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## Abstract

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## Adaptation of Migrated Upper Mustangi People in Pokhara, Nepal

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*The adaptation process of migrant people from the Upper Mustang to Pokhara found a social issue. The trend of permanent and seasonal shifting was prominently observed in this study. The individual and community-level adaptation process of the in-migrants in Pokhara, and multi-ethnic societal adjustment were considerable. This research concentrated on specific ethnics of the Himalaya region of Mustang district who migrated to Pokhara and adapted in hilly ecology. The study was trying to seek the pattern of migration from the Upper Mustang their circumstance and their adaptation in Pokhara. The study area of this research was covered the migrant population in Pokhara from Lomanthang and Lo Ghekar Damodar Kunda Rural Municipalities of Upper Mustang. This study was based on a qualitative research design with interpretative research paradigm. Six informants residing in Pokhara seasonally or permanently both rural municipalities were selected representatively. For the qualitative information in-depth interview was taken with the help of a semi-structured questionnaire. Due to the climatic vulnerability, people from Upper Mustang were shifting in Pokhara permanently or seasonally for survival. The extreme cold, occasional summer rainfall, soil erosion and glacier outburst are major threats of the life security of migrants. Whereas, the common destination of migrants found Pokhara because favorable climate, life survival opportunities and historical legacy of socio-economic connection.*

OVER THE LAST few decades, the mountain people have been migrating to Pokhara city permanently and temporarily. The continuity of the mountain culture in Pokhara city is a challenging issue due to the distinct socio-cultural and environmental contexts

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of the destination. Pokhara is itself a multi-cultural, multi-religious city with the opportunities and challenges of diverse economic life. The mountain people are culturally, religiously, and linguistically homogeneous, and their assimilation process in the heterogeneous cultural setting, including in Pokhara city, is a challenging issue for adaptation (Chettri, 2008). Similarly, the mountain people in the place of origin have adopted agro-pastoralism for their livelihood which is not suitable to continue in migrated area. They are forced to adapt new adaptations like business and tourism.

Moreover, language is not merely a means of communication but also a means of adaptation in a mixed community. Many mountain people are not comfortable to speak the Nepali language properly, while it is the main language of everyday communication in their migrated area Pokhara. It is also challenging to them to community with new people in the city as well as the survival of their mother tongue. Hence, adaptation of the Mustangi people after shifting in Pokhara is both an opportunity and challenging. The survival of their tangible and non-tangible culture and social relation in new environment is challenging. The transitional migrants who recently shifted to Pokhara are supported by previously migrated neighbors or relatives. However, they have faced many adaptational challenges in communication, food culture and hazy environment of city area.

Pokhara, one of biggest metropolitan city the of Nepal on the base of geography, is one of the best destinations for the people of Upper Mustang. The population of the Upper Mustang is 3422 and remarkable population seasonally migrates during the winter season to escape from the sever climatic condition (CBS, 2021). Hemja, Prithvi Chowk, Chorepatan, and Bijayapur are the major destination for their migration in Pokhara. Various literature has shown that the internal migration of Himalaya to the hilly and major city of Nepal which were seasonal circulatory to the southern part for their livelihood. The study focuses on the adaptation of people of Upper Mustang in Pokhara. Adaptation is examined through linking with different setup variables such as occupation, social adaptation, and family life.

## Literature Review

The livelihood of almost the population of Nepal depends upon their inhabitant ecosystem. The change in climatic vulnerability total ecosystem services should identify for adopting measures to maintain the ecosystem integrity along with their survival. There is a close relationship between human well-being and the eco-system, however, it is very complex to adjustment (Dixit et al., 2015). An adaptation process and environmental mitigation strategy are equally important for the response in the sustainable adjustment of any community in their native and host place. Human activities and the natural environment are co-related, mitigation strategies of environmental protection mean control over the man-made environmental degradation process which is not control of a single community or society. Similarly, the adaptation process refers to adjusting the lifestyle of individuals and society along with the changing environmental condition. It forces them to adopt the new pattern of livelihood to increase the flexibility of the societies (Munasinghe, 2019). The Himali ethnic is depending on seasonal trade, pastoralism, and agriculture as their occupation but it is gradually declining their activities due to the climatic vulnerabilities. The salt and wool trade between India and Tibet has replaced by transportation system and they were

forced to choose an alternative occupation and in the different ecological area (Scholz et al., 1981). As a result, the vulnerable livelihood of Upper Himali remote areas is the adverse situation of the environment, socioeconomic position shifting towards the new destination (Mishra et al., 2019). Hence, the trend of seasonal trade in different areas has replaced by modern trade facilities in recent time. The harder livelihood with the adverse climatic condition of the Himalayan region have forced them to search alternative destination to the excess area for survival.

Pokhara is the nearest city destination from Upper Mustang which is connected with Kathmandu and linking with Siddhartha Highway and Prithvi Highway and the interior part of Nepal. It is a stopover point of Himali traders to come down from their origin to move towards Gagangaula, Damauli, Highway's hotel points, Kathmandu, Butwal-Bhairahawa, and India (Chhetri, 1986). He further opined that Pokhara is found the best trade center and resettlement area for people of Upper Mustang. People there are residing for a long and they have adjusted with the Pokhareli community and being participated in socio-cultural, political, and economical institutions. They have established various Samaj (community organizations) as Pokhara Thakali Sudhar Samaj, Marpha Thakali Samaj, Dhikur Samuha, etc for community adaptation.

Economically sound migrants run hotels, clothing stores permanently. Similarly, after running the business in Pokhara, they are associated with the trade association, chambers of commerce, local community members. Further, the social and cultural adaptation process become more stronger due to marital relationship of Mustangi people with the local people specially, those Mustangi who were grown up and educated in Pokhara (Khattri, 2020). In another hand the seasonal traders around Pokhara and other areas are visited for selling Himali herbs Jimbu, Yarcha Gumba, Hing, Birenun, etc. for their livelihood.

The farmers with the subsistence farming of the Himalayas travel to lower hilly regions mostly in Pokhara with the small trade supporting their basic needs. The earning is directly beneficial on food nonfood materials and services. The impact of modernization and reach in the market area their daily life has influenced to consume the modern industrial product. Traditional food security gradually declining and people becoming habitual to migrate towards modernized cities. The challenges of their primitive life model shifting to modern life of the city within the diverse subtropical climatic region is a concerned issue in this study (Fan et al, 2013). However, the food scarcity of the Upper Mustang and rapid climatic changes has pushed the people to migrate seasonally and permanently to the new destination (Khattri & Pandey, 2021). The destination of Mustangi people have chosen due to socio economic connection in Pokhara.

## **Theoretical Framework**

The cultural adaptation of diverse environmental settings of society are influenced by community where they interact. It is concern with language background, culture, and livelihood activities. Community based adoption theory posit that the knowledge developed by communities are the major principles of the livelihood of the people. Huq & Reid (2007) opine in their community-based adaptation approach that a process of adjustment of vulnerability of climatic change which affect the local environment and capacity of community for livelihood. Individuals are

explicit the role of culture which is necessarily interconnection for strength of community adaptation. Every community wants to be improved revised safe and easier livelihood in their residential setting or even in a new destination. Community based capability can affect by climatic change, community itself poses its assets and capabilities collectively for the new strategy of survival and adoption.

Culture and adoption process are simultaneously developed in community. The community-based adoption is possible with the fuller understanding of need of individual and responsibility of the community. This study analyzes the interplay between culture, security and adoption and multiple chances of opportunities through social forms.

### **Statement of the Problem**

The climatically vulnerable people from Mustang are shifting to Pokhara in search of new settlement. The Himalayan region of Nepal lies in the northern part which consists of the main part of the Himalaya Mountain portion about 15% of the total area of Nepal. The climate of this Himalayan region is severe cold in winter and dry rest of the year. Steeply land, low temperatures, seasonal snow falling resulting very low agricultural productivity and harder livelihood. The Upper Mustangi people are engaging in animal husbandry rather than cultivation because of availability of pastoral land. Tourism, mountaineering, pottering, running hotels are alternative livelihood sources in this region (Chhetri, 2014). Similarly, medicinal herbs, local handicrafts, and wool production are also engaging part of the people of the Himalayan region in recent years (Shrestha, 2019). However, the soil and land composition of this region are fragile, less productive, and vulnerable to erosion because of the fewer people engaged on land (Wester et al., 2019). Further, the trend of shifting seasonal and permanent settlement is prominently observed in this region (Singh et al., 2011). Hence, the accessibility of transportation and in search of possible opportunities for their adaptation they migrated in Pokhara.

Upper Mustang, administratively known as the “forbidden Kingdom of the Himalaya” is located at an altitude ranging from 2950m to 3900m above sea level (Peissel 1992). Similarly, climate change directly affects the livelihood of the people existing in their place of origin. It also reverses the developmental activities on the socioeconomic arena of the Himalayan region particularly in developing countries (UNDP, 2010). The inherent knowledge capacity and skill of the indigenous Himalayan communities in response to adopting changing environmental hardship are more responsible to sustain the Upper Mustang. The changing climatic condition of the research study area basically on rainfall and snowfall variability which is the most challenging on livelihood pattern, food productivity, water resources availability, livelihood opportunities, and so on are closely associated with seasonal and outgoing migration (Gautam, 2017). This research is concentrated on specific ethnicities of the Himalaya region Mustang district who are migrated to Pokhara Metropolitan city and adapted to hilly ecological areas.

### **Research Questions**

The study aims to explore the climatic adaptation strategies of people in the new ecological region from the Upper Mustang to the Pokhara. The following research questions are looking for

the answer.

1. What are the patterns of migration of the people from the Upper Mustang to Pokhara?
2. How individuals and communities are adapted in Pokhara?
3. What are the major circumstances of migrants in Pokhara?

## **Data and Methods**

The study area of this research is covered the migrant population in Pokhara from Lo Manthang and Lo Ghekar Damodarkunda Rural Municipalities of Upper Mustang. This study was based on a qualitative research design based on an interpretative research paradigm. The informants were selected proportionally residing in Pokhara seasonally or permanently. This study was based on in-depth interviews with four informants. The open-ended semi-structured checklists were prepared before the interview. The leading questions along with the probing questions were used to get more qualitative information during the interview.

The total population of Lomanthang and Lo Ghekar Damodar Kunda rural municipalities are 1430 and 1292 respectively. Almost 90% of these population migrates seasonally out of Mustang and about 50% of out migrants shifted to Pokhara (Lo Ghekar Rural Municipality, 2018; Lo Manthang Rural Municipality, 2018). According the data, 1512 people are the universe of this study. This study is concern with shifting people in Pokhara from two rural municipalities of Upper Mustang.

There were six informants in total, for three informants from Lo Ghakar Damodar Kunda and three from Lo Manthang representatively and purposively. The major settlement areas of informants in Pokhara Shivalaya Chok, Prithivi Chok, Mustang Chok, Lakeside, Gagan Gauda Deep, Hemja and Bagar were visited and observed. Their time was scheduled for an interview in their convenience. The interviews were recorded with their permission and transcribed and a re-interview was taken for authentication of their version before the final writing. The process of coding and decoding had finalized for analysis and interpretation to qualify the audience for credibility. To make rigorous and trustworthy qualitative research, the researcher has to consider “transcription”, “triangulation”, “member checking,” coding and decoding systematically (Gunawan, 2015). The secondary data were collected from the population monograph of Nepal, the website of the Lomanthang and Lo Ghekar DamodarKunda Municipalities of Mustang district in Gandaki province. The published research articles were cited related to the research topic.

## **Result and Discussion**

The adaptation process of Upper Mustangi people in Pokhara was analyzed in two thematic areas. Individual and community-based livelihood pattern were digging out to get clear glance of the study.

### **Livelihood Adaptation**

Livelihood refers to a set of human activities that are necessary to do in everyday life for

survival. To full fill, the basic requirements for life security such as food, shelter, clothing, medicine, education and so on individuals use their efforts while the term adaptation means adjustment to the various pattern of social settings (Selvaraju et al., 2006). Individuals of severely cold ecology migrate to hilly ecology where temperature and rainfall are drastically different in this study the people of Upper Mustang having about -20oC and another ecology of Pokhara which experiences about 10oC in winter. Normal life is not possible in Upper Mustang during the winter season and they migrated to lower hills with the hawking. The youth people travel city areas Beni, Baglung, Pokhara, Damauli, Syangja, Butwal Bhairahawa, and Kathmandu to sell winter goods. This is all for their livelihood adaptation during the winter season. The school students are also shifted to the Pokhara from Kartik to Falgun every year in rotating schools. One of the informants 'A' (age 17) studying in class 10 in Upper Mustang who is now in Bijayapur Pokhara stated that:

This year I am attempting my SEE examination. We came to Pokhara every year in Kartik because of the extreme cold in Chhoser. We will back to our village after Falgun / Chaitra. Our school is sometimes covered by snow and it is very terrible to read and live there in winter. So, we all have been shifted. Here we are feeling comfortable weather.....teaching-learning is also going easily. In holiday time we can visit Pokhara Bazar. MoMo, Chowmin are very tasty here and the clothes are also available for buying.

The young student of Chhoser, Upper Mustang who is experiencing coming to Pokhara for winter school has been adapted to the hilly ecology and feels safe and progressive in her academic career. New food taste of the city, the better alternative of fashionable clothes and the modern city environment is attracting her. The healthy environment and excess of transportation service in city area made to visit their relatives residing in Pokhara during school holidays. However, informant 'B' (a hawker age of 63) opines that:

In our previous year, I used to sell medical herbs, Jimbu, birenun, hing, silajit, nail-cutter, khip, Kankarno, shocks, etc. but nowadays people of city area do not give the value of these goods. Nowadays it is very difficult to sell these goods and becoming harder to survive in Pokhara. I cannot walk long to the village area but in the city, all goods are available in shops. Time is changed, our expenditure is high, and children are reading in Pokhara. They do not like to go back to the Chhoser but my earning is decreasing...and difficult to run my Chhoser house in Upper Mustang and rented house in Pokhara... now a days, 'Samajghar organizes Lhosar. They invite all of us which makes close with the villagers and also supports us through the community members during the crisis.

The modern market system of Pokhara has developed the choices of the people in the local area and they do not believe in the traditional hawkers. It shows very challenges to the seasonal migrant people depending on their occupation to survive in the lower market area. On the other hand, the younger generation is interestingly adapted in warm ecological areas and their perception as well. The modern lifestyle of community changes directly or indirectly influences by various ecological changes and they are multiple processes to change their thought and livelihood activities (Huntington, 1968 as cited in Tipps 2012). Modern life style, comparatively easy livelihood, and suitable climatic condition were found common influencing factors for the migration of

Mustangi people towards the Pokhara.

The climatic condition of Upper Mustang has been changing and it has seen direct impact to the day-to-day life pattern of the people. Uncertainty of snow falling, melting of glacier, increasement of rainfall making hardship to run traditional agriculture and small hotel-based tourist services. The climatic pattern rapidly threatening to poor people for management of alternative residential settlement (Devkota, 2013). Due to such unsecured livelihood people have shifting in search secure area. In this regard, one of the informant 'C' from Loghakar stated that,

I am 33 years old, running small hotel at Prithvi Chowk in Pokhara, for seven years. My family used to run small restaurant for thirty years in Loghakar. The trekkers were the major costumers of our restaurants. Due to the connectivity of road, tourist chosen vehicle to travel there and our restaurant become far from the tourist approach. Which lead to migrate us from Loghaker to Pokhara.

In the beginning days of my business start-up in Pokhara was very difficult. It was hard to communicate with people, food culture, dress style and so on. Gradually, we started our small hotel with the support of our community running Dhukuti here. Now, our Dhukuti is running with paying turn regularly. ... our hotel is running well. We have updated our services according to time. Hence, we adapted here.

In this regard, Huq & Reid focused in their community-based adaptation approach that the vulnerable people are migrated in search of their community people in new destination for their livelihood and cultural adaptation. The basic foundation of working pattern, occupational selection and cultural sharing found supportive to survive. Moreover, migrants in Pokhara are chosen their specific locality and with similar types of occupation. The informant 'C' had chosen hotel service in Prithvi chowk because of the connection their community people who were running business in Prithvi chowk and also Dhikuti circulation. This traditional Dhikuti system supporting cultural practice in Pokhara and making their social adoption easier as well.

## **Cultural Adaptation**

Cultural adaptation is a process of assimilation and acculturation of people from one culture to another new form of culture. More or less the migrant population needs to make integration for their survival in their new destination. They cannot isolate themselves from the migrated society and need to adopt the same kind of social-economic cultural setting. The people of Upper Mustang are establishing their community houses to run their cultural practices. The Sakya Sadan in Pokhara Nadipur, Thakali samajsewa Matepani, Thakali Sewa Samiti Duleganda, etc. are example of the institutional setting of people Mustang to cultural circulation in Pokhara. The people of Upper Mustang most of Loba, Lama, and Himali, Gurungs of Loghakar Damotherkunda and Lomanthang has established their Hemja Samajghar in 2064 BS. These community houses are the center for performing their rituals. It is supporting the new migrants with their community and similar cultural people in the new ecological area. One of the informant's 'D' who is the secretary of Hemja Samajghar, Pokhara 27, stated that

This community house is the center for the cultural identities of Upper Mustange people. it is one of the latest community houses of two municipalities of Upper Mustang. All to gather 51 household are members of this Samaghghar. There are majority of people of Lomanthang. We started to celebrate Sonam Lhosar from 2080 BS. Similarly, we perform our Buddhist religion-based activities such as celebrating Lhosar, organizing feasts and festivals and so on. The death ritual was practice with Lama astrologist on the base of Buddhist calendar. The death body used to take out from home touching with the 'horn' of the Yak and 'hoof' of the horse. The lama leads the funeral with three four death body cutting to the open big stone area. The Lama calls the vulture to feed the death body. No family members are allowed to go in funeral procession. However, the death rituals are modified in Pokhara. Started to make assess by burn with fire at the bank of Seti Gandaki. People recently migrating to Pokhara wants to take membership of the Samajghar to adopt in Pokhara for easy connection of natives to continue their culture. We set up such community houses to prevent and preserve our culture from the modern cultural encroachment. However, the marriage ceremonies are not practiced in Hemja Samajghar so far. We have practiced to marriage in summer at own village. Our lifestyle socio-cultural, and economic activities are gradually influenced by Hindu culture in the city.

The cultural practices of the people of Upper Mustang are found relatively similar to the Tibetan culture. However, their scattered population not supporting to continue their emic culture. Seasonal migrants during the winter time makes their larger population in Pokhara but they return back in their own village. The permanent dwellers in Pokhara are practising their birth and death rituals with the help of Lama of Gumba but the marriage ceremonies of youths are not found in the Samajghar. They prefer marriage in their native village.

The young generations who are migrated with their parents are found easily adopted in Pokhara. However, the senior citizens are found more attachment with their village. In this regard informant, 'E' (age 55) quoted that

I am residing at Hemja, Pokhara for 25 years. I am a fancy owner of Chiple Dhunga. My two children are recently graduated. My parents seasonally come to Hamja but this year they are not going back there because the roof of our house was damaged by summer rain and it needs to make alternative roof either cemented or tin instead of muddy roof. It was not experienced rainfall there but we used to be happy by snow falling. I struggled to adjust and finally setup my permanent livelihood. My children are well adjusted here because they have their school and college friends' network but my parents requesting me to renovate the house of Nemdo to adjust with the weather-friendly house but it is expensive.

The informants who participated in this study have mixed types of reflection. The natural setting and resources of the Upper Mustang became the major cause of their migrant pattern during the wintertime. Socio-ecological system developed the livelihood pattern based on extreme weather conditions of a vulnerable population (Osahr et al., 2008). The modernization process has influenced each corner of the global society in response to the Upper Mustangi people mostly



the younger generation who are seasonally migrated in Pokhara are considerably adapted easily to the influence of modern facilities. However, the senior population who spend a long time in their native land are worried about the weather change and the necessary to modify their native accommodation system.

The life in Pokhara is easier now-a-days in comparison with Lo Ghaker. However, they missed their relatives, festivals and old houses. The people above sixty years have rural intimacy even though residing Pokhara. They feel happy during the winter because of the arrival of their village people as seasonal migrants. Another informant 'F' (age 65) of Lo Ghaker Rural Municipality ward number 5 residing in Shiva Chowk, Pokhara argued that,

I am a Tibetan Ex-Army residing here for 20 years. Now, my son and daughters are abroad. We are not going now going our village LoGhaker, for 3 years. Transpiration service is very expensive. The normal jeep from Pokhara to Lomanthang takes charge as fair five thousand per person. It is not controlled by CDO, Police officer, and local government. The climate of our village become severe cold during Ashoj to Falgun. People migrates to warm areas mostly in Pokhara and other cities during this period. Some people visit to the rural area to collect cereals by exchanging Jimbu, black salt, Silajit and so on. .... our son and daughter who are in abroad force us to stay in Pokhara. They further worried about harder life of village, food unviability, and health issue. I was member of Hemja Samaj at Hemja Pokhara but now, I should not go in Samaj because people of above sixty years are not going. The practice to be the member of Samajghar is eighteen to sixty years in our village because only active member can help to samaj. Here in Pokhara, we can allow to visit the Samajghar but not given any responsibility. which is known as 'Dharchyang'. I have survival income from my own house rent and sometimes my son and daughter send money as well. Our villagers used to come during winter and we stay here as in our village.

The cultural practices of Upper Mustang living in Pokhara are found acculturated with hilly culture. The 'Dharchyang' system is very strong among them due to the labour participation in society. However, this system has faded in Pokhara because of their different livelihood practice. which does not active labour participation. The farmers and hawkers are changing their way of life by running trekking service, tea shops, handcraft shop, and other medical herb trade. Youths of economically strong family are in foreign employment and their parents are residing in Pokhara. Huq & Reid urge the adoption process of people supported by cultural traits are strong in community. The understanding level of the individual and their livelihood assimilate with community. Community itself embrace the people for cultural development. The cultural practices of Upper Mustang living in Pokhara are found connected each other for their similar understanding of livelihood. Similarly, people chose specific locality to reside and common types of occupation for community adoption in new destination.

### **Conclusion**

Socio-cultural Adaption of Himali people of Upper Mustang in Hilly ecological region of Pokhara is qualitatively analyzed on the perspectives of Community-based adaptation by H. Reid,

and S. Huq (2007). The seasonal and permanent migration trend is experienced for a long due to the connection of Mustang district to other major cities. Adverse climatic conditions experienced hardship to survival in Upper Mustang during November to March (Upadhyaya 2020). Hence, people seasonally migrated in nearer and safe climatic hilly regions Pokhara. The practice of adaptation an individual basis as hawking, and community supportive adaptation by developing different community-based institutions had been found. Comparatively, youth were found easily adapted in Pokhara because of the availability of facilities. However, the senior citizens are found interested to back their children for marriage in their native land. Similarly, they desired to live in village in their old age because they feel the life will be emancipated with the Lama's mantra during the death rituals. Individual and cultural adaptation was strong through Community houses where they preform cultural and ritual practices. However, their families who are adopted in Pokhara could not manage to reside their parents in village.

The changing climatic pattern is another challenge to reside in village. The summer rainfall becoming a major challenge to reside there. It damages the muddy roof of the houses and results in leakage water in houses (Bhadra et al., 2021). The lifestyle of the Upper Mustangi people forcefully changing, they are shifting and adapting gradually in hilly ecological zone mostly in Pokhara. due to favorable climate, life survival opportunities and historical legacy of socio-economic connection.

The ethnicity of the Upper Mustang is shifting in Pokhara for various purposes. The major causes of shifting Pokhara can be considered as a nearer trade destination where their traditional seasonal trade changed into the permanent mode (Thakali, 2012). Tours and travel business, hotel and tourism, trekking and mountaineering, traditional handicrafts, medicinal herbs, and so on are their major engaging occupations in Pokhara. Their major livelihood of them is a non-agricultural sector in Pokhara because of their ecological changed environment as compared to the Himalayas. The recent trends of moving towards the lower areas of this region are modern transportation systems which made them easy to migrate city area and another cause to migrate is the development of road transportation which has removed the traditional trekker's oriented small hotels services that were running since the long period as an alternative of agriculture.

## References

- Bhadra, R., Neupane, B., & Khadka, U. R. (2021). Induced impacts of climate change on livelihood and migration in Upper Himalayas: A case of Mustang, Nepal. In J. M. Luetz & D. Ayal (Eds.), *Handbook of Climate Change Management* (pp. 2229–2269). [https://doi.org/10.1007/978-3-030-57281-5\\_303](https://doi.org/10.1007/978-3-030-57281-5_303)
- CBS., (2014). Population monographs of Nepal, Vol, II. *National Planning Commission Secretariats*. <http://mohp.gov.np/downloads/Population%20Monograph%20V01.pdf>

Central Bureau of Statistics. (2011). National population census report, 2011.

<https://cbs.gov.np/image/data/Population/National%20Report/National%20Report.pdf>

Chettri, N., Shakya, B., Thapa, R., & Sharma, E. (2008). Status of a protected area system in the Hindu Kush-Himalayas: An analysis of PA coverage. *International Journal of Biodiversity Science & Management*, 4(3), 164–178. <https://doi.org/10.3843/Biodiv.4.3:4>

Chhetri, P. (2014). "Livelihood strategies of people in the Himalayan region of Nepal: A study in the villages of eastern Manang". *Independent Study Project (ISP) Collection*. 1831.

[https://digitalcollections.sit.edu/isp\\_collection/1831](https://digitalcollections.sit.edu/isp_collection/1831)

Chhetri, R. B.(1986). Migration, adaptation and socio-cultural change: The case of Thakais in Pokharta, Nepal. *Contributions to Nepalese Studies*, 13(3).

[http://himalaya.socanth.cam.ac.uk/collections/journals/opsa/pdf/OPSA\\_01\\_05.pdf](http://himalaya.socanth.cam.ac.uk/collections/journals/opsa/pdf/OPSA_01_05.pdf)

Devkota, F. (2013). Climate change and its socio-cultural impact in the Himalayan region of Nepal – A visual documentation. *Anthrovision*, 1.2.

<https://doi.org/10.4000/anthrovision.589>

Dixit, A., Karki, M. B., & Shukla, A. (2015). *Vulnerability and impacts assessment for adaptation planning in Panchase Mountain Ecological Region, Nepal*. Government of Nepal, United Nations Environment Programme, United Nations Development Programme, International Union for Conservation of Nature, German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB) and Institute for Social and Environmental Transition-Nepal.

[https://dpnet.org.np/public/uploads/files/EBA\\_Main\\_report\\_final31Dec15%202021-09-12%2009-29-18.pdf](https://dpnet.org.np/public/uploads/files/EBA_Main_report_final31Dec15%202021-09-12%2009-29-18.pdf)

Fan, S., Brzeska, J., Keyzer, M., & Halsema, A. (2013). *From subsistence to profit:*

*Transforming smallholder farms* (0 ed.). International Food Policy Research Institute.

<https://doi.org/10.2499/9780896295582>

- Gautam, Y. (2017). Seasonal migration and livelihood resilience in the face of climate change in Nepal. *Mountain Research and Development*, 37(4), 436–445.  
<http://www.jstor.org/stable/90016609>
- Goorha, P. (2017). *Modernization Theory* (Vol. 1). Oxford University Press.  
<https://doi.org/10.1093/acrefore/9780190846626.013.266>
- Graves, N.B. and Graves, T.D. (1974). Adaptive strategies in urban migration. *Annually Review of Anthropology*, 3: 117-151. <https://doi.org/10.1146/annurev.an.03.100174.001001>
- Gunawan, J. (2015). Ensuring trustworthiness in qualitative research. *Belitung Nursing Journal*, 1(1), 10–11. <http://belitungraya.org/BRP/index.php/bnj/>
- Khattri, M. B. (2020). Building national security through human security: Seasonal migration from Upper Mustang. *Unity Journal*, 1, 74–88. <https://doi.org/10.3126/unityj.v1i0.35697>
- Khattri, M. B., & Pandey, R. (2021). Agricultural adaptation to climate change in the trans-Himalaya: A study of Loba community of Lomanthang, Upper Mustang, Nepal. *International Journal of Anthropology and Ethnology*, 5(1), 1.  
<https://doi.org/10.1186/s41257-020-00039-w>
- Lo Ghaker Damodar Kunda Rural Municipality. (2017/18). Rural Municipality Profile, Lo Ghaker Damodar Kunda Rural Municipality. <https://www.nepalarchives.com/content/lo-ghekar-damodarkunda-rural-municipality-mustang-profile/>
- Mishra, A., Appadurai, A. N., Choudhury, D., Regmi, B. R., Kelkar, U., Alam, M., Chaudhary, P., Mu, S. S., Ahmed, A. U., Lotia, H., Fu, C., Namgyel, T., & Sharma, U. (2019). Adaptation to climate change in the Hindu Kush Himalaya: Stronger action urgently needed. In P. Wester, A. Mishra, A. Mukherji, & A. B. Shrestha (Eds.), *The Hindu Kush Himalaya Assessment* (pp. 457–490). Springer International Publishing.  
[https://doi.org/10.1007/978-3-319-92288-1\\_13](https://doi.org/10.1007/978-3-319-92288-1_13)
- Munasinghe, M. (2019). *Sustainability in the Twenty-First Century: Applying Sustainomics to Implement the Sustainable Development Goals* (2nd ed.). Cambridge University Press.  
<https://doi.org/10.1017/9781108241847>

- Osbahr, H., Twyman, C., Neil Adger, W., & Thomas, D. S. G. (2008). Effective livelihood adaptation to climate change disturbance: Scale dimensions of practice in Mozambique. *Geoforum*, 39(6), 1951–1964. <https://doi.org/10.1016/j.geoforum.2008.07.010>
- Population monograph of Nepal. (2014). Government of Nepal, National Planning Commission Secretariat, Central Bureau of Statistics. <https://nepal.unfpa.org/sites/default/files/pub-pdf/PopulationMonograph2014Volume1.pdf>
- Reid, H., & Huq, S. (2007). Community-based adaptation: A vital approach to the threat climate change poses to the poor. *International Institute for Environment and Development*. <https://www.iied.org/17005iied>
- Scholz, J. T., Blakie, P., Cameron, J., & Seddon, D. (1981). Nepal in Crisis. Growth and Stagnation at the Periphery. *Pacific Affairs*, 54(4), 749. <https://doi.org/10.2307/2757921>
- Selvaraju, R., Subbiah, A. R., Baas, S., Juergens, I., & Baas, S. (Eds.). (2006). *Livelihood adaptation to climate variability and change in drought-prone areas of Bangladesh: Developing institutions and options; implemented under the project Improved Adaptive Capacity to Climate Change for Sustainable Livelihoods in the Agriculture Sector - DP9/1-BGD/01/004/01/99*. FAO. <https://www.fao.org/3/a0820e/a0820e.pdf>
- Shrestha, S. (2019). Mountain livelihoods in a time of change: A case study of Upper Mustang in Nepal. *Electronic Theses and Dissertations*. 3059. <https://digitalcommons.library.umaine.edu/etd/3059>
- Singh, S. P., Bassignana-Khadka, I., Karky, B. S., & Eklabya Sharma, E. S. (2011). *Climate change in the Hindu Kush-Himalayas: The state of current knowledge* (pp. x+-88).: ICIMOD. [https://lib.icimod.org/record/9417/files/icimod-climate\\_change\\_in\\_the\\_hindu\\_kush-himalayas.pdf?type=primary](https://lib.icimod.org/record/9417/files/icimod-climate_change_in_the_hindu_kush-himalayas.pdf?type=primary)
- Thakali, S. (2012). *Localising environment: Mustang's struggle to sustain village autonomy in environmental governance* (Doctoral dissertation, Lincoln University) [https://researcharchive.lincoln.ac.nz/bitstream/handle/10182/5458/Thakali\\_phd.pdf;jsessionid=D59E496573CC6913E1914813F94B8473?sequence=3](https://researcharchive.lincoln.ac.nz/bitstream/handle/10182/5458/Thakali_phd.pdf;jsessionid=D59E496573CC6913E1914813F94B8473?sequence=3)
- UNDP (2010). Summary of implications from the East Asia and South Asia consultations: Asia Pacific human development report on climate change: *UNDP Asia Pacific Regional Centre*. [https://www.undp.org/sites/g/files/zskgke326/files/migration/asia\\_pacific\\_rbap/RBAP-HDR-2010-APHDR-CC-Consultation-Asia.pdf](https://www.undp.org/sites/g/files/zskgke326/files/migration/asia_pacific_rbap/RBAP-HDR-2010-APHDR-CC-Consultation-Asia.pdf)

Upadhyay, P. (2020). Climate change adaptation in mountain community of Mustang district, Nepal. *The NEHU Journal*, 29.

[https://nehu.ac.in/public/uploads/The\\_NEHU\\_Journal\\_Vol\\_VIII\\_No\\_2-38-49.pdf](https://nehu.ac.in/public/uploads/The_NEHU_Journal_Vol_VIII_No_2-38-49.pdf)

Wester, P., Mishra, A., Mukherji, A., & Shrestha, A. B. (Eds.). (2019). *The Hindu Kush Himalaya assessment: Mountains, climate change, sustainability and people*. Springer Open. <https://link.springer.com/book/10.1007/978-3-319-92288-1>