is 41-50 years old. The demographic profile of the gender of the respondents observed 65% of respondents were males and 35% of respondents belonged to females during over research period.

Similarly, Bhikiyasen block, 14% of respondents are between the ages of 20 and 30 years old, 33% are between the ages of 31 and 40, 31% are between the ages of 41 and 50, 15% are between the ages of 51

and 60, and only 8% are between the ages of 61 and 70. This makes it clear that the age range of 31 to 40 years has the highest proportion of respondents. It is observed that 68% of respondents were males, and 32% of respondents belonged to females during over research period.

The caste status of male and female respondents had three categories general, other backward class and schedule caste. Around 57% of respondents belong to general categories, and 11% belong to other backward classes (OBC). The scheduled caste (SC) respondents have 32% of the 150 respondents in the Salt block of Alomra district. The religious distribution of the people 93% of the respondents were Hindus, and 6% of the respondents were Muslims. Christian religious respondents were 1% of the total Salt block demographic data. In the Bhikiyasen block of the Almora district of the 150 respondents. 16% of all respondents are from the other backward class (OBC), whereas 57% of respondents fall into general categories. The scheduled caste (SC) respondents make up 32%, and SC respondents make up 2%. Religious distribution in bhikiyasen was 77% of the respondents were Hindus, and 17% were Muslims. Christian religious respondents were 6% of the total respondent.

The educational position of Salt Block (Almora) during the research data collection period. Out of 150 respondents, 3% of man and women respondents are illiterate, 21% of both respondents have not completed high school, 38% of the respondents have completed high school, 26% of them are qualified up to the intermediate level, 10% of respondents have graduated, and only 2% of respondents have completed post-graduate studies. According to the data, the vast majority of the women who participated in the survey had a high school level of education. In Bhikiyasen block, out of 150 respondents, 3% of man and women respondents are illiterate, 11% of both respondents have not completed high school, 27% of the respondents have completed high school, 31% of them are qualified up to the intermediate level, 25% of respondents have graduated, and only 3% of respondents have completed post-graduate studies.

8.5. THE PATTERN OF HOUSEHOLD INCOME AND EMPLOYMENT

Salt block area of Almora district, 59 respondents earn less than Rs. 7,000 per year. However, the number of migrant household respondents decreased to 31, who earned between Rs 40001-80000, followed by 34 respondents who earned between Rs 80001-120000. Seventeen migrant household respondents earned an amount of Rs 120001–160000 annually, and only nine migrant household respondents earned an amount above Rs 160000 annually before migrants.

In Bhikiyasen block of Almora district, 53 people who answered earn less than Rs.7000 per year. However, the number of foreign households that answered the survey went 34 respondents who made between Rs 40001- 80000, and 36 migrants household respondents who made between Rs 80001-120000. In all, 18 migrant households reported yearly incomes between Rs 120001 to 160000, while only nine reported annual incomes greater than Rs 160000.

The annual income of the respondents' households after the migration was 59% of respondents in Salt block and 17% in Bhikiyasen block earned less than Rs.7000. 17% of Salt block and 40% in Bhikiyasen block household respondents earned Rs 7001 to 14000. In Salt Block, 11% of the respondent households earned Rs 14001 to 21000, while in Bhikiyasen, only 15% of the migrant household respondents earned. After migration, in Salt and Bhikiyasen block of Almora district, the percentage is 11% and 25% of respondents, respectively, with an annual income of Rs 21001 to Rs 35000. Out of 35000, only 1% of migrant households responded, observed in Salt block, while in Bhikiyasen block, 4% of respondents come under this annual income of Rs.

The survey results suggest that 88 per cent of rural families migrate from their homes to at least one person for employment.

The majority (nearly 74 per cent) of out-migrants of Uttarakhand have salaried jobs generally of longer duration. Alone 16 per cent of migrants are employed in government salaried employment and another 12 per cent are students. Another 10 per cent are engaged in domestic work, largely female migrants. A fairly high percentage of women (nearly 27 per cent) are students.

Migrants have comparatively better educational attainments as compared to their non-migrant counterparts. Nearly half of them have high school/higher secondary level education and another 36.4 per cent are graduate and above (Table 1). The inter-social group differences in educational levels are also quite significant, with SCs remaining much behind their other caste counterparts.

8.6. THE NATURE AND EXTENT OF MIGRATION AND EMPLOYMENT

The nature of migration is categorized into three categories, inter-region, temporary and permanent. In salt block inter-region migration is 22 % but in Bhikiyasen, it is 8%. In Salt block temporary migration is 38%, in Bhikiyasen, it is 33%. In Salt block, the percentage of permanent migrants is 40%, while in bhikiyasen block it is 59%. We can observe that the number of permanent migrants is dominating in the area of investigation.

The number of household members of the respondents, 25% of the respondents have five members in their families, 26% of the respondents have six members in their families, 11% of the respondents have seven members in their families, and 10% of the respondents in Salt Block have nine members in their families. In the sample of Salt Block, there are only four members in the household of 6 respondents. In the sample of Bhikiyasen Block, there are only 4 members in the household of 17 respondents. 21% of the respondents have 5 members in their families, 26% of the respondents have 6 members in their families, 37% of the respondents have 7 members in their families, and 5% of the respondents in Bhikiyasen Block have 9 members in their families.

One hundred fifty respondents in the Salt block of Almora district, Only 3 respondents have zero migrants during the study period. 38 (25% of the total respondents) respondent's families had one member who migrated from Salt Block, 60% of the respondent's families notified that only 2 family members migrated, and 8% of the respondent's families responded that the 3 members migrated from Salt Block area. 4 family members migrate from the 5 % of respondents' families. the vast majority of migrant persons belong to 90 respondent families who participated in the survey.

150 respondents in Bhikiyasen block of Almora district, Only 20 respondents have zero migrants during the study period. 68 (43% of the total respondents) respondent's families had one member who migrated from Salt Block, 33% of the respondent's families notified that only 2 family members migrated, and 8% of the respondents' families responded that the 3 members migrated from Bhikiyasen Block area. 4 family members migrated from 5% of respondents' families.

The survey results suggest that 88 per cent of rural families migrate from their homes to at least one person for employment. Such widespread magnitude of migration has also been reported by earlier studies that have intensified in the recent decade. Most of the respondents are men, young, educated and belong to other castes in hill district of Uttarakhand. The percentage of SCs is proportionately less among migrants. This is mainly due to the weak social networks of SCs at the place of destination. However, their proportion has substantially increased in recent years.

The majority (nearly 74 per cent) of out-migrants of Uttarakhand have salaried jobs generally of longer duration. Alone 16 per cent of migrants are employed in government salaried employment and another 12 per cent are students. Another 10 per cent are engaged in domestic work, largely female migrants. A fairly high percentage of women (nearly 27 per cent) are students.

Migrants have comparatively better educational attainments as compared to their non-migrant counterparts. Nearly half of them have high school/higher secondary level education and another 36.4 per cent are graduate and above (Table 8.1). The inter-social group differences in educational levels are also quite significant, with SCs remaining much behind their other caste counterparts.

Table.8.1: Education Level of Sample Population

Educational level		Types of household	
		Migrant	Non-Migrant
All	Illiterate	1.3	15.3
	Up to middle	12.4	45.7
	High school and higher secondary	49.9	30.3
	Graduate and above	36.4	8.7
Total		100	100

8.7. TO STUDY THE RELATION BETWEEN MIGRATION, EMPLOYMENT AND AGRICULTURAL PRODUCTION

Two forms of agriculture can be seen in the Himalayan region. The first is irrigated, and the second is rainfed. Irrigated land is significantly less in amount, whereas a large amount of land is cultivated as rainfed agriculture. In mountainous regions, where agriculture depends on rainfall, the higher elevated areas are referred to as the "Uparanv" or "upland". The land where irrigation is practised is known as "Talaav" or "reservoir".

Irrigated land is less in amount as compared to the category under rainfed. During the survey, the researcher found that production is also less in rainfed agriculture. People are leaving agriculture due to low productivity. The planning commission of Uttarakhand state also identifies this fact. According to the report of the migration commission, 8.37 % of people admit that low production is one primary reason in the whole state for Migration.

In mountainous regions, agriculture is indeed the primary source of livelihood. The possibility of commerce and trade is limited because agriculture in these areas primarily depends on weather conditions. However, in irrigated land, production is comparatively higher, allowing farmers to generate more income. Agricultural production is deficient in rainfed or non-irrigated land, and people rely solely on farming for their subsistence. In the present times, due to rapid population growth, agriculture is struggling to meet the needs of the people.

The production of different food grains is decreasing. Thirty years ago, people used to grow 40 kg wheat/Nali, which is now 2 kg/Nali only. This pattern is typical in the entire study area.

Contribution of Migration to Household Income A whopping 94 per cent of the sample migrant workers from the hill region of Uttarakhand are employed in salaried jobs, though most of them are engaged in low-paying petty jobs such as domestic servants, security guards, peons, office attendants, etc.

Remittances by them contribute significantly (about 26 per cent) to migrant households' income. These are particularly crucial in poor and relatively low-income group households contributing nearly 50 per cent and 38 per cent of household incomes at the place of origin, respectively. If we include the income from pension, which of course, 12 is income primarily from return migration, the household income rises by nearly 40 percent. The average annual amount of remittance per remitting migrant worker is nearly Rs. 16000, as per our survey result. Studies show that an overwhelming majority of out-migrant workers are employed in low-paid salaried jobs, which makes it difficult for them to remit in more significant sums. The inflationary pressures in recent years have also seriously eroded their remitting capacities.

8.8. THE REASONS OF MIGRATION AND TO SUGGESTIONS FOR THE BETTERMENT OF MIGRATING WORKERS

One of the primary challenges farmers face in the Himalayas is the limited availability of arable land. The steep slopes and rugged terrain make it difficult to find suitable areas for cultivation. Farmers often have to terrace the land and construct terraced fields to create flat surfaces for farming. However, even with these efforts, the amount of cultivable land remains limited, leading to small land-holdings for most farmers. Low agricultural productivity can have a momentous impact on migration patterns. Here are several ways in which low agricultural productivity can affect migration:

Economic Factors: Agriculture is often a primary source of income and livelihood for rural communities. When agricultural productivity is low, it can result in decreased incomes and limited job opportunities in the farming sector. As a result, people may be compelled to seek better economic prospects elsewhere, leading to rural-to-urban migration or even international migration.

Poverty and Food Insecurity: Low agricultural productivity can contribute to poverty and food insecurity in rural areas. Insufficient crop yields or failed harvests can lead to inadequate food supplies and increased vulnerability to hunger and malnutrition. In such situations, people may migrate for better access to food and economic opportunities.

Rural-Urban Migration: Low agricultural productivity can drive migration from rural to urban areas. Urban centers often offer a more comprehensive range of employment opportunities in non-agricultural sectors, such as manufacturing, services, and construction. Individuals and families may move to cities for better-paying jobs and improved living conditions.

Land Degradation and Climate Change: Agricultural productivity can be vulnerable to land degradation, desertification, climate change, i.e., droughts, floods, and unpredictable weather patterns. These environmental factors can make farming less viable and push people to abandon their lands. Consequently, they may choose to migrate to areas less affected by such issues or to urban centers where alternative livelihood options are available.

Social Disruption: Low agricultural productivity can create social disturbance within rural communities. As people face challenges in sustaining their livelihoods, social unity and traditional community structures may weaken. This can lead to conflicts over limited resources, land disputes, or social unrest, prompting individuals to migrate to escape such conditions.

It is important to note that low agricultural productivity is rarely the sole factor driving migration. Migration decisions are influenced by economic, social, political, and environmental factors. However, the impact of low agricultural productivity on migration should not be overlooked, as it can play a

significant role in shaping migration patterns, particularly in rural areas heavily dependent on agriculture.

The growth process could hardly create productive employment and income opportunities in the Hill region of Uttarakhand. There is hardly any visible progress towards developing remunerative agriculture in most of the villages in the hill region. As Outside agriculture, employment opportunities in construction grew significantly, but local people are mostly unwilling to undertake manual work. Their access to skilled jobs in the construction sector was severely affected due to the lack of such skill training. The employment opportunities in other sectors, such as trade, transport and government services, improved in Hill Region but remained limited to a few people. Thus, a lack of remunerative livelihoods coupled with an obsession for salaried jobs has forced many youth to migrate to cities in search of salaried jobs of relatively longer duration, irrespective of earnings. The situation has become quite grim in some pockets as there are hardly a few people left in single digits in several villages. Such destitution needs to be reversed.

The policy framework for the all-round development of the Hill Region of Uttarakhand is comprehensive and appreciable. However, the New Industrial Policy of the State, which has almost remained ineffective in attracting investment to hill areas, needs to be re-looked and made more effective to ensure balanced industrial growth by attracting more capital to backward district, particularly in the hill areas. Thus, the policy challenge is creating environment-friendly micro and small enterprises in the Hill region. The persistent bias in credit flow for priority sectors is another example where the banking sector prefers to finance only developed district and is hesitant to take risks in the hilly district. In this process, the gap in development is bound to widen. As a result, there is hardly any visible progress towards developing remunerative employment opportunities in farm and non-farm sectors in most of the villages in the Hill Region.

8.9. SUGGESTIONS FOR THE BETTERMENT OF MIGRATING WORKERS

The hill area presents challenging conditions for agriculture and resource utilisation due to their rising heights, steep slopes, and harsh climate. These factors severely restrict the region's productivity and carrying capacity of natural resources. As a result, most of the population in the Himalayas relies on subsistence farming as the primary source of food and livelihood.

A scheme of NABARD (National Bank for Agriculture & Rural Development) promotes the concept of producer organisations of their own. Small producers do not have the volume individually to benefit from economies of scale. In agricultural sectors, there is a long chain of intermediaries who work non-transparently, leading to a situation where the producer receives only a tiny part of the value the consumer pays.

Through aggregation, the primary producers can benefit from economies of scale. Central and state governments should promote this scheme of NABARD to the fullest possible extent because herein lies the key to providing better livelihood opportunities to the agricultural land-holding rural populace of Uttarakhand.

State government and central government should concentrate on setting up public sector units in the processing sector if private sector investment is not forthcoming. This shall ensure a readymade market for vegetable and fruit producer organisations and individual growers. State government can think of determining minimum support prices for different vegetables and fruits for the purchase to be used in public sector processing units.

Adventure tourism can also be aggressively developed in Uttarakhand viz trekking, paragliding, zip lining, canoeing and kayaking, cable car ride, bungee jumping, elephant safaris, camping and river rafting. This shall give an extra fillip to employment opportunities.

Promote measures to align migration and employment policies. Improve the capacities of institutions linked to the labour market to address labour migration issues. Increase the participation of migrant workers in unions and associations to ensure their voice is included in social dialogue processes.

The changing demographic dimension of the decrease in the youth population and the increase in the dependent population has posed a new challenge to care for the elderly. Proper social security programmes and their awareness can help people use the same.

HYPOTHESIS

1. Both push and pull factors of migration seem to prevail in district.

These factors influencing gendered migration in Kumaun are shaped by socio-economic, cultural, and structural factors. Push factors for both men and women include limited economic opportunities, unemployment, underemployment, and poverty in their place of origin. These factors motivate individuals to seek better economic prospects and livelihood options elsewhere. The pull factors for men often revolve around employment opportunities in urban centres and other regions, while for women; the pull factors may include the need to provide financial support for their families or to escape oppressive social or cultural norms. Women who migrate in search of work face unique challenges and opportunities. They often work in low-wage, informal sector jobs, such as domestic work, construction labour, or agriculture. Long working hours, low wages characterize these occupations and often lack social protection measures. Women migrants are vulnerable to exploitation, abuse, and unfair treatment in their workplaces. They may also face difficulties accessing essential services such as healthcare and education. According to the above statement, therefore the hypothesis is valid.

2. Migration and economic development are closely related to each other.

H 2.1. There is no significant difference between annual income and saving before and after migration of salt respondents.

Out of 150 Salt block respondents, the annual average income of the respondents before migration was 73776 Rs, and the average annual savings was 8085 Rs. Whereas, when migrant household respondent post migration conditions, their average income was 81394 Rs and their average annual savings was Rs. 16331 Statistical analysis of total migrant household respondents data was performed using the chi-square test (Fisher's exact test). Therefore, the theory that "there is no significant difference between annual income and savings before and after migration of Salt block" is not valid.

H 2.2. There is no significant difference between annual income and saving before migration and after migration of Bhikiyasen respondents.

Before moving, the average yearly income of the 150 Bhikiyasen block respondents was 72189 Rs, and the average annual savings were 7448 Rs. When migrant households were asked about their lives after moving, their average income was 96616 Rs and the average amount they saved each year was 19055 Rs. The chi-square test (Fisher's exact test) was used to analyze the data from all migrant households that answered the survey. This shows a vast difference between the yearly income and savings before and after moving, which is $P=0.0001$. Therefore, the theory that "there is no significant difference between annual income and savings before and after migration of Bhikiyasen block" is not valid.

3. There is impact on agriculture productivition due to migration.

District Almora is rapidly changing, people are migrating from villages, so agricultural land use is also changing. In 2018-2019, the area of agricultural wasteland was 41552 hectares and 42819 hectares in 2020-2021. Land use change analyses play a crucial role in tracing out-migration patterns and understanding the factors that drive population movements. Land use change analyses provide valuable insights into migration dynamics by revealing the underlying environmental, social, and economic factors. Understanding these patterns is essential for developing effective policies and interventions to manage Migration, address its impacts, and promote sustainable development.

One of the primary challenges farmers face in the Himalayas is the limited availability of arable land. The steep slopes and rugged terrain make it difficult to find suitable areas for cultivation. Farmers often have to terrace the land and construct terraced fields to create flat surfaces for farming. However, even with these efforts, the amount of cultivable land remains limited, leading to small landholdings for most farmers. Low agricultural production can have a momentous impact on migration patterns. Here are several ways in which low agricultural production can effect migration.

Land use and land cover help us understand the economic growth condition in any area. These are closely interrelated. For example, if agricultural land is converted into built-up land, we can observe that the primary sector of the economy is going towards secondary or tertiary. These small but essential changes help to understand the complete picture of the area of investigation.

The area of agricultural wasteland in Salt block, is increasing yearly. The same thing is happening for Bhikiyasen block. In the year 2018-2019, the area of 11240 hectares for Salt; this has been increased in 2020-2021, which is 11,521. Due to these changes in landuse patters in the study area the production of different food grains is decreasing. Thirty years ago, people used to grow 40 kg wheat/Nali, which is now 2 kg/Nali only. This pattern is typical in the entire study area.

Therefore the hypothesis, “ There is impact on agriculture productivition due to migration.”

An environmental factor plays a significant role in shaping migration patterns in the Kumaun region of Uttarakhand, India. The region's unique environmental characteristics, including its mountainous terrain, susceptibility to natural disasters, and changes in climate patterns, influence the decision of individuals and communities to migrate. Understanding the relationship between environmental factors and migration is crucial for comprehending the complex interactions between human populations and the natural environment in Kumaun.

Vulnerability to Natural Disasters: Kumaun is prone to various natural disasters, including floods, landslides, and earthquakes. These disasters can cause significant damage to infrastructure, disrupt livelihoods, and pose risks to human lives. Environmental factors such as the region's geographical location, proximity to seismic zones, and high rainfall patterns contribute to the vulnerability of communities to these natural hazards. In the face of frequent disasters, individuals and communities may choose to migrate to safer areas to mitigate the risks and protect their lives and livelihoods.

Climate Change and Environmental Degradation: Climate change and environmental degradation have become increasingly significant factors influencing migration patterns in Kumaun. The region has witnessed changes in temperature, precipitation patterns, and the availability of water resources, which impact agricultural practices, water availability, and overall ecosystem health. Climate change-induced events, such as droughts or erratic monsoons, can adversely affect agricultural productivity and contribute to economic challenges, leading to migration as a coping strategy.

Agriculture and Livelihood Challenges: Agriculture is a crucial economic sector in Kumaun, providing livelihoods for a significant portion of the population. However, environmental factors such as limited agricultural land, fragmented land holdings, and reliance on rain-fed agriculture pose challenges to agricultural productivity and sustainability. Changes in climate patterns, including erratic rainfall and changing temperature regimes, can disrupt agricultural cycles and affect crop yields. These challenges and vulnerability to natural disasters drive individuals to seek alternative livelihood options, often resulting in migration.

Water Scarcity and Irrigation Challenges: Water scarcity is a pressing environmental issue in Kumaun, exacerbated by changing climate patterns and the increasing demand for water resources. The region's mountainous terrain and dependence on rain-fed agriculture make it susceptible to water stress, particularly during dry spells. Water scarcity affects agricultural productivity, access to safe drinking water, and overall livelihoods. In some cases, individuals and communities may choose to migrate in search of regions with better access to water resources and irrigation facilities.

Forest Resources and Forest-Dependent Livelihoods: Forests play a vital role in the socio-economic fabric of Kumaun, providing various ecosystem services and supporting forest-dependent livelihoods. However, environmental factors such as deforestation, illegal logging, and forest degradation pose challenges to the sustainability of forest resources and the livelihoods they support. The decline in forest resources affects the availability of forest-based products, such as timber, non-timber forest products, and fuel wood, which are essential for local communities. In response, individuals may migrate to seek alternative livelihood options, contributing to changes in migration patterns.

Suggestions

Promote eco-tourism: Highlight the natural beauty and biodiversity of rural hill areas to attract tourists and generate revenue.

Enhance social infrastructure: Improve public amenities such as schools, community centers, libraries, and recreational facilities to enhance the quality of life in rural areas.

Facilitate access to credit: Establish microfinance institutions or provide low-interest loans to support small businesses and agricultural activities.

Preserve cultural heritage: Promote cultural tourism and traditional arts and crafts to generate income-generating opportunities for local communities.

Encourage collaboration: Facilitate partnerships between government agencies, private organizations, and local communities to foster sustainable development.

Promote local self-governance: Empower local communities and support decentralized decision-making processes.

Strengthen governance: Ensure transparency, accountability, and effective governance at the local level to address issues and deliver public services.

Access to clean water and sanitation: Implement water supply projects and sanitation facilities to improve living conditions.

Improve healthcare facilities: Establish well-equipped healthcare centers and ensure the availability of medical professionals in rural areas.

Provide vocational training: Offer skill-based training programs that align with market demands to enhance employability.

Create employment opportunities: Encourage the establishment of industries, businesses, and agricultural projects that provide jobs locally.

Enhance agricultural productivity: Provide farmers with training, modern farming techniques, and access to credit and markets.

Diversify the economy: Promote non-agricultural sectors such as tourism, handicrafts, and small-scale industries to create alternative livelihood options.

Strengthen education: Improve the quality of education in rural areas to enhance human capital and skills development.

Develop infrastructure: Invest in roads, bridges, and transportation networks to improve accessibility and connectivity to urban centers.

A proper data bank in regard of out migration from the district should have to be made to facilitate the further research study.

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