

The Raute Community and the Challenges to Maintain their Indigenous Ecological
Knowledge and Practice

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Knowledge and Practice

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List of Acronyms

ADB	Asia Development Bank
BBC	British Broadcasting Company
CBS	Central Bureau of Statistics
CFUG	Community Forest User Group
CEDA	Centre for Economic Development and Administration
ICARRD	International Conference on Agrarian Reform and Rural Development
INGO	International Non-Government Organization
IWGIA	International Work Group For Indigenous Affair
IK	Indigenous Knowledge
NEFDIN	National Foundation for Development of Indigenous Nationalities
ILO	International Labour Organization
NEFIN	Nepal Federation of Indigenous Nationalities
NGO	Non-Government Organization
INGO	International Non-Governmental Organization
PMO	Prime Minister's Office
UNDP	United Nation Development Program
UNICEF	United Nation International Children Emergency Fund
VDC	Village Development Committee

Glossary

Nepalese	English
Akashbeli	Dodder
Amala	Gooseberry
Ban devi	Forest goddess of wealth
Ban jhakri	Forest god
Barro	Sweet flag calamus
Uttis	Cedar
Salla	Pine tree
Hande	A small but very hard thorny bush
Bhyakur	Deltoid yam
Ciraito	Chireta
Harro	Chebulie
Hasiya	Sickle
Halhale	Curly doek
Jamun	Black plum
Tiju	Indian persimmon
Kafal	Bayberry
Niguro	Fiddlehead fern
Skus	A kind of green vegetable like gourd
Tuni	Cedrella tree

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Abstract

Among 59 indigenous groups in Nepal, the Raute continue to subsist on seasonal forest-based harvesting activities although they have faced many obstacles to their cultural survival. They have strongly disliked modern amenities and stayed away from modern influence. According to the Census data in 1992 and 2015, the population of the Raute rapidly decreased from 2,878 to 140. Even though many researches have studied about the Raute, no clear explanation has been offered about this rapid decline of the Raute. Nor have they suggested any political actions that might restore the population. In light of these concerns, this study identified the current population of the Raute. Contrary to the Census, this study found that the Raute population has not changed.

This study also analyzed the knowledge of the Raute community about biodiversity conservation in the forest. The spatial and temporal availability of plant resources require the Raute to move extensively throughout their traditional territory. It clarified that Raute women take advantage of their broad knowledge about forest ecosystems in collecting wide varieties of edible plants.

Furthermore, the study recommends that the government of Nepal and NGOs encourage the Raute people to participate in forest management projects such as CFUGs that promote alternative economic and livelihood opportunities for the Raute as they face a number of challenges such as deforestation, climate change, displacement, and the encroachment of settler population into their traditional territory. Raute knowledge should be helpful for the biodiversity conservation of the Nepalese forest.

Keywords: Population, Biodiversity, Indigenous knowledge, Forest Resources

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Chapter 1: Introduction

1.1. Background

Many researchers have argued that Indigenous peoples have contributed to the conservation of biodiversity. This argument is based on the understanding that Indigenous knowledge is the body of information that has developed over time in adaptation to the forest environment. Their knowledge has played the vital role in sustaining forest resources and forest-ecosystems. It has been the vital elements of maintaining their livelihoods (Cunningham 1991). In addition, there is a growing consensus that biodiversity conservation is most effective with the engagement of local communities and Indigenous peoples (Chernala 1989; Becker and Ostrom 1995; Nabhan 1997; Becker and Leon 2000).

Due to the colonial suppression and the influence of modernization, many forest people have lost their livelihood. Agricultural lands have increasingly encroached the forests in the twentieth century. Many Indigenous peoples were removed from traditional territories and experienced population decline (Panter, et al. 2003). The Raute in Nepal, the main focus of this dissertation, have faced the problems of deforestation, land encroachment by the mainstream society, and cultural/political marginalization (Fortier 2009; Bista 1976; Singh 1998; Luintel 1998; Bhattachan 2005; Gurung, et al. 2014).

When I was an undergraduate student in Nepal, I often heard about the Raute through the media. At that time I did not know about the importance of human knowledge to conserve the forest, but their forest livelihood fascinated me. I wanted to study these people. This dream came true when I entered the University of Tsukuba and took classes in environment ethics and community forest management. However, I already followed my previous supervisor's advice in choosing my topic on water and public health, which is also salient livelihood issue in my country.

Many Nepalese believe that Indigenous knowledge and technology provide a means to mitigate environmental problems partly because of the common notion that modern technology is not as reliable as it appeared in advertisement. For example, a few years after Nepal introduced the pipeline system to distribute water with the promise of steady water supplies for the long run, it failed and people faced water shortage. People then depended on traditional water resources such as springs and wells. In my master's thesis, I analyzed the historical water supply system to find out the reason why the development of the municipal

water system (modern system) did not work well, and how the traditional water supply system plays roles in water supplies.

Before starting my doctoral study, I read articles, journals and books and also watched videos related the Raute to learn more about them. Most sources emphasized that the population of the Raute declined. Even the National Population Census, the Centre for Economic Development and Administration (CEDA) and other scholars' studies said that the Raute were vanishing soon.

As I carefully examined all these available studies on the Raute population, these studies present different numbers even though they are based on field researches in the same year. This discrepancy made me become more curious to find out about the true Raute population. Otherwise, I wanted to know how they survive in the forest in this modern era. Is there any modern influence on them? What kinds of challenges do they face?

1.2. Research Objectives

The Rautes are often called “the lord of forest” because of their in-depth knowledge of using forest resources. In this study, I attempt to find out what knowledge about forests they hold in conserving the forest and its biodiversity. In addition, my study attempts to identify the main reasons behind the claim that their population has rapidly declined. In order to achieve these objectives, I attempted to answer the following questions:

- What knowledge do the Raute have about biodiversity conservation (chapter 4)
- Why did the rapid decline of the population happen (chapter 5)
- What are challenges they face to maintain their identity (chapters 3, 4 and 5)
- How can we protect this unique community (chapter 6)

1.3. The Significance of Studying the Raute

Traditionally the Raute totally depended on forest resources. They moved from one place to another for harvesting purposes. Although the Raute are known for killing monkeys in the forest for consumption, they normally do not cause harm to animal species (Fortier 2009). Within the regional and seasonal cycles of mountain ecosystems, the Raute people play important roles in maintaining ecological balance and biodiversity.

I believe that my study on the Raute and their traditional knowledge will help (1) better understand the process of maintaining ethnic identity in fighting against rapid modernization influence. It will also help (2) share information with the wider academic community about the distinctive conservation methods of biodiversity in the Himalayan region. This study (3) shed some important light on how Raute knowledge of the local

environment plays key roles in conserving mountain ecosystems. In a larger context, my study will help (4) better understand the linkage between ecological biodiversity and sustainability policies as well as cultural survival.

1.4. Methodology

This qualitative research is mainly based on documentary evidence and fieldwork. In undertaking the latter, discussions and consultations were made while taking in-depth interviews with different experts and scholars who have worked on the Raute. I applied the participant observation method to illustrate Raute's communal knowledge networks regarding watershed biodiversity in the forests.

From April 2014 through March 2015, I collected secondary data and have selected the study area after consultation with some experts in Nepal. In February 2015, I conducted my preliminary field research in Nepal for about one month in order to collect information and meet some experts of the Raute. In October 2015, I conducted the primary data collection survey among the Raute in Rakam village of Dailekh District. I took in-depth interviews with the Raute about their knowledge on biodiversity and observed their daily activities from October 6 to 21.

Government documents, especially those from the Central Bureau of Statistics and the Bureau of Statistic, Nepal, form the basis of the Raute population estimate. Chapters 1 and 2 mainly rely on academic journals, academic books. Some reports by some national and international organizations such as the National Foundation for Development of Indigenous Nationalities (NFDIN), Asia Development Bank (ADB), and the United Nations Working Group for Indigenous Affairs (IWAGI), and the International Conference on Agrarian Reform and Rural Development (ICARRD).

1.5. Literature Review

I reviewed available literature in two phases: before and after the field visits in October 2015. This framework helped carefully examine and re-examine publications Raute conservation activities. 'Yogi' Narhari Nath conducted the earliest scholarly work on the Raute in 1955. His publication mainly gave introductory information about the Raute.

After the 1970s, a number of anthropological studies revealed Raute lifestyles. Reinhard (1974), in "The Raute: Notes On A Nomadic Hunting And Gathering Tribe Of Nepal," described the socio-economic status of the Raute. This publication of fieldwork was followed by Bista (1976), Purna (1983), and Gautam and Thapa-Magar (1994).

Researchers began to focus on biodiversity research in the late 1990s. Singh (1997) published “The Endangered Raute Tribe: Ethnobiology And Biodiversity” to document the ethnography of the “endangered” Raute community. This notion of the Raute continued to a more recent study (Oli 2005). The study by Singh documented plants and animals used by the Rautes in the Mid-and Far-Western Development Regions of Nepal. In total, he recorded 48 species of animals and 188 species of plants. Manandhar (1998) wrote about herbal/medicinal plants by the Raute tribe in two villages, Aampani and Rajaura of Dadeldhura District. In total 47 species plant species, including one species of pteridophyte, four monocotyledons and 42 dicotyledons, and 17 types of diseases treated, were identified.

Posey and Dutfield (1997) wrote *Indigenous Peoples And Sustainability: Case And Actions To Alert The Conservation And Development Communities* to emphasize the importance of involving Indigenous peoples in sustainable development strategies.

Luintel (1998) wrote *The Nomadic Raute: A Sociological Study* to examine the social life of the Raute. The study shows very detailed information of the Raute community, their relationship with the local people, their culture and with nature. NFDIN (2008) published the report, a “Study Of Sustainable Biodiversity Conservation: Knowledge Of Indigenous Communities In Nepal,” and analyzed the existing national and international policies pertinent to Indigenous communities and biodiversity conservation.

In *Kings of the Forest: The Cultural Resilience of Himalayan Hunter-Gatherers (2009)*, Fortier discusses the culture of the Raute people. It contains the very detailed and important information about the history of the Raute, their livelihood in the forest. Shahu (2014) examined the reciprocity and sharing practices between the Raute and sedentary people such as farmers, artisans and pastoralists. This study highlighted how mutual trust, agreements, and generosity contributed to reciprocity and how sharing practices are based on mobility, kinship ties, rituals and occasions.

Similarly, Karki (2012) published *The Rautes On The Border Line*. It depicts Raute people by carefully selecting available information. He examined all previous studies and compared them with his own experience with the Raute. He criticized the fabricated publications on the Raute. He also emphasized the urgent requirements of strong law and order to improve the livelihoods of the Raute and prohibit such unscientific studies.

Gurung, et al. (2014) wrote *Raute Of Nepal* to give the ethnographic account of the sedentary and nomadic Raute. The study is based on primary data collection from observation, key informant interviews, focus group discussions and by listening to individual stories and

life histories. The study recommends that the Nepalese government allow the nomadic Raute to have an unfettered access to their traditional areas and also provide enough support to the sedentary Raute to live a dignified life.

Apart from ethnographical studies, some researchers have provided information about the impact of environmental changes to the Raute. Gautam carried out researches on “Deforestation in Nepal” (2012) and “Forms and Patterns in Nomadic settlements” (2014) to analyze the deforestation and forest degradation ratio of Nepal and the settlement in different bases of the nomadic Rautes in the Mid- and Far-Western Development Region of Nepal. Thakur (2014) examined the “Impacts Of Climate Change On The Livelihoods Of Raute Community And Its Associated Biodiversity Of Mid-Western Region Of Nepal.” It shed light on the status of livelihoods, culture and biodiversity resources of the Raute Community, their perception towards the impact of climate change on their livelihoods and biodiversity resources.

Overall, these studies provided information about the socio-economy, culture, and human geography of the Raute community. They also demonstrated the importance of Indigenous knowledge for biodiversity conservation.

However, unfortunately, none of these studies mentioned clearly how the Raute community is using their knowledge to conserve forest biodiversity and sustain their livelihoods. Moreover, these studies also have not clarified the reason behind the rapid population decline of the Raute community and their current challenges. In addition, ideas are not clear how we can protect this unique ethnic tribe. Thus, this thesis attempts to fill out some of these gaps.

1.6. The structure of the Thesis

The thesis has six chapters. The second chapter discusses the relationship between the Raute people and biodiversity conservation. The third chapter discusses the policies for the indigenous peoples in Nepal and the impact of those policies on the Raute livelihoods. The chapter comprises the current challenges of the Raute to maintain their livelihoods. The fourth chapter explains about the Indigenous ecological knowledge and practice of the Raute women. This chapter illustrates the knowledge of Raute women about biodiversity. It examines how these women use the knowledge in daily activities. The fifth chapter clarifies the reasons behind the rapid population decline of the Raute population. The final chapter recommends some ways to improve, the conservation of biodiversity by encouraging the participation of the Raute people.

Chapter 2: Biodiversity and Indigenous People

Nepal is endowed with rich biological and cultural diversity. For Nepalese, biodiversity is an important part of culture and the sustainable livelihoods. Many species have religious values and are the source of food, fiber, shelter and medicine (Parajuli 1999). Indigenous knowledge (IK) contains rich information about the conservation and use of biodiversity. IK on biodiversity is stored in people's memories and activities and is expressed in stories, songs, folklore, proverbs, dances, myths, cultural values, beliefs, rituals, customary laws, agricultural practices and others (Grenier 1998).

The Raute people are called the lord of forest because of their in-depth knowledge of using forest resources. They are one of the most traditional Indigenous groups of Nepal with unique culture that has been sustained for generations. For them forests is integral part of the Raute life and identity from birth to death. Forests provide them with woods and foods, but their livelihood has been threatened by deforestation and the depletion of natural resources such as water, fruits, and green plants (Fortier 2009).

This chapter examines the interconnection between biodiversity and the Indigenous people in Nepal so that the reader understands the roles of Indigenous knowledge for forest biodiversity conservation in Nepal. This chapter also traces the history of Indigenous peoples in Nepal to better understand the current status of Nepalese Indigenous peoples. This historical examination is especially helpful to analyze the reasons behind the socio-political marginalization of the Raute people in Nepalese society.

2.1. Forest Biodiversity and Management in Nepal

Biological diversity or biodiversity encompasses variety of life forms: plants, animals and microorganisms, genes and the ecosystems. Human beings are entirely dependent on biodiversity as we derive all our foods, medicines and various industrial products from the wild and domesticated components of biodiversity. People living in rural areas of developing countries rely heavily on biodiversity for their livelihood (Allen and Hoekstra 1992).

Even though Nepal covers only about 0.1% of the earth's landmass, it is ranked at the twenty-sixth in the world and the eleventh in Asia in terms of biological diversity richness. This richness is attributed to diverse bio geographical features and climatic conditions, ranging from lush moist forests and sparse alpine deserts to luxurious grasslands in lowland plains (Dobremez 1976). Nepal is in the meeting point of six provinces of Asia, namely Sino-

Japanese, South-East Asian, Indian, African-Asian Desert, Irano-Turanean and Asiatic province. It lies between the Oriental realm and the Paleo-arctic realm and the altitude variation is between 63 m above sea level at Kechana Kalan, Jhapa in the southeastern plains to the highest peak in the world, Mount Everest at 8848 m. The diverse climatic conditions and the variation of altitudes have made Nepal suitable to harbor all types of forests found in the world (Joshi 2005).

Nepal has about 4.27 million hectares of forests (about 29% of total land area), 1.5 million hectares of scrubland and degraded forest (10.6%), 1.7 million hectares of grassland (12%), 3 million hectares of farmland (21%) and about 1 million hectares of uncultivated land (7%). Its forests contains very diverse flora with 35 forest types (Stainton 1972). The types of these forests are categorized into ten major groups: tropical, sub-tropical broad-leaved, subtropical conifer, lower temperate broad-leaved, lower temperate mixed broad-leaved, upper temperate broad-leaved, upper temperate mixed broad-leaved, temperate coniferous, sub-alpine and alpine scrub forests (Chaudhary 2000).

Forests are legally categorized into national forests and private forests in Nepal. The national forest includes government-managed forests, protected forests, community forests, leasehold forests and religious forests. In community forests and leasehold forests, only the usufruct right has been given to the users.

However, because of social, economic, and political activities, along with global climate change, a number of species of flora and fauna is on the verge of extinction. Over-cutting of wood for fuel and construction, and heavy logging of trees for fodder and fire are the main causes of biodiversity loss. In the period between 1978/79 and 1994, the area of the national forest was reduced by an annual rate of 1.7 percent and shrub land increased by an annual rate of 8.4 percent. The area under agriculture and grassland remained more or less unchanged during the same period (LRMP 1986; DFRS/FRISP 1999).

Due to the deforestation and degradation, Nepal's forest cover decreased from about 60% in the 1960s to 29% in the 1990s. According to Adhikari, between 1964 and 1991, Nepal lost 570,000 hectares of natural forests, out of which 380,000 hectares were converted into agricultural land (Adhikari 2000).

Consequently, Nepal is also rich in tremendous socio-cultural diversities. It has 59 Indigenous communities mostly living in rural areas. They largely depend on agriculture and harvesting activities in the forests. Most of them suffer from biodiversity degradation through deforestation, climate change and others. Biodiversity loss is directly correlated to the erosion

of cultural diversity caused by the socio-politically assimilating forces and the exclusion of indigenous peoples from governmental and non-governmental initiatives in Nepal.

Among these 59 groups the Raute people are considered as an endangered Indigenous group. They are highly mobile people and travel 2,000-4,500 square miles each year between the Siwalik foothills and the Himalayan mountain range (CVN 2011). Forested areas in these regions consist of 37 to 50 percent. Since 1978 to 1990, deforestation has caused a rapid decline in forest coverage in the hills by about 2.3% (NFDIN 2003). Impacts of the deforestation and the depletion of natural resources such as water, fruits, and green plants have challenged the survival of the Raute people's distinctive traditional way of life (IUCN 2004; Thapa 2009).

Considering this grim situation, the significance of biodiversity in the national and global perspective, the following policy and legal instruments are available to conserve biodiversity in Nepal.

Constitution

- The Constitution of Kingdom of Nepal, 1990
- Interim Constitution, 2007
- Interim Constitution, 2015

Acts

- Aquatic Life Conservation Act, 1961
- National Parks and Wildlife Conservation Act, 1973
- Soil Conservation and Watershed Management Act, 1982
- Water Resources Act, 1992
- Forest Act, 1993
- Environment Protection Act, 1997

Rules

- Royal Chitwan National Parks Rules, 1974
- National Parks and Wildlife Protection Rules, 1974
- Wildlife Reserve Rules, 1977
- Himali National Parks Rules, 1980
- Forest Rules, 1995
- Conservation Areas Management Rules, 1996
- Buffer Zone Management Rules, 1996

- Environment Protection Rules, 1997
- Government Management on Conservation Areas Rules, 2000

Guidelines

- National Environmental Impact Assessment Guidelines, 1993
- EIA Guidelines for Industrial Sector, 1995
- EIA Guidelines for Forestry Sector, 1995
- Buffer Zone Management Guideline, 1999

Policy and Plan

- Nepal Environmental Policy and Action Plan: Integrating Environment and Development, 1993
- Nepal Agriculture Perspective Plan, 1995
- The Tenth Five-year Plan (1997-2002)

Strategies

- National Conservation Strategy, 1998
- Nepal Biodiversity Strategy, 2002
- Development of National Biodiversity Strategy and Action Plan (2014)

Moreover, Nepal has been the member of the International Union for Conservation of Nature and Natural Resources since 1956. It has ratified the Convention on Biological Diversity (CBD) and adopted the Mataatua Declaration on the Cultural and Intellectual Property Rights of Indigenous Peoples (1992). All these international legal frameworks are designed to ensure the conservation of biological diversity, the sustainable use of its components, and fair and equitable sharing of the benefits from biodiversity uses.

Furthermore, these international frameworks recognize that “the close and traditional dependence of many indigenous and local communities” on biological resources, and the outstanding knowledge about biodiversity that these communities hold. Despite the government’s commitment to these conventions so far there has not been a systematic approach to document and inventory IK on Biodiversity in Nepal (IUCN 2004).

2.2. A History of Indigenous Peoples in Nepal

In Nepal, 59 distinctive Indigenous peoples reside in different areas with the total population of about 8.4 million, which is about 37% of the Nepal’s total population (IWGIA 2008). About 86% of the country (NBS 2002) is covered by mountains, in which many of these Indigenous peoples live. Biological and cultural diversities in the Himalayas have coexisted.

Various plants have been the primary source of traditional medicine and health care for 70-80% of the mountain population. As most Nepalese Indigenous peoples live in remote areas and their livelihoods are directly related with resources such as forest/meadow resources, the sustainable management of biological resources has been imperative (ICIMOD 1994).

In Nepalese language, Indigenous peoples are known as *Aadibasi Janajatis* (indigenous nationalities). The National Foundation for Development of Indigenous Nationalities (NFDIN) Act of 2002 defines *Adivasi Janajati* as “communities that perceive themselves as distinct groups and have their own mother tongue, traditional culture, written and unwritten history, traditional homeland and geographical areas, and egalitarian social structures.” The NFDIN Act divides these 59 indigenous nationalities into five groups on the basis of literacy rate, housing unit, land holding, economic assets, education level and population size (NEFIN 2004).

Table 2.1. Category of Indigenous Nationalities of Nepal (NEFIN 2004).

Categorizations	Indigenous Peoples	Total Number
Endangered Group	Kusunda, Bankariya, Raute, Surel, Hayau, Raji, Kisan, Lepcha, Meche, Kusbadiya	10
Highly Marginalized Group	Majhi, Siyar, Lohmi, Thudam, Dhanuk, Chepang, Santhal, Jhangad, Thami, Bote Danuwar, Baramu	12
Marginalized Group	Sunuwar, Tharu, Tamang, Bhujel, Kumal, Rajbangshi, Gangaai, Dhimal, Bhote, Darai, Tajpuriya, Pahari, Topkegola, Dolpo, Fri, Mugal, Larke, Lohpa, Dura, Walung	20
Disadvantaged Group	Chhairotan, Tangbe, Tingaunle Thakali, Baragaunle, Marphali Thakali, Gurung, Magar, Rai, Limbu, Sherpa, Yakkha, Chhantyal, Jirel, Byansi, Yolmo	15
Advanced Group	Newar, Thakali	2

In Nepal, Indigenous peoples have been deprived of their economic, social, educational and political rights for a long time. Compared to the mainstream population,

Indigenous people have higher rates of infant mortality, unemployment, alcoholism, disease and incarceration. However, among the categorization of the Indigenous nationalities as shown in table 2.1; the advanced groups are at the verge of extinction of their distinct identity, some disadvantaged groups have managed to continue their Indigenous identity intact and others are losing it to some extent because of the influence from the dominant groups and modernization. The Raute people are the only nomadic people left in the country living in remote rural forest areas and rely on subsistence hunting and gathering (Bhattachan 2008).

This group is small in the population size 162 persons (Less than 0.1% of Nepal's population). Because of the imposition of the Nepali language as the only language for education (including literacy and basic and primary education), most of the Indigenous peoples are either illiterate or have less education. The literacy rate among the Indigenous peoples is 14 percent among the Chepang, while the Newar and Thakali are the highest with 61.0 and 62.6 percent respectively. The Rautes do not believe on education and never attended to the school any of them from their community (CBS 2003).

Because of the State's predatory land policies, such as Birta (the rulers gave ownership of land to individual Bahuns) and Jagir (land given in lieu of salary) and have the abolition of Kipat (communal/collective land ownership) land tenure system (Regmi 1977; 1978), all Indigenous peoples had lost ownership and control over their ancestral lands by the 1960s. The economic status of Indigenous peoples varies enormously from the Rautes who still make their livelihood through hunting and gathering, to the Newars and the Thakalis who are well advanced in commercial and industrial activities (Anaya 2009).

Among the categorizations of indigenous people, the Newars have relatively better living conditions and political influence. The Thakalis are also listed as an advantaged or well-off group but their representation in government is minimal. The Gender and Social Exclusion Assessment Team (GSEA of the World Bank) examined poverty outcomes among the excluded population in Nepal using indicators of economic wellbeing, human development levels and voice and political influence (NIRS 2006). GSEA shows that the Newars and the Thakalis have higher health indicators and life expectancy. Rural women of these groups also have the highest access to trained assistance during child delivery than other groups.

Unfortunately, due to the rejection of Raute people to utilize any kind of medical medicines and modern treatment in the Raute community, most of the women have suffered from the lack of maternal health care services during the period of maternity. They have often

deprived of having nourishing foods during post-partum, which becomes the main reasons of maternal child mortality (Silwal 2011).

According to the Nepal Human Development Report (2009), Indigenous peoples have both the highest and the lowest proportion below the poverty line: poverty characterized a lower proportion of the Newars (14%) than of other Indigenous peoples, whose rates fluctuate between 41% and 46%, significantly higher than the national average of 31%. Similarly, the human development index shows that the Newar have a higher HDI value (Above 0.6%) than that of the other Indigenous peoples (Bhattachan 2012).

Indigenous peoples have been excluded from mainstream politics and faced discrimination in workplaces and schools (Rai 2007). After the annexation by the Gorkha Kingdom under King Prithvi Narayan Shah in the second half of the eighteenth century, native groups have been forcibly assimilated into the mainstream Nepali language speakers with the Hindu cast system. Indigenous traditional cultures, social practices and institutions were forbidden. The Hindus, the special group of the Khas, the Bahaun, and the Chettri, have controlled the mainstream politics of the country. After the Gorkha Kingdom expansion ended or the territorial unification of Nepal under King Prithvinarayan Shah finished, his son Drabya Shah started a more radical movement called Hinduization or Aryaization.

The main motive of this movement was to change Nepal into a country of only one language (Nepali or Khas), one religion (Hindu) and one culture. For example, the King drove away the Newars of the Kathmandu Valley and forcibly tried to assimilate them. After him, this Hinduization policy continued. Many Tamangs, another Indigenous group, were killed in order to make them change their language and culture (Rai 2007).

Under the Rana Dynasty Regime (1846-1951), the forcible assimilation and discrimination of Indigenous peoples into Khas culture continued. In this era, Prime Minister Chandra Shamsar Rana gave order not to accept the Newars and the Madeshi into the Nepalese army force. Another Rana Prime Minister, Judha Shamsar Rana, imprisoned some Newars' politicians for twelve years because they criticized the regime in their own Indigenous language, Newari (Rai 2007).

After the fall of the Rana Regime in 1950, modern democratic Nepal emerged, but discrimination against Indigenous peoples did not end. Some policymakers proposed to create separate schools for Indigenous people to learn in their own languages at least at the primary level, but their proposal was rejected outright on the grounds that this proposal would hamper the one language policy as well as national unity and peace.

In 1958, Gwara Pradhan, a Newari, was imprisoned because he changed his religion from Hindu to Christianity, even after the democratic constitution was established in Nepal (Rai 2007). The multiparty democracy did not last for long. King Mahendra hijacked the government in 1960 and established the party-less Panchayat system (Uppadhya 2015). In 1990, the democracy was reinstated, but the marginalized conditions of indigenous peoples remained the same.

When the Maoist insurgency occurred in 1996, the federal republic took shape and then government moved toward the multicultural policy in favor of the Indigenous nationalities. The Civil Service Bill passed by the interim Parliament allocated 45% of the positions in the civil service for members of unprivileged sections of society, such as the Dalits, Adivashi/Janajati, Madhesi and people from the remote regions. The interim Constitutions of 2007 and 2015 allow the use of local mother tongues to be used as official languages in certain regions. It also guarantees the rights of the Adivashi/Janajati, Dalits, and Madhesi communities as well as women, oppressed classes, poor farmers, and workers to participating in state politics (Subba, et al. 2009).

However, the new Constitutions have not satisfied the Indigenous peoples like the Raute. Either version of the Constitution does not mention clearly what rights are secured except to participate in state politics (Uppadhya 2015; Gurung, et al. 2014; Kathmandu Post 2016). The forest conversion acts passed without considering the historical livelihood practices of forest people like the Raute.

These acts forced the Raute to adopt alternative livelihood to forest use, negatively affecting the traditional mode of the economy (Bhattachan 2005). The Government has forced some of the Rautes to settle. The remaining people continue to refuse the suggestions of the Nepalese Government and non-governmental organizations (NGOs) to settle down (Bhattachan 2012). Consequently, the Raute negatively think about the modern concepts of development, such as forest conservation, infrastructure development, market expansion.

There are many NGOs and INGOs today working with the Raute community in the name of enhancing their socio-cultural life. Since these organizations are politically guided and responsible before the donor, they have implemented programs that facilitate the adoption of global consumerism to solve the immediate welfare problems of the Raute (Karki 2012).

2.3. Relationship between Biodiversity and Indigenous Peoples in Nepal

The relationship between the cultural diversity of Indigenous peoples is closely linked to nature and biological diversity (GEF 2006). In fact, more than three quarters of the world's

population rely on local knowledge systems to meet their medicinal needs. Also, at least half of the world population relies on local varieties and associated knowledge system for their food supplies (Bodeker 2000). The Brundtland Report of 1987 popularized the notion of indigenous/traditional knowledge in sustaining local livelihoods. In 1992, the Convention on Biological Diversity (CBD) reiterated this position.

The international community has growingly become aware that indigenous peoples' socio-cultural practices in a particular area can help protect local biodiversity. For example, the local religious belief in Dolpa District in western Nepal prohibits the killing of leopards. This belief has greatly contributed to the protection of snow leopards in the region. Similarly, the occupational development of indigenous technologies that have used in carving wood, stone, and metal has promoted the preservation of indigenous cultural heritage and secured employment (Bhattachan 2012).

Indigenous communities to a large extent have been guided by local knowledge and wisdom to sustain their use of natural resources. Recognizing this, some international organizations operating in Nepal have tried to conserve biodiversity by using Indigenous knowledge and technologies with the active participation of Indigenous people. In this context, studies conducted by Campbell (2004) and Grenier (1998) on Indigenous biodiversity conservation in Nepal demonstrated that Indigenous nationalities of Nepal have rich knowledge about the sustainable use of biodiversity (CVN 2011). The Indigenous knowledge is dynamic, innovative and adaptive. In a sense, they are the experts on the local environment (Parajuli 1999).

In Nepal, it is estimated that if the present trend of resource management continues, ten species of highly valuable timber trees, six species of plants for fiber, six species of trees for edible fruits, four species of medicinal herbs and some 50 species of little known trees and shrubs would be lost forever. In addition, the habitats for 200 species of birds, 10 species of mammals and 20 species of reptiles and amphibians would be severely affected (DNPWC 2006). Consequently, the loss is directly correlated to the erosion of cultural diversity caused by the assimilation policy and the marginalization of Indigenous peoples from governmental and non-governmental initiatives (Subba et al. 2009).

2.4. A History of the Raute

'Yogi' Narhari Nath (1955) found out about the Raute people in the forest and explained about them in his "History Publication –Part I." Linguists found that the Raute speak a Tibeto-Burman language and their language is linguistically unique as they had been isolated

from other ethnic groups for a long time (Reinhard 1974).

It is not clear that how long they have lived in the mid-western belt of Nepal (Singh 1998). According to their origin story, the Raute were descendants of the erstwhile royal family, probably the descendants of the second son of Shahi-Thakuri IV, who left home for the forest after his father, King Shahi, scolded him badly for a small misdemeanor (Karki 2012). However, Singh (1997), the most popular ethno biologists of Nepal working on the Raute, claims that there were in total 17 groups of the Raute, six of which lived in Nepal and eleven in India. Almost all of these groups lived nomadic life in forests until the 1950s (Singh 1997).

In Nepal, there are two groups of the Raute, Nomadic Raute and Raji Raute. In 1981, the government of Nepal forced the Raute to live sedentary life. Only those five groups that were scattered to search foods from the far west, Darchula and Dadheldhura districts, responded positively for this process (Singh 1997b: 27; Gurung, et al. 2014). These five groups settled at Jogbudha, Dadheldhura and Aampani, Baitadi, an inner Terai area in the period between 1983 and 1985. According to the CBS, the total population of the Raji community in 2011 was 618, 320 males and 298 females.

The rest has continuously moved around the mid-western part of Nepal (Singh 1997). No official census of this group has been conducted until now. In my field visit in 2015, the total households of the nomadic Raute community were 45 with 162 persons, of which 90 were males and 70 females. The number of children below 10 years of age was 47. The eldest person of the community is Bechne Shahi, 82, the wife of former headman, the late Man Bahadur Shahi (Fieldwork 2015).

2.5. The Characteristics of the Nomadic Lifestyle of the Raute

The Raute tend to favor high mountain forests where they erect a cluster of huts thatched with either forest leaves or plastic during the monsoon season. In the dry season, they prefer to migrate to riverbank or fallow land surrounding sedentary villages. Generally, the length of stay at a particular place is between one and two months, however it depends on the availability of food (Oli 2005).

During my field visit in 2015, the Raute said to me that they used to migrate regularly in particular area and route. Local people also confirmed this, mentioning that the Raute used to appear at the same place after 12 years. I asked the Raute: "What are the main reasons to move your community from one place to another?" Raute tribal chief Mahin Bahadur Shahi replied: "The place becomes dirty when somebody dies in the community; so we go for

another clean one."

They use their *rauti* (means 'camp' in their language) as a base camp and hunt, cut down trees for woodcraft, trade door to door in nearby villages and other contact. After finishing all of this in a particular place, they migrate to another place. In 8 or 10 years, they migrate back to the same place as a migration cycle. Once they decide to move on, they destroy their huts immediately by either setting fire on the huts or dismantling them (Bista 1976; Paudel 2012). The Raute in the following points gives the reasons of migration:

- To give time for trees and plants to regenerate after harvesting for woodcraft and food.
- To enhance the availability of monkeys and other animals for hunt.
- To secure a cool-off period with villagers in terms of trading.
- To purify their thoughts.

For trade, the Raute make *kosi* (tub), *madus* (box), *gabru*, *phuru*, *gilas* (cup), *ghurri* (churning stick), *lauri* (walking stick), and other materials by using soft woods like silk-cotton tree. They use tools like axe, adze, *chhini* (used in making holes in wood). They have blacksmiths to make these tools.

Raute men visit villages to sell their products in exchange for grains, rice, clothes and jewelries. This is the important part of their economic activities. They are very articulate and convincing in selling their products. They bargain until they get their desired prices (Fortier 2009; Field work 2015).

Hunting is another important economic activity. The Raute do not consume any animal except monkeys. The men use nets to capture monkeys, and women prepare nets. Raute women process the meat and distribute it among members. The Raute men are very skilled in tracking and finding monkeys. They set a net in a particular location. After that, they make noise with whistle to scare monkeys so that they escape toward the net. As soon as monkeys are captured, Raute men kill them with a mallet that was hidden behind the tree. This is done very quietly so that some more males and females can trap more monkeys. According to the local people of Rakam, Dailekh, the monkeys come to nets automatically with hypnotism of Raute's whistle (Karki 2012).

The Raute keep the hunting process very secret. If some outsider sees their hunting activities, they think their hunting fails due to the anger of their own deity. All persons who witness the hunt, however, must take the piece of flesh. All participants cut and divide the meet in the spot. They release other animals from the trap in the net unless somebody wants to buy it. They used to hunt tigers, bears and other predatory animals mainly for security reasons

until the 1980s. The Raute people are very much conscious about environmental conservation.

They save valuable hardwood trees like Saal (*Shorea robusta*) and Sisau (*Dalbergia latifolia*), and blame the villagers of destroying the forest. They argue that villagers need very big and durable logs to make big houses and furniture but the Raute use only brushes to make their huts (Reinhard 1974; Karki 2012).

Other than hunting for meat, Raute women gather plants, particularly yams, in the forest. *Dioscorea rotundata* is the most desired species, and *Dioscorea esculenta* is the most available one. Other forest foods they mainly collect are mushrooms, banana, leaf greens (Singh 1997; Reinhard 1974).

However, since 2008, the economy of the Raute has been assisted with the government allowance. Each member receives nearly US\$10 per month to buy necessary goods for livelihood. Additionally, various organizations have provided monetary and non-monetary aid mainly to them because deforestation has decreased forest resources and government's forestry policy has discouraged hunting and gathering (Gurung, et al. 2014).

The Rautes are basically Hindus, but most of their religious practices are not similar to the sedentary Hindus. The Raute people do not conduct elaborate rituals with priests. They do not have Hinduism-related witchcraft. They primarily worship two deities, namely Bhuyar and Daray Masto (Singh 1997). The Raute community worship Bhuyar especially on full moon days of June-July and July-August. Bhuyar is their hunting god and they fear the most. Women are not allowed to participate in these religious worships. For Bhuyar they usually sacrifice a chicken or a goat. According to the Raute, Bhuyar becomes extremely angry and curse them if any villager involves in their hunting practice (Karki 2012; Reinhard 1974).

Daray Masto is considered as the god of beneficence. When someone in the community falls sick or experiences an accident, this deity is worshiped. A bell and a metal piece in a human shape are kept in a wooden box and taken out at the time of prayer for Daray Masto. The worship is done in any open area, and rice is offered. The Raute do not sacrifice animals for Daray Masto. Beside these two deities, two other forest gods are also worshipped called Ban Devi and Ban Jhankari to protect any family from misfortunes (Reinhard 1974). Elderly people, parents and headmen of the community play an important role in the major life cycle rituals, like birth, marriage and death (Gurung, et al. 2014).

Birth is an extremely important life ritual for the Raute community. The ritual practice of birth differs between boy and girl. For example, after the birth of a boy anything touched by the mother until the 22nd day after delivery is considered tainted. On the 11th day, similar

to Hindu customs, a woman, generally aunt or sister, of the family gives name to the child in front of the community members and sprays holy water or cow urine around the house to purify it.

Additionally, she puts a red mark on the forehead of the child and ties a thread around the wrists and legs. She provides food to the guest presented on the day and ensures that the food is finished. If the food is left, they believe something wrong is going to happen to the newly born child (Nepal 1998). However, all these ritual activities are performed on the 9th day for a girl. Generally the name giving ceremony of a girl goes silently.

The Raute people have only arranged marriage. They marry within their own community into a different clan. There is no multiple marriage system in the community. The good time of marriage in the community is when a boy reaches 18 years old. After knowing the age of boy, his parents talk to the headman about it. The next day, the headman talks to the parents of the preferred girl. If they agree with the proposal, they fix the day of marriage. In arranging the marriage the headman can play the role of mediator but cannot impose his decision-making power he normally enjoys in other social activities (Gurung, et al. 2014).

The community only considers the age of boy. If girl's parents agree she has to marry this boy. On the marriage day, the groom along with his father, brother and headman goes to the girl's house and brings her with him. Except some formal talk and sharing some gifts, they do not perform any rituals on this day. After a few days of marriage, the newly married couple starts living at their own house (Nepal 1998). However, the male population has outnumbered that of women, a good number of boys remains unmarried (Field work 2015).

When a member of the community dies, they bury the dead body on the same day wrapping in monkey hunting net. After the body was cremated, the community leaves their camp area. There is no different system of cremation for male and female (Nepal 1998; Field work 2015).

In the community, the headman holds the central position. He deals with the outsiders and possesses the greatest skill in manipulating the villagers. In most of the outside affairs, he speaks for the group whereas the internal conflict is handled in his leadership with mutual cooperation among members (Reinhard 1974). He often makes plans for working or migration or anything connected to the community by consulting with some senior male and female members. He is supposed to provide equal justice to all members and look after them when they are in trouble. There used to be only one headman, but today there are four headmen (Nepal 1998; Field work 2015).

2.6. Conclusion

In Nepal, biodiversity is vulnerable due to various social, economic, political and developmental activities. This condition is further exacerbated by global climate change. The loss of biodiversity is directly correlated to the erosion of cultural diversity, including that of the Raute people. This cultural erosion escalated as a result of government's assimilation policies and cultural discrimination. Indigenous peoples in Nepal have been excluded from Hindu-dominant political power for centuries.

In the last few decades, various researchers have revealed the struggle of the Raute for survival. Today, we have better understanding about how the Raute have faced challenges in continuing their traditional way of living because of increasing cultural pressure from the dominant sedentary societies and ecological changes. My field research has also contributed to better understanding the Raute people's social conditions in relation to forest biodiversity conservation.

Chapter 3: Policy Implementation among Indigenous Peoples in Nepal: A Case Study of the Raute Community

3.1. Introduction

Policymakers often place relatively low emphases on the protection of Indigenous peoples and their knowledge. In many developing countries, the very survival of Indigenous peoples is difficult, and they have endured historical injustices as a result of colonization and dispossession of their lands and resources, as pointed out in the UN Declaration on the Rights of Indigenous Peoples (2007). According to Nepal's 2011 census, the Indigenous peoples are categorized as "Adivasi Janajati." The population of Indigenous peoples consists of 37.2 per cent of the total Nepalese population. Although the Indigenous people constitute a significant proportion of the population, the dominant groups have marginalized them.

This chapter critically reviews the relevant policies that are implemented among Indigenous peoples of Nepal and how these policies impact their lives. The Raute community was selected as the case study to highlight the implications of international law and domestic policies. In particular, this chapter examines how policies have affected the livelihoods of the Raute community. The following discussion begins by briefly reviewing laws and policies related to Indigenous peoples in general and their effects on their overall access to natural resources, particularly on their harvesting rights.

3.2. Policy Implementation

The essential feature of the policy implementation process is that necessary task related to law should be carried out. The success of the implementation can be measured in terms of the extent to which goals are met. The implementation outcome is expected to have some measurable positive changes as a result of a program (Hill and Hupe 2002). Thus, policy implementation refers to the connection between the expression of governmental intention and actual result (O'Toole 2003). This successful outcome of policy implementation in developing countries is challenging and causes legitimate concerns among the Indigenous peoples (Saetren 2005).

3.3. Indigenous Peoples in Nepal

In the world, Indigenous peoples are known by different names and legal identities: First Nations, Indians, Native peoples, and the Métis/mestisos. Indigenous peoples are known in Nepal by *adivasis* (literally means Indigenous peoples, autochthons, native peoples) or *janajatis* (nationalities or indigenous peoples). The term *adivasi/janajatis* has been used in the government documents, including the Constitution. The National Foundation for the Uplift of

Adivasi/Janajatis (Indigenous Nationalities) Act of 2002 also defines the “Indigenous nationalities” as communities or people who “have their own mother tongue and traditional customs, distinct cultural identity, distinct social structure and written or oral history of their own” (NFN 2013).

The Nepal Federation of Indigenous Nationalities (NEFIN) classifies the 59 Indigenous peoples into five categories based on a set of socioeconomic indicators. The Government of Nepal categorizes the Raute people as an endangered people.

Table 3.1. Regional Category of Indigenous Nationalities of Nepal (Source: Nepal Federation of Indigenous Nationalities 2004).

Regions	Indigenous Peoples	Total Number
Mountain	Bara Gaunle, Bhutia, Byansi, Chhαιrotan, Dolpo, Larke, Lhomi/Shingsawa, Lhopa, Marphali/Thakali, Mugali, Siyar, Tangbe, Thakali, Thudam, Tingaunle Thakali, Topkegola, Sherpa, and Wallung.	18
The Hill	Bankaria, Baramo, Bhujel/Gharti, Chepang, Chhantyal, Dura, Fri, Gurung, Hayau, Hyolmo, Jirel, Kushbadia, Kusunda, Lepcha, Limbu, Magar, Newar, Parí, Rai, Sunuwar, Surel, Tamang, Thami, and Yakkha.	24
Inner Terai (Inner Low lands)	Bote, Danuwar, Darai, Kumal, Majhi, Raji, and Raute.	7
Terai (Low lands)	Dhanuk (Rajbanshi), Dhimal, Gangai, Jhangad, Kisan, Meche, Rajbanshi (Koch), Satar/Santhal, Tajpuria, and Tharu.	10

In Nepal, Indigenous peoples are struggling in different stages to maintain their social and political structure. As mentioned in the table 3.1, the indigenous peoples of the Hills and the Terai regions, including Inner Terai, had lost their traditional political system and many parts and aspects of the traditional social structure. For example, the Tharus and other indigenous peoples of the Terai lost control over their ancestral land after eradication of malaria in the early 1950s, and lost their traditional social and political structure with the

introduction of the autocratic party less Panchayat system in 1960. That system had a mission of "One King, One Country, One Language, One Dress", which was a project of homogenization of social and political structures by the dominant caste group. Also, the Limbus of the eastern Hills of Nepal is the last indigenous peoples to lose the Kipat (the indigenous land tenure system).

The Rautes, the last nomads of Nepal, still control their way of life but have lost control over the forest that they have been living in for centuries after introducing the Community Forest Policy in 1978. They keep moving from one place to another and making their living by hunting, gathering and bartering their handcrafted wooden products for food grains in nearby villages (IIDS 2002).

On the other hand, many indigenous peoples who live in the mountain regions have been almost untouched by the external social and political structure. While in the past, imposition of the national social and political structure, which is based on monarchy and Hindu religion, culture and society, has destroyed the social and political structures for many indigenous peoples of the Hills and the Terai, these structures continue for about 18 indigenous peoples of the mountain areas.

For example, the Marphhali Thakali, Tin Gaunle Thakali, Bara Gaunle and Loba of the Mustang district, which is a trans-Himalayan region, still have full ownership and control over their ancestral land, and their own traditional political, judiciary, social and cultural systems. The Mustang district police chief and officers pay fines to the local community when they fail to attend their meeting. The local body of the Nepal Government could not do anything without consulting with and getting the consent of these communities (Bhattachan 2008).

3.4. Policies for Indigenous Peoples in Nepal

Nepal has formulated the general policies and statutes, regulations and rules affecting Indigenous peoples. These policies and legislation are enshrined in the National Commission on Indigenous and Ethnic Communities Act, 2001, the Constitution of the Kingdom of Nepal 1990, Muluki Ain (National Code) 1963, the Local Self Governance Act 1996 and international covenants on Indigenous peoples. These policies and legislation do not contain many provisions on the rights of Indigenous peoples to natural resources.

Although they touch on equality, and cultural and religious rights of the disadvantaged people at large, no provision deals with the traditional rights to natural resources for the indigenous peoples like the Raute. In addition, unlike Indigenous rights policies in the United States, Canada, and Australia, no recognition of Indigenous peoples' territorial rights to the

ancient land. Recently, however, some local policymakers have discussed the possibility of establishing some reserved areas for marginalized peoples, including indigenous peoples without any political outcome (Upreti and Ghale 2002).

There are various laws and policies to guide the use of natural resources in general. These regulations or policies mainly take into account national interests. The Nepal Federation of Indigenous Nationalities (NEFIN) argues that at least 40 common and special laws are discriminatory against the Indigenous communities. Among them the following acts govern the use of natural resources related: the Land Ownership and Registration Act, the Nationalization of Private Forest Act, the Local Self-governance Act, the Land Related Act, the Nationalization of Pastures Act, the Land Taxation Act, the Forestry Act, the Protection of Water Animals Act, the National Park and Wildlife Protection Act, the HM King Mahendra Nature Preservation Fund Act, the Plant Protection Act, the Land and Water Resources Protection Act, the Water Resources Act, the Mine and Mineral Products Act, and the Guthi Corporation Act.

Nepalese forest policies have particularly detrimental to the traditional livelihoods of Indigenous peoples. The Nationalization of Private Forest Act of 1957, for example, placed all forests under the government ownership. Ethnic groups did not receive any compensation for these forests and the uncultivated lands lying there (Subba 2002). Similarly, the Forest Act of 1993 placed the ownership of lakes and rivers along with the banks within the forest area, thus depriving more from Indigenous peoples. Groups like the Raute, Bankariya, Chepang, Kusunda, Tharu, Danuwar, Santhal (Satar) are largely dependent on forests and the surrounding areas. The forests the Raute have used have slowly been converted to community forest users' groups (CFUGs).

Daniggelis (1997) similarly observed that in east Nepal, the Rais and Limbu were marginalized by the cadastral survey and declaration of national park over their traditional territories. The Rais and Limbus no longer have free access to pasture, swidden land and forest resources (Gurung 2005; Subba 2002; Kafle 2014). The establishment of various protected areas (e.g., national parks, conservation areas, hunting reserves) has encroached on the lands of the Indigenous peoples as their areas have high level of biodiversity. The traditional skills and knowledge of the Indigenous peoples have also come under the attack of large capital and industries as Indigenous products cannot compete in the market (Gurung 2005).

Nepal is a signatory to the number of international instruments and conventions, including the International Covenant on Civil and Political Rights (1966), International Covenant on Economic, Social and Cultural Rights (1966), International Convention on the Elimination of All Form of Racial Discrimination (1969), UN Convention on the Rights of Child (1989), and the Convention on Biological Diversity 1992. In 2007, the Nepal parliament ratified ILO Convention No. 169, which is directly related Indigenous and Tribal Peoples. In Nepal, Indigenous peoples have taken ILO Convention No. 169 and UNDRIP very seriously as these provide a basis of making dialogue with the Nepalese government and help protect Indigenous peoples 'rights.

For example, article 13 (1) of ILO Convention No. 169 emphasizes that the State shall respect the cultures and spiritual values of the Indigenous peoples concerned, and of their relationship with their lands and territories. Article 14 and 6 of ILO Convention No 169 also refer to safeguard the rights of indigenous peoples. Similarly, the UNDRIP and the Convention on Biological Diversity (articles 8j and 10c) recognize the rights of Indigenous peoples and local communities to biological diversity and genetic resources.

Articles 26 and 27 of the UNDRIP also recognize the land rights of Indigenous peoples even though the area is "not exclusively occupied by [Indigenous peoples], but to which they traditionally had access." This provision can be interpreted that those lands used by nomadic peoples like the Raute and shifting cultivators are included. In ratifying these laws, Nepal is obliged to take specific measures to safeguard the rights of Indigenous peoples to lands (Bhattachan 2005; Adhikari 2006; Roy, et al. 2005; Bhattachan 2012).

3.5. Professional Diversity of Indigenous Peoples in Nepal

Indigenous peoples are 'trapped' in occupation that yield low return for their investment and in geographies that are resource-deprived and underdeveloped. These traps were analyzed on the base of historical and institutional context of Nepal.

The main reasons are to believe that the occupation and geographic "traps" are inherent in the institutions that govern Nepali society. The origin of the prevalent institutions in Nepal began with the caste-system, which was imposed on the Nepali society when Nepal became a nation state in the late 1700s A.D. First, occupational trap is a direct result of the cast-system.

According to the design of the institution of caste system constrains people's ability to change occupations; and it justifies differential treatment of peoples based on their occupation. Under the caste-system, high paid jobs such as doctors, lawyers, teachers, political leaders,

government officials and other professionals had been reserved for caste groups mainly Brahmins and Chetries. Indigenous peoples are confined to low-paid labor-intensive jobs such as farmers and skilled/unskilled workers. This is one of main reason to see those farmers are in significant risk of poverty. It also, perhaps, is being a main reason that agricultural and industrial production in Nepal has not evolved modern technology for agricultural and industrial production. The governing elites, who were neither farmers nor skilled workers, were not interested for the advancement of science and technology.

Moreover, the geographic trap is likely another reason behind the ethnic clustering. Indigenous peoples live in different geographies than non-indigenous peoples. Historically, the governments had confiscated productive lands of the indigenous peoples. The confiscated lands were either transferred to the governing elites (Brahmins & Chetries) under the system known as “Birta”; or they were turned into national parks (Bhattachan 2005).

This process pushed the indigenous peoples further to remote and unproductive lands. The government then deliberately kept the indigenous territories isolated and underdeveloped to exploit their cheap labor. With no access to roads, universities, electricity or healthcare system in these areas shows that geography presents a significant risk of poverty for indigenous peoples who live in those geographic areas.

In regards to the variations in risk of poverty within caste groups and indigenous groups, the reason for relatively better economic status of Newar is thought to be due to their geographic proximity to the capital city. The reason for Sherpa, Gurung, and Thakali’s relatively better economic status is thought to be due to tourism in their territory, and their recruitment to the British Army. The main reason to be in high risk of poverty for other indigenous people like Kusunda and Chepang people are only caste-discrimination in which they are treated as lower castes. These historical injustices are assumed to be the driving forces that led to the current state of poverty among the indigenous people.

The socio-economic and political status of various indigenous populations varies in Nepal. The use of natural resources and their importance to livelihoods have been illustrated in Table 3.2. Groups that depend on industries are less concerned with access to resources and traditional rights. On the contrary, those that depend on foraging (including fishing) and pastoralism (Gurung 2005) are more.

Table 3.2. Professions of Indigenous Peoples (Sources: IIDS 2002).

Indigenous peoples	Forage	Horticulture	Pastoralize	Agriculture	Industry
Raute, Kushbadia	+	-	-	-	-
Kusunda, Bankariya, Chepang	+/-	+	-	+/-	-
Thami,Raji, Hyayu	+/-	+	-	+/-	-
Majhi,Bote, Musahar	+/-	-	-	+	-
Jirel, Larke, Siyar, Tangwe	-	-	+	+	+/-
Balung,Topke, Thudam,Lhomi, Sherpa,Holmo, Dolpo,Bhote, Lhopa, Mugali	-	-	+	-	+
Gurung, Byansi	-	-	+	+	+
Limbu, Lepcha, Yakkha, Rai, Sunuwar, Surel, Tamang, Pahari, Free, Baramo, Bhujel, Dura, Chantyal, Magar	-	+/-	-	+	-
Danuwar, Durai, Kumal, Mache, Kisan, Santhal, Rajbansi, Tajpuria, Dhimal, Gangai, Jhangad, Tharu, Dhanuk	-	-	-	+	-
Chairotan, Tin Gaunle Thkali, Barha Gaunle	-	-	+/-	+/-	+
Newar, Thakali, Marphali Thakali	-	-	-	+	+

(+ = main profession, - = not main profession, +/- = some group members are involved in this profession).

A Raute leader I consulted during my field study period expressed his concerns that some influential and larger ethnic groups are more directly related to policymaking. The primary concerns are a lack of their access to natural resources and protection of their traditional rights. The popularity of metal and plastic utensils among the villagers has significantly reduced the value of woodenwares and utensils the Raute produce (Bhandari 2003, Sejuwal 2014).

3.6. Impacts of Policies on the Raute Livelihoods

Since 1950s, the Raute people have been affected by a number of policies, including the inception of the forest law in the early 1960s and the Community Forest Policy in 1978. Similarly, the royal decree of 1981 attempted to assimilate the Raute into national Hindu culture providing five groups with free land and houses (Bhattachan 2005). However, the policy implementation was carried out hastily, and most of the settled Raute has suffered from poverty. They do not yet have enough knowledge about agriculture and cannot farm the land. The government has not provided any training (Gurung, et al. 2014).

Despite the fact that the interim Constitution of 2007 guarantees to preserve the cultural practices and livelihood practices of all Indigenous peoples, the life of nomadic Raute has always been subject to encroachment and threat. After having ratified CBD, ILO No. 169, and the UNDRIP, many NGOs and INGOs have come to enhance the socio-cultural life of the Raute. Since these organizations are politically motivated and responsible before the donor, they have implemented modernization programs, especially promoting global consumerism, to solve the immediate problems of the Raute. For example, NGOs and welfare organizations distribute cash in the Raute community, but they do not teach how to earn cash. Some INGOs provide fish instead of teaching the Raute how to fish, making them more dependent on the external world.

More recently, because of frequent meetings and discussions with various stakeholders and taking part in many local programs such as bio-diversity conservation, all the Raute, except women who used to be called mum traders, can efficiently articulate their opinions in Nepali language today. The leaders and some other senior men of the community are found very eloquent and logical in talking. Their external relation and interaction has extended beyond the local area, and they have visited three different Prime Ministers at the Prime Minister's Office in the last ten years and expressed their grievances.

However, the help measures provided by these Prime Ministers were influenced by global politics. For example, the previous Prime Minister Kamal Prasad Oli gave the Raute leaders Rs 300,000 (about US\$2,752.96) on February 11, 2016, and urged them to abandon

nomadic life and adopt sedentary life wherever they want (Kathmandu Post 2016). These days the government of Nepal has provided monthly allowance to all the Raute Rs 1000 (US\$9.21 per person). Local leaders of various political parties often offer them food, grains, goats, chicken, among others, on the occasion of festivals. Hence, the immediate economic help provided by external agencies has increased the dependency of Raute to them thereby deteriorating the traditional mode of production (Gurung, et al. 2014).

3.7. Impact of Forest Law on the Raute

As discussed above, considering the increasing deforestation, King Mahendra promulgated the Private Forest Nationalization Act, the first forest law in Nepal. It placed all forests in the country as national forests; all individuals were prohibited to use forests without the government consent (Gautam, et al. 2004). In 1959 the government established the forest ministry and increased the number of forest bureaucrats for scientific forest management.

In addition, the government promulgated the Forest Act (1961) and Forest Protection Act (1967) mainly to prevent forest destruction and ensure protection through better management. These statutes, however, led to a lot of controversies and debates among local and national authorities because these acts further restricted the rights to use forest resources and neglected the Indigenous skills of forest management (Regmi 1978). According to Bhattachan (2005), the stringent forest policy of the government affected more the Indigenous people, including Raute.

Table 3.3. Change in Nepal's Forest Area 1954-1999 (Adhikari 2006).

Base year	Forest area (ha)	Percent of total area	Source
1954	6478000	47.6	FAO 1954
1964	6402000	45.6	HMG/USAID 1964
1977	5259348	35.7	Dur Samedan Kendra 1985
1977/78	5617000	38.7	LRMP 1986
1985/86	5518000	37	Forest Dev. Master Plan 1988
1999.	4268800	29	DFRS 1999

The table 3.3 above shows the area covered by forest in Nepal from 1954 to 1999. The area decreased, especially from the 1970s through the mid-1990s. During this period, the government introduced the community forest policy. The Raute encountered more problems in continuing their nomadic way of life according to Hari bhadaur Rastakoti (age 52).

Today, there are more than 1,013 community forests in Middle-Far Western districts in Nepal where nomadic Raute traverse for periodic migration. Since the forest authority has transferred forest access and management rights to forest user groups, the Community Forest User Groups (CFUGs) of this area have worked for more efficient management of forest resources, curbing the traditional ways of forest use obey the Raute. CFUG managers considered that the Raute caused the severe environmental destruction without clear evidence. Forest officers also ask the Raute in every visit with intimidating tone to abstain themselves from their traditional ways of using natural resources (Gurung, et al, 2014; Fieldwork 2015).

According to Devbahadur Thada Magar (age 28), the secretary of Rakam village community forest, which is in my research area, the rate of forest cutting by the Raute had slowed down significantly since the establishment of CFUGs. Nowadays they have completely stopped setting fire in the forest and the trend of burning down the huts while migrating elsewhere has also gradually declined. There is almost no evidence for hunting animals except monkey, rhesus, small rabbit and some birds for the last five years.

3.8. The Policy Changes the Nomadic Raute into Modernization

As a result of the ratifying different conventions and declarations, NGOs and INGOS have emerged to aid the Indigenous peoples. Various Christian Missionaries, Red Cross, UNDP, UNICEF and several other NGOs/INGOs have provided the Raute support. However, for many of these visitors, the Raute have become “exotic” people. Filmmakers, photographers, journalists and researchers have visited their campsites, and the Raute ask them for money in return. Today, asking money from visitors has become a norm and the visitors can’t get any help from the Raute without payment.

On the first day of my meeting with the Raute during field visit, it was very difficult for me to interview without any gifts. They started asking money in cash or rice about Rs 40,000 (US\$370). I had to negotiate with them for about half an hour and made them understand that the interview was my academic purposes not any business purpose, and as a student I could not able to pay that much. Still, I paid them Rs 10,000 (US\$92) to interview and observe their livelihood activities. When I asked them why they need money, Hari Bahadur Rastakoti (age 52), the previous leader, and Surya Narayan Sahi (age 41), the current leader of the Raute community answered me:

We do not have option now without taking money. Forest resources are not many anymore as few years ago. We could not make woodcrafts as many as before due to the restriction of

cutting softwood in the forest. Even though we make few, local people are not so interested as before to buy our woodcrafts due to the popularity of plastic materials. We need money to buy foods now and even we sell our woodcrafts people prefer to give money nowadays rather than other things. The Nepal government also gives us money every month Rs 1000, but it's not enough for us. Rice is expensive and so are other food items. Many organizations' people, students, journalist and photographers come from different places including foreign countries as well and give some money and things to us for a few days but that do not help us for long to survive in the jungle. The moral and legal lessons don't solve our perennial problems. We want a permanent solution; free rights to roam in the forest and cut soft woods, monthly pension for all the Raute nearly 10 USD. Please write our demand in your paper and convey it to the Prime Minister.

The Raute have faced modernization mainly due to the globalizing economic policy, the migration of people and the expansion of media and information technology (Karki 2012). The growing market economy has expanded to every corner of rural Nepal. The popularity of metal and plastic utensils among villagers has significantly influenced the trade relations for the Raute. Because of the growing influence of capitalism and importance of cash flow in everyday economic life, the Raute have opted for making money for adaptation. In 2014, some Rautes worked as forest security guards and wage laborers, but they left the work places only after a few months (Sejuwal 2014). When I expressed my curiosity to know about their leaving these jobs behind so soon, Chandraman Shai (age 62) said:

We do not want to do any job because it is not our culture and we do not get any satisfaction from it. We did it because we just want to see how it feels but to give it continuity is impossible for us. We can take-care the forest as it is in our traditional way if the government allows us to get access to the forest resources as easily as before. Forest is free gift of nature so we do not need extra knowledge to take care it. We need to know only when and how to use it. That we Raute know very well. We could not even imagine making it harm and destroy, as it is our motherland. If forest will finish we will die, no one can survive.

It seems the Raute people are more interested to get free rights to access the forest resources instead of getting jobs to sustain their living. They are more confident on their Indigenous knowledge.

The Raute community has a traditional culture of male dance, which is supposed to be performed mainly either to please the god or to make the villagers give extra food grains while exchanging goods. However, the traditional purity of this dance has been tarnished nowadays. They perform it to the visitors at any time for money and liquor. In fact, these days, money has become almost the sole means for purchasing, lending and selling commodities. The influence of currency in the Raute community has broken some cultural ethos, emotional attachment with widows, orphans and disabled of their own society and eroded trade relations with non-foragers (Gurung, et al. 2014).

The popularity of the modern liquors in the local market impacts the Raute people so deeply. With more cash, they buy alcohol more frequently rather than food (My Field Work 2015). They explain that they drink alcohol to make them warm and prevent cold from the forest. The liquor making is their culture, which they used to make it at home by women (Singh, 1997). Also, the availability of rice at the local market has become less due to the increasing price of rice. The Raute cannot afford to buy rice; instead, the men say modern liquor is cheaper and always available. The monthly allowance provided by the government to the Raute has been one of the most influential factors to disseminate consumerism among the Raute.

3.9. Conclusion

The national forest management policy, especially the community forest act, has bridled the Raute to use forest resources freely as before and weakened the traditional mode of the economy. The new Constitutions have not helped improve the livelihood of the Indigenous peoples like the Raute. Either version of the Constitution does not mention clearly what rights are secured except the encouragement to participate in politics. Nepal has so far ratified a number of international treaties and declarations like ILO169, the UNDRIP, and CBD, but the implementation has not been successful.

The nomadic Raute still practice traditional culture, but the tradition has been eroded to a large extent. The depletion of forest resources, restriction on using forests, welfare policies, and modern consumerism has increased the dependency of the Raute on the market. The Raute leaders are changing traditional strategies that used to strongly resist the external influences. Consequently, the traditional economic structure of the Raute has metamorphosed, and it is hard to predict how long they will be able to preserve their culture and traditional livelihood.

Chapter 4: Indigenous Ecological Knowledge and Practice of the Raute Women

Ecological knowledge develops on the basis of experience acquired over some years of human contact with the environment (Sherpa 2005). In Nepal, more than 59 Indigenous peoples have developed a dynamic cluster of cultural expressions, such as wisdom, folklore, customs, and oral traditions that are closely attached with ecosystems and biodiversity. In their use, management and conservation of natural resources, including forest resources, water, agriculture and fish, the roles of women are often greater than those of men (Upadhyay 2003).

Women are the primarily responsible for domestic and household management, interacting more intensively with the natural environment; therefore, having more ecological knowledge than men. The workload of Indigenous women in Nepal is higher than the global average (UNICEF 2005). Unfortunately, the roles of women and their ecological knowledge in natural resources and agriculture management have been under appreciated or neglected (FAO 2011).

The Raute in mid-western Nepal sustainably use forest resources, and the women play crucial roles in doing so. They enhance and maintain biodiversity, whereas the men take responsibility for securing economic resources to feed the family. Although both gender roles are important in sustaining their livelihoods, the Raute women have heavier workloads than men do because of their diverse responsibilities for reproductive and productive tasks. Other than taking care of the family by gathering forest products for food and medicines as well as making huts and nets, women help their husbands in making woodcrafts.

This chapter argues that the Raute women have knowledge about using forest resources that enhances both livelihood of the Raute and ecological conservation in the forest. Its objective is to clarify how the Raute women engage in daily subsistence activities that are related to using and conserving forest resources. Much of the information discussed below is based on my field observation and secondary sources, as secondary sources on the Raute people generally do not provide in-depth knowledge about women. My fieldworks were conducted in the two periods: January-February and October-November, 2015. The fieldworks were based on the participant observation method and interviews. Interviews were also conducted among those who have worked for or with the Raute in order to gain additional insights on this study.

4.1. Indigenous Ecological Knowledge of Women for Biodiversity Conservation

Indigenous ecological knowledge develops with the regular use of resources by Indigenous peoples in adapting to complex ecological systems in their own territories. Indigenous people have accumulated knowledge through cross-generational empirical observations. Hence, the sustenance of biological diversity is crucial in maintaining traditional livelihoods (Gadgil, et al. 1993).

Since time immemorial, women's roles and tasks have been explicitly linked to biodiversity (IDRC 1997). For instance, Owen (1998) describes in her book, *In the Mix: Struggle and Survival in a Women's Prison*, that women contributed 50 to 70 per cent of dietary requirements by collecting and conserving edible plants. Today Indigenous women especially in rural areas continue to gather bush products for food, medicine, paint sources and house building materials. They play crucial roles in sustaining and enriching local biodiversity, including the domestication of wild plants and the enhancement of particular beneficial plant characteristics (Byers and Sainju 1994; Howard 2001, 2003; Lambrou and Laub 2004; Chambers and Momsen 2007; Voeks 2007; Abdelali-Martini, et al. 2008). In Bhutan, 45 per cent of women are medicinal plant collectors (UNDP 2001).

In Pakistan, women are carrying out nearly 90 percent of medical herb collection and 71 percent of the collected herbs are also sold by women at local markets (UNDP 2007). According to a report on Indigenous knowledge of Wancho communities in the Tirap District of Arunachal Pradesh, India, women are more involved in natural resource management than men are even though women do not have representation in local village decision-making (Thomas 2008). All those studies suggest that it is almost impossible to conserve biodiversity without women.

In rural Nepal, gender roles for work tend to be clearly separated. This tendency is more obvious in Indigenous communities. Men engage in earning cash incomes and women engage in multiple roles such as crop production, domestic chores and community management responsibilities (Moser 1993). Consequently, when scholars from developed countries came to study Indigenous peoples in Nepal, Indigenous men's economic activities, which resemble gendered roles in the Western economic system, have gained much of their attention whereas women remained to be relatively invisible (Norberg-Hodge 1991). Among 59 Indigenous groups in Nepal, the Raute have recently gained much attention from scholars and journalists partly because they are often regarded as an endangered and last "nomadic" people in the country. The Government of Nepal also has categorized the Raute as

one of “endangered” Indigenous peoples in the country (CBS 2011). These publicized works have taken a similar trend to previous male-centered studies. Consequently, they have neglected to examine women’s forest-based harvesting and conservation activities.

Some of these works have called the Rautes the “kings of the forest” largely because of their in-depth knowledge of using forest resources, but their livelihood has been threatened by deforestation and the depletion of natural resources such as water, fruits, and green plants (Gurung, et al. 2014). These environmental conditions have severely affected traditional activities of the Raute women, as they mainly engage in collecting forest resources to feed their families.

4.2. Traditional Territory of the Nomadic Raute

The Raute are highly mobile people. Each year, they travel between the Siwalik foothills in the south and the Himalayan mountain range in the north (CVN 2011). Forested areas in these regions consist of 37 to 50 percent. The altitude ranges from 2,000 to 10,000 feet above the sea level. The temperature fluctuates from 90F to 50F. The annual rainfall is 70 to 80 inches or 1,000 to 3,000 mm (mostly from June to August).

This ethnic group basically has followed two migrating routes: one in Mid-Western Development Region and another in Far-Western Development Region. The routes of their movement are largely influenced by climatic conditions, as they come to warm valley areas during winter months (November to February) and high mountain areas in summer months (March to September). Similarly, they prefer to migrate to riverbank or fallow land of surrounding villages in the dry season (April to October). In addition, the duration of their stay at a particular place usually is between one and two months, depending on the availability of food.

Their extensive travelling is based on their belief that a longer stay in a particular place will contribute to deforestation. Mobility will also help deplete fewer resources for hunting, gathering and the wooden craft making. The use of the large territory implies that the Raute must have a fairly extensive knowledge on flora and fauna (Thapa 2009). Indigenous ecological knowledge of the Raute women plays the important role to move one place to another in this community.

As the primary users and managers of subsistence resources and food, the Raute women tell *mukhiya* (leader) about the decreasing food and other resources in their current residing place and should move to another place where they could sustain further stay. They

interact more intensively with the natural environment while collecting fruits, herbs and shrubs and contain ecological knowledge more than men (Fieldwork 2015).

Today the Raute are divided into nomadic and sedentary groups. These two were originally in one nomadic community before the 1980s. In 1981, the Government of Nepal forced some Raute people to settle. Currently, the sedentary Raute farm seasonal vegetables and fruits, rear goats and work as skilled and non-skilled wage laborers (Rana 2010). Since 2011, the Government of Nepal launched People's Housing Program to assist financially to the people of marginalized communities, including the sedentary Raute. Thirty-five houses were constructed for the sedentary Raute at Far-Western part of Nepal (Gurung, et al. 2014; Shakya, et al. 2015).

In contrast, the nomadic Raute group has refused the proposals of settlement continuously (Singh 1998). Each member of this community gets nearly US\$10 per month by the Government of Nepal to buy necessary goods for livelihood. This group is consisted of about 45 families. They select one leader for their community called "mukhiya," who makes important decisions for all members, including the time to move to another camp (Reinhard 1974; Fortier 2009).

Carpentry and wood drafts from soft woods (e.g., *Shorea robusta*, *Acacia catechue*, *Dalbergia sisoo*) are the only source of cash income for this community. The main items for trade are wooden bowls and boxes. These commercial activities are regarded as men's work. Men then procure grain, cloth, tobacco and other necessary things from neighboring Hindu villagers. The Raute do not engage in wage labor and agriculture. They do not allow marriage with outsiders; thus, they avoid any contact with outsiders except for trading. The Raute perceive Nepal's formal education and permanent settlement as "enemy." They do not like the idea that the government issues citizenship certificates to them. They even do not care to seek the help of modern medicines for their children (Dailekh 2009).

As several Raute groups are spread around watershed areas in the Mid Far-Western development regions of Nepal, the primary data collection survey was done with one of the groups at Rakam Karnali VDC (Village Development Community) in the Dailekh district, which is shown in below figure 4.1.

Traditional Territories of the Nomadic Raute

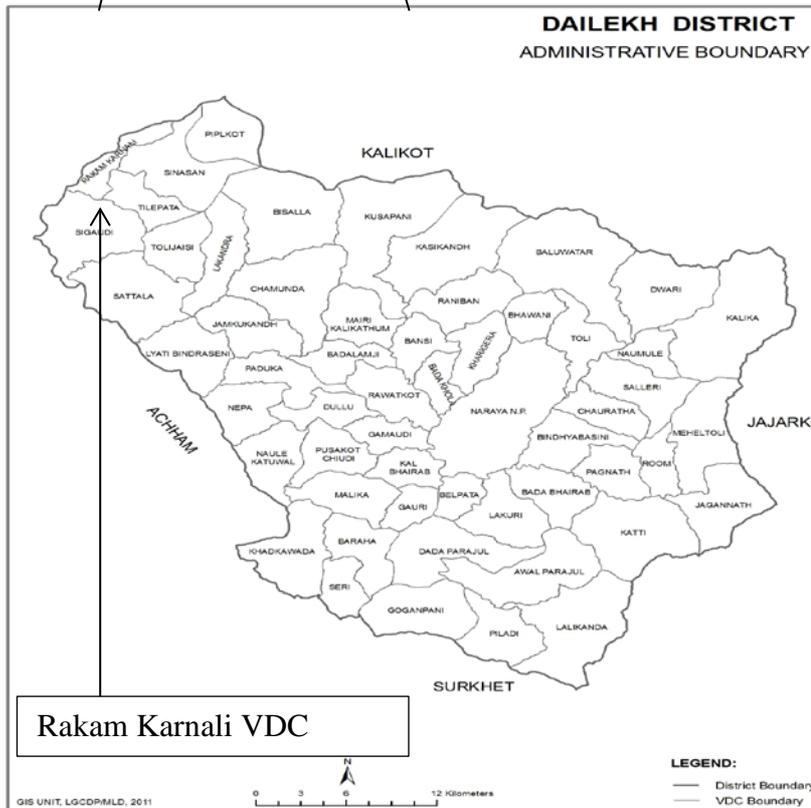


Figure 4.1. The Profile of the Study Area (Source: <http://hamronepal1.blogspot.jp/>)

Dailekh district is located in Middle-Western part of Nepal. It has 1 municipality and 55 VDCs. The Rakam VDCs is one among these 55 VDCs where Raute people used to live. In October 2015, when I met them, the total population of the community was 148, of which the female population was 65 and the male population was 83. The number of children below 10 years of age was 47 and the rest of them were above 10. The oldest person of the community was Bechne Shahi, 82, the wife of former headman, late Man Bahadur Shahi. Among 39 households, three different clans exist: Raskothi, Kalyal and Swobanshi. They marry someone from different clans (Gurung, et al. 2014; Fieldwork 2015).

4.3. Indigenous Knowledge and Practices of Raute Women about Forest Resources



Figure 4.2. The Raute Women repairing roof of her house in Rakam (Rakam Karnali, Dailekh 2015).

Indigenous knowledge is orally inherited within the community. Forest is the ultimate home for the Raute. Each succeeding encampment of huts and tents is a new temporary village for them. It is their shelter, source of food, a place for entertainment, basis of their utensils and the real foundation for their income source (Fortier 2009). Their work and activity begins at dawn and lasts into mid-evening, with water carrying, fire building, and cooking, wood crafting for barter, hunting, foraging, and trading with local people (Fortier 2009; Reinhard 1974).

Although much of works in the forests is in the men's domain, women can be pushed to spent time in the forest, such as collecting fuel wood, forest foods, medicine, resins and

dyes (Singh 1997; Reinhard 1974; Fieldwork 2015). Males are devoted for hunting monkeys and spend time one third of the day in the forests, while other two-thirds of the time spend in making woodcrafts and trading those objects. Similarly, women spend three to four hours for collecting edible plants and two hours for cutting and collecting firewood. They spend other remaining time for preparing food, repairing huts as shown in above figure 4.2, making woodcraft and selling woodcraft (Reinhard 1974; Fortier 2009; Fieldwork 2015).

The Raute women play the leading role in the management and use of forest resources. Of particular importance is the gathering of fuel wood for domestic use as well as harvesting fruits, leaves, gums and medicinal products. They also keep and cook monkey meat after successful monkey hunt. As monkey meat is important, they pay special care and equally distribute it in the whole community. Although woodcraft is men's work, women take extra care to keep the crafts out of the sun and wind, sometimes placing in water to prevent them from drying and cracking.

Those made objects are rubbed with red soil partly to make the woodcraft more durable. The red color is also the symbol of good luck. Women do all these works. Other works by women include weaving leaves, bark and inner bark for baskets to carry woodcrafts, monkey traps, and other items. They also weave windscreens to cover their huts. These days, the Raute women started taking participation for trading as well (Reinhard 1974; Karki 2012; Gurung, et al. 2014; Fieldwork 2015).

During my fieldwork, I conducted a small survey in order to know their knowledge and practices about the use of forest resources. I found that women more actively participated in all activities of their daily livelihoods and contain much more knowledge in terms of using forest resources. Tables 4.1 and 4.10 show the use of forest resources (59 flora and fauna) by the Raute women based on their indigenous knowledge. Although the list below is far from complete, I consulted other sources and could identify more than 90 kinds of plants (Reinhard 1974; Howland and Howland 1984; Singh 1997; Manandhar 1998, Fortier 2009 Thakur 2014; Field work 2015).

Table 4.1. Woods (Dailekh 2015).

Plant Species	Common Name	Local name	Place	Uses
<i>Shorea rousta</i>	Sal tree	Sal	Dailekh	Fuel, Furniture
<i>Rhododendron arborem</i>	Rhododendron	Laliguras	Dailekh	Fuel, Furniture
<i>Dalbergia sissoo</i> Roxb.	Sisso	Sissau	Dailekh	Fuel, Furniture
<i>Boehmeria regulosa</i>	Fir	Gobre salla	Dailekh	Fuel, Furniture
<i>Bauhinia vahlii</i>	Maloo Creeper	Malu	Dailekh	Fuel, Furniture
<i>Cedrella toona</i> Roxb	Moulmain Cedar	Tuni	Dailekh	Fuel, Furniture
<i>Pinus roxburghii</i>	Gobrsalla	Chir pine	Dailekh	Fruit, Fuel

Woods are collected to make woodcraft and the fuel.

Table 4.2. Wild Fruits (Dailekh 2015).

Plant Species	Common Name	Local name	Place	Uses
<i>Berberis aristata</i> Dc.	Nepal barberry	Chutro	Dailekh	Fruit
<i>Myrica esculenta</i> Buch-Ham	Bay-berry	Kaphal	Dailekh	Fruit
<i>Madhuca butyracea</i>	Indian butter	Chyuri	Dailekh	Fruit
<i>Rubus elipticus</i> Sm.	Himalayan yellow raspberry	Sunauloo Ainselu	Dailekh	Fruit
<i>Berberis aristata</i> Dc.	Nepal barberry	Chutro	Dailekh	Fruit
<i>Rubus paniculatus</i>	Witch berry	Ainselu	Dailekh	Fruit
<i>Holboellia latifolia</i>	Sausage Vine	Bagul, Guphala	Dailekh	Fruit

Wild fruits are collected to harvest as the fruits.

Table 4.3. Fish (Dailekh 2015).

Plant Species	Common Name	Local name	Place	Uses
<i>Barillus bendelisis</i>	-	Tite fageta	Karnali	Meat
<i>Puntius sophore</i>	-	Bhutke pothi	Karnali	Meat
<i>Noemacheilus rupicola</i>	-	Gadela, Garere	Karnali	Meat
<i>Glyptothorax pectinopterus</i>	-	Kabre, Kadhing	Karnali	Meat
<i>Mastacembelus armatus</i>	-	Palainu, Bam	Karnali	Meat
<i>Chana gachua</i>	-	Geluwa, Hile	Karnali	Meat

Fish is caught for the meat.

Table 4. 4. Wild Vegetables (Dailekh 2015).

Plant Species	Common Name	Local name	Place	Uses
<i>Sonchus oleracea</i>	-	Tite sag	Dailekh	Vegetables
<i>Fagoprus cymosum</i> Meissn	Perennial Buck Wheat	Bhan phapar	Dailekh	Vegetables
<i>Urtica ardens link</i>	Stinging Needle	Sishno	Dailekh	Vegetables
<i>Dioscorea bulbifera</i>	Yam	Tarul	Dailekh	Vegetables
<i>Vigna sinensis</i>	Cow pea	Bodi	Dailekh	Vegetables
<i>Rumex hastatus</i>	-	Kapo	Dailekh	Vegetables
<i>Taraxacum officinale</i>	Dandelion	Dudhe jhar, Phule jhar	Dailekh	Vegetables
<i>Benincasa hispida</i>	Wax gourd	Khuvind	Dailekh	Vegetables
<i>Ophioglossum vulgatus</i>	Adder's tongue	Jibre sag	Dailekh	Vegetables
<i>Commelina paludosa</i> Pal	May flower	Kane sag	Dailekh	Vegetables

Wild vegetables like May flower was used for food vegetables.

Table 4. 5.Wild Shoots, Roots and Seeds (Dailekh 2015).

Plant Species	Common Name	Local name	Place	Uses
<i>Drypteris cochletata</i>	Edible fern shoot	Niuro	Dailekh	Vegetables
<i>Drypteris Bulbifera</i>	Air Potato	Githe tarul	Dailekh	Vegetables
<i>Drypteris deltoidea wall</i>	Cush Cush	Bhyakur	Dailekh	Vegetables
<i>Arundinaria artistata</i> Gamble	Red himalayan Bamboo	Nigalo	Dailekh	Vegetables
<i>Amedeola virginiana</i>	Indian cucumber root	Kandamool	Dailekh	Vegetables

Wild Shoots, Roots and Seeds like Air potato for vegetable food.

Table 4. 6.Wild Animals (Dailekh 2015).

Plant Species	Common Name	Local name	Place	Uses
<i>Macaca mulatta</i>	Rhesus Monkey	Rato badar	Dailekh	Meat
<i>Muntiacus muntjak</i>	Barking deer	Ratuwa	Dailekh	Medicine
<i>Lophura leucomelana</i>	Kalij pheasant	Kalij	Dailekh	Medicine

Wild animals are killed for the flesh and the medical purpose.

Table 4. 7. Wild Plants (Dailekh 2015).

Plant Species	Common Name	Local name	Place	Uses
<i>Betula alnoides</i>	-	Saur	Dailekh	For lighting
<i>Betula utilis</i>	Himalayan silver bitch	Bhojpatra	Dailekh	Making fire
<i>Artemisia vulgaris</i> linn	Mugwort	Titepati	Dailekh	Thatching and religion
<i>Dendrocalamus</i>	Bamboo	Bans	Dailekh	Thatching
<i>Terminalia tomentosa</i> wight	-	Saj	Dailekh	For lighting
<i>Quercus Leucotrichophora</i>	Himalayan oak	Sanu banjh	Dailekh	Making fire
<i>Colebrookea oppositifolia</i>	-	Dhursu	Dailekh	Thatching
<i>Imperata</i>	-	Siru	Dailekh	Thatching and religion

Wild plants are used for lighting, fire, sheds and thatching.

Table 4. 8. Medical Plants (Dailekh 2015).

Plant Species	Common Name	Local name	Place	Uses
<i>Bombax malabaricum</i>	Silk Cotton	Simal	Dailekh	Medicine
<i>Terminalia chebula</i>	Myrobolan	Harro	Dailekh	Medicine
<i>Oxalic corniculata</i>	Indian soreel	Chariamilo	Dailekh	Medicine
<i>Pinus wallichiana</i>	Blue Pine	Khote salla	Dailekh	Medicine
<i>Piper longum</i>	Long Piper	Pipla	Dailekh	Medicine

Wild plants are used for lighting, fire, sheds and thatching.

Table 4. 9. Intoxicants Plants (Dailekh 2015).

Plant Species	Common Name	Local name	Place	Uses
<i>Cannabis sativa</i> linn	True hemp	Ganja	Dailekh	Intoxicant with smoking
<i>Lindera pulcherrima</i> benth	-	Tharpipiri	Dailekh	Hunting
<i>Nicotiana rustica</i>	English Tobacco	Golepate surti	Dailekh	Fresh oral use
<i>Nicotiana</i>	American Tobacco	Lampatte surti	Dailekh	Fresh oral use

For the intoxicants purpose they use like English Tobacco and other few plants.

Table 4. 10. Fibrous Plants (Dailekh 2015).

Plant Species	Common Name	Local name	Place	Uses
<i>Agave americanana</i> linn	Agave	Rambans	Dailekh	Fibre, Thatching
<i>Eulaliopsis binata</i>	-	Babiyo	Dailekh	Rope
<i>Gossypium arboreum</i> linn	White jut	Sanpat	Dailekh	Fibre
<i>Girardinia Zeylanica</i>	-	Allo	Dailekh	Fibre

Fibrous plants are collected to weave leaves.

4.4. Knowledge and Practice of Raute Women about Forest Biodiversity Conservation

The spatial and temporal availability of the plant resources required the Raute community to move extensively throughout their traditional territory on a seasonal basis. The Raute women are well aware of the cyclical nature of plant yields. When asked about the reason to move from one place to another, the community leader, *mukhiya*, said that without moving local resources will be exhausted, and people will become angry with him. This statement shows

that even though it is *mukhiya* who decides when and where to move, other community members like women influence him in the decision making process. The Raute men generally recognize that forests, upland meadows and wetlands are under the domain of the Raute women as these places are essential for women's harvesting activities.

For example, the Raute women take charge in organizing harvesting activities according to the seasonal fluctuations of wide varieties of edible plants in the middle far western part of Nepal. In mid-summer, they come to some specific area to harvest witch berries. In late summer, larger fruits such as *Pinus roxburghi* are ready for picking and tubers such as *Dioscorea bulbifera* mature there later in the dry season (spring). Before finishing available foods and other necessary resources to harvest, the Raute women encourage *mukhiya* to search for another place in the forest to move.

The knowledge of the Raute community about biodiversity conservation is closely related to specific forest resources in specific areas. Women know not only the available duration of food in the forest, crucial information to mobile livelihood, but also how to sustain harvest. They do not pick immature herbs and shrubs, because, as they said, the taste of herbs and shrubs would be better when they mature. Sometimes they harvest more herbs and root crops like yams if they see these foods can be preserved. Women are also in charge of the fishery, but they do not harvest fish actively whereas the neighboring non-Raute people are more active in the fishery (Reinhard 1974; Fortier 2009; Field work 2015).

Raute's Indigenous landscape management entails harvesting and burning practices on a regional scale. Fortier, in her *Kings of the Forest: The Cultural Resilience of Himalayan Hunter-Gatherers* (2009), describes about burning practices of the Raute when they are about to move out from the camp after a few weeks. When she visited the previous campsite, she observed some seedlings of willow and sprouts of berreis, ferns, and sage brushes already emerged from ashes.

4.5. Challenges the Raute Women Face to Maintain their Livelihoods

The Raute women work more than 8 hours in a day. Due to this heavy workload, Raute women face a number of problems. In general they are physically weak and their children often suffer from malnutrition (Maharjan 2016; Dnepal). Many young women die in maternal stages because of the lack of care and nutrition. In the Raute community the wellbeing of women is largely ignored.

According to the Raute community, economic conditions have worsened in recent years. Some of them said that they used to enjoy their nomadic lifestyle to the fullest extent.

There were plenty of wild fruits and water in the forest. They cut trees and made wooden utensils. However, things have changed now. The Raute depend more on the supplies from outside (Nepal 1998; Shahu 2012; Field work 2015).

The Raute people have faced legal restrictions since the establishment of the forest law in the early 1960s. The Government of Nepal also established the community forest policy in 1978 and the community forest system in 1992. The latter policy prohibited the Raute people from cut trees in forests. This new policy led to increasing conflicts between the Raute and local residents (Gurung, et al. 2014). The Raute women were prevented from freely searching for food and collecting firewood, vegetables and fruits.

They were required to get permission from the Community Forest Users Groups. Also, the introduction of some exotic weeds reduced the growth of edible fruits and vegetables. Obtaining firewood became more difficult. To gather fruits, vegetables and firewood, women now have to go deep into the forest. It takes more time to collect and dry some food during the rainy season. Sometimes they cannot find enough food, making them, especially children, suffer from hunger and malnutrition (Sangraula 2009).

The nomadic Raute and other Indigenous peoples in Nepal also have legal challenges ahead. For example, the usufructuary rights of Indigenous peoples to the forest are not enshrined in the Nepalese law even though political discussion that led to the new constitution of 2015 spent considerable time in discussing Indigenous peoples' rights. The new constitution did stipulate that: "Women shall have equal ancestral rights without any gender-based discrimination." However, Nepal has not yet observed any policy implementation that meets this gender equality and respect for ancestral rights (IDEA 2015).

After the Maoist campaign for minority rights such as Indigenous peoples, lower castes, and women, Nepal ratified ILO Convention No 169. It addresses the importance of introducing measures by ratifying countries to safeguard the rights of Indigenous peoples like the Raute community. Nepal has not formulated its policies for Indigenous rights yet. As the majority of Nepalese live in urban areas, most people do not care about the Raute livelihood. Nepalese land and forest policies, such as the establishment of National Parks and Conservation Areas, severely restrict the use of forest resources. These regulations are in conflict with the nomadic Raute's traditional economic activities. The Raute people, other indigenous peoples and forest dwellers are no longer permitted to live or to perform any activities in designated areas. Thus, many have been relocated out of traditional harvesting areas (Gurung, et al. 2014).

Due to the external pressure on the Nepalese Government to ratify ILO Convention No. 169 and announced in 2007 to provide aid 1,000 Nepalese Rupees (near about US\$10) for the Raute per person daily needs. This lump-sum payment was not enough for them to survive even for one month. The new constitution includes a provision to protect, empower and develop minority groups, but it does not mention explicitly about Indigenous peoples like the Raute.

Many NGOs and INGOs work for improving social conditions of the Raute as well as their rights to forest resources although the Raute women still remain silent in the process of gaining a secure access to forest resources. In fact, the Raute women face gender discrimination as they are largely deprived of voice to speak in public. The Raute women do not learn Nepalese language, as they are not supposed to talk with any outsiders. Because of this women could not speak up in Nepalese language about their rights.

4.6. Climate Change and Deforestation

The Raute women have noticed the impact of climate change and deforestation such as the depletion of resources in the forest. Mr. Suryanarayan Shahi, one of the Raute leaders, said that about 30 years ago, routes they took for moving in forests were thickly covered with trees. At the time they rarely found forest fire occurrences and famine. They could easily find a large number of wild animals and edible plants in the forest so that they did not need to move near villages to obtain grain food. Forest fire became more frequent recently partly because of intensive deforestation activities. A deficiency of rain and subsequent famine has escalated the depletion of forest resources as clearly shown below in table 4.11; and they were now more depend on neighboring villages for food.

Table 4.11. Different Times of Accessible of Food Resources (Dailekh 2015)

S.N.	Food Consumption	Time of Accessibility		
		Before 1990	1990-2000	After 2000
1.	Wild fruits like Witch berry	3	1	1
2.	Wild vegetables like May flower	3	2	1
3.	Wild Shoots, Roots and Seeds Indian cucumber root, Cush Cush, Edible fern shoot	3	2	1
4.	Monkey	3	3	1
5.	Other animals for medical purpose like, Barking deer	3	2	1
6.	Wild medicinal plants like Silk Cotton, Long Piper	3	1	0
7.	Fibrous plants like Babiyo	3	2	1
8.	Wild plants for lighting, fire, sheds and thatching like Dhursu, Himalayan oak, Bamboo	3	2	1
9.	Agricultural foods such as rice, wheat, corn, potato etc.	1	2	3
Total		25	17	11

Accessibility Time: High=3, Moderate=2, Low=1, Extinction=0

Raute people have observed that the number of rainy days has decreased recently, but when it rains, it often rains intensively. In June 2013, for example, the large floods and landslides brought a massive destruction in western Nepal. The Raute community was forced to migrate because of landslides in their settlement. The increasing occurrences of floods and landslides have not only destroyed natural resources, which the Raute could depend on, but also devastated their travelling routes for hunting and gathering in the forest. Now the situation is very miserable for the Raute community. They have suffered from hunger

especially women and children (Bhattachan 2005; Malla 2008: 63; Subba, et al. 2009; Sanghraula 2009; Field work 2015).

Over-cutting of wood for fuel and construction, and heavy looping of trees for fodder and fire are the main causes of forest degradation. Between 1978/79 and 1994, the area of national forest was reduced by an annual rate of 1.7 percent and shrub land increased by an annual rate of 8.4 percent. The area under agriculture and grassland remained more or less stable during the period (LRMP 1986; DFRS/FRISP 1999). Due to the deforestation and degradation in Nepal the forest cover of around 60% in the decade of the 1960s shrunk to 29% in the 1990s. According to Adhikari, between 1964 and 1991, Nepal lost 570,000 hectares of natural forests out of which 380,000 hectares were converted into agricultural land (Adhikari 2006).

According to the government survey, devastating forest fires and famines occurred in 1990 and 2004. The forest area decreased from 45.5% in 1963/64 to 38.1% in 1978/79, 1984/85, 37.4% and 28.9% (3.64 million ha) in 2005 (Nepal 1998; Bhattachan 2005). To increase the quality of wood products and cull exotic weeds in the forest, community forest users groups introduced Silviculture. This practice in turn has decreased the amount of softwoods and edible plants, medicines, fruits and firewood. These conditions have negatively affected men's woodcraft production and women are harvesting activities (Bhattachan 2012).

4.7. Conclusion

In Nepal, the Raute people or “the kings of the forest” hold very unique and distinctive knowledge about biodiversity conservation. It is important that Nepal and the world keep this heritage. This community has suffered from depleting resources and changing environmental and social and political conditions. Women and children are especially in vulnerable conditions as they have much heavier workload and responsibilities than men do within the community.

The spatial and temporal availability of plant resources require the Raute to move extensively throughout their traditional territory. The Raute women take advantage of their knowledge about forest choosing resources and its environment in collecting wide varieties of edible plants. They classify different plant species according to their use and nutritional values. They also practice ethical principles in preventing excessive harvesting. For example, as discussed above, they do not pick immature herbs and shrubs. They do not actively engage in the fishery, as neighboring local people are more active on it. Women are also active caretakers of the forest, alpine meadows, and wetlands.

Because of the Raute women's language disadvantage and gender discrimination, their rich knowledge and traditional roles in managing resources have been neglected. It is urgent and crucial to better understand the extent in which the Raute women play significant roles for sustainable forest conservation. Their in-depth knowledge can be helpful to formulate local adaptation strategies for climate change. Above all, much more research is needed to better understand the nomadic Raute people and their contribution to biodiversity conservation. For this, more active actions by the Government of Nepal are required to protect the Raute rights.

Chapter 5: Population of the Raute

According to the Census Bureau, from 1991 to 2011, the population of the Raute rapidly decreased from 2,878 to 140 (Census 2011). Even though many researches have studied about the Raute, no one has given clear explanation about this rapid decline of the Raute. Nor have they suggested any political actions that might restore the population. In light of these concerns, this chapter investigates the main causes of the rapid “decline” of the Raute population. My investigation shows that the Bureau actually made a wrong estimation.

5.1. The Raute Population

Comparing to the rest of the nation’s population, Indigenous people have higher rates of infant mortality, unemployment, alcoholism, diseases and incarceration (Bureau of Statistic 2007). In Nepal, 59 distinctive indigenous peoples reside in different areas with the total population of about 8.4 million, which is about 37% of the Nepal’s total population (IWGIA 2008). According to the Census 2001 as shown in below table 5.1, most of the indigenous groups have small population. Most of them have less than 1 percent of the total population of Nepal. About 86% of the country (CBS 2003) is covered by mountains, in which many of these Indigenous peoples live (ICIMOD 1994). The Raute people are the only nomadic foragers in the country living. Many studies have been published about the Raute, but no study examines the population of the Raute.

Table 5.1. Classification of Indigenous Peoples by Population Size (Source: Census 2001)

Population in percent	Indigenous peoples	No
5 to 8 per cent	Magar, Tharu, Tamang, Newar	(4)
1 to 3 per cent	Rai, Gurung, Limbu	(3)
0.4 to 1 per cent	Dhanuk, Sherpa, Bhujel, Kumal, Rajbansi, Sunusuwar	(6)
0.1 to 0.4 per cent	Majhi, Dnuwar, Chepang, Satar, Jhangad, Gangain, Thami	(7)
Less than 0.1 per cent	Dhimal, Bhote, Yakkha, Darai, Tajpuria, Thakali, Pahari, Chhantyal, Bote, Baramu, Jirel, Dura, Meche, Lepcha, Kisan, Raji, Byansi, Hayu, Walung, Raute, Hyolmo, Kushbadiya, Kusunda	(23)

All indigenous peoples are concentrated in their own ancestral lands. In the mountain regions, such as Mustang, Manag and Rasuwa, indigenous peoples comprise 75 to 95 per cent of the population, but in the Hills and the Terai, indigenous peoples are less than 50 per cent of the population because they are outnumbered by the migrant non-indigenous populations. The indigenous peoples in mountain areas still control their indigenous way of life. On the contrary, many indigenous peoples of the Hills and the Terai have been losing control over their indigenous way of life because of the influence of the dominant groups through the processes modernization (Bhattachan 2012).

There are two Raute communities in Mid-Western part of Nepal. Both of their livelihoods are based on forest resources. But one of them has already settled in 1981 by the government as discussed in previous chapters (Singh, 1998). They are no longer identified as the Raute. Currently, they are called Raji and live in Aampani (Jogbudha), the Rajyouda (Sirsha) Village Development Committee (VDC) in Dadeldhura District, western Nepal. The total population of the Raji is 618, of which 320 are males and 298 are females. They have engaged unsuccessfully in agriculture because of insufficient knowledge about cultivation and irrigation (Gurung, et al. 2014).

The most recent population of the nomadic Raute is 162 or 45 families (of which 92 are males and 70 are females (Field work 2015). However, it was very difficult for the author to count their current population during fieldwork due to prohibition of counting member in the Raute community. But with the help of Mr. Pradeep Shrestha, previous Chief District Officer (CDO) of Kalikot District in 2015, the author got the name list of the nomadic Raute from the Dailekh District office. Recently, the Raute gave permission only to the government staff to count the number of their family after they got money per person Rs1000 (Nearly, US\$10). About counting members in their community, Hari Bahadur Rastakoti says:

Why you need to count our member? We do not allow anyone to count our member. It's not our culture. If you need, you can contact Dailekh District Office. We already allow them to count our member and suffer different problems. We do not want any more problems.

His answer made me more aware of their strict culture and their strong belief against counting the population. In previous researches conducted institutionally or personally, therefore, only could guessed the Raute population, but the author for the first time managed successfully to present the accurate current population of the Raute for this study.

5.2. Delusion about the Nomadic Raute Population

Most studies that mention the Raute population do not distinguish the nomadic Raute from the Raji. The Census Bureau of Statistics (CBS) and the National Population Census (NPC), Community and Economic Development Association (CEDA) do not distinguish the Raji from the nomadic Raute. This has created the misconception about the population decline of the nomadic Raute community.

Table 5.2. Vaired Population Estimates of the Raute (Source: Singh 1997; CBS 2002; Paudel 2012; Gurung 2014; Thakuri 2014; CBS 2011; Rakam Karnali 2015).

Scholars/Institutions	Number of Families/groups	Counted Population	Status (Nomadic or sedentary)
Reinhard (1974)	35-36 huts	140	Nomadic
Nepal Yatri (1983)	4groups	352	-
Ministry of Labor and Social Welfare (1984)	-	135	Settle +Nomadic
Bista (1985)	-	200	Nomadic
National Population Census (1991)	-	2875	Settled+ Nomadic
CEDA (1991)	-	375	-
CERID (1991)	-	2878	-
CBS (March1993)	-	268	-
Karki (August 1993)	60 families	350	Nomadic
Mishra (January, 1993)	Many groups	250	-
Majhi (July, 1993)	1 group	300	-
Singh (1997)	6groups	980 (130Nomadic+850sedentary)	-
CBS (2002)	-	658	Settled + Nomadic
Paudel (2014)	-	148	Nomadic
Thakuri (2014)	-	143	-
Gurung (2014)	45 families	167	-

Scholars/Institutions	Number of Families/groups	Counted Population	Status (Nomadic or sedentary)
CBS (2011)	-	140	-
Fieldwork (2015)	2groups	162	-

Table 5.2. shows that in 1975 Reinhard's count of the nomadic Raute population was 140 but in 1983 Yatri enumerated both Raji and nomadic Raute as 352. The National Population Census of 1991 showed 2,878, but the CEDA in the same year (1991) claimed 375. The CBS in 1993 said the Raute population to be 268. These counts alone show considerable differences. Singh in 1997, however, separated the settled population from the nomadic one, and said the nomadic population was 130. Despite Singh's study, in 2002, the CBS declared that the Raute population was 658, combining both the nomadic Raute and the Raji. Recent studies of the scholars touched on the estimated population of the Raute, but they did not conduct their own surveys.

Hence, it is clear that the past estimates do not provide reliable sources of information to trace the changes in the Raute population. Discounting the overestimation by the National Population Census in 1991, and setting aside the Raji population, it is quite likely that the Raute population has not declined rapidly. My investigations during field work in 2015 shows that the exact population of the Raute was 162. This count is based on the data provided by the Dailekh District Office in 2015.

5.3. Impact of Diseases on the Raute Population

Although the population of the Raute has not declined, it is clear that the Raute are suffering from the economic and ecological challenges, which have severely threatened their traditional livelihoods and culture. Moreover, recently they have suffered from diseases, such as dysentery, cholera, typhoid. Since the water resources are being polluted, waterborne diseases have increased as the Raute drink water directly from ponds and spring. In July 2012, cholera broke out in the community and killed three small children within two days. They were advised to take allopath, but they rejected in the beginning. When the epidemic took the lives of two more children and two elderly people in the same month, severely suffering patients accepted the medicine with hesitation for the first time in the history (Paudel 2012). But they are not happy to accept the modern medicine. Hari bahadur Rastakoti (age 52) explained:

Yes, we do [take medicine] sometimes because we do not have option now due to the depletion of medicines in the forest like Ciraito (Sweet flag calamus) for treating

stomachache, Akasbeli Swertia angustifolia for treating fever, Amala (Phyllanthus emblica), Pani Amala (Nephrolepis aueiculata) for treating cholera. Harro (Terminalia chebula) Barroo (Terminalia belerica) to prevent catching cold, Pipla Piper longum, Halhale (Elephantopus scaber) to treat injuries most of it we find very hardly which are not enough for us. But still we believe our own treatments rather than these so called modern medicines.

I asked another question regarding on the population decline due to different diseases, and Surya Narayan Shahi said:

We don't know if our population is declining or not. We are human being like you and die normally as you people die in your society. In our community, males died usually while hunting because we need to run blindly competing with the monkey and at that moment our members fall down from the cliffs of the forest. And females died during pregnancy and giving birth. Except this we also got sick and have disease like cholera, typhoid sometimes. Most of the time, we got injured while climbing cliffs of the forest. Two years ago some doctors came to our community and said that few of our children are suffering from polio, which we did not believe, but they forced us to give our children polio drops and vitamin 'A'. These days we suffer from different modern diseases, which we never heard before because we do have eating our own food properly sometimes we also suffer from hungriness. Will you convince the government to provide food for us frequently in the future?

It seems that the Raute people do not want to disclose about their population decline of their community. Dying during climbing cliffs in the forest and during pregnancy and delivery are the normal things for them. In dealing with water-borne diseases, they started taking allopathic medicines. But they do not want to take it continuously in the future.

5.4. Conclusion

This study identified the current population of the Raute, which contrary to the previous government notion of “endangered” status has not changed. However, the nomadic Raute face the urgent problems of deforestation, various new diseases, and population encroachment by majority societies, language domination, and the political hegemony of the surrounding Nepalese society. While they suffer from diseases like cholera and polio, their future population growth seems to depend on the extent to which the Raute control their own affairs in terms of forest resources use and acceptance of modern medicine.

Chapter 6: Conclusions and Recommendations

In the previous four chapters, I have examined the knowledge of the Raute people in using forest resources and demonstrated how their Indigenous knowledge can be useful to conserve forest biodiversity. I also have illustrated the historical policies that affected Indigenous peoples in Nepal. Moreover, I have proved the misinformation about the Raute population decline and the current challenges they face to maintain their traditional livelihood.

6.1. Conclusion

The spatial and seasonal availability of plant resources require the Raute to move extensively throughout their traditional territory. The Raute women take advantage of their broad knowledge about forest ecosystems in collecting wide varieties of edible plants. They classify different plant species according to their use and nutritional values. They also practice ethical principles in preventing excessive harvesting. For example, they do not pick immature herbs and shrubs. They do not actively engage in the fishery, as neighboring local people are more active on it. Women are active caretakers of the forest, alpine meadows, and wetlands.

There are two Raute communities in Mid-Western part of Nepal. Both of their livelihoods are based on forest resources. But one of them has already settled in 1981 by the government. Currently, they are called Raji. Most studies that mention the Raute population do not distinguish the nomadic Raute from the Raji that has created the misconception about the population decline of the nomadic Raute community. Discounting the overestimation by the National Population Census in 1991, and setting aside the Raji population, it is quite likely that the Raute population has not declined rapidly. My investigations during field work in 2015 show that the exact population of the Raute was 162. This number is based on the data provided by the Dailekh District Office in 2015.

The national forest management policy, especially the community forest act, has bridled the Raute to use forest resources freely as before and weakened the traditional mode of the economy. The new Constitutions have not helped improve the livelihood of the Indigenous peoples like the Raute. Either version of the Constitution does not mention clearly what rights are secured except the encouragement to participate in politics.

Nepal has so far ratified a number of international treaties and declarations like ILO169, the UNDRIP, and CBD, but the implementation has not been successful. The nomadic Raute still practice traditional culture, but the tradition has been eroded to a large

extent. The depletion of forest resources, restriction on using forests, welfare policies, and modern consumerism has increased the dependency of the Raute on the market. The Raute leaders are now more open to external influences. While the Raute suffer from diseases like cholera and polio, their future population growth seems to depend on the extent to which the Raute control their own affairs, including forest resources use and modern medicine. Consequently, the traditional economic structure of the Raute has metamorphosed, and it is hard to predict how long they will be able to preserve their culture and traditional livelihood unchanged.

6.2 Recommendations

To ensure that the voice of Indigenous people is heard and their biodiversity conservation practices are respected, it is important to establish a cooperation mechanism among different governmental agencies and external bodies or stakeholders such as ILO, trade unions, employers' associations, other indigenous peoples, local communities, and representatives from civil society. In order to achieve this mechanism, the following actions are important to be considered.

It is necessary to raise better awareness among local neighbors about Raute people and their culture and livelihood. These neighbors also need to understand that the Raute people have their rights to land and forest resources. In particular, women should be given greater support for their initiation and measurement of forest preservation and management by using their indigenous knowledge. At this time, there is no cordial relationship between the Raute and local villagers. These villagers do not think that they can learn about forests and biodiversity from the Raute.

To keep the Raute community, their values and indigenous knowledge on sustainable forest management and biodiversity conservation should be promoted. The further study and publications on the indigenous knowledge of the Raute especially women on forest management can not only enhance forest biodiversity conservation in general but also contribute to the empowerment of Raute women or the restoration of their power over natural resources.

The Raute women should be provided with more opportunities for full, equal and effective participation in decision-making and community affairs, including negotiations with neighboring villagers and government officials. This is possible by providing more educational opportunities to enhance their capacities, skills, technology proficiency, which in general will lead to self-confidence. In order to achieve this goal, the Nepalese Government

must take drastic efforts to eliminate ethnic and gender discrimination. For example, the Government should fund different projects that aim at educating children and women.

As the Raute face a number of challenges such as deforestation, climate change, displacement, the encroachment of the settler population into their traditional territory, it is necessary for the government and NGOs to promote alternative economic and livelihood opportunities for the Raute. The living situation has deteriorated, and under these circumstances, the Raute have great difficulties to maintain their traditions. For example, Raute women can be trained as protected area rangers as they have the extensive knowledge of using forest resources. Or they can work for scholars and relevant government agents as guides and help enhance the knowledge of flora and fauna in the forest.

The government should also protect the rights of the Raute in harvesting plants for medicine, food, firewood and fodder for subsistence uses. Local non-Raute people can learn more about forest biodiversity and resources from the Raute so that they can engage in more sustainable development.

To prevent the loss of Raute's rich traditional knowledge, it is crucial to record their knowledge, skills, practices, and technologies in multiple languages. This use of technologies for knowledge transfer can secure opportunities for younger generations to learn about their traditional skills through various channels. The information dissemination through these technologies also helps the larger Nepalese communities to better understand and respect Raute people and their livelihood.

It needs to be recognized that ecological knowledge of the Raute such as choosing plants, moving one place to another regarding biodiversity are expressed not only in location and group-species practices for multiple forest uses, but in social practices for sharing diverse benefits. Although the Raute are not the expert of the genetic diversity of plant and animal species but they are part of it and knows very well how to use those plants and animals species which they used to do more than hundred years ago. Their knowledge of choosing plants and animal species is useful to make balance of ecological environment in the forest which may also grasp the ability to adapt to climate change.

Their indigenous protection participatory approaches are really important to create the standard setting for biodiversity conservation. Such processes empower local communities to make use of local knowledge and deal effectively with global standards and enhance sustainable conservation of biodiversity conservation.

The popularity of the modern liquors in the local market impact the Raute people so deeply. With more cash, they buy alcohol more frequently rather than food. Although they explain that they drink alcohol to make them warm and prevent cold from the forest, it may impact on their health and they might suffer with serious diseases. The government must organize awareness program among the Raute community about the negative effects of alcohol and tobacco.

The Government of Nepal should take steps forward to prohibit development programs and projects that threaten indigenous peoples' livelihoods and their rights to land and resources, especially when they cause wide-spread deforestation and forest degradation (e.g., the allocation of forest lands to private companies and community forest and users). They should implement policies to protect the rights of indigenous peoples with equal gender participation in accordance with articles 13(1), articles 8j and 10c, 26 and 27, 22(3) and 23(1) of ILO Convention No. 169. As the Government does not have sufficient human resources to protect remote communities, INGOs and NGOs are important in monitoring the wellbeing of indigenous populations.

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