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Nepal's community forestry has been internationally recognized as an example of successful case of collective action. However, many scholars argue that although it has been successful in protecting forests from degradation, it has not been able to create an inclusive platform for political decision-making process. Using historical analysis, comparative case studies and social network analysis, this research examines the opportunities and barriers to a successful implementation of community forestry program in Nepal. The results show that when given proper rights and responsibilities, local communities have the potential to successfully protect and manage their resources. However, it was evident that larger political and economic forces influence the locals' capacity to protect their resources, and existing social hierarchy and inequality continue to marginalize the disadvantaged groups, thus affecting their ability to participate in the decision-making processes. This research argues for a deeper historical analysis as an essential aspect to evaluate collective action, since it provides a context for existing social, political and economic structures. The results of this study are further used to evaluate the discrepancies of theory of collective action, and provide suggestions for theoretical framework for broader implementation.

Examining Nepal's Community Forestry to Understand Opportunities and Barriers to Successful Collective Action

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I understand that my dissertation will become part of the permanent collection of Oregon State University libraries. My signature below authorizes release of my dissertation to any reader upon request.

Suman Pant, Author

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During the fieldwork of my master's research, I was introduced to the success of community forests in Nepal. Although it was not my research area back then, I was intrigued by the community forestry program in Nepal, and how it had helped protect the forests from degradation while making forest resources accessible to local community members. I decided that I wanted to learn about it more, and so it became my research topic for my Ph.D. work.

As I learned more about it, the more complicated and confusing it became. The existing literature was often conflicting, with stories of success, failure, and somewhere in between. I felt like a kid, excited about something that was interesting and confusing, and I did not know how to look at it. I am indebted to Prof Alison Johnston, who helped me figure out different ways to approach the topic, understand competing theories and methods I would employ. Slowly, the research started taking shape, and I went back to Nepal with a rough proposal to conduct my preliminary research. Mr. Deepak Dorje Tamang, Director of SEARCH Nepal invited me to a two day workshop, where I had the chance to speak with scholars and practitioners to learn about the opportunities and challenges associated with community forestry.

I was back in Nepal in December 2013 for five months, and again in June 2015 for two months, interviewing local community members, relevant stakeholders and scholars. Those seven months were interesting and exciting, and I was able to learn so much more about community forestry first hand. I am grateful to all the interviewees for taking their time to talk with me. Thanks to Dharam Raj Uprety, Raja Ram Paudel, Kokishera Magar, Kaushika Nepali, Prem Airi, Mukesh Chand, Pooja Bhatta, Raj Saud, Sunil Pant, Anita Bhatta, Stuty Maskey, Purushottam Gaire, and Anil Bhandari for the support and collaboration during the fieldwork. I would also like to thank The Tokyo Foundation (Sasakawa Young Leaders Fellowship Fund, 2013; and SYLFF Research Abroad Award, 2014) for the funding this research.

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TABLE OF CONTENTS

LIST OF FIGURES

Figures Page

LIST OF TABLES

Table Page

COMMONLY USED ACRONYMS

CBNRM: Community Based Natural Resource Management
CF: Community Forestry
CFUG: Community Forest User Group
DFO: District Forest Officer
FECOFUN: Federation of Community Forest Users, Nepal
HDI: Human Development Index
IAD: Institutional Analysis and Development
INGO: International Non-Government Organizations
NGO: Non-Government Organizations
NRs: Nepali Rupees
VDC: Village Development Committee

DICTIONARY

Janajati: Commonly used to refer to indigenous groups, or ethnic minority groups

Birta: Land given out by the state to individuals, free from any taxes

Brahmins (Bahuns) and Chettris: Refers to "upper-caste", based on the caste system

Dailt: Refers to the "lower-caste", based on the caste system

Ilaka: Area

Kamaiya: Commonly referred to Tharus who were bonded-labors

Mukhiya: Village leader (usually an older elite man)

Mukta Kamaiya: Freed bonded-labors.

Naya Muluk: New land; refers to four Southern districts in West of Nepal

Panchayat system: A party-less political system, based on absolute power of Monarchy. The lowest level of administration constituted of village assemblies, and the highest administration was the Rastriya Panchayat (National parliament).

Terai: The Southern low-plains of Nepal

Tharu: Ethnic group, native to Terai, only group in Nepal known to be immune to malaria

Tole: Commonly used to refer to a certain locality (based on radius and size, rather than administrative or legal jurisdiction)

CHAPTER 1: INTRODUCTION

> "[A]mbiguity runs through all of the most important discourses on economy and the environment today.... Precisely this obscurity leads so many people so much of the time to talk and write about 'sustainability': the word can be used to mean almost anything...which is part of its appeal." (O'Connor, 1994)

The discourse of "sustainable development" was launched globally in 1987 with the release of the Brundtland Report, which emphasized the importance of incorporating environmental protection and social justice along with economic development. Ever since, national and international organizations all over the world have made attempts to sustainably manage the natural resources.

Sustainable management of natural resources, especially forests, is vital for human livelihood and has shown potential for sustainable development (Katila, et. al. (eds), 2014). According to the World Bank, forests contribute to the livelihood of 1.6 billion people all over the world (World Bank, 2004). Besides the tangible wood and non-wood productions for consumption, forests provide a range of environmental services like flood control, air filtration, soil stabilization, and play an important role in climate mitigation and adaptation. According to some (Pan, et al., 2011), world forests account for a large portion of land based carbon uptake.

The goal of sustainable forest management is to conserve the environment, while utilizing the resources for improving livelihood. Many of these approaches are guided by the literature on forest tenure and property rights to forest resources.[1] Among these different regimes, devolution of forest rights to local communities and smallholders has become the focus of research, as it has shown potential for sustainable forest management (Katila, et. al. (eds), 2014; Dev et. al., 2003). Although such a devolved form of governance has potential, the outcomes have varied with mixed results.

[1] Tenure regimes are classified into three broad categories: state, private, and common-property regime.

Community Based Natural Resource Management (CBNRM) has shown positive outcomes in some locations, but overall, such devolution strategies have not always resulted in the outcomes predicted by property rights theory (Edmunds and Wollenberg, 2003). One of the successful cases, Nepal's community forestry, has shown that devolved form of forest governance has the potential for forest conservation, while utilizing the resources for improving livelihood (Dev et. al., 2003).

This research aims to examine Nepal's community forestry program as a case of community based natural resource management to understand the opportunities and barriers to successful collective action, and provide informed policy suggestions. Additionally, the findings from this study will be used to assess the theoretical predictions of collective action theory, evaluate its shortcomings, and provide suggestions.

1.1 Nepal's Community Forestry

The Community Forestry (CF) program of Nepal intersects with local governance, natural resource conservation and local development. It is an interesting and widely appreciated forest management system that attempts to meet its dual objective of environmental protection and local development by transferring rights and responsibilities to local communities. Since 2005, forest degradation (rate of decrease in forest cover) in Nepal has maintained at 0%, from 2.9% in 1990s, and scholars and practitioners alike have given community forestry due credit (Tamang, 2012). In the last 30 years, CF has emerged as a major national program that involves 40 percent of the country's total population and covers 27.4% of the total forest area (Paudel et. al., 2009; Department of Forests, 2016). Many successful community forests have also been able to generate substantial income to support local schools, health posts and build local infrastructure.

Empirical research on Nepal's community forestry has shown mixed results: on one side, proponents claim that community forestry has the potential to meet its dual goals

(Edmonds, 2002; Pokharel and Suvedi, 2007), and on the other hand, opposing arguments claim that community forestry cannot meet its dual goals, given the political history, social inequality, and bureaucratic control of the government (Paudel et. al., 2013; Sunam et. al., 2013). However, both proponents and opponents agree on one argument—social inequality continues to exist (Thoms, 2008), and in some cases this inequality has increased due to the institutional setup of community forestry (Ojha et. al., 2009; Nightingale, 2005).

The conflict in the research could be due to the differences in the objectives of the research or the methodologies employed. For example, literature based on social discourse theories or feminist theories often reflect the inability of community forestry to meet its dual goals, while research based on a neoliberal perspective has shown the benefits of community forestry. Additionally, there are no clearly defined goals of community forestry, which makes it difficult to evaluate the outcome. For example, there is no standard benchmark for success—should community forestry meet all the objectives of sustainable development? Is it expected to dispel the social inequalities and help build a politically inclusive platform? Is the goal to protect the forests geared towards local livelihood and sustenance, or to manage and extract resources for economic benefits?

To reduce the ambiguities, this research will make a few assumptions regarding objectives and benchmarks. These assumptions are based on field research (narratives by locals and practitioners), existing literature, and the national guideline provided by the Department of Forests.

1.2 Definitions, assumptions and impact of Community Forestry

Research and policy papers have shown that the main objectives of community forestry are to protect the forests from degradation (environmental protection) and contribute to local development.[2] Local development is measured as the contribution to the

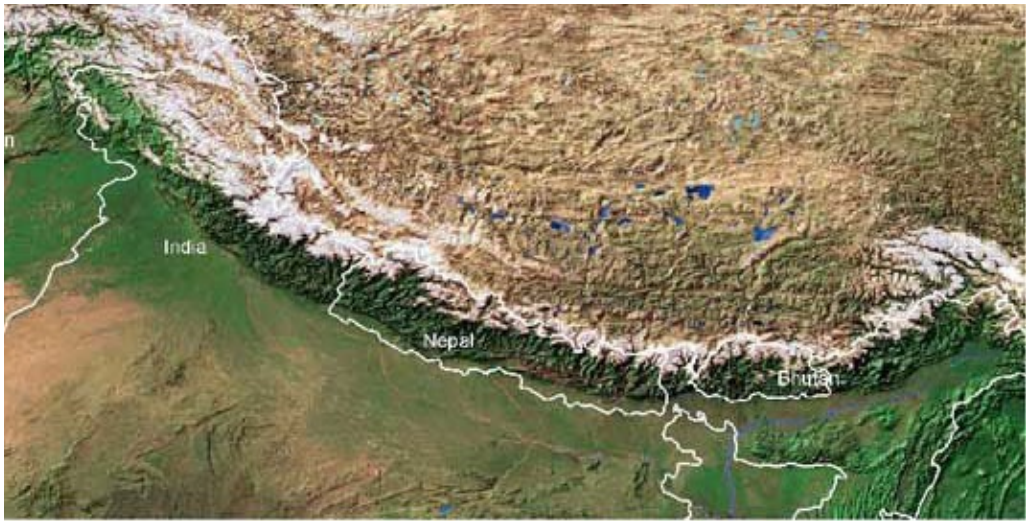
[2] Forest conservation is measured by increase or decrease in the forest size. Proper assessment of forest biomass or quality is not the scope of this research.

development of local infrastructure and efforts to alleviate poverty. Since the national guideline proposed by Ministry of Forestry has pushed for gender equality and equal rights for marginalized groups, this research will assume that equality and inclusion is also a part of the second objective. These objectives are similar to the framework of sustainable development presented in the Brundtland report. Though there are ambiguities about "sustainability", this research will assume that the objective of CF in Nepal is to help improve social equality, improve local infrastructure and reduce poverty, and protect the environment by preventing forest degradation.

People are not only dependent on the resources, but also interdependent among themselves, and hold varying power positions in the community. Their interaction among each other and the environment is dependent on the power distribution among the actors involved in management (Hobley, 1996). So, before we begin to examine community forestry, it is important to contextualize the case. An understanding of the social structure and existing discourse is necessary to understand the interdependence among the people.

1.3 Ecological and Socio-economic Context of Nepal:

Fig: 1.1 Topographic Map of Nepal: The Himalayan Range and Indo-Gangetic Plains



Source: Pariyar (2008)

Nepal lies in South Asia, bordering India on the East, West and South, and China on the North. The 14.7 million ha land area (approximately 800 km east to west, and 144-240 km north to south), ranges from low plains (66 m above sea level) to the highest mountains in the world (to 8848 m above sea level) (Pariyar, 2008). The Himalayan range and Indo-Gangetic plain that runs through East to West have created distinct ecological zones (belts) in the country: (1) The Plains, also known as Terai, (2) Hills (elevation ranges from 300m to 3000m above sea level), and (3) Mountains (elevation > 3000m).

Table 1.1: Ecological zones, Forest types, People and Infrastructure

Eco-zones	**Elevation (m)**	**Area (sq km)**	**% Area**	**Vegetation**	**People**	**Infrastructure**
Mountains	> 3000 m	51817	23.7%	Open meadows, tundra vegetation	Temporary herders, Sherpa and Bhotiya	No road linkages
Hills						
High hills	2000-2500	28,995	19.7%	Fir, Pine, Birch, Rhododendron	Ethnic groups (Gurung, Magar,Tamang, Thakali, etc.), Hill tribes, Caste elites, Dalits	Few road linkages
Mid-hills	<2000	43,503	29.5%	Pine, mixed hardwood, oak		Road linkages in major centres
Shivalik	300-1800	18,886	12.7%	Sal, mixed hardwood, pine		Good road linkage
Terai	66-300	21,422	14.4%	Sal, mixed hardwoods	Tharu, Caste elite, Dalit	Good road linkages

Source: Adapted from Pariyar (2008)

The ecological context is important for three main reasons: 1) the economic benefits to the community depend on the value of the timber, and ecology determines the forest type and the quality of timber; 2) the terrain becomes difficult as the elevation increases, so road infrastructure and linkages becomes less dense traveling from South to North. This could possibly impact the market pressure on the forest, or the convenience in transporting the products; and 3) different ethnic groups are distributed along these ecological lines; further creating differences in social construction and hierarchy. Usually the social construction is more discriminatory in the Southern Terai, but as we go North,

communities are observed to be more egalitarian.[3] Besides the ecological distribution, socio-economic construction of Nepali society is important to examine because socio-economic hierarchies and constructions can provide a glimpse on how local community members interact with each other.

According to the Human Development Report (based on the data from 2011 census), Nepal's overall Human Development Index (HDI) score was 0.458, ranking it at the lowest among the nations in South Asian Associated for Regional Cooperation (SAARC) (UNDP, 2014).[4] According to the UN Report, Nepal is not only poor with low HDI, but also suffers from income inequality that causes overall loss to the human development potential (UNDP, 2013).

The current gender inequality index (GII) value of Nepal is 0.485, which is lower in Nepal than other South Asian countries (except Srilanka).[5] Gender inequality in labor force participation is also much lower in Nepal (80.4% of women and 87% of men participate in the labor force), which shows progression in gender equality when compared with other South Asian countries, nations with low level of human development.[6]

Besides gender, caste and ethnicity also shape inequalities in Nepal. The national data on inequality based on caste and ethnicity (Table 1.2) shows that the caste elites rank higher

[3] The UNDP reports, Social Inclusion Index and many other narratives have shown that communities in hills and mountains are more egalitarian than communities in the plains.
[4] Human Development Index (HDI) is a composite statistic of life expectancy, education, income per capita indicators, which are used to determine countries' ranks into four tiers of human development.
[5] Gender Inequality Index (GII) is an index for measurement of gender disparity in four important aspect of human development—reproductive health, participation in politics, education, and participation in labor force.
[6] The data shows that gender inequality is lower in Nepal, and there are possibilities that this number is hyperinflated. First, the national parliament reserves 33% of seats exclusively for women. It is important to note that this is an attempt to increase gender equality, not an indication of one. Secondly, the index for economic equality (labor force in market) between genders does not calculate income inequality, biasing the results. For example, if a woman works in someone else's fields and earns minimum wages, it is counted as the same value for a man who could be earning 10 times more. This could be the reason why gender equality is hyperinflated.

in HDI, have higher life expectancy and years of schooling, and earn higher income than the marginalized caste and ethnic groups. Caste elites (representing 30.9% of total population) also heavily dominate the public, political and civic sectors (Table 1.3). This inequality further spills on the political sphere, where caste elites (and Newars) exercise socio-economic and political power, while the marginalized caste and ethnic groups are systematically deprived of the same socio-political opportunities.

Table 1.2: Human Development by major caste and ethnicity in Nepal

	Human Development Index	**Life Expectancy Index**	**Adult Literacy Index**	**Per Capita Income (NRs)**	**Sub categories**
All high caste	0.538	0.816	0.763	49,878	Bahuns and Chettris
All lower caste	0.434	0.703	0.523	33,786	Hills and terai Dalits
All Janjatis (excluding Newars)	0.482	0.748	0.669	37,726	Mountains and Hill Janjatis
Terai Janjati	0.473	0.741	0.622	36,765	Rajbansi, Santhal, Tharu etc.

Source: Adapted from UNDP (2011)

Table 1.3: Representation of various caste/ethnic groups in different sectors, 2005

Sector	Bahuns and Chettris	Janjati	Dalit	Newar	Madhesi	Others	Total
Public	82	7	2	14	9	0	114
Political	93	20	1	14	11	0	139
Private	21	3	0	42	30	0	96
Civil Society	94	9	1	19	18	0	141
% of total population	30.9	23.1	7.9	5.5	31.5	1.2	100

Source: Sijapati (2013)

Table 1.2 and 1.3 show that when inequality is differentiated based on caste and ethnicity, *Dalits* and ethnic groups (*Janajatis*) are found to be the most marginalized groups while *Bahuns* and *Chettris* have been exercising the political, economic and social power. *Dalits* have long faced discrimination, and are traditionally considered "lower caste" as they are considered inherently polluted to many *Bahuns* and *Chettris* and other ethnic groups (Gunaratne, 2002). The *Janajatis* (indigenous groups) comprises of more

than 60 culturally and linguistically diverse groups, and many of these groups have historically spoken Tibeto-Burman language. After the unification of Nepal, many indigenous groups have had limited access to state power and resources, while caste elites have benefited from different policies enacted by the state (Hangen & Lawoti, 2013).

The Central Department of Sociology/Anthropology at Tribhuvan University in Nepal has published a *Multidimensional Social Inclusion Index* that captures important dimensions of social inclusion using 39 indicators. Using these indicators, a team of scholars and practitioners created a social inclusion index to rank different ethnic and caste groups in Nepal.

Table 1.4: Dimensional and Composite Social Inclusion Index by social groups

Caste/ Ethnicity	Social dimension	Economic dimension	Political dimension	Cultural dimension	Social cohesion dimension	Gender dimension	Social inclusion
	Index	Index	Index	Index	Index	Index	Index
Hill Bahuns	0.6799	0.6048	0.7020	0.9673	0.9594	0.5285	0.7403
Terai Bahuns/Chettri	0.6008	0.6313	0.7969	0.7695	0.8790	0.4842	0.6936
Newars	0.6811	0.6137	0.6697	0.6695	0.9013	0.5759	0.6852
Hill Chettri	0.5845	0.5156	0.5709	0.9860	0.8689	0.5415	0.6779
Others	0.6143	0.6297	0.5049	0.6639	0.8789	0.5076	0.6332
NATIONAL AVERAGE							
Mountain Hill Janajati	0.5497	0.5109	0.2363	0.6933	0.8096	0.5516	0.5586
Terai Janajati	0.4592	0.5183	0.2634	0.7475	0.8550	0.4566	0.5500
Terai Other Caste	0.4350	0.5297	0.2684	0.8008	0.8218	0.4046	0.5434
Muslim	0.3557	0.4871	0.3691	0.8181	0.6941	0.4333	0.5262
Hill Dalit	0.4854	0.3900	0.1409	0.9386	0.3286	0.4847	0.4616
Terai Dalit	0.3330	0.2972	0.1373	0.7976	0.4720	0.3505	0.3979
Total	0.5359	0.5155	0.2974	0.8327	0.7991	0.5083	0.5815

Source: (Das et. al., 2014)

Different ethnic and caste groups experience different levels of inclusion, but it is clear that *Bahuns, Chettris* and *Newars* experience higher level of inclusion, while marginalized ethnic groups, *Dalits* and Muslims have low index scores across all dimensions and the overall social inclusion (Table 1.4). The table (1.4) also shows that *Bahuns* and *Chettris* score high along the political dimensions, indicating their power and relationship with the state. Such differences in power relationship with the State and inclusion amongst themselves can have significant impact on social structure and hierarchies, establishing large inequalities based on caste, ethnicity and gender. These inequalities have historic roots, political and power relations with the state, and demographic analysis does not necessarily examine the causes behind certain community attributes. [7]

1.4 The research

Nepal's inequality is not a case of inequality decided by the market; it is a systemic structure, where minority ethnic groups, *Dalits,* and women are disadvantaged. When scholars argue that "marginalized groups" are not benefiting from community forestry as much as the advantaged groups, it simply means that *Dalits*, ethnic minority and women benefit less (and bear higher costs for their participation) than *Bahun* and *Chettri* men.

Despite these social inequalities, community forestry has shown significant steps towards building more inclusive local institutions. In a country where gender and caste inequality is so high, the Community Forestry program (in its legal framework) has initiated some steps like imposing mandatory women's participation in decision-making to promote

[7] For example, during my research, when a *Dalit* (or women) said, "I don't know what to say, I go to the meetings but stay quiet" or "I don't see a point of going to the meetings", it is more than just "opportunity cost" for the lack of participation. If the policies are intended to compensate for the "opportunity costs" and neglects the symbolic violence in society, it does not necessarily empower the marginalized. Such compensated participation does not necessarily build to "active participation" that facilitates decision-making, as many scholars have shows that marginalized people often attend meetings, but do not actively participate (Nightingale, 2002; Agarwal, 2001).

gender equality.[8] Though the legal framework of CF encourages equality in gender participation, there has not been enough push for equality for the discriminated caste groups.[9]

Besides its ability to control forest degradation and help soil conservation and its push for gender equality, Nepal's community forestry is interesting on many fronts: (1) it includes the management of one of the renewable and extremely dependable natural resources, especially for the locals in Nepal;[10] (2) it allows some kind of political devolution, which creates room for local politics (even in cases where it creates local elitisms) to negotiate with larger political forces; (3) to some extent, it formalizes local rights over the resources that locals depend on, so people can determine local needs and create local rules-in-use for development; (4) Community Forestry in Nepal started with technical assistance from FAO, UNDP and the World Bank, so non-government organizations and aid agencies are important stakeholders, and their push for technocratic policies and discourse has significant implications for local empowerment. An examination of Nepal's CF can help us understand how civic societies and international agencies impact and shape environmental governance.

This research was conducted to understand and evaluate Community Forestry as a forest management program in Nepal. Research sites were selected based on the design principles presented by the Institutional Analysis and Development (IAD) framework. The variation in biophysical property of the resources and social structures because of the ecological belts, IAD framework's "context" provides a perfect guide for case selection.

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[8] Although not completely adopted in most CFs in Nepal, the national guideline mandates that every CFUG board should have 50% or more women board members. Other regulatory measures mandate power-sharing between both genders: if the chair of the CFUG board is a man, the second power position (secretary) has to be a woman, and vice-versa.

[9] Though the national guidelines mandate that people from all groups need to be included in decision-making processes, research has shown that marginalized groups are often excluded from the decision-making.

[10] According to a report by Multi Stakeholder Forestry Program, 70% of the population that lives below the poverty line is forest dependent (MSFP, 2016).

This thesis is organized as follows:

Chapter two introduces the concept of community based natural resource management (CBNRM). The chapter elaborates the history and evolution of CBNRM and the different theories of and perspectives on collective action. The chapter also explores the conflict between theoretical predictions of collective action and observed results, and argues that the theory has discrepancies and limitations within itself. The chapter further assesses the need to include characteristics from political ecology and social discourse theories. Building on these arguments, the chapter will present the current status of Nepal's community forestry, and provide an explanation for conflict in the literature.

Analysis of the theory of collective action and the existing literature further guides the research methodology. Since ecological divisions have created distinct biophysical and socio-economic differences, the Institutional Analysis and Development (IAD) framework is the most fitting policy framework. Though the IAD framework is useful in understanding local processes, it fails to accommodate for larger political and economic forces and also neglects the historic dynamics of local communities. The need for an in-depth historical analysis to understand structural social changes and past policies is also presented in this chapter.

Historical analysis of Community Forestry and social structures in Nepal is presented in Chapter 3. Using the political economy of Nepal, this chapter presents large regime changes, the policies that were implemented, and their long-term impacts on Nepali society and Nepal's forest management. This chapter explains how the Nepali population has undergone changes in its power relationship with the state and amongst itself.

Community Forestry started as a formal institution after the Decentralization Act, but historical events (both political and social) on the national and international scale have influenced and shaped Nepal's community forestry. This chapter explores the Pre-1951 (Rana regime), 1951-1957 (post Rana regime, period of Nationalization act), 1975-1987

(Panchayat system of governance), and Post-1987 (Devolution and Decentralization of power) eras. It focuses on the different political systems, the policies implemented, and their impact on forest management and local communities. This analysis, in general, aims to help understand the macro-level institutional set up of Nepal's Community Forestry.

Chapter four presents different case studies and compares them using the data collected (narratives, excerpts and field notes). Eight case studies from four case sites were selectively chosen based on their ecological properties and community attributes, as guided by the IAD framework. Using historical analysis as a contextual foundation, the comparative cases examine local processes and their impact on the institutional setup. Using different characteristics of political ecology and social discourse, this chapter examines how Nepal's community forests have varied in their outcomes.

Social network analysis, presented in chapter 5, is used to examine the patterns of interactions among different stakeholders in community forestry. Actors are mapped based on their socio-political power positions, and information flow and frequency of interaction is used to evaluate the strength and structure of the networks. This chapter aims to understand the difference in institutional outcomes due to network structure and find ways to build robust and sustainable networks among various stakeholders.

Chapter six presents the theoretical discussion, suggests a revised framework to examine collective action, and the limitations of the research. The suggested revised framework's validity is tested using the arguments of New Institutionalism. This chapter suggests the importance of combining historical institutionalism, sociological institutions and rational choice institutionalism, to examine the potential and principles of collective action.

CHAPTER 2: HISTORY, EVOLUTION AND THEORETICAL FOUNDATIONS OF COMMUNITY BASED NATURAL RESOURCE MANAGEMENT & OVERVIEW OF NEPAL'S COMMUNITY FORESTRY

The concept of Community Based Resource Management assumes that communities are the focal unit in this form of resource management. In implementation, it could range in a spectrum of possibilities, where state and local communities share the rights and responsibilities to management (Thakadu, 2005). At one end of the spectrum, the local communities are involved in environmental protection efforts and have complete ownership of the resources. On the other end of the spectrum, local communities participate in environmental protection, but are not involved in the management.

The sharing of rights and responsibilities to management is not limited to the state and local communities; international organizations have been heavily involved in the CBNRM projects (Leach, et. al., 1999). Since the 1990s, international funding institutions have been investing through aid and technical assistance to support CBNRM in countries all over the world (Blaikie, 2006). With the help of donor agencies, many countries in Africa, East Asia and the Pacific, Latin America and the Caribbean, and South Asia have adopted CBNRM as a mechanism to protect the environment with local development (Thakadu, 2005; Brosius et. al., 1998). It is assumed that CBNRM will be able to meet the dual goal of environmental protection and local development.

Despite the push for CBNRM with hopes of environmental protection and improvement in livelihood, implementation has shown that the results are inconsistent with the theoretical predictions. Empirical evidence has shown mixed results in regards to CBNRM's ability to meet its dual objective. In some cases, CBNRM have shown positive results, while some cases have failed to meet their goals (Agrawal, 1999; Gibson, Williams and Ostrom 2005; Pagdee et, al 2006; Blaikie, 2006; Agrawal and Chattre, 2006; Berkes, 2007; Charnley and Poe, 2007; Bray et. al 2008).

To identify the probable reasons behind the inconsistencies in outcomes, I will examine the existing theories, their assumptions and predictions, to assess the probable causes

behind the difference between evidence and theoretical predictions. This chapter explores the theoretical foundations and assumptions of CBNRM, discrepancies in the existing theory, and suggests other key characteristics that require revisiting. The research method is guided by the theoretical discussions and analysis of existing literature.

2.1 History of Community Based Natural Resource Management

The economic literature on commons began to influence policy makers and international organizations in the 1960s, as the world saw unprecedented extraction of natural resources and exploitation of the environment. Some of the most influential scholars were Olson (1973) and Hardin (1968), whose arguments about managing the commons influenced scholars and policy makers around the world. They argued that collective action to achieve a common goal is difficult because those with smaller interests will have an incentive to free ride, creating a "tragedy of the commons." Examples of overgrazed pastures and degraded forests were used to explain how, in the absence of property rights, commons were overexploited. Property rights emerged as an important aspect for protection, and needed to be properly assigned to prevent degradation. Hardin (1968) and Demsetz (1970) argued that common pool resources would be overexploited unless proper property rights were assigned, and in many cases it would mean closing of the commons and protecting them via strong state regulations.

This literature had a substantial impact, as it coincided with environmental degradation and population explosion all over the world (Mansuri and Rao, 2004).

These policies to protect and manage resources via strict state regulations failed to prevent resource degradation. Governments were not only unable to protect their common pool resources, the deterioration actually escalated. "Tragedy of the commons" was an influential theory that inspired much of the property rights literature, but the implementation showed that the policies derived from those theories were not beneficial. By mid-1980s, it was evident that large-scale government projects were not effective, and some of the empirical evidence showed that the lack of collective action did not

necessarily lead to failure (Robbins, 2012).[11] Scholars started to seek new alternative theories that could explain the collective action problem in a positive light. The "commons" was no longer a failed case of property rights; it became a new way of understanding resource management through collective action.

Ostrom and Ostrom (1977) proposed re-defining common pool resources, by differentiating them from the private and public goods. While private and public good differ in regards to their excludability and rivalry (public goods are non-excludable and non-rivalrous, while private goods are both excludable and rivalrous), common pool resources are *difficult to exclude* (sharing the property of public goods) and at the same time *rivalrous* (property of private goods). To allow a different set of characteristics to define common pool resources, they replaced the term "rivalry of consumption" with "subtractability of use" (Ostrom & Ostrom, 1977). This allows common pool resources to include characteristics of both public and private goods.

Fig: 2.1: Four types of goods

		Subtractability of Use	
		HIGH	LOW
Difficulty of excluding potential beneficiaries	HIGH	Common Pool Resources: groundwater basins, lakes, forests, fisheries, irrigation systems, etc.	Public Goods: national defense, security and peace of a community, weather forecasts, etc.
	LOW	Private goods: clothing, automobile, food, etc.	Toll Goods: theatres, private clubs, etc.

Source: Ostrom, 2010

[11] Hardin (1998) in his later synthesis defended his previous arguments about "Tragedy of the commons", but accepted his mistake for not using the term "unmanaged commons".
"To judge from the critical literature, the weightiest mistake in my synthesizing paper was the omission of the modifying adjective "unmanaged." In correcting this omission, one can generalize the practical conclusion in this way: "A 'managed commons' describes either socialism or the privatism of free enterprise. Either one may work; either one may fail: 'The devil is in the details.' But with an "unmanaged commons", you can forget about the devil: As overuse of resources reduces carrying capacity, ruin is inevitable." With this modification firmly in place, "The Tragedy of the Commons" is well tailored for further interdisciplinary syntheses." (Hardin, 1998)

In implementation, the emerging acknowledgement of local knowledge, practices and abilities allowed new approaches like Integrated Conservation and Development Programs (ICDPs), Community Based Conservation (CBC), and Community Based Natural Resource Management (CBNRM) (Mansuri and Rao, 2004). These approaches also came with a hope that local management would allow more sustainable, locally relevant, and facilitate equitable development in the communities. While the ICDP and CBC specifically focus on either environmental protection or local development, CBNRM aims to meet dual goals (Dressler, et. al., 2010).

Community based natural resource management is founded on three principles: 1) Locals conserve and manage resources; 2) If the benefits are higher than the cost, people will have an incentive to conserve the resources; and 3) People will conserve resources if it is directly linked to their quality of life (Thakadu, 2005)[12]. Additionally, it allow other key assumptions about local empowerment and development: 1) CBNRM is small scale, is labour intensive, which means that it retains benefits locally which can be redistributed in the community; 2) local institutions will enable trust and promote transparency through representation as opposed to central governance. Since the actors are locally based, they will be held accountable for their actions and this will in return incentivize them to promote fairness and justice; 3) local base eliminates the need of extra policing and security, hence decreasing the costs and increasing effectiveness; and 4) CBNRM is assumed to initiate a cycle of active participation and inclusive decision making, which will in effect promote political empowerment of the locals.

One of the pioneers of the field, Ostrom (1994), in her theory of collective action, suggests that individual actors base their decisions on notions of rational choice, so if they understand the importance of protecting their resources and have the tools to do so, they will protect the resources. This is why small-scale development can be effective and participatory development has the potential to accomplish goals of improving livelihood and/or environmental protection. Ostrom's work on common pool resources was applauded by academics and practitioners alike; where she argued that if given proper

[12] These stated principles are based on rational choice.

tools, rights, incentive and knowledge, the locals will be able to manage their resources effectively.

2.2 Community Forestry (A case of CBNRM):

Community forestry emerged in different places between 1970 and 1990 (starting in Asia, and later in Africa and Latin America) as a response to forest degradation and overexploitation of forest resources (Charnley and Poe, 2007). Increasing concerns over the environment and human wellbeing in the 1970s led to efforts in protecting the environment and helping local people in various ways. It was one of the strategies to simultaneously deal with problems of forest degradation and community wellbeing (Charnley and Poe, 2007). Though the definition and terms of community-based forestry are different in different places, they all share three similar characteristics: 1) There is some kind of devolution of power from the state to the local people, 2) Ecologically sustainable management of forests is the goal, where local communities take responsibility of protection and improving forest health, and 3) Local communities can gain economic and social benefits from the forests.

These characteristics provide a foundation for community forestry and predict that if local communities are given responsibilities and rights to management, 1) they will protect the forests from degradation, 2) the benefits will stay within the community, and 3) devolution of power will allow local empowerment.

Some early examples of community forestry are from Asia, where Nepal, India, and the Philippines were the pioneers of the community forestry movement (Arnold, 1992; Prado, 1995). In these places, community forestry emerged as a response to the failed "social forestry" programs. Its predecessor, social forestry, was a forest management strategy where government with the help of international donors, carried out large-scale plantation projects (mainly fast growing trees that could supply wood, timber and fuel for people as soon as possible) to mitigate the problem of deforestation and support rural livelihoods (Poffenberger & McGean, 1996). Social forestry became unsuccessful

because it could not provide the broad range of forest products that people needed, and hence was unable to decrease the pressure on natural forests. Furthermore, it failed to include people's voices in the governance and management (Poffenberger, 1999). Community forestry emerged as a management strategy that would help protect the environment and improve local wellbeing through the devolution of power and responsibilities of management to the local communities.

Like other community based resource management systems, community forestry was implemented to meet the dual goals of forest (environmental) protection and local development via sustainable management and utilization of the resources. According to Pagdee et al (2006), a successful community forest will meet the goals of: 1) ecological sustainability—improve forest conditions and address environmental issues, 2) efficiency— improve local livelihood and alleviate poverty, meet local needs, control mismanagement and corruption, and facilitate interaction between locals and authorities, and 3) equity—enhance equitable sharing of management, entitlement, political power and decision-making, redistribution of benefits, and access to future productivity and investment. In short, community forest management aims to achieve environmental protection (protect and conserve forests), social equity and justice (inclusive decision-making, participatory management), and local development (poverty alleviation, community development).

2.3 Community Forestry in Nepal

Forest management has been transferred to the local communities in Nepal in three distinct phases. The initial handover of the forests was done in 1993-95, which involved smaller forests (less than 10 hectares in size), as this was the "experimental devolution period." Most of these handovers were done in regional and district capitals. The second phase of management devolution occurred between 1997 and 2002, and as government confidence in community participation increased, these forests were larger in size (usually more than 100 ha). The third phase of devolution occurred from 2005 onwards, when relatively fewer forests were handed over to the communities. The rate of

deforestation that was alarming in the 60s and 70s has now been reduced to zero since 2005.

Table 2.1: Facts and figures with change in forest cover from 1990- 2012

SN	**Description**	**Figure**
1.	Total land (ha)	14,718,100
2.	Total population	26,494,504
	Population density (per sq. km)	180
	Population growth rate (per annum)	1.35 %
	Rural population (% of total population)	83 %
3.	GDP per capita (ppp)*	2,265 USD
	GDP annual growth rate*	5.48%
4.	Total forest area (Ha)*	3,636,000
	Forest area (% of land area)*	25%
5.	Other wooded land area (Ha)**	1,897,000
	Wooded land (% of land area)**	13%
6.	Forest cover change (1990-2000)**	-2.09
	Forest cover change (2000-2005) **	-1.39
	Forest cover change (2005-2010) **	00
	Forest cover change (2010-2014) *	00

Source: Central Bureau of Statistics (2012), Tamang (2012)**, World Bank (2014)*

The decrease in the rate of deforestation indicates that increase in transfer in management coincided with the decrease in the rate of deforestation, and community forestry is credited with the improvement in forest conditions. Empirical evidence has shown that community forests have been successful in meeting their goal of environmental protection through forest conservation (Dev et. al., 2003; Adhikari et. al., 2007; Thoms, 2008; Pandit and Bevilacqua, 2011).

Community forests in Nepal are viewed as successful cases by some researchers (Berkes, 2007; Berkes et al., 1989). Since the concept of community forests (CFs) emerged in the 1980s, new instruments and tools to manage forests in Nepal have been evolved, modified and re-modified. The present CFs are guided by the Forest Act of 1993 and Forestry Regulations of 1995, which have recognized the Community Forest User Groups (CFUG) as the autonomous, independent institutions that are responsible for protecting and managing the forest land with defined boundaries and user groups. There are 17,685

active community forests in all 75 districts of Nepal, with over 1.6 million member households (SDC, 2013).

Besides the local CFUG and the government, environment and development organizations have a significant impact on influencing and shaping Nepal's community forestry (MFSC, 2013). International donor agencies and environmental groups are important stakeholders in community forest management in Nepal. In the last 30 years, the donor agencies have already spent more than USD 237 million in the development of community forestry in Nepal (MFSC, 2013). Donor agencies have also worked extensively to promote women's participation and empowerment in community forestry (Agarwal, 2001).

The transfer of management has protected forestland and to some degree has benefited the locals, but the benefits are disproportionately higher for the richer, well-off households (Adhikari et. al., 2004; Dhakal et. al., 2005; Maskey et. al., 2006). This could be because the disadvantaged groups are excluded from decision-making processes, and hence they cannot negotiate for favorable policies. For example, focus on timber has influenced communities to focus on timber extraction for their income. Since timber is distributed on a need basis and the richer households require more timber (infrastructure) than the poorer households, they benefit more from the community forests (Dhakal and Masuda, 2009). The poorer households depend on multiple use of forest like forage, litter, mulch etc. and the forest regulation and protection mechanism prevents these groups from accessing their much-needed resources (Dhakal et. al., 2005).

Some scholars like Thoms (2008) suggest that the social and economic inequities might be the reason behind positive conservation benefits. The author elaborated that because powerful elites did not depend on forest resources as much, they were willing to set restrictions on forest use, thus helping with the conservation but marginalizing the disadvantaged. Research has also shown that the technocratic discourse in forest management has created further marginalization of the disadvantaged groups in community forestry (Giri and Ojha, 2010; Ojha et. al., 2009; Nightingale, 2005).

Though it is evident that community forestry disproportionately benefits the richer households, Adhikari et. al. (2007) and Dev et. al. (2003) defend the need for community forestry. They argue that without such programs, the marginalized populations would be worse off. This argument holds water, as it is estimated that more than 70% of the population living below the poverty line is dependent on forest resources (MSFP, 2016), and community forestry provides them the rights to access those resources.

In summary, community forestry in Nepal has shown positive results in regards to forest protection. However, the second objective has mostly met with failure. Even in successful cases, where locals have been able to manage and utilize their forests, it is evident that richer households benefit disproportionately more than the poorer households. In failed cases, the discriminated population is further marginalized. Even though community forestry does not benefit the poorer forest dependent people, as theory would predict, it is argued that having community forests is better than not having them.

2.4 Theoretical Discussion

Community forests are very site specific: the human and ecological dimensions and their interaction processes can be unique and need to be examined. The institutional choice theorists like Ostrom (1994) conceptualize it as a collective action problem where individual actors act based on their logic and rational choice. While this local approach allows us to compare various cases to understand how individuals come together to manage their commons, it rests on the basic assumption of individuals as rational actors. For example, institutional choice researchers have suggested that forest attributes, the attributes of the users and the autonomy of the users to make decisions for harvest and protection will determine the outcomes of community forestry (Ostrom, 1994). However, there is ample evidence that larger political and economic forces influence local institutions (Adhikari and Dhungana, 2009; Ostrom E. , 2007) and local actors' decisions are also based on social constructs and perceptions rather than only incentives (Agrawal, 2001).

The political and economic forces not only affect the outcome of the local institution, but also shape the institution by influencing the preferences and actions of the different stakeholders. For example, change in living standards or "modernization" can also influence locals' needs and shape their dependency on forest resources. Similarly, market demand and the market value for timber can change the users' incentives, and management strategies. Therefore, to understand local institutions, we need to include the larger political and economic factors that shape (and influence) the institutional setup of the collective action (Sikor, 2006).

Besides its inability to include larger forces, the basic theory of collective action also disregards layers of interdependence amongst people. Social construction and hierarchy play a large role in determining the inclusiveness of the local institution (Ojha et. al., 2009; Sikor, 2006). There are material and symbolic struggles between different actors, often between the state and locals and the elites and marginalized within the community (Sikor, 2006).

I will use the concept of political ecology to make up for the discrepancies in institutional choice theory. Political ecology examines the changes in institutions since environmental institutions are dismantled and reconfigured as political and economic changes occur (Robbins, 2004). While this approach allows the examination of larger political and economic forces, it can also provide a glimpse to how larger forces can change and influence the environmental (local) institutions like Nepal's community forestry. In a similar vein, we can use the characteristics of political ecology to understand how larger forces can influence and construct social structure.

In many cases, marginalized people bear the burden of degradation while causes of forest degradation have mainly been due to state development and policies rather than use by the locals (Pravat, 2006; Hobley and Malla, 1996; Gilmour and Fisher, 1991). For this reason, marginalization and the discourse to perpetuate it needs to be closely examined. In Nepal, state policies restricted forest dependents from using their basic resource, yet

blamed the same locals for degradation while larger economic and political forces were responsible for forest exploitation.

Rational choice, due to its theoretical predictions assumes an equal platform where all individuals are trying to maximize their utility. While focusing on the principle that individuals are utility maximizing rational actors, rational choice theory fails to take into account the plight of marginalized populations whose dependence on the forest resources make them vulnerable to and sometimes the cause of degradation. This is where political ecology comes in; embedded with the concepts of social and environmental justice, political ecology presents a sympathetic view towards the marginalized population, defending their resource dependence.

> *"Marginalization is a process whereby politically and socially marginal (disempowered) people are pushed into ecologically marginal (vulnerable and unstable) spaces and economically marginal (dependent and narrowly adaptable) social positions, resulting in their increasing demands on the marginal (increasingly limited) productivity of ecosystems. As a consequence, those individuals and groups will tend to increase their efforts on the landscape, increasingly pushing the limits of its capacity, and achieving lower and lower yields. The result is hypothesized to be degraded landscape that returns less and less to an increasingly impoverished and desperate community- a cycle of social and environmental degradation.*" Robbins (2004)

From a point of environmental justice, even in the case where poor locals have overexploited the resource, the causes were larger than individual extraction. The issues of discrimination, unequal redistribution of benefits, power relations, etc., that are lumped in the cultural aspects in the theory of collective action (based on rational choice) are identified and examined by the theoretical lens of political ecology. In short, political ecology has the potential to provide the concepts and theoretical explanations that rational choice theorists have been unable to explain[13].

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[13] Political ecology provides a detailed analysis to understanding how environmental and socio-economic institutions change. To explain this, Robbins (2004) provides an example:
"A political ecological analysis of the decline of traditional water-harvesting techniques under the increasing influence of state irrigation authorities, for example, is not simply a mournful or romantic call for a lost technological past. By documenting not only the changing economic and

Peet and Watts (2002) in their book "Liberation Ecology" critique and question the discrepancies in the collective action theory and argue different socio-political and economic factors that need to be included in understanding collective action. The five issues (aspects) presented by Peet and Watts (2002) can help compensate for the inconsistencies in the theory of collective action:

1. Capital/development is as much of a cause for degradation as impoverishment. So blaming poverty and degradation because of resource extraction by the local communities allows development policies to go unnoticed, and puts the burden of resource protection on the local communities.
2. In-depth understanding of environmental history will allow researchers to understand the long-term changes in environmental and community dynamics. Historical analysis not only helps understand existing norms and values, but also raises important theoretical and methodological questions for study.
3. The complex analytical and practical association of ecology and civil institutions needs to be explored. This is mainly because the growth in environmental movements has been initiated and sustained by civil society. Additionally, these movements are largely unregulated by the state - which positions civil society actors as important stakeholders in the political process.
4. The discourse used in understanding CBNRM needs to be included in the theoretical foundations of collective action. Collective action applauds the importance of "local knowledge" and "capabilities", but research has shown that the discourse on the environment is privileged, often influenced by technocratic ways.
5. There is a serious need for integrating politics in resource management. Political struggles, whether on a household level or national level need to be included in understanding institutions. Accommodating for political actions will help unravel

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bureaucratic pressures under which water management is currently being transformed, but also detailing the way it is managed traditionally and describing techniques of local adaptation and resistance, political ecological research helps to plant the seeds for reclaiming and asserting alternative ways of managing water (Rosin, 1993)."

the struggles over and ability to access resources, which in turn shape resource entitlements and benefits.

2.5 Research Design

The purpose of this research is to achieve contextual information about Nepal's community forests, and analyze it to understand the opportunities for, or barriers to successful community based natural resource management. To do so, this research includes historical analysis, comparative case studies, and social network analysis.

a. Historical Analysis

Community Forestry, as a local institution is also nested in historical institutions. A historical examination will allow us to understand the institutional foundation of community forestry, identify stakeholders and their roles, and the social structures of the communities that manage their resources. Whaley and Weatherhead (2014) and McGinnis and Ostrom (2014) have also highlighted the importance of examining historical institutions to understand collective action. A historic analysis will also provide a glimpse into understanding how changing political and economic context has reconfigured traditional environmental institutions. The objective is to capture this dynamism to understand how economic and political forces have reconfigured and shaped Nepal's community forestry.

It has been widely accepted that deforestation in the 1960s and 70s was happening at an alarming rate; however, the reasons for this remain ambiguous. Much of the literature cites the theory of environmental degradation that assumes that local people were overextracting and depleting their resources. This was the same era in which infrastructure development began on a large scale in Nepal (including building the east-west highway) (Khanel and Acharya, 2008). As Peet and Watts (2002) argue, capital could be as much a cause of degradation as impoverishment. In Nepal's case, the locals have carried the burden of blame for deforestation, though state development might have been the cause.

Nepal's political scene has changed a lot since multiparty democracy was established in 1991, but forest institutions have been affected by different forest and non-forest related policies that were enacted pre-1991. The historical analysis of these changing policies helps explore the power relations between different stakeholders and their vested interest in Nepal's community forestry. Local institutions are built upon historical dynamics, influenced by historical events (and factors), and historical institutionalism helps understand the long-term dynamics (Hall & Taylor, 1996; Steinmo, 2008).

Historical analysis provides an examination of broad changes in socio-economic and/or political context. However, research has shown that within Nepal, the outcome of community forestry is varied. Historical analysis of macro changes cannot be used to explain the variance in outcome of the community forestry cases in Nepal. To examine the differences in outcome, comparative case studies will be employed.

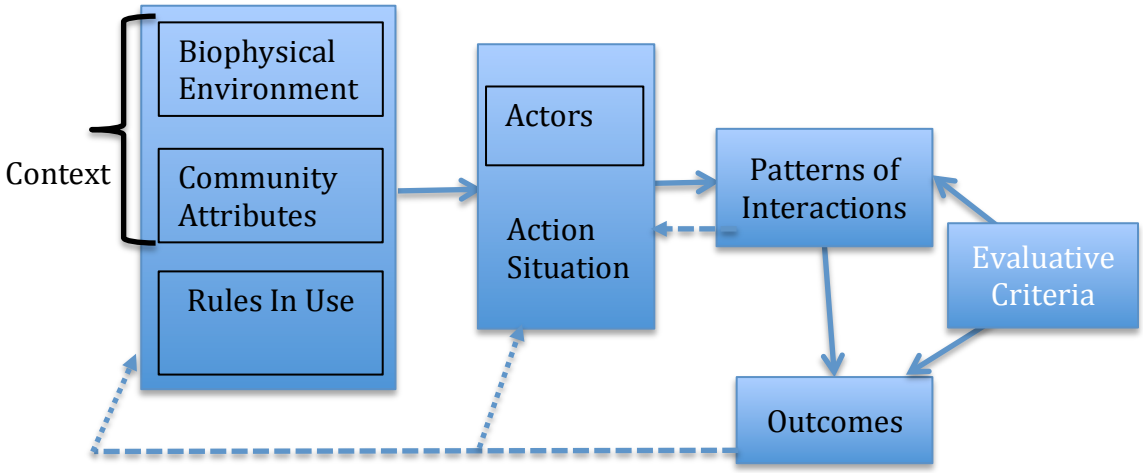
b. Comparative Case Studies

Like other common pool resources, community forestry consists of complex causal relations and their interactions, and case studies are the proven methods that can examine complex causal relations (George and Bennett, 2005). Case studies also provide rich contextual information to help understand processes that occur at different levels. This allows us to produce knowledge that is applicable for implementation rather than just predicting general theories (Flyvbjerg, 2001).

For this research, I will use the Institutional Analysis and Development (IAD) framework for case study selection and examination.[14]

[14] Institutional Analysis and Development framework, pioneered by Elinor Ostrom and her colleagues, has been extensively used in understanding resource governance and management, especially in collective action for common pool resources. Researchers have applied the framework to examine irrigation governance and management (Shivakoti and Ostrom, 2002), understanding local collaboration in land use and forestation policies (Clement and Amezaga, 2008; Thomas and Koontz, 2011), sustainable governance for natural resource management (Rudd, 2004; Fischer et al., 2007), among others.

Fig 2.2: Institutional Analysis and Development (IAD) framework



Source: Ostrom (2005)

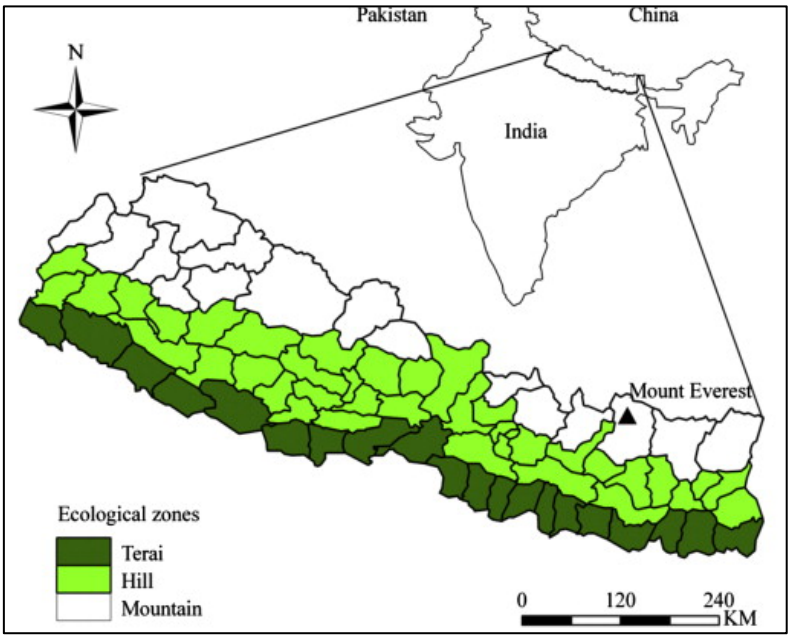
The Institutional Analysis and Development (IAD) framework was developed to facilitate the comparative analysis of institutions, and to understand how people come together, create rules and norms to meet a certain objective (Hess and Ostrom, 2005).

The locus of the IAD framework has been the action arena (actors and action situation), and identification of this conceptual unit can be the first step of analysis (Ostrom, 2007). However, for this research, proper case selection (out of more than 17 thousand community forests) is important. Although Ostrom identified the importance of the action arena, the action situation is dependent on the contextual variables. According to the IAD framework, the factors affecting the action arena include three clusters of variables: 1) The biophysical attributes/conditions of the resource, 2) The structure of the general community within which any particular arena is placed, and 3) The rules used by participants to order their relationships.

These variables have significance in Nepal's case. The ecological zones in Nepal (mountains, hills and plains) distinctly divide attributes of climate and vegetation. Empirical evidence has shown that income from community forests is highly skewed and depends on the timber quality. For example, the forests in Terai can generate a lot of income because of high quality timber like *Sal*, whereas the community forests have low

income because they mostly have low quality timber (Chhetri et. al., 2012). It can be assumed that the institutions built around utilizing forest extracts for economic benefits, while protecting the environment are different from the institutions that do not get economic benefits from extraction (so their objective to protect is not challenged by their incentive to extract).

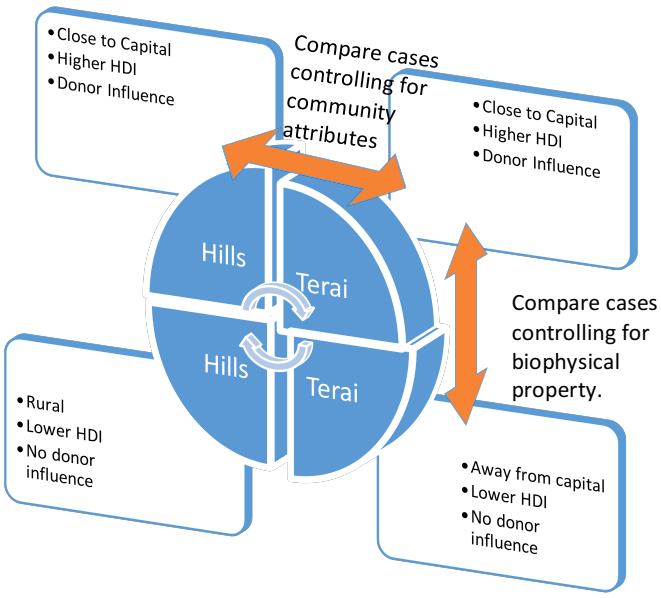
Fig 2.3: Map of Nepal with different ecological zones



Selecting two community forest cases from each case district can help control for similar community attributes and help evaluate the micro level, internal processes and local rules-in-use. This research evaluates 8 cases: two cases from each district, and two districts from each ecological zone. The cases were also selected based on my preliminary field research and the information collected from scholars, guided by the IAD framework. [15]

[15] Due to the constraints of incomplete information and time, a few general assumptions were made about the social structure and history of different development regions of Nepal. For example, hill communities are different (more inclusive and egalitarian) from the communities in the plains, so the community forests in the hills cannot be compared with community forests in Terai.

Fig 2.4: Case selection controlling for biophysical properties and community attributes.



Existing literature on Nepal's community forests suggests that the outcome of CFs in the hills has shown positive results, while community forests in Terai have undergone conflicts, resource and political capture (Adhikari and Dhunagana, 2009; Pokharel and Amatya, 2000). Besides the differences due to timber quality and incentives for economic extraction, technical and financial investment in developing and establishing the local institutions play an important role (Khanel, 2006). This research assumes that donor interests and investments can improve the local institutions. Since Nepal has centralized governance, it is assumed that donor and nongovernmental institutions are also concentrated in the capital.[16] To compare for the difference, case districts are selected based on their distance from the capital.

Four case districts hills/central, hill/rural, terai/central, and terai/rural are selected for comparison.

[16] To give a context, Nepal has been receiving foreign aid for over 60 years. Aid generally runs at fairly stable levels and is currently worth over $1bn a year, which about a quarter of the government budget.

Fig: 2.5: Selected case districts (Lalitpur, Nawalparasi, Dailekh & Kanchanpur)

Dailekh lies in the Midwestern region of Nepal, and is comparatively rural and remote. The population is relatively poor (below the national average), and the geography varies from mid hills to high hills. Due to its remoteness from urban centres, proper infrastructure and access to markets is largely missing. A large portion of the community depends on forest resources for subsistence.

Kanchanpur lies in the plains, is resource rich with good quality timber. The national highway passes through Kanchanpur, so it has a good infrastructure and relatively better access to resources. Due to its distance from the capital, donor investment and civic organizations are not active in the region.

Nawalparasi lies in the plains, and is resource rich with good quality timber. The national highway passes through Nawalparasi, so it has a good infrastructure and relatively better access to resources. In addition, due to proximity to the capital, NGOs and donor agencies support the local communities via empowerment and technical support programs.

Lalitpur is one of the three districts in the Kathmandu valley, and is closest to the urban centre (capital). Because of its proximity to the capital, Lalitpur is densely populated (in the urban areas), is relatively more connected with the political system, and has relatively better socio-economic conditions. Due to proximity to urban centres and good road infrastructure, Lalitpur has good access to markets and high donor and NGO presence.

Table 2.2: Demographics and attributes of selected case districts

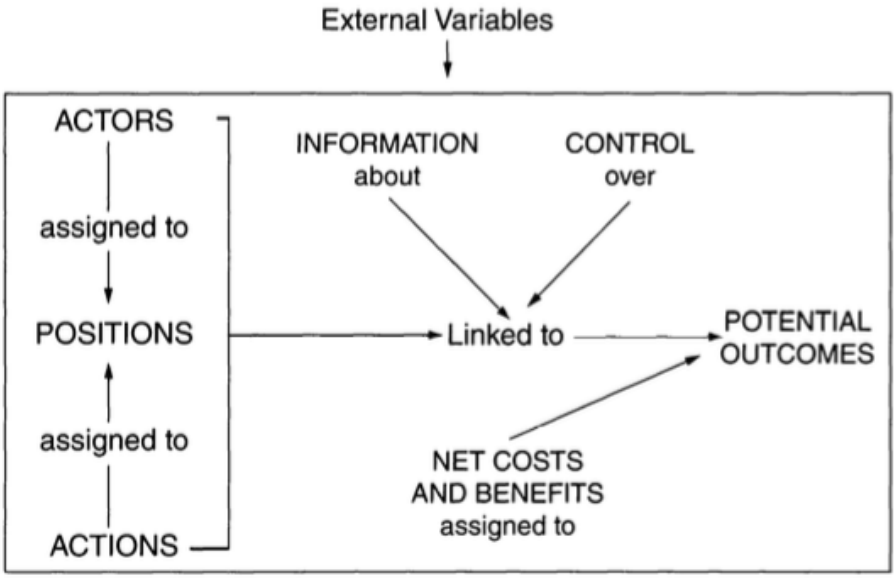
Sites (district)	DAILEKH	KANCHANPUR	NAWALPARASI	LALITPUR
Ecological Zone	Mid hills - high hills	Terai	Terai	Hills
Altitude (m)	544 - 4138	90- 1000	91 - 1900	1350 (avg)
Area (ha)	150,200	161,000	216,200	38,500
Population	263,835	451,248	643,508	468,132
CF Coverage (ha)	21,230	15,254	15,882	9,645
Total CFUGs	281	100	124	170
HH involved in CF	26,323	29,361	34,377	11,759
Ethnicity	Chettri, Dalit, Thakuri, Brahmin	Chettri, Brahmin, Tharu, Dalit	Brahmin, Chettri, Tharu, Newar	Newar, Chettri, Brahmin, Tamang
Literacy percent	65%	57.60%	71.4%	82.4%
HDI	0.381	0.475	0.5	0.6
Infrastructure	Low infrastructure	High Infrastructure	High Infrastructure	High infrastructure
Characteristics	Rural, low access to markets	High access to markets	High access to markets	Urban, high access to markets

To compare cases for evaluating the micro processes and local rules in use and external influencing factors, we have to control for the general community attributes (namely social traditions and norms, levels of human development, relationship with the state on a macro/meso level and social history). To control for these characteristics, two CFs from each district were selected based on their proximity to each other and the stakeholders that they worked with. Since the goal is to compare community forests with similar biophysical and community attributes, this research selected cases that could be controlled for the duration since the transfer of management, their forest and administrative jurisdiction, size of the forest, and number of households involved.

Much of the IAD framework's focus has been the action situation. Since the framework is based on the principles of game theory, the internal parts of the action situation are consistent with the variables used in game theories (Ostrom, 2010). According to the framework, the context variables (external variables) interact with the action situation to create patterns of interactions that feed back on the context and the action situation.

> *"Action situations are the social spaces where individuals interact, exchange goods and services, solve problems, dominate one another, or fight (among the many things that individuals do in action situations)"* (Ostrom, 2011).

Fig 2.6: The internal structure of the action situation



Source: Ostrom (2010)

Identifying the key actors, their interests and incentives along with their interactions with the natural resource and among themselves provides an important approach to understanding how institutions are structured (Grimble and Wellard, 1997). Reed et al (2009) propose identifying stakeholders, categorizing them and investigating the relationships between stakeholders as an important part in participatory natural resource management research.

Community Forest User Groups are pivotal and primary stakeholders in Nepal's community forestry, but other stakeholders also play an important role in shaping the institutional arrangement. The Swiss Agency for Development in their report (SDC, 2011) has identified seven key stakeholders involved in community forestry in Nepal.

Table 2.3: Stakeholders in Nepal's CF and the resources they derive

Stakeholders	**Resources derived from forests**	**Operational Level**
Community Forest User Groups	Primary Custodians. They depend on forest resources for income, livelihood and ecosystem services.	Local
Ministry of Forest and Soil Conservation	Department of Forestry (DoF) depends on forests for jobs, revenue and national environmental services (hydrological, biodiversity, recreational)	National
Federation of Community Forest Users (FECOFUN)	Association of CFUGs, acts as a lobbying group. Dependent on forests for legitimacy and revenue.	National
Forest Based Enterprises (FBE)	These are the private tree owners, or contracted by Department of Forestry, or tourism industries. Dependent for revenue/business opportunities.	Local, National
Village Development Committees (VDC), District Development Committees (DDC), Local government	Responsible for making regulatory frameworks for taxation, benefit sharing, and revenue extraction.	Local (bounded by national)
Political Parties	They formally and informally participate in governance. Dependent for revenue and votes.	Local, national
NGOs, Donors, Researchers	They don't have a legitimate say, but donors can actively (or implicitly) influence policies and implementation.	Local, national, and international

Source: SDC (2011)

One of the beauties of IAD framework is that it allows scholars to analyse the components that are composed of cluster of variables. This means that each component of the framework can be further examined by unpacking its variables for micro-level analysis (Ostrom, 2010). This means that the framework not only provides overall generalizability, but also allows detailed analysis of individual components.

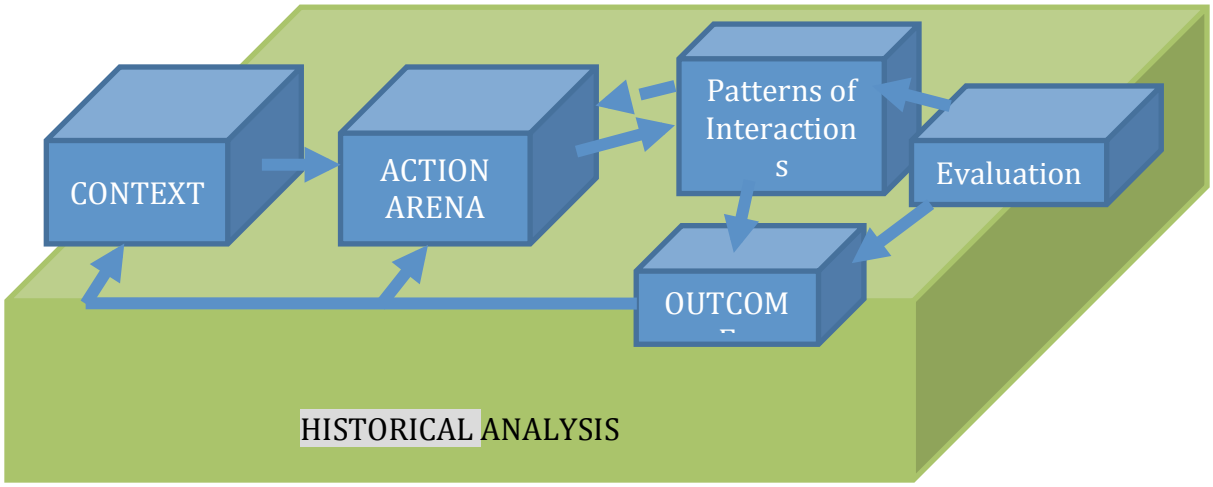
Despite its ability to analyze local institutions, the IAD framework does not include detailed analysis of larger political and economic forces. I will briefly discuss Whaley and Weatherhead's (2014) "politicized IAD framework" and McGinnis and Ostrom's (2014) "Social-ecological system" framework. Both of these frameworks attempt to fill in for the existing discrepancies in the IAD framework.

Whaley and Weatherhead (2014) added two significant variables "political-economic context" and "discourse" variables in the cluster of variables that constitute the dependent variables. In their revised framework, the action situation is dependent on five contextual variables: 1) biophysical properties, 2) community attributes, 3) rules-in-use, 4) political-economic context, and 5) discourse. The idea is to account for the political-economic context and its impact on the action situation. The revised social-ecological system (SES) framework by McGinnis and Ostrom also attempts to include for larger political and economic forces using multi-tired nested cluster variables. [*See appendix A*].

Though these revised frameworks attempt to include for larger forces, they both treat political and economic context as exogenous variables. There is ample evidence in the field of institutionalism that individual actors' behaviours are embedded in the social and economic-political context. The IAD framework or its revised forms continue to treat political-economic and social context (endogenous variables) as exogenous. The problem with IAD framework is not a "missing" independent variable; rather, it stems from the flaw that comes with the assumption of rational choice. Individual actors are not just predictable rational actors, they are often "irrational", and their actions are based on interests imbedded in self interest and social construction.

The historical analysis of Nepal's community forestry can help provide a context for power dynamics and social construction. Instead of treating larger political and economic forces as external variables and the resulting sociopolitical changes as a part of community attributes, this research uses the findings of historical analysis as the foundation for local institutions.

Fig 2.7: IAD Framework coupled with historical analysis



Historical analysis helps explore long term social, political and environmental dynamics, but it might not be helpful in understanding how different actors strategize their power relations and coordinate to work towards resource management. To understand the political contestations, we also need to evaluate different actors and how they create and sustain networks that shape local institutions.

c. Social Network Analysis

Differences in the local processes, political and economic factors and the linkages between them might explain the variation in outcomes of community forests in Nepal. The different stakeholders come together as actors in the action arena (as per the IAD framework), and their patterns of interactions will decide how they negotiate, bargain and coordinate together in forest management in Nepal. This research uses social network analysis to understand the network structure and power relations among the different stakeholders involved in community forestry in Nepal.

Based on social network theory, social network analysis can help identify how network structure influences the power relations among the stakeholders (Prell, 2012). Synthesizing the network information with the historical analysis of community forestry helps examine the patterns of interactions within the CFUG users and the relationship

with other actors. It provides an examination of power relations and contestations among different actors.

This research will be able to include all the different aspects that the theory of collective action fails to account for. Including different characteristics of political ecology and building on the theory of collective action, this research evaluates community forestry in Nepal by adding other approaches to compensate for the inconsistencies of collective action theory.

In short, this research employs historical analysis, comparative case studies and social network analysis to understand Nepal's community forestry as local institutions, and the opportunities and barriers to successful collective action.

2.6 Data Collection:

In-Depth Interviews: I interviewed most of the relevant stakeholders in each CFUG case, including household members, Village Development Committee (VDC) officers, members of Federation of Community Users, Nepal (FECOFUN), District Forest Officers (DFO), non-government agencies, donor agencies, and local leaders. Total 72 interviews were conducted, ranging from 10 minutes to 4 hours.

Community Forestry User Groups categorize household members based on their socio-economic status, where group A constitute of high income households, group B constitute of medium income, group C are the poor household and group D constitute of very poor households. Household members from each group were selected, where fifty percent of the interviewed household members were women and other fifty percent were men. Besides the socio-economic category, to include for the lower caste groups, *Dalit* household members were also selectively chosen and interviewed.

The interviewees (community user members) were asked about their relationship with the forest (dependence, needs and ability to access the resources) and how it had changed

since the transfer of management, the change in forest cover since the establishment of community forestry, the impact of devolution of environmental governance in their ability to participate in decision-making processes, and their source of information and resource distribution. Other stakeholders like VDC officers, DFOs, FECOFUN members, donor agencies were asked about their relationship and interaction with the forest and the community members.

Focus Groups: Conducting focus group was not necessarily included in the methodology prior to field research. However, in three cases, focus groups discussions were conducted impromptu, which also helped to include more informed questions during the individual interviews.

Participant Observation: Due to social construction, marginalization can go unnoticed by the respondents. To counter this problem, I attended CFUG general assemblies (in four cases) and local community meetings.

2.7 Validity:

The research employs interviews, field notes, and participatory observation to understand the context and also test for the reliability of the given information. For example, participating in one of the CF meetings can give an idea about whose voices are being heard and if there is a sense of inclusiveness in the community. Though many interviewees said that the local institution was gender inclusive, it was observed during the meetings that though women participated actively, their demands or needs were not included.

Acknowledging that community forests can produce mixed range of outcomes (Sunderlin et al., 2004), this research does not necessarily aim to test hypothesis as predicted by theories of collective action. The purpose of this research is to explore community forestry by understanding its sociopolitical and economic aspects that interact with

deeply embedded social construction, to find useful knowledge that can be used to understand existing policy implications and provide suggestions to make better-informed policies and projects.

As a Nepali, I am familiar with the social constructions, discrimination, and social hierarchy, which helped me understand and identify cultural context, discourse, and social colloquialisms. Although familiarity can also create imbedded biases, I have tried my level best to be as objective as possible during the fieldwork and while analyzing the data.

CHAPTER 3: HISTORICAL ANALYSIS OF NEPAL'S COMMUNITY FORESTRY

The concept of Community Forestry, where communities are given responsibility to protect the forests and rights to use forest resources for livelihood and consumption emerged in Nepal in the 1980s. After the establishment of multiparty democracy in 1991, sweeping changes and the surge of international organizations began to change the political and socio-economic dynamics of the country, and the dynamics of forest management witnessed huge changes. The Decentralization Act (1987) allowed transfer of forest management to the communities, and the concept of Community Forest User Groups (CFUGs) was first introduced. Forest Act (1993) and Forest Regulations (1995) first laid out the general guidelines, regulations, and rights of the local user groups. During this time, power was transferred from government to the local people, and the role of government forest officials who were previously the forest custodians became facilitators.

The rights to manage and protect were transferred from the government to local communities, making CFUG members the pivotal stakeholders. Establishment of multiparty democracy brought new changes in the power system in Nepal. As Nepal opened doors to the outside world, a surge in civil society occurred, where NGOs and international donors along with the government started influencing and shaping policies. Community forest management system started as an experiment in the mid-hills of Nepal, and when it showed significant success, it led to a larger scale transfer of management across the country. Currently, there are over 17,000 active CFUGs in Nepal that productively manage 25% of the forest area (SDC, 2011).

The regulatory system of Community Forest might not be an old one, but the institutional components like community attributes, establishment of rules in use and environmental history are embedded in the present and past political and economic context. To understand the evolution of the socio-political dynamics and power relations, this chapter takes a historical analysis approach to help reveal important aspects of present day community forestry in Nepal.

This analysis focuses on significant political events and examines how the changing political and economic environment has influenced the biophysical property as well as the governance system of community forestry. While these big political events shaped the institutional setup of community forestry, the events also influenced the state's relationship with the people, creating certain social structures and hierarchies. So, in parallel to presenting historical analysis of community forestry, this chapter also explores the influence on social structures and discourse in Nepal.

This chapter looks at four distinct time periods, differentiated by the ruling regime and policies adopted by them, the impacts of such policies in forest resource management and social construction, and how these policies have influenced the socio political characteristics of the forest management system in Nepal.

History of Forestry in Nepal and the emergence of Community Forestry

Time Period	Ruling Regime	Decision-making authority
Pre-1951	Rana Regimes	Ranas and their loyals
1951-1975	His Majesty's Government of Nepal/ Panchayat	Department of forests, His Majesty Government of Nepal
1975-1987	His Majesty's Government (HMG) of Nepal/ Panchayat	Village Panchayat (constituted by local leaders that were King's loyals)
1990- Present	HMG Nepal/ Government of Nepal	Community Forest User Groups, Government of Nepal.

Pre- 1951: Rana Regime

Forest Land has been used strategically for political and economic extractions since the unification of Nepal in the late 1700s. Though there were no specific forest laws or acts before 1951, other non-forest related acts had huge impacts on forests and related institutions. For example, the policies adopted by former rulers to increase tax revenues, garner political support from their loyalties and maintain relationships with colonial British India heavily impacted the forest conditions in Nepal. During this time, the

government converted forests into agricultural land as a strategy to increase their tax revenue. The ruling party allocated certain forestlands to be clear-cut and used for agriculture because the government could not collect taxes from public (national) forests, but could tax the locals for agricultural production. The *Rana* regime also continued to allocate forestland to their supporters and family members as "*birta* land".[17] This tax-free transfer of land based on nepotism was supposed to create and maintain political loyalties for the Ranas.

The 104-year-old *Rana* Regime from 1846-1951 also used forests as a means of income generation and to maintain friendly relationship with British colonial India. The Department of Forests was established 1925 to administer timber exports to colonial British India, a relationship that was fostered when 100,000 Nepali soldiers were involved in support of Britain in World War I, and Britain recognized Nepal's complete independence in 1923.[18] Significant forest depletion occurred during World War II when Nepal mobilized further resources in support of Britain.[19]

The institutions built around forests were similar to Acemoglu and Robinson's (2012) explanations of extractive political institutions that have created extractive economic institutions around the natural resource that the locals heavily depended on. Using forest products to increase revenue and to garner political support for the regime created institutions that marginalized local people and legitimatized the misuse of the resource by the government. Since the *Rana* regime benefited politically and economically using the forests, they had a perverse incentive to continue exploitation and degradation. The political institution under the Rana regime generated a lot of wealth for the rulers, but it created a disproportionate access to resources for the local people, and most importantly did nothing to help the common people.

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[17] Land is given to the individual by the state as a strategy to keep their political loyalties (to the Rana regime), tax-free and based on nepotism.

[18] The history of exporting labor has continued in Nepal to this date. According to World Bank data, personal remittances amount to 29.2% of national GDP in 2014 (World Bank, 2016), and the remittance amount is assumed to be more than 1.5 billion US dollars (Seddon, 2005).

[19] Forest resources are used as energy sources for arms and ammunitions. Nepal's Rana regime exported a large amount of timber to colonial India, and maintained a friendly relationship.

Marginalization based on gender, caste and ethnicity has been persistent in Nepal since (and before) Prithivi Narayan Shaha unified the country in the 18th century. Institutionalization of this inequality can be traced back to the construction of Nepal as a Hindu nation by the promulgation of Nepal's first comprehensive legal code, the *Muluki Ain* of 1854. This legal code created a single caste hierarchy by placing the Hindu "high" caste on the top, the "low" caste at the bottom, and inserting other ethnic groups to show Nepal as a homogenous Hindu country (Hangen and Lawoti, 2013).[20]

Table 3.1: Caste hierarchy imposed by *Muluki Ain* of 1854

Caste Group	**Castes**
The "wearers of the holy cord" a.k.a. "Tagadhari"	Upadhyaya Brahman, Rajput/ Thakuri (warriors), Jaisi Brahman, Chettri (warriors), Newar Brahman, Indian Brahman, Ascetic sects, Various Newar castes
Caste group of the "non-enslaveable alcohol drinkers" *(Namasinya matwali)*	Magar, Gurung, Sunuwar, Some other Newar castes
Caste group of "enslaveable alcohol drinkers" *(Masinya matwali)*	Bhote (people of Tibetan origin), Chepang, Kumal (potters) Tharu, Gharti (descendents of freed labor)
Impure but "touchable" castes *(pani nachalnya, choi chito halnu naparnya)*	Kasai (Newar butchers), Kusle (Newar musicians), Hindu dhobi, Musalman (Muslims), Mlecch (Europeans)
"Untouchable" castes *(pani nachalnya, choi chito haalnu parnya)*	Kami (blacksmiths) and Sarki (tanners), Kadara (stemming from the union of Kami and Sarki), Damai (tailors and musicians), Gaine (minstrels), Badi (musicians and prostitutes), Cyame (Newar scavengers)

Source: Gunaratne (2002)

This adoption of the Hindu caste system in the national legal code also served the Hindu high caste elite men and helped them sustain their power, while marginalizing other

[20] Hinduism within itself has four caste hierarchies, with the "pure" *Bahuns* and *Chettris* on top and the "impure" *Vaishyas* and *Sudras* in the lower rung. Ethnic groups did not follow Hinduism.

ethnic groups (Hangen and Lawoti, 2013). The Rana regime was overthrown in 1951 after a popular uprising, but the legitimatization of legal codes based on Hinduism continued to haunt the political scene for a long time (Shakya, 2013). During the uprising, the Ranas brutally oppressed the democratic movement, but the legal code based on Hindu religion was so strong that they had to spare the *Bahuns*. In the legal code "Brahma-hatya" (murder of a *Bahun*) was considered a sin bigger than a proven case of treason. By the time the Rana regime ended, Nepal had a generation of almost exclusively *Bahun* political leaders, and the political and social sphere was dominated by Hindu caste elites (Shakya, 2013).

The only positive light to this structure is perhaps explained by Hofer (1979); through the instrument of Muluki Ain the population of Nepal was coherently structured. His argument rests upon the idea that this form of structure allowed Nepal to become unique from its Southern neighbor India. This aligns with the dictum by Prithivi Narayan Shah, who referred to Nepal as "*Asal Hindustan*" (true Hindu country), since neighbouring India had been corrupted by Muslim influence (Hofer, 1979).

Hinduism also positions women in the lower social hierarchy and through the institutionalization of such a structure, marginalized women. Though causes of gender inequality are often complex and constitute the interplay of societal and cultural norms and beliefs, societal and individual attitudes towards gender roles along with political institutions, heavily influence and shape these norms.

Das et. al. (2014) in their report show that caste elites (Bahuns and Chettris) and Newars dominate the sociopolitical sphere, and in contrast, ethnic minority groups and socially constructed lower castes rank low (See table 3.2; where the inclusive value ranges from 0-1, and higher value indicates high level of inclusion). The index is developed to measure important dimensions of social inclusion in Nepal.[21]

[21] Social inclusion is the process of ensuring fullest participation of all individuals in all spheres of life. Social exclusion is conceptualized as a process (or state) of being excluded from the life of community, society, and the world at large.

The data also shows that none of the caste or ethnic groups score highly across all dimensions of gender inclusion, which means that none of the groups are completely gender inclusive. Though the national guideline mandates inclusiveness in regards to all castes and ethnic groups, these groups have been continuously marginalized.

Table 3.2: Present Cultural, Social, Political and Gender Dimensions by Social Groups

Caste/ Ethnicity	**Cultural Dimension**	**Social Sphere**	**Political dimensions**	**Gender dimensions**
Hill Bahun	0.9673	0.9594	0.7020	0.5285
Hill Chettri	0.9860	0.8689	0.5709	0.5415
Terai Bahun/ Chettri	0.7695	0.8790	0.7969	0.4842
Hill Dalit	0.9386	0.3286	0.1409	0.4847
Terai Dalit	0.7976	0.4720	0.1373	0.3505
Mountain/Hill Janjati	0.6933	0.8096	0.2363	0.5516
Terai Janjati	0.7475	0.8550	0.2634	0.4566
Newar	0.6695	0.9013	0.6697	0.5759
Terai other caste	0.8008	0.8218	0.2684	0.4046
Muslim	0.8181	0.6941	0.3691	0.4333
Others	0.6693	0.8789	0.5049	0.5076

Source: Das et. al. (2014)

In their research, Acharya and Bennett (1983) show that women in orthodox Hindu communities have a less significant role in household decision-making than women in Tibeto-Burman communities. It is evident from Table 3.2 that though gender inequality exists across all groups, ethnic groups are less gender-unequal than caste groups. Table 1.4 shows that communities become more egalitarian as we go from South to North of Nepal. Though geography and resources can be contributing factors, the difference could also be a result of religion: Tibeto-Burman groups were influenced by Buddhism, and Hinduism shaped the caste groups. To understand how Hinduism dictates social hierarchy, I present a quote from the *Bhagavad Gita:*

मां हि पार्थ व्यपाश्रित्य येऽपि स्युः पापयोनायः ।।

स्त्रियो वैश्यास्तथा शुद्रास्तेऽपि यान्ति परां गतिम् ।।३२।।

- Shrimad Bhagwad Gita

This translates to:
"For taking refuge in Me, they also, O son of Prtha, who might be of inferior birth-Women, Vaishyas, as well as Sudras—even they attain to the Supreme Goal" [22]

The *Muluki Ain* of 1854 with its foundations based on Hinduism created and institutionalized the social structure whereby Hindu caste elite men positioned themselves on the top of the hierarchy while women and other groups were marginalized. The caste based political justice system paved the way for a political path where dominance of caste elites and marginalization of other groups became a socio-political construction of Nepali society.

1951- 1975: Panchayat Regime, and Nationalization

The Rana Regime was overthrown by an uprising led by democratic political parties and the then disfranchised king Thribhuvan Shaha. There was a brief period of political "freedom" and then King Mahendra took power and banned political parties in 1960 (Shakya, 2013). This was an important juncture in the Nepali political system because of two important political events: 1) the establishment of the Panchayat era, where power was transferred from the King to his cronies; and 2) the declaration of Nepal as Hindu Kingdom.

The state congealed Nepal as a homogenous Hindu Kingdom, where the state promoted Hindu monarchy.[23] *Khas Bhasa* (Nepali language spoken in the hills by Hindu caste people), and the established hill Hindu culture became national symbols (Hangen and Lawoti, 2013).[24] As Nepali became the sole medium of instruction, state published books ignored Nepal's indigenous nationalities and delivered nationalist ideologies glorifying

[22] Swami Swarupananda (2000), in his translation explains that by birth, the Vaishyas are engaged in agriculture, and Women and Sudras are debarred from the study of Vedas. This could be a reason why Women, Vaishyas and Sudras are referred to as "of inferior birth".
[23] The Hindu King of Nepal was considered a reincarnation of Lord Bishnu and was worthy of worshipping.
[24] Daura Surwal, worn by hill Caste people became the national dress, cow became the national animal and crimson became the national colour. All refer to Hinduism

the Hindu Monarchy (Hangen and Lawoti, 2013). Such imposition of hill culture marginalized people who belonged to ethnic groups that did not speak Nepali, or followed Hindu traditions. It is no wonder that in the national elections that followed soon after the new constitution of 1962, hill Caste elites won the elections with an overwhelming majority, while ethnic groups were underrepresented in Nepali politics. The discriminatory Civil Service Act served the caste elites and sustained their dominance in bureaucracy.

> *"Almost five years before the constitution was written and endorsed, a controversial Civil Service Act of 1956 had made it mandatory for the candidates of civil service jobs to be competent in Nepali language (Khas Bhasa) and be knowledgeable of the Hindu and Sanskrit literature in the name of being knowledgeable about the country"* (Shakya, 2013; p 68).

While homogeneity was being institutionalized, marginalizing certain groups, new opportunities and avenues were opening for people. After the oppressive Rana regime was overthrown, people started migrating from hills to the plains, driven by the eradication of malaria, easy access to roads, productive agricultural land combined with resettlement policies.[25]

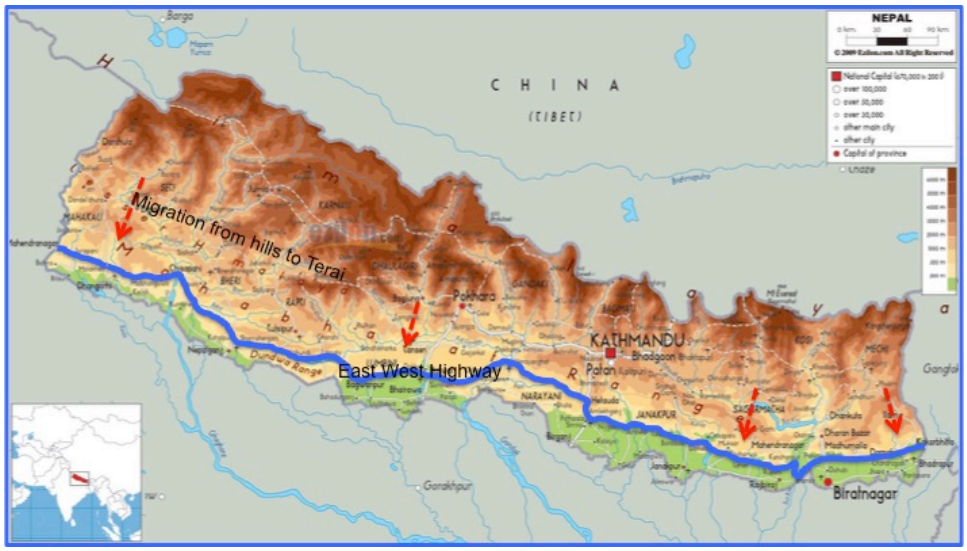
During the *Rana* regime, one third of agricultural land and forests were under the *Birta* tenure, a system where the government could not tax the property owners under *Birta*. Recognizing forests as an important source of revenue generation, the government nationalized forests in 1957 by introducing the Private Forest Nationalization Act and abolishing the *Birta* tenure in 1959.[26] The government declared regulations on forest use upon nationalization, but this policy failed because the government could not enforce

[25] WHO and World Bank collaborated to eradicate malaria from the jungles in the plains of Nepal.
Some railroads and roads were built to transport timber to colonial British India, and further infrastructure was built to connect the east-west highway. During this time, forests were clear-cut and the timber was used to built roads, bridges and other infrastructures along the highway.
The government encouraged migration to decrease population pressure in the hills and to increase agricultural productivity.

[26] This was an important step to control forests and also generated taxes from old "loyalties" to pay the tax revenue to the government. Till then, individuals who were given birta did not pay their taxes.

regulations or monitor the forests (Khanel and Acharya, 2008). Further degradation occurred as development projects were implemented. It is estimated that more than 100,000 ha of forest was cleared between 1950 till early 1980 during the construction of the East-West highway in Nepal that runs through the Terai belt.

Fig 3.1: Map of Nepal showing the East-West Highway along the Terai belt



The absent-government created a state of moral hazard, where locals continued to over use forests as population pressure grew. In 1961, the government created the Forest Act to demarcate government forests, where the government officials became the custodians of the forests. The Forest Preservation Act (1967) gave further power to these officials, under which they could prosecute the violators. These Acts were not designed to serve the communities in Nepal; rather they were copied from India's Forest Act, without considering the situation of the poor hill villagers in Nepal. Thus, the government continued to use forests as a means of resource extraction and building forest institution by delineating people even more. In their paper "*Gaining Forests but losing ground: A GIS evaluation in a Himalayan Watershed,"* Schreier et. al. (1994) examine the changes in land use, and argue that deforestation was most pronounced during the 1960s, immediately after the Forest Nationalization Act.

The Forest Nationalization Act (1957) and abolishment of *birta* tenure (1959) transferred the power from the Rana-supporters to the government forest officials, but this power was used to stop locals from pursuing their collective goal of utilizing forest and forest products. This divide between political activities and the social context created symbolic violence against the forest dependents, where the powerful intelligent government's reasoning conflicted with the mixed ways that locals used forest resources for their livelihood.

People were not given rights to use forest resources, the government was unable to enforce regulations, and the population continued to grow, which led to an increase in pressure on forests and exacerbated the illegal extraction and overuse of forest resources. Forest resources were misused for political and economic purposes, and the forest department was also accused of corruption, where people were being wrongly accused and charged in case they could not provide bribes (Khanel & Acharya, 2008).

Infrastructure development in the country increased during this period; small towns and cities started emerging, leading to an increased need for timber. These development projects in different parts of the hills and the plains and the government's inability to monitor and protect the forest from illegal timber extraction (to fulfill market need) led to three different aspects of socio-economics and environment. First, the focus on timber and the importance of the forest for market purposes changed the relationship between people and forests. The interaction between locals and their resources for basic livelihood and consumption was ignored and replaced with a market based view of forest resources. Second, the government's inability to identify and differentiate between "timber smugglers" and locals who use the forest for basic livelihood put them under the same blanket. Locals became thieves and untrustworthy in the eyes of the government (Pokharel, et. al., 2005). Third, the focus on the economic incentive of the forests, coupled with the perception of the locals as untrustworthy, marginalized the locals' rights and needs.

Transfer of power from the *Rana* regime to government officials did not change the extractive political institutions to inclusive institutions; rather, government officials continued to use the existing extractive institutions to enforce further separation between forests and people. A feudal state, corrupt government bureaucrats, and stringent protectionist laws created a weak institution where forest degradation continued. The national policies also created symbolic interactions where local people were considered "ignorant and not trustworthy" and required controlling via punitive measures. This increased the power imbalances: the professional, educated forest officials had complete (authoritative and judicial) power over the use of forest resources and over the local forest users. The holistic nature of forest systems, its backward and forward linkages and interaction with people was forgotten and replaced by protectionist measures. These protectionist measures used the forest as a means of revenue generation via extraction of timber. This change in institutional setup was not only extractive, but also created a divide between the educated and uneducated, widening the gap between the few powerful officials and rest of the population.

1975-1987: World Bank, Technocratic Policies and *Panchayat* System

Forest condition in Nepal continued to deteriorate unnoticed until the publication of Eckholm's "Theory of Environmental Degradation" brought international attention to the country. In his book Losing Ground: Environmental and World Food Prospects, Eckholm presented the symbiotic relationship between poverty and environmental degradation (Eckholm, 1976). In his theory, Eckholm postulates that flooding in India or Bangladesh can be traced back to the deteriorating forests in the hills of Nepal.[27] Following this idea, in 1978 the World Bank projected forests in hills and Terai would be completely depleted by 2000-2005. The solution to this rapid deforestation was large-scale forest plantation

[27] This theory raised two important points that pushed Nepal further into changing its forest policies and institutions. The first point was that the population living in the downstream countries were victims of environmental degradation of upstream countries- allowing them to justify their political or economic demands as compensation. The second point was a view of Nepal as a poor, environmentally degraded nation.

programs and protection, where they created a summary of tentative long-term targets for forest replantation. The World Bank Report Nepal Forestry Sector Review (1978) quotes:

> *"Based on the assumptions that it would be HMG's objective to try to resolve the rural energy crisis by the end of the century, thereby making significant improvement in the current soil erosion and fodder shortage situations, and also that an integrated forestry development program would include establishment of sufficient industrial and fuelwood plantations to meet domestic demands of the urban townships, the approximate program needed by the year 2000 would be about 1.3 million Hectare."* (World Bank, 1978)

This allowed the emergence of neo-liberal ideas and a quick fix, disregarding the socio-economic and political context. Mitchell (2002) explains this as an enactment of modernization, in which villagers who have not changed their ways of life in generations are expected to change their relationship with forests in a short amount of time by enforcing stringent rules and coercion.

The World Bank (1978), FAO/World Bank (1979), Environmental Resources Ltd (1988), among others, claimed that forest resources in Nepal would be completely depleted by the late 1990s, and production of timber has to be the first priority for the government. However, there were other researchers that were working to dispel this argument. Ives and Messerli (1989), Gilmour and Fisher (1991), among others countered the argument, claiming that local people were not the cause of massive deforestation; in fact they were the victims. However, their ideas did not get credit, as their research was based on anecdotes and field observations. It was only when the Land Resource Mapping Project (LRMP) was completed in 1986 did it became evident that there was a shortage of forage and fuel that the locals depended on, and not timber. The evaluation papers based on the LRMP data showed that fuel wood production was slightly higher than consumption, and fuel wood as a particular resource was a less critical issue than food and animal feed (Schreier, et al., 1994).[28]

[28] This means that the goal of producing timber from forest as suggested by the World Bank was not the "need" of the locals. Locals needed forests for food and animal feed rather than timber.

The policies made were mostly based on the research report developed by the World Bank, FAO/World Bank and other research that was anecdotal, historical and descriptive was largely ignored. Afforestation projects were already underway by the time the LRMP was able to provide statistical data.[29]

The technocratic quick-fix strategy employed by the World Bank was to plant as many trees as possible in the barren hills of Nepal. This large-scale afforestation was a major landmark for the 1980s, where barren hills were planted with pine trees (native and non-native). The afforestation, mainly by pine *(Pinus Roxburghii)* changed the dominance of species in some parts of the hills.[30]

It is argued that one of the reasons behind this strategy was to re-forest the hills with a plant that was sturdy and grew faster to bring back greenery to the country again. Such a quick fix strategy (large scale replantation) had many ecological and social consequences. Although pine trees can improve future timber and wood production, 1) they do not help with the multipurpose forest ecology that local people in the hills depended on, 2) Pine is not desirable firewood, the pine needles cannot be used for animal fodder, and 3) the forest litter is likely to acidify the soil in the long run (Schreier, et al., 1994).

The locals could not change their dependency on forests, as expected in a country where more than 90 percent of the population lives on subsistence farming, and the forests provide almost 100 percent of energy (fuelwood), resources for farming (leaf litter from the forests, mulch), resources for animal husbandry (forage and grass) and other medicinal and aromatic plants. Punitive rules and lack of rights encouraged illegal extraction of forest products, creating a perspective of locals as thieves and illiterates,

[29] This relates to what Flyvbjerg (2001) refers to as the obsession with numbers and statistical analysis, where the contextual information and *Phronesis* is forgotten. *Phronesis*, an important part of social research that values practical wisdom, has been neglected by the social sciences, wherein instrumental rationality (focusing on *episteme* and *teche*) has completely overshadowed value rationality.

[30] Sal *(Shores Robusta)* dominant forests have been on a decline as the dominance of pine forests have increased.

who needed to be taught and sometimes punished by educated officials along with technical support from international scholars and experts.

On a domestic level, the government of Nepal developed the Nepal Forestry Plan in 1976, inspired by small experiments that showed that forest conditions improved when locals participated in management. Based on this act, the government handed over forests to village *Panchayats.*[31] The *Panchayat Forests* were plantations created by village Panchayats and the *Panchayat Protected Forests* were government forests managed by village Panchayats. This Panchayat system of forest management (in 1978) strategically placed the burden of protection and monitoring on the communities without any consideration to their own livelihood or benefits.

The Panchayat system initially became successful in controlling illegal extraction of forest products because local leaders were able to enforce regulations and closely guard the forests. Though the Panchayat system intended to devolve power (from King to his cronies), it actually increased the power-divide between elites and poorer locals. As political turmoil increased in the country, people's hatred for the exploitative Panchayat system created a similar scenario as forest nationalization. The forest resources were in no one's custody and forest degradation continued (disregard for regulations during nationalization was mainly due to moral hazard, and during the exploitative Panchayat system people continued destroying forests because Panchayat was deemed as "forest owners").

The transfer of power from government to local elites did not change the institutional setup. The complete protectionist mode adopted by the government decentralized responsibility, creating more power for the local elites (and supporters of the rulers) but failing to include people. Locals, especially the marginalized groups, were excluded from

[31] Village *panchayats* were the lowest level of political bodies, consisting of nine territorial units called "wards". Eleven elected members — nine ward members from each ward, one mayor and one deputy mayor known as *Pradhanpancha* and *Upa Pradhanpancha* ran a village *panchayat*. After the re-instatement of multiparty democracy in 1989, the *panchayat* system of polity was abolished. The Village Development Committee (VDC) has now replaced the village *panchayat.*

the decision-making process. The existing caste and socio-economic hierarchy coupled with exclusive governance did not provide room for participatory management and widened the gap between the powerful elites and the discriminated groups. The existing power divide on the macro-level moved to the micro level, making locals worse off.

To understand this complex socio-political dynamics and unequal power relations, one can look into Mitchell's (2002) explanation of Le Bon's famous work *Psychologie des foules,* in which Le Bon explains that the misery of poor people in rural communities is not hardship or poverty, but their lack of education and culture along with their inability to understand the causes of suffering. So, the burden lies on the elite to "teach" and liberate the rural population because the locals are powerless and numbed (Mitchell, 2002). Though there were multiple changes in reforms and acts, the extractive political institutions were ingrained even deeper in Nepal's forest system and its related institutions. The reforms were brought about not because of the plight of the poor, but rather due to the emerging neo-liberal ideologies driven by economic incentives and international pressure. *"The elites with their richness of mind and money were the only ones who could bring prosperity to the locals"* (Mitchell, 2002).

Nightingale (2005) during her fieldwork in the northwestern part of Nepal in 1997-98 analyses the concept of "professionalization and knowledge in community forests," and argues that neo-liberal ideology and modernization of ideas regarding forest products and use have created systemic inequalities. She argues that the professionalization of community forests have changed the use of forests to a narrow concept of timber extraction and protection rather than the multi-use for livelihood (food, fuel, forage, manure, medicine, etc.) (Nightingale, 2005). This professionalization not only affects the way forest resources have been used, but have also created power imbalances between the "educated" elites and the "uneducated" lower-caste poor people. The elites use their education and knowledge to justify and legitimize their power, often bending or breaking the rules, while the poor people are coerced to change their behavior even if it has significant negative impacts on their livelihood. (Nightingale, 2005). Nightingale also showed a distinct divide between the rich older men, who made decisions and

marginalized women and lower caste groups who managed the forests and did all the work required.

The exploitative political and economic institutional setup by the Rana regime continued, except now there were local elites who could use the existing norms and reforms to capture political and economic power. By this time, Nepal's forest institutions had evolved into a strange mix of feudal state, modernity via techno-politics, and a social construction where rich, educated high-caste elites became powerful decision-makers, and illiterate, uneducated poor locals needed to be regulated and excluded from the decision-making processes. It is important to note that macro policies not only shifted the power structure on a national level, but also changed power and social relations between the elites and the marginalized on a micro level. The national level policy making processes until 1985 were top-down, extractive and non-inclusive, but the effect of these policies changed social and power relations on the local level.

The Forest Nationalization Act and Panchayat system created a role for government officials to focus on policing and regulating the locals without fulfilling their needs or demands. The district forest offices were given not only custodian role, but also judicial, exponentially increasing their power without any accountability or transparency. On a local level, this changed the forest management system, alienating the locals from their much-needed resources. There was rising antagonism and a lack of trust between the forest officials and the locals, rule of law deteriorated, and the rate of forest degradation increased (Pokharel et., al., 2005). The technocratic "quick fixes" for a complex system allowed policies and programs that had questionable benefit to the locals, and did not improve the multi-purpose forest resources. A system was created where a few removed elites shaped the policies and regulations of the country.

Pressure from international bodies (Ives & Messerli, 1989) and realization of the government's inability to enforce regulations resulted in the initiation of Forest User Groups in 1987.[32]

1990- Present: Multiparty democracy, Devolution, and Community Forestry

Multiparty democracy in 1990 brought new shifts in the political system in Nepal. Civil society became an important part of the country providing services, skills and expertise in the field of human health, education, and development. The Forest Act of 1993 devolved power to local users. As the users became managers, Community Forest User Groups (CFUGs) became empowered.

On a national level, the new Nepali politics and the 1991 constitution provided space for marginalized ethnic groups to organize, formulate demands, and negotiate with the state (Hangen and Lawoti, 2013). However, power relations in such negotiations were skewed because the constitution did not allow registration of ethnic parties. The ethnic grievances had to be addressed by the political parties that were dominated by caste elites. Nepal remained a Hindu Kingdom, adherent to Aryan culture and Hindu religion and even though other mother tongues were accepted as languages of the nation, Nepali was the official national language[33].

The armed rebellion launched by the Maoists in 1996 brought ethnic grievances and marginalization into the spotlight of Nepali politics and society, and helped ethnic identities receive attention and legitimacy. The existing marginalization helped Maoists recruit from the disenfranchised groups, as many marginalized groups perceived the

[32] An October 1987 article in India Today held Nepal responsible for flooding in Bihar. This was because most of the rivers originate in Nepal before flowing in the Ganges. After the flooding, the then Prime Minister of India, Rajiv Gandhi demanded to know what preventative measures had been taken by Nepal. A month later, Newsweek published an article "Trashing the Himalayas, a once fertile region could become a desert", a dramatic perspective of Nepal's environmental degradation.

[33] The Supreme Court in 1999 made a decision to not allow other languages as additional local government languages, but it was challenged and radio news started broadcasting in other languages like Maithili and Newari.

Maoists as capable of addressing their demands. After a decade long insurgency and negotiations with ethnic groups and Nepali political parties, the Maoists laid down their arms and joined the mainstream politics of Nepal.

The interim constitution of 2007 declared Nepal as a secular state, all mother tongues were declared as national languages (and Nepali remained the official language) and even though ethnic parties were not to be registered (as per the constitution), the election commission registered them and they were allowed to participate in national politics. The constituent assembly elections were held in 2008 to write a new constitution that is inclusive and addresses the needs of everyone.

ANALYSIS AND POLICY RECOMMENDATIONS:

> *"Although policy legacies are the product of past political choices, they are not necessarily at the disposition of present policy makers. For one thing, not everything can be changed at the same time in modern, highly differentiated policy systems…, and even when policy change is feasible, it is likely to be path dependent"* (Scharpf, 2000)

Nepal promulgated its new constitution on September 20, 2015, replacing the interim constitution of 2007. Though there is a lot of contestation about the new constitution and how it positions different groups, I will focus on the new constitution and how it positions women (their citizenship rights) and marginalized groups (their representation in political participation and inclusion) in the Nepali society. Presentation and critique of the constitution has a dual purpose: 1) it shows the power relations and the resulting political rights that are constitutionally established, and 2) it helps understand how historically and traditionally embedded institutions continue to influence present day policies.

The new constitution of Nepal has made some progressive steps towards gender equality by giving women equal rights to inheritance, and equal rights to remuneration for the same work (as men) and social security. However, the constitution fails to give equal

rights to women to confer citizenship to their children (a right that women activists have been fighting for a long time).[34] Though these rights were enshrined in the interim constitution of 2007, the patriarchal mindset of the bureaucrats and the old laws prevented implementation of such rights.[35] The new constitution, instead of establishing those rights, now has conditions that will create different classes of citizenship.[36]

Critics of the new constitution argue that the demarcation of federal boundaries continue to emasculate the dominant caste elites because the new constitution puts geographic representation as the main element in the formation of parliament. The new constitution violates the agreements that the state has signed with the indigenous groups in the past. The five-month long protest along the Terai border of Nepal is an example of the dissidence that people have against the state, and the government's reluctance to redistribute power to historically discriminated and marginalized groups.

Hangen and Lawoti (2013) argue that the systemic discrimination based on caste and gender is historically specific and elite dominance has emerged from their historical relationships with the state. In Nepal's context, this social construction translates to the local village level. Social hierarchies are persistent, reflecting the national data. The actors (stakeholders) in community forestry are positioned in certain hierarchical order, which determines their capacity to influence outcome. This contextual understanding is important because social hierarchies play an important role in determining political power, resource management, and redistribution of power.

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[34] One of the reasons stated by politicians was the idea that allowing women to confer citizen to their children independently would drastically increase the influx of immigrants from India (since Madhesi women inter marry with Indians). Such discrimination against the Madhesi group is not new. For details see Whelpton (2005) and Ghimire (1998)

[35] There were incidents where Chief District Officers refused to sign paperwork when women sought to confer citizenship to their children.

[36] Article 12(4) states that "A person born to a Nepali citizen mother and who has domicile in Nepal but whose father is not known, shall be granted Nepali citizenship by descent. However, the citizenship of such a person shall be turned into naturalized citizenship as provided for by law if the father of the person is proved to be a foreign citizen. This law deliberately marginalizes women who are married to foreigners and the Madhesi groups in Terai where marriages between Nepali and Indians are common.

The theory of collective action argues for the importance of interdependence between the users and the resource (Ostrom, 1990). This theory assumes that primary interdependence is in terms of managing the resources, which is not a complete picture. As Fisher quotes:

> *"People are interdependent in many ways; resource management is just a part of this interdependence and cooperation is encouraged not just by relatively narrow economic interdependence but by the overall interdependence between people"* – (Fisher, 1992; p:68).

Though theories of community based natural resource management predict environmental protection and local development through inclusive participation, researchers have shown that Community Forestry in Nepal does not provide equal benefits or show inclusiveness (Nightingale, 2002). The poorer households are often not benefited and sometimes are worse off after the implementation of community forestry (Chakraborty, 2001), and the disadvantaged groups (women and lower-caste) are not included in decision-making processes (Malla, Neupane, & Branney, 2003; Adhikari, Falco, & Lovett, 2004; Adhikari & Lovett, 2006; Maskey, Gebremedhin, & Dalton, 2006; Dhakal & Masuda, 2009). Giri and Ojha (2010) have argued that weak governance within the CFUG members has resulted to elite capture, inequitable redistribution, and the present emphasis to "protect" have created an institutional setup where the benefits to poorest of households is strictly limited (Giri & Ojha, 2010).

Poor identification of the users and their needs, psychological subservience of poor people and their social marginalization, institutional arrangements that work against the needs of poor people, and regulations that aimed to protect the forest but are detrimental to the livelihood, act to disempower marginalized groups in Nepal's community forestry (Hobley, 1996). In forest dependent communities, poorer households depend heavily on forest resources for their basic livelihood. Any changes in access to the forest resources can have profound impact on their subsistence (Hobley, 1996). Since these groups are excluded from decision-making processes, their needs are not addressed, further disempowering them. As Hobley (1996) argues, local informal institutions need to be evaluated carefully before assuming the "magic" of "local management".

From a rational choice perspective, the social structures that are based on political economy are often lumped in the "community attributes." The problem, however, is that it shifts the burden from the state to the local people (and their beliefs). For example, the current constitution of Nepal does not allow caste-based discrimination, so, caste discrimination is seen as a "social structure" rather than a result of political events that influenced the society. As these political events are shrouded in history and forgotten, the social hierarchy remains. Just because the traditional forms of behavior have been deinstitutionalized, does not mean people are unconscious of their ranks (Gunaratne, 2002). Groups that historically benefited from state policies and relationships now attribute their superiority to education and acumen.[37]

Even though inappropriate state policies and technocratic management has been the main cause of degradation, the locals have been bearing the burden of degradation. This has been clearly pointed out by Paudel et. al. (2015), where the authors examine the REDD+ Readiness Preparation Proposal (RPP) for its inability to account for the cause of forest degradation. The authors present RPP analysis alongside various independent studies from 1978 to 2012 to compare the key drivers of deforestation in Nepal. While the RPP report identifies "high dependence on forest land and products" as the main cause of resource exploitation, independent studies show state exploitation as the key driver of resource degradation (Paudel et. al., 2015). (*See Appendix B for RPP Report*).

Though the RPP identified the correlation between forest dependence and the illegal harvesting of timber and fuelwood, research has shown that such illegal extraction is often supported and protected by political parties, local leaders and corrupt government officers (Paudel et. al, 2015). The authors highlight the Parliamentary CNRM, which shows that poor governance is the core cause of ongoing deforestation, where the corrupt and weak government protects timber traders who are involved in illegal extraction.

[37] This argument is taken from Gunarate's (2002) example of how Bahuns view themselves. In his book points out that Bahuns see themselves as superior to Tharus (one of the marginalized groups), but attribute their superiority to their better education and general acumen rather than the past policies that benefited them.

Additionally, some political-environmental events have shown that government policies are not completely devolved, and some of these policies restrict community rights.[38]

Table 3.3 Drivers of degradation and deforestation identified by different studies in Nepal

RPP- identified drivers	**Identified by independent studies**
High dependence on forest land and products - Illegal harvesting of timber and fuelwood - Unsustainable harvesting of timber and fuelwood - Resettlements - Forest fire - Encroachment - Overgrazing - Infrastructure development (road, hydropower and public buildings)[39] - Expansion of invasive species	*State Exploitation* - The Nepali state maintained exploitative relationship with Terai forest by distribution of forestlands to members of ruling class, encouraging conversion of forest into agricultural land and sale of timber to India (Regmi, 1978; Sinha, 2011) - State launched major resettlement programs and encouraged in-migrants from the hills (Gurung, 1989) - People in and around forestlands in Terai could not exercise secure rights to manage and benefit due to vacillating policies (Bhattari et. al., 2002) and the introduction of multiple and conflicting forest management policies (Ojha, 2008) - Weak law enforcement, poor governance and corruption (Sinha, 2011) - Complex socio-economic and demographics dynamics of Terai (Baral, 2002) - Lack of robust institutions and widespread conflicts at different levels (Gautam et al., 2003; Ojha 2008; Satyal, Parvat and Humphreys, 2013).

Source: Paudel et. al. (2015)

[38] *In Dec 2009,* the Council of Ministers held a meeting in the Everest Base Camp, to declare three new protected areas (example of state control, environmental and resource carelessness- the amount of fuel and transport that was required to take all those ministers to Everest Base Camp). *In July 2010,* a proposal was created to amend the Forest Act 1993 (the key legal foundation of community forestry), with intent to empower forest officers and restrict community rights. *In June 2014,* the Chure Conservation Area was declared under the Environmental Protection Act, restricting rights of locals in the region. (Source: Paudel et al., 2015).

[39] It is interesting to see infrastructure development as a responsibility of the locals. Local people need infrastructure, but that does not mean that the local people should shoulder the burden of unsustainable forest resource extraction because the development is "meant" for them. Personally, I think this argument is as ill-informed and misjudged as the theory of Himalayan degradation presented by Eckholm.

Historical analysis of Nepal's community forestry shows that the exploitative institutions have persisted even though changes have been made to make community forestry inclusive and sustainable. However, historical analysis also shows how tenure changes and governance reforms can make large positive changes (Paudel et. al., 2015). The deforestation and degradation during 1960s and 70s were not only curtailed, but also reversed after the introduction and establishment of community forestry. This means that even when institutions persist, significant macro-policies can make large impacts on local institutions, both for the environment and socio-economic development.

Table 3.4 Key Actors in Deforestation in *Terai* (presented by Paudel et al., 2015)

Actors	**Illicit Activities**	**Motivation**
Political leaders and senior forestry staff	Send forest officials to lucrative sites where there is high timber trade and transaction, usually through a non-transparent transfer process; forge clandestine relations with traders; use discretionary power to support substandard practices; manipulate inventories; misinterpret legal or regulatory provisions to meet their own interests.	Maintain authority and control. Maintain techno-bureaucratic hegemony in forest management; Maximize discretionary power; Reduce influence of local government and civil society in the forest sector.
Timber traders	Illegally extract and trade timber; establish clandestine relations with bureaucrats and politicians.	Maximize profit (may also have legal enterprises, but usually earn more from illicit activities); Weaken monitoring and oversight by the Department of Forests. Minimize taxes.
Local elites	Engage in non-transparent transactions; bribe officials for higher allowable harvest misuse leadership position.	Maximize rights and influence.
Landless poor, forest dwellers and environmental refugees	Encroach on forest land or engage in illegal logging as a livelihood strategy.	Ensure livelihoods security.

Source: Paudel et. al. (2015)

It is hard to reverse historical institutions, but it is important to understand that past extractive policies in Nepal's forest management have continued to haunt the sustainability of resource management. While larger economic and political forces are at play, the burden and responsibility of degradation is shifted to local communities. For example, illegal timber extraction by timber traders with the help of corrupt government officials and political parties is often seen as "deviant locals" stealing from their forests and selling it in the market.

State's control, existing corruption in the political parties and government officials coupled with marginalization have distorted the potential outcome of Nepal's community forestry. Paudel et al. (2013) in their report present various causes behind forest degradation in Terai, which accounts for both- community and national forests. From an incentive perspective, scholars argue that Terai has what Collier (2007) would refer to as a resource curse, where the available resources allow extractive institutions (formal, or informal) to maintain power and create poverty for the population.

Another reason why forests in Terai could not replicate the results of hill forests is because of the existing institutions. While communities in the hills had established traditional institutions involved in forest use, in Terai such traditional institutions are missing (Chakraborty, 2001). Lack of existing traditional institutions, heterogeneity, high timber value and social inequality add complexity to challenge the simplicity of collective action theory.

Iversen et al., (2006) show that forest value and existing inequality were the causes for further inequity and institutional instability. In their research, Iversen et al., (2006) present the principles of hidden economy to show how CFUG, due to its hidden transactions[40] and hidden subsidy[41], is increasing the social inequality. For example, the CFUG covers the cost of felling, sawing and transporting timber from the forest to the

[40] Hidden transactions constitute of illicit activities like illegal extraction, taking bribes, theft, embezzlement, etc.
[41] Hidden subsidy is the unaccounted amount that results from a margin between the member price and the local market cost.

market, where the members are able to buy it at a much lower price. Since the higher income members demand/require more timber than their lower-income counterparts, it benefits them more. The cost of protection is borne by both, and sometimes more by the lower income households because of their proximity to the resource. Iversen et. al. (2006) in their research, confirm that transaction costs to benefits are higher for the lower-income households. The authors recommend changing the mechanism for allocation of the forest resources and narrowing the gap between the market price and the CFUG member price for timber.

There is another way of looking at the problem: rather than making economic amendments that could possibly have a huge backlash and hurt community members, we can make political changes that allow local institutions to be transparent, accountable and inclusive. This argument is based on Lenski's "A Theory of Inequality", where he presents the laws of redistribution from a political context. Going beyond the general assumption of "self-centered" utility maximizing individuals, Lenski offers the context of concentration of political power and economic surplus as the root causes of inequality (Lenski, 1994). Community Forests in Nepal have shown that political power is often captured by the elite groups in the society, and in cases of surplus from forest resources (like, in many cases of Terai), benefits are unequally redistributed.

Lenski argues: 1) *power will determine the distribution of nearly all the surplus possessed by the society*, and specifically 2) *the richer the environment, the larger the surplus and greater the importance of power in the distributive process* (Lenski, 1994). In the case of Nepal's community forestry, this means that power relations between larger forces (including State and other stakeholders) and local CFUG will affect the institutional setup and the rules-in-use, and this influence is even more exaggerated when there is an economic surplus. In Terai's case, existing social inequality and discrimination further adds to the issue.

There are two ways that the government can act and reduce such pressure on the local institutions: 1) by curtailing the larger economic and political forces that is beyond the

scope of local institutions, and/or 2) by enforcing inclusiveness in the local institutions so that the local institution can filter the pressure of larger forces. With increasing education and awareness, community forests might be able to make everyone aware, informed and capable of managing their resources, but such social changes are slow. However, we also know that political processes show characteristics of stability and slow increment while also producing occasional departures from the past (True et al., 2007). Nepal's community forestry is an example, which shows that even though the extractive institutions continue, certain powers have devolved.

Although community forest user groups are autonomous bodies, current legal settings provide power to the government officials. Research has shown that this control of the government officials on community forests is harmful for the institution because this power allows some corrupt government officials to collaborate with timber traders and local elites, resulting in timber smuggling and forest degradation (Paudel et al., 2006). For an honest devolution of power, the state needs to decrease its control and power over the management of community forestry. However, the government has shown no signs of decreasing its control; rather in the last many years it has attempted to control community forests even more (Paudel et al., 2015; Sunam et al., 2013).

Recently, the government has made proposals to increase the power of the government officials, increase tax for CFUGs, and further curtail local decision-making regarding extraction and utilization of forest resource (Sunam et al., 2013). Cruikshank (1999) would present this situation as the antithesis of devolution, where the state is dichotomizing the "politics" and "administration" and local communities are given the "decision-making" for the day-to-day management (mainly administration), but they are not included in politics and decision-making.

Allowing local communities to exercise autonomous rights over their resources with some evaluation control would not only reduce corruption, but also increase community engagement in protection and utilization. It incentivizes local leaders to be accountable to their communities. However, as mentioned before, the state continues to control power,

which has allowed timber traders, corrupt government officials and local elites to have a collaborate platform to illegally extract resources.

Since the government seeks to maintain its power and control, it can strengthen local institutions by redistributing local political power. This can be pursued by imposing inclusiveness in the regulatory framework (without giving up its power to resource management). The national guideline created by Community Forestry subdivision (MFSC, 2009) to support community forestry aims to provide a guideline to make local community forest user groups (CFUGs) more inclusive and sustainable.

The macro policies recommended in this chapter are derived from the listed guidelines and articles, in the context of Nepal's political economy and social structure. I would argue that inclusiveness should be mandated because it is an essential component to meet the objectives of community forestry. For example, the guideline states that 35% of the income should be utilized for supporting marginalized groups but research has shown that the marginalized groups are not even included in the decision making process (Ojha et. al., 2009; Nightingale, 2005).[42]

Social divisions affect the institutional parameters by negatively influencing the inclusiveness in institutions (Isaksson, 2011). To improve inclusiveness in a society with unequal power balances between different groups, mandatory inclusiveness can increase participation from marginalized groups and eventually improve inclusiveness of the local institutions. For example, community forestry as an institution has taken significant steps in establishing proper gender representation in the CFUG board. The national guideline mandates that at least 50% of the board should constitute women members and the rest (50% or less) should constitute proportional representation of other marginalized groups. Through a deliberative process, the local community should identify different groups based on socio-political and economic wellbeing.

[42] According to the guideline, 25% of the benefits (income) should be reinvested in forest conservation, 35% of the income should be utilized for supporting marginalized groups and the rest of the income (40%) can be spent on infrastructure and/or institutional development.

Using cross-scale interactions and establishing networks among local actors, the government can foster a platform for inclusiveness.[43] For example, the Village Development Committee (VDC) does the collection and maintenance of demographics data on their jurisdiction. Mandatory collaboration with the VDC office while creating a CFUG can create transparency in regards to identification of different marginalized (and advantaged) groups in the local community. Since VDC offices are government bodies working for development on the local level, their collaboration with the local CFUGs can improve resource utilization.

The national guideline mandates equal representation in regards to gender, and even though it has not been completely implemented, it has shown positive effects in regards to improving forest conditions and livelihood (Leone, 2013). Similarly, amendments can be made to increase inclusiveness by mandating the representation of other groups. For example, the government can mandate regulations that impose proportional representation for all groups (marginalized and advantaged) with equal gender representation. This will allow women from marginalized groups to actively participate in and contest political power on the local level.

The analysis also shows the impact of international powers in influencing forest management that has critically affected the livelihoods of local communities. The large-scale plantation program funded by the World Bank has long-term negative effects. The government needs to evaluate the impact of such technocratic policies that can cause damage to local livelihoods. For example, the recent interest in Reducing Emissions from deforestation and forest degradation (REDD+) shown by the government has indicated negative impacts on the forests and local communities. The REDD+ pilot program in nine CFUGs has shown to increase social conflict and restrain locals' ability to access forest resources (Poudel, 2014). Although the cash benefits (cash transfer for carbon sequestration) from REDD+ implementation can increase financial income for the CFUGs in the short term, research has shown that such benefits are not viable in long

[43] This argument is based on Adger et al. (2006) research on resource management in marine protected areas in Tobago, where they argue that cross-scale interactions can help empower local level user groups.

term. Additionally, the locals in the researched communities pointed out increases in corruption due to such cash flow. The government needs to take these arguments seriously before implementing any international programs that may suggest potential benefits.

Historical analysis often relies on critical junctures to explain broad structural changes, but it cannot explain incremental changes in local institutions. Following the ideas proposed by Mahoney and Thelen (2010), I will argue that institutions also evolve gradually. *"Institutional change often occurs precisely when problems of rule interpretation and enforcement open up space for actors to implement existing rules in new ways"* (Mahoney and Thelen, 2010). Resting on the macro policies and political economy of Nepal, the next chapter provides comparative case studies to understand how local actors and communities have shaped their local institutions.

CHAPTER 4: COMPARATIVE CASES

(LALITPUR, DAILEKH, NAWALPARASI, AND KANCHANPUR)

The historical analysis presented in the previous chapter provided a context for Nepali society and the institution of Community Forestry. Although the political economy provides a broader context, it does not explain variations in different community forests in Nepal. For example, the community forests in the hills have shown different results from the community forests in Terai (Paudel et. al., 2015; Chakraborty, 2001). Besides the difference between the hill community forests and Terai community forests, case studies have also shown conflicting results, presenting a variation in CFs in Nepal.

Scholars have argued that these variations in result are due to biophysical properties (Paudel et. al., 2013), existing (or lack of) traditional institutions (Chakraborty, 2001), community demographics and attributes, and the available support and resources (Acharya and Gentle, 2006).

To explore this variation, this chapter employs comparative case studies of eight community forests in Nepal. The cases are selected based on the context presented by Ostrom's Institutional Analysis and Development (IAD) Framework. Since research has shown significant difference between the community forests in hills and Terai (due to the quality of available timber in the Terai forests), this research will evaluate them separately (because of difference, the research assumes that community forestry in the hills cannot be compared with the community forests in Terai).

Nepal has a centralized government, which allows government and non-government resources concentrate in (and near) the capital. The historical overview of community forestry shows that first handovers and implementation projects were close to the capital. Besides that, non-government agencies have mobilized their technical and financial resources for the establishment of community forestry, and these resources are also concentrated near the capital. From a social context, efforts for infrastructure and

community development projects are implemented closer to the centre rather than the periphery.

This research assumes that government and non-government investment is significantly higher in (and around) the capital than the peripheral districts, causing difference in the institutional arrangement of community forestry. So, the case sites are selected based on their geographical location from the capital.

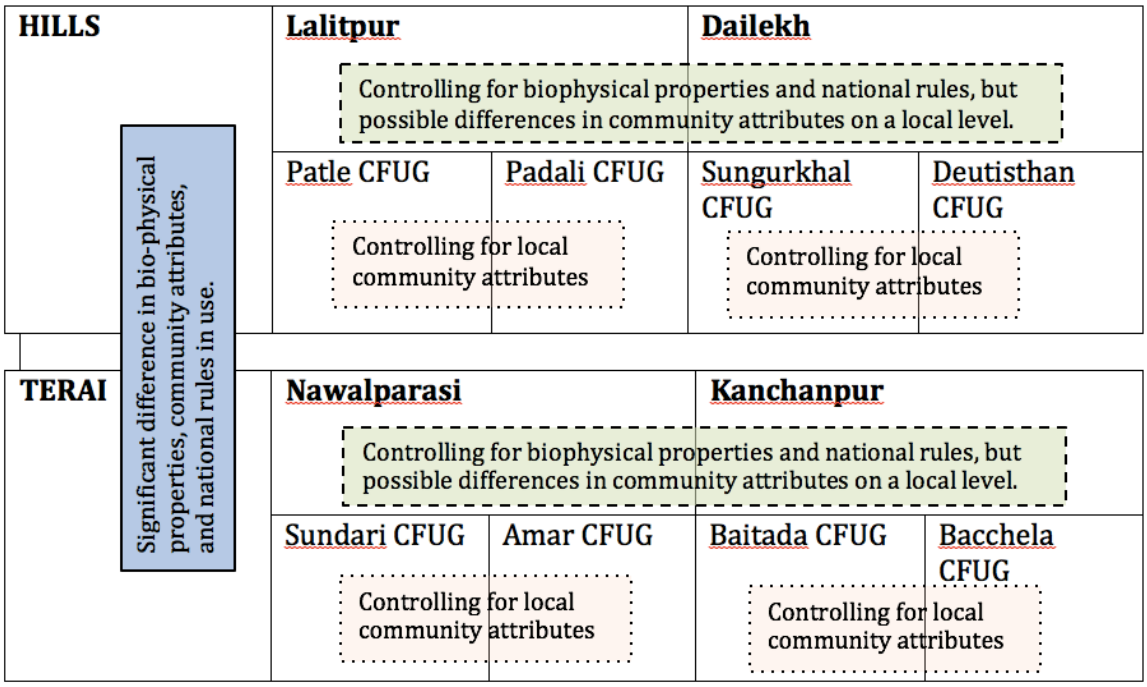
Two hill case districts and two Terai districts were chosen to explore how accessibility to resources (and the associated local context) influences the outcome of community forestry. In the hills, Lalitpur (centre) and Dailekh (peripheral) case districts are selected, and Nawalparasi (centre) and Kanchanpur (peripheral) case districts are selected from Terai.

From each case district, two community forest user groups were chosen. The selection criteria were based on forest area, date of transfer of management, number of households involved, and the governing body. For example, two Community Forest User Groups (CFUGs) from Lamatar VDC were selected in Lalitpur because were similar in regards to their context (forest size, household involved and local community attributes), and under the jurisdiction of Godavari Ilaka range post. Similarly, two CFUGs from Narayan Municipality in Dailekh were selected based on their contextual similarity with each other.

To provide controlled comparison between the central and peripheral districts, CFUGs that has close access to road infrastructure were selected in peripheral districts. For example, although Dailekh district by itself is remote (most of the communities in the district do not have any road access), the district headquarters have access to road and most of the government and non-government agencies are situated in the headquarters. The selected CFUGs in Narayan Municipality are assumed to have more access resources than the rest of the district due to their location.

The comparative case studies are based on the stakeholder interviews, discussions with scholars and practitioners, and field observation.

Fig 4.1: Visual representation of case selection and criteria



4.1 LALITPUR CASES

There are 41 Village Development Committees (VDCs) in Lalitpur District, among which, Lamatar is nine kilometers from Gwarkho (the point in the ringroad). Lamatar is situated in the north east part of the district at 27.62 deg N and 85.4 deg E. The altitude ranges from 1308m to 2069m from sea level. The total area of the VDC is 1365.4 Ha, out of which 560.65 ha constitutes of Community Forests (CF) and 380.4 ha is arable land. The rest of the land is steep-terraces.

After the promulgation of Forest Act 1993, local leaders and community members established community forests to protect the forests and utilize forest resources for local consumption. In 2049 B.S. (1992 A.D), *Mul Ban Upabhokta Samittee* (Main Forest User Group) was created to curb ongoing forest degradation in Lamatar. Later this "Mul Ban

Upabhokta Samittee" was divided in 11 Community Forest User Groups and the forest boundaries for these individual CFUGs were determined by the Politico-administrative boundary.[44] Though the later regulations allow forest boundaries to be determined by the traditional use rights, local CFUGs have continued to use administrative boundary to determine user members.[45]

The local CFUGs in Lamatar have received support (technical, financial and other resources) from various donor organizations and government, especially for forest conservation and replantation. Donor agencies have also implemented various social projects designed for poverty alleviation and empowerment of women and marginalized caste groups. For this research, Patle CF and Padali CF were selected, and different stakeholders associated with these community forests (community user members, government officials, non-government and advocacy groups, etc.) were interviewed.

Table 4.1 Community Forests in Lamatar VDC

CF Name	**Address**	**Date of transfer**	**Area (Ha)**	**HH**
"*Patle*"	Lamatar 1	2050/2/21 B.S. (June, 1993)	104.0	168
Shri Ganesh	Lamatar 3	2061/3/21 B.S. (July, 2004)	5.96	89
Dhikaspakha	Lamatar 5	2053/3/27 B.S. (July, 1996)	39.80	116
Kafle	Lamatar 6	2051/2/9 B.S. (May, 1994)	94.0	63
Gomati	Lamatar 6	2051/2/9 B.S. (May, 1994)	60.0	64
Chisapani	Lamatar 6	2056/8/21 B.S. (Dec, 1999)	1.72	29
"*Padali*"	Lamatar 7	2052/2/30 B.S. (June, 1995)	46.0	117
Upper Patle	Lamatar 9	2059/8/21 B.S. (Dec, 2002)	56.5	63
Manedanda	Lamatar 9	2052/1/10 B.S. (Apr, 1995)	25.5	72
Goldanda Kakaridanda	Lamatar 9	2055/2/14 B.S. (May, 1998)	119.25	104
Sirthali Pakha	Lamatar 9	2066/11/12 B.S. (Feb, 2010)	9.32	15
Total			560.65	897

Source: Community Forestry Resource Center, Lamatar (2014)

The forest condition has improved significantly since the transfer of management. Locals claim that the hills were barren before the transfer of management and the locals did not

[44] See Appendix E for list of progressive changes in Forestry Regulations.
[45] For example, locals from Ward no. 1 can be user members for community forest that lies in ward number 1, irrespective of the distance between the users and the CF they use.

have easy access to forest resources (like fuelwood and forage). Access to forest resources for daily consumption has become easier for the local user members. Local community members elaborated that they wanted to protect the forest to have accessibility to forest resources and to protect their soil from erosion and degradation.

In Lamatar, societal changes and proximity to the capital and decreasing forest dependency have contributed to the regeneration and conservation of the forests. The former chairman of Patle CFUG explained that access to alternate fuel source (methane gas stoves) has significantly reduced the pressure on forests, and increasing awareness among the user members has made it easy to protect about environment and the need to protect the forests. Reduced resource dependency has prevented pressure on the forest and circumvented conflicts associated with it. At the same time, it has reduced incentives for better-off households to participate in forest management because they can afford alternative source of fuel.

It is a logical rational assumption that if better off households become disenchanted by the forest, it would create room for the forest dependent marginalized groups to become active participants and play important role in decision-making, however, it was not evident in Lamatar. Although the poor and marginalized groups access and utilize forest resources for their consumption on daily basis, the decision-making roles were dominated by the local elites. Existing social structure that has created dominance of the elites and subservience of the marginalized has prevented the disadvantaged groups from becoming active participants in decision-making processes. Furthermore, decision-making roles require certain socio-political position and skills, which are often lacking among the disadvantaged groups. For example, one of the interviewed members pointed out that his family did not require to access forest for daily consumption and he did not have interest in participating. However, he was requested to join the CFUG board for his accounting and financial skills.

Existing social structures play an important role in determining the inclusiveness in the CFUGs. Both government and non-government agencies have initiated various policies

and programs to empower women and previously disadvantaged groups, but there has not been much success. The national guidelines have mandated equal representation of women in the CFUG board, which has increased participation of women as CFUG board members, but their role in decision-making was observed to be low. The chairman of *Padali* CFUG explained that the positions held by women and other marginalized groups are more like "quotas", where even though they hold positions; their role in decision-making processes is missing. For other marginalized groups, the mandatory laws are not as stringent, resulting in fewer efforts to inclusion.

Although the mandatory quota has not significantly changed the political position of disadvantaged groups, one of the interviewee (who is also a FECOFUN member) argued that such mandatory positions would eventually increase active participation. He explained that such laws and regulations force the previously disadvantaged people to participate and slowly the institution can become more inclusive. He elaborated:

> "Some places there might be some trophy positions, but the thing is in CFs even if the women feel submissive, they have no choice but to be active. They need to participate and if they are in a decision-making position, they will have to make decisions. Initially they might be shy and say they don't know things, but the position forces them to learn and take leadership in community."- FECOFUN member

The social hierarchies institutionalized by past political legacies are persistent; resulting in an order that impedes marginalized groups' ability to partake in leadership roles. Although the non-government agencies have been actively working to empower the previously marginalized population, there has not been much success. "*There is a sense of elitism among the advantaged and sense of inferiority among the disadvantaged groups*", said one of the NGO representatives, working to improve the livelihoods of *Dalit* households in *Patle* CFUG. In fact, the specific projects that target marginalized groups are sometimes met with resistance from the local community.

This was evident in the discourse used to address the marginalized population. For example, one of the interviewed user member said that even though there were efforts to support the disadvantaged groups, they (Dalits) do not make enough effort to improve

their socio-economic condition. *"There have been so many projects and planning to include the Dalits and disadvantaged groups, but they [marginalized groups] are not very responsible,"* she said.

Although the power is concentrated among the elites, according to the interviewed members, this lack of inclusiveness has not affected the redistribution of benefits. The community forests are open to the users (to collect forage and fuelwood), so the forest dependent households can access the resources for their daily consumption. The fact that fewer households are dependent on the forest resources for daily consumption, there is less resource conflict and the poorer (forest dependent) households can access the resources with ease.

Lamatar is situated in the hills, so the forests do not have high quality timber and hence they have very little economic benefit from timber extraction. However, due to its proximity to the capital, the local leaders in Lamatar have been able to attract projects from both government and non-government organizations. Both Patle and Padali CFUGs have received technical and financial support for environmental and social causes. These outside projects are often designed to benefit a certain group (like Dalits, Women, other disadvantaged groups), so due to the specificity of their objectives; there has been no conflict in the redistribution of such benefits.[46]

Political parties and non-government agencies are also equally active stakeholders in community forestry.[47] Due to its biophysical location, Lamatar does not provide incentives for economic players, but the proximity to the centre makes it a focus for

[46] The CEO of COLARP acknowledged that there has been some resistance from other groups. Questions like "why only Dalits, or only women" are often raised in the field. However, such questions would be considered skepticism rather than conflict.

[47] There were 139 registered political parties on 19 November 2013, for CA elections. This number has increased since. Most of these parties have power in their own demographics, but the ruling three parties: Nepali Congress, Communist Party of Nepal (Unified Marxist-Leninist), and Unified Communist Party of Nepal (Maoist) exercise significant amount of power over government bureaucracy, private sector and public sector. Political parties often influence local leadership, where gift giving and loyalty is embedded in the culture. In such case, local leaders can show loyalty for political parties rather than being accountable to the local community.

stakeholders. Some interviewees (representing external agencies like FECOFUN and NGOs) pointed out that due to its proximity to the capital political parties have a strong hold in Lamatar and many local leaders are important (active) members of national political parties. It is difficult to predict whether such influence has negative or positive impact on the institution, but it is evident that CFUGs are providing platform for the local leaders to become strong members in national political parties, thus increasing their political power.

> "In the past, there has been a political vacuum on community level, and community forests are changing that. The local actors are getting some space in politics. There has been a lot of politicizing because of this, which is a negative impact, but it is creating some kind of devolution. In some cases, you will see that CF has managed to influence the politics. Currently, national UML party has a strong presence there, so a lot of active local actors are affiliated to them."— CEO, COLARP

The local leaders in Lamatar have also increased their power using CFUG as the working platform. With the help of Forest Action and Forest Office have established a "Coordination Committee", which works as a networking platform for all the 11 CFUGs in Lamatar. This coordination committee works in partnership with the government and non-government agencies, giving the local CFUGs the power and platform to negotiate with larger forces.[48]

Lamatar shows evidence that community forestry has devolved political power, but the local institution within itself has not shown inclusiveness as the theory of collective action predicts. This is mainly because the theory focuses on the interdependence of the users and the resources, but neglects the interdependence and power relationship amongst the local actors. Similarly, the power relationship between the government and local CFUGs is skewed, where the government officers continue to control the management procedures and resource extraction.

[48] FECOFUN is the federation of CFUGs all over Nepal and works as an umbrella organization. In Lamatar, however, the coordination committee has been able to establish itself as the negotiating platform and umbrella organization for 11 CFUGs. FECOFUN does not have any presence in Lamatar, instead the coordination committee is active and works in partnership with government and non-government organizations. It indicates the ability of local platforms to compete with larger forces and allows a certain level of political and power devolution.

Initially, the goal of community forestry was to protect and conserve the resources. As the forest resources have improved and increased with time, community development was stated as the second objective. However, lack of proper rights and the "protectionist" approach by the government has created obstructions for the local communities to extract the forest resources for income generation and community development.

Additionally, stringent government policies (regarding extraction of resources) have created a sense of disenchantment among the local community members. Many community leaders who were interviewed expressed disappointment regarding government rules. *"We did all the work, we protected these forests, and now when it is time to extract benefits, the government imposes different regulations"* was a common phrase. Even though community forestry user groups are recognized as autonomous bodies, the government controls the local management of the resources. Due to this control, the knowledge and information about forest management is technocratic, restricting resource (timber) extraction and utilization of the forest for income generation projects.

In summary, it is evident that CFUGs in Lamatar have shown that devolution (even when the larger political forces have a lot of influence) and conservation has been possible when local communities have been given the rights to mobilize their resources. However, the goal to establish inclusiveness is deeply influenced by past policies and existing social construction.

Literature suggests that due to the biophysical properties of the hills and lack of high quality timber, has prevented the influence of larger economic and political forces on local resources (Iversen et. al., 2006). Further, literature also indicates that the existing traditional institutions associated with forest management in the hills have been important factor for the success of community forestry (Chakraborty, 2001). The community users in Lamatar have been able to protect and manage their forests, but the interviews and

field observation suggested that power relations in the local institution are skewed and local elites continue to dominate the decision-making process.

Due to its proximity to the capital, CFUGs in Lalitpur show characteristics that are not necessarily present in other hill CFUGs. For example, the local CFUG leaders of Lamatar are able to establish and build relationship with government officers, invite donors to implement projects, and are politically powerful enough to challenge some the larger political influences. Access to education and awareness among the locals and less-dependency on the local forests make Lamatar's case different from other CFUGs that do not have similar attributes.

Depending on their community attributes, access and availability of resources, and forest dependency, different hill CFUGs can have varying institutional structures. To contrast and compare with the researched CFUGs in Lamatar, two CFUGs from Narayan Municipality were selected. The local communities of both CFUGs had some access to road infrastructure and were in a close proximity to the district forest office and other government and non-government agencies.

4.2 DAILEKH CASES:

Dailekh lies in the midhills of the mid-western region of Nepal. The district of Dailekh by itself is remote, with low infrastructure and low HDI score.[49] However, for this research, the CFUGs were selected based on their proximity to the district capital. This allows a more comparative comparison between the CFUG cases in Dailekh and Lalitpur. The research assumes that CFUGs that are situated in the district capital will have access to available resources and infrastructure. Additionally, proximity to various government and non-government organizations will be advantageous for information flow and establishing networks.

[49] To provide a perspective, it takes 6-7 hours by bus to get from Dailekh Bazaar to Surkhet (regional capital of Mid-western region, and the closest urban town). There is a once-a-week flight from Kathmandu to Surkhet.

Although the district of Dailekh is remote and has much lower HDI than the district of Lalitpur, the communities situated in the district headquarters are assumed to be better-off and the available resources and infrastructure makes them comparable with the CFUGs in Lamatar.

According to the 2012 report provided by Everest Club Bahusahakari, there are 41 CFUGs in Narayan Municipality (Dailekh district headquarters), out of which 34 are active. They all fall under the jurisdiction of Narayan Rangepost. For this research, Deutisthan CFUG and Sungurkhal (previously known as Tamakhani) CFUG were selected and various stakeholders associated with the CFUG were interviewed to explore the institutional arrangement.

Table 4.2: Researched CFUGs in Dailekh

CF Name	Address	Date of transfer	Area (Ha)	HH
Deutisthan CFUG	Narayan Municipality, Ward No- 2	2054/10/13 B.S (January, 1998)	34.69	122[50]
Sungurkhal CFUG	Narayan Municipality, Ward No- 3	2051/3/12 B.S. (June, 1994)	59.94	99

Source: Integrated Development Society- Nepal, Dailekh Office (2015)

Similar to the case of Lamatar, the local community members claimed that forest conditions have significantly improved after the transfer of management. Locals claimed that the hills were barren and the local members had to spend a day to collect firewood and forage from distant forests. After the transfer of management, the local communities felt a sense of ownership towards their forests and with the help of district forest office started to protect their forests by restricting open grazing and indiscriminate resource exploitation.

Contrary to the idea presented in Eckholm's "*Losing Ground*", the interviewed Asst. explained that development plans coupled with lack of local rights were the main reasons behind forest degradation. He explained that forest nationalization created disincentive

[50] According to the Chairman of Deutisthan CFUG, during the interview, the number of households has increased to 132.

for the local communities to participate in forest conservation and increased incentives for timber smugglers to over-extract the available resources. He elaborated:

> "If you look at the historical background, there was a sense of protecting the forests. Around 2018-2025 B.S., locals would collect money to employ forest guards to protect the forest.[51] The Mukhiya of the forest would really care about the forest and manage the resources…. When people realized that the forests were government's property and they had to pay taxes/royalty to the government, indiscriminate felling began. There was a lot of development going on. Roads and government building were being constructed- where would they get the timber? So, to meet the needs of this place, of course they would use the forests here nearby. Contractors and other people would come to the forest office, get permits for a certain amount, and would extract more timber than the permit allowed. That ultimately degraded the forests."- Asst. DFO, Dailekh

Except for few households in the researched communities, all member households heavily depend on the forest for their fuelwood and forage. The regeneration of the forest resources after the transfer of management has positive effect on the local communities. The CFUGs have established local rules-in-use for resource access, which allow locals to collect fuelwood and forage on the designated days. Both CFUGs have restricted open grazing, and do not sell the extracted timber outside of the community.

The local household members actively work in protecting the forests, however, there is a lack of awareness about the rights and responsibilities, especially for the women members. Most of the interviewed women members did not know which income category they fell in. This was affirmed by the interviewed social mobilizer (employed by local non-government agency), who claimed that from all the CFUGs within the municipality, only 50% of the women members were aware of their rights or the household category they belonged to. He further added that social hierarchy has prevented marginalized groups (Dalits and women) from becoming active participants in forest management.

The government and non-government organizations are active stakeholders in CFUG, where the government focuses on providing plants, technical information and trainings, while the non-government agencies are focused on creating awareness and supporting the

[51] 2018 B.S. is 1961 A.D.

poorest households with income generation schemes. The interviewee affiliated with the NGO explained that lack of awareness about rights and responsibilities prevent the sustainability of local institution. Their organization, funded and directed by donor agency, focuses on filling in the information gap that the government has not been able to do due to lack of resources.

Although the interviewed member claimed that they have been focusing on helping the marginalized Dalit groups, the local CFUGs did not necessarily target the *Dalit* group in their income generation schemes. The community as whole is poor, so the categorization is based on income only, not socio-political position. When asked why they did not specifically target the *Dalit* groups for income generation, one of the CFUG board member said that there was enough support for *Dalit* groups from other organizations and they did not have to pool their resources for a specific group. Similarly, interviewed board member of another CFUG claimed that *Dalits* are not interested in helping themselves, which is the main reason behind their continued marginalization.

The national guideline mandates 50% or more women participants in the CFUG board. However, due to existing gender relations the researched CFUGs did not meet the requirement. The interviewed board members admitted that women did not come forward for power positions, and when they were given a position in the board, often times their husbands would participate in the meetings in their place. For example, the chairman of Deutisthan CFUG said that he often gets phone calls from the husbands of CFUG board members asking if they could come to the board meetings instead of their wives.

One of the board members of Sungurkhal CFUG also expressed similar concern. He argued that the national guideline mandates women hold positions in the board, but the women do not actively seek leadership positions. Often times, even when the women are in a position, their husbands do most of the work and involve in decision-making roles. Existing gendered roles significantly impact the involvement of women in CFUG, and household duties affect their ability to attend meetings. The women board members have

to prioritize their household duties, and sometimes CFUG board meetings clashes with their time at home.

This is an interesting point- so if it is mandatory that 50% or more women have to be board members, shouldn't they be the ones to determine and schedule meeting times? It was clear that women are and can be active participants. For example, women attend the mother's group meetings regularly and actively participate. If their household duties do not affect their meeting schedules for mother's group meetings, it means that women can and do make time for community work. This shows that local rules in use, meeting schedules are determined for the convenience of the men, often affecting (and interfering with) women's schedules. This conflict is sometimes interpreted as lack of active participation from women's side. For example, of the CFUG board member, who is also a woman, argued that women need to put in more effort to become active.

> "Before there did not use to be any women in the board but after they made it mandatory, women membership in the board has increased. But women don't come to the board meetings. If they are in the position, they should be there for meetings.
> [interruption from someone else]: But women have to work at home, and they can't manage their time.
> "They should manage their time. They need to do that, otherwise, how will they become empowered? I think this is flaw from women's part. I don't think men have forced women to not participate."
>
> - Board member, Deutisthan CFUG

Similar to the cases in Lamatar, existing social hierarchy plays an important role in determining the inclusiveness in the researched CFUGs in Dailekh. Lack of awareness among the users, especially the underprivileged has impacted the ability of the local institution to become inclusive. Although there is no resource conflict in regards to forest utilization, disadvantaged groups are still struggling to gain some power. "*There has been a lot of struggle, but of course, the disadvantaged groups are free to support whoever is supportive of their demands and needs*", said the chairman of Deutisthan CFUG.

Although the social construction has led to concentration of power among the elites, it does not affect the redistribution of benefits on a day-to-day fuel and forage consumption.

However, the applied rules in use does benefit the well-off households more than the poorer households. For example, the cost of timber for CFUG members is 20 times less than the market price, which means that households that require larger quantity of timber (usually the richer households) disproportionately benefit from the CFUG rules-in-use.[52] The cost of protection is borne equally by all households, and sometimes more by underprivileged groups due to their proximity to the resources.[53]

Like the case of Lamatar, the timber quality of the forests is not high, which reduces the incentive for larger economic forces to exploit the local resources. The Asst. DFO explained that resource exploitation is visible in places where CFUG have contracted their timber sale to out-of-community agents. Resource exploitation in the hand of timber contractors was even higher in the forests that were in close proximity to roads.

Most of the interviewed members said that there was no political interference in the local CFUG. Although most of the board members had aligned their ideologies with certain political parties, their affiliations did not interfere with forest management. However, the interviewed board member of Sungurkhal CFUG pointed out that political interference existed in all realms of Nepali society, and was the cause of inefficiency and corruption in the system. Although not explicitly, one of the interviewed social mobilizer said that political leaders often swayed the development projects in local communities, sometimes appropriating the resources (from local CFUGs) for their political advancement rather than pro-poor projects.

Comparing Lalitpur and Dailekh CFUGs:

The researched Community Forests in Lalitpur and Dailekh have shown positive results since the transfer of management. The local community members have been heavily

[52] This number is based on the information given by the interviewee (official reports were not available).
[53] This argument is based on the idea that property costs are higher closer to the road infrastructure. Also, the cost of degradation is higher for the marginalized population that depends on the forest resources, creating higher incentives for them to involve in protection.

involved in forest protection, and with the support of government and non-government agencies, established institutional arrangements for resource management.

The historical background provided shows that development projects and the untethered larger economic forces that came with it were the drivers of degradation. The locals however have shared the burden, especially due to the rhetoric that population boom and overexploitation by the locals was the main reason behind degradation. Lack of proper monitoring by the government could have dis-incentivized the locals from taking measures to protect the resource. As many interviewees elaborated how they planted saplings, protecting the forests from timber smugglers, forest fire and contributed in thinning and pruning.

This is the reverse of devolution at its best. The local communities have been able to regenerate and protect their forests after extensive resource degradation due to inappropriate policies. The concerns raised in CFUGs of Lamatar show that there is an immense potential in the local communities, and the government has been impeding its ability to maximize benefits.

However, CFUGs are becoming platforms for local leadership, which to a certain extent devolves politics. For example, the leadership in Lamatar has become a strong force that has been able to compete with FECOFUN as a coordinating body. This could be because of the proximity to the capital, and the associate advantage to build strong networks with government and non-government bodies. This devolution was observed in Dailekh as well. The interviewed board members said that their social positions are stronger in the community after their involvement in the local CFUG.

Since there is no economic incentive to exploit the local resources, larger economic forces have not interfered in the communities. Due to its proximity to the capital, local leaders in Lamatar have been able to access technical and financial resources from both government and non-government organizations. The leaders in Narayan municipality have also sought for financial and technical support, but due its remoteness in a

centralized governance system, local leaders in Dailekh do not have the same level of access and availability of resources.

Political devolution is evident, but that does not necessarily create inclusiveness in the local institution. Social hierarchy and existing norms allow socio-politically advantaged actors to become local leaders, while the marginalized population continues to struggle for their socio-political positions and power. However, the leaders in researched communities were accountable to the local community members. Such accountability to the community is mostly based on local leadership, and the sustainability of the institution relies on the goodwill and work of the local leaders.

Research has shown that the success of community forestry in the hills has not shown similar results in the Terai (Pravat and Humphreys, 2013; Pokharel, 2012). Scholars argue that a highly stratified and complex social system living close to biologically rich resources, coupled with uneven forest resource distribution and use have resulted in complexities in forest management. The historical politics and policies that encouraged resource extraction by the state, and continued upper hand of the State in forest politics have affected resource management (Adhikari and Dhungana, 2009). The existence of an attractive timber market across the border (India), and the widespread organized illegal timber extraction add to the issue (Pravat, 2006).

Keeping this in mind, this research will examine four community forests from Terai, two from Nawalparasi district, and two from Kanchanpur district.

4.3 NAWALPARASI CASES

Nawalparasi lies in the southern part of Western development region, and is also the middle point for the east-west highway. According to MSFP (2011), there are 299 CFUGs in Nawalparasi, comprising a total area of 15,881.98 Ha. For the research, Sundari Community Forest and Amar Community Forest were selected; both of them fall under the jurisdiction of District Forest Office, Nawalparasi.

Table 4.3: Researched CFUGs in Nawalparasi

CFUG Name	Address	Date of transfer	Area (Ha)	HH involved
Sundari CFUG	Amarapuri VDC	1998	384.75	1032[54]
Amar CFUG	Divyapuri VDC[55]	2000	384.00	1300

Source: Acharya and Gentle (2006)

4.3 a. Sundari CFUG

According to the constitution of Sundari CFUG, in April 1996, the community collectively created a community forest user group, and subsequently, the first constitution was approved by the District Forest Office on 2059/7/6 B.S. (2002/10/23 A.D). The local leaders with the support of the Village Development Committee developed a plan to protect and manage the forest. The constitution categorizes different households in four groups (rich, medium, poor and poorest/marginalized), providing them with different opportunities and benefits for resource redistribution. According to the constitution, 40% of the benefits from forest resources are allocated for Forest Management, 10% on Human Resource Development, 20% on Institutional Development, 15% on Community Development and the rest 15% for Support to Marginalized Groups.

With an annual income averaging approximately 65,000 USD, Sundari CFUG has become an important institution and development platform for the local community.

The forest condition of in the community has significantly improved since the transfer of management. As locals were given the rights and responsibilities to protect the forests, the users have been actively involved in protecting the forest by allowing regeneration and planting new trees. Unlike the rhetoric that local community members overexploited the resources, historical accounts show that timber traders with the support (and protection) from the political parties and government were the key to over exploitation.

[54] The interviewed board members said that the number of households is currently 2200.
[55] The Sushil Koirala Cabinet in 2014 announced Amarapuri VDC as a part of Gaindakot Municipality and Divyapuri VDC as a part of Devchuli Municipality (KathmanduPost, 2014).

One of the interviewed members (who is also a local leader and has been living in the community all his life) explained that in the late 1970s, indiscriminate timber extraction made it dangerous for the local communities to protect the forests. *"We could hear them felling trees all night, but it was dangerous, how would be go and confront them? We were afraid of them"*, he explained. This overexploitation of the resources continued and by the end of 1980s, all forests were barren.

Some interviewed members pointed out that in absence of proper fuel and forage resource, locals would resort to cutting down small plants and saplings (that were regenerating), and in some places burn some forestland for agriculture.

The CFUG also works in close collaboration with the Village Development Committee for its development projects. It is hard to say whether CFUG by itself has changed the level of development, because the community itself is very innovative and motivated. For example, 14 years ago, locals created a user committee, to manage the drinking water supply for the village. The interviewed member of this user committee said that it became a necessity after the government failed to provide proper services. With the help of international donor agencies, CFUG, district drinking water office, VDC and the district development committee, the user committee has built the needed infrastructure and has been able to provide drinking water services to the community.

The CFUG has contributed to community development programs, provided income generation programs for marginalized groups and built homes for 18 poorest (and marginalized) households. These projects have been developed to provide some financial and technical resources for the marginalized population, but they have not been as successful in empowering the disadvantaged groups. *"We have conducted many projects to help the poor and needy, but we haven't got any satisfactory results,"* said the FECOFUN member, expressing his concern about the projects ability to improve the socio-economic status of the disadvantaged groups.

When asked about if the establishment of CFUG has affected the social status of the marginalized population, one of the interviewed members said that people from disadvantaged groups with the help of external agencies have been able to form groups, thus giving them a platform to discuss their needs. *"Earlier when there was no group, people were shy and hesitant to speak. Now that there are groups so people who couldn't even stand up and say their names now have been able to do so. That is the only improvement I see,"* she said.

Contrary to the theoretical assumption, most of the interviewed members claimed that CFUG has not contributed to improving the socio-political position of the disadvantaged groups. *"Well, personally I don't see any kind of such benefit because of the community forest here. This VDC is a completely literate VDC,"* said one of the interviewed members, pointing out that the community was already better off, aware and educated.

Although the CFUG has allocated some resources to support the marginalized households, one of the interviewee (from the marginalized group) argued that the richer households are disproportionately benefiting from the CFUG. The main reason behind that is that the cost of timber is considerably less than the market price. Better-off households require more timber for construction than poorer households, and have to pay significantly less than they would at the market price. The cost of protection, however, if borne equally by both.

The existing social norms and structure has impeded inclusiveness in the local institution. The constitution of Sundari CFUG has mandated positions (2 for women, one for ethnic group, and one from Dalit) to create inclusiveness, but elite men dominated most of the decision-making roles. *"Women and marginalized groups actively participate in management, but when it comes to leadership roles, there are only few. What can we do if only a few come forward?"* said one of the interviewed members.

The time commitment required could also be another reason that adds costs for participating. *"As you see one has to spend so much time in management, and there is no*

compensation. Unless you are financially well off, it is hard to work in the board and give so much time", said one of the board members.

The networks and relationships between different local institutions (like school, VDC, CFUG) have provided stability and promoted development in the local community. The CFUG also works in collaboration with various non-government agencies in conservation and development. The interviewed board member said that there have been more than 50 NGOs that have worked (or are working) in the local community using Sundari CFUG as a development and networking platform.

Sundari CFUG has established itself as an important platform for networking and development, but that does not mean it is devoid of political influence. Local leaders are active members of various political parties and have been able to use their power relations to secure positions in decision-making roles.

Most of the interviewed stakeholders claimed that there has been no negative political influence. One of the board members elaborated that although political parties were active stakeholders in community forestry, they have been able to curb the negative effects by including all the political actors in their decision-making process.

> "We include all the political parties in our advisory list and include all political parties while planning and project implementation. There is politics everywhere and we think that if we can include them all then they will help and support us. I don't think politics have done any disadvantage to us. All political parties have contributed, and they all feel it theirs."[56]

Other interviewed members affirmed this. Locals explained that although politics and political parties influence the local institution, there have been no negative impacts. Members from all political parties were included in the management processes and decisions, thus preventing a single political dominance or capture.

[56] The interviewee household member admitted that there has been a lot of political influence in the CFUG. Her answer was cut short by the board member, who elaborated that although the political parties are invested in CFUG, they have not negatively impacted the institution.

Although the political parties are active stakeholders, and make themselves significant stakeholders in community forestry, it is important to note that they are not disjoint from the local community. The local leaders are often associated with certain political parties and are loyal to the party objectives, and in return they gain more power and access in the politics. The CFUG leadership is comprised of these local leaders, who are already associated with political parties (and politics). The parties play an important role in nominating and supporting the local leaders (who are the part of CFUG board). For example, one of the board member explained that when her party gave her support, she was able to run for the elections and win. *"The party people told me that I should be in the board, and they supported me. I ran for the elections and won. I became a board member",* she said.

The political influence on the institution might not have negative impacts, but it takes a large share of the income. Political parties rely on agencies for their party funds, and local CFUGs have a consistent source of income, making them a place to collect "donations". One of the interviewee, also a local leader, expressed his discontent on how the benefits are taken by the political parties that have found sources for their party funds without much effort.

> "There have been a lot of benefits…. But then, the people in the central government, those political parties who want votes from us, take that share away. The amount of money that should come to us, they take away a large share and by the time it comes down to us, we get so little. That's how the national system is."—CFUG member (local leader)

The Terai forests have high quality timber, which can provide income to the local communities. However, it also makes it lucrative place for the political parties to get resources for their political agenda (both as funds and votes). It is logical that they would support the local community members that are associated with their own political party, so that the local leadership will in return work for the interests of the political party they are affiliated with.

It is hard to claim it as political devolution. The larger political and economic forces remain strong and continue to influence the politics and decision-making in the local

institution. Along similar lines, the interviewed District Forest Officer of Nawalparasi explained that local leaders are incentivized by the political power (within the ranks of the political parties) and social power (the recognition and change in their social status within their community), so there is an automatic selection regarding the local leadership.

In summary, Sundari CFUG has shown positive results in regards to forest protection and management. The local institution has been able to manage the resources and obtain economic benefits, which are re-invested in the community for local development and poverty alleviation programs. The CFUG also acts as a local platform, allowing different non-government organizations to implement community level projects for environment protection and community development.

Amarapuri VDC is a completely literate VDC and the local population is economically better off than average Nepali community. This could be the reason that after the transfer, local community members were able to circumvent conflicts surrounding the resource use and management. Although larger politics continues to influence the local leadership (and thus the local institution), robust relationship among various local institutions and community members has helped establish stability in the institution. However, existing social hierarchies and historical institutions persist, preventing inclusion of the marginalized groups in decision-making processes.

4. 3 b. Amar CFUG

The forest condition has improved since the transfer of management, and the locals have been able to prevent further degradation by controlling illegal timber extraction and smuggling. Locals can now access the forest resources conveniently and obtain timber at a lower cost.

Many interviewees recalled the history of the forest before the transfer of management, and the causes of degradation were illegal timber extraction by smugglers. The in-migration in 2022 B.S. (1965 A.D) also increased the demand for forest resources, adding to the exploitation. After the transfer of management, local communities started

protecting the forests from forest fire and timber smugglers, turning the barren hills into green forests.

Although the government initiated community forestry to conserve and protect the forests, many interviewees said that they were involved in to for their own community's wellbeing rather than the forest conservation. Since the transfer of management, the community users and local leaders along with the VDC have been actively involved in protecting their forests while utilizing the resources for the consumption and welfare of the locals.

The locals initially believed that the forests were theirs to be utilized, but as government rules have become stricter in regards to resource extraction and utilization, it has created a sense of disenchantment among the some of the locals. One of the user member, who is also a tole representative said:

> "There is too much demand and less supply. Government has made stricter guidelines, so the users are becoming a dissatisfied by the whole system. Initially we thought it would be ours and we can benefit from it, but now it seems like we do the work while government controls it."

Besides the stricter rules, many conflicting policies on national level have created problems for resource extraction and development. For example, the national guideline mandates that any kind of timber processing plant have to be out of 3 km radius from the community forest, which increases the cost to transport the timber to the processing facility. These policies that were geared for environmental protection impede the local CFUG's ability to effectively implement local development.

The stricter government policies in regards to resource extraction and utilization can have negative impact on user's incentives to protect the forests. The interviewed chairman of Amar CFUG argued that community forestry needs to be given more autonomy and the government needs to be more sympathetic to the needs and demands of the local people. *"If we cannot extract the resources to fulfill our own needs, then there is less incentive for locals to protect and work in forest management",* he said.

Although the demand is higher than the supply and not all needs can be met, the interviewed members said that they did not see any discrimination regarding redistribution of benefits. According to the national guidelines the household members are categorized based on their socio-economic status (rich, medium, poor and poorest/marginalized), and resources are allocated accordingly. The better off households pay higher price for the timber than the poorer households.

The CFUG also supports the disadvantaged groups through income generation programs and providing them with free timber in case of emergency (natural disaster). So far, about 50 households have been given free timber, and few poorest households have been given goats to raise for income generation. Besides that, about 50 people from poor households are employed for four months to extract and transport timber from the forests. One of the interviewed user member, who is leads the committee for poverty alleviation said that although the CFUG has allocated resources to support the poorest of households, it is not enough.

The presence of non-government agencies is very low, in fact there are no donor-driven projects in the local community. The available financial resources are not enough for wide scale poverty alleviation programs. The user member, who leads the committee for poverty alleviation said:

> "This is a poor community, there are a lot of ethnic groups and there is no support from outside (support comes only from the CF). People who live closer to the forest are very poor no matter how hard they work. About 300 HH are extremely poor in this community."- CFUG member

When asked about the lack of any non-government agencies in the community, the secretary of Amar CFUG explained that it was an intended by the board and local leaders. He argued that non-government agencies do not commit to the community for long term, thus unable to meet the expectations that create when they begin their projects. He further added that donor-driven projects were often designed without keeping the local context in mind, which often results to failure and increases conflict of interest in the community.

"Also, they take all the credit for any work, even the ones that we do. So we decided that if external agencies want to work here, it should in in our terms, not theirs", he said.

The CFUG board makes decisions regarding redistribution, project implementation and resource allocation. Although most of the interviewees said that the committee includes their suggestions and feedbacks in decision-making process, one of the Dalit household members argued that it was hard to convince the committee about new ideas. Various stakeholders, political leaders, and tole leaders are included in the decision making process. In recent years, there has been increase in women participating in decision-making roles, but it is still significantly low.

Most of the interviewees explained that women and disadvantaged groups actively participated in day-to-day management, however their participation is often limited to resource utilization as per the decisions made by the CFUG board. This participation on day-to-day management is often considered an empowering role, even though the decision-making processes are largely dominated by local elites. The VDC in his interview pointed out that because disadvantaged groups are active in management due to their dependency and proximity to the forests.

> "Women have become more active. Since they are more connected to the forest, they need to be more involved with forest and forest resources. Regarding Dalits, as you have seen, they live the closest to the forest- that forest is theirs- they do all the work like cleaning, cutting wood, transporting it. I think there has been a good increase in participation from various groups that wouldn't actively participate before."- VDC Secretary

This presents a gap between active participation and inclusiveness in decision-making. Does "active participation" mean day-to-day utilization and protection of the forest resources, or ability to participate in decision-making processes? Disadvantaged groups do and can actively participate in forest management, however due to the social norms and hierarchy, their role is limited to day-to-day work rather than exercising power to make or influence decisions.

To increase participation, the CFUG also provides trainings for women and people from marginalized caste groups. One of the interviewed members, who is also in the CFUG board explained that such trainings are available but there has not been enough initiation from the targeted groups. She further elaborated that she was an active member and when she showed interest, and was supported by all four major political parties to be a part of the CFUG board.

Many interviewees agreed that there was a lot of political influence in the community, but it did not cause negative impacts on the local institution. The local leaders are often supported and encouraged by larger political parties to participate and work in the CFUG board, and in return get resources (financial and votes) from the local community. Although this allows local leadership to emerge and provides a platform for local politics, it is hard to refer to this power relationship as purely political devolution. Local leadership created and supported by larger political forces rather than an independent devolution by itself.

It is evident that the local actors play a dual role in regards to their power relations and interactions among each other and with the larger forces. While they hold higher socio-political position and leadership in local communities, the larger political parties largely determine their power and involvement in the CFUG. The political parties use these CFUGs for financial resources and local votes, while the local leaders use the opportunity and network to establish themselves on local level (within the national political parties). The local institution has devolved power to the local leaders (although this power is determined and influenced by the larger politics).

In summary, Amar CFUG has been able to protect the forests after the transfer of management, which has increased the local's ability to access and utilize the forest resources. The high value of timber has also allowed the CFUG to utilize the resources for local development and create poverty alleviation programs. However, larger politics plays an important role in establishing local leadership, rather than devolution of power.

Exiting social institutions persist, creating some support for the marginalized groups, but traditionally elite groups dominate power and decision-making roles.

The local leaders defended their rights to autonomy and criticized the government for controlling their ability to utilize resources, indicating that government (officials) continue to have an upper hand in the power relations. Similarly, national political parties heavily influence the emergence and continuation of the local leadership. On the other hand, the social hierarchy and traditions allow the local leadership to maintain dominance in their power relations with other community members, giving them power to interact with larger forces.

4.3. c Comparing the two CFUG cases

In this research, both Sundari CFUG and Amar CFUG have been successful in forest restoration and protection after the transfer of management. Both communities witnessed significant degradation due to illegal timber theft prior to the transfer, and now not only are the forests restored, the communities have also been able to utilize the resources for local consumption and community development.

The communities, although share similar attributes regarding social hierarchy and structure, are different in regards to their economic position. The economic benefits from forest resources in Sundari CFUG are twice the amount than in Amar CFUG. Additionally, Sundari CFUG receives financial and technical resources from non-government agencies, while the poverty alleviation programs in Amar CFUG rely completely on its income from the forest.

Although the local institution has shown significant positive results in collective action and devolution of power to manage the local resources, larger political forces continue to influence the local leadership. The national political parties help determine the power positions, and the local leadership plays a dual role in its power-relationship within and outside the local community. Both of the CFUGs have been able to establish relationships

with the political parties by including them in their institution (as a part of advisory board), thus preventing negative political capture.

Existing social structures continue to persist, and as a local institution, both CFUGs have failed to provide inclusiveness in decision-making processes. Although there have been many programs targeting the marginalized population, the decision-making power is dominated by local elites. The mandatory national guidelines have been able to increase the role of women in the decision-making positions, but there has not been significant change. Inclusiveness for the marginalized caste groups is missing in both CFUGs. Existing social structure resulting to (and coupled with) psychological subservience of the marginalized has prevented the disadvantaged groups from becoming a part of decision-making.

In summary, both Sundari and Amar CFUGs show that local communities have been able to benefit from the transfer of management. As compared with the nationalized forests, community forestry allows local communities to manage and utilize the resources for their own benefits. Local community members (including the disadvantaged groups) benefit from collective action, and forests are restored and protected from further degradation. The local institution also provides a platform for local leadership to emerge, and to a certain extent is accountable to the local population.

However, social hierarchies and historical institutions persist. The local leadership does not emerge from the local communities themselves (as assumed by theory), rather it is influenced and established by existing larger political forces. The mandatory rules imposed by the national guidelines have an impact on increasing the role of women in decision-making processes, which indicates that transfer of management does not necessarily devolve power and create inclusiveness. To counteract the existing hierarchies and structures, certain rules are necessary to create inclusiveness.

The researched communities in Nawalparasi, on average, are better off than many Terai CFUGs in Nepal. Due to its proximity to the capital and various investments from private

and non-government sectors, these communities have higher HDI than many other Terai communities. The researched communities had higher income, higher literacy rate, and local institutions have stronger networks amongst themselves. To understand how the selected CFUGs of Nawalparasi compare with other Terai CFUGs (with lower HDI and less available resources), CFUGs from Kanchanpur were researched.

4.4 KANCHANPUR CASES

Kanchanpur lies in the southwestern part of the country, and is one of the four districts that comprise "*naya muluk*". When Jung Bahadur Rana supported the Colonial British to quell the first *Indian Sepoy Mutiny* in 1857, the British returned the four bordering districts in western Terai- Kanchanpur, Kailali, Banke and Bardia. During this time the ruling Ranas established The Naya Muluk Bandobast Adda (Office for Administrative and Development Functions) and Naya Muluk Rakam Goshwara (Office for Revenue control) (Shakya, 2013). The main revenue generation in the Naya Muluk was through logging the forests and trading them to Colonial British.

Another big political action that changed the socio-economic and cultural dynamics of Kanchanpur was after the Rana Regime ended in 1951. In the 1950s, people started migrating from the hills to the plains due to re-settlement policies adopted by the government. Terai was agriculturally productive than the hills, and after the eradication of malaria from the jungles in Terai, it was beneficial to both the government (to increase its agricultural/economic production) and the hill people to migrate to the plains. Large number of forests was cleared during this migration, because people started clear-cutting forests for agriculture and infrastructure. The east-west highway runs through and ends in Kanchanpur in the far west.

Table 4.4: Researched CFUGs in Kanchanpur district

CFUG Name	Address	Date of transfer	Area (Ha)	HH involved
Baitada CFUG	Daiji VDC- 4	2054/4/6 (July 1997)	484.6	408
Bacchela CFUG	Daiji VDC- 3	2055/2/3 (May 1998)	308.31	416

Source: District Forest Office, Kanchanpur, Nepal (2014)

Baitada CFUG and Bacchela CFUG were selected from Kanchanpur district. The selected CFUGs fall under the jurisdiction *Betkot Rangepost* and the administration of *Daiji* Village Development Committee (VDC). I will present an overview of the selected community forests and then will compare and analyze them.

4.4 a. Baitada CFUG

According to the report provided by Kanchanpur District Forest Office, Baitada Community Forest User Group was created and the forest management was handed over to the user group in 2054 B.S. (July, 1997). The community forest covers an area of 484.6 Ha, where 408 registered user member households manage and utilize the forest.

Baitada CFUG has been supporting the local Bal Jyoti School since its establishment. The CFUG has also collaborated with two other neighbouring CFUGs to buy an ambulance for *Daiji* Redcross. They have supported three pre-schools in the village and also provided financial support to construct a road connecting the village with the local road.

Most of the users who were interviewed said that access to forest resources have improved after the transfer of management. In fact, before the transfer of management, the locals were restricted from accessing the resources. The CFUG users said that illegal timber smuggling was very common and often times went unpunished, but at the same time the locals had to steal basic forest resources (like firewood) and risk getting penalized. To make it convenient for the users, the Baitada CFUG was created in 1997. As one of the interviewees recalled:

> "Before the transfer of management, people could just go and cut the trees. It was a national forest so some people would be fined for doing so, some had to pay 200,000 NRs as penalty and some even had to go to the jail. Some would just get away with it. Some people would get arrested for collected basic firewood. Earlier if we had to get wood, we had to go there at night, had to steal it. Now we can get wood from the forest and it is easy."

The access to resources has improved for all the users, including the timber smugglers in the community, who use their political power to get away with such activities without getting penalized by the government.

Most of the community users agreed that access to forest resources had improved since the transfer of management, but many argued that the forest conditions have not improved. Increasing demand from the local community, stricter regulatory policies imposed by the government coupled with the CFUG's inability to communicate and explain the situation to the users, has created a sense of resource conflict among the users.

It was evident that the problem was not just the resource conflict because of high demand and stricter policies. The local institution has not been able to prevent the outside political and economic forces from influencing the forest condition and its management. The problem is multifaceted: existing poverty and corruption in the community, financial value of timber, political security for the timber smugglers and corruption in the government, and lack of inclusiveness; all these factors influence the local institution and determine its effectiveness in meeting the objective of Baitada community forest. As one of the users and CFUG board member pointed out, economic (market) and political forces interact with each other and heavily influence the local institution. As an example, the secretary of the CFUG board explained:

> "The problem is that with wood, you can get very rich very quickly. The timber smugglers have good networks and connections with everyone- politicians, timber industry, and government. Why do you think the culprits go unpunished no matter how hard we try and how strict the rules are? You know in Nepal everyone is associated with some party or the other so they use their political influence. In our CF, we have been trying to stay neutral. The reason why we don't want too much involvement of the political party is the amount of donations we have to give to them.[57] If we could put these donations on paper and show it as expenses, it would have been fine, but we are not allowed to do that. We have to hide it and somehow cover it up."

[57] Though these donations are considered voluntary, often they are coerced; either based on social pressure, personal and professional favours, or implied threat.

In one hand, the larger political and economic forces are creating pressure on the local institution, and on the other hand, the same forces are allowing corruption and timber theft. In cases where local users have caught timber smugglers in action and reported them to higher authorities, these crimes have gone unpunished because of the insulation provided by the larger political forces. When asked a government employee (forest police) about such issues, he explained:

> "When we arrest them and bring them here, we get a phone call from someone high up and we are supposed to release them without any investigation. There are so many files, right here, so many cases reported, but we cannot do anything. I'm not saying that the government officials are not corrupt, but we have to do whatever the high political party leaders tell us to do."

One of the theoretical predictions by collective action is that the local institution can act as a filter against larger economic and political forces. In the case of Baitada CFUG, the local institution has failed to protect the local resources from external political and economic forces. According to the IAD framework, the local rules-in-use are regulatory measures to protect the natural resources from external (and internal) forces, and in case of Baitada CF, the local institution has failed to prevent the exploitation. Local rules in use also determine the level of inclusiveness in decision-making, and policies for re-distribution of benefits. Baitada CFUG is not inclusiveness, and the redistribution of benefits is not geared to helping the poor.

Two distinct facets emerged that the interviewees presented as the cause behind lack of inclusiveness in decision-making processes: 1) discrimination based on caste and gender, and 2) Social discourse.

The tradition of gender and caste discrimination has prevented women from actively participating in the forest management. Although there has been some improvement in regards to gender inclusion, the traditional norms impede women's ability to actively participate in decision-making roles.

While the cultural and traditional norms have prevented women and marginalized groups in becoming a part of decision-making processes, the lack of inclusion shown by the local institution has created bigger hindrances. Most of the interviewees said that they attend general meetings called by the CFUG board, but they complained that their voices were not heard and their suggestions were not taken in account. This issue was more common among the women and men of marginalized groups. The interviewees argued that going to a meeting did not make any difference because their demands were not heard or taken in consideration:

> "They will tell you that they invite us and yes that is true. We get invited. But the thing is, if they don't do anything to help us or don't take our feedbacks and suggestions, what is the point in inviting us and asking us to participate?"- CFUG Member, *Dalit*

There was a distinction while addressing people in power, and the inability of the marginalized to become a part of decision-making. *"Of course we go and talk. But why would those big people listen to us?"* said one of the interviewed *Dalit* woman.
Social discourse is another aspect that prevents local users from voicing their demands and suggestions, which impacts the non-marginalized users as well. One interviewee (not from marginalized groups) said that they were not capable of "speaking like leaders" and that is why their voices were not heard.[58]

Lack of inclusiveness in decision-making process has also severely impacted the redistribution of benefits. Marginalized groups felt discriminated by the CFUG board and the argued that the distribution of forest resources is targeted for the powerful elites and the marginalized groups did not benefit. One of the interviewees said that the forest guards specifically discriminate against the *Dalits* and poor people, and this has affected their ability to access basic resources from the forest.

Another interviewee from the *Dalit* groups had similar story, where she argued that marginalized groups were targeted by the forest. She said, *"There is a lot of caste*

[58] This does not mean that there is a certain way of speaking, or a formal language barrier, rather a social construct that to be heard, one has to know how to speak like a "leader" (educated, higher-caste, probably man).

discrimination and it definitely affects and shows. They have taken away our collected firewood so many times. It is all because we come from Dalit group. They don't do this to people from higher caste."

When asked about the ability of *Dalits* to participate in forest management and voice their demands, another interviewee argued that the situation has improved and *Dalits* have opportunity and platform to have them heard. However, he also argued that their voices were not taken in account, as they should be. *"Right now Dalits are very socially conscious, I think they raise their voice more than other groups. It is a good positive change in democracy, but the problem is—if everyone just talks, who will listen? The main institution needs to listen to them."*

This indicates an interesting aspect of the society: on a community level, people admit that *Dalits* voices should be heard and they need to be given equal opportunity in the management process. However, the ability of *Dalits* to speak up is considered a positive change, but the local institution continues to ignore their needs and excludes them from decision-making. There is also an interesting aspect that "speaking up" is considered empowerment, while the needs of marginalized groups are ignored by the local institution.

The lack of inclusiveness and CF board's inability to communicate with the marginalized population has also impacted some of their projects in a negative way. As a part of poverty alleviation, the Baitada CFUG provided the poorest households with some pigs as an income generation scheme. The interviewee, who is also one of the *tole* coordinators, said that this project was a failure because most of the households either sold the pigs prematurely or killed them for easy money. As a *tole* coordinator, he was given 20 thousand NRs to help alleviate the poorest households in that locality. The idea was to raise pigs as a part of income generation and continue animal husbandry, and for that 20 poorest households were selected as the beneficiaries. When asked if the households were given any skill trainings to raise pigs and keep accounts, the interviewee said that there were no trainings given.

The CFUG also provides financial assistance to the poorer households to build *Gobar-Gas* (bio-gas) and construction of toilets.[59] The financial assistance, however, is low, and cost of construction is estimated to be about 10 times the support. The poorest of the households are expected to be able to cover the rest of the expenses by themselves. When asked about the feasibility of the program with such small financial assistance, the interviewee responded that it was all that the CFUG could afford to give. As a *tole* coordinator, he did not know the number of households that had *Gobar-Gas*.[60] There was also a lack of information about the poverty alleviation program and distribution of financial assistance.

> "The CF actually gives money to the poor households (up to 15 thousand NRs) to install toilet and Gobar-Gas, but there hasn't been much change.[61] About 15% of the HH in the community have toilets, the rest don't. The CF is trying to help, but no positive result."- CFUG board member

There is also misinformation (and opinions) about how the CF is helping the marginalized population. One of the interviewees claimed that the *Dalits* and marginalized people were benefiting the most from the CF, arguing that they can now access the forest resources for their livelihood. When asked how this access (which is for everyone) benefited the marginalized population the most, the interviewee said, *"Because they depend on it the most".*[62] This was a common perception by many non-marginalized users: benefits were correlated with level of dependency. It was assumed that the people who were most dependent on the forest resources were benefiting the most due to easy access to forage and firewood after the transfer of management.

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[59] Biogas is also an alternative fuel that can significantly reduce the dependence of forest for firewood. The poorest HHs were given NRs 5000 to construct Gobar-Gas and toilet, and 3000 to construct only Gobar-Gas. It costs about 25-30 thousand NRs to construct bio-gas infrastructure.

[60] This was an interesting aspect: if the CFUG has a limited budget for poverty alleviation program, the information about the number of households or targeted population was largely missing. Without prior information about needs and the target population, the CFUG decided on a certain assistance amount. Ironically, this amount covers only 10% of the total cost and the poorest of the households are expected to "alleviate them by the help".

[61] The tole coordinator said that up to 5000 NRs is given to a household to construct toilet and Gobar Gas, but another user from the community said that it was 15000 NRs. When questioned about this difference, he said he did not know and refused to comment any further.

[62] When inquired further about how accessing the forest because of dependency makes the marginalized groups benefit the "most", the interviewee did not respond. This was common among most users from upper caste or relatively better off households.

It was evident that the local rules-in-use were made without including users from disadvantaged groups in the decision-making processes. The poverty alleviation programs are created with minimum finances and targeted without any initial information about needs and feasibility. The targeted population is not consulted before implementing these projects. Local development, especially infrastructure development was given priority over needs of the disadvantaged groups. Since the disadvantaged groups are excluded from decision-making and their needs are ignored, they often become the last priority in redistribution of benefits.

In summary, the transfer of management has helped the local communities in two ways: first, the locals can access forest resources more conveniently than they could prior to the transfer, and second, since the forest officers do not have any jurisdiction, it has prevented locals from getting jailed or high penalty for extracting the resources. Although the forest condition has improved, it has not been able to provide the benefits like the CFUGs in Nawalparasi have been. Furthermore, increase in demand has also created resource conflict among the community members.

Larger political and economic forces play a large role in illegal timber extraction and the local communities have not been able to prevent timber smuggling. The high value of timber, coupled with poverty and unemployment in the community allows incentives for exploitation, while the existing corruption and influence of political parties encourage and shelter the culprits. Existing social structure has prevented women and marginalized groups from becoming a part of the decision-making process and the local institution is unable to meet the dual goals of community forestry.

Despite its weaknesses, Baitada CFUG is not one of the failed examples of community forestry in Kanchanpur. During our first few conversations, the District Forest Officer suggested researching neighbouring Bacchela CFUG, which has failed, and set a perfect example of failure and political capture. According to the data provided, Baitada and

Bacchela CFUGs are comparable in regards to their forest cover, number of households involved and the socio-economic status of their population.

4.4 b. Bacchela CFUG

Bacchela community forest user group is located in Daiji, Ward No 3, and falls under the jurisdiction of Betkot Range Post in Kanchanpur district. According to the Kanchanpur District Forest Office report, Bacchela CFUG was registered on 2055 BS (May 1998), where 416 registered households manage the community forest that covers an area of 308.31 ha.

Bacchela CFUG presents an interesting case of resource capture, where forest regulations have not been effective in controlling degradation. During my field visit in April-May 2014, there was an increasing resource and political conflict among the users and CFUG board. I attended the 17th general assembly, which was also their third attempt at nominating and electing new board. The forest was degraded, and the District Forest Officer, in his speech said, "*Well, I don't see a forest here, it is supposed to be a community forest, but all I see is one or two trees.*" During the research, there was no community organization that was observed in Bacchela CF, there were no *tole* coordinators, and the chairman of Bacchela CFUG was accused of corruption, timber theft and use of nepotism to protect himself.

Similar to Baitada CFUG, the transfer of management from government to Bacchela CFUG has helped protect local community members from larger political forces. Four of the interviewed stakeholders claimed that transfer of management has protected the poor community members from government corruption and exploitation. Before the transfer, government was the regulator and custodian for the forests and in case of small theft or illegal activities; locals were fined exorbitantly and jailed by the forest officers.

This was particularly harsh on poor community members who depended on forest resources to meet their basic needs. One of the interviewees, who is also a local teacher, said:

> "Though the forest is degrading and things are not as we would like them to be, but the people are better off now than before the transfer of management. Now people can access the forest resources in a very convenient way, collect forage and firewood and request for timber, which they get at a better price than the market. The district forest officials don't come and arrest the people anymore. Previously if someone was caught getting timber, the DFO would penalize then 1-2 lakh rupees, but now if someone is caught, the timber is taken back and the penalty is something like 100-200 per cu.ft., and the culprit is released by the community. People don't have to go to jail now."

He elaborated that the transfer of management has increased the convenience and power of the locals, and at the same time it has made easier for timber smugglers to get away from severe punishment. This is an interesting situation: the local institution was able to protect the community users from punitive government forces, but this also increased the incentives for timber smuggling (by decreasing the costs associated with the risk): The benefits from smuggling are much higher than the costs of getting caught. The external forces can utilize rent-seeking behavior from the local leaders to continue exploitation, degrading the local resources.

While the external political and economic forces will continue to pressure local resources, the magic of devolution of power is that it allows local users to create their own rules-in-use. Five of the interviewed community members pointed out that the low penalty has incentivized timber theft, but CFUG board have not taken any steps in changing the rules in use. The local institution is given right to amend their rules-in-use, however, rent-seeking behavior in the local leadership has been benefiting from these rules. During this research, the current board, especially the chairman was accused of smuggling timber and using external political force to maintain power in the community. There is a clear need for change in leadership, the community construction is preventing any change, even though the community desperately wants change in leadership.

Besides the social taboo associated with resource capture, the poverty and lack of opportunity has allowed and encouraged corruption. One of the interviewed local leader pointed out that the unemployment among the youth had significantly increased in the

last few years and the incentives for resource theft has created conducive environment for political corruption to thrive.

> "Well, you know there is a lot of unemployment in this place. There were a lot of migrant workers in the past but a lot of them have come back to the community in the last few years and there is no work. Now, if they can steal the timber and sell it, they can easily earn 4-5 thousand a day, and that is a lot of money. So, it is obvious that they will side with the man who allows such corruption to happen."- CFUG member, local leader

So, theoretically, in cases of weak local institution and non-stringent rules-in-use, external political and market forces will be able to significantly influence and shape the natural resources. Bacchela CF follows this prediction, the cost of timber theft and its associated risks are much lower than the benefits. It is an economically poor community, with a large population of unemployed youth and if the resource is easily exploitable, illegal resource extraction. The local institution is not capable of filtering the pressure, or find more effective ways of management.

Even though Bacchela community forest is an example of resource degradation and failed institutional arrangement, one of the interviewees claimed that transfer of management has to some extent curtailed degradation. He explained that previously local community members not only exploited the forest, they also continued to misuse good timber just because no one had any control or responsibility to protect the resource. At present, people do not degrade the forest to create space for farming, or misuse good wood; but timber theft continues in the community and the local institution has been unable to control illegal activities.

> "You know many years ago, if people put on fire in October, it would go on till April. We did not need matches. What they used to do is put one log on fire, and then another… they would never put out fire. Why? Because if they cleared out these forests, then there will be space for farming. They used to burn really good Sal wood, because in the olden times people wouldn't burn Simal due to the fear of ghosts.[63]

[63] Simal is Bombax ceiba, or commonly known as Red-Silk Cotton (in English), and has different superstitions associated with it. In the local communities of Kanchanpur, it is believed that burning Simal wood would invite ghosts, and so people did not burn Simal. It is also rumoured to be an incarnation of Lord Bishnu. In Nepal, Simal wood has been dominantly used for manufacturing of matches (Forestry Nepal, 2014).

> Before, there were two kinds of destruction: a group who would clear cut small plants and bushes to settle down here, and then the other group who would steal timber and logs from the forest. After it became a community forest, people cannot clear-cut and start farming, so there is definitely an increase in small bushes (trees), but because of our own inability to conserve, timber theft is still continuing. This theft has increased in the last two years."- CFUG member

The local political capture, existing poverty and lack of opportunities, and the historic setup of timber smuggling continues to weaken the institutional capacity to sustainably manage the resources. Besides all these issues, external political forces and their influences in Bacchela community forest has been large. The bigger political forces are the government policies, political parties and their influences, and the decade long insurgency (from 1996-2006).

After the transfer of management, the government also enacted another resettlement policy, and a large population was resettled in the community. The forest resources were already scarce during the transfer of management, and after the resettlements, the resource was so scarce that it the CF is unable to meet the needs of local people. One of the interviewees, who also served in the board of Bacchela CFUG in the past, explained:

> "When the government transferred the management, then they also created a flux of immigrants (the Mukta Kamaiya, flood victims, and people suffering from leprosy) in the same place. This increased the demand for forest resources. So, I don't think the conflict was created from the community at all, I think the related local organizations and the government are responsible for the conflict that goes on in Bacchela CF."

The resettlement policies enacted by the government had two-fold impact on the community and its relationship with the resources. It created a resource conflict in a community, and at the same time these resettled populations are not able to seek their rights or express their needs to the local community (or the government). On a community level, there are various factors that prevent the resettled population from seeking their rights to the resources: the elite capture of the resources, the existing resource conflict, and the interaction between these two factors.

The Bacchela CFUG as a local institution needs to address this issue, but there has been a lack of political will. The interviewed ex-chairman explained how this affects their ability to demand resources, but at the same time did not elaborate on why he never took any steps to amend this situation during his tenure. He also claimed that a lot of external political influence, especially during the insurgency, has affected the local community.

> "What has happened is that a lot of people who immigrated there could not become CFUG members, while the 416 households that were initially there remained the only users, in the constitution. Now 2/3rd of the users are illegal users (they have an ID, but are not included in the constitution so the 2/3rd have no say. Besides that, a lot of committee members to save their position, sought out for new users too.[64] Also, during the insurgency, that community's space was used to protect the political interests of the political parties."[65]

This larger political force and its influence in the resettlement policies was seconded by Ghasi Ram Rana (one of the *Mukta Kamaiya* leaders). The high demand for forest resource and the existing corruption had led to political capture, and it was the main reason behind degradation. He explained:

> "Everyone who comes in this CF tends to be corrupt. I have been in this community since 2059, and during my time here, everyone I know that has been involved with the CF, is corrupt. It has always been like this- if only the CF committee was responsible and working towards making it better it would have been good by now. The government handed over this forest to the community, but there has always been conflicts and power play here, that is the reason why we got to get settled in this community. It is clear that our settlement program was influenced by power politics. There is a lot of plantation work every now and then, but the thing is that there are way too many users and all of us need wood."
> - CFUG member (not enlisted in the CFUG constitution)

While there is a lack of political will to include the resettled groups (especially the *Mukta Kamaiya*), there is also a lack of community support for the resettled population. I would argue that the reason behind such exclusion and discrimination against another group is the perceived attitude towards the *Mukta Kamaiyas* by local community, and their lack of political power on national (or local) level. Due to their exclusion from becoming

[64] To increase the number of voters for oneself.
[65] The political parties used the community's resources to organize events, recruit supporters and workers.

constitutional members of the CFUG, the local leaders have an incentive and opportunity to seek rent from the marginalized groups. Since the marginalized groups realize that their needs are not included and they are vulnerable to exploitation, they further exploit the forest to compensate for their costs. This increased resource exploitation, as resources run scarce has created a resource conflict among groups.

> "The chairman is a big problem here, because he is very corrupt. So, let's say if a *Mukta Kamaiya* wants some wood, he will agree and put that on paperwork, but at the same time he will demand atrocious amount of money from them. Let's say if the wood is worth 400 rupees, he will demand about 2000 NRs extra. So, if someone has paid 2400 NRs for the wood, they will try to get worth the amount they have paid- so there is a lot of exploitation." - CFUG Member, Local social worker

The marginalized group of *Mukta Kamaiyas* has been demanding their rights to be a part of decision-making, but their lack of constitutional rights (due to their exclusion from the registered list of users) prevents them from becoming so. Not only has this impacted their ability to access resources or become a part of decision-making, it has also encouraged and fostered corruption.

The social marginalization of the *Mukta Kamaiya* groups was evident during the general assembly and during the interviews. During the General Assembly I attended, the women, men, and women from *Tharu* community (*Mukta Kamaiyas*) were sitting in different groups. While the group of men were angry and disrupting the events, the group of women were telling them to be quiet and listen to the proceedings. The *Tharu* women (*Mukta Kamaiya* group) were sitting behind the platform, did not talk or express anything and after the meeting ended without any conclusions, went to the Chairman to demand their money back. It was evident during the interviews that some of the local community members perceived these marginalized groups as disruptive to social norms and rules, and involved in resource degradation. One of the board members said that the forest guards were corrupt and were allowing the marginalized *Mukta Kamaiyas* to over-exploit the forest resources.[66]

[66] The interviewee claimed that the users who were stacking firewood in their houses were cutting down trees as well. However, she did not elaborate on her sentiments.

Not only the local users, this perception was voiced by one of the government officers. He said that there have been attempts in helping the marginalized communities by providing them enough wood, but they often misuse these resources and fail to follow the rules set by the local institution.

> "Last year the government provided each household with free timber. We gave each HH 35 Cu. Ft. of wood. What they did with that timber? Instead of using it for their consumption and building house, they took that timber and sold it. If they have already misused it now, would we provide them with such benefits again? If they have made a mistake, it's their fault but they blame others for that. That is just unfair. Just look at the amount, 35 cu.ft. of wood costs about 50-60 thousand rupees, so these households have misused and wasted that much of government, which is community's money. Now they complain that they haven't got the wood, they are not helped, but they need to actually make the most of the benefits provided by the government."- Government officer (forest guard)

There is some evidence of lack of assimilation of resettled population, further exacerbated by the lack of political will to include them. Though there are more than 1300 user member households, and only 416 households have constitutional right to participate in the decision-making processes.[67] The local institution has not taken any steps to amend this issue, and it is interesting to observe that though all stakeholders are aware of this discrepancy, they do not pressure the local CFUG to amend it. The marginalized population has been demanding their rights on forest resources, but lack of support from social, political and government level has prevented them from becoming a part of the board, voice their needs, and seek rights as community members.

The marginalized group, on the other hand, has their own difficulties in fulfilling their basic needs and accessing the forest resource. One of the interviewees, who claimed to represent the marginalized groups, expressed his difficulty in being included in the decision-making process.

> "As a representative of Kamaiyas, I can say that our livelihood is very closely connected with the water, forest and land, and we need to do

[67] One of the interviewees claimed that there were approximately 1600 household members, but this number is inconsistent. Some of the interviewees said that there were approximately 1400 HH. Due to inability to fact-check or obtain the right number, this research will assume that there are more than 1300 member HH.

> everything we can to protect it. If we can't access the forest, we cannot cook our meals. So we need to protect this forest for our own lives. I think that people who are closely associated with the forest, who depend on the forest and who love the forest should be included and given the benefits. Right now out of the 4 localities here, we (Mukta Kamaiyas) constitute 3 of those. Even in the forest guidelines it clearly states that tribal groups, ethnic groups and Dalits should be given priority, but right now the same people are being pushed away and local elites are capturing the resource."

The lack of political will has not only prevented the resettled (marginalized) population from decision-making processes, but also has resulted in failed poverty alleviation projects. The targeted poverty alleviation programs that intend to support these marginalized groups were not able to help the communities because of conflict between the objective of the programs and the local rules-in-use. The poverty alleviation programs were designed to support the poor households with animal husbandry, but inability to access forage led to failure, which further increased a resentment towards the marginalized population. Mr Rana, the leader of the *Mukta Kamaiya* group, who has been demanding a right to participate in the decision making explained:

> "The poverty alleviation organization gave us some support- like raising goats and pigs. But then, some people in this CF said that they need to close the forest so a lot of people slaughtered their goats and pigs and ate them. Open grazing is still going on, and the rules for "no-grazing" is for us Kamaiyas. They closed the forest for open grazing for a little while and it has opened again."

However, the interviewed CFUG board member had a different explanation. This inability to implement programs is perceived as a lack of willingness and effort from the resettled population, thus resulting in failure.

> "There is help, but if they are not willing to work hard and try to help themselves, it won't work. They were given goats to raise and earn money in long term. Instead of raising them and making a living from animal husbandry, they either killed and ate them or sold them in the market. Then they complain about not being helped."- CFUG board member

Contrary to this argument, one of the donor agencies, Chure Conservation Network (CCN) Nepal claimed that the resettled communities were contributing more to conservation and sustainable resource use. The interviewee explained that as an agency

associated with the conservation in that region, they have discontinued their projects in Bacchela CF because they were unable to achieve any results. However, working with a *Mukta Kamaiya* community, (out of the limits of the Bacchela community forest), has shown some positive results.[68]

Bacchela Community Forest User Group is an interesting local institution, and except the board members, everyone claimed that it was corrupt, heavily influenced by power politics, and under capture. A few locals also claimed that the forest could not sustain itself, would either be taken by the government or there would be no trees left. The available resource is not enough to meet local needs. Additionally, capture and larger political and economic influences have marginalized certain groups, further degraded the forest, weakening the local institution.

The lack of inclusiveness has further marginalized the disadvantaged groups, preventing them from seeking rights to access the resource, and also creating obstacles in poverty alleviation projects. There is a visible lack of inclusiveness in decision-making processes, where most of the users said that the committee did not listen to their needs or even took their suggestions in consideration. Besides the resettled groups, women and lower-caste user members also said that they were excluded from decision-making processes.

During the General Assembly, a few speakers mentioned the importance of having women as board members, claiming that women would be the effective stewards of the environment and the forest. While the speakers were promoting the need to involve women in the board, a few women members said that it was an attempt to corruption. *"Of course they want us to be on the board so that they can go and steal timber at night, and then blame us for not protecting the forests."* The next day, as I went to interview the women participants and members, they laughed about the previous general assembly, and elaborated:

[68] The interviewed government officer, who is also a forest guard, explained that this particular area was not where the "Mukta Kamaiya" lived; rather it is the "resettled area". Regardless, this community constitutes of resettled Tharu population that were under bonded labor before the emancipation policies were implemented.

> "Remember that man yesterday- He was giving speeches about how women should be given power position because they understand and need the forest the most? Well, he later came to us and told us that he was better for the job. In his speeches he claimed that we should be in decision-making positions, and later he told us that protecting the forest was a hard thing and women would not be able to do so. So, we should support his nomination as the chairman."- CFUG member, Female

While the local women (especially the hill caste) are demanding accountability from the local leaders, the women from *Mukta Kamaiya* groups stayed quiet throughout the meeting. Contrary to local belief that they don't care about the rules, in fact these women came to the meeting before time, stayed within their own group (away from men and women from hill higher castes), and waited patiently till the meeting ended. As soon as the chairman finished his speech, they approached him and some argument ensued. Later, it was found that these women were demanding their money back that they had given to the chairman as a payment for promised timber.

In summary, Bacchela CFUG is an example of a "failed" CFUG that has undergone resource conflict and political capture. The resettlement policies by the government have increased the demand for forest resources, increasing the resource conflict. On one hand, marginalization of the resettled population (both socially and constitutionally) has increased social conflict and increased avenues to corruption and resource degradation. On the other hand, it has also diverted the responsibility of degradation to social conflict rather than the political capture. Additionally, the disadvantaged groups (women, Dalit groups, and resettled population) are not included in the decision-making processes, creating room for elite capture.

Larger political forces have a significant role in resource exploitation in the community. Illegal timber extraction is common, encouraged and supported by the political parties. For example, all the interviewed members knew and pointed out that the chairman was heavily involved in illegal extraction, but no one could do anything about it because a major political party protected him. The interviewed government officials agreed that

corruption was rampant (even in the government), but political intrusion prevented them from taking any action.

4.4 c Comparing the two CFUG cases

It is interesting to note that the rhetorical that "transfers in forest management to protect the environment" did not apply to the researched cases in Kanchanpur. In both case, interviewees said that the transfer in forest management helped to protect the locals from the stringent government bureaucracy. In both cases, local users expressed the level of extortion from the government and the punitive measures used, which led to exploitation of local people. They also argued that government corruption allowed timber theft and government officers protected the timber mafia, while locals were arrested and punished for accessing the forest resources for basic needs. The interviewees did stress the importance of protecting the forests, but the main reason behind establishing community forestry was to protect them from the government's punitive measures that negatively affected them.

After the transfer of management, both communities have benefited the rights to resources while attempting at protection. The larger economic and political forces have significant impact on the local institutions. Even though the local communities have been given autonomy, the community forests face resource exploitation due to timber theft, supported by corrupt government, political parties and incentivized by market pressure.

Cultural factors that are deeply rooted in historical institutions continue to hinder inclusiveness in decision-making. Due to this, resource management has been difficult and poverty alleviation programs have been unsuccessful. Lack of information about forest management policies and inability to actively participate in decision-making processes have prevented marginalized population from addressing their needs, leading to resource conflict.

According to the theory of collective action, local communities need proper knowledge, tools and incentives to successfully manage the resource. It is generally assumed that the

local communities were provided the tools and knowledge when the rights were transferred. However, in the case of Kanchanpur, such tools and expertise was not provided during the transfer of management. As the former president of Bacchela CFUG explained:

> "Community forestry was implemented in different places, but the people were not made aware of the impacts and benefits of conservation. Neither were they given technical knowhow on resource use. So, most of the CF chairmans did what the rangers or forest officers told them to do."

The government has their own limitations in reaching out to the communities. The DFO explained the number of personnel in the forest office were not enough to be able to reach out to the local community forest user groups.

The government is one of the many stakeholders in community forestry. The Federation of Community Forestry Users Nepal (FECOFUN), Chure Conservation Network (CCN), and Terai Arc Landscape (TAL) are important coalitions and project teams. However, these non-government stakeholders have not been able to provide support to the local communities in effective manner. The District Forest explained that the coalitions often acted on the account of donor agencies, as long as financial resources were provided. This has prevented the coalitions and project teams from developing consistent and long-term partnership with local communities. He said:

> "There are quite a few of them in this district. But then all these coordination teams and coalitions become active only when there is money. If we want these coalitions or institutions to work, we need to provide them with small projects and finances to run those projects. It would be small amount; maybe of only 5000Rs, or 4000Rs, we need to feed into the institution to keep it active. If there is a small project, then it obligates the staff, or other workers to connect and work together. So, more people work in collaboration and understand the situation."
>
> - DFO, Kanchanpur

The interviewed non-government stakeholder echoed this situation. Their work depends upon the projects funded by donor agencies and short-term visible outputs. In case where project results were not immediately visible, the resources were invested elsewhere. The partnerships and networks that are built are often weaker, and short-term.

It is expected that multiple stakeholders working in collaboration will allow more transparent and accounted transactions. However, in Bacchela's case, this was not evident. The wrong data (about the member households) was widely known by all stakeholders; locals, government and non-government but there have been no push for transparency.[69] The larger political and economic forces, coupled with weak ties among the coalitions and lack of resources from the government have weakened the local institution.

Though the issues of timber theft, corruption and the pressure of larger political and economic forces have plagued both of these CFUGs, the Bacchela CFUG is additionally plagued by community conflict. Ecologically, both Baitada and Bacchela CFs should be able to protect and utilize their forests and generate economic benefits. Yet, both community forests have not been able to live up to the expectations of CFs in Nepal.

4.5 ANALYSIS

The comparative case studies show that the CFUGs in the hills show different results from the CFUGs in Terai. Although larger political forces influence all the researched communities, their incentives are different, thus resulting in different outcomes. Various interviewees pointed out that available infrastructure to transport timber, or availability of high quality of timber leads to over exploitation. However, contrary to the rhetoric, this exploitation is caused by timber theft (incentivized by economic forces, and supported by political forces) rather than over consumption from the local communities. The ability of the local community (and its leaders) to curb the impacts of such larger forces determines the outcome of community forestry.

Existing dominance of political parties in the communities influenced the creation and establishment of local leaders. Most of the interviewed board members were associated

[69] Even though it was widely known that there were more than 1500 HH user members, the formal number indicated 416 HH.

with the national political parties and their success in holding positions was also largely determined by the support from the political parties. Although the national guidelines imposed inclusion of women and other disadvantaged groups, these positions did not emerge from local support or power. In fact, larger political parties determined who was to be included from these disadvantaged groups (like in the case of CFUGs in Nawalparasi), and in communities where people from disadvantaged groups were included without much influence from the larger political parties, these positions were more of "trophy" positions rather than representation of their respective groups.

It is interesting that different communities had different perceptions about the transfer of management. In Lalitpur and Dailekh, locals claimed that the transfer of management has helped them access forest resources (firewood and forage) easily, and the transfer of management was important to protect their environment (and restore forests). In Terai, however, the reasons for transfer and its subsequent results were different. In Nawalparasi, locals claimed that they needed to protect their forests from illegal timber theft and use the forests for their own wellbeing. In Kanchanpur, the case was different. Locals were able to protect themselves from the punitive measures of the government, for they were being punished for accessing forest resources for daily consumption while the timber smugglers were heavily involved in over extraction.

This perceived benefits from the transfer of management not only impacts how the institution is organized, but also influences the relationship between the locals and the government. For example, the local leaders in the researched CFUGs in Lalitpur and Nawalparasi argued that they felt ownership and protected the forests, and now when they need to utilize the resources for their wellbeing, stringent government policies obstruct their autonomy. In Dailekh, on the other hand, local leaders were happy with the government support and their concerns were more about boundary issues and concerns about certain species that were taking over the forest.[70]

[70] The locals pointed out that ivy was a big problem. Locals said that they needed to find ways to get rid of it because it spread too fast and was affecting small sapling from growing.

The case of Kanchanpur was different. Local leaders and community members argued that rampant corruption in the government, dominance of political parties and existing power of the timber contractors (who extracted timber illegally and were protected by government and political forces) made it difficult to manage and protect the forests. While board members of Baitada were struggling to meet the local needs and protect the forests, larger forces were too strong to fight. In the case of Bacchela, dominance of political parties and the disjoint between the community and the institution allowed political capture. Lack of information among the community members (and the CFUG board) allowed the corruption to foster, weakening the local institution.

While political dominance was evident in all the researched cases, this influence resulted in political capture in Kanchanpur's researched cases than anywhere else. The high quality of timber and availability of infrastructure for transport does allow ease for exploitation, but similar attributes were common in Nawalparasi as well. So, what makes the researched cases in Nawalparasi different from the researched cases in Kanchanpur, although they both have high quality timber and good infrastructure for transport?

From the comparative case studies, it was evident that local communities' ability to negotiate with (or filter) the larger forces largely determines the success or failure of collective action and local institution. I will focus on three aspects of the community attributes that significantly impacts the local communities' ability to filter the larger political and economic forces: 1) Poverty and lack of resources, 2) Information about rights and responsibilities, and 3) Social hierarchy and power distribution.

Poverty and lack of resources: Due to the low value of timber and lack of infrastructure due to the terrain, illegal timber extraction is significantly low in the hills than in the Terai CFUGs. However, in the case of researched Terai, CFUGs in Kanchanpur witnessed illegal timber extraction, while the CFUGs in Nawalparasi were able to curtail this illegal extraction. Many interviewees suggested that the existing poverty and unemployment incentivizes some locals to involve in this illegal extraction. The high

value of timber, existing extractive institutions and market pressure encouraged timber theft.

The communities in Nawalparasi on the other hand were economically better off. Many households had family members working as migrant workers, and private industries nearby provided employment for many locals. Interviewed members in the CFUGs of Nawalparasi said that there were a few cases of timber theft, but those occasional cases could be controlled. In Kanchanpur, wide scale timber theft, protected by the political parties, and corruption made it difficult for the locals to protect their forests.

Information about rights and responsibilities: Local CFUG members in the researched cases of Nawalparasi were aware of their rights and both CFUGs had, to an extent followed the national guidelines. The users were categorized based on their socio-economic position, and the cost of forest resources was determined accordingly. In contrast, the local community members in the researched CFUGs of Kanchanpur were not aware of their rights and responsibilities to forest management. The new board has established categorization of households based on their socio-economic position, but not all members were aware of it. In Bacchela, all the household members paid the same amount regardless of their economic condition.

Members of disadvantaged groups in the CFUGs of Nawalparasi were provided various supports by the CFUG, and many of them were aware about their rights to participation. In Kanchanpur, there was an evident lack of awareness about the mandated inclusiveness imposed by the national guidelines. Similarly, both Baitada and Bacchela CFUGs showed lack of inclusiveness, which significantly impacted their poverty alleviation programs. The board members were not aware about the problems faced by the poor communities, and information about support and needs were either missing or vague.

In the researched communities of Lalitpur and Dailekh, many users (predominantly women and from the disadvantaged groups) were less aware of their rights and responsibilities to forest management. In Lamatar, locals were familiar with the rules and

guidelines, but this was largely missing in the researched communities of Dailekh. The CFUGs in Lamatar were comparatively more inclusive than the CFUGs in Dailekh, which could also be a result of higher literacy rate and HDI in Lamatar cases.

Social hierarchy and structure: The social structure determines how the local institutions are organized and established. Regardless of the biophysical condition of the forests, or socio-economic status, all the researched communities showed lack of inclusiveness. It was evident that the CFUGs that followed national guidelines did have women in the decision-making roles, but often these positions were limited to being "trophy" positions. In many cases, CFUGs selected Dalit women, thus fulfilling the quota for women and representative of marginalized groups.

In more gender unequal societies like Dailekh and Kanchanpur, the CFUG board did not follow the national guidelines, and argued that women were not active and did not come forward to partake in decision-making process. While attending meetings and assemblies, the evidence showed otherwise, women and members of disadvantaged groups attended assemblies and showed interest in forest management. However, men always dominated the conversation.

The case studies show that the disadvantaged groups (women and *Dalits*) face marginalization, powerlessness and cultural imperialism, which hinder their ability to express and participate actively in the local institution.

Paulo Freire (1970) believes that powerlessness is the strongest form of oppression because it allows people to oppress themselves and others. So, even though there are opportunities that are legally available, social constraints, especially the idea of powerlessness continues to oppress the disadvantaged groups. Many interviewees argued that women and other disadvantaged groups did not come forward to participate in the political process, attributing it as a weakness of the disadvantaged group, giving reasons like "lack of time", or "lack of desire to participate". However, the fact that these groups actively attend assemblies and meetings indicates otherwise. Viewing this juxtaposition

as a result of oppression provides new perspectives to the subservience of the disadvantaged groups, and can identify opportunities for change.

Although caste and gender inequality persists in all researched communities (and all over Nepal), discrimination against certain groups is more case specific. For example, communities in Nawalparasi were less discriminatory against the disadvantaged groups than the communities in Kanchanpur. Especially in Bacchela CFUG, the discrimination against the resettled population (*Mukta Kamaiya*) created social conflict and excluded 2/3 of the population from exercising their basic rights to local resources.

Transfer of management does not devolve power and create inclusiveness on a local level, rather the local institutions are embedded in the existing social structure that often stem from historical institutions. Communities are unique in their own way, and a historical analysis provides the context for understanding the social construction. Collective action cannot be understood without the context of social construction, which is heavily dependent on historical institutionalism.

For example, from a rational choice perspective, the case of Bacchela can be understood as a case of social conflict due to resource conflict. The problem is, there is not an avenue to investigate any further, rather blame it on the fact that "demand is higher than the supply". Instead of viewing it as a case of demand and supply, we can also investigate it through the lens of power distribution. Who is the resettled group? What are the factors behind their marginalization? Should we do something about it?

To understand the lack of power among the resettled groups (and their exclusion from decision making processes), I will present the historical marginalization of the *Tharus* using the lens of political economy of Nepal. This can have huge policy implications: to encourage equality and social cohesion, and create policies that can empower the politically discriminated.

A brief historical analysis and marginalization of *Tharus* will help this thesis in two ways: first, it provides an important case to prove the importance of local context in understanding social hierarchy and its impact on local institution, which has important implication on theory building. Second, it explores the influence of political events that have impact on social hierarchy and marginalization, which can have important implications on policy making. Historic analysis can provide a moral ground to identify the discrimination and build policies that can compensate for the (historic and present) marginalization of certain groups.

The analysis is based on three distinct political events: 1) promulgation of the first legal code by the Ranas in 1854, 2) the post-Rana period after 1951, and 3) the Kamaiya labor prohibition act of 2002. This analysis provides a case of *Tharus*, the natives of Terai forests, who were displaced and made bonded labours due to macro policies, and are still struggling for their political rights and access to forest resources.

Tharus and their socio-political relationship with State

Folklore says that Tharus were the only people living in the Terai because of their immunity to malaria up until the late 1700s. Terai was colonized at different stages, in 18th and 19th century by the immigrants from the South (India and other parts of Nepal) and during the 20th century by the hill people of Nepal (Pravat, 2006). The natives of Terai, the Tharus were alienated from their land by the hill people and gradually made them landless, and later bonded labor (Chhetri, 2005). Research has shown that even after the abolishment of bonded labor system, systemic discrimination against the Tharus continues. The current socio-economic and political power of the Tharus is rooted in the historic political events, and has been institutionalized by the political economy of the country.

i. Rana regime and Muluki Ain of 1854:

A more significant political event, the promulgation of first legal code, institutionalized the marginalization of the Tharus all over Nepal. This legal code (*Muluki Ain*) aimed to

setup different castes and tribes along the caste hierarchy of Hinduism. During this time, even the non-Hindu groups were positioned along the hierarchy, lower than the high-caste Brahmins and Chettris, and higher than the constructed "untouchable lower caste".

Fig 4.2: Snapshot of the Tharus in the Muluki Ain (See table 3.1 for details)

Caste group of "enslaveable alcohol drinkers" (Masinya matwali)	Bhote (people of Tibetan origin), Chepang Kumal (potters) **Tharu,** Gharti (descendents of freed labor)

This legal code and establishment of caste hierarchy allowed the second largest ethnic group of Nepal to fall in between the higher castes and the Dalits. The fact that they were situated in the "enslaveable caste" group could have further marginalized them, since they were included in the lowest category of clean castes (Gunaratne, 2002).

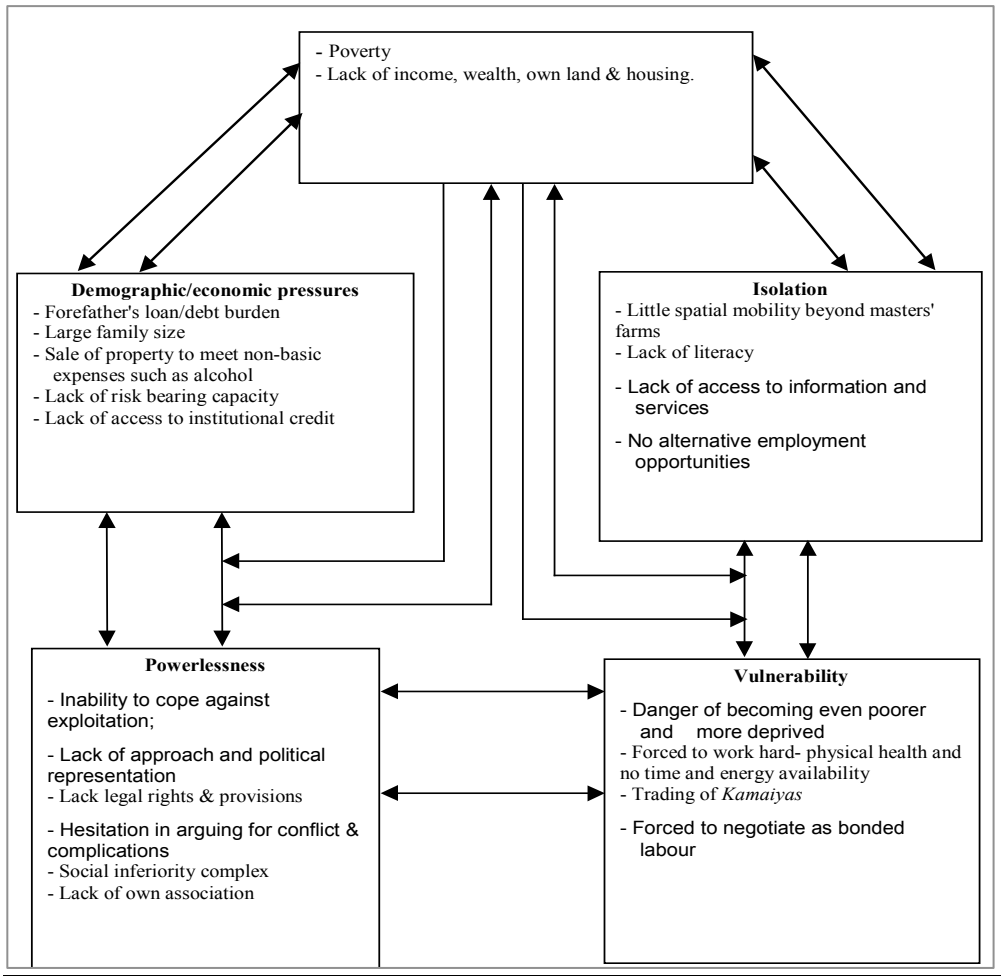
ii. Post Rana Regime 1951, mass migration to the Terai, and Kamaiya system:

According to the *Tharu* dialect, *Kamaiya* is used as a synonym of hardworking farm labor (Fujikura, 2007). If one of the workingman or woman died in the family, the tradition was to hire a man or woman from another family to compensate the loss. This system of compensating the loss of labor was referred to as the Kamaiya system (Fujikura, 2007).

After the government started the eradication of malaria and clear-cutting the forests in Terai, large group of hill immigrants started moving in, registering the land in their names (the land originally cultivated by the Tharus), and forcing the original masters to work for their newly captured land (liedaire Sheppard, 2009). This was possible mainly because of two reasons: first, the hill immigrants had political powers and had maintained ties with the state, which the Tharus clearly lacked. Secondly, Tharus had no power in the state, and were considered only farm labour, without any recognition as "citizens", so they (or their rights) were never included in any policy making process. From the simple idea of "helping hand in the farm", this system turned into a "patron-client" relationship

and was further exacerbated by the state by institutionalizing unequal power relationship among different groups.

Fig 4.3: Deprivation trap of Kamaiyas



Source: Karki (2001)

This structure inequality was strengthened even more when big landlords were given legal rights to own big plots of land by forcing the Tharus to work for them as bonded labours (Thapa, 2014).[71] It is argued that the State took such steps for two main reasons: 1) Create and increase support for the then ruling body by making these "landlords"

[71] The concept of Jamindar (landlord) has existed in Nepal even before the unification, but the Rana regime (1846-1951) intensified the Jamindar system, where most of the Jamindars were transformed into big landlords (their legal rights to owning very big plots of land were secured).

faithful (loyal) to the rulers by providing them incentives and power in the state, and 2) Increase agricultural productivity (production) by allowing big landlords to increase production by using bonded farm labour.

It is no doubt that this kind of socio economic and political relationships between State and Tharus developed after malaria eradication and large influx of hill migrants into the Terai region (Thapa, 2014). Researchers argue that this is mainly because after the eradication of malaria, the size of land for cultivation increased, and the labor was limited. The Kamaiyas who were responsible for the farm work were even further exploited and coerced into strict conditions of bonded labor (Karki, 2002; Rankin, 1999).

It is important to note that Kamaiya system in Nepal has been abolished three times before it was declared illegal. In 1926, the then Rana Prime Minister abolished any form of practices that are akin to slavery, in 1990 the constitution of Kingdom of Nepal abolished Kamaiya system, and in 2000 it was abolished by the cabinet of ministers (Thapa, 2014). However, Kamaiya system still persisted. It was not until the Kamaiya Labor Prohibition Act in 2002 (which declared all bonded labourers as "free"), that it would become illegal for landlords to keep any Kamaiyas under the coercion of bonded labor. Although the Government of Nepal had ratified almost all international human rights instruments that prohibit slavery and bondage, the social construction and the structured inequality legitimatized by the State allowed such practices to continue even though legal mandates were declared.

iii. Kamaiya Labor Prohibition Act in 2002

On July 17th 2000, the government of Nepal outlawed bonded labor system, but their resettlement and repatriation process took another two years.[72] Only in 2002, the government finally established the Kamaiya Labor Prohibition Act and categorized the

[72] "On August 9, 2000, Khem Raj Joshi, a representative of Peasants Rights Conservation Forum, Geta -7, Kailali led a writ petition in Supreme Court of Nepal mentioning the Article 7 regarding the Rights of Property in the Constitution of the Kingdom of Nepal 1990 to challenge the government decision to exempt debt given to the Kamaiya without the consent of the landlords. In their order, Supreme Court mentioned that the Article 20 of the constitution prohibits the selling of human being or making anybody involve forcefully in any activity against his/her will and interpreted that the practice of bonded labour is unconstitutional." (Thapa 2014, P: 117)

"freed" Kamaiyas categorized by different groups (A, B, C and D), and started to distribute land.[73] Small piece of land was distributed to the landless Kamaiyas (from Group A and B), but out of 13,450 Kamaiya households that were supposed to obtain some land from the government only about 12000 households were given a piece of land measuring on average 0.134 hectares (Chaudhary et. al., 2014).

The government completely disregarded the other two groups (Group C and Group D), who have some piece of land but is not enough to earn a living. These groups of Kamaiyas have gone unnoticed by the government and the activist groups and have been left in this limbo where they are neither eligible for support and nor can they support themselves (Chaudhary et. al., 2014)

Similar to Piven and Cloward's (1993) argument about degradation of the people who sought public welfare: the central feature of the degradation of the Tharus was based on the idea that the "freed" labourers would accept small plots of land (these agricultural reforms did not empower and enhance their living standards) as a compensation from the government instead of proper rehabilitation programs that would really help the freed Kamaiyas.

The report published by Actionaid has found that the land that "freed Kamaiyas" received were too small, not fertile enough to be productive, and sometimes the land they were allocated were already taken over by other landless squatters. The census in 2003 found that 30.8 percent of the "freed" Kamaiya families were working in others' land (Gurung, 2003). Out of all the "freed" labours, 29 percent are still under the "landlord" rule as they have started working for some landlord or the other. Report have shown that though the Tharus are happy to be free, there is no significant difference in their lifestyle- and this issue is not just a transistional phase.

[73] Group A comprised of totally landless Kamaiyas; Group B were Kamaiyas that had a hut but no land; Group C kamaiyas had a hut and a small piece of land (less than 0.07 hectares); and Group D were the kamaiyas that had a house and more than 0.068 hectares of land.

The government did not invest any time or resources in rehabilitation programs. Since unskilled jobs in non-agricultural sector is scarce, there are hardly any opportunities for them. As a result, many freed labours are falling back into debt and hunger. Report has shown that more than 22 percent of the freed labours have no citizenship cerificate, and a lot of that is derieved from the fact that majority of them (57.4%) cannot afford the cost of applying and obtaining the citizenship (Gurung, 2003). Awareness, education, participation in local governance and decision-making is still negligible among the freed Tharus.

In short, the political economy and policies adopted by the state have displaced, marginalized and exploited the native Tharu community, and as compensation to this historic marginalization they have been resettled in different communities, where they continue to struggle for their power and identity. The same group of people that was native to the jungles of Terai is struggling for their rights to access the forest resources that they heavily depend on.

4.6 DISCUSSION & POLICY RECOMMENDATIONS

The objective of community forestry is not as clear as we would hope it to be. Although the local communities are excited about the opportunities for local development, community forestry's main objective has and continues to be protective. The local communities are protecting the environmental that is directly linked with their sustenance. Within itself, this idea seems simple- local communities are doing the best they can within the limitations of their rights and responsibilities to the resources. However, if we really expect devolution of power and sustainable development via community forestry, social inclusion, justice, environmental protection and local development have to go hand in hand.

The suggested policy recommendations are based on the case studies and existing literature:

1) Need for contextual analysis for informed policy making:

It is evident that the outcome of community forestry is different for individual cases. Researchers have argued that community forests in the hills have been more successful than the forests in Terai because of the existing traditional institutions, quality of timber, and available infrastructure that allows easy transportation of the forest products (Adhikari and Dhungana, 2009; Iversen et. al., 2006). However, the case studies show that these differences are not just between hills and Terai, community forests within the Terai belt also differ from each other.

The history of forest management in Kanchanpur shows that past political events and policies were designed to be exploitative, and these structures have persisted. The economic systems that were created for timber extraction and trade during the Rana regime have not disappeared, rather they have persisted, fed and encouraged by the corruption in government and political parties. Although the biophysical properties and available infrastructure is similar in cases of Kanchanpur and Nawalparasi, the outcomes of community forestry in regards to protection and utilization of resources are different.

After the Rana regime ended, Terai witnessed a surge of in-migration from the hills, resulting in forest degradation (Satyal Pravat, 2006). Besides its impact on the environmental resources, this migration also impacted the social structure of the local communities. For example, the case study in Kanchanpur shows that this movement reconfigured the social structure, resulting in exploitation of the natives. The case of Nawalparasi could be different.

There are other factors like education, income level, available opportunities, etc., that might have contributed to the difference in outcome for the community forests in Kanchanpur and Nawalparasi. However, I would argue that these “market outcomes” like income and education are also embedded in the socio-political history of the communities, demanding for a deeper, contextual evaluation.

The top-down approach of forest management coupled with influence of larger political and economic forces limits the ability of local institution to become autonomous. It is clear that the government continues to control community forests, but it can allow opportunities for better management by allowing local communities to build local rules-in-use based on contextual information. To do so, the Forest department could make efforts to build networks and relationship among researchers, scholars, and other local stakeholders to build locally relevant policies.

2) Empowering the disadvantaged groups:

The case studies from the selected CFUGs have shown that community forestry has not been able to meet its goal of inclusiveness, especially for the disadvantaged groups. The national guideline mandates inclusiveness and affirmative action for the groups that have been discriminated in the past, but many interviewees argued that there was a lack of active participation from the disadvantaged groups (Dalits and women). All researched CFUGs showed that decision-making processes were dominated by men (from elite caste), and even in cases where women held power positions; their political power was minimal. The interviewed members presented various reasons for the lack of participation- time conflict for women, the cost (time) for participation, and the reluctance of disadvantaged groups to play an active role in management.

These arguments were conflicting with the observation in the field- women and other disadvantaged groups attended general assemblies with gusto, they accessed the forests on regular basis for their household consumption, and actively participated on other forest operations (like clearing the bushes, protecting the forests from forest fire, etc.).

It seemed like community forestry was not necessarily a devolved form of governance that embraces inclusiveness and equality, rather a “man-centric” institution that expects members of other groups to imitate the elites. For example, the ability to participate in the decision-making process was measured by attendance to the monthly meetings, whose schedule was convenient to men (and inconvenient for women). Similarly, the ability to

travel and negotiate with District forest officers and/or other elites was used to measure the ability to participate. In short, one is not included in the political process unless they mimic the advantaged groups.

The present discourse and social structure discriminates against the marginalized groups even though the national guidelines attempt to impose inclusiveness. While the disadvantaged groups are forced to reconfigure their social relationship to participate in the political processes, the advantaged groups seem to be unsympathetic to the trials and struggles of the disadvantaged groups.

It is evident that the social structure and larger political forces are reluctant in giving power to the disadvantaged members, but non-government agencies (in collaboration with the government) can take this opportunity to find ways to empower the marginalized groups. For example, mother's groups are active groups that work for community development, but in all the researched communities, the members of mother's groups said that they did not receive any support from other agencies. It is surprising to see that mothers' groups have been working together to support the community in various ways (like encouraging women to vaccinate their children, creating awareness about health and sanitation, pooling money to support community members in need- either as loan or gift, etc.), yet they have not been approached by other agencies to work in partnership. Mothers' groups were also found to be more egalitarian than other local institutions, e.g. *Dalit* women held positions like the chair or secretary of the group.

Various NGOs supporting marginalized groups via advocacy and/or income generation programs can use these Mothers' groups as platform to reach out to and support disadvantaged groups. Women in general tend to do better in collectives[74], in an environment that they feel comfortable; and since the local Mothers' groups have already build this platform, development and human rights agencies can work in collaboration with them. This will also reduce the technocratic approach by donor agencies, since the

[74] Collective action among women is common in Nepal: rice planting, collecting forage from the forest, supporting community members during grief or celebration are activities that women perform collectively.

local groups can help provide information about the context, needs, and political capacity of the community.

This approach sounds different from the conventional method employed by the donor agencies; however, it is not a radical idea. From Chipko movement in India to Yunus's microcredit lending in Bangladesh, it is evident that if given opportunities and access to resources, women's groups have been able to successfully support themselves, their communities and also protect the environment. Previous policies and development projects in Nepal have intentionally and unintentionally created ample opportunities for the advantaged groups, maybe it is time to try something more plausible.

3) Improve information and resource flow:

The case studies show that communities that are informed about their rights and responsibilities have been more successful than communities that are less informed. For example, the household members in the researched communities of Lalitpur and Nawalparasi were more informed about the rules and regulations of forest management. Additionally, the household members in these communities were able to access information, either via the CFUG office (in Nawalparasi cases), or by contacting a local leader (in Lalitpur).

On the other hand, many household members in the researched CFUGs of Kanchanpur and Dailekh were not informed about their rights and responsibilities to management. For example, many interviewees in these cases did not know the category their household belonged to. This lack of information was misused by Bacchela CFUG, where the CFUG board did not categorize households, and all community members had to pay equal amount to access forest resources.

The local community leaders in Nawalparasi and Lalitpur complained about the technocratic management imposed by the government, which prevented them from utilizing their resources. On the other hand, interviewed government officers defended

the argument of "sustainable utilization", and how the community members were unable to understand scientific methods of resource extraction. There is a lack of information flow between the CFUGs and monitoring (and controlling) government agencies.

In Dailekh and Kanchanpur, the local community members were largely unaware of their rights to forest management. As the interviewed social worker in Dailekh and the DFO of Kanchanpur said in similar vein, "*we need to disseminate information to the local communities. Once they know their rights, they start to actively participate*." The government, in collaboration with other non-government agencies, could find ways to disseminate information among the locals.

On hindsight, this form of information flow is appropriate for top-down approach of environmental governance. If community forestry is aimed to be autonomous, sustainable local institution, the information flow needs to flow bottom-up (Ojha et. al., 2016). Government and non-government agencies should not only disseminate information, but also receive information about local needs, issues, and potential, for better informed projects and policies. Another way of improving knowledge would be by reducing the technocratic management in favour of indigenous knowledge (and capacities) to protect the forests and improve livelihoods that depend on the resources (Ojha, et al., 2016).

It was evident during the interviews that financial collaboration was essential for establishing networks among stakeholders. The non-government agencies can perhaps design projects that require financial collaboration among participating stakeholders. Such collaborative projects can also increase mutual trust among stakeholders and improve the robustness and stability of the local institution. Proper channels of information flow will subsequently improve the channels for resource flow. By establishing proper networks for information and resource flow, stable and transparent patterns of interactions can be built.

To understand how different patterns of interactions can influence the institutional setup, the next chapter will investigate how different stakeholders involved in community

forestry interact. Using social network analysis, the chapter will examine information flow and the frequency of interaction among the actors involved. This analysis allows us to understand power-positions of different actors, their interactions in the community and with external forces, and how these interactions influence the network structure. Additionally, the social network analysis coupled with the findings from case studies can provide important insight to building robust networks that can increase stability and transparency of the local institutions.

CHAPTER 5: NETWORKS & PATTERNS OF INTERACTIONS

The influence of political parties and government control was evident in all the researched CFUGs, but what makes the local institutions in Nawalparasi more stable than the Kanchanpur case studies? How is it possible for case study CFUGs in Nawalparasi to work in collaboration with political parties and protect their forests, while the Bacchela CFUG (and to a certain extent, Baitada CFUG) is undergoing political capture and degradation? The comparative cases illustrate a few attributes, which were mostly contingent upon historical institutions and social construction (community characteristics). The problem, however, is that these attributes require large policy changes, which might not be possible given that different actors have varying levels of political power and may not be open to reform.

For example, the lack of inclusion of Mukta Kamaiya group is not a policy decision of the Bacchela CFUG, rather it the result of various policy decisions that were made by the state since 1864. The deeply imbedded social hierarchy has prevented marginalized groups from participating in the decision-making process. The power distributions and endowments that stem from historical legacies create social norm and structure that further feed into the power distribution, which helps maintain the status quo.

This is a critical aspect to understand inclusiveness and the incentives for the disadvantaged groups to participate in the political process. Women and members of disadvantaged groups tend to have higher transaction costs, not only in regard to time and contingent valuation, but also the costs of disrupting the status quo. For example, most of the interviewed women board members pointed out that being involved in the CFUG board has affected them both positively and negatively. *"There are some who criticize us for becoming involved, they say as a woman we shouldn't be getting into political processes"*, was a common statement. On the contrary, none of the interviewed male board members indicated any criticism from the community for their involvement in decision-making roles. Rather, they all said that involvement in the CFUG has increased

their social position and popularity. Their costs to involvement are only related to time and contingent valuation.

Although historical analysis and understanding of social structures help provide context to evaluate why different CFUGs show varying results, they do not provide easy and clear avenues for change. Keeping this in mind, this chapter aims to analyze the power relationships among local actors and their patterns of interactions and suggest ways that can increase stability and power of local institutions. The focus is to evaluate interactions among different stakeholders (actors) on a micro-level, to better understand and recognize the networks among different actors, and their implications on information and resource distribution.

5.1. LOCAL NETWORKS AND INSTITUTIONAL ROBUSTNESS

The institutions that are involved in forest management are a system of established rules and characteristics that makeup the social structure. Institutions include local actors, organizations, social norms, and the implicit and explicit rules. The relationships that the actors have with natural resources and society can improve participatory governance through better resource mobilization, increase in information flow, facilitate engagement in decision-making, improve monitoring, and facilitating resolution of conflicts (Bodin & Crona, 2009).

The case studies suggest that communities that have better information and robust networks (among local institutions and actors) have a higher ability to filter external pressures on the local resources. For example, community members in Sundari CFUG and Amar CFUG said that although there are a few cases of timber theft, they are few and far between, and easily managed. On the contrary, local community members in the Baitada CFUG and Bacchela CFUG struggled to control illegal extraction that was encouraged and protected by economic and political forces.

The case study CFUGs in Nawalparasi could be a result of higher education levels, income and opportunities, which the researched communities in Kanchanpur clearly lacked. However, higher literacy rates and income did not create networks among different local institutions (or actors) in the researched CFUGs in Lalitpur. While the Community Resource Centre (CRC) in Lamatar provides a platform for all the CFUGs to network and collaborate, it is limited to the board members, and its networking is based on the personal networks of one of the CFUG chairs.

The interviewed local leaders expressed that the lack of social networks was due to lack of financial incentives. Collaboration among different stakeholders were driven by economic incentives, and in absence of financial resources, collaborations were either missing or weak. Along similar lines, the DFO of Kanchanpur explained that to establish networks and information flow among different stakeholders, some kind of financial investment is needed. *"Even if it is a small amount, a few thousand rupees, it makes organizations interact and build relationships,"*—he said, stressing the need to build projects and networks between different non-government and community organizations.

Besides building paths for information and resource flow, networks also allow institutions to become autonomous and challenge central guidance (Rhodes, 1996). Although that might not be possible in the case of Nepal's community forestry due to the heavy handedness of government control, networks and collaborations can provide a certain level of autonomy and independence to the local institution. For example, interviewees said that when the government restricted all timber extraction for a year, the VDC office in Amarapuri provided financial support to Sundari CFUG for administration costs (wages for forest guards and office expenses). Similarly, collaborating with other local level institutions, Sundari CFUG has benefited with resources, both financial and labor. Networks and collaboration among different local (and external) actors and institutions can thus provide stability to the local CFUGs.

The theory of collective action rests on the idea that institutional arrangement of CBNRM will structure behaviours and attitudes of individual actors, because of an already existing

social cohesion in the local community. However, it was evident from the case studies that this social cohesion in the local community was weak in the cases of Kanchanpur, where existing inequality and ethnic conflict coupled with poverty and unemployment led to resource capture. The objective of this analysis is to examine the social network structures in the researched CFUGs to evaluate the patterns of interactions among various stakeholders. This analysis also aims to investigate avenues through which robust networks can be built to create social cohesion for collective action[75].

Using social network analysis, this chapter will compare and networks of the researched CFUGs. The analysis will examine information transmission, frequency of interactions among actors and resource distribution, to evaluate their impact on resource distribution and the resulting institutional setup.

5.2 SOCIAL CAPITAL

Community based natural resource management (CBNRM) promotes the "small scale sentiment" arguing that CBNRM is labor intensive, so benefits will be retained on a local level, which can be redistributed in the community. Additionally, CBNRM also hinges on the concept of "social capital" of the community, arguing that local leaders are representative of the community and therefore will be more accountable to their constituency, thus ensuring fair and just redistribution of the resources (Thakadu, 2005). However, there are opposing arguments that view CBNRM as an opportunity for the local elites to rent-seek, and/or capture the benefits (Blaikie, 2006).

In local resource management, "social capital" is assumed as given, which captures the idea that social bonds and norms are important to members of the local community (Pretty, 2003). Social capital is based on relations of trust, reciprocity and exchanges, common rules and norms, and connectedness in networks and groups. Research has shown that social capital is a necessary resource for shaping individual action for

[75] The idea is to approach this aspect in a counter way. If robust and well-interconnected networks signify social cohesion and relational belonging, then improving social network can influence (and improve) social cohesion.

successful collective action outcomes (Pretty and Smith, 2004). Although communities might have a strong social network, it may or may not translate to the institution of resource management. For example, although the community might come together to help during a period of grief (death or disaster), it might not translate in a similar way for resource management institution, especially if the incentives and benefits differ[76].

Instead of assuming that social cohesion translates into local resource management, this chapter will investigate how connectedness and networks are built to shape the local institution. This analysis includes three components: a) existing power position of the actors; b) information flow; and c) frequency of interaction among actors.

5.2 a. Social and political position of the actors:

The historical analysis (presented in Chapter 3) and comparative case studies (presented in Chapter 4) show that actors involved in the local institution of community forestry are not equal in regards to their socio-political position. Although the actors belong to the same community, and might have relationships based on friendship and communal reciprocation, the historical and larger contexts play a subtle role in creating different power relationship among actors (Carley and Krackhardt, 1996).

The context of Nepal shows that caste and gender are important determinants of social and political power. Based on the existing literature and in-person interviews, it is evident that power relations between different actors and stakeholders are founded on the existing social hierarchy and influenced by different patterns of interactions. For example, local elites who have power in the community can (and often do) interact with political parties to establish their power in the local or regional political sphere.

[76] One has to differentiate between social capital that evolves with the norms and traditional "social values" that have existed for centuries, and the "social capital" that is assumed to translate to institutional establishment of community forestry. Although CBNRM hinges on the concept of social capital and local mobilization, it is nevertheless, an institutional arrangement (rather than an organic evolution of local collaboration).

Relevant findings from previous chapters include:

a. Local institutions are influenced and dominated by larger political forces. For example, the government controls how local resources are extracted and utilized, and acts as the monitoring body. Additionally, political parties influence local leadership and its ability to make independent decisions. Both of these factors act to undermine the autonomy of the local institution, and refute the idealized "devolved governance".
b. Social structure and hierarchy determines power relations among local actors. The local socio-political position of the actors is dependent on caste and gender, further supported (or encouraged) by larger socio-economic forces. In this case, the disadvantaged groups are women, Dalits, and certain ethnic minority groups. Men from elite-caste groups are socio-politically advantaged groups.
c. Due to Nepal's centralized governance system, actors that are close to the center (capital) tend to have higher access to resource, information, and power. Actors in the peripheral region, on the contrary have less access to government and non-government resources.
d. Non-government agencies are important stakeholders in community forestry even though they do not have any legal power in decision-making. They have invested (and continue to invest) in many conservation programs, local development, and empowerment and poverty alleviation projects for disadvantaged groups.

5.2 b. Information flow:

Advice relationships based on exchange of information are likely to occur in asymmetric power relationships. This is because power, knowledge and information are distributed unevenly in a network, thus making some actors as the focus of power and information in the community (Prell, 2012). So, in this research, "source of information" is used as a variable to identify the power position and influence (centrality) of certain actors in local CFUGs. For example, if community members said that their get their information from a local leader (or teacher), then the local leader is a central actor due to their ability to control (and disseminate) information.

5.2 c. Frequency of Interaction:

Research has shown that increase in interaction can help build trust and thus increase the robustness of the relationship. Granovetter (1973) argues that frequency of interaction, level of intimacy and trust, and the amount of reciprocal services contributes to strengthening the relationship between actors. Besides strengthening the network and relationship, the increase in the frequency of interaction can create opportunities for actors to influence each other's decisions (Erickson, 1988). In addition, the increase in positive interaction can also help actors gain popularity and establish leadership (Erickson, 1988). Frequency of interaction enhances transmission of information in a timely manner, and can thus help in developing strategies and better policies.

5.3 MEASUREMENTS

Each case study is individually evaluated for social networks. Due to their network structures, and difference in the size of their networks, different cases cannot be compared for centrality (position) of different actors.

The case studies show the CFUGs case studies in Nawalparasi have been successful in managing their resources, while the Kanchanpur case studies have undergone political and resource capture. Since we cannot compare the social network structures due to their difference in size, findings from the comparative cases are used to evaluate the networks. For example, this chapter assumes that the network structures of the case study CFUGs in Nawalparasi are conducive for successful resource management.

People who occupy central positions in a network are more visible, and known by other actors (Prell, 2012). The centrality of different actors and their patterns of interactions are used to understand the power implications on the information transmission, resource flow, and subsequently on the stability (and success) of the local institution.

In a social network, intuitively we would assume that actors that have highest number of links (relationship with other actors) hold stronger position in influencing decisions and dictating information flow. Their immediate network ties determine the network positions of the actors (with other actors), referred to as degree centrality. Besides the degree centrality, the actors' power positions are also determined by c their ability to influence information flow in the entire network, their independence from other actors, and the centrality (power) of other actors they are associated with.

a. Degree Centrality:

This is the most straightforward measurement of centrality, determined by the number of ties that any actor has with other actors in the network.

$$\mathrm{C(i)} = \sum_{j=1}^{n} X_{ij}$$

However, this study assumes that actors that are trusted and considered to have power and knowledge are sought after for information. Thus, actors that are highly sought after by other actors in the network are assumed to hold higher power. This centrality is measured as the "in-degree" centrality.

$$C_{in-deg}(\mathrm{i}) = \sum_{j=1}^{n} X_{ji}$$

where X_{ji} = the value of tie from actor j to actor i

n = number of nodes in the network

The value of tie is determined using the frequency of interaction i.e. higher frequency of interaction= stronger tie; lower frequency of interaction= weaker tie.

b. Eigenvector Centrality:

Besides "how many" actors we know, the power position in the network is also determined by "who" we know. Eigenvector centrality evaluates the power position of the actor, based on the centrality of other actors that it is associated with. For example, two local leaders are connected to various actors (they are both connected to 10 other actors in the network). One of them is connected to actors that do not have many ties of their own, while the other leader is connected to actors that also have multiple ties with other actors within the network. In this case, the latter will have higher capacity to

influence decisions and information flow because of larger number of associated ties within the network.

Eigenvector centrality includes local network of actors that are immediately adjacent to the focal actor in the network. In short, eigenvector centrality is based on the idea that an actor is central if it is associated with other actors that are central within themselves. The centrality of each actor is proportional to the sum of centralities of its neighbours.
Mathematically,

$C(v_i) = \frac{1}{\lambda} \sum_{j=1}^{n} a_{ij}\, C(v_j)$ $\quad \forall i$ and $\lambda \neq 0$

In Matrix form,
$\lambda C = AC$

Here, $C = (C(v_i), \ldots\ldots, C(v_n))$

A represents an adjacency matrix and λ represents the array of eigenvalues in the matrix

(*Note: There are generally multiple eigenvectors. The greatest eigenvalue would be the centrality score for actor i*).

c. Closeness Centrality:

Closeness centrality emphasizes an actor's independence in the network (or its reliance on other actors). For example, if an actor "i" is close to other actors, then the actor does not have to rely too much on others to relay the information. Thus closeness centrality measures the actor's ability to mobilize and reach out to other actors in the network.
Mathematically,

$C_c(i) = \left[\sum_{j=1}^{n} d_{ij}\right]^{-1}$ Where, d_{ij} is the distance connecting actor i to actor j

d. Betweenness Centrality:

Some actors might not have large number of ties with other actors, but their position within the network can have significant influence on their power (or centrality). Certain actors might be the intermediaries for information flow, so they can control information between different actors in the network (regardless of their number of ties or closeness with other actors). For example, in the case of community forestry, if the information

about rules and new policies reach the community via one particular actor, that actor holds power even though s/he might not have fewer ties than some other actors in the network.

Thus, betweenness centrality measures how much potential control an actor has over the information flow within the network. The "betweenness" gives an actor the ability to heavily influence the network, especially if s/he chooses to withhold and/or distort the information.

Mathematically,

$C_B\ (k) = \sum \partial_{ikj} / \partial_{ij}$; $\quad i \neq j \neq k$

∂_{ikj} = the number of geodesics (i.e. the shortest path) linking actors i and j that pass through actor k

∂_{ij} = the number of geodesics (shortest path) linking actors i and j

Limitations in Measurements:

Although social networks include various aspects of interdependence among actors, this research focuses on social networks related to forest management only. The questions for social network analysis was based exclusively on information exchange and resource flow regarding information about forest management and resource use.

To analyze how information is exchanged among actors, the interviewees were asked about their source of information, and the beneficiaries of the information.

i. Where do you get your information (regarding forest management)?
ii. Who do you provide information to?

The interviewees were also asked if they trusted their information. However, in this research, all the interviewees said that they trusted their source of information, so the trust relationship was not included as a variable.

The interviewees were asked about their frequency of interaction with other stakeholders. Although there were often vague answers like "whenever required," or "depends," the

answers were coded by including both formal and informal interactions. For example, if a board member said "mandatory monthly meeting and whenever there is an emergency," they were further questioned how often they met for emergency cases in the last six months. The frequency of meetings was coded "highest," "average," "low" and "lowest" and respective weights (highest=3; average=2; low=1.5; and lowest=1) were given to those interactions. If the stakeholders interacted more than once a month, frequency was given the "highest" category. If the stakeholders interacted once a month or less, it was categorized as "average." For interactions averaging "once in a few months," the frequency was categorized as "low." If the interactions were "once a year, or less," it was categorized as "lowest."

Since the collected data value is vague and hard to quantify without developing proper index, the weights given to each frequency of interaction is approximate. Although not definitive, it can provide some information to analyse and predict how 'interaction among different actors' shape the network and build connectedness.

The centrality values for each actor in their network structure are listed in *Appendix C*. Since the collected data is interpreted based on certain assumptions, the values are approximations. Albeit vague, it provides a glimpse of the network.

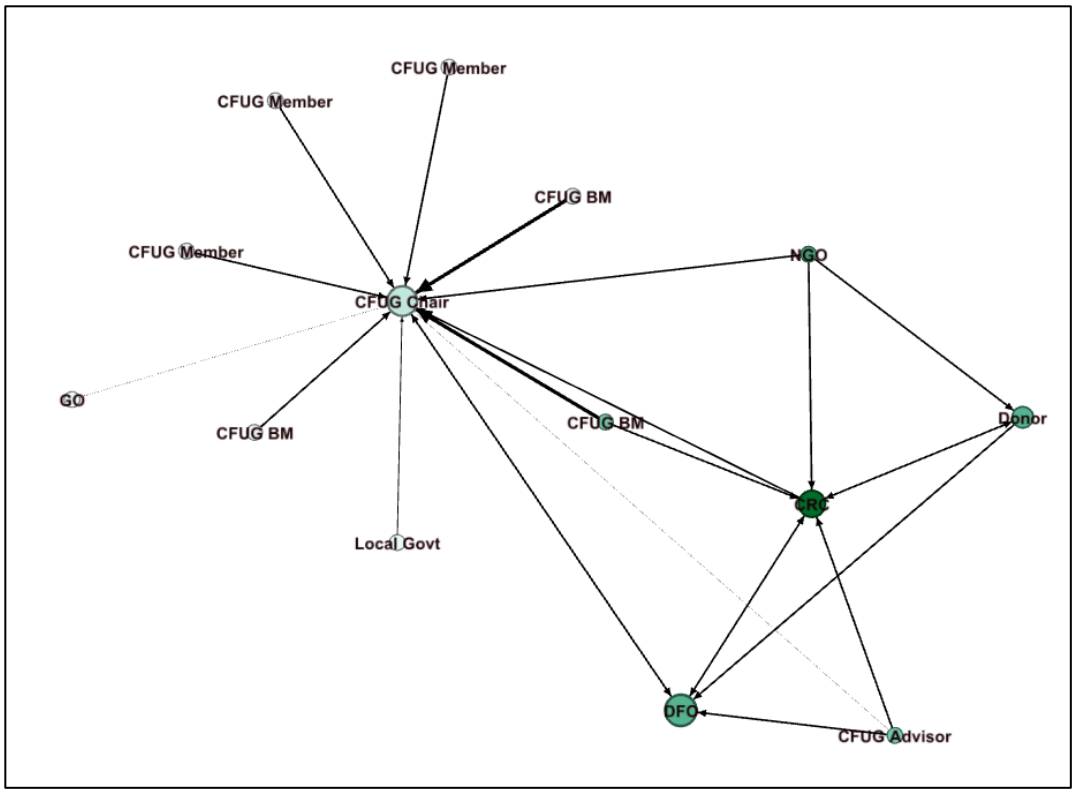
5.4 ANALYSIS

The analysis based on information dissemination and frequency of interaction shows that politically powerful actors (local elites, government officials and donor agencies) have high centrality values than other community members involved in the CFUG (*See Appendix C for centrality values*).

In the Lalitpur and Dailekh case studies, the chairman was the main source of information, trusted by local community members and other agencies. The district forest office, donor agencies and NGOs also have high centrality values, meaning that they either hold high socio-political position, or interact with actors with high socio-political

position. It is evident from Fig 5.1 and Fig 5.2 (shown below) that the institution of community forestry is top-down, where the information and power is concentrated among the socio-politically powerful actors.

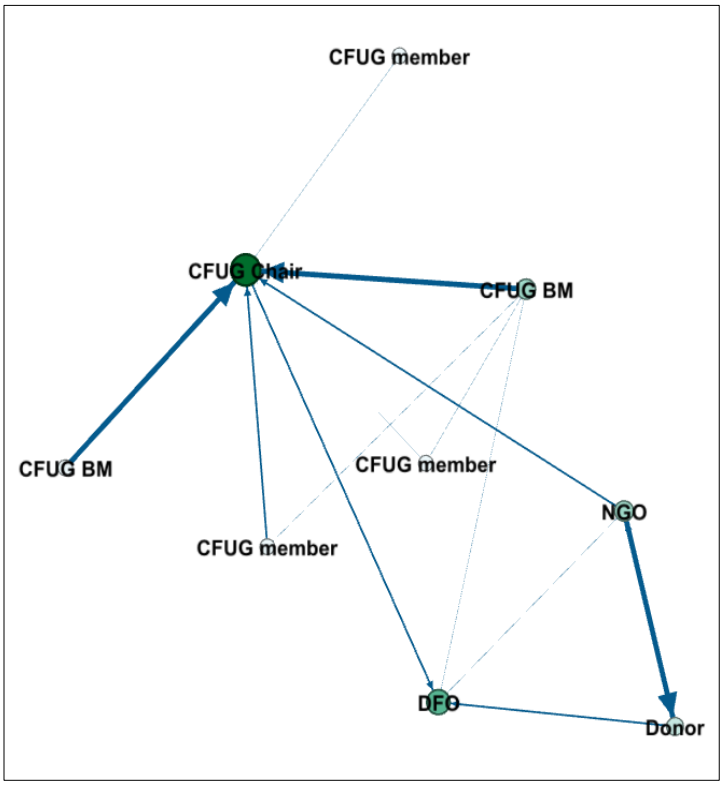
Fig 5.1: Lalitpur cases showing actor positions and information flow[77]



All the interviewed community members said that they trusted their leader, and valued their judgment, which shows the trust in the local leadership. However, this "chairman-centric" structure can have implications on the stability of local institutions, since the sustainability of the institutions is dependent on the capacity and goodwill of one (or a few) actor. Although devolution relies on the concept of local leadership and accountability to local constituency, the existing literature and this research has shown that larger political and economic forces often influence local leadership and resource utilization. This means that the institution relying on the capability and goodwill of one actor remains vulnerable to the larger forces.

[77] The graphs are created using ForceAtlas layout in Gephi. ForceAtlas is used to spatialize small-world/scale-free networks. It allows a rigorous interpretation, with the fewest biases possible.

Fig 5.2: Dailekh cases showing actor positions and information flow

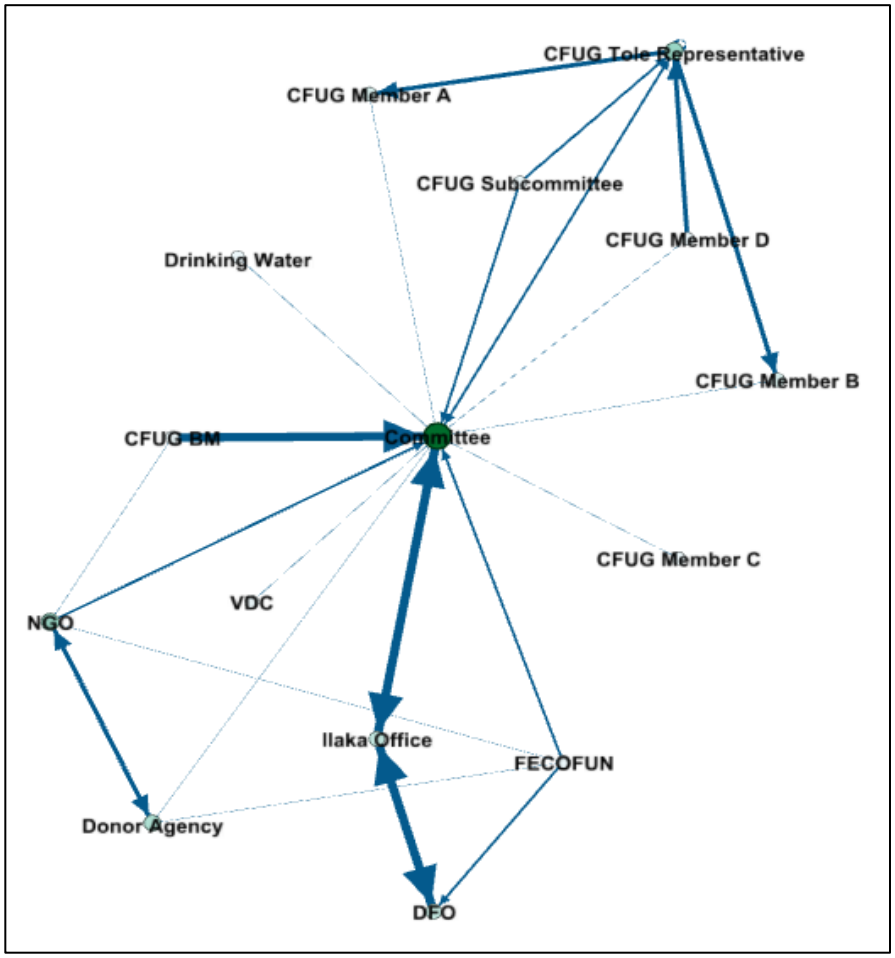


In the Nawalparasi case studies, the local actors have been able to protect their forests from political capture through collaboration with the political parties and other local institutions. The interviewed CFUG members expressed the influence of political parties in their CFUG, at the same time pointed out that the political influence did not negatively impact the management of forests. Although the pivotal actors in the community were encouraged and established by the larger political force, they benefited from protecting and managing the resources.

Different from the cases in Lalitpur and Dailekh, the CFUG office in Nawalparasi case studies (constituting of committee members and employee of the CFUG committee) are the central source of information and resource flow. Instead of relying on individual actors (like chairperson, or board member), the CFUG office is pivotal for interactions:

for the local community, and for external agencies and local institutions (like local school, drinking water office, VDC office, etc.)

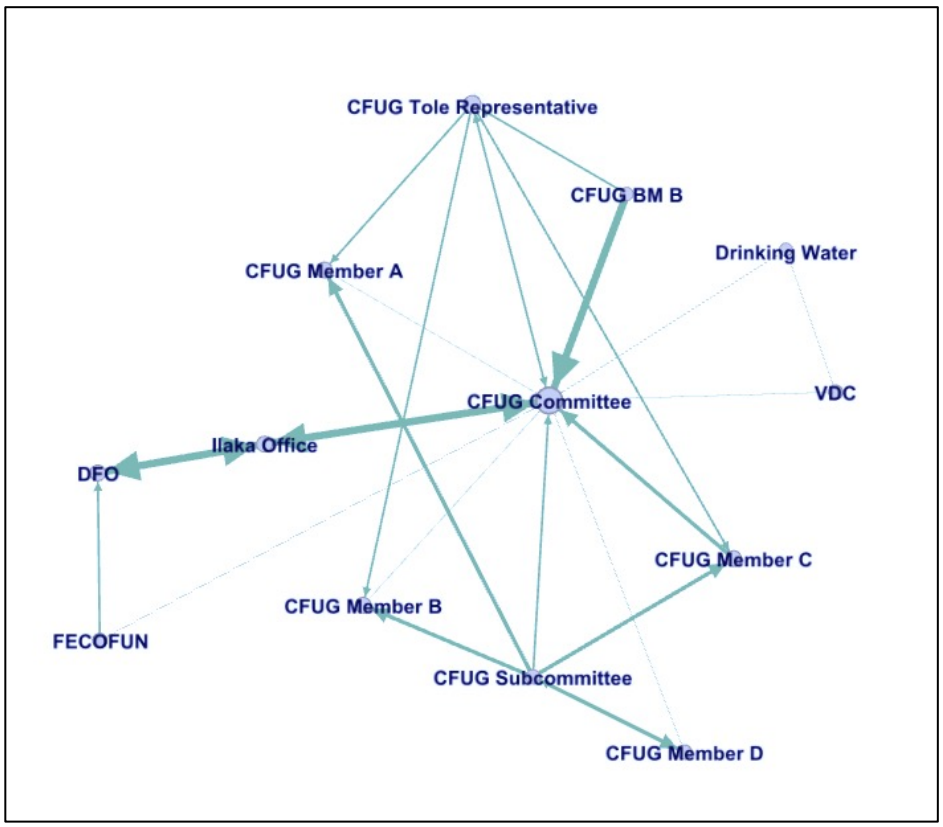
Fig 5.3 Sundari CFUG actors and network (Nawalparasi)



Although the CFUG committee is the focal point of the CFUG network structure, the Nawalparasi case studies have been able to create other pivotal (intermediary) actors within its structure. For example, the *Tole* coordinators act as the bridge between the CFUG committee and the local household. These *Tole* coordinators discuss and assess the needs of households in their respective *toles* (localities) and present this need assessment to the committee. These tole coordinates also act as the intermediary for information dissemination. Similarly, different "subcommittees" established for poverty

reduction identify and assess the needs of the poorest households and help information and resource flow between the CFUG committee and the disadvantaged members.

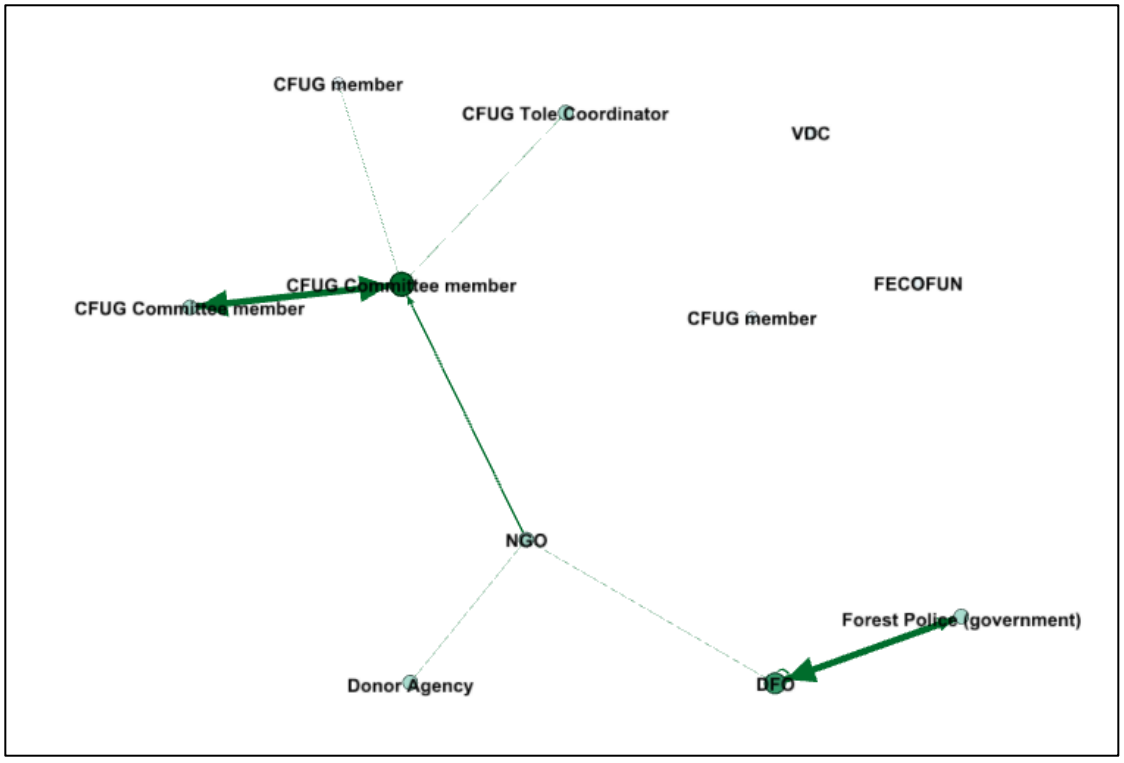
Fig 5.4: Graph showing Amar CFUG actors (Nawalparasi)



The Nawalparasi case study communities have an added advantage over the hill community case studies concerning the economic benefits (income) derived from the forests. Since the quality of timber is high in the communities in Nawalparasi, the CFUGs have been able to extract their resource for economic benefits. This income has helped to establish their CFUG administration office, which acts as a platform for information and interactions among the community members. The CFUGs case studies in Dailekh and Lamatar did not have the financial resources to establish a platform (in the form of an office), so information and resource flow is often dependent on the central actor (in these cases, the CFUG chair).

Although higher timber quality can create a potential to establish a local platform for information and resource flow, it also creates incentives for larger political and economic forces to capture the local resource. For example, the researched community forests in Kanchanpur have not been able to tap into this potential, mainly because of the influence of larger political and economic forces. The local community members have been unable to protect their forests from illegal extraction by smugglers. After more than 15 years of community forestry, the outcomes of researched community forests in Kanchanpur are very different from the researched community forests in Nawalparasi.

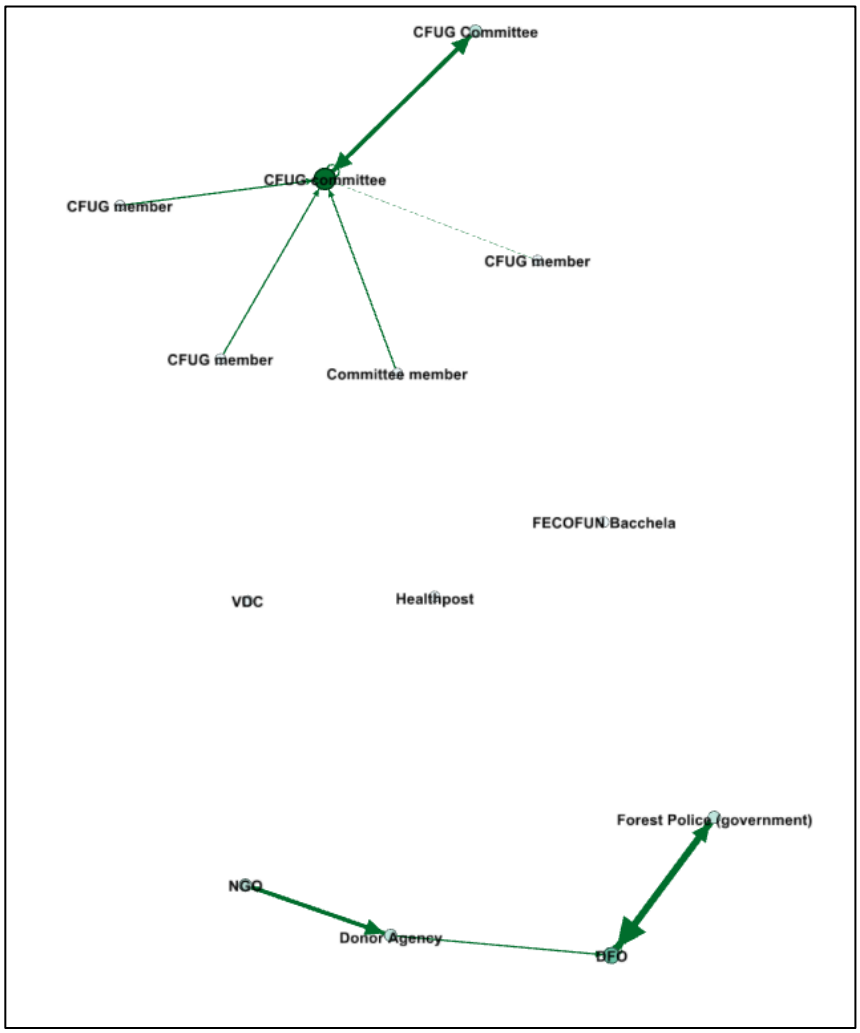
Fig 5.5 Baitada CFUG actors and network (Kanchanpur)



In the Kanchanpur case studies, the actors with high centrality values were CFUG board members, donor agencies, NGOs and the district forest office. There was no relationship with other stakeholders like VDC and FECOFUN. The networks were weak and

disconnected, and there was a lack of trust among the stakeholders[78]. Although the network structure for Baitada CFUG is less unstable than the network structure of Bacchela CFUG, Fig 5.5 and Fig 5.6 shows that the networks are weak, fragmented and not conducive for effective information and resource flow.

Fig 5.6 Bacchela CFUG actors and network (Kanchanpur)



The 200-year-old extractive institution built around forest resource extraction are embedded in the political, governance and economic systems (See Chapters 3 and 4), and

[78] The local community members and leaders accused government officials and political parties for corruption, while the government officials accused the local leadership for resource degradation.

these historical institutions have persisted. The Nawalparasi case studies have higher HDI and lower resource conflict. This could be a result of better work opportunities, higher income and education. It is evident that the local actors have been able to build robust networks, allowing them collectively manage their resources while negotiating with larger forces.

On the other hand, high unemployment, poverty, lack of opportunities, and high social inequality has created incentives for the larger forces to capture the resources in the Kanchanpur cases. Weak relationships and networks among various stakeholders have created opportunities for larger economic and political forces to capture resources by perversely incentivizing certain local actors. For example, timber smugglers hire the unemployed local youth to steal timber from the forests, while receiving protection from the larger political forces. This pressure from external forces is not only degrading the resources, it is also negatively affecting the local community members' ability to access the forest resource. Since they heavily depend on forage and firewood for their daily sustenance, degradation has created resource conflict.

5.5 DISCUSSION AND POLICY RECOMMENDATIONS

"*Cohesion, when conceptualized as a form of network structure, is seen as influencing the behavior and/or values of individuals and the collective*" Prell (2012).

Social cohesion is an important aspect in collective action. It is derived from the idea that local community members who share similar beliefs and values will work together for a collective good. Strong social networks not only allow information flow, but also influence behaviors and attitudes of the individuals embedded in the network structure.
Collaboration among local stakeholders can strengthen the local institution, and good information and resource flow can create pressures on the local leaders to become more accountable to the local community. Understanding network structures and their significance in the operation of local institution can provide insights to creating stable

and sustainable institution. The learning from Nawalparasi cases can perhaps provide suggestions for the cases in Kanchanpur.

The technocratic knowledge required for forest management has created a top-down approach to information dissemination. The actors with high socio-political position become the source of information, and are able to control the information and resource flow. This has prevented local communities (especially the disadvantaged groups) to become a part of the political process of resource management. To develop a bottom-up, devolved form of governance, indigenous knowledge and tools along with community needs need to be prioritized (Ojha et. al., 2016). However, it is evident that despite the theoretical suggestions, natural resource management has continued to employ scientific and technocratic expertise, without including local knowledge and capabilities.

The recommended solutions are based on the assumption that natural resource management, despite its theoretical foundations has not been able to include local knowledge and tools. If the local knowledge cannot be included in resource management, the government needs to provide local community members the information and tools to management, so that the knowledge and resources are not controlled by the politically powerful.

There is a need for collaboration and information sharing within the community forestry user groups. Local community members need information about rights and responsibilities to management. An informed constituency can pressure the leaders to become accountable to the local community.

To increase information about rights and responsibilities in forest management, there is a need to invest in advocacy. The DFO in Kanchanpur expressed the importance of "social mobilizers," who frequently interact with local members to disseminate information and create awareness. One of the interviewed social workers in Dailekh affirmed this, highlighting their work in making women and marginalized communities aware of their rights. Employing social mobilizers can be effective, but the cost to such programs can be

high. To reduce the costs, government and non-government agencies can collaborate and partner with local institution. As I mentioned in previous chapter, mothers' groups could be a good platform to partner with.

It is surprising how different development and empowerment agencies have not identified mothers' groups as potential partners! Investment and partnership with similar agencies can create better networks, stronger community. Often non-government agencies attempt to create their own "empowerment teams," focusing on a small segment of discriminated population, which hasn't been able to gain much traction because it is "minority." For example, local community members in Lamatar expressed their reluctance to support *Dalit* groups, arguing that despite investment from donor agencies and NGOs, these groups have not actively attempted to help themselves. A broader view of the issue is needed, empowering discriminated population as "a bigger group" can increase their confidence to participate in political processes without disrupting their social relations. Individuals from the marginalized groups often face disturbance in their social relationships when they participate in the decision making process[79]. By supporting disadvantaged groups as a collective, the intensity of disruption can be distributed (and reduced) and eventually eliminated.

The cases in Nawalparasi shows that an increase in collaboration among the local actors can increase trust and strengthen the local community. In Nawalparasi, the community attributes create a conducive environment for such collaborations to establish. In Kanchanpur, although the community does not offer a fertile ground for such partnerships, government and non-government agencies can invest to create such opportunities. Many practitioners highlighted the importance of financial incentives to collaborate, and CFUGs like the researched cases in Kanchanpur need investment from donor agencies to allow local institutions to establish partnerships.

[79] For example, women board members pointed out their struggle in participating in the decision-making processes. These struggles often arise from the disturbance in their social relationships due to existing gender relations. However, such social disturbance (and resistance) is reduced when women work in mothers' groups. It was observed that marginalized groups could curb such social resistance when they collaborate and work together.

The field observation in Kanchanpur showed that women from the Tharu communities were hesitant to converse or participate during the meetings. Historic marginalization, language barriers, social construct etc. could be the reasons behind such self-imposed exclusion. Policy makers and implementers need a careful examination of the existing social discourse to ensure successful development of empowerment and advocacy projects. For example, the national guidelines have clearly listed the requirements, rights and responsibilities to forest management, but lack of awareness (and lack of education) can prevent disadvantaged locals from knowing their rights. This can have important implications in places with low literacy rate, especially when Nepali is not the first (or commonly spoken) language. Advocacy and awareness projects need to be designed to make it accessible, suitable and convenient for the disadvantaged groups.

Besides advocacy, whenever possible, establishing local platforms can help local actors increase their bargaining power with external forces. An example of such would be Community Resource Centre (CRC) in Lamatar, established by the support of Forest Action. This local umbrella organization not only helps pool local political power on one platform, but also strengthens the local institution to negotiate with larger forces. As a result, the District Forest Office and other non-government agencies view the CRC as a local partner for collaboration to ensure effective implementation of conservation and development projects.

Although social cohesion and strong networks are assumptions of collective action, it is evident that they do not necessarily occur in all local communities (See the differences between Fig 5.3, 5.4, and Fig 5.5, 5.6). Social and ethnic conflicts can have historic roots, which are further perpetuated by the market pressures. However, proper contextual analysis and investment, networks can be created and built, that can improve social cohesion and support collective action for resource management.

CHAPTER 6: THEORETICAL DISCUSSION AND CONCLUSION

"The point is that the move from general propositions about what political actors are seeking to maximize inevitably brings the theorists face to face with the question of what it means to, say, maximize power within a given context. Until this step is complete, the analysis cannot begin" (Thelen, 1999).

Using Nepal's political economy (hinging on large political events), Chapter three provides a historical analysis of Nepal's community forestry and how the institution has changed with time. It also provides a glimpse of the social structures that create certain social hierarchy and discourse. The case studies (Chapter 4) provide an institutional level analysis of how certain institutions differ in their results and operation based on their geographical location and socio-economic and political status.

This contextual knowledge is the crux of the analysis- social construction and hierarchy creates different incentives and level of information among the actors. They understand and benefit from the institutions differently. Even in cases where they might have the same incentives and rights, social construction and their power relationships might hinder or increase their ability to exercise their rights. For example, the psychological subservience evident among the disadvantaged groups was an inherent part of the community that resulted from asymmetric power distribution, rather than lack of knowledge or information. The "utilities" for the disadvantaged groups was not just about deriving benefits from the resources, but also "not fighting the status quo". Similarly, historically advantaged elite groups can benefit from the local institution, not only for forest resources, but also for their political gain.

These actors have inherent socio-political positions that help them negotiate with other actors, and the resulting patterns of interactions further change (increase or decrease) their power relationship with outside forces. Chapter 5 uses social network analysis to map the power positions of different actors, and understand the network structures of the local institution. These different network structures are then compared with the case studies to understand how different patterns of interactions might result in different

outcomes of community forestry. The research, however, hypothesizes that better-connected network structures will result in successful community resource management.

The aim of this chapter is to use the results of this research as a guide to discuss the theoretical discrepancies of collective action, and suggest solutions to those theoretical gaps. In addition, a policy framework is suggested that can fulfill for the discrepancies of the IAD framework (based on the design principles of collective action). For validity, the suggested theoretical (policy) framework is compared with New Institutionalism in political science.[80]

6.1 SUMMARY OF THE RESULTS:

This research found that forest coverage, on average has increased (or improved) since the transfer of management. Local community members, when given the rights and responsibilities were able to protect and utilize their resources. However, in the failed cases like Kanchanpur, where forest coverage has not increased, was mainly due to the existing economic forces. The existing timber mafia, with the help of corrupt government and political parties, has been able to extract resources from the local communities, severely impacting the forests. These external economic forces were established more than a 100 years ago, and have been able to use (misuse) the poverty and unemployment in the local communities for their own benefits.

It was found that the local communities that were strong within themselves were able to curb these negative influences. The strength of the local communities was directly correlated with the economic standards and their ability to collaborate with the local institutions. For example, in the successful Nawalparasi cases, the local community members were economically better off than their counterparts in Kanchanpur cases, had employment opportunities, and collaborated with other local institutions like the VDC

[80] New institutionalism is not a single unified theory, rather three different analytical approaches to understanding the role of institutions in the determination of social and political outcomes (Hall and Taylor, 1996). The three different institutionalist theories are historical institutionalism, sociological institutionalism, and rational choice institutionalism.

office, local schools, and other local institutions. Additionally, heavy influence of the political parties in the communities posed a threat of political capture. Although the political parties were as influential in Nawalparasi as in Kanchanpur, the local CFUGs were able to coordinate with the political parties to prevent external forces from capturing the resources.

The ability to successfully protect and utilize the resources affected the ability to invest for local development. For example, the successful cases in Nawalparasi were able to invest a part of their income in supporting the local schools, constructing path and other local infrastructure, and investing in poverty alleviation programs. On the other hand, the CFUGs in Kanchanpur did not have enough economic benefits to invest in the local development programs. Furthermore, lack of collaboration among the local institutions prevented the researched CFUGs in Kanchanpur from designing well-informed projects, resulting in inefficient use of the resources.

Although it is evident that investment in local development is dependent on the income generated from the forest resources, collaboration with the local communities can also make up for the lack of income. For example, Baitada CFUG was able to collaborate with the local school, provide some financial support and work closely with the local institution. Since the local community members were also parents of the school students, they were more inclined to protect the forest since successful management of the community forest could affect the quality of their children's education.

Additionally, collaboration among the local institutions has shown to play an important role in increasing transparency and protecting the local resources from external capture. For example, the disenchantment towards community forestry among the local community members in Kanchanpur is driven by their lack of trust in the CFUG board members and perceived corruption in government and political parties. Increasing collaboration among these institutions via increased transparent interactions among different stakeholders can influence the local community members' interest in protecting their resources and demanding accountability from their local leaders. The historical

political events that have established and encouraged external forces (political and economic) continue to affect the local communities' ability to protect and manage their resources. These forces that are rooted in Nepal's political economy cannot be easily overturned, but collaboration and networking among the local institution can strengthen the local community to curb the negative influences of these external forces.

The historical events of Nepal's political economy have not only shaped the political and economic structure of the country, but also designed a specific social structure. Marginalization of certain ethnic groups, socially constructed lower castes, and women have been institutionalized by past political events, and persist to this day. Although such marginalization has been outlawed in modern day Nepal, the established social construction continues to marginalize these disadvantaged groups.

The national guideline for community forestry advocates for inclusion and participatory decision-making, but lack of inclusion in decision-making processes and political participation was evident in all the researched communities. Such exclusion of marginalized groups was higher in communities that were socially unequal and more discriminatory against the disadvantaged. For example, researched CFUGs in Nawalparasi were more inclusive (in regards to gender and sympathetic to minority groups) than the CFUGs in Kanchanpur, and interviewees highlighted the existing social inequality and gender discriminatory structure as the main reason behind the lack of inclusion.

The social, economic and political structure that are deeply rooted in the nation's history are difficult to reverse, and it is immature to expect local CFUGs to be able to counteract and provide an inclusive platform. However, investing in advocacy, information dissemination and collaboration among the local institution can create room for inclusive participation and could eventually empower the disadvantaged groups.

6.2 EVALUATION OF THE THEORY OF COLLECTIVE ACTION USING NEPAL'S COMMUNITY FORESTRY

The theory of collective action is founded on the principles of rational choice, based on the idea that if given proper rights and responsibilities, and if the benefits exceed the costs to conservation, people will conserve the resources if it will positively affect their livelihoods (Thakadu, 2005). The idea is simple and intuitive—people are rational actors, they will try to maximize their benefits—so if they benefit from working towards a mutual goal of resource management, they will do it. If given the rights and responsibilities to the communities along with the tools and resources, the communities will protect and sustainably manage their resources.

The case of Nepal's community forestry shows that many underlying factors contribute to the outcome, which are not explained by the theories of rational choice.

Although the idea of community based natural resource management often assumes local capacity and power, this research shows that larger forces influence and heavily shape community forestry. The outcome, and consequent evaluation does not necessarily feedback into the framework, as "iterative game theory" would suggest. Lack of autonomy in local institutions means local institutions adjust not to the evaluated outcome, but rather to the rules imposed by the government and pressure from larger political and economic forces.

Historical analysis of Nepal's community forestry presented in Chapter 3 examines the political events that institutionalized social construction. The case studies in Chapter 4 provide a glimpse of the evolving manifestations of previous political events. Although it shows a grim picture, it also gives us hope. For example, if we consider the psychological subservience of the disadvantaged groups as a given, then the policies built around it will often be patronizing, and possibly ineffective. However, if we examine historical events as underlying factors behind present day oppression, we can design informed policies that

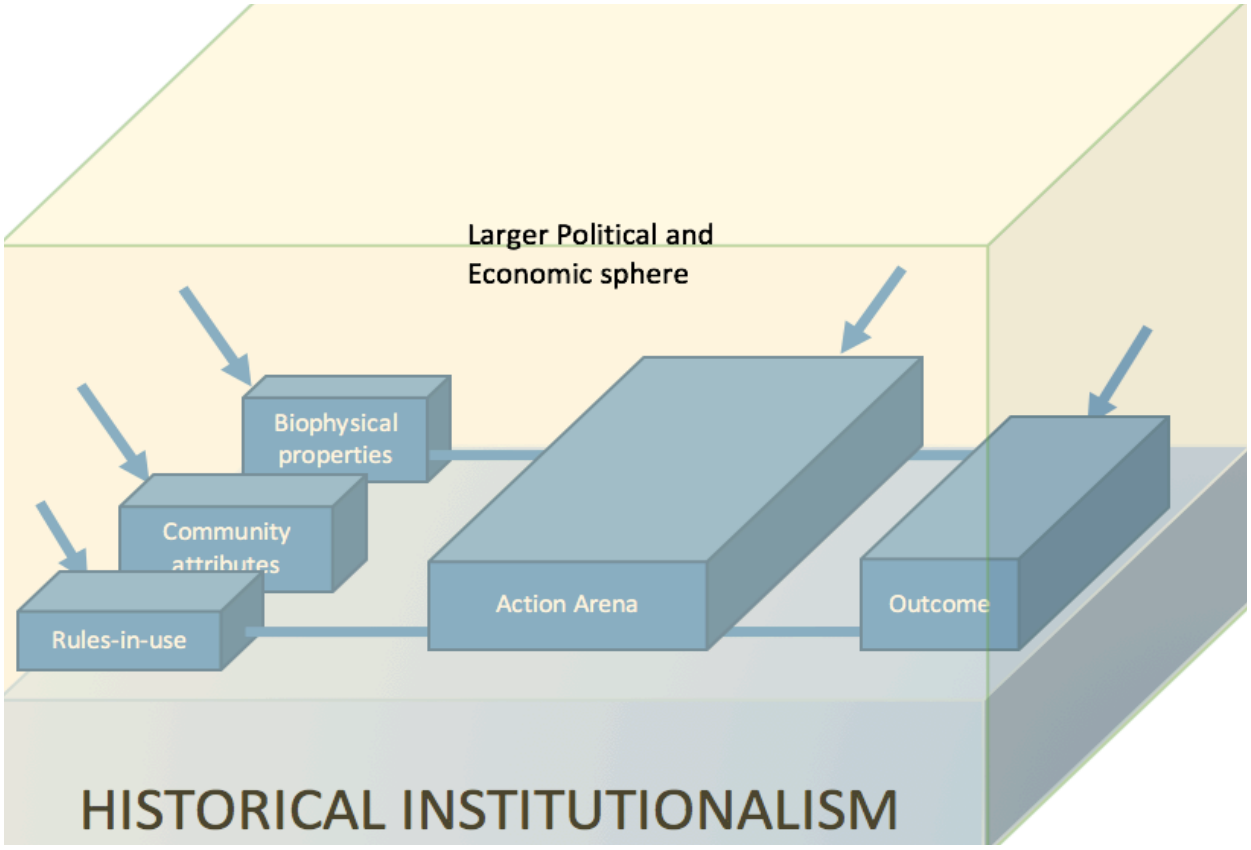
can correct the past mistakes. Policy suggestions can be made on various scales: national and local.

Ostrom's Institutional Analysis and Development (IAD) framework has shown its robustness by showing its applicability when examining collective action for various cases of natural resource management (Gautam and Shivakoti, 2005). However, the IAD framework has its criticisms too. For example, Steins and Edwards (1999) highlight the shortcomings of Ostrom's design principles, mainly arguing that it ignores the larger ecological context and wider political economy, while focusing on internal dynamics. Similarly, Agrawal (2002) points out that important external variables (like market, technology, population) and their impact on common pool resources have not been adequately addressed by the IAD framework.

Using the case of Nepal's community forestry program, the analysis presented in this study suggests the need to include historical institutionalism with the IAD framework to understand the foundations for local institutions and the values and norms shared by local actors. Local institutions are influenced by the larger political and economic forces, which often emerge from historical political events. The historical events not only shape the political and economic forces, but also shape the social construction, hierarchy of the local communities. Additionally, the historical events and their legacies also create a cognitive script for the local community members, affecting their incentives, their understanding of social appropriateness and their patterns of interactions. The actors interact with local and external forces, and their power relations are dictated by the historical events and its evolution into the current social structure.

Based on this argument, a revised policy framework is warranted. The aim of the framework is to constructively combine aspects of political ecology to fulfill the discrepancies of collective action founded on rational choice. Local institutions are based on larger socio-political attributes as well as a continuously evolving networks and collaborations, and an outcome of past events and current power relations.

Fig 6.1: Revised Framework for understanding community forestry



This revised framework uses historical analysis as the foundation for understanding the power dynamics and social construction and opens the subcategories of "community attributes", "biophysical properties", and rules in use to understand the preceding conditions. The power relationships that are built due to past political events determine the social and political sphere, a space where different actors collaborate and contest. The historical analysis can also provide a guideline (or explanation) to understand the norms and values shared by the local actors. More importantly, the historical analysis can provide a deeper analysis of the environmental history and community attributes, which are pivotal in understanding collective action for natural resource management.

Nepal's community forestry evolved from different political events that have influenced Nepali society and forests. The institutionalized power relationship between the government and the local communities has persisted, hindering local communities ability

to successfully manage their resources for their own benefits. For example, even though community forest user groups are considered autonomous bodies, the district forest office has a strong control over resource extraction and management. This uneven power relationship could be the result of historic power of the district forest officers during forest nationalization period coupled with current technocratic governance of environment. The illegal extraction and underlying economic industry can also be traced back to the historic extractive institutions. These extractive institutions are deeply embedded in the governance, political and economic sphere of the country.

The legacies of past political events not only influence the political and economic sphere, they have also created particular social structures. Understanding the historic roots and power distribution can provide an insight into community attributes, providing explanations to norms and values that do not reflect rational choice behaviour. The case studies that examine social structures, discourse, and power distribution can provide a cognitive script to understand how local communities interact amongst themselves.

The values and norms established in the society evolve to create certain social positions for the local actors. This research shows that local leaders interact with larger political and economic forces, indicating that they are not bounded to the local institution in an isolate manner. Just as the local actors are not completely bounded to the local level, larger political and economic forces are also not completely "external forces". The local actors and the larger forces interact within the socio-political and economic sphere that is rooted in historic policies and institutionalized by the social construction.

In simple words, this framework uses historical institutionalism as the foundation, uses the same attributes given by IAD framework; and frees the local actors—so that we can examine their patterns of interactions, within local institutions and with the impact of external forces. The framework utilizes the advantages of the IAD framework, while fulfilling for its loopholes, mainly by including larger political and economic forces and treating them as endogenous attributes.

For example, in the case of Nepal's community forestry program, it is evident that political parties have a large influence on local institutions. These political influences were deeply embedded in the local community and institutions, rather than being "external" variables. The larger forces are not necessarily contesting with the local actors for the resources, rather they establish and support local leadership, as the research results presented here show. Political parties and the power they have is inherent in the local context. The political parties are not just "external variables" imposing their demands on local institutions.

The IAD framework is founded on Cartesian method—that each unit in the framework can be unpacked and examined in detail (Ostrom, 2007). While it allows detailed analysis of each unit, it comes with a disadvantage—extended unpacking of each unit makes the framework unstable as it reveals different aspects of institutions that rational choice fails to explain. For example, the unit of "community attributes" can be unpacked to understand in detail about the community structure, but it also means that aspects of inequality, power relations, social construction and discourse surface as we unpack them, and rational choice cannot provide the theoretical foundation to include such variables. Following the suggestion from Peet and Watts (2002), this research is an attempt to understand collective action in by including aspects of political ecology that rational choice cannot accommodate.

Besides the discrepancies pointed out by other scholars, there are other issues in the IAD framework. Due to its foundation on game theory, it captures an iterative process through the feedback loop. The framework assumes that the outcome of collective action will feed back to the context (bio-physical properties, rules in use, and community attributes), so that the learning from the outcome will help actors negotiate and collaborate to improving their institutional arrangement. In an isolated system, this would be true. However in the real world, with various influencing forces (which are often larger than the institution of collective action), the feedback by itself can have lower significance. The historical analysis of Nepal's forest management shows that larger political processes and events heavily impact forest management practices and policies.

The revised framework includes historical analysis to understand the "context," rather than relying on an iterative loop based on game theory. By conceptualizing the case, the framework eliminates the assumptions made by rational choice, and at the same time includes aspects that can explain social structure, norms and values.

Without including the historical analysis, the IAD framework fails to understand differing incentives among the local actors, and also fails to include what it would refer to as "irrational behavior". For example, in the long term, community members benefit from protecting their resources, and even if they understood the long-term benefits, external political and economic pressures can negatively impact their decision-making. To understand the local institutional capacity and the varying incentives, analysis of individual actors and their benefits is warranted, which can be tedious and complicated. By providing a historical analysis to understand the influence of political and economic pressures, the revised framework compensates for the loopholes in the IAD framework.

On a policy level, including the historical analysis provides an insight into the causes behind degradation. Resource degradation has been blamed on the local community members, although it was caused by political events and sustained by larger political and economic forces. The revised framework shifts this burden away from the local community members and provides a deeper analysis to understand resource use, degradation to provide better-informed policy suggestions. The IAD framework cannot accommodate for the historical events, since it focuses on the local institution and present scenario. For example, the existing timber mafias (established historically) often use the poverty and unemployment in the local community for their own benefits. On the surface, it looks like the community members are involved in resource degradation (which, logically they are). However, research in the CFUGs in Kanchanpur shows that the larger economic and political forces feed such illegal extraction and it is the timber mafias with the help of political parties that use local members to capture the resources.

The IAD framework focuses on the local level, but it is evident that the patterns of interactions among actors are not confined within the local institution. The local actors frequently interact with the larger forces (political, government and economic), which in turn affect their power level and relationship. The pattern of interactions among the actors is dynamic, feeding into their power relationship. The IAD framework fails to capture this dynamicity, and the revised framework attempts to fulfill the discrepancy. For example, the local community leaders who are involved in the CFUGs often interact with larger political parties to enhance their opportunities and power relations. In cases where the local communities are stronger (e.g. reached CFUGs in Nawalparasi), these local leaders benefit from being accountable to their constituency, whereas in other cases (e.g. cases in Kanchanpur), the local leaders can succumb to the incentives and opportunities offered by the larger forces. By including a larger political and economic sphere as an important feature of the revised framework, the dynamic nature of interactions and power relationship can be captured. Additionally, including a larger political and economic sphere can also help understand the distrust among the local community members and stakeholders. Excessive influence of the larger forces can create a sense of disenchantment and skepticism for devolved environmental governance as was observed in the researched cases in Kanchanpur.

The arguments and the revised framework presented in this chapter are based on Nepal's community forestry program. A robust deductive argument requires multiple observations, which is not the scope of this study. Instead, comparing it to the New Institutionalism can help test the validity of the revised framework. Since we are examining CFUGs as local institutions, so the suggested revised framework for collective action should be applicable when scrutinized under the lens of institutional theory.

6.3 VALIDITY: USING THE NEW INSTITUTIONALISM

The arguments presented here are based on arguments put forward by Hall and Taylor (1996) and Schimdt (2006), where the authors advocate for the need to complement different institutionalisms (historical, sociological and rational) to understand political

processes. The authors examine the strength and weakness of each institutionalism, and argue that these three institutionalisms are complementary and together can explain the political processes and institutional arrangement. In similar vein, this research attempts to understand the institutional arrangement of Nepal's community forestry by complementing IAD framework with aspects of political ecology.

Table 6.1: The three institutionalisms

	Rational Choice	Historical	Sociological
Theoretical Foundations (actors' behavior)	Rational actors calculate, and strategically maximize their incentives. (Actors are motivated by interests)	Focus on structures and processes: unable to explain human agency. (Driven by institutional structures and path dependency)	Rationality is socially constructed and contingent upon culture and history. (Actors are motivated by appropriateness)
Theoretical Foundations (Role of institutions)	Represent the incentive structures to reduce uncertainties	Sets of regularized practices that structure action and outcomes	Present norms, cognitive frames, and meaning system that guide human action
Origin of Institutions	Functionalist (Institutions are created for a certain outcome)	Historically deterministic (continuities and path dependency)	Culturally deterministic (focus on cultural norms, routines and rituals)
Method	Deductive		Inductive
Strengths	Good at explaining reasons behind actors' behaviour within a given institutional incentive structure.	Good at explaining asymmetries in power relations associated with development of institutions	Good at explaining how institutions influence behavior by providing a cognitive script.
Weaknesses	Cannot explain individual's reasons for action within a given context (or any particular set of real political events)	Unable to explain human agency. Neither efficient (like RCI) nor purposive (like SI).	Lower level of generality, less parsimonious

Source: adopted from DiMaggio and Powell (1991), Hall and Taylor (1996), Campbell (2004), Schmidt (2006)

It is evident from the above table that the strengths of each institutionalism have the potential to complement for the discrepancies of other institutionalisms. For example, by allowing the rational perspective of "utility maximizing actors," rational choice institutionalism often neglects the power behind the operation of institutions. Historical institutionalism and Sociological institutionalism, on the other hand, include the inherent power dynamic as an important endogenous variable.

Historical Institutionalism provides a path dependent evolution of institutions, but does not include hypotheses about how institutions influence actors' choices. In contrast, the other two institutionalisms (sociological and rational choice) have distinctly different theories about the choices and preferences for actors. In rational choice institutionalism, it is argued that self-interested rational actors will attempt to maximize their utility, since actors are assumed to have a standard and stable preference (because in the rational sense, the actors' cognitive capacities are sufficient to identify the consequences, weigh their options and act in a utility maximizing manner).

Although rational choice institutionalism provides a universal assumption about actor's motivation based on self-interest, there are various factors that impede the "rational decision making" by the actors. For example, Scharpf (2000) argues that in an institution, the actors do care about normative obligations and aspirations, while trying to meet the individual and organizational self-interest. Since these kinds of actions are contextually relevant, sociological institutionalism can provide a better explanation of actors' decisions that are based on "appropriateness". Interpretation and legitimacy play an important role in creation and development of institutions, and since sociological institutionalism provides a cognitive script for actor's behavior, it can account for inefficiencies (due to normative interpretation and legitimacy) in institutions that rational choice fails.

Founded on the principles of rational choice, and complementing its discrepancies by adding aspects of political ecology, this study is an attempt to understand collective

action. Historical analysis, comparative case studies, and social network analysis provide a robust examination of Nepal's community forestry on macro and micro level. Reflecting on the arguments presented by Hall (2010), the revised framework combines all three institutionalisms.

The revised framework can be applied to evaluate community based natural resource management in Nepal and other places. Collective action is dependent on the context, and the historical institutionalism included in the revised framework provides the foundation and the context for communities, the available resources, and the interaction among them. Including an in-depth historical analysis helps to understand environmental dynamism and the political and social sphere that emerge from past political events. The historical analysis also provides an insight into the cognitive script that can help researchers understand actors' incentives, their patterns of interactions and how they evaluate the outcome to contest and collaborate for environmental governance.

This revised framework retains the generalizability of the IAD framework, while providing a contextual framework to include socio-economic and political forces that play an important role in collective action. In short, it provides generalizability rational choice, while including the specificity of contextual cases, making it applicable to different environmental governance institutions.

6.5 LIMITATIONS OF THE RESEARCH

This research attempts to include three levels of analysis, which also validates with the idea of combining the three institutionalisms. The historical analysis provides a larger social and political context, to narrate the story of forest management in Nepal. The case studies provide a comparative analysis of the local institutions, controlled and selected based on their ecological and social characteristics. Social network analysis of the stakeholders is used to examine the patterns of interactions among the actors involved in community forestry.

The breadth of this research has consequences for the depth of the analysis. Although historical analysis provides a context, a deep examination is not the scope of this research. Similarly, the research instrument designed for comparative case studies and network analysis were not able to accurately examine or measure the information. The idea behind this research was to par take in the theoretical debate for common pool resource management rather than focus on details for each analysis. There might be many discrepancies in this research that emerge from researcher's biases and ignorance, but there are three big discrepancies in this research (and analysis) that can be taken into consideration for future research.

1. Lack of information on political parties and their establishment in rural communities:

The analysis presented in this research provides an overview of large political events and their impact on society and forest condition. However, it was difficult present a more detailed historical analysis because there is not enough literature on the history of Nepal and examination of different political events. Due to the lack of available information, understanding of political parties and their deep-rooted establishment in the local communities is lacking.

The case studies showed that political parties exert direct and indirect influence on the local communities and institutions, impacting political decision-making processes. Although this influence was evident in all case studies, some communities were negatively impacted by the political parties' power. For the CFUGs in the Kanchanpur case study, the national political parties were criticized for protecting illegal activities (timber extraction) and promoting corruption among the government officials. However, in the Nawalparasi case study, although interviewees said that the political parties have a significant influence in decision-making processes, local community members had a more positive view of this influence.

The historical analysis presented here does not provide insight on how these political parties have become such powerful forces in the local communities. An overview of the establishment of political parties and their power relations within the local communities could help examine how larger political forces continue to shape the local institution. There is not enough literature on this, and probably structured interviews with political leaders[81] and activists can shed some light in this matter.

2. Difficulty in obtaining information from the disadvantaged groups:

During this research, local leaders and CFUG board members were approached for the access to community case studies. Although this helped to identify the selected household members, it also meant that these household members were interviewed in front of the community leaders. While interviewing female members of disadvantaged groups, often times males would intervene and answer for them (especially when the interviewee was confused or hesitant to respond).

Although this interaction provided detailed information about the operational procedures, it also showed that information was not widely distributed (women who were involved with the CFUG board had more information about the forest management). I was also unable to get perspective of socially disadvantaged groups, to understand their relationship with the resources and power in the decision making process. During the fieldwork, it was evident that members of disadvantaged groups are often not included in the decision-making process, which was attributed to women's inability to give time to the work. For example, in the Dailekh case study, CFUG board members said that women did not participate actively because of the time conflict with household chores. Women do and can participate actively—and they were doing so—in the mother's group. So the problem was not that the time conflicts with the household work, rather the *scheduled* for the CFUG meetings were inconvenient for women. A simple solution to

[81] Historic analysis of emergence of Nepali politics (especially multiparty system) can provide insights to how political parties influence and use the local resources. It can also provide a deeper look into the existing corruption and persistence of the timber smuggling industry.

this problem would be to schedule meetings and discussions at a time that is convenient for women.

Time conflict was not the only issue, disadvantaged groups (e.g. women) faced resistance from other societal forces, interfering with their ability to participate. While all the interviewed men members highlighted the benefit of social recognition, interviewed women presented a different scenario. For them it costs their time, complicates their gendered household obligations, and led to additional tensions with their social relationships in the community. More in-depth and uninterrupted interviews would have provided a look into the political makeup of gender relations. This could have big policy implications. Currently, policies are designed to push for inclusiveness, but existing social structures impede those half-hearted efforts.

An insight in the political power and discourse, especially in regard to gender relations could provide opportunities for policy prescriptions. Informed policies that are friendly towards the disadvantaged groups can be created if we understand the structure and discourse that continues to disenfranchise them. An anthropological research could lead in the direction.

3. Lack of proper data for social network analysis:

The research questions designed for social network analysis were not relevant during the field research. Certain hypotheses about relevant stakeholders and their power relations in the local institutions turned out to be wrong. For example, in many cases, only other stakeholders in community forestry (besides the CFUGs) were forest office and local public institution (recipient of support from the CFUG). The case of Nawalparasi was different- local institutions were active stakeholders in CFUG (through collaboration and mutual gains).

The questions were designed to collect quantifiable data (observable in a discrete fashion), but the questions were not contextually relevant. For example, according to the

research instrument, frequency of interaction was measured by scheduled meetings and interactions per month (or year), but often interviewees responded with "whenever needed," which meant anywhere from a few times in a week to once in a year. Although there were scheduled monthly meetings for board members, there were far more meetings scheduled and held on a need basis. The research questions were not appropriately designed to accommodate for this.

This data also fails to reveal networks that are political in nature. Although political forces influence local institutions, due to lack of insight, the research questions could not obtain information about political networks among different stakeholders. One of the systemic problems was that local leaders and CFUG board members (who were politically powerful) did not provide any information about the political influence, and the information from other groups were vague and often limited to "political influence is everywhere, it is here too." The data are limited to networks that involve collaboration in operations, not networks that are based on political power relations.

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APPENDICES

APPENDIX A:

REVISED SES FRAMEWORK & THE POLITICIZED IAD FRAMEWORK

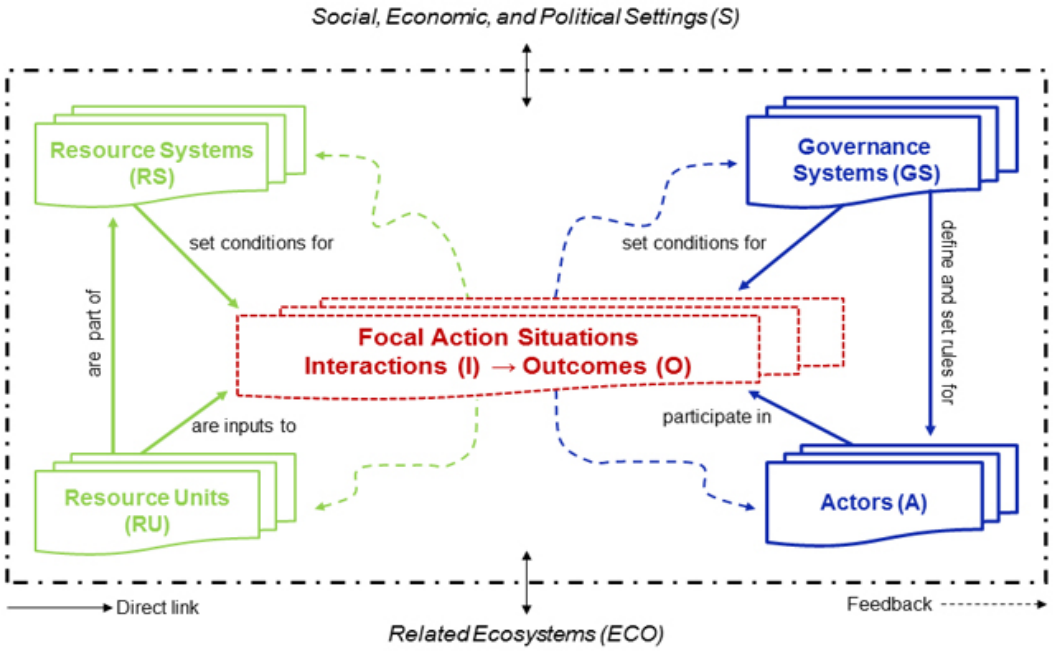

Fig 1: Revised SES framework (Source: McGinnis and Ostrom, 2012)

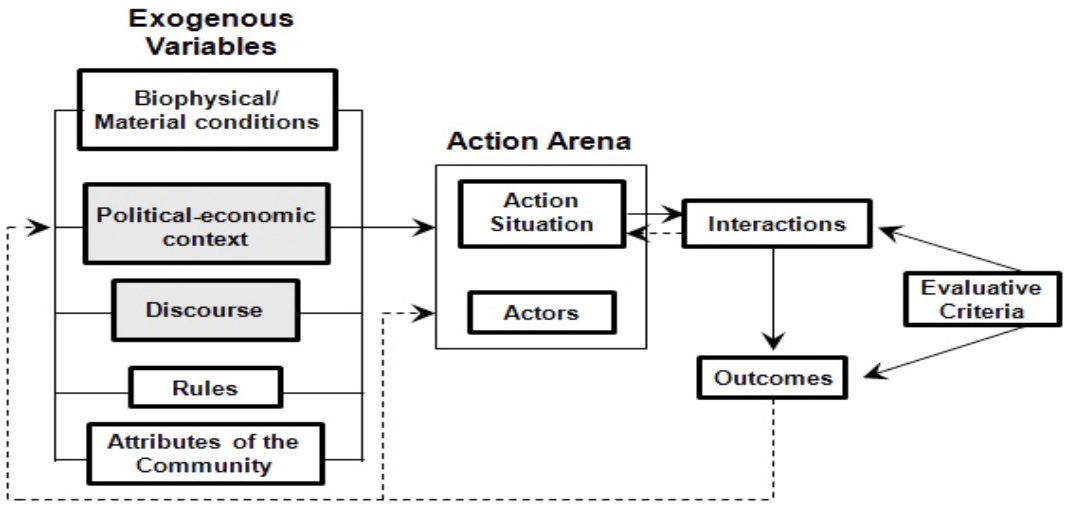

Fig 2: The Politicized IAD framework (Source: Whaley and Weatherhead, 2014)

APPENDIX B:
DIFFERENT POLICIES AND THEIR EFFECTS ON NEPAL'S FORESTRY SECTOR

Year	Policy/Legislation	Effect of the Policy/legislation
1957	Private Forest Nationalization Act	Indiscriminate cutting of forests Conversion of private forest into farm land in Terai
1961	Forest Act	Forest Categorization Forestry Officials empowered
1967	Forest Provision Act, special provision	Judicial power to forestry officials Law enforcement power reinforced
1976	National Forestry Plan	Recognition of people's participation in forest management Concept of village Panchayat forest
1977	Amendment in Forest Act	Provision of Panchayat Forest (PF) and Panchayat Protected Forest (PPF)
1978	PF and PPF Rules	Handing over of National Forest to village Panchayat (elected village body)
1982*	Decentralization Act	Authority to District and Village Panchayat Promotion of User's Committee concept
1987	Revision of PF and PPF Rules	Provision of User's committees for forest management
1989*	Master Plan for Forestry Sector	Incorporated the concept of CFUG Priority given to community forestry
1993**	Forest Act	Users as managers of forests CFUG empowered for forest management
1995**	Forest Rules	Process of community forestry detailed Forestry staff's role changed from custodial to facilitation
1999	Revision of Forest Act	Control mechanism brought for violation of operational plan Provision for spending 25% in forestry activities
2000	Forest Policy 2000	Degraded and scattered forest in Terai and inner Terai can be managed as community forests CFUGs in Terai give 40% of their income from the sale of surplus timber to government for program implementation, which was reduced to 15% from only two species through the financial bill enacted in July 2004)

Source: Community Forestry Division, Department of Forests, Kathmandu, Nepal

APPENDIX C: CENTRALITY VALUES FOR SOCIAL NETWORKS

HILL DISTRICTS

Table 5.1: Actors in Lamatar CFUG and their respective centrality values

Actor	Attribute	Degree	Eigenvector Centrality	Between-ness Centrality	Closeness Centrality
Chair	Male, upper-caste	12	0.889459359	0.139957265	0.5
Advisor	Male, upper-caste	2	0	0	0.666666667
B. Mem	Male, upper-caste	2	0	0	0.666666667
B. Mem	Female, Dalit	1	0	0	0.4
B. Mem	Female, upper-caste	1	0	0	0.4
Member	Male, upper-caste	1	0	0	0.4
Member	Female, upper-caste	1	0	0	0.4
Member	Female, Dalit	1	0	0	0.4
CRC	Local platform	8	0.689698528	0.082264957	1
VDC	Local govern. (dev)	1	0	0	0.4
DFO	Forest government	6	1	0.108974359	0.75
NGO	Local NGO	3	0	0	0.8
Donor	International NGO	4	0.349133691	0.002136752	0.75

Table 5.2: Actors in Dailekh CFUGs and their respective centrality values

Actor	Attribute	Degree	Eigenvector Centrality	Between-ness Centrality	Closeness Centrality
Chair	Male, upper-caste	9	0.89332999	0.26785714	0.75
B. Mem	Male, upper-caste	4	0.01047903	0.01785714	0.57142857
B. Mem	Female, upper-caste	1	0	0	0.5
Member	Male, upper-caste	1	0	0	0.5
Member	Female, upper-caste	2	0	0	0.5556
Member	Female, Dalit	2	0	0	0.5556
DFO	Forest government	5	1	0.00892857	0.5
NGO	Local NGO	5	0.64469224	0.13392857	1
Donor	NGO	3	0.32939365	0	0.75

NAWALPARASI (TERAI)

Table 5.3: Actors in Sundari CFUG and their respective centrality

Actor	Attribute	Degree	Eigenvector Centrality	Betweennes s Centrality	Closeness Centrality
Committee		17	1.0	0.406593	0.7
B. Mem	Female, Dalit	2	0	0	0.470588
Tole Rep.	Fem, upper caste	8	0.601971	0.142857	0.583333
Subcommittee	Fem, upper-caste	2	0.0	0.0	0.533333
Member A	Male, upper-caste	2	0.221302	0	0.466667
Member B	Male, upper caste	2	0.221302	0	0.466667
Member C	Fem, upper caste	1	0	0	0.444444
Member D	Female, Dalit	2	0	0	0.533333
DFO	Forest government	3	0.164564	0.002747	0.35
Ilaka Office	Forest office	4	0.437407	0.098901	0.5
VDC	Local govt.	1	0	0	0.444444
Drinking water	Community	1	0	0	0.444444
FECOFUN	District level	4	0	0.0	0.571429
NGO	Local, national	6	0.595482	0.002747	0.466667
Donor Agency	International	5	0.594521	0.0	0.466667

Table 5.4: Actors in Amar CFUG and their respective centrality

Actor	Attribute	Weighte d Degree	Eigenvector Centrality	Betweennes s Centrality	Closeness Centrality
Committee		13	1	0.454545455	0.6363636
B. Mem	Fem, Dalit	2	0	0	0.5333333
Tole Rep.	Male, Upper caste	8	0.732352493	0.204545455	0.6363636
Subcommittee	Male, upper-caste	6	0.019903439	0.022727273	0.642857
Member	Male, upper-caste	3	0.318728613	0	0.4375
Member	Male, Dalit	3	0.318728613	0	0.4375
Member	Fem, upper-caste	3	0.318728613	0	0.4375
Member	Very poor HH	3	0.019903439	0	0.5294118
DFO	Forest government	3	0.42035737	0.045454545	0.3333333
Ilaka Office	Forest office	4	0.595209208	0.121212121	0.4666667
VDC	Local govt.	2	0.00429235	0	0.4210563
Drinking water	Community	2	0	0	0.45
FECOFUN	District level	2	0.42923497	0.037878788	0.28

KANCHANPUR (TERAI)

Table 5.5 Actors in Baitada CFUG and their respective centralities

Actor	Attribute	Degree	Eigenvector Centrality	Betweennes s Centrality	Closeness Centrality
Comm. Mem	Male, Dalit	6	0.62682	0.088889	1.0
Comm. Mem	Male, Upper caste	2	0.42311	0	0.66667
Tole Rep.	Male, Upper caste	2	0.42311	0	0.66667
CFUG member	Female, Dalit	0	0	0	0
CFUG member	Male, Dalit	1	0	0	0.6
VDC	Local Govt.	0	0	0	0
FECOFUN		0	0	0	0
Donor Agency	National	1	0.06802	0	0.428571
NGO	Local level	3	0.06802	0.055556	0.666667
DFO	Forest office	2	1	0.022222	1.0
Forest Officer	Local	1	0.591493	0	1.0

Table 5.6 Actors in Bacchela CFUG and their respective centralities

Actor	Attribute	Degree	Eigenvector Centrality	Betweennes s Centrality	Closeness Centrality
Comm. Mem	Male, upper caste	8	1.0	0.030303	1.0
Comm. Mem	Male, upper caste	1	0	0	0.66667
Comm. Mem	Fem, upper caste	2	0.6140585	0	1.0
CFUG member	Fem, upper caste	1	0	0	0.66667
CFUG member	Male, upper caste	1	0	0	0.66667
CFUG member	Male, Tharu	1	0	0	0.66667
FECOFUN		0	0	0	0
Donor Agency	National	3	0.0561234	0.015152	0.75
NGO	Local level	2	0.0561234	0.055556	0.5
DFO	Forest office	5	0.733962	0.0151515	1.0
Forest Officer	Local	2	0.431483	0	1.0
VDC	Local govt.	0	0	0	0
Health post	Local	0	0	0	0

APPENDIX D
RPP REPORT ON STRATEGIC OPTIONS FOR DRIVERS AND UNDERLYING CAUSES OF FOREST DEGRADATION IN NEPAL

*T- Terai, H- Hills, M- Mountains

Drivers	Underlying Causes	Nature of causes	Strategic options	Affected Regions
High dependency on forests and forest products (timber, firewood, and other NTFPs)	(1.1) Poverty and lack of livelihood alternatives	Direct	Scale up investment in non-forestry sector employment programs targeting to rural areas to reduce forest dependency (especially for poor) Provide vocational education Create skill-based training opportunities for economically poor and marginalized peoples Establish environmental tax mechanism and use revenues to generate employment alternatives for forest-dependent poor and marginalized peoples Channel local government resources (i.e., matching funds and resource leverage) to forest-dependent poor and marginalized peoples to promote livelihood improvements Promote PES mechanisms for the income generation among forest-dependent poor and marginalized peoples.	T, H
	(1.2) Limited	Direct	Increase investment and access	T, H, M

	access to alternatives for fuel wood and timber		to alternative energy technologies for forest-dependent poor and marginalized people Promote access to technologies that enhance fuelwood efficiency and promote fuelwood substitution for forest-dependent poor and marginalized people Pilot wood-substitute building materials (e.g. bamboo housing) Promote cost-effective wood technologies (e.g. particle board, pressed board) for forest-dependent poor and marginalized communities Promote greater access for forest-dependent poor and marginalized peoples to alternative energy subsidies Develop user-friendly policies that subsidize private plantations and on-farm, multi-purpose tree planting for fuelwood and timber	
	(1.3) Inefficient forest product use	Direct	Promote fuel-efficient cook stoves and fuelwood technology for forest-dependent poor and marginalized people with respect to forest law enforcement Define ownership and use	T, H, M

			rights for all forest land Bring all forests under an identified and agreed forest management modality Prioritized transfer of forest areas to community-based management regimes and Develop policies that encourage private investment in efficient and alternative timber technologies (e.g. bamboo housing, timber drying, timber treatment, timber processing etc) Pilot and promote use of more efficient wood technologies Explore and pilot environmentally sound alternatives to wood use (including wood recycling and recovery) Implement sustainable management of forest that enhances forest productivity under different forest management regimes Build capacity in improved and cost-efficient forest product utilization technologies Build public awareness and promote attitude change to real value of forest products	
Illegal Harvest of Forest Products	(2.1) Weak law enforcement and impunity	Direct/ Indirect	Institute forestry sector institutional reform to increase accountability and transparency of all concerned	T, H

			agencies Strengthen the incentive and punishment system for both government officials and community-based forest management groups Restructure and reorient/sensitize the GoN staff and HRD systems (including DoF) to ensure removal of offenders Work with the media to 'name and shame' individuals and organizations involved in illegal forest products trade Create better awareness and capacity amongst all law enforcement agencies e.g. police, armed police, army, border police, on forest law enforcement issues Expand participatory forest management systems to forest areas where law enforcement is difficult. Pilot and implement effective, participatory M&E mechanisms at different levels Implement a study on increasing the effectiveness of the judiciary and judicial process with respect to forest law enforcement	
	(2.2.) Weak	Indirect/	Define ownership and use	T, H, M

	Governance	Direct	rights for all forest land Bring all forests under an identified and agreed forest management modality Prioritized transfer of forest areas to community-based management regimes and develop appropriate forest management modalities for government forests Promote and establish decentralized and accountable multi-stakeholder forest governance structures (e.g., DFCC) and support multi-stakeholder district forest sector planning (DFSP) and VDC planning Reactivate multi-stakeholder forest governance structure at national level (FSCC) Sensitize political parties on forest sector governance issues through the parliamentary committee on Natural Resource Identify and address contradictory legislation (e.g., between Forest Act 1993 and other acts) and cross-sectoral policy issues through National Planning Commission facilitation Assess alternative governance arrangements for protected	

			areas (e.g., involve indigenous peoples and local communities and local government in management)	
	(2.3) Inefficient distribution mechanisms for timber and firewood	Indirect	Establish a mechanism for periodic analysis of demand and supply of forest products by geographic region Pilot and study alternative and more efficient distribution and marketing mechanisms for timber and firewood (e.g., community-based, private, local-government-based) Establish a mechanism for analysis of forest product demand and supply (legal/illegal) by district, and develop distribution programmed to address demand-supply gaps. Carry out a study to identify options for restructuring the Timber Corporation of Nepal, Forest Product Development Board and other sectoral public corporations	T, M
	(2.4) Market failure	Indirect	Study the forest product (timber and fuelwood) value chains (illegal/illegal) to identify weaknesses and 'leakage' and to assess opportunities for tackling them Develop a mechanism to	T, H, M

			engage the private sector in the forest sector for the entire value chain of forest products, from planting to end-product development Carry out a study to identify alternatives to the current tax and royalty systems for forest products and implement the recommendations to foster a more competitive market Study ways for deregulating markets for forest products (including examples from elsewhere) and implement resulting recommendations	
	(2.5) Poverty and lack of livelihood opportunities	Indirect	Scale up investment in non-forestry sector employment programs targeting rural areas to reduce forest dependency (especially for forest dependent poor and marginalized people) Promote off-farm income generation activities for forest-dependent poor and marginalized households Invest in sustainable forest-based enterprises to create more employment opportunities in the forestry sector (both timber and NTFPs) Implement effective plan for sustainable management of forests that enhances forest	T, M

			productivity under different forest management regimes Provide vocational education Create skill-based training opportunities for the forest dependent poor and marginalized peoples Increase awareness and access to education, health and other livelihood services Establish and support public land management for identified poor households (Terai) Promote land allocation for poor households and income generation from products found in community forests Channel local government resources (matching funds and resource leverage) to forest-dependent poor and marginalized peoples for livelihood improvements	
	(2.6) High cross-border demand for forest products	Direct	Sensitize border authorities and collaborate with them for effective forest law enforcement – especially at border crossings Study potential for involvement of local bodies in forest law enforcement and regulating the movement of forest products	T, M

			Promote large-scale private plantations to meet both domestic and cross-border demands for timber (Terai) Explore cross-border law enforcement strategies and inter-country negotiations with Indian and Chinese (Tibetan) authorities Promote and provide incentives for export and cross-border movement of finished forest products	
Unsustainable harvesting practices	(3.1) Weak governance mechanisms	Direct	Restructure DoF and (re-) orient and sensitize the DoF staff. Revise ToRs for DoF staff, (re-)orient and sensitize them. Promote and establish decentralized and accountable forest governance structures (egFSCC/DFCC) Explore participatory models for protected area management. Prepare national forestry strategy through multi-stakeholder process (to replace the expired Forestry Sector Master Plan), incorporating specific strategies for the Mountains, Terai and Middle Hills regions Develop demand-based forest and land-use plans; translate	T, H, M

			them into DFSPs and implement them Improve and execute existing Forest Management Plans (Five-year district forest operational plans) Clarify land (and carbon) tenure and use rights Promote handover process for community-based forest management regimes	
	(3.2) Inadequate Budget for research and development	Direct	Strengthen coordination mechanisms for promoting policy and planning linkages among the MoFSC, Ministry of Finance, and the National Planning Commission. Pilot sustainable forest management practices and disseminate results to political parties, civil society and other concern stakeholders Facilitate non-governmental organizational to generate fund for R&D	T, H, M
	(3.3) Insufficient technical inputs	Direct	Enhance technical capacity of government officials, indigenous peoples and local communities, and service providers on sustainable forest management and harvesting. Pilot and demonstrate sustainable harvesting practices in the field.	T, H, M

Forest fire	(4.1) Carelessness	Direct	Increase community participation and awareness in forest fire management Develop institutional and technical capability of the extension division of the MoFSC, DoF, DFO, local community-based institutions and other stakeholders for awareness- raising on forest fire Provide alternative technology for charcoal production Include awareness raising about forest fire management in school curricula	T, H, M
	(4.2) Intentional	Direct	Increase community awareness and participation in forest fire management. Develop effective mechanism for forest fire monitoring and control. Develop forest fire strategy plan and review existing laws, rules and regulations. Promote multi-purpose fodder and grass species planting and management and encourage stall feeding. Promote use and access to alternative fertilizer to replace shifting agricultural practices in forest areas and farmlands.	T, H, M

			Provide alternative sources of income for poor people. Review current provisions of the forest act to kill wild animals (tiger/leopard) affecting rural areas Build fire management technical capacity among all stakeholders who are involved in fire fighting	
	(4.3) Weak forest fire management practices	Indirect	Prepare strategy to promote community participation in forest fire management. Implement effective plans for sustainable management of forest that enhances forest productivity under different forest management regimes Develop district forest fire management plans. Periodically develop and implement community-based forest fire management plans based on risk assessment. Develop technical capacity among all stakeholders. Train fire fighters and provide firefighting equipment. Provide insurance for fire fighters. Establish forest fire monitoring systems and firefighting network at	T, H, M

			different levels.	
Encroachment	(5.1) Expansion of Agricultural land	Direct	Promote the application of Sloping Land Agriculture Technologies. Invest to conserve land productivity. Increase handover of forests to community-based forest management regimes. Strengthen the incentive and punishment system for government officials, as well as for community-based forest management groups. Develop national and local land-use policies, planning and implementation of plans. Demarcate and regularly monitor forest boundaries. Promote and establish decentralized and accountable multi-stakeholders forest governance structures (for example, FSCC/DFCC). Enhance value of standing forests through promotion of NTFP markets Promote local and regional-level PES regimes. Increase awareness to raise community ownership Invest in better agriculture practices	T, H

			to increase productivity and address food security. Implement effective plans for sustainable management of forest that enhances forest productivity under different forest management regimes	
	(5.2) Poverty	Indirect	Develop land reform and agricultural policies (including cross-sectoral policies) to address fragmentation and inequitable land distribution. Increase in investment for creation of forest product alternatives and non-forest sector employment in rural areas to reduce forest dependency (especially for poor) Invest in better agriculture practices to increase productivity and address food security, including on barren lands. Increase and ensure the equitable sharing of forest-related benefits, including carbon markets	T, H
	(5.3) Politically induced		Sensitize political parties and develop mechanisms to get their commitment.	T, H
	(5.4) Unclear land tenure, policy and	Indirect	Develop national and local land use policies, planning and implementation of plans.	T, H

	planning		Promote land tenure reform at both the national and local levels. Define and transfer a larger bundle of rights Improve policy coordination among Forest, Land Reform and Agriculture Ministries for effective cross-sectoral implementation of land policy and administration. Develop institutional and legal mechanisms to provide increased access to forests to poor and landless families Provide formal endorsement of forests managed informally.	
Overgrazing	(6.1) Governance vacuum	Indirect	Expand coverage in transferring to community-based forest management modalities Implement effective plans for sustainable management of forest that enhances forest productivity under different forest management regimes Support multi-stakeholder district forest sector planning for all district-level (DFSP) and VDC-level forestry sector planning. And, Promote land tenure reform at the national and local levels.	T, M, H

	(6.2) High number of low productivity livestock	Direct	Improve coordination between MoFSC & Ministry of Agriculture for improved breeding technologies, practices and financial resources. Improve access to breeding improvement programs. Explore and develop mechanisms to dispose of unproductive livestock. Increase access to alternative sources of fertilizer.	T, H, M
	(6.3) Limited alternatives for fodder	Direct	Develop and execute plans to promote fodder production on private and public lands. Increase fodder production from forest land (including on land allocated for poor households inside community forests). Implement effective plans for sustainable management of forest that enhances forest productivity under different forest management regimes Increase technology for and access to concentrated feed at local level and investments to promote stall feeding. Scale up fodder reserve system, especially silage and hay, for use during slack	T, H, M

			periods.	
	(6.4) Limited alternative income sources	Indirect	Invest in sustainable forest-based enterprises to create more employment opportunities in the forestry sector (both timber and NTFPs). Scale up investment in non-forestry sector employment programs targeting rural areas to reduce forest dependency (especially for poor). Provide vocational education starting from secondary school level. Increase skill-based training opportunities for the poor. Invest in commercial livestock farming at local level to address the need for local markets and subsistence	T, H, M
Infrastructure development	(7.1) Inconsistencies within and among forestry policies and various development policies	Indirect	Review and revise policies to make them more consistent with each other. Improve coordination and planning among development projects, MoFSC and other ministries, NPC and the National Development Council. Promote integrated planning, monitoring and evaluation of infrastructure development	T, H

			projects. Make provision for the compulsory substitution of equivalent forest land used for non-forestry land use	
	(7.2) Weak accountability mechanisms for planning and approval of development projects	Direct	Ensure integrated local level planning, monitoring and evaluating of development projects, including local road building. Sensitize policy makers to forest-related planning issues. Sensitize local government to forest-related planning issues. Implement compensation mechanisms for private land lost due to road construction (to ensure forest land is not used)	T, H
	(7.3) No EIA, IEA or follow-up monitoring	Direct	Make IEE and EIA compulsory for all forest land use conversion projects including infrastructure development Develop regular joint monitoring and feedback mechanisms in the implementation of plans. Promote integrated planning, monitoring and evaluation of development projects. Improve coordination among development projects and	T, H

			activities of MoFSC and other ministries.	
Resettlement	(8.1) New economic growth prospects (e.g. Oil and gas, cement factory, airport, hydropower dam)	Indirect	Make provision for the compulsory substitution of equivalent forest land used for non-forestry land use.	
	(8.2) Increased demand for land for new settlements	Indirect	Strengthen law enforcement for unregulated settlements and address impunity Provide alternative settlement areas on non-forested land	T
	(8.3) Poorly enforced planning regulations	Indirect	Ensure integrated local-level planning, monitoring and evaluation of development projects including local road building Strengthen law enforcement related to planning and infrastructure development Sensitize policy makers on forest-related planning issues Sensitize local government on forest-related planning issues	T
Expansion of invasive species	(9.1) Lack of proven eradication practices	Direct	Develop and execute research plan targeting invasive species. Disseminate the results to wider stakeholders and	T

			integrate the result into policies and plans. Sensitize concerned authorities on their roles and responsibilities to immediately act to overcome the problem.	
	(9.2) Frequent forest fires	Indirect	Promote community participation in forest fire management and fire control Develop institutional and technical capacity of the extension division of the forest department and other stakeholders to prevent and fight forest fires	T, H, M
	(9.3) Overgrazing	Indirect	Expand coverage and accelerate transfer to community-based forest management modalities in all regions Develop and execute plans to promote fodder production on private and public lands Increase fodder production from forest lands (including land allocation for poor households inside community forests)	T
	(9.4) Opening of canopy		Enhance technical capacity of Government officials, indigenous peoples, local communities and service providers on sustainable forest management and harvesting. Pilot and demonstrate	T

			sustainable harvesting practices in the field Expand coverage and accelerate transfer to community-based forest management modalities in all regions	
	(9.5) Introduction of new bio-fuel species	Direct	Conduct detailed studies before introducing exotic species Increase monitoring of importing and planting of exotic species.	T, H

Source: Nepal's Readiness preparation Proposal, Govt of Nepal (2010)

APPENDIX E: PROGRESSIVE CHANGES IN FORESTRY REGULATIONS

(PF= Panchayat Forests; PPF= Panchayat Protected Forests)

Issues	1978		1979 amendment		1987 amendment		Act amending some forest Acts, 1991/92	Forest Act 1993 and 1995 regulations	Forest Act 1993, first amendment 1999	Present, effective from July 2004 Financial Ordinance and Forest Policy 2000
	PF	PPF	PF	PPF	PF	PPF	CF (PF/PPF)	CF		
Forest Area	<125 ha	<250 ha	<125 ha	<500 ha	No limit	No limit	No limit	No limit	No limit	No limit in hills but only small and isolated patches in Terai
Forest condition	Degraded Forests and Plantation	Any condition	Degraded forest requiring 66% of plantations	Any condition	Degraded Forests and Plantation	Any condition	Any condition	Any condition	Any condition	Degraded Forests and shrub lands
Geographical variation	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No
Benefit to the community (%)	100	40	100	75	100	100	100	100	100	100% in hills and 15% from sale of sal and khair outside of

Fund Mobilization	50% for Forestry	Not mentioned	50% for Forestry	Not mentioned	100% for Forestry	100% for Forestry	Local development and Forestry	Local development and Forestry	Local development and Forestry	25% for Forestry development
Price fixing	Panchayat	Govt. rules	Panchayat	Govt. rules	Panchayat	Govt. rules	Govt. rules	Govt. rules	CFUG	CFUG
Plan prepared by	DFO	DFO	DFO	DFO	Panchayat	Panchayat	CFUG	CFUG	CFUG	CFUG
Plan approval	Conservator	Conservator	Conservator	HMG	DFO	DFO	DFO	DFO	DFO	DFO
Forest Boundary	Politico-administrative boundary	Politico-administrative boundary	Politico-administrative boundary	Politico-administrative boundary	Politico-administrative boundary	Politico-administrative boundary	Politico-administrative boundary	Politico-administrative boundary	Traditional use rights	Traditional use rights
Management Authority	Panchayat	Panchayat	Panchayat	Panchayat	Panchayat	Panchayat nominated user committee	CFUG	CFUG	CFUG	CFUG
Technical issues	Not included	Not included	Not included	Not included	Not included	Not included	Not included	Not included	Included	Included
Government	Decisive	Decisive	Decisive	Decisive	Decisive	Decisive	Facilitation	Facilitation	Facilitation	Facilitation

Source: Modified from Acharya (2002)