

## ENVIRONMENT, CULTURE AND REMOTENESS IN ISOLATED REGIONS OF NEPAL

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### Abstract

In this paper research and findings are presented and discussed in relation to themes of environment, culture and remoteness in Nepal. The research clearly illustrates that due to isolation there are a number of compounding factors that, although possibly similar to other areas in Nepal, are particular to the specific remote location. Themes have emerged from the data during the process of coding and analysis of participants' narratives and field observation notes; and, through the use of the methodological approach of grounded theory.

The environment of the area is presented in relation to the geographic isolation of the research location, the matters of terrain and transport, and the influence of climate on the location. These environmental issues have helped craft the unique economy of the area with its subsistence farming and seasonal migration which has significant impact on the locals. The socio-cultural aspects of the local ethnicity and the influence and demands on this community are presented.

Topography and climate combine to create a dynamic context which also makes its presence felt on the locals. The terrain makes the area not only isolated, but at times dangerous to traverse and locations difficult to access. Further, climate makes community buildings inhospitable especially in the winter months. Solutions to the geography, whether it be longer holidays, *chang*, subsistence farming or *kabela*, all affect the local population.

**Keywords:** Environment; Culture; Remoteness; Isolation; Nepal

### Introduction

Globally, mountain environments have a wide range of characteristics, but in general, they are characterised by their remoteness and the isolation of human settlements. This has led to a high level of self-sufficiency and, in some cases, a forced migration pattern. Markets are remote and government infrastructure is minimal. The mountainous terrain and slopes are steep, which presents a number of potential hazards (Whiteman, 1985).

The growing body of research suggests that the range of adaptation and coping mechanisms employed by poor people in developing countries is quite diverse, and that local-level research is essential for the successful implementation of development strategies (IPCC, 2007b). The mountain regions of the world are home to a variety of rural and remote settlements, which are often characterised as difficult to access, fragile, remote, and host to some of the most impoverished populations in the world (Messerli & Ives, 1997). Due to this, mountain development has been prioritised as a means of aiding mountain regions in their quest for sustainability, as outlined in Valenzuela (1988). This has had a significant impact on the character and functioning of rural communities in other less developed areas (Nepal, 2005; Pawson et al., 1984).

In Nepal, the development of remote settlements in the Everest region can be traced back to at least six factors: the historical migration of Sherpa communities from Tibet; the development of a local economy and service centres, such as the emergence of Namche Bazaar as a transit point during the era of trans-Himalayan trade; the arrival of mountaineers and trekkers, which

necessitated the development of a service-driven tourism industry; the seasonal migration of lowland people to the Everest region looking for employment in tourism; the emergence of selected centres like Namche Bazaar or Lukla as a tourism hub, taking advantage of the influx of government intervention in the provision of services, employment, and utilities (e.g. Sagarmatha National Park and the Khumbu Bijuli company); and the development of the main centre, Namche bazaar, which eventually generates new service centres on the expanding periphery (Nepal, 2005). The isolation of the area is marked by a lack of basic infrastructure, including access to roads, educational institutions, medical facilities, electricity and communications, inadequate services, and limited market access (Gentle & Maraseni, 2012). This paper will discuss the environment, culture, remoteness, and therefore, isolation of a small Himalayan village in the Everest (Chomolungma/Sagarmatha) region of Nepal. A review of the pertinent literature is made clear. This is followed by the explanations and justifications of the methodology utilised for the research. The Findings and Discussion are then presented and are followed by the Implications and Conclusions of the research.

## **Background**

### **Environment**

Rural communities in developing countries rely heavily on ecological resources and services, including water, land that can be cultivated, and forest products made from non-timber materials. Environmental resources and income generation activities play an essential role in rural livelihoods (Mamo et al., 2007; Mcelwee, 2008; Shackleton & Shackleton, 2004; Walelign, 2013). In general, these resources and activities typically support at least one of the four following functions in sustaining or enhancing rural livelihoods: Supply, which supports current year round household consumption needs; Season gap-fill, which covers income or consumption gap caused by seasonality of income generation activities; Safety net, which supports households in overcoming unexpected income loss or subsidizing consumption shortfall caused by unexpected shocks such as crop failure or high expenditures such as wedding, funeral expenses; Pathway out of poverty, which provides households with regular cash income to save and use to buy assets (Angelsen & Wunder, 2003; Cavendish, 2002). The impact of ecological resources and services on rural life can be quantified in terms of monetary resources and forms of environmental income in total household income accounting (Angelsen et al., 2014; Babulo et al., 2009). The ratio of environmental income to total household income shows the extent to which households rely on the environment. In general, rural households tend to rely more on the environment (Angelsen et al., 2014; Babulo et al., 2009; Vedeld et al., 2007; Walelign & Jiao, 2017; Walelign & Nielsen, 2013).

Nepal's economy is based on subsistence agriculture. More than 80% of Nepal's population live in rural areas and most of them rely on subsistence agriculture as their primary source of income (CBS, 2011). Subsistence agriculture is a type of agriculture that combines crops and livestock production with primitive technology on small plots of land under continuous land fragmentation. Per capita arable land has declined more than 50% since 1960, from 0.19 ha to 0.09 ha in 2010, making it one of the world's lowest (World Bank, 2015). The proportion of agricultural production in gross domestic product has been steadily declining over time. In 2010, the ratio of non-agricultural income to total revenue was approximately 54% (CBS, 2011). Recent research has indicated that livelihoods are undergoing a period of rapid socio-economic transformation (Barnett et al., 2005; Chaudhary et al., 2007). In addition, there has also been a steady decline in agricultural activity (Aase et al., 2010; Bhandari, 2013; Khanal & Watanabe, 2006; Paudel et al., 2014) signalling a generational shift where more and more people are moving away from agriculture or pursuing various non-agricultural income options concurrently (Gautam & Andersen, 2016).

On the face of it communities with limited knowledge, limited assets and lack of external support are struggling to adjust to their changing environment. Traditionally, adaptation of agricultural production consisted of crop diversification and drought resistant crop selection. These responses were self-organising, short-term and ad hoc. The local community requires immediate support in the areas of crop diversity, water harvesting and sustainability of natural resources. As new crop varieties failed, there was a need for agriculture and natural resources research to gain a better understanding, testing and adoption of new technologies, methods, and services (Gentle & Maraseni, 2012).

### **Culture**

Nepali culture is renowned for its diversity; however, many parts of the country are characterised by the prevalence of hierarchical structures which are based on caste and kinship, and which are present in almost all interpersonal relations. In rural Nepali village life, one of the most significant characteristics of hierarchy is the presence and expression of interdependence between individuals and groups (Sharma, 1978). This interconnectedness is not only demonstrated in a variety of ideological and ceremonial contexts (Stone, 1983), but also from an economic perspective. For instance, caste and kinship systems determine how and where goods and services are distributed and exchanged. In many contexts, including non-caste and non-kin contexts, one's access to desirable goods and services is highly contingent upon one's capacity to establish, sustain, or manipulate one's place within a larger social structure. Thus, contrary to a view in which personal autonomy, individual initiative, and self-sufficiency are viewed as tools to obtain access to resources, goods and prospects, there is a broad cultural appreciation of and value for mutual dependencies, human connections, and regulated exchanges among individuals and groups (Stone, 1989).

### **Remoteness**

Remote location has a significant impact on human and economic well-being. Jalan refers to a 'geographical poverty trap' where lack of access perpetuates poverty (Jalan, et al., 2002). For instance, several case studies, such as Bird et al., (2002), point out that chronic poverty is most common in rural areas that are isolated by land and/or environment. This is especially true in South Asia where, according to the United Nations Development Programme's (UNDP) Human Development Report 2016, 64% of the world's population experiences multidimensional poverty in rural areas (compared to 25% in urban areas) compared to 29% in India and 11% in the rest of the world. In India, every additional 10 km distance from a town reduces average earnings by 3.2% (Asher et al., 2016). For instance, several case studies, such as Bird et al., (2002), point out that chronic poverty is most common in rural areas that are isolated by land and/or environment. This is especially true in South Asia where, according to the United Nations Development Programme's (UNDP) Human Development Report 2016, 64% of the world's population experiences multidimensional poverty in rural areas (compared to 25% in urban areas), compared to 29% in India and 11% in the rest of the world (Ray & Ebener, 2008). As a result, many public health investigators and practitioners use travel times to evaluate the effect of accessibility on healthcare use (Banick & Kawasoe, 2019; Buor, 2003; Van Hemelrijck et al., 2009).

### **Methodology**

The contribution to the knowledge of remoteness in Nepal through the exploration of the villagers' perspectives has been achieved through the use of grounded theory as advocated by Charmaz (2006). This methodology provides "systematic, yet flexible guidelines for collecting and analysing qualitative data to construct theories 'grounded' in the data themselves"

(Charmaz, 2006, p. 2). Importantly, in the case of this research, it is not about testing hypotheses about reality, but rather, about generating statements about how the villagers interpret reality.

In a grounded theoretical approach, the researcher is not the “objective analyst of subjects’ experiences”, but rather a partner and co-constructor of meaning (Charmaz, 2006; Mills, Bonner & Francis, 2006, p. 12). Mills, Bonner and Francis (2006) contend that:

Ontologically relativist and epistemologically subjectivist, ... grounded theory overtly reshapes the interactive relationship between researcher and participants in the research process and in doing so brings the centrality of the researcher as author to the methodological forefront (p. 9).

The research location was chosen due to its isolation. Access to the area is highly limited, with the research location, accessible only by 20-hour bus ride, or alternatively, an aeroplane flight from Kathmandu. The only form of transportation north of the area is a four-hour jeep ride through very rough terrain, from which the nearest villages in the research region are a 1-2 day walk away, with the most remote areas requiring a further 3-5 days of walking. Despite the relatively short distances in kilometres, the mountainous terrain slows down travel (see Banick & Kawasoe, 2019).

A total of eighteen villagers from a remote and isolated area in northeastern Nepal were interviewed. The participants had resided and worked in the area for a minimum of four and a maximum of thirty years prior to the data collection period. The researchers were not known to the participants prior to the interview. Instead, the participants chose to participate in the research when they first encountered the researcher at the research location. All participants were provided with an information sheet in both English and Nepali. All participants were also asked for their consent to participate in the research. All happily agreed.

The data was obtained through interviews, field notes and observations. The interviews were conducted individually, but in two cases, group interviews were conducted. In these cases, participants spontaneously asked to be interviewed as a group. The data was securely stored. Due to the remote location and the risk of loss or failure of recording devices due to natural disasters or power outages, voice data collected from interviews were recorded on two different recording devices. Once the researcher returned to Kathmandu (the capital of Nepal), the interview audio was downloaded and securely stored on a designated computer and an internet server in accordance with university ethical guidelines. Due to the remote location of the research site, access to participants was restricted to a three-week period of data collection only.

The interviews were conducted in the Nepali language because the interviewer was fluent in Nepali. As a result, a translator was not required, and fieldnotes were written directly into Nepali. For all but three of the participants, Nepali was their second language. They felt comfortable sharing their experiences in this language. The fieldnotes were also checked three times for authenticity, and then transliterated into English. Audio data was transcribed by a third-party translation service. Both sets of translations and notes were cross-referenced, evaluated and edited as needed. This process, while time consuming and costly, helped to ensure that the interviewees’ voices were authentic in the English transcriptions. It also served as a valuable tool to engage with the data and the voices of the participants more fully.

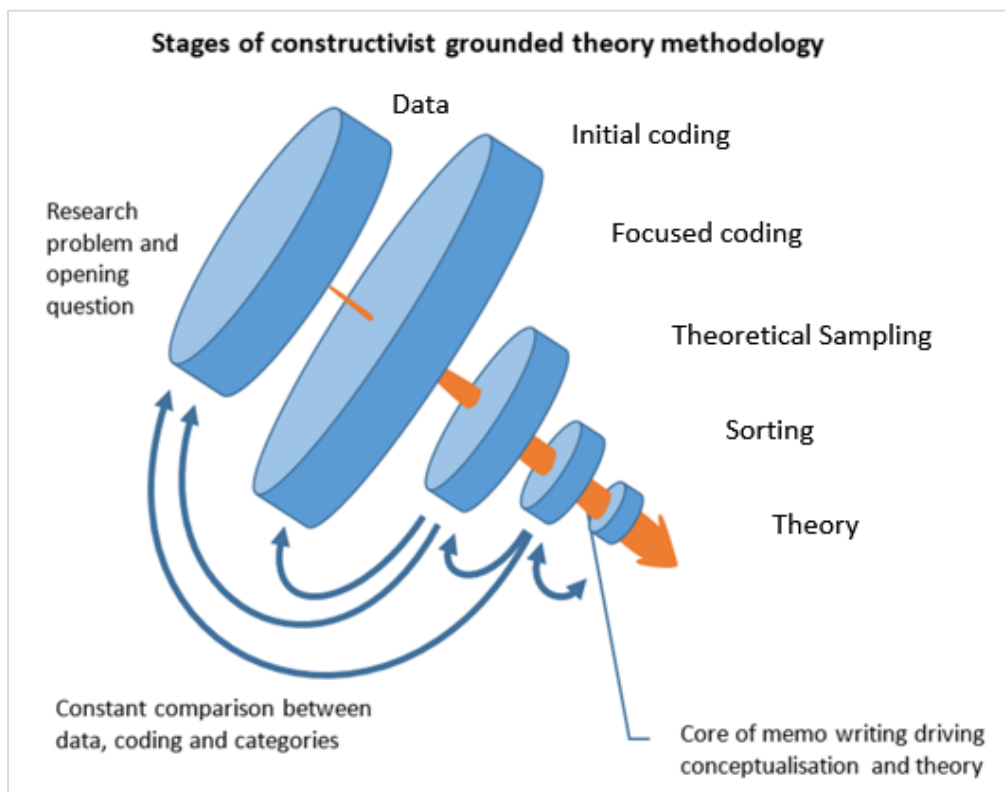
Fieldnotes were taken captured to provide an understanding of the remote context as interviews alone did not provide sufficient data. Fieldnotes are designed to place qualitative studies in a larger social and temporal context (Phillippi & Lauderdale, 2017, p. 381). This is

due to the fact that events can only be understood when they are seen in the context of larger social and historical contexts (Bryman, 1988, p. 64 Byrant, 2015). These notes were intended to provide an overview of the research context. Furthermore, attempts were made to collect observational data regarding the geographical setting (e.g., terrain, climate, trails, economic activity, physical condition, cost of living, etc.), as well as photographs of terrain, trails and paths. To avoid any potential third-party identification of the area and participants, no visual records of the participants were kept.

The interview and observational data were analysed using the grounded theory approach of initial and focused coding (see Figure 1 below). This approach is supported by Charmaz (2006) in her constructivist formulation of grounded theory. Cho and Lee (2014) succinctly summarised the approach as follows: “In Charmaz’s (2006) coding process, initial coding is similar to open coding, during which the researcher develops categories of information. Focused coding is a process designed to narrow initial codes down to frequent and important codes” (p. 8). Throughout this process, memo writing is used to define codes, but more and more, it is also used to define categorisations, the conceptual components of theory (Charmaz, 2006).

Constant comparison was used in the data analysis. Constant comparison is “a method of analysis that generates successively more abstract concepts and theories through inductive processes of comparing data with data, data with category, category with category, and category with concept” (Charmaz, 2006, p. 187). The concept of constant comparison is not one that is applied at a specific point in the data analysis process, but rather throughout the entire process. It is both a means of aiding conceptualisation and a means of controlling and limiting conceptual inferences made due to researcher bias. (Charmaz, 2006).

**Figure 1.** Visual Representation of Grounded Theory Analysis



**Source:** Developed for the research

Ethical considerations limited the researchers' ability to identify the people as a community; however, they are referred to as participants and have names, and although their faces are absent and invisible in these words, every effort has been made to ensure their voices are heard from their 'isolated' location.

## Findings and Discussion

### Environment

Typography and climate combine to create a dynamic context which also makes its presence felt on the local inhabitants. The terrain makes the area not only isolated, but at times dangerous to traverse and locations difficult to access. Further, climate makes community buildings inhospitable especially in the winter months. Two solutions the community use are *Chang* and *Kabela*.

### Chang

There are subtle climatic influences on the community, such as in the use of *Chang*. *Chang* is a millet or wheat-based alcohol drunk by most of the population in the research location, including children, to stave off the cold in the winter months. Especially in the colder months, children and infants as young as three months are given *Chang*. *Chang* is also often called Tongba (Tibetan name).

While debating the issues of the effects of *Chang*, *Chang* has a nutritional value that is important to the malnourished families in the area. There is, however, very clear research to show the negative effects of alcohol on childhood development, on liver function, cognitive ability, and increasing the chance of alcoholism (Newbury-Birch et al., 2009; McLean & McDougall, 2014). *Chang* is also used for cultural purposes in all ceremonies and official occasions.

Interviewee 14, speaking about the positive impact the community could have on encouraging locals not to be drunk, discloses that:

*"If there were educated people then they could teach about abstaining from drinking wine and alcohol and being on time to [work]. But the society is just the opposite, therefore it isn't possible to field [quality workers]"*.

Interviewee 14 described this acceptance of alcohol misuse as a cultural or 'social factor' impinging on conduct.

### Kabela

The local participants have adopted a culture of migration southward to lower areas and warmer climates in the winter months. This migration is referred to as *Kabela*, which is partly due to the cold weather, but also a form of economic activity. According to the Tegu language, *Kabela* is defined as a Bill of Sale or a Grant. The Telugu language is one of the languages spoken in Andhra Pradesh and is spoken by more than 75 million people worldwide. It is the second most spoken language in India after Hindi and is considered by linguists to be Dravidian in origin. Therefore, *Kabela* and its meaning have originated from trade interactions with other groups in India.

Participant 6 describes that:

*“... before, about 90% would migrate during the months of January and February”.*

Participants explained that long winter months mean crops are unable to be planted from November to March; therefore, participants must either purchase or store food or find other means to exist in winter. During the warmer months the ‘local ethnicity’ grows, gathers or prepares *chirpi* (Chirpi is also known as Chhurpi or Durkha, and is an indigenous fermented milk based pale-yellow cheese that is typically made within the mountain region of Nepal), medicinal herbs, spices and incense to trade in the south. Traditionally, as winter arrives, whole households board up their homes and migrate south, only to return just before Spring.

## Culture

It must be noted that *kabela* or even the use of *chang* are not simply decisions made by people, but are embedded in cultural behaviour, historical practice and sustained adaption to the local environment.

The term culture can be confusing. Spencer-Oatey (2008) a thinker on inter-cultural pragmatism, defines culture as:

*... a fuzzy set of basic assumptions and values, orientations to life, beliefs, policies, procedures and behavioural conventions that are shared by a group of people, and that influence (but do not determine) each member’s behaviour and his/her interpretations of the ‘meaning’ of other people’s behaviour.* (Spencer-Oatley, 2008, p. 3)

Therefore, culture can refer to an ethnicity or a group of people or even an organisational culture like a school. Culture is dynamic, not only in terms of social interactions within a culture, but also in terms of the social environment in which people live; and how they interact with other cultures.

The culture of the participant area is characterised by an economy that is limited to seasonal migration and subsistence agriculture. In this economy, the entire community is employed, including children and locals. As participants explain, the seasonal peak periods of planting and harvesting necessitate a significant amount of labour, which impacts the attendance of children at school and prevents others from undertaking any other forms of labour.

In a subsistence economy where time equates to food on the table, time is evaluated against economic need. Interviewee 3, talking about local villagers, states that:

*“The people in this area aren’t at ease. In order to eat a single daily meal they must work all day long. If they rest for even an hour, they begin to get anxious”.*

As a result, Interviewee 15 explains that students:

*“[ ... in their spare time] in the morning and evening, have to work”.*

Interviewee 17 confirms this, saying:

*“The village experience is a little like this—there they have to work more than schooling”.*

Interviewee 6, while stating that learning is affected by labour demands, explains that other workers are also affected by their own subsistence farming:

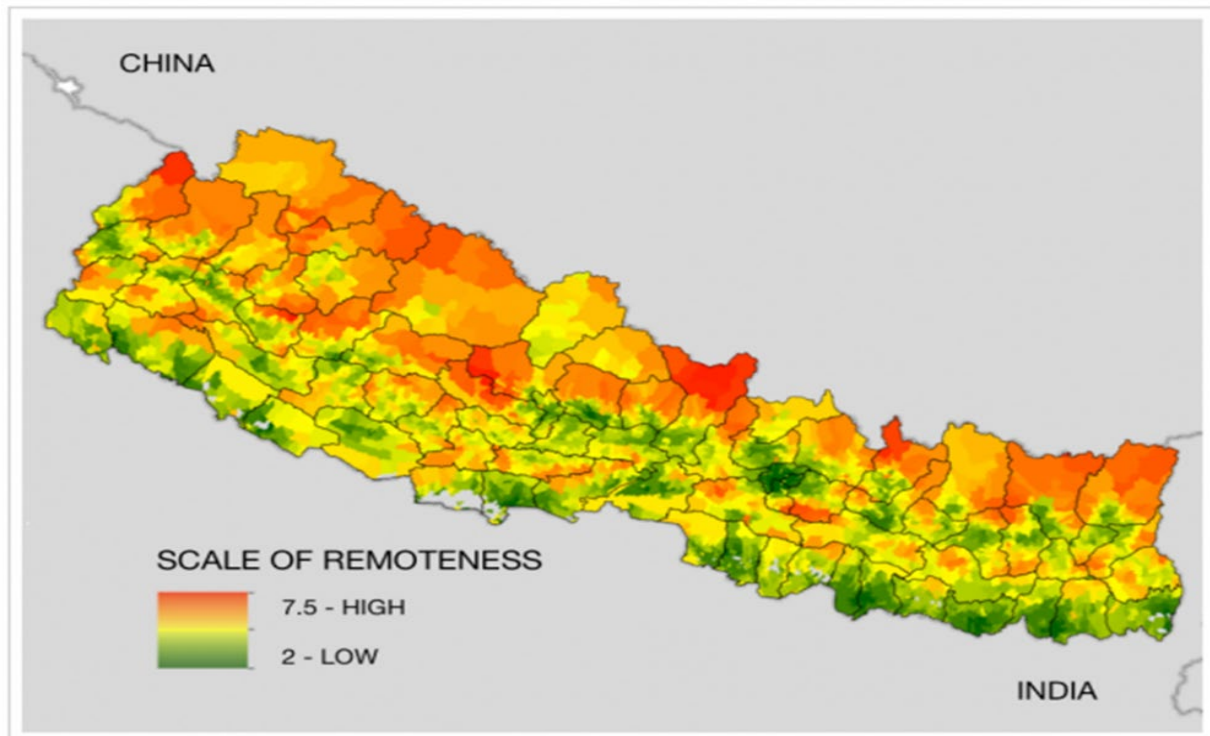
*“... as the month of Ashar [mid-June-July–summer in Nepal] arrives then the parents themselves ask for permission to let their children not attend [school] because they have to help in farming, shepherding, and helping in household work”.*

During the peak agricultural season, workers experience a heightened level of stress due to the potential for crop failure. This stress is exacerbated by the necessity to engage in economic activities away from their usual work, such as agriculture.

**Remoteness** (durgam chhetra bhaeko kaaranle) [being remote and being a remote area]

In most cases, the definition of remoteness refers to the distance a population is physically able to travel to centres of goods and markets and, as a result, as the opposite and inverse to those centres. Remote areas are sparsely populated locations that have very restricted accessibility to goods, services and socio-political engagement (see Bird, et al., 2002). In Nepal, restricted access is characterised by physical distances measured in time needed to travel to the District Headquarters or other major urban service centres and by social exclusion which also distances people from access to public services.

**Figure 2:** Dempsey’s Scale of Remoteness in Nepal



**Source:** Dempsey (2016, N.P.)

In Nepal, the concept of remoteness is defined by Dempsey (2016), which focuses on measuring distance from roads, airports and district headquarters, slope and elevation, land cover, and presence of rivers. Figure 2 illustrates the highly remote nature of the northern mountain districts of Nepal. This scale is particularly useful as it does not measure distance in kilometres, but rather the time taken to get to service centres. The scale also considers geographical features, including mountain slopes, rivers, and vegetation (e.g. time taken to climb and



descend mountains or to cross a river). It is important to note that, due to the accessibility of airports and well-established road networks, some parts of the northern mountain regions are more accessible and therefore are not considered highly remote. The participants defined the physical nature of *being remote* in terms of three major aspects: terrain, transport and climate.

Participant 10 states that “*we risk our lives*”, “we put our lives at risk” due to the logistics of constructing temporary bridges over rivers and streams. The terrain is challenging in terms of the amount of time required to traverse it and is hazardous for those living with its geographical dangers. Furthermore, the participants report that the soil is infertile, lacks crop diversity, and necessitates significant labour and extensive fertilisation to produce satisfactory yields.

Due to the absence of transportation, physical accessibility to the area is limited, making it isolated and undeveloped. As participant 14 states:

*“If there would be transportation then other development would automatically come”.*

Participant 3 concurs with the notion that their locality is characterised by backwardness and poverty:

*“harik kuraamaa pechaDi ekar hunalai”* [in everything fallen behind].

The mountainous landscape has limited road infrastructure, which has contributed to the enduring remoteness of the area. Until recently, all goods have been transported solely by porters or the owners of the goods, which is a laborious and time-consuming process that adds to the cost of goods. Participant 3 continues:

*“In order to bring salt, they have to go by foot on these sorts of trails for 5 days to [name of District Headquarters] and then back”.*

Over the past few years, mule trains have also been used to transport heavy goods like [essential commodities] and to save time away from “Roads End”. However, remote life is still defined by distance and time. For some, even going to a meeting can involve a 4-hour return walk. These themes of seclusion and isolation are prevalent not only within the region's infrastructure and development, but also within the narratives and experiences of participants.

### **Implications and Conclusions**

This research has provided insight into the concept of remoteness in Nepal by examining the experiences and attitudes of a inhabitants of a small village in a particular remote area of northeastern Nepal. The aim was to gain a better understanding of the concept of remoteness by examining the perspectives of this group of individuals, and ultimately to develop a theory that accurately describes and elucidates the attitudes and beliefs of these remote dwellers. The transformation of rural areas and landscapes has been extensively discussed. It is widely accepted that the growth of settlements in remote mountain areas is dependent on their dynamic economic, social, cultural and geographical conditions. The size, purpose and design of remote mountain settlements are the result of the physical, sociological, economic and political conditions. Changes in human populations, the emergence of economic alternatives and the connection of the local economy to the wider world all contribute to the development of mountain settlements (Nepal, 2005).

Remote villages, not only in the Himalayas, but also in the rest of the world, are changing drastically in terms of their size, features, functions and geographical spread as a result of

tourism development (Nepal, 2005). Today, however, the area is economically better off, thanks in part to the cash crop of cardamom and migratory work, and now only approximately 50–60 percent of the community makes the traditional journey south. The figure of 50–60 percent of population seasonal migration was gathered from discussions with community members while in the area; and participant 6's interview data.

*Being remote* is a finding that explains the aspects of the phenomena of the remote; the existent state of the 'remote' defined by its geography, economy and culture. It is a state that is shaped and defined by the rhythm of life regarding subsistence livelihoods, the *going and coming*, the concepts of future. While it is geographic, it is also a mental state of mind; one sees local identity shaped not only by perceptions of place, and ethnicity but also by broader pervasive concepts of modernity and development that are characterised by their absence.

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