Adaptive Collaborative Governance of Nepal's Community Forests:

Shifting Power, Strengthening Livelihoods

Cynthia L. McDougall

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Cynthia Lauren McDougall

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List of Acronyms

ADB: Asian Development Bank

ACM: adaptive co-management

ACG: adaptive collaborative governance

CBNRM: community-based natural resource governance

CF: community forestry

CBFM: community-based forest management

CBNRG: community-based natural resource governance

CGIAR: Consultative Group on International Agricultural Research

CIFOR: Center for International Forestry Research

IDRC: International Development Research Centre

IIRR: International Institute of Rural Reconstruction

IUCN: International Union for the Conservation of Nature

LI-BIRD: Local Initiatives for Biodiversity, Research, and Development

NRM: natural resource management

PAR: participatory action research

CHAPTER 1

Introduction

Chapter 1. Introduction

1.1 INTRODUCTION

This thesis examines the experience of community-based forest management in Nepal, from the perspective of governance. Community-based natural resource management (CBNRM), including forestry, faces intertwined challenges in the 21st century. The objectives of resource sustainability in the global South typically include the expectation that the participation of local actors will be equitable and that their livelihoods will be enhanced. However, CBNRM has been widely critiqued for its limitations and failures in meeting these objectives (Murray Li, 2002; Fabricius, 2004; Dressler et al., 2010; Shackleton et al., 2010). In some cases, a lack of attention to equity, power, and other social dynamics has contributed to perverse outcomes, such as the exacerbation of inequities (Malla, Neupane, & Branney, 2003; Saito-Jensen, Nathan, & Treue, 2010; Sunam & McCarthy, 2010). This points to the need for more nuanced, effective, and equitable approaches to governance in CBNRM—ones that can work in contexts of complex, power-ridden and ever-changing local realities.

Thinking and practice in natural resource management and governance has been moving towards social learning-based approaches. Adaptive collaborative governance is one such approach. While adaptive collaborative approaches are proposed in terms of their potential to enhance sustainability through dealing with the complexity of social and ecological interdependence and the fit between governing and ecological systems (Plummer et al., 2012), there is as of yet relatively little knowledge about if and how such approaches might contribute to more equitable, engaged and livelihoods-enhancing governance of CBNRM. This thesis aims to contribute to the development of such understanding. Specifically, it draws on research in Nepal to investigate if and how adaptive collaborative governance of community forestry (CF) influences patterns of engagement, livelihoods, and social capital and conflict, with a particular focus on women and the poor.

This chapter introduces the study on which this thesis is based by first presenting trends, strengths, and critiques of community forestry in the global South (Section 1.2). It then introduces the central concept of adaptive collaborative governance (Section 1.3). Next, it outlines the research context in Nepal, including the national conflict and civil movement that prevailed during the research period (Section 1.4). The chapter then presents the research problem addressed by the study, followed by the study's objectives and research questions (Section 1.5). The chapter concludes by outlining the organisation of the thesis (Section 1.6).

1.2 COMMUNITY FORESTRY IN THE GLOBAL SOUTH: TRENDS, PROMISES, PITFALLS

1.2.1 Trends: From government to community governance

While overall trends of decentralisation, marketisation and certification have emerged in recent decades in forestry around the world (Agrawal, Chhatre, & Hardin, 2008), two particular trends are central to this study of community forestry and adaptive collaborative governance: devolution and governance.

Increases in devolution

Forest governance in the global South—and North—in the 19th and 20th centuries was characterised by centralised, top-down management by the state (Agrawal, Chhatre, & Hardin, 2008). The approach relied on techno-bureaucracies for the creation and enforcement of formal rules and regulations, with little input from local people (Tole, 2010). The guiding rationale was that the state could better regulate and manage ownership, access and use of forests, and prevent over-use by private users or local people (Arts & Visseren-Hamakers, 2012a). As Arts and Visseren-Hamakers (2012) capture, however, colonial, post-colonial, capitalist and socialist states alike often

> "proved to be even worse managers of the forests: they over-exploited the resource, often in conflict with local livelihoods and with the state's own conservation objectives; they issued concessions to private companies or public enterprises without any effective monitoring mechanisms in place; and they were absent as managers, leaving the forests open to often illegal local use…" (p. 5).

Pressure thus emerged for reform of forest governance from a range of interests and actors. Their concerns included forest conservation and sustainable forest management by nongovernmental and international nongovernmental organisations (NGOs and INGOs) and international donor agencies, as well as the promotion of local rights by grassroots movements (Arts & Visseren-Hamakers, 2012a). Since the 1990s, the devolution of forest rights to communities has gained ground in many parts of the world, including the global South (Leach, 2002). Loosely collected under the heading 'community-based forest management' (CBFM), devolution has involved a "granting of independence and leverage to communities to decide how their forests will be managed and for what purposes" (Tole, 2010, p. 1312). Plummer and Fitzgibbon (2007, p. 38) emphasise that "[d]ecentralization and devolution have become norms in the domain of resource management…around the world…". Local communities and organisations now govern almost 200 million hectares more forests than they did in 1980s (Agrawal, Chhatre, & Hardin, 2008).

Expanding conceptualisation of governance

The past twenty years have seen a growing focus on and an elaboration of the concept of forest 'governance'[1]. Arts and Visseren-Hamakers (2012a) refer to governance as the "key buzzword in political sciences and public administration for the last two decades" (2012b, p. 4). Similar to the impetus for increased devolution, the focus on governance has been tied to the loss of legitimacy and perception of ineffectiveness of previous topdown centralised models of decision making about forests (Arts & Visseren-Hamakers, 2012a).

For the purpose of this study, community-based forest governance refers to processes of multifaceted decision-making and to the formal and informal institutional arrangements and power relations involved. The conceptualisation applied here acknowledges beyond-the-state and multi-level governance—including multiple levels within community institutions—and process aspects. It also recognises governance as a determining influence in shaping the distribution of power in natural resource decision making. This conceptualisation draws on several sources. It uses Folke et al.'s (2005, p. 444) definition as a starting point, whereby governance refers to "the processes, structures and practices by which people make decisions and share power". This aligns with Khan's (2005) definition of governance as the rules, norms, practices and procedures that determine "how power is exercised, for what purpose, and how it is shared and weighed during decision-making. In other words, governance is about decision-making" (Khan, 2005, p. 17).

This conceptualisation draw's on the International Union for the Conservation of Nature's (IUCN) underscoring that "governance is not the province of governments alone" (http://www.iucn.org/about/work/programmes/social_policy/governance_of_natural_resources_project/ accessed July 21, 2011). It is similarly further informed by Arts and Visseren-Hamakers (2012a) refinement, which highlights both governance's beyond-the-state and multi-scale attributes. The conceptualisation applied in this study additionally reflects Graham et al.'s (2003) further nuancing, which specifically draws attention to the *process* aspect of governing and to governance as determining *who* is involved. They describe governance as a "process whereby societies and organisations make their important decisions, determine whom they involved in the process and how they render account" (Graham, Amos, & Plumptre, 2003, p. 1).

[1] The field appears to continue to be growing still: (Arts and Visseren-Hamakers, 2012a) note that a Google Scholar search for 'forest governance' in January 2012 produced about 4,000 results; my own Google Scholar search two years later (January 2014) produced 276,000 results.

The general shift towards a forest governance paradigm is significant: it reflects a broadening and adjusting of scope from singular technical decision making about a resource by government to the multi-faceted and inherently social phenomenon of decision making. Moreover, in recent years there has been increasing discussion of the concept of 'good governance'[2] and a more normative focus on the quality of governance. The United Nations Department of Economic and Social Affairs' work on 'engaged governance' (focused on state-civil interaction), for example, argues for the revision of the normative underpinnings of governance such that it "can engage citizens more directly, more inclusively and more permanently into decision-making processes [of a state] with the goals of achieving, at the least, socially just and equitable [public service provision]" (Khan, 2005, p. 17). Similarly, the nature of governance is increasingly recognised for its critical role in influencing wellbeing (Graham, Amos, & Plumptre, 2003). As Kofi Annan—then Secretary-General of the United Nations—suggested, "good governance is perhaps the single most important factor in eradicating poverty and promoting development" (Birner, 2007, p.1).

1.2.2 Community forestry

Overview

Falling within the realm of community-based natural resource management, community forestry encompasses a wide variety of forms and arrangements. They all have a basis in both forest conservation and rural development (Arts et al., 2012). Nepal, as well as India, Bolivia, Kenya and Tanzania, have been pioneers in this field since the 1990s (Arts & Visseren-Hamakers, 2012b). The various forms that have developed in these and other countries go under different names, including participatory, social, joint, collective, or community forestry, or CBFM. Arts et al. (2012) refer to community forestry as ideally "carried out by, for, and with" communities (Western and Wright, 1994, p. 7 in Arts et al. 2012, p. 16). Tole (2010, p. 1312) notes, "In contrast to earlier top down approaches, CBFM implies a bottom up approach, one that involves a designation of power over forest resources to local people…"

Community forestry has fitted well with the shift away from centralised, top-down approaches, including with the International Monetary Fund's and World Bank's support to the downsizing of government bureaucracies. Similarly, the growth of literature

[2] The concept of good governance includes a range of attributes, frequently including those of responsiveness, inclusiveness, participation, integrity, accountability and fairness (Graham, Amos, & Plumptre, 2003; Khan, 2005).

evidencing the success of common property regimes has added legitimacy to the concept (Tole, 2010). Tole (2010, p. 1313) notes that an impetus has come from academic economic literature, which has argued for the "efficiency, conservation, equity and poverty reduction benefits of local control".

Promises and pitfalls

The anticipated benefits of community forestry programmes are wide-ranging, including resource sustainability, democratic participation and empowerment, and poverty reduction (Charnley & Poe, 2007; Maryudi et al., 2012; Sikor et al., 2013). The outcomes to date, however, have been considered to be "mixed" (Arts & Visseren-Hamakers, 2012a, p. 6; see also Agarwal, 2001; Gilmour, Malla, & Nurse, 2004; Charnley & Poe, 2007; Mustalahti & Lund, 2009; Beauchamp & Ingram, 2011). Tole (2010, p. 1313), for example, indicates that "the benefits…have often failed to materialize". Arts and Visseren-Hamakers (2012a) note that,

> "where success is reported, it usually relates to the forest condition rather than to enhancing local livelihoods or empowering local people. Also, [participatory forest management] has been subject to serious power struggles. Often, only local elites benefit, and conflicts between forest officials and communities over valuable timber resources and land rights have frequently been reported" (p. 6).

Here this study further explores three aspects of community forestry relevant to this study, including their equity implications: participation; poverty reduction; and, social capital and conflict.

i) Participation

The intrinsic and instrumental value of active participation is well recognised, at least in theory (Osmani, 2008). The instrumental value relates to the notion that involvement of those closest to the resources in terms of use, management and reliance increase the quality of decisions and effectiveness of implementation of such decisions. The former is associated both with allocative efficiency (and participants' potential to directly indicate their preferences) and technical efficiency (and participation's potential to address information asymmetries and accountability issues that affect design and implementation) (Osmani, 2008). Tole (2010) notes that,

> "[l]ocal agents and institutions are better placed than central governments to respond to local needs and wants. Local communities have the right 'information and incentives to make decisions best suited to (their) needs' (Grootaert & van Bastelaert, 2002, p. 6)….[L]ocal

> knowledge and skills can be harnessed to the advantage of the resource, thereby ensuring greater efficiency in use and greater internalization of externalities" (p. 1313).

Similarly, greater involvement in decision making is understood to increase the likelihood of effective implementation of CF initiatives, such as in following through with seedling care or tree planting. The intrinsic value of participation refers to the inherent value of participation, regardless of its influence on outcomes. This is illustrated in Sen's (1999) seminal work outlining social choice as contributing to 'development as freedom'.

Despite recognition of the value of participation, in practice, participation in community forestry and CBNRM has been perceived to be weak in many cases (Agarwal, 2001; Binot et al., 2009). Osmani (2008, p. 28) observes that although "there are some spectacularly successful examples of participatory governance in some parts of the world, they are far outnumbered by cases of failed and spurious participation". One key aspect of such weakness relates to unequal participation amongst the diverse socio-economic subgroups within communities. Historically local communities have been perceived in development and natural resource management as homogenous and internally consensual (Leach, 2002; Kumar, 2005). As such, communities have tended to be viewed in terms of their dominant elements (Charnley & Poe, 2007), such as men from elite subgroups. Braidotti et al. (1994), for example, note that community forestry applies the rhetoric of participation but fails to differentiate interests along the frequently conflicting axes of gender, class, and caste. Similarly, Arts et al. (2012, p. 20) refer to the neoliberal CBNRM discourse "being clouded by various romantic notions of 'community', which in turn leads to a range of paradoxes and ambiguities that have problematic, if not outright negative outcomes at community level". The relevant literature has been flagged as lacking a gender perspective on participation, in terms of "who participates and what effects this has, and what factors constrain participation" (Agarwal, 2001, p. 1624; see also Agarwal, 2009).

In contrast, other scholars have stressed that the weight of evidence indicates that communities are diverse, both one community from another, and also within each community (Leach, 2002; McDougall & Braun, 2003; Colfer, 2005a). The degree of diversity—and the social significance assigned to various differences—vary from one context to another and over time. Intra-community diversity relates to the cross-cutting categories of gender, ethnicity and caste, and wealth, as well as to other differentiators such as religion, migrant versus indigenous status, proximity to resources, and age. These significantly shape local actors' experiences, perceptions, needs and priorities as well as social and livelihood barriers and opportunities. Such social differences between community members strongly shape how natural resources are differently valued (Leach, 2002). Colfer (2005a, p. 2) has underscored that these differences also mean that different

members "have differential access to power in their relations with each other and with outsiders". The negotiation of these internal differences underpins "critical issues of equity, power and access to decision making and resources" (McDougall & Braun, 2003, p. 21). Decisions taken about resources will affect the wellbeing of diverse actors in different ways and with varying intensities. As such, the fact that communities as a whole have been gaining —or re-gaining—control over forests and other resources via devolutionary trends has not been sufficient in itself to engender equitable involvement within the local governance of these resources. Patterns of exclusion and inequity within local resource decision making remain (Colfer, 2005a). This is the starting point for Chapter 4 of this thesis.

ii) Poverty reduction

With more than one quarter of people in developing regions living on less than $1.25 per day[3] (IAEG, 2010), poverty alleviation remains a priority worldwide. The majority of the world's poor depend heavily on natural resources—often forests—for their livelihoods. The World Bank estimates that approximately "60 million indigenous people are totally dependent on forests, 350 million people are highly forest-dependent, and 1.2 billion are dependent on agroforestry farming systems that help to sustain agricultural productivity and generate income" (The World Bank, 2008, p. 15). A meta-analysis of 51 cases from 17 countries indicated that forest environmental income represented (on average) 22% of total income, with the main sources being fuelwood, wildfoods and fodder (Vedeld et al., 2007).

This dependence is one of the reasons that the devolution of forest rights to local people is significant to livelihoods and poverty. While not a 'ticket out of poverty', forests make an important contribution to the patchwork of subsistence and income activities that make up rural livelihoods. In other words, forests contribute to the productive *bricolage*, or "the flexible and dynamic crafting together of various livelihood options and its associated impacts on the landscape" (Ros-Tonen, 2012, p. 35).

Yet, as noted above, where success in community forestry is reported, it often relates to forest condition rather than livelihoods (Arts & Visseren-Hamakers, 2012b). Moreover, when there are benefits, it has been reported that local elites may be the main—or sometimes only—beneficiaries, thus reflecting distributional equity challenges (Malla, Neupane, & Branney, 2003; Gilmour, Malla, & Nurse, 2004; McDermott & Schreckenberg, 2009; Schreckenberg & Luttrell, 2009; Vyamana, 2009) This distributional imbalance is found in many CBNRM contexts (Colfer, 2005a). Chapter 5 of this thesis further investigates this issue.

[3] Purchasing power parity.

iii) Social capital and conflict

Social capital is widely held to be significant to natural resource management and sustainable development (Pretty, 2003; Plummer & FitzGibbon, 2006; Bodin & Crona, 2008). While it has multiple roots and definitions, as elaborated in Chapter 6 of this thesis, in this context it broadly refers to "the goodwill that is engendered by the fabric of social relations and that can be mobilized to facilitate action" (Adler & Kwon, 2002, p. 17). There are various forms of social capital, reflecting connections within groups ('bonding'), horizontal connections with other groups that may have different perspectives ('bridging'), and linking to external agencies to influence them or access resources ('linking') (Pretty, 2003; Pretty & Smith, 2004). Social capital is linked to participation and poverty alleviation—albeit with a 'chicken and egg' dilemma in the causal relationship—including through inclusion, cooperation and trust. It is also recognised to have 'dark side', for example through the creation or strengthening of domination or exclusive behaviours. While this dark side suggests a connection between social capital to conflict, there is little examination of this in the relevant literature.

While conflict is recognised as inherent in CBNRM (Cox et al., 2010), conflict—and associated power and dynamics issues—continue to represent an area in need of more indepth knowledge. Arts et al. (2012), for example, note that local dynamics underlying CBNRM initiatives are a 'blind spot' in the literature. Similarly, governance literature is critiqued for its lack of addressing power issues (Arts & Visseren-Hamakers, 2012b). Moreover, the literature reveals relatively little in terms of innovation-oriented views of social capital and conflict, in particular in terms of the connections between social capital, conflict and social learning-based innovations such as adaptive collaborative governance. Plummer and Fitzgibbon (2007) observe that the understanding of such linkages is in its infancy.

1.3 ADAPTIVE COLLABORATIVE GOVERNANCE: PARADIGM SHIFT, CONCEPT AND GAPS

1.3.1 From linearity and order to complex and dynamic systems

The predominant management paradigm of the scientific-industrial era framed nature in terms of a resource base that was perceived as largely stable and predictable (Folke et al., 2002a). Similarly, modern societies and economic systems have been framed as operating relatively independently from nature, with a minimised perception both of socio-economic system reliance on, and of impacts on, the integrity of natural systems. In tandem with the above-described topdown approach to natural resource management, a command-and-

control approach to management sought to bring order and predictability into natural resource management (Folke et al., 2002a). Furthermore, environmental problems were framed "as technical and administrative challenges devoid of politics" (Lebel et al., 2006).

Over the past several decades, increasing ecological stresses and crises on multiple scales and with increasingly evident impacts on societies have called the dominant paradigm into question (Folke, Carpenter, et al., 2002a; Folke et al., 2005). As Folke et al. (2002a, p. 438) note, "paradoxically, management that uses rigid control mechanisms to harden the condition of social-ecological systems can erode resilience and promote collapse". Such erosion can have collateral social consequences including negative impacts on human livelihoods, vulnerability, security and conflict (Folke, Walker, et al., 2002b).

The emergence of an alternative narrative—complex adaptive systems thinking—has catalysed changing perceptions about and ways of interacting within natural resource management. Its starting point has been the framing of the world in terms of coupled ecological and social-ecological systems (see Capra, 1996; Holling, 2001; Berkes, Colding, & Folke, 2003). In parallel with the rise of the contemporary environmental movement through treatise such as Carson's 'Silent Spring' (Carson, 1962), complex adaptive systems thinking makes explicit socio-economic system dependence on natural systems, as well as the impact of the former on the latter. Management within this paradigm is oriented not solely towards the production of ecosystem goods or services, but rather also towards consideration of ecosystems' longterm dynamic capacity to uphold the supply (Folke et al., 2002b).

Building on this, a complex adaptive systems perspective frames the world not as near equilibrium, but instead as characterised by "dynamic, non-linear relations, continuous change, discontinuities and uncertainties from complexes or suites of synergistic stresses and shocks" (Folke et al., 2002b, p. 6). The relationships between the coupled systems of society and natural resources are understood to be self-organising. This means that order, or macrolevel properties and patterns, emerge from the interactions amongst components, without control or steering by a particular agent or subsystem. These, in turn, feedback to influence the ongoing interactions (Folke et al., 2002b). Building on this, complex adaptive systems thinking also stresses a multi-scale perspective, that considers the "interactions of scale interactions across time and space in relation to adaptive renewal cycles…in social and ecological systems" (Folke et al., 2002b, p. 6).

One thread that runs through this thinking is the concept of managing resilience (Adger, 2000; Gunderson & Holling, 2002; Berkes, Colding, & Folke, 2003). In this context, resilience can be understood as "the capacity of a SES [social-ecological system] to

continually change and adapt yet remain within critical thresholds" (Folke et al., 2010, p. 1). This understanding builds on Walker et al.'s (2004, p. 2) earlier definition of resilience as "the capacity of a system to absorb disturbance and reorganise while undergoing change so as to still retain essentially the same function, structure, identity, and feedbacks". As such, it relates to the capacity of a system to absorb and handle shocks while still maintaining its functions (Folke et al., 2002b).

If socio-economic systems are reliant on natural systems being in certain states—i.e., capable of delivering certain services upon which our well-being, if not survival, depends—then ecosystem resilience is paramount for sustainability (Plummer & Armitage 2007). Managing resilience is thus a matter of environmental, social, and economic security (Folke, 2002b). Conversely, vulnerability in this context refers to the susceptibility of social and ecological systems to harm from external stresses and shocks (Folke et al., 2002b). As such, "[i]n a resilient system, change has the potential to create opportunity for development, novelty and innovation. In a vulnerable system even small changes may be devastating" (Folke et al., 2002b, p. 4). This in turn, is fundamentally related to adaptive capacity, which is:

> "the ability of a social-ecological system to cope with novel situations without losing options for the future, and resilience is key to enhancing adaptive capacity. Adaptive capacity in ecological systems is related to genetic diversity, biological diversity, and the heterogeneity of landscape mosaics (Carpenter et al., 2001a; Peterson et al., 1998; Bengtsson et al., 2002). In social systems, the existence of institutions and networks that learn and store knowledge and experience, create flexibility in problem solving and balance power among interest groups play an important role in adaptive capacity…" (Folke et al., 2002a, p. 17).

Lebel at al. (2006) underscore the critical importance of societies' capacity to manage resilience. Folke et al., (2002b, p. 4) describe the shift away from aspiring to "control change in systems assumed to be stable, to managing the capacity of social-ecological systems to cope with, adapt to, and shape change. Managing for resilience enhances the likelihood of sustaining development in changing environments where the future is unpredictable and surprise is likely…" As such, resilience-building relates to groups' or societies' ability to stay in a desired configuration, i.e., one that is sustainable, weathering shocks and stresses through on-going and effective adaptation and adjustment rather than having the system collapse. In other cases, managing resilience is about managing transformation. Transformability refers to "the capacity to initiate social transformation that moves away from unsustainable and undesired trajectories, toward new social-ecological trajectories

that strengthen and enhance management of desired ecosystem states and associated values" (Olsson, Folke, & Hahn, 2004, p. 22). In other words, it relates to situations in which there is a need to undermine the resilience of the existing system(s). This may involve introducing or allowing the emergence of new variables to create "untried beginnings from which to evolve a new way of operating when existing ecological, economic, and social structures become untenable…" (Olsson, Folke, & Hahn, 2004, p. 2).

Overall, while there is a considerable literature on resilience in ecological systems, and some, albeit much less on socio-ecological systems, there is still a need to further flesh out the linkages among resilience, and CBNRM, including community forestry[4].

1.3.2 Adaptive collaborative governance

Overview

The shift in perception—from natural resources as predictable assets to socio-ecological systems that are complex and dynamic—was accompanied by a call for an alternative approach to managing and governing natural resources: a more adaptive one. Moreover, the recognition of limits to and shortcomings of various forms of collaborative management, including co-management and CBNRM (e.g., Leach et al., 1999; Singleton, 2000; Conley & Moote, 2003), sparked a quest for further innovation. This study focuses on one such emergent innovation: 'adaptive collaborative governance'. As its name implies, the concept links the dynamic learning basis of adaptive management (see Holling, 1978; Lee, 1993) with the multistakeholder or cooperative aspect of collaborative approaches (Pinkerton, 1994; Borrini-Feyerabend et al., 2000; Carlsson&d Berkes, 2005). More specifically, adaptive collaborative governance is an approach in which groups of actors:

- consciously and explicitly base decision making in social learning and critical reflection;
- emphasise inclusion and equity in governance; and
- strive to engender effective connections and relations among actors and/or with groups of actors, including seeking to effectively manage conflict

(McDougall et al., 2008).

[4] For example, a Google Scholar search of key terms (January 9, 2013) produced the following results:

- ecological system + resilience: 133,000
- ecology + resilience: 118,000
- socio-ecological + system: 6,220
- CBNRM + resilience: 946.

Reflecting a perception of the governance context (both its socio-political and environmental aspects) as uncertain, complex and dynamic, such an approach differs fundamentally from more conventional approaches to NRM. It does so in that it frames management and governance as "processes of ongoing cooperative inquiry—or social learning—and innovation for continuous learning and improvement, rather than as the implementation of plans or 'management prescriptions' to fulfill set goals" (McDougall et al., 2008, p.33). As such, it implies a need for processes, norms and arrangements to be inclusive, learning-oriented, and enabling of linkages and involvement of diverse actors.

The above conceptualisation of adaptive collaborative governance emerged from the concept of adaptive co-management (subsequently adaptive collaborative management or 'ACM') as coined by the Centre for International Forestry Research (CIFOR) (Plummer et al., 2012), which was organisational home of this study (see Chapter 2 of this thesis, section 2.2 Organisational context). The adaptive co-management concept was crafted from a number of sources, most fundamentally, an integrating of adaptive and collaborative management approaches, as well as social, transformative and organisational learning, popular (adult) education and community development, and participatory learning and research models (Colfer, 2005b; Fisher, Prabhu, & McDougall, 2007a). As such, it resonates with other conceptualisations of adaptive co-management in its linking experiential and experimental learning together with collaboration with the goal of effective resource governance (Armitage et al., 2009; Olsson, Folke, & Berkes, 2004).

The language of adaptive collaborative *governance* is indicative that the concept differs in focus from adaptive collaborative (or adaptive co-)*management*. Specifically, it draws attention to social relations, power, and decision-making, rather than to the technical aspects of forest management (see also Folke et al., 2005). The concept also resonates with, but differs from, the concept of *adaptive governance* which Gunderson and Light (2006, p. 325) describe as an emergent framework that "deals with the complex human interactions that have been obstacles to the implementation of adaptive management", and "consists of social structures and processes that link individuals, organisations, agencies, and institutions at multiple organisational levels" (Gunderson & Light, 2006, p.330). Adaptive collaborative governance, in this study's application, is distinct from the above concepts, in that it purposively applies a social learning and adaption process *to the governance itself (*including the linkages), not only to the management of the resources. In other words, the adaptive cycles that form the basis of the approach relate to learning about and improving the governance or shared decision-making processes, arrangements and norms, not only to technical decisions about forests.

Finally, in this study's conceptualisation, adaptive collaborative governance is purposefully oriented towards continuously improving the quality of decision making and facilitating equity (McDougall et al., 2008), both in terms of engagement (participation) and regarding access to resources (distribution). Equity here refers to a subjective quality of 'fairness'—in contrast to 'equality', which refers to a quality of 'sameness' (Cochran & Ray, 2009). Equity is relevant to CBNRM—and sustainable development—in pragmatic as well as intrinsic terms. The former refers to the instrumental value of engagement in planning, as well as the implications of access to resources on poverty, which in terms affects environmental degradation. The latter relates to the notion of social justice as a meaningful social goal unto itself.

Adaptive collaborative governance in practice

The essence of adaptive collaborative governance, as applied in this study, is that governance is "rooted in a process of conscious and intentional learning by a group of people dealing with a shared area of concern, with the intention of innovating for improvement or goal achievement" (Prabhu, McDougall, & Fisher, 2007, p. 18). As such it is an engine for adaptation and innovation and a means of adding quality to governance (and management) (Prabhu et al., 2007).

In practice, an adaptive collaborative approach varies from context to context. Overall, in this study's conceptualisation, it reflects a pattern of inclusive, bottom-up decision making amongst diverse actors that is based in social learning. As such, in line with the above, governance in this approach draws on and reflects a 'learning cycle' (Box 1.1). This involves joint critical reflection and negotiation amongst actors, including processes such as visioning, ongoing joint monitoring of process and outcomes, and consequent adjustment of understanding, processes and actions (Figure 1.1). Prabhu et al. (2007) described it as stakeholders engaging

> "…in a process of effective social interaction in which they negotiate a vision for the forest. The actors consciously undertake deliberate and shared learning in developing and implementing their plans for their forests. In doing so, they jointly observe and reflect on the outcomes of plans—especially the unexpected—and the process of planning, and together, they then continually seek and negotiate innovations and improvements in understanding, plans, processes and implementation" (p. 17).

This is similar to Plummer's (2009) synthesis of adaptive collaborative management generally involving "monitoring and assessing conditions interspersed with components of: scoping or assessing opportunities, designing policy options or experiments, implementing

or taking action, and evaluating and adjusting", yet with adaptive collaborative governance having an expanded emphasis on learning about and improving governance itself.

Box 1.1. Adaptive collaborative governance as an action-reflection-action cycle

As actors seek to practice adaptive collaborative governance (and management) they move iteratively through action-reflection-action cycles. For example, actors could: identify their shared vision and make their expectations about what outcomes their planned actions and governance will generate, but with awareness that these are only expectations, not certainties; carefully observe and reflect on—in other words, monitor—the impacts of their efforts, including surprises and failures; improve their shared knowledge and understanding by reflecting on their observations and assessing the outcomes of their actions; and adjust or correct their governance or management actions to reflect that new understanding.

Source: Adapted from McDougall et al., 2008

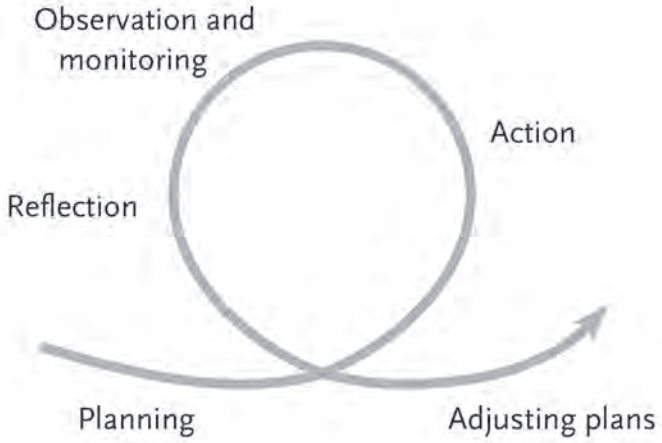

Figure 1.1 Pro-active and applied learning in an adaptive collaborative approach: A spiral of reflection and adjustment
Source: Adapted from McDougall et al., 2008

Key elements: Adaptive management, collaboration, and social learning

As noted in the Overview above, adaptive collaborative governance is rooted in both the dynamic learning-basis of adaptive management (see Holling, 1978; Lee, 1993) and the multi-stakeholder, and cooperative aspect of various forms of cooperative or collaborative approaches to management (Pinkerton, 1994; Borrini-Feyerabend et al., 2000; Carlsson & Berkes, 2005). In this conceptualisation, these two are integrated and actualised through the concept and practice of social learning (see Wollenberg et al., 2001; Leeuwis & Pyburn, 2002). (Why and how social learning operates at this intersection is explored in the Discussion chapter of this thesis). Drawing on McDougall et al. (2008), this section outlines these three key elements or 'cornerstones' of the adaptive collaborative governance approach (adaptive management, collaboration, social learning).

i) Adaptive management

Growing from complexity and resilience thinking outlined above, "many ecologists now recognise (and have recognised for some time) that ecosystems are dynamic, that equilibrium is little more than a convenient fiction at best, and that an adaptive approach is more appropriate" (Fisher, Prabhu, & McDougall, 2007b, p.4). With this as a starting point, adaptive management thus emphasises that management can be undertaken as an

opportunity for ongoing learning, continual adjustment and iterative improvement in understanding, decisions and action (McDougall et al., 2008; Lee, 1993). Drawing on complexity thinking, it is built on the assumption that natural resource decision makers cannot predict with absolute certainty what the effects of a decision, policy, or initiative will be—only what they think should happen. As such, adaptive management

> "recognises the limits of our understanding of natural systems and accepts that chance and variation are intrinsic to ecosystems. It enables managers to proceed without resolving all uncertainties in advance, while explicitly recognising change and variability (Walters, 1986; Holling and Meffe, 1996; Lee, 1999). It is a management approach that involves conscious learning based on action and the observed consequences of action…" (Fisher, Prabhu, & McDougall, 2007b, p. 4).

Adaptive decisionmakers thus learn *proactively*. This involves aspiring to plan in such a way that actors can optimise learning (rather than learn incidentally), and thereby better respond and adapt on an ongoing basis. This involves intentionally building explicit strategies for 'learning by doing', such as learning-based monitoring. It also includes learning from 'surprises', such as outcomes that don't live up to expectations, and using that learning as the basis for improving understanding and future decisions. Lee (1993) eloquently sums up adaptive management thus in his seminal work 'Compass and Gyroscope':

> "… an approach to natural resource policy that embodies a simple imperative: policies are experiments; learn from them.… Adaptive management takes uncertainty seriously, treating human interventions in natural ecosystems as experimental probes. Its practitioners take special care with information. First, they are explicit about what they expect, so that they can design methods and apparatus to make measurements. Second, they collect and analyse information so that expectations can be compared with actuality. Finally, they transform comparison into learning—they correct errors, improve their imperfect understanding, and change action and plans. Linking science and human purpose, adaptive management serves as a compass for us to use in searching for a sustainable future" (p. 9).

Adaptive management has been implemented or attempted to be implemented mainly in large ecosystem settings, such as major river systems. Its conceptual strength (regarding addressing complexity) notwithstanding, adaptive management experiences have been criticised in practice. Key shortcomings identified include: an overemphasis on scientific

knowledge and modelling (McLain & Lee, 1996; Walters, 1997), while undervaluing shared learning (McLain & Lee, 1996; Allen and Gunderson, 2011); being limited by conflicting values and bureaucratic interests (Walters, 1997); lack of stakeholder engagement (Allen & Gunderson 2011); being short on cooperation (McLain & Lee, 1996); weaknesses in addressing power and ethical issues relating to the typically limited voice of vulnerable people in 'official deliberations' (Lee, 1999); and a lack of action and application of learning (Allen & Gunderson, 2011).

ii) Collaboration

The broad field of collaboration in natural resource management has continued to grow over recent decades, and embodies a range of forms including co-management (e.g., Pinkerton, 1994; Singleton, 2000), and collaborative, participatory and community management (e.g., Fisher, 1995). This includes that the interest in collaboration has begun to intersect at times with complex systems thinking in resource governance and development, and growing calls for collaborative strategies in social-ecological system management (Nkhata et al., 2008).

Concepts of collaboration in NRM have expanded in line with the development of thinking and experience in areas such as pluralism, participation, and rural and community development. Originally conceived of as potential collaboration between community and state actors, more currently a wider range of potential actors are recognised as having or claiming a stake in forests. These actors range from local community and district forest agencies, to nongovernmental actors, donor agencies, researchers, and corporate actors and others.

> This study uses the concept of *collaboration*—as a cornerstone of adaptive collaborative governance—to refer to the nature of relations between actors, rather than to any particular type or form of multi-actor arrangement. Specifically, this study frames collaboration in terms of "the seeking of inclusive, constructive, and equitable relations within and between groups....". This is in line with Riley's (2002) notion of a 'collaborative relationship' as a relationship involving two or more stakeholders addressing a given problem, and being based on a set of mutual perceptions: that each is a legitimate actor; that each is capable of contributing the solution of that problem; that it is to the greater advantage of all parties to work in partnership than to work separately; and that stakeholders have agreed to share the authority to both define the problem and its solutions. As such, in this study, "[a]spects of collaboration—or collaborative interaction—include communication, efforts to balance power relations, conflict management, negotiations

> about understanding and decisions, and joint actions as appropriate" (McDougall et al., 2008, p.29).

The relevant literature suggests that even while collaborative endeavours may have contributed to resource conservation in some cases, as described above, experiences of collaboration in NRM more broadly have not been without widely reported challenges and shortcomings, especially weak participation of less powerful groups including women and vulnerable people, and domination of benefits by more powerful actors including community elite (Malla, Neupane, & Branney, 2003; Saito-Jensen, Nathan, & Treue, 2010; Sunam & McCarthy, 2010). Fisher et al. (2007b, p.5) note that "[c]alls for pluralist forest management have raised questions about the need to develop processes and fora that permit stakeholder negotiation and, at the same time, empower weaker stakeholders within these processes…". Moreover, Carlsson & Berkes (2005) caution that most conceptualisations of co-management don't capture the range of complexities involved, including the complexities of actor groups such as the involved communities, the complexities and dynamic nature of the systems involved and the need for co-management to be seen a governance process, and to be adaptive and flexible. The latter call for learning to be linked to and embedded in collaboration is echoed in the notion of soft systems as learning systems (Checkland, 2000), and is reflected in the call for shared or 'social' learning in collaborative NRM literature, such as (Borrini-Feyerabend et al., 2000; Borrini-Feyerabend & Jaireth, 2004; Pahl-Wostl, Mostert, & Tàbara, 2008; Mostert, Craps, & Pahl-Wostl, 2008). More broadly, Armitage et al. (2007, p. 6) look to adaptive co-management, raising the question "How can we move beyond the limits of co-management?"

iii) Social learning

The theory and practice of social learning was integral to our conceptual development and implementation of adaptive collaborative management in this study. The concept of social learning has many roots and interpretations (Plummer & Fitzgibbon, 2007). For the purposes of this study, social learning is understood as a "process in which multiple stakeholders bring together their different knowledge, experiences, perspectives, values and capacities for a process of communication and critical reflections as a means of jointly understanding and addressing shared issues, challenges and potential options" (McDougall et al., 2008, p. 30). This particular conceptualisation was formed from various sources and roots including popular and adult education (such as Barndt, 1989; Freire, 1970), organisational learning (such as Senge, 1990), and learning theory (such as Loevinsohn et al., 2000; Mezirow, 1997). It resonates with Leeuwis and Pyburn's (2002) and Röling's (2002) view of social learning as a move from multiple to distributed cognition. Social learning—

like all multi-actor and collaborative processes—involves power-related interactions, including negotiation of meaning and even conflict management.

In this conceptualisation, social learning has several defining characteristics that distinguish it from other forms of learning: it is shared and communicative, possibly transformative in nature, and it is ongoing, applied and proactive (McDougall et al., 2008). The shared aspect refers to the learning occurring amongst multiple actors. In other words new understandings, insights and perceptions are jointly (albeit not necessarily smoothly or equally) constructed by multiple actors. As such, social learning is also different from learning that embodies a transfer or an accumulation of knowledge. A transfer of knowledge model of learning, which is known as 'reproductive learning' considers that knowledge is transferred intact from the knower (teacher) to the learner (student) (Van der Veen, 2000; Loevinsohn et al., 2000; Vernooy and McDougall, 2003). In contrast, in this conceptualisation of social learning, learning is 'constructivist' or 'communicative learning'. Drawing on a constructivist perspective, implies that social learning is a process that recognises that there is no single 'correct' perception of a situation. Rather, actors are encouraged to jointly create common understandings and bridge the divide between their diverse worldviews, perspectives, or cognitive models (Van der Veen, 2000; Loevinsohn et al., 2000; Vernooy and McDougall, 2003). Further, such learning may extend to be 'transformative' in nature as well (Van der Veen, 2000; Loevinsohn et al., 2000), generating 'ah-ha' moments in which actors' understanding of the world shifts or becomes more holistic or integrative (Vernooy & McDougall, 2003; McDougall et al., 2008).

Finally, in this conceptualisation the learning is ongoing, proactive, and applied. Moreover, it is cyclical, thus embedded in conscious and routinised reflection to update understanding, knowledge, and perceptions and adjusting of practice (governance and management). Social learning in this approach is thus "routinised (rather than one-off), and applied, with the learner-actors coming together repeatedly to reflect, internalise and innovate" (Prabhu, McDougall, & Fisher, 2007, p. 36). Such a cycle draws on and reflects learning loops or cycles embodied in participatory action research (see Chapter 2 of this study) as well as the iterative nature of learning and experimentation promoted by adaptive management.

Social learning has been increasingly recognised as relevant and valuable to natural resource management (Leeuwis & Pyburn, 2002). Diduck (2010) notes that despite its growth as a concept and its rich contributions, questions and gaps about such learning in the natural resource context remain. These questions include how social learning occurs at multiple levels of social organisation and how power differences influence learning and outcomes. Moreover, an exploration of the literature for the purpose of this study indicates that there is as of yet relatively little explicit attention regarding the converse relationship,

i.e., the influence of social learning on power differentials, with Rist et al. (2007) being one exception. Similarly, while social learning, social capital and adaptive collaborative approaches to natural resource governance are intertwined and have implications for practice (Plummer & Fitzgibbon, 2007)—as do livelihoods, and conflict—there is relatively little literature making explicit those links and lessons. More fundamentally, in line with the gaps in understanding flagged below regarding 'how are adaptive collaborative approaches enacted' (section 1.3.4 Gaps identified in the literature; see Plummer & Fitzgibbon, 2007; Plummer & Armitage, 2007; Armitage et al., 2007; Plummer, 2009), the question arises: what is the role and significance of social learning in adaptive collaborative approaches?

1.3.3 Gaps identified in the literature

As outlined above, bodies of experience and knowledge have been growing overtime in the fields of adaptive management, collaborative management, and social learning. And yet, the literature also flags significant gaps in experience and learning, in particular, in relation to combinations these fields and concepts, such as embodied by adaptive collaborative governance. The key areas that have been flagged as needing more research and further development, and which are relevant to this study are as follows:

- ***Application at local scales and other contexts***
  Adaptive management has been applied primarily at the large ecosystem management scale. Jiggins and Röling (2002, p. 12) note that this has been an "unwarranted limitation" in terms of application and they recommend expanding experiences of this type of approach to other scales, in other words "seeking creative, decentralised opportunities". Aside from scale, based on their review of ACM-related research, Plummer et al. (2012, p. 11) ask about other forms of transferability of such approaches beyond North America and Europe: "Our review shows that much of the published ACM scholarship has concentrated on North America and Europe, with the notable exception being work by CIFOR in Asia. Given the differences that exist within these locations and contexts, a pertinent question is the extent to which ACM transcends and/or is transferable across contextual differences relating to wealth/poverty, political systems, and degrees of social and ecological capital."

- ***Power, participation, and social dynamics, including social capital and conflict***
  As outlined above, multiple authors have now underscored the need for more attention to and understanding of power in collaborative approaches to resource management and governance. Similarly, while challenges with participation of more vulnerable

people in collaborative management continue, a search of the relevant literature suggests that there is relatively little literature empirically documenting successful strategies to address these challenges. These and similar gaps are echoed regarding adaptive-based approaches. Plummer and Fitzgibbon (2007) note that while acknowledgement of the significance of social relationships has been growing in common property, environmental governance, and sustainable development literature and practice, more investigation is needed into the longterm and dynamic social relationships embedded in collaboration in socio-ecological systems (Nkhata, Breen, & Freimund, 2008; Plummer, 2009). Nadasdy (2007) flags strongly that power-related aspects associated with adaptive co-management need attention. While challenges relating to the engagement of less powerful groups are flagged in the literature on adaptive approaches, there is still relatively little explicit the literature on successful means of addressing this, nor regarding the relationship of engagement with key aspects of such approaches, such as social learning. Further, while social capital—and social learning—are clearly significant to adaptive and collaborative approaches, understanding of the linkages are only in a fledgling stage (Plummer & Fitzgibbon, 2007). The same is true of conflict: while there is a growing body of literature on conflict, a search of relevant literature on adaptive collaborative approaches offers relatively little depth on this significant issue beyond that it presents a challenge.

- ***How adaptive collaborative approaches are enacted***
  Plummer and Fitzgibbon (2007, p. 57) underscore that "while Parson and Clark's call (1995) for more case studies of social learning in environmental management has been answered somewhat, there is a need to document specific experiences with adaptive co-management". Armitage et al. (2007, p. 2) note that there are still considerable limitations in terms of studies that systematically examine how co-management and adaptive management can be combined in practice. Plummer (2009, p. 2) adds the more conceptual angle, noting that what is missing is "knowledge and representation of how the process of adaptive co-management occurs. This is partially due to the relatively small number of case studies documenting and describing experiences with adaptive co-management.....This void raises several important questions. Is there a general process of adaptive co-management? Can a representation of the phenomena be derived? What variables influence the process of adaptive co-management?" Others concur, highlighting that more understanding is needed regarding if, who, how, when and what type of learning takes places amongst diverse stakeholders (Armitage, Marschke, & Plummer, 2008; Keen & Mahanty, 2006). Similarly, in relation to adaptive co-management, Plummer and Armitage (2007) identify a number of research questions as being of high importance: What role do institutional arrangements play in

enabling or impeding ACM? How does ACM work along horizontal linkages and across vertical scales? How are multiple sources and types of knowledge integrated and used?

- ***Outcomes relating to livelihoods***
  With the exception of Armitage (2007) there is relatively little literature which links adaptive collaborative governance, social learning and livelihoods. Armitage (2007), notes that the livelihood literature does give considerable attention to transformative structures and processes (e.g., institutions, policies) that influence livelihoods. Yet these analysis are not usually linked to exploration of the "collaborative and adaptive governance regimes required to mitigate the dynamic, cross-scale, effects of livelihood change differentially experienced by multiple social actors" (Armitage, 2007, p. 66). A Delphi study of adaptive collaborative management (Plummer & Armitage, 2007) similarly flags the key emerging question for further study: Does ACM enhance the well-being or livelihoods of communities?

These gaps lay the scientific foundation for the research problem, objectives and questions of this study. These are articulated below, immediately following the presentation of the research context.

1.4 RESEARCH CONTEXT AND PROBLEM: COMMUNITY FORESTRY IN NEPAL

1.4.1 Nepal

Geography

Situated between India and Tibet, Nepal spans five physiographic zones: high Himalaya (above 5000 m); high mountain (3000-5000 m); middle mountain (1000 -3000 m); Siwaliks (500-1000 m); and Terai plains belt (less than 500 m) (FAO, 1999). Hills and mountains make up over 80% of Nepal's total area (Nepal et al., 2005). The extreme range of altitude gives rise to diverse climates, ranging from subtropical through to alpine, including permanently frozen zones in the highest areas. Nepal's forest types vary with altitude and microclimates, as do the uses of these diverse forests (Springate-Baginsky et al., 2003). The main forest species in Nepal include 'Sal' (*Shorea robusta),* 'Khasru' *(Quercus spp),* 'Asna' *(Terminalia alata), and* 'Khote salla' *(Pinus roxburghii) and* 'Talis patra' *(Abies spectabilis) (*FAO 2009). Forests provide a "vast array of goods and services" (FAO, 2009, p. 1) in this context, including essential ecological functions such as biodiversity conservation and erosion control (FAO, 2009).

Sociopolitical landscape

Home to 27.47 million people (in 2012, http://data.worldbank.org/country/nepal, accessed February 11, 2014), Nepal is highly socially and ethnically diverse. The 2012 census identified 125 social groups based on caste and ethnicity and 123 languages (CBS, 2012). Hindu caste groups make up 57.5 % of the total population (World Bank & DfiD, 2006). *Janajatis* (indigenous groups), including all *Newari* subgroups, *Magar*, *Tamang*, and *Tharu*, make up 37.2 % of the population (World Bank & Dfid, 2006). Religious minorities make up 5.3 % (World Bank & Dfid, 2006).

The integration of the Hindu caste system into all aspects of Nepalese society formed the basis for the longterm shaping of political and economic power (World Bank & DFID, 2006). Within this complex system, people belonging to *Dalit* groups (previously so-called 'lowest caste' or 'untouchable' peoples), such as *Biswokarma* and *Damai castes*, are ascribed lowest status and thus least symbolic and political power. Despite caste-based discrimination being legally abolished in 1963, there continues to be a correlation between caste, poverty, and access to resources (World Bank & DFID, 2006). This social hierarchy is multi-dimensional, with factors such as gender and ethnicity, as well as geopolitics, language and religion all playing mediating, overlapping roles. As such, people who are poor, female, and *Dalit* or from some indigenous groups (*Janajatis*) face considerable overlapping socio-political barriers. Jones et al. (2009, p. 17) describe the norms and practices of this complex social hierarchy as "deeply entrenched" in all facets of Nepali life.

Poverty, forests and livelihoods

Nepal is one of the poorest countries in the world, ranking 157th out of 187 countries on the Human Development Index (http://www.worldbank.org/en/country/nepal/overview, accessed February 11, 2014). According to the UNDP (http://hdr.undp.org/en/countries/profiles/NPL, accessed January 10, 2013), the percentage of the population in multidimensional poverty is 44.2%. The proportion of poor people in Nepal, however, has been in a declining trend in the recent years (http://www.worldbank.org/en/country/nepal/overview, accessed February 11, 2014).

Poverty in Nepal varies geographically and by socio-ethnic group. It is higher in rural areas and the mountain belt than in urban and non-mountain areas, and is highest in the western mountains and far-western hills (UNDP 2009). In socio-ethnic terms, it is most severe amongst the *Dalit*, and some indigenous people and ethnic minorities, as well as amongst women. For example, 48 percent of hill *Dalit* fall below the national poverty line, as compared to the national figure of 31 percent (World Bank & DFID, 2006). In terms of gender, Nepali women bear "much greater economic insecurity than men" (World Bank & DFID, 2006, p. 24).

Agriculture is the backbone of the economy, with nearly two-thirds of the country's population depending on it for their livelihoods (FAO, 2009). Agricultural livelihoods in Nepal "encompass complex interactions between agriculture, forestry, and livestock systems" (Ojha et al., 2009, p. 4). Within this integrated system, forests provide agricultural inputs, including food and bedding materials for livestock, as well as wood for agricultural implements. In the Middle Hills, for example, *Katus-chilaune* is widely used for fodder, foliage and leaf litter for livestock. Forests also supply fuelwood and timber, as well as being an important source of medicinal herbs and—in times of shortage—foods including roots, vegetables, and fruits. They are also a source of income for some households, through the sale of products such as fuelwood, charcoal, wooden pots, and nontimber forest products (e.g., cardamom, paper crafted from *Lokta,* handicrafts, and so forth). Springate-Baginsky et al. (2003), for example, note that in the Middle Hills, in addition to some households being dependent on forests for their livelihoods, "virtually all households depend on forests for a variety of domestic needs" (Springate-Baginsky et al., 2003, p. 7).

National conflict during the research period

While maintaining its centuries-old monarchy, in 1990 Nepal formally established itself as a democracy. Starting in the late 1990s, however, a violent and widespread armed conflict between Maoist rebels and the government gripped the country. The conflict led to the deaths of at least 13,000 people and the disappearances of at least 1,300 more (http://www.ohchr.org/EN/Countries/AsiaRegion/Pages/NepalConflictReport.aspx, accessed February 11, 2014).

After more than a decade of violence, the conflict came to an official end with the signing of the Comprehensive Ceasefire Agreement in November 2006. In the subsequent period, the nation abolished the monarchy and formed the Federal Democratic Republic of Nepal, but the political instability that has characterised the nation has persisted (The World Bank http://www.worldbank.org/en/country/nepal/overview, accessed January 10, 2013).

During this period, a widespread civil pro-democracy movement developed in tandem with the Maoist conflict. Its civil protests contributed to the monarchy's steeping aside, as well as to the reinstatement of parliament, and subsequent democratic elections for a new constituent assembly. Overall, the movement embodied a depth of public demands for greater equity, transparency and accountability.

The conflict progressively eroded or brought the functioning of many organisations to a halt, including nongovernmental, bilateral and governmental forestry and development agencies. At the same time, the conflict and parallel civil movement and emergent socio-political changes raised the political consciousness and expectations of the country's

citizens, including women and *Dalit*. As noted by the World Bank, "the conflict raised awareness that the Nepali state had been associated with exclusionary political, social, and economic institutions that did not reflect the country's diversity. This has led to the rise of identity politics with an increasing demand for state recognition and greater accommodation of diverse social, cultural, and ethnic identities" (The World Bank http://www.worldbank.org/en/country/nepal/overview, accessed January 10, 2013). Key challenges in post-conflict Nepal include developing legitimacy in terms of governance and generating benefits for marginalised people and the population large (The World Bank http://www.worldbank.org/en/country/nepal/overview, accessed January 10, 2013).

1.4.2 Community forestry in Nepal

Overview

Nepal has multiple forestry regimes. The two main branches are national and private forests; the former encompasses community, leasehold, government, protected, and religious. Community forestry, which is the locus of this study, has been developed as "the main forestry management strategy and it has been recognised as one of the most successful programmes" (Acharya et al., 2008). The shift to community forestry was sparked by international environmental concerns in the 1970's, with efforts ultimately leading to the Community Forestry policy framework being established in the following decades.

The Community Forestry Programme operates through the granting of use and management rights of forest areas to identified groups of households called community forest user groups (CFUGs). These groups do not own the land, but hold the legal right to manage and use the forest resources in accordance with their formally established operational plans. At present there are more than 17,600 CFUGs, involving approximately 1.4 million households—or 35% of Nepal's population—and governing approximately 1.6 million hectares of forest (http://dof.gov.np/division/community-forest-division/community-forestry, accessed February 11, 2014).

CFUGs work with, and are legally beholden to, District Forest Offices. These offices provide technical support to CFUGs, as well as regulating them, including that they hold the power to revoke CFUGs forest rights on the basis of non-compliance with Community Forestry rules and regulations. Beyond this state-community relationship, in the Community Forestry Programme's two and half decades of existence, the range of actors involved in community forestry—and the complexity of the community forestry landscape—has considerably increased. CFUGs now co-exist with nongovernmental organisations, civil

society networks, government agencies, research projects, and bilateral projects, many of which operate at local, meso and national scales.

The Middle Hills region, which comprises 41% of the country's land area and 46% of its population, has been the main geographical focus of community forestry (Springate-Baginsky et al., 2003). The Community Forestry Programme has been secondarily expanding to the Terai—but much more slowly, and with much more controversy over rights and form—which relates to the higher value and more accessible forests, more recent settlements, and established illicit logging (Springate Baginsky et al., 2003).

National conflict and community forestry

The prolonged Maoist conflict (late 1990's to 2006) had far reaching impacts on community forestry (Banjade & Timsina, 2005; Pokharel & Paudel, 2005). Services normally provided to CFUGs by district forest offices—and, in some cases, by nongovernmental or bilateral agencies—were disrupted or even stopped altogether with the closure or in some cases, destruction of offices. Some CFUGs had to pay for 'approval' (permission) from a Maoist parallel administration. Members were sometimes 'requested'—with varying degrees of pressure—to donate to the Maoist cause or were taken to lengthy 'educational' speeches. As with rural Nepalis in general, CFUG members were directly or indirectly affected by the violence. Some CFUG members were harmed for being perceived to be elite; some relocated in fear. Mistrust and fear became widespread. In some cases, CFUGs limited or stopped venturing into their forests to harvest forest products for fear of encountering Maoists or army. Recurring state-of-emergencies, strikes, power disruptions and fear of being caught in crossfire suppressed community forestry processes, including large gatherings like CFUG assembly meetings. Despite these challenges, many CFUGs managed to continue to function at least in basic terms, which implies their significance in terms of resilient democratic local institutions (Pokharel & Paudel, 2005; LFP, 2010).

1.4.3 Challenges: Engagement, livelihoods and distributional equity

Considered a leader in CBNRM, macro-level studies and visual interpretations indicate that community forestry in Nepal has achieved some success in terms of its goal of improving forest cover and condition (FAO, 2009). However, a number of other challenges of the programme have been identified.

One widely identified challenge relates to engagement, or participation, in the governance of the CFUGs. Empirical research has documented patterns of elite domination of CFUGs that reflects the earlier-described social hierarchy (Springate-Baginsky et al., 2003; Paudel et al., 2007). Committees and chairpeople, comprised predominantly of male, higher caste or dominant ethnic group, and wealthier members, tend to dominate, while women, the

poor and *Dalit* members tend to have little voice in CFUG decisionmaking. Upadhyay (2005, p. 224) describes women's exclusion in community forestry in Nepal (and India) as "categorical". Still lacking, however, is indepth understanding of why these patterns persist and evidence-based knowledge of how more equitable engagement can be engendered.

Second, the production of livelihood benefits from community forestry has been identified as a central 'second generation' issue for community forestry (Kanel & Dahal, 2008). While CFUGs overall have begun generating some income and livelihood benefits, community forestry has not yet optimised its contribution to livelihoods (Malla et al., 2003; Profor, 2008). More empirically-based understanding is needed regarding the generation of livelihood contributions through community forestry (Luintel et al., 2009).

A third and related challenge crosscuts the above two: distributional equity (Kanel & Dahal, 2008). Research has documented that the limited livelihood benefits that are generated tend to go to the already better off members of CFUGs, while the poorer and more vulnerable members receive smaller shares of community forest benefits relative to their needs (Malla, 2001; Kanel, 2004; Nurse & Malla, 2005). In some cases, the most vulnerable members have even been made worse off, as the conservation-oriented rules, to which they had little input, limit their forest access Dressler et al. (2010). This imbalance is especially significant because of the relatively high dependence of the poor on forests (Lachapelle et al., 2004).

1.5 RESEARCH PROBLEM, STUDY OBJECTIVES AND RESEARCH QUESTIONS

Drawing on the above-identified gaps in literature identified and context-specific challenges of community forestry in Nepal, this section frames the research problem, objectives and questions.

1.5.1 Research problem

This study addresses the need for indepth and evidence-based knowledge regarding means to enhance the limited engagement, livelihood benefits, and distributional equity in community forestry in Nepal, in particular with reference to women and the poor. More broadly, this study addresses the need for more indepth and evidence-based knowledge regarding the potential for adaptive collaborative governance to influence these outcomes and the crosscutting issues of social capital and conflict. In doing so, it addresses the

scientific problem of the need for deeper understanding of the underlying issue of the persistence of power imbalances in CBNRM and whether adaptive collaborative approaches play a role in addressing these.

1.5.2 Study objectives and research questions

Responding to the above, the study's objective is to contribute empirically-based insights regarding if and how adaptive collaborative governance of community forests in Nepal can constructively influence engagement, livelihoods, social capital and conflict, especially in regards to women and the poor. Further, the study aims to elucidate the related underlying issue of power in CBNRM. In particular, it aims to contribute to deeper, theoretically-based understanding of the persistence of power imbalances in community forestry, and of the potential of adaptive collaborative governance to shift such imbalances.

The research questions are as follows:

1. *From a theoretical perspective, why do power imbalances persist in community-based natural resource management and what role could adaptive collaborative governance play in shifting them?*

2. *What is the influence of an adaptive collaborative governance approach at the CFUG scale, on engagement in CFUG decision making, in particular, in relation to women and the poor?*

3. *What is the influence of an adaptive collaborative governance approach at the CFUG scale on the generation and distribution of CFUG-related livelihood benefits?*

4. *What is the influence of, and relationship between, adaptive collaborative governance, social capital and conflict at the CFUG scale?*

1.6 THESIS OUTLINE

The below briefly introduces the specific focus of each chapter; an overview of the thesis is presented in Figure 1.2.

- Chapter 1 introduces the study and thesis in terms of the key issues and concepts, relevant literature, and the emergent research problem, study objectives and research questions.
- Chapter 2 presents the study's design and methodology.
- Chapter 3 presents and analyses theory-based insights into the persistence of power imbalances and the potential role of adaptive collaborative governance in addressing them.
- Chapter 4 presents a study on the influence of adaptive collaborative governance on the engagement of women and the poor in CFUG decision making.
- Chapter 5 presents a study on the influence of adaptive collaborative governance on the generation of CFUG-related livelihood benefits, in particular, in relation to women and the poor.
- Chapter 6 presents a study on the influence and relationship of adaptive collaborative governance with social capital and conflict in CFUGs.
- Chapter 7 highlights the study's key findings in relation to the research questions and discusses contributions to theory and scientific debates.

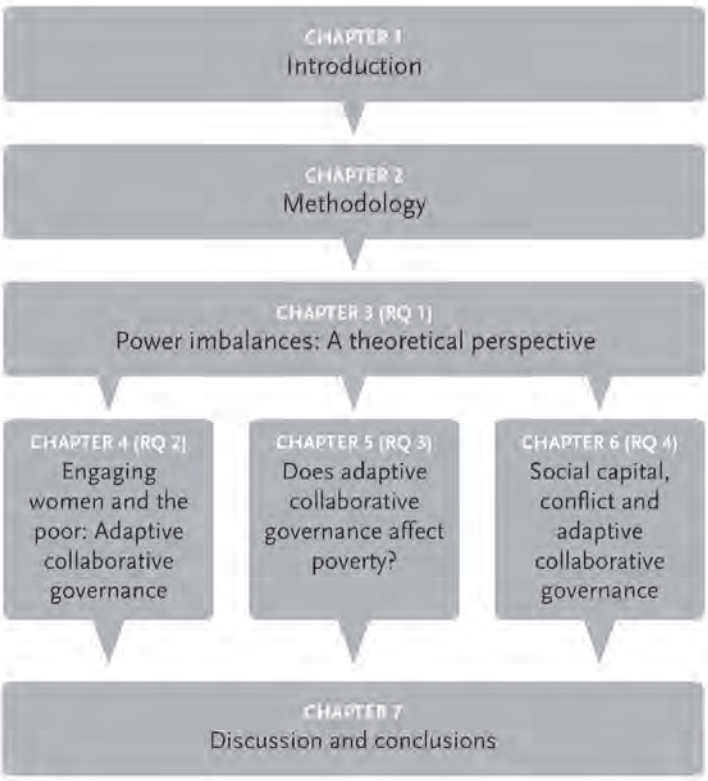

Figure 1.2 Overview of thesis chapters and research questions

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CHAPTER 2

Methodology

Chapter 2. Methodology

2.1 OVERVIEW

This study is based on a longitudinal, multiple case study of community forest user groups in Nepal. The study took place in two phases of research (1999-2002 and 2004-2007), plus one follow-up visit (2008). There were 4 sites in the first phase ('longterm sites') and an additional 7 ('short term sites') added in the second phase (n=11). Both phases were partnership-based and operated under the auspices of the Center for International Forestry Research.

In both phases, the methodology combined 'before', 'during' and 'after' assessments with participatory action research (PAR) (Figure 2.1). The assessments involved gathering sets of comparable socio-economic and institutional information to enable before-and-after analysis as well as analysis across sites. The PAR enabled an adaptive collaborative approach in community forest user group (CFUG) governance at each of the sites. In both phases the empirical research was complemented by integration of the relevant literature.

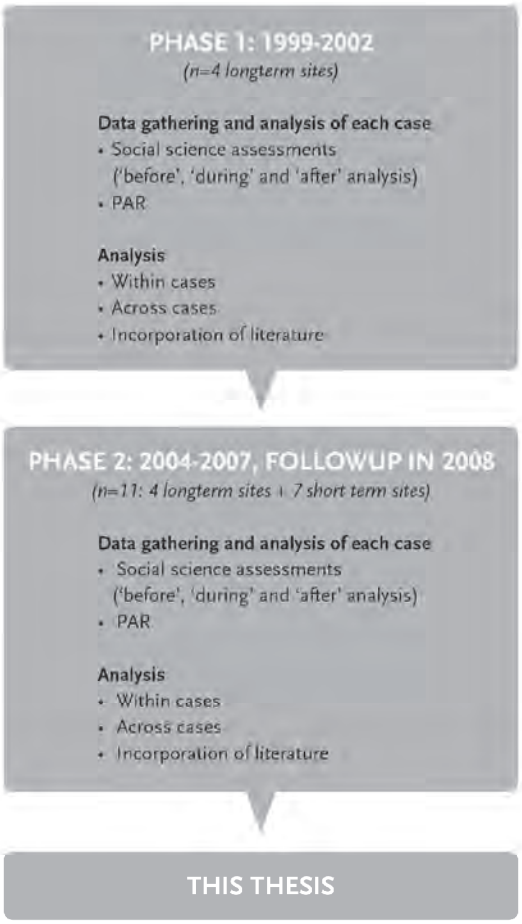

Figure 2.1 Overview of research phases

Data for the assessments were collected through a combination of methods. These included participant observation of formal and informal processes and occurrences, participatory wealth ranking (using criteria developed by actors at each site), focus group discussions, participatory mapping (Colfer et al. 1999a, 1999b) and document reviews. The data were triangulated both through the use of multiple sources as well as through multiple methods, and cross-checked with CFUG members and through field observations. Gender and diversity were operationalised in the data gathering and analysis through several means. For example, the participatory methods were applied separately with sub-populations identified by gender, wealth, and/or interests, as appropriate to the enquiry. The main analytic tool was iterative examination of observed and documented changes and influences in order to identify patterns and 'plausible causal connections' among them (Fisher et al. 2007a). Cross-case comparisons were carried out manually; quantitative data were analysed using descriptive statistics through comparison of 'pre-' and 'with' data using Excel (Microsoft 2007). Analysis across sites was consistently disaggregated by gender and wealth. The multiple means applied to ensure rigour include the combination of in-depth case experience with comparison across cases contributed to the robustness of the study (Yin 2009).

Following an outlining of the parameters of the study (organisational context, partnerships, funding), this chapter presents the above research design, sites, methods, and approach to rigour below in more depth.

2.2 STUDY PARAMETERS: ORGANISATIONAL CONTEXT, PARTNERSHIPS AND FUNDING

2.2.1 Organisational context

This thesis represents the culmination of the CFUG-scale portion of a larger multi-scale research project in Nepal (CFUG, meso, and national) led by the Center for International Forestry Research (CIFOR). This Nepal project was, in turn, part of a larger international research initiative on adaptive co-management led by the CIFOR (see Colfer, 2005; Fisher et al., 2007b; Diaw et al., 2009). As such, the overall research project in which this study is based involved a plethora of activities, including grant management, engagement with the larger CIFOR team, development of the Nepal team, and collaboration with the Ministry of Forests (Community Forestry Division) and many other agencies. The main activities are presented in Gantt chart form in Annex 1 of this thesis.

The author of this thesis was the team leader of the Nepal research project for both of its phases: first, as CIFOR staff based in Bogor, Indonesia, then as a CIFOR Associate based in Canada. In this role, key responsibilities involved leading the collaborative development, design, implementation and analysis of the research, as well as partnership building, research team building, and leading and enabling the communication of findings, fundraising, grant management and donor reporting. Additionally, the role involved active capacity development and support for the Nepal research team members, and liaising with the Nepal Steering Committee and CIFOR's Adaptive Collaborative Management (ACM) Asia Steering Committee, as well as actively engaging in the international ACM project, such as through contributing to the cross-country design and analysis across country projects, and contributing as a co-facilitator in researcher trainings and retreats.

2.2.2 Partnerships

In line with CIFOR's and this thesis author's own intended collaborative and applied approach, the research that forms the basis of this study was consciously designed as a partnership-based initiative. The research was established and undertaken in formal collaboration with the Government of Nepal's Ministry of Forests and Soil Conservation (Department of Forests, Community Forestry Division,), and two research partner organisations (NewERA and Forest Action, Annex 2). As well as involving several independent consultants, the research team created a wide network of informal collaboration and partnerships with multiple community forestry actors and agencies to shape, support the implementation of, and engage with and share in learning from the research. In other words, the research team sought to embed itself in and engage actively with the evolving landscape and network of community forestry (CF) actors in Nepal. One aspect of this collaboration was the development of a National Steering Committee (first phase), which contributed to shaping the goals and direction of the research, as well as reviewing ongoing progress, findings and outputs. Another aspect of collaboration was the development of partnerships in each of the research site areas, some of which were more general information-exchange relationships, and some of which were specific collaborations that involved nongovernmental (NGO) or CF network or Forest Office staff in the research project as facilitators of the PAR. These partnerships also contributed to more practical input in terms of safety and security in relation to the national Maoist conflict. A third aspect was the more informal, albeit deliberate, ongoing networking and information exchange with actors from governmental, nongovernmental, bilateral, research and civil agencies throughout the research, including high-level policy actors.

2.2.3 Funding

Phase one of the research was funded primarily by the Asian Development Bank (ADB). The second phase of research was funded by Canada's International Development Research Centre (IDRC). The followup site assessments (2008) were funded by CIFOR. Additionally complementary funding was provided during phases 1 and 2 by CIFOR, by the Consultative Group on International Agricultural Research (CGIAR)'s Systemwide Programme on Participatory Research and Gender Analysis, and through Nepali partner organisations by the International Institute for Rural Reconstruction (IIRR) and the Local Initiatives for Biodiversity, Research and Development (LI-BIRD) in Nepal.

2.3 RESEARCH DESIGN

2.3.1 Factors: Expectations, challenges and opportunities

From the outset, several factors presented expectations, challenges, or opportunities for the research. These fundamentally shaped the research design. These factors were:

- The need to produce generalisable findings in line with the international research centre's mandate and in the context of a multi-country research initiative;
- A tension between: a) the extractive and researcher-controlled research culture of the host research centre at the time of research planning and initiation (late 1990s); and b) the research team's desire that the research would have direct benefit for relevant local people, and allow a degree of local control over the research;
- The mode of governance that was to be the subject of the research (adaptive collaborative governance) did not yet substantively exist in community forestry practice in Nepal at the time the study was initiated;
- The research subject suggested a need to assess relatively intangible or challenging to measure issues (such as engagement in governance, or social capital);
- Community forestry in the given context was multi-scale in nature;
- The social setting of the research (the CFUGs) was highly diverse (in terms of wealth, caste and ethnicity); and
- There was a violent conflict rapidly spreading across rural Nepal, and associated uncertainty and instability at all levels.

Taken together, these contextual factors posed three dilemmas, framed here in practical, ethical and scientific terms. The practical dilemma encompassed several challenges: How to generate research lessons about a governance approach that did not yet exist in practice at the sites? How to make the research meaningful for policy and other CF actors, especially in an uncertain political context? And, how to do both of these safely in a context characterised by a rapidly evolving violent context? The ethical dilemma embodied how to create generalizable research lessons in a way that was relevant, meaningful and beneficial to actors in the research sites, especially marginalised people? Finally, the scientific dilemma comprised how to generate generalisable social science findings about complex situations that were accurate, reliable and valid? The research design created to address these dilemmas is outlined in the following subsection.

2.3.2 Key aspects of research design

To respond to the above, the research design was anchored in the following:

i) Longitudinal study of multiple cases;
ii) Participatory action research combined with social science assessment;
iii) Explicit focus on gender and human diversity;
iv) Applying an adaptive and collaborative approach to the research process itself.

As illustrated in Figure 2.2, the first three aspects shape the research design, while the fourth shapes the whole process. Each of the four design aspects is explained below, beginning with a brief outline of the aspect in practice, followed by its rationale for application in this context. In addition to these design aspects, attention to maintaining scientific rigour was applied throughout the study. The strategies to maintain rigour are elaborated at the conclusion of this chapter following the description of sites and methods (Section 2.6).

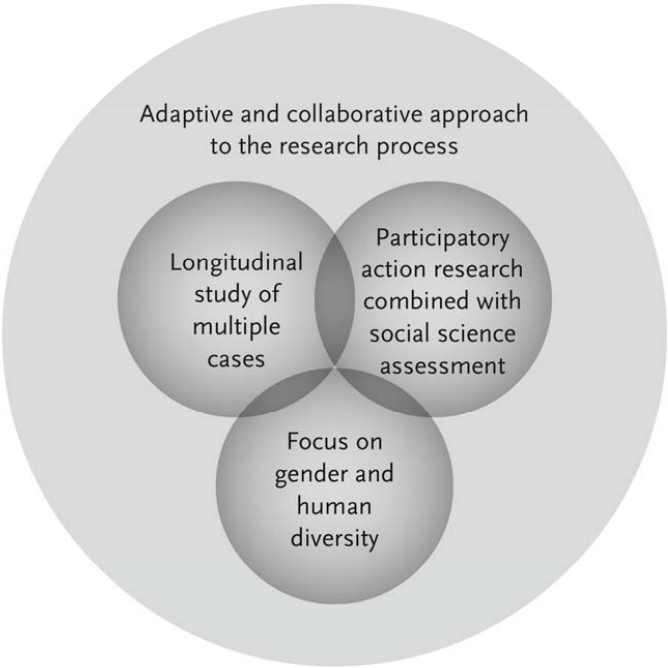

Figure 2.2 Key aspects of research design

i) Longitudinal, multiple case study

In this study, the longitudinal, multiple case study design involved tracking a total of 11 cases during the course of a nine year period. Specifically, it comprised: four case studies in its first phase (1999-2002), called 'long-term sites'; and while continuing to track these, the addition of seven new cases, called 'short-term sites', for the second phase (2004-2007). The research team did a follow-up visit to each site in 2008 for data validation and filling in any gaps in data.

The rationale for applying a case study approach in this study was the value of a case study methodology in terms of generating nuanced insights into complex, real world situations. As framed by Yin (1981; 2009), case study research is an established form of social science inquiry that "allows investigators to retain the holistic and meaningful characteristics of real-life events" (Yin, 2009, p. 4). The critical features of a case study are that it is "an empirical enquiry that investigates a contemporary phenomenon in depth and within its real-life context, especially when the boundaries between the phenomenon and the context

are not clearly evident" (Yin 2009, p. 18). Moreover, it was a natural fit given that the phenomenon to be studied (adaptive collaborative governance) was not widely present, thus a broad survey approach would not have been feasible.

Overall, while the case study approach would not create the potential for statistical generalisability along the lines of a survey, it would allow for meaningful generalisation to theory (knowledge). As Yin (2009) elucidates, the response to the generalisability dilemma regarding case study research is not simple, but can be understood through differentiating *case generalisability to theory versus sample generalisability to populations*:

> "...case studies, like experiments, are generalizable to theoretical propositions and not to populations or universes. In this sense, the case study, like the experiment, does not represent a 'sample', and in doing a case study, your goal will be to expand and generalize theories (analytic generalization) and not to enumerate frequencies (statistical generalization).....the goal is to do a 'generalizing' and not a 'particularizing" analysis'"(p. 15).

The choice to take a multiple case study approach, as opposed to a single case study, was made because of the contribution of multiple cases to robustness of the findings. This same logic motivated the decision to expand from 4 to 11 cases for the second phase of the study. The rationale for taking a longitudinal approach—the tracking of each case over a period of years—was to enable 'before' and 'after' type comparisons and to generate insights into effects of adaptive collaborative governance over the longer term.

In this study, the main unit of analysis or 'case' is the community forest user group. This reflects that this study's research focus is at the local scale, and in particular, each case is bounded by the legally defined community-level entity of the CFUG. Additionally, the study uses an 'embedded design' (Yin, 2009), in that it undertakes and presents analysis of sub-units of analysis within its main units (CFUGs), in particular female and poor members. It does so to create depth, and to support its gender and diversity orientation. In line with its multiple case design, this thesis focuses on such analysis *across* cases, identifying patterns by collating changes in variables (such as women's engagement in executive committees) across CFUGs.

ii) Participatory action research combined with social science assessment

In this study, research in each case study systematically combined participatory action research and social science assessment. Participatory action research—or as Probst et al. (2003) term it, 'participatory learning and action research'—is an established participant-

centred methodology that both generates learning and action for social change (Selener, 1997; Chevalier & Buckles, 2013). The PAR in this study revolved around the CFUGs seeking to improve their own, self-identified, site-specific community forestry-related issues (including internal relations and conflict, equity, and livelihood outcomes) through efforts to enhance the adaptiveness and collaborativeness of their CFUG governance. Social science assessment, as applied in this study, involved the gathering of social science data for the case study research, using well-established methods such as document reviews (CFUG records), focus groups, and participant observation (see section 2.5 Methods). In line with the study's research questions, the assessments gathered data regarding governance processes and arrangements, decisions and outcomes, and related social, institutional, and livelihood information including engagement in CFUG governance, generation and distribution of livelihood benefits, and social capital and conflict (see Chapters 4, 5 and 6 respectively). The combined traditional-PAR methodology meant that the research in each site, in each phase, began with a social science assessment ('background study')', transitioned to PAR, involved ongoing data gathering and interim assessment during the continuing PAR, and concluded with a final assessment (Figure 2.3). The comparable socioeconomic and institutional information of the assessments enabled 'before-and-after' analysis within, as well as across, sites. (PAR processes and facilitators are described in Section 2.3.3).

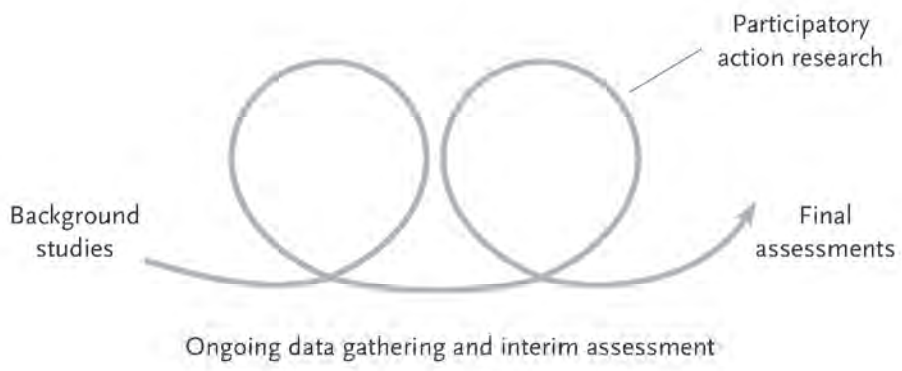

Figure 2.3 Combined methodology: PAR embedded in social science assessment

This methodological choice was based on it offering a form of enquiry that was both systematic and applied and would enable the generation of theory as well as influence on the social system (Fisher, Prabhu, & McDougall, 2007a). In more specific terms, this combined methodology was developed because it could encompass the multifaceted aims of: generating in-depth understanding regarding contexts and the changes to community forestry practices and outcomes over time (via the social science assessments); and, sparking or enhancing adaptive and collaborative capacity for the purposes of enabling experience-based research lessons about the approach (via the PAR); and, catalysing local benefit (via the PAR). In terms of the latter, participatory research allows for a nuancing of 'what matters' locally; when combined with action, it allows for the information to be used internally in ongoing reflection, learning and adjustment (J.Jiggins pers comm.).

Moreover, this methodological aspect was developed because it aligned with the study's focus on power and equity. In participatory research "the researcher collaborates with all the others involved, including members of the target group: the researcher is a participant in the intervention. Heron and Reason (1997) call this cooperative inquiry, which means research with, rather than on, people…" (Wagemakers, 2010, p. 31). One—and some would suggest the—key dimension distinguishing participatory and other forms (nonparticipatory) of research is the question of who controls and makes decisions in the research process (Lilja & Ashby, 2000; McDougall & Braun, 2003). A second and related question of ownership is central here: the question of "who is participating in whose process?"(McDougall & Braun, 2003, p. 23). In and through the PAR element and its focus on locally relevant issues, this combined methodology created the opportunity for "real ownership" (McTaggart, 1997, p. 29) or control over the local processes of action and learning in the study, as opposed to local people being involved in research owned and controlled by the research team. Repeated discussions and clarifications took place from the outset regarding the intention and the mode of study in terms of community ownership as well as the nature of adaptive collaborative approach.

In epistemological terms, this approach reflects a constructivist perspective—in other words one in which the assumption is that "reality is socially constructed and interpretations are filtered through prevailing….contexts" (McDougall and Braun, 2003, p. 26). More fundamentally, it brings with it the acknowledgment that the research process influences outcomes (McDougall & Braun, 2003), which implies an abandoning of assumptions of the research process as purely objective. In terms of knowledge translation, the implication of this methodological design is that—unlike more traditional applied research—it does not embody a separate first stage of information generation, followed by application of knowledge only at the end of the research. Rather, the learning is carried

out in an integrated way with the action: the 'action leads to learning, the new learning informs future action steps' (Fisher, Prabhu, & McDougall, 2007a).

iii) Gender and diversity analysis

This study applied design-oriented and transformation-oriented gender and diversity analysis (see Box 2.1). As applied in this study, this has three dimensions. First, this application reflects the broader shift in natural resource management (NRM) research from gender as the sole central analytical category, with undifferentiated conceptualisations of women, to multi-dimensional subjectivities, including axes of power such as place and wealth (Resurreccion & Elmhirst, 2008). Second, it reflects the evolution of gender and diversity from a focus on roles to a more expansive perspective. In particular, in line with McDougall and Braun (2003), this study incorporates a broader range of gender and diversity-related issues, in particular those relating to relationships and power dynamics, distribution of resource benefits and costs related to group decisions, options for increasing equity, and, how and why the above change over time. Third, the gender and diversity orientation grew from the objectives and focus to shape the research questions (design orientation), as well as to shape the methodology and implementation (transformation-oriented). As such, the study does not only incorporate gender- and diversity-relevant data, but its inquiry is gender and diversity-oriented, and its research process is oriented towards enabling marginalised actors' equitable access to local decisionmaking about their CFs.

Box 2.1 Gender and diversity analysis: A three-tiered typology

Descriptive gender and diversity analysis*: Gender and other differences amongst actors—such as the differing roles of, and relations between, men and women or poor and wealthy actors—are assessed, described and included in the analysis. This information is not used to design the research questions or process.*

Design-oriented gender and diversity analysis*: Gender and diversity information is used in designing the research questions, as well as in the analysis (i.e., it incorporates 'descriptive gender and diversity analysis').*

Transformation-oriented gender and diversity analysis*: The research process and activities—and intended outcomes—are designed to help marginalised stakeholders overcome barriers to their full access to decision-making processes and resources, in the research process and beyond it. This is incorporates and is in addition to describing gender and diversity differences ('descriptive gender and diversity analysis', above) and using this information in designing the research questions ('design-oriented diversity analysis').*

Adapted from McDougall & Braun (2003), based on Milne et al. (2001) and Lilja & Ashby (2001).

The scientific rationale for the study applying gender and diversity analysis was its contribution to accuracy. Gender and diversity analysis illuminates the NRM landscape more accurately, including differences and similarities, causes and effects, and avenues of change relating to actors' diverse worldviews, roles, relations, knowledge, power and vulnerability. Such analysis can bring to light 'invisible' actors and "elucidate the fact that relative wellbeing is neither neutral nor random" (McDougall & Braun, 2003, p. 32). Based on this, research that better reflects the experiences of diverse actors is more likely to contribute to NRM policies or practice that takes into account those differences and enables more equitable outcomes and impacts (Wilde, Vainio-Mattila & Brindley, 1995; McDougall & Braun, 2003). Conversely, there is an inherent risk in not addressing gender and diversity. As (Colfer 2005, p. 2) notes, "in-group/out-group differences suggest a real vulnerability on the part of the out-groups who will need careful attention if participatory research is not to do more harm than good".

Additional to this scientific impetus, the driver for this design and transformative gender and diversity orientation in the research design relates to this study—and the overall CIFOR research project of which it formed a part—being developed in response to concerns regarding equity and the wellbeing (or lack of it) of marginalised forest-dependent people (Colfer, 2005). As such, while such an orientation brings additional complexity to the research, it is also a logical fit. Moreover, gender and diversity analysis continues to be less than optimally developed in NRM and community-based natural resource management (CBNRM) research (Guijt & Shah, 1998; Vernooy, 2006). Vernooy and Fajber (2006, p. 22) note that the "practical and context-specific implementation of more socially sensitive research and development…remains a very difficult concept for many…Most of the social and gender analysis in NRM is at the conceptual level". This project provided an opportunity to contribute to the continuing development of gender and diversity analysis in NRM research. Gender and diversity strategies applied in the study are presented in Box 2.2.

BOX 2.2. Gender and diversity strategies in this study

In this study, CFUGs were not treated as homogeneous, but as diverse and multifaceted. In line with its research objectives and questions, the study sought and applied perspectives of both gender groups and of diverse socio-ethnic and wealth groups. Data gathering included separate focus groups as appropriate and separate reporting of perceptions of different groups in the findings. Additionally, it sought to nuance the understanding generated by integrating and overlaying gender and wealth diversity, as possible and appropriate in the study (i.e., addressing the emergent subcategories such as wealthy women versus medium wealth group versus poor women) and recognising caste and ethnicity in the data, as possible. A balance of gender and socio-ethnic diversity was sought in the field researchers to support access to marginalised subgroups

Moreover, the PAR aspect of the research involved processes that helped to illuminate issues of gender and diversity locally including participatory wealth ranking exercises and CFUG self-monitoring. Similarly, facilitators and researchers contributed to bringing diversity and equity issues into local CFUG discourse through their critical questioning and encouraging reflection in relation to roles, relations and equity (further addressed in Chapters 4-6 of this thesis). Additionally, the research teams intentionally sought to create opportunities for marginalised members at the sites including as local change agents (facilitators), as well as providing training, backstopping, coaching and networking to support capacity in this role encouraging local CFUG leaders to begin to consider marginalised members in their selection of members for CF-related opportunities.

v) Applying an adaptive and collaborative approach to the research process itself

As described in Colfer (2005), the research teams (in the larger CIFOR adaptive co-management programme, as well as within the Nepal ACM project of which this study forms a part) espoused an adaptive collaborative approach to the research process itself: "We were proposing a collaborative and adaptive approach for forest communities, but could we implement such a process amongst ourselves?" (Colfer 2005, p. 15). Our research team attempted to do so by:

- co-researching with local and other CF actors, in which the aim is to "research with people, and not about or for" them (Steyaert & Jiggins, 2007, p. 582);
- intra- and inter-team exchanges and collaboration (within each Nepal partner team; between Nepali partner teams, and between the larger Nepal team and other international teams);
- routine joint reflection on research processes, activities, findings and linking to new ideas (within and across teams, as per above); and,
- flexibility and open-endedness in design to allow for adaptation to learning, surprises and opportunities, as described further below (Colfer, 2005; Wollenberg et al., 2007).

The research team chose to apply this approach to the research process for ethical reasons ('walking the talk' of the research theme and the team itself trying what it was suggesting local people in the study try), as well as for the team's own learning (to enrich the team's understanding of adaptive and collaborative approaches). Additionally the research team perceived this approach to be appropriate because the flexibility of an adaptive approach would be a good fit with the relative uncertainty in the study context (the violent conflict) and with the dynamic and unpredictable nature of a PAR approach (with action leading to learning, then informing future action).

This approach had several implications, as well as suggesting collaboration and partnership-based research (section 2.1). One was that the design was intentionally open-ended and flexible in anticipation of 'surprises'. For example, the original plan for the second phase of the study (2004-2007) was to (only) track the 4 sites that had engaged in PAR in the first phase (1999 – 2002) using conventional social science methods, while starting PAR with 7 new CFUGs (sites). Members of these four original CFUGs, however, expressed strong interest in a different plan: i.e., they requested that we also engage in PAR with them in the second phase, alongside the 7 new sites. In line with the research team's ethical commitment to listening to research collaborators and benefitting marginalised people, the team adapted the plans and engaged in PAR with those sites. The team also, for example, re-worked and refined the data collection frameworks throughout both phases project in response to the iterative development of themes and key points of learning. Additionally, the team worked with the understanding that initial steps in the PAR (i.e., the initial catalysing of adaptive collaborative approach) could be planned, but much of continuation of the PAR (i.e., the further development of adaptive collaborative governance and its use by CFUGs) involved identifying and grasping opportunities. Also, the team purposively took a flexible approach to its field work in order to be able to continue to operate safely in the context of violent conflict. Furthermore, the Nepal team tried to take

a learning approach in the sense of valuing team and individual learning about the research subject ('single loop' learning) and about the process of doing research ('double loop learning'). This manifested in terms of time and resources being used for regular team reflection sessions and workshops, as well as a conscious effort to build capacity through in-team mentoring and accessing external capacity building opportunities for all team members.

2.4 SITE SELECTION

2.4.1 Processes, criteria, and logic

In both phases of the research, the site selection process was based on a set of selection criteria and carried out through stakeholder consultations and negotiations and site selection visits. Stakeholders involved in the consultation were from the national level (Ministry of Forests, Community Forestry Division, Nepali nonprofit organisations, and bilateral projects) as well as from the District levels (District Forest Offices, District offices of NGOs and bilateral). The selection criteria were drafted in short form initially by the research team, in line with the overall project objectives, then negotiated with stakeholders.

Stakeholders at the national level gave recommendations for Districts in which to work. The selection of Districts, based on stakeholder recommendations, related to: safety in relation to the national conflict; CF stakeholder need and desire for information on certain districts; sufficient maturity of the CF programme in the district; physical accessibility to CF groups; and the potential for certain district to provide more diverse CF actors within and in relation to the CFUGs. Stakeholders at the District level gave suggestions for sites for the team to visit and assess for potential selection (written up in Site Selection Reports). Actors in the CFUGs visited as potential sites, discussed the project with teams and expressed if they would be interested in engaging as a site (all indicated that they would).

In terms of specific sites, the rationale for the site selection criteria was to select CFUGs that were relatively 'average' groups for their districts. In other words, the criteria were intended to aim for the relative 'middle' performers, ruling out CFUGs that were already 'star performers' or those that were trailing far behind the norm. This rationale was taken both in order to: enhance the relevance and generalisability of the findings, as well as to avoid communities with either little room for or little need for innovation, or such extremely low social or institutional capital that the time period of the research would be insufficient to see any development during the research period. As such, selection criteria included average intra-group relations, conflicts, external relations, level of dependence on

CF, forest condition and group activeness/passiveness. The criteria are presented in full in list form in Annex 2.5. The specific meanings of 'average' or representative for the district were worked out in each district with stakeholders. The common criteria scale (i.e., the meaning of high, medium and low in the criteria) was documented in an internally generated scoring guide for CFUG site selection criteria.

The research team used the criteria as a guideline with the understanding that not all sites would fully match each and every characteristic in terms of being 'average' or 'medium'. As such, as well as each site being selected to fall (generally) within the above, the site selection was intended to create diversity across the set of sites because the variation would create contextual richness for the study.

2.4.2 Sites

Based on the criteria, four sites were selected in phase 1 and seven additional sites were selected in phase 2 (n=11) (Table 2.1). The sites spanned 7 districts, ranging from east to west, and including areas of the Mid-Hills region as well as the Terai (Figure 2.4). As presented in the upcoming chapters, and in line with the criteria, the sites were all formal CFUGs, meaning that they held the legal management and use rights to their designated community forests. They were all heterogeneous, with a range of 5 to 12 caste and/or ethnic groups. There was internal variation in wealth within all the CFUGs, with 37% of all members falling into a 'poor' category, according to the CFUG's own assessments. The CFUGs ranged in size from 111 to 751 households per group (with a median value of 156), with their community forest areas ranging from 24 to 355 ha (with a median value of 120). Further site details are presented in the empirical chapters of this thesis (Chapters 4, 5, and 6).

Table 2.1. Sites: Name and district

	Site: CFUG name	District
Phase 1: 'Long term sites'		
1.	Bamdibhir	Kaski
2.	Deurali-Bagedanda	Kaski
3.	Andheri Bhajana	Sankhuwasabha
4.	Manakamana	Sankhuwasabha
Phase 2: 'Short-term sites'		
5.	Kajipawa	Palpa
6.	Chautari	Nawalparasi
7.	Patle	Lalitpur
8.	Handikharka	Dhankuta
9.	Khanyubas	Dhankuta
10.	Chautari	Morang
11.	Pathivara	Sankhuwasabha

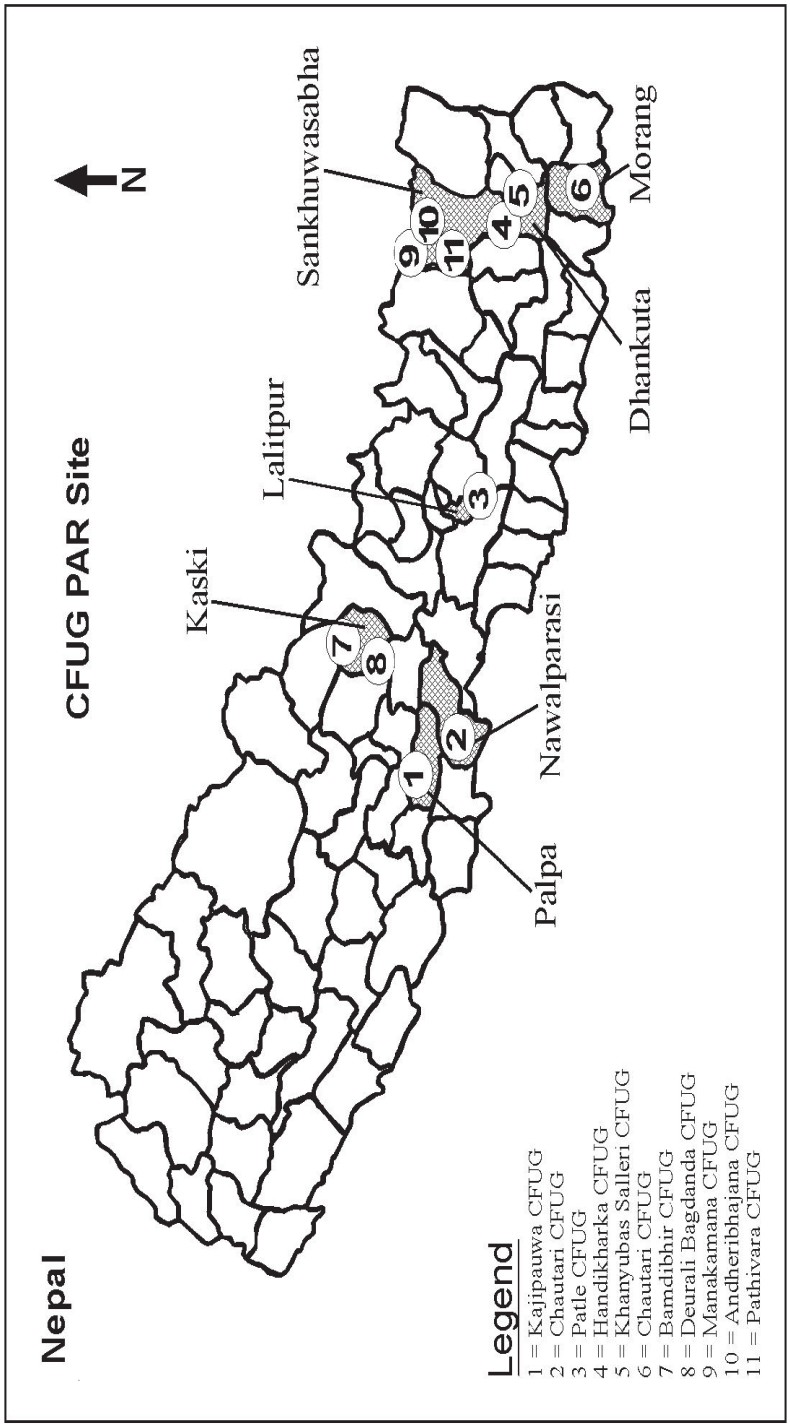

Figure 2.4 Map of sites (n=11)
Source: McDougall et al., 2008

2.5 METHODS: DATA RECORDING, COLLECTION & PAR

2.5.1 Data recording

Data recording was nested in time and across sites: within each site, smaller time period data feed into regular longer time period analysis and reports; and, data from each case was recorded and analysed separately, then this data and analysis was applied in cross case analysis (for this study). While slightly adapted and updated from phase 1 to phase 2, the overall chain of reporting and analysis comprised:

- **site selection** studies;
- **background studies;**
- **ongoing daily field diaries** by researchers while in the sites;
- **ongoing field records** by local research assistants between researcher stays in the sites;
- **interim reports**;
- **final reports.**

The above reports all used protocols that were agreed upon by the team in advance in order to enable cross-case comparison and analysis. The protocols covered aims and questions, methods, reporting formats, and team-generated 'scoring guides' for defining and measuring terms such as 'high', 'medium' and 'low' conflict.

2.5.2 Data collection

Data for the Background studies, Interim, and Final assessments was gathered by the research team through a combination of participatory methods and reviews of CFUG documentation and records (Table 2.2). The former include: participant observation of formal and informal events and occurrences; regular field diary recording by field researchers and documenting by field research assistants; participatory mapping; participatory wealth ranking; semi-structured interviews with actors outside the CFUGs; semi-structured interviews with key informants within the CFUGs; focus group discussions; and pebble distribution. One of the Nepal partner teams secured a small complementary grant to assess Social Analysis System (SAS) tools such as Network Dynamic Analysis, Collaboration, Legitimacy, Interest and Power Analysis, Information Dynamics Analysis, Perception Analysis (Problem Ranking), and Trust Analysis so also applied those in the short term sites for generating information about the social context. Relevant documents and records that were reviewed included CFUG Operational Plans, general assembly and executive committee records and minutes including decisions and distributions, and, after PAR had started, the CFUGs' own selfmonitoring records.

Table 2.2 Summary of data collection methods

Information	With whom	Methods
Basic features of CFUG • Key stakeholders • Relationships • Site selection criteria • Key conditions and history of CFUG • (In longterm sites: Followup information from phase 1 at outset of phase 2)	Female and male, and different caste, wealth and ethnic group members of CFUGs, and their executive committees and *tole* groups; district and rangepost level actors with knowledge of the CFUGs (e.g., District Forest Office staff, NGOs, bilateral agencies)	Focus group discussions Key informant interviews Venn diagrams Matrix ranking CFUG document reviews Participatory mapping Stakeholder/Network dynamic analysis (SAS) 'Problem ranking' (SAS)
Performance of facilitators and changes in human capital of change agents	Female and male facilitators and female and male, and different caste, wealth and ethnic group members of executive committees and each *tole*	Semi-structured Interviews Focus group discussions SWOT analysis
Institutional processes and arrangements of the CFUG, including: • Long term planning process • Annual planning process • Action (activity) planning process	Female and male, and different caste, wealth and ethnic group members of CFUGs, and their executive committees and *tole* groups	Focus group discussions (by separate homogenous *tole*, gender or interest groups) Key informant interviews Risk and uncertainty (systems) analysis Document reviews Observation and Participant observation Ongoing recording in field diaries

The nature and quality of CFUG governance and management, including assessment of adaptiveness and collaboration decision making and planning processes	Female and male, and different caste, wealth and ethnic group members of CFUGs, and their executive committees and *tole* groups	Focus group discussions (by separate homogenous *tole*, gender or interest groups) Key informant interviews Observation/participant observation Information dynamics (SAS) Ongoing recording in field diaries
Transaction costs of the CFUG's governance and management (including, time costs, resources, social risks)	Female and male, and different caste, wealth and ethnic group facilitators and members of executive committees and each *tole*	Semi-structured interviews Focus group discussions (by separate homogenous *tole*, gender or interest groups) Document reviews Observation and participant observation Ongoing recording in field diaries
Capital and changes in Capital: • Stakeholder priorities/perceptions of problems • Livelihoods, including dependence on forest resources • Social, including power relations and equity • Institutional • Human	Female and male, and different caste, wealth and ethnic group members of the CFUGs, executive committees and *tole* groups; rangepost and district actors with knowledge of the CFUG	Focus group discussions (by separate homogenous *tole*, gender or interest groups) Matrix ranking (pebble distribution) Key informant interviews In-depth 'stories' of members Observation and participant observation Collaboration, legitimacy, interest and power analysis (SAS)

• Natural (ie, distribution of forest resources)		Perception analysis ('Problem ranking') (SAS) Trust analysis (SAS) Ongoing recording in field diaries
Forest Condition and Management • Forested area • Density • Biodiversity • Forest health • Threats and strategies	Female and male, and different caste, wealth and ethnic group members of the CFUGs, executive committees and *tole* groups;	Focus group discussions Field observation Transect walks Pebble distribution Ongoing recording in field diaries
Security, policy context and accessibility to services	Female and male, and different caste, wealth and ethnic group members of the CFUGs, executive committees and *tole* groups; rangepost and district actors with knowledge of the CFUG	Key informant interviews Focus group discussions
In depth contextual understanding of the CFUG and the people in it	Female and male marginalised and elite individuals in the CFUG (separately)	In-depth Interviews (ethnographic account/personal histories/life stories) Participant observation (community works, celebrations, and so forth) Ongoing recording in field diaries

Source: McDougall et al., 2007

Some of these research methods applied in this study, such as participatory analysis of wealth, equity, and perceptions played a dual purpose: they both generated information for external analysis (for the research project) and also sparked or informed critical reflection (by local participants in the PAR, as a part of their own self-monitoring and critical reflection). The document reviews were of CFUG materials (such as committee records, assembly meeting minutes, Operational Plans, and selfmonitoring records of CFUGs) as a means of sourcing and validating data such as CFUG decisions, activities, and selfmonitoring assessments.

To support the effectiveness of the direct observation of planned events such as committee meetings, the researchers prepared 'learning questions' for themselves beforehand and tried to structure their observation around these. Observations included assessment of process quality issues such as seating arrangements, who participated, who influenced outcomes, as well as content and decisions. For ongoing field data recording between their visits, the researchers provided field researchers with Nepali guidelines and checklists to help keep the records of relevant events. The researchers also provided mentoring support to the field researchers, such as suggestions and feedback on the records. The field researchers were asked to disaggregate qualitative (e.g., perspectives) and quantitative data (e.g., leadership positions) according to socio-economic categories as appropriate. In addition, they were also asked to provide their own critical observations on the events and processes.

Data gathering as undertaken through interaction with at different (sub)scales and with different groups in the CFUGs, including with the toles (hamlets) and tole committees, interest groups (such as pot makers), 'action groups' (once these were formed during PAR, such as handicraft groups), the executive committee of each group, and key informants (such as teachers, social workers, and ex-committee members who tended to be up to date on CFUG issues and changes), and general members of the CFUG. Participatory information gathering was carried out separately with gender, wealth, and/or interest groups as appropriate.

2.5.3 Data analysis

The main analytic tool was the iterative examination of observed and documented changes and their influences in order to identify 'plausible causal connections' among them (Fisher et al., 2007a) (Box 2.3). This aligns Process-Tracing as an analytic method appropriate to case study material (George & Bennett, 2005). A central feature of the analytical method was the iteration between field experience and analysis. The research team sought, identified and periodically assessed the emergent themes and patterns in the material. The

team also searched for surprises in the material, as well as exceptions and negative cases, which is in line with negative case analysis (Patton, 2003). Cross-case comparisons were carried out manually in this analysis; quantitative data were analysed using descriptive statistics through comparison of pre- and with- data using Excel (Microsoft 2007).

Box 2.3. Plausible causal connections

As noted by the International Steering Committee of the larger CIFOR project of which this study is a part,

> *"...Assuming an adequate timeframe for meaningful change, quantitative (or 'objective') data may demonstrate that a change in forest condition or human well being has occurred. However, [the research project] cannot demonstrate the cause of this change. Indeed, there is no methodology that can demonstrate the causes of such change with certainty. The best that can be done is to apply something like the sort of analysis used by practitioners of historical sciences (such as palaeontology or history), who examine events in order to establish plausible causal connections..."*

Source: Excerpt from ACM International Steering Committee Report in Fisher, Prabhu & McDougall (2007a, p. 9)

2.5.4 Catalysation and facilitation of PAR

The main strategies used to catalyse and facilitate the PAR were: the exploration and iterative reinforcement of key concepts (especially 'learning together' and 'reflection', and 'working together'); development, trying and adjusting of learning- and collaboration-based governance processes, structures and strategies; and, ongoing facilitation to support both the above. Facilitators sought to keep in mind and share a set of 'adaptive collaborative principles' developed early in the research based on relevant literature and prior researcher experiences. These principles or guideposts were used by the researchers and facilitators as sort of 'design principles' or design goals to keep in mind in their work with the CFUGs. The guideposts evolved from the first phase to the last and were revised over time to reflect the learning during the course of the research (Box 2.4).

Box 2.4 'Guideposts' of adaptive collaborative governance

1. All relevant actors engage in decision making and negotiation and have the space and capacity to make themselves heard.
2. Actors communicate and exchange knowledge and skills with other actors in multiple directions.
3. Actors effectively manage conflict.
4. Actors implement actions together.
5. Management and governance are based on shared intentional learning and experimentation, and actors internalise and consciously apply this learning to improve their understanding and practices.
6. Planning and decision making include attention to relationships within and between human and natural systems.
7. Planning and decision making clearly reflect links to the desired future, and take into account information about key past and present trends.
8. Actors identify and deal effectively with uncertainties in knowledge, including risks, in their planning processes.
9. Actors join together in reflection and social learning processes, so that shared understanding or knowledge is created and learning is transformative.

Source: McDougall et al. (2008, p. 33)

In the first phase the researchers took on the role of facilitators. They made efforts—with varying degrees of success—to transfer that role to local people by the end of the phase. Researchers' initial facilitation role was to lead a workshop in each CFUG site to explore key concepts of the approach. The workshops included experiential games about learning and collaboration and sparking the development of options for revision to CFUG governance and management. Following the workshop, over the course of the 13-16 months of PAR, facilitators supported each CFUG in developing *tole* (hamlet)-based visioning and self-monitoring processes as the basis for governance and management, as well as action groups to lead activities.

In the second phase, for the purpose of sustainability post-PAR, the role of facilitator in each site was taken on by teams of local and meso (district and rangepost) actors, rather

than researchers. The meso actors were CF-related individuals from community forestry networks, nongovernmental organisations, bilateral agencies or district forest offices. The facilitators were women and men (just over 50% women over the course of the PAR) from a range of socio-economic backgrounds. They were selected based on the suggestions of community and district actors, based on agreed criteria, such as commitment to equity, ability to commit the time required, and potential to be accepted in the role by diverse local actors. These local facilitators (or 'change agents') were selected by the CFUGs and meso actors, with input from researchers. They undertook approximately 5 days of initial training in the approach and facilitation, as well as several followup trainings and workshops/networking with facilitators across sites. The facilitators worked in teams of 2-4 people, typically including at least one actor from the level and one from the CFUG. There were 58 facilitators selected and trained initially; replacement facilitators were selected and trained throughout the course of the PAR as needed if a facilitator left the community or was unable to continue in their role. Similar to phase 1, the PAR began with workshops in the new sites (n=7). Over the course of the following 19 months, with facilitation teams' support, the CFUGs continued to develop, apply and adjust their learning and collaboration-oriented governance processes, arrangements and strategies and activities.

As a part of this, facilitators' roles in each site included, as appropriate to each site, facilitation in *tole* (hamlet) and action groups, committee meetings, general assemblies and other planning and reflection processes. In doing so, the facilitators actively engaged on an ongoing and regular basis with the CFUGs and subgroups to facilitate and support inclusive group negotiation, learning, and adaptation. More specifically, this facilitator engagement included:

- facilitating large group and small group (such as *tole* or action group) processes to build awareness of the existing situation and how that situation compares with the desired situation;
- engaging the groups in reflection about the nature of their governance and management, including issues of learning, connections within and outside the group, and equity;
- supporting the groups in identifying their learning needs, tracking changes, and using their learning to adapt governance and practices; and
- informal encouragement of individuals (for example, to participate, reflect, or view issues from different perspectives).

In the second phase, the researchers' main role viz-a-viz the facilitation and the PAR, was to train, support and backstop the facilitation teams. Support and backstopping here refers to periodic local facilitation-researcher joint facilitation for particular tasks, joint brainstorming regarding solving challenges, joint reflection amongst change agents and

with researchers, and researcher involvement in local issue if requested such as helping to 'trouble shoot' if tensions arose between facilitation teams and executive committees. Researchers also coordinated various capacity building and networking events for facilitators, such as a facilitator 'study tour and workshop'.

The researchers and facilitators purposively took a 'non-neutral' stance in their facilitation and supporting roles. This refers to researchers and facilitators explicitly acknowledging (amongst themselves and to the CFUG and meso actors) that their goal in the facilitation was to enable space for marginalised members to participate as effectively as non-marginalised actors. They sought to put this into action in various ways, including the central strategy, especially by researchers: the use of critical questioning of CFUG norms around equity. For example, when discussing which groups get access to which areas of forest, and the *Dalit* groups have the furthest away and least valuable area, the researchers and facilitators would ask questions such as, 'Why is this the rule?', 'Who made this rule and who benefits and who loses from it?', 'How would you feel if you were assigned the furthest and least valuable?', and, 'How does this fit with (earlier) CFUG visions of equity in this CFUG?'. Additionally, the researchers and facilitators used other strategies including modeling respect, designing processes to be non-threatening to marginalised people (for example, using small groups and visuals), and actively inviting the input of marginalised people on equal terms with others.

2.6 SCIENTIFIC RIGOUR

To ensure scientific quality, the study design integrated multiple strategies for scientific rigour. As a reflection of the participatory and constructivist nature of the research, these means are framed in terms of Lincoln and Guba (1985)'s notion of research quality or trustworthiness. The four criteria they offer for evaluation of quality and trustworthiness are: **credibility; dependability; confirmability; and transferability**. Each of these four criteria, and the research design's fit with them, are outlined below, drawing on Cohen and Crabtree's (2006) interpretations. Additionally, in line with this study's case study framework, the below notes the links of these to three of the more conventional social science criteria relevant to case studies, as highlighted by Yin (2009): internal validity, external validity, and reliability.

Credibility

Lincoln and Guba (1985)'s concept of *credibility* relates to whether the research findings (which are in themselves interpretations and re-constructions) are credible to those actors involved in the research. Lincoln and Guba's (1985) techniques for establishing credibility include: triangulation, prolonged engagement, persistent observation, negative case analysis, member-checking and peer-debriefing (Lincoln & Guba, 1985; Cohen & Crabtree, 2006).

In this study, credibility was established through a number of means. Triangulation of data was carried out, both in terms of gathering information from multiple sources, and in terms of using multiple methods to gather the same data. The former included from sources within the CFUGs (e.g., from women and men, from wealthy and poor users, from multiple hamlets, and so forth) or, as appropriate, from within the CFUG and also outside the CFUG (e.g., from actors in the national community forestry network, from the District Forest Office staff, and so forth). Additionally, as per Cohen and Crabtree (2006) and Lincoln and Guba (1985), the study applied the strategies of prolonged engagement and persistent observation, with researchers having multiple and extended stays in the sites, observations recorded with field diaries, as well as having field recorders observe and record events on an ongoing basis.

Building on these ideas, the study contextualised and created depth of understanding through repeated in-depth interviews with individuals and iterations of focus groups, and more broadly, through the longitudinal aspect of the methodology. In relation to the PAR, participatory tools such as visioning and focus group reflection on key issues allows for a nuancing of 'what matters' locally (J.Jiggins, pers comm..). Furthermore, credibility was built through the application of the gender and diversity analysis (see section 2.3 above). Researchers drew on the personal 'stories' and perspectives of individuals from either end and throughout the spectrum of power and forest benefits to get insights into the subtle and complex socio-political environment. Similarly, to support the nuanced accuracy of the findings, the information was gathered and analysed in a disaggregated way as needed; this enabled the information about, and perspectives of, marginalised users to be clearly distinguishable from the 'dominant' voices. For example, key issues in which people of different socio-economic categories of the CFUG may have different views (such as perceptions of equity), the information was gathered through separate homogeneous (by gender, caste or class, as appropriate) focus group discussions to enable freer and more candid exchanges amongst participants.

Furthermore, credibility was enhanced through searching for 'negatives' (negative case analysis) in the data collection and analysis, for example, seeking instances of low or

decreasing collaboration or adaptiveness, or negative outcomes. Additionally, by validating the findings in the sites through sharing and discussions with CFUG members from the sites ('member-checking') as well as with other CF and CBNRM actors external to the research (peer-review or' peer-debriefing'). The latter included periodic review of the overall CIFOR project (of which this study forms a part) by an independent Steering Committee, by a Nepal National Advisory group (phase 1) and an informal group of national advisors (phase 2), as well as through double blind peer review of the findings presented in this study (i.e., Chapters 3, 4, 5, 6).

Lincoln and Guba (1985) note that credibility is the naturalistic inquirer's version of the more conventional test of 'internal validity'. As Yin (2009, p. 40) applies the term with reference to explanatory or causal studies, internal validity refers to "seeking to establish a causal relationship, whereby certain conditions are believed to lead to other conditions, as distinguished from spurious relationships". Yin relates this to the data analysis phase of the research. As presented above, this was the central analytical approach of the study, framed in terms of 'plausible causal connections'. Furthermore, to contribute to investigation of causal relations, the team incorporated as a strategy critical questioning between team members and across sites, asking questions such as 'Why?' and 'What else could have caused that?', 'How else can this be interpreted?', or 'What surprises have occurred and why?'. This study, and the larger CIFOR project of which it was a part, made the effort to make explicit those causal connections. Plummer et al. (2012) recognised those, and in their systematic review of the wider literature on adaptive co-management approaches, they flag the CIFOR project (of which this study is a part) as best practice in terms of 'Clear evidence of outcomes attributed to specific processes or attributes'.

Dependability

Lincoln and Guba's criteria of *dependability* parallels the more conventional test of 'reliability' (Lincoln & Guba, 1985)[5]. As such, it is concerned with stability, predictability, consistency (Lincoln & Guba, 1985) in the sense of the operations of a study, such as data collection procedures, being repeatable, with the same results (Yin, 2009). Lincoln and Guba (1985) note the role of an external audit or audit trail in enhancing dependability, which is similar to Yin's flagging the use of a case study protocol.

In this study, the operational procedures were documented on an ongoing basis as a part of the overall donor reporting frameworks (both phases), and as a part of the larger cross-

[5] Lincoln and Guba (1985:299) consider dependability to be somewhat broader than reliability however, in that dependability relates to the taking into account both factors of instability as well as factors of phenomenal or design induced change.

country CIFOR project documentation and analysis (phase 1). Similarly, as noted above, data from each case study was documented according to the established, systematic case study protocols, for each phase of assessment. Also, the National and International Steering Committees, as well as the study donor agencies contributed to reliability through their periodically scrutinising ('auditing') project documentation, including methodological and procedures aspects. For example, the International Steering Committee repeatedly encouraged process documentation: "While there may be some scope for quantitative data collection and analysis in the project, most of the data collected will be qualitative, and often in the form of process documentation. As the project is intended to test and improve the application of the ACM process, such documentation is essential" (International Steering Committee Report in Fisher, Prabhu & McDougall 2007a, p. 9). In parallel, during phase 1 of this study, the Nepal project of which this study is a part underwent an evaluation by the CGIAR Systemwide Programme on Participatory Research and Gender Analysis to document and evaluate the gender and diversity aspect of the project.

Finally, as a part of the larger CIFOR ACM project in Asia of which this study is a part, this study contributed to communicating its methods and operationalisation (see Fisher, Prabhu & McDougall, 2007b). In the systematic review of adaptive co-management literature noted above, Plummer et al. (2012, p. 11) also flag this contribution: "Only a minority of the items examined employ traceable assessment methods; primarily qualitative observations of learning characteristics that are variously understood (e.g. Fisher, Prabhu & McDougall, 2007b; Plummer & Fitzgibbon, 2007)". Plummer et al. (2012) also list the synopsis of this CIFOR project (of which this study forms a part) as an illustration of best practice in terms of 'Rigorous and transparent methods that enable replication'.

Confirmability

Confirmability relates to the notion of objectivity in research (Lincoln & Guba, 1985). In other words, it refers to "a degree of neutrality or the extent to which the findings of a study are shaped by the respondents and not researcher bias, motivation, or interest" (Cohen & Crabtree, 2006, parag. 1). Audit trails, external audits, triangulation and reflexivity are noted as important to developing confirmability (Lincoln & Guba, 1985; Cohen & Crabtree, 2006). Similarly, Yin (2009) underscores the need for triangulation.

In this study, as described above, the operationalisation and data were carefully documented (audit trail), the external steering committees and peer reviews played an auditing role (external audit), and triangulation of sources and methods was applied (triangulation). Additionally, the research design purposively involved engaging

simultaneously with two different Nepali organisations as partners in the research. The two organisations worked in parallel and shared information and learning, but worked separately enough to contribute to illuminating differences that related to the research team organisations or individuals. While tying into a general concept of triangulation, this also ties into reflexivity (Cohen & Crabtree, 2006). The teams engaged in cross-team, cross site discussions as well as some cross-site exchanges that included critical reflection on differences in processes, methods, and interpretations.

Transferability

Transferability relates to the applicability of the findings to contexts beyond the research site(s) (Lincoln & Guba, 1985; Cohen & Crabtree, 2006). This parallels the notion of 'external validity' in case study frameworks (Yin, 2009, p. 40), relating to "defining the domain to which a study's findings can be generalized". In other words, it "deals with the problem of knowing whether a study's findings are generalisable beyond the immediate case study" (Yin, 2009, p. 43). A strategy for transferability is thick description (as opposed to superficial description) (Cohen & Crabtree, 2006). Yin (2009) relates external validity to the understanding of generalisation, underscoring the difference between samples in surveys being applied towards statistical generalisation, in contrast to cases in case study research being applied towards analytic generalisation. By the latter he refers to generalising a specific set of results to broader theory. Furthermore, in particular, Yin (2009) suggests the use of replication logic in multiple case studies, which he explains as analogous to the logic used in multiple experiments.

In gathering the data for our studies, as noted above, researchers spent multiple extended periods in the sites over the period of multiple years. Their reporting encompasses multiple facets of each site included histories, and the evolution of complex social (and social-ecological) situations and relations. Thus while the findings presented in this thesis are cross-case analysis, they are built from rich ('thick') bases.

Additionally, as noted above, the study follows Yin (2009) in approaching the generalisation involved as analytic (rather than statistical). Results were generalised from multiple cases to theory (not from samples to populations), and replication logic (literal replications) as per Yin (2009) was used in the development and analysis of the multiple cases (both phase 1 and 2).

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CHAPTER 3

The Persistence—and Transformation—of Power Imbalances in Community-Based Natural Resource Governance: A Theoretical Perspective

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Chapter 3. The persistence—and transformation—of power imbalances in community-based natural resource governance: A theoretical perspective

Abstract

Natural resource governance literature has increasingly recognized the prevalence of power imbalances in social-ecological landscapes. Moreover, the literature signals that these imbalances undermine livelihoods and well-being and reinforce the vulnerability of the least powerful groups and. And yet, to date, there is limited exploration of why such imbalances persist. Further, while adaptive collaborative approaches to natural resource governance have been proposed as potentially contributing to power shifts, this connection is relatively little explored and explained. The article addresses these gaps by advancing a theoretical understanding of the persistence of power imbalances in community-based natural resource governance. It does so by means of a theoretical synthesis highlighting the concepts of unmarked categories, doxa and delegation as contributing forces, and the concepts of structure and agency as elucidating the recursive nature of these imbalances. Additionally, the article applies this theory-based lens to understand why and how adaptive collaborative governance may influence power imbalances. As such, after introducing the concept of power, the article focuses on the question 'Why is it that power imbalances tend to persist?' Next, it asks, 'How can we understand adaptive collaborative governance's potential influence in shifting persistent power imbalances?' This reflection proposes reflexivity as a theoretical entry point to this question. This flags the multifaceted roles of social learning in explaining adaptive collaborative governance's potential transformative influence on power imbalances.

Key words: adaptive collaborative governance; agency; delegation; doxa; power; unmarked categories; reflexivity; structure; transformation.

3.1 INTRODUCTION

Power imbalances between actors are commonplace in community-based natural resource governance (CBNRG) (Colfer, 2005; Berkes, 2006; Ojha et al., 2009). These imbalances have been observed to reflect overlapping categories of identity in terms of gender, wealth, ethnicity and caste, education, linkages to more powerful actors or institutions, and other factors (Nightingale, 2011). They have pragmatic and ethical implications, including the marginalisation of some people from decision-making processes (Mahanty et al., 2006), lack of attention to the needs of some social categories, weakened resource governance due to limited input and buy-in to decisions, as well as conflict, and other negative outcomes from the perspective of sustainable development.

Despite this significance, the limited scope and depth of discourse regarding power in community-based natural resource governance literature and practice has been widely critiqued (Mosse, 2002; Lachapelle et al., 2004; Ribot, 2006). Even in the relatively successful devolution of power in Nepal's community forestry, resource management practices have focused on material rather than subtleties of power (Khadka, 2009). Moreover, the issue of power imbalances has been increasingly flagged as needing more recognition in the discourse and practice of adaptive collaborative management and governance. Nadasdy (2007), for example, highlights the risk of adaptive collaborative management initiatives entrenching power imbalances. At the same time, adaptive collaborative approaches have been proposed as having the potential to contribute to the more equitable sharing of power and thus shifting power imbalances (Plummer & Armitage, 2007). And yet, the relative dearth of elaboration on this proposition in the literature to date suggests that adaptive collaborative governance may be facing an impasse with regards to power. We propose that this may be rooted in the need for a deeper conceptualisation of why power imbalances tend to persist in CBNRG and a deeper understanding of why and how adaptive collaborative governance may play a role in shifting them.

In response, the aim of this article is to contribute to the scientific debate regarding the persistence of power imbalances—and their potential transformation in CBNRG—in particular, in relation to adaptive collaborative governance (ACG). Specifically, we contribute to the understanding of the persistence of, and ACG-related shifts in, power imbalances at the local scale by means of a theoretical exploration within the broader context of community-based natural resource governance. The analysis does not seek to explore the depths of any single theoretical perspective on power nor present a comprehensive review of the literature. Rather, we follow Kemp (2010) here in pursuing the building of bridges across ontological divides in order to understand how "social action is stable and consistent, yet open to change and contingency" (Kemp, 2010. p. 4). As such, the

value of this reflection is in the richer and more coherent picture that emerges as we consider several relevant synergistic theory-based angles in order to ground and deepen understanding of the persistence of power imbalances, and in what way adaptive collaborative governance may play a role in transforming these. Viewing theory as an ultimately practical exercise, as proposed by Lewin (1952, p. 169) ("there is nothing more practical than a good theory"), we propose this exploration as a step towards understanding power imbalances for the ultimate purpose of advancing the utility and effectiveness of adaptive collaborative governance.

The article begins by exploring the concept of power, first outlining how we define it for the purposes of this article and highlighting its significance and some key patterns of imbalances. Next, the article synthesises insights from selected theoretical perspectives to probe the central question 'Why do power imbalances persist?' In doing so, it begins by focusing on three concepts that help to elucidate the existence of power imbalances: unmarked categories, doxa and delegation. It then turns to a two-fold concept that helps to explain the reinforcement or repeated re-creation of these imbalances: structure and agency. These constructs are selected because of their relevance to CBNRG and their resonance with learning from our own empirical research experiences. Finally, continuing as a theoretical reflection, the article considers how it is that adaptive collaborative governance may contribute to shifting power imbalances. In addressing this question we use the concept of reflexivity as a theoretical entry point. This points to social learning—a key element of ACG—and flags its multiple potential roles in contributing to the transformation of power imbalances.

3.2 POWER: CONCEPTS, IMPLICATIONS AND PATTERNS

3.2.1 What is power?

The concept of power is diversely interpreted and multifaceted. For the purposes of this reflection, we frame it in terms of a force that acts as a constraint to or enablement of human action. In this sense, power relates to the capacity of individuals or groups to exercise their will. This draws on Weber's encapsulation of power as: "the probability that one actor within a social relationship will be in a position to carry out his own will despite resistance…" (Weber, 1978, p. 53), as well as tying to Rupert's (2004, p. 209) observation that social power "…is a condition of possibility for social action". Further, understanding of power is usefully refined to include and distinguish between power that relates to: influence on or control over others ('power over') (Barnett & Duvall, 2004; Rupert, 2004); actors' being socially empowered with capacities and practices that influence their ability to perform or

achieve socially meaningful action ('power to') (Barnett & Duvall, 2004; Rupert, 2004); and, relation or connection with others ('power with') (Surrey, 1987).

Sources of power have been distinguished in a multitude of ways. Galbraith, for instance, frames power as 'condign' (based on force), 'compensatory' (based on use of resources), or 'conditioned', and sources of power as 'personality' (individuals), 'property' (resources) and 'organisational' (Galbraith, 1983). Linking to natural resource governance, the mobilisation of power can be understood in connection to various forms of capital, such as human capital (including language skills, charisma, persuasive ability and ability to speak in public assemblies), symbolic capital (respect, honour and so forth), and social capital (in terms of positive linkages to other powerful actors). In a broader social commentary, Toffler emphasises the transformative and amplifying role of knowledge viz-a-viz power: "Knowledge itself … turns out to be not only the source of the highest-quality power, but also the most important ingredient of [the other sources of power] force and wealth" (Toffler, 1990, p. 18). These conceptualisations are significant to the CBNRG context in that power relations are multifaceted and that power is relational (one actor's power cannot be specified except in relation to other parties'). Also relevant to this context is the notion that power relations do not exist in the abstract, but rather are embedded in specific social or socio-ecological contexts and in exist relation to specific processes of resource control, use and management (Sikor & Lund, 2009). As such, typological relationships of power thus cannot be assigned as a permanent state of being or to fixed social categories.

3.2.2 Why do power imbalances matter?

With power understood in terms of constraining or enabling human action, in this article, power imbalances are taken as significant in terms of their equity-related implications. Equity here refers to a subjective perception of fairness (in contrast to equality, which relates to 'sameness') in both material and symbolic domains. We flag two broad areas of equity in this CBNRG context: equity in engagement and equity in outcomes (Box 1). These reflect aspects identified in other framings of equity, such as the Food Ethics Council's (2010, p. 40) notions of equity of opportunity and fairness of outcomes. Both aspects of equity are influenced by actors' relative power.

Box 1.Equity in engagement and in outcomes

Equity in engagement is expressed in natural resource governance in terms of actors' effective involvement in making decisions relating to resources. The ability to engage includes the ability to access relevant information, to participate effectively and without discrimination, and to make views clearly understood and appreciated by others. In this sense, the power to engage in decision-making reflects the social justice aspect of equity and more broadly relates to Sen's notion of development as freedom (Sen, 1999); conversely, power imbalances are problematic when they prevent such engagement.

Equity in resource decision-making outcomes includes distributional equity relating to the proportioning of associated benefits and burdens of all kinds. As such, it is a manifestation of the negotiation of different, potentially divergent, allocative perspectives—each associated with a differing degree of power. In terms of everyday experiences, outcomes include the distribution of benefits such as amount or quality of natural resources, related income or opportunities, and also burdens such as resource-related fees, distances walked, or restrictions on harvesting. Those whose interests are marginalised in discussions, whether they are themselves present or absent (low equity in engagement), are less likely to get their resource needs met and may bear a relatively larger portion of the burdens (low distributional equity). The power-related area of equity in outcomes thus has pragmatic implications for poverty. Indirectly, this in turn relates to environmental sustainability through its influence on pressures to use natural resources to meet short-term needs.

3.2.3 Patterns of power relations

Given the implications of power imbalances, consideration of potential patterns of power imbalances across time and space becomes important. Thus at this point we turn to the question: Are there patterns (discernible regularities) in power relations in community-based natural resource management (CBNRM)?

While power can be understood as a nested phenomenon occurring and extending across multiple scales, in this CBNRM-focused article we turn our attention to patterns within the local scale (community and community group). Within the local scale, natural resource governance and development discourses emphasise two divergent points: on the one hand,

power is a temporally- and contextually-specific phenomenon; on the other hand, some markers of identity—in particular gender and wealth—tend to have power implications that run across contexts. Moreover, power is not uni-dimensionally ascribed; rather it is nuanced in its reflection of multifaceted identities: one actor is never fully embodied by a single identity (McDougall, 2001; Sen, 2006). Different markers of identity, in different combinations, such as gender, ethnicity, caste, and wealth have varying and context-dependent implications. Thus while gender is a significant marker of power differences throughout the world, the relative power of different women or groups of women is nuanced by many other factors such as wealth, marital status, age and cultural context. For instance, while women have less access to resources and decision-making authority than men in community forestry (Agarwal, 2001), women's household and public power is shaped also by other aspects of their identity. For example, in contexts such as Nepal and India, indigenous women may be less subject to dominant cultural norms that discourage *Brahmin* women from speaking out in public meetings. Overall, the above patterns elucidate that power is neither neutrally nor randomly expressed.

3.3 WHY DO POWER IMBALANCES PERSIST?

Here we turn our attention to the question of why power imbalances exist and persist in CBNRG. We begin by exploring constructs that help to 'unpack' and explain power imbalances: unmarked categories, doxa, and delegation; we then consider the persistence of these imbalances through the application of the concepts of structure and agency (Figure 3.1). We conclude each subsection with a question; we gather and return to these in the penultimate section of this article.

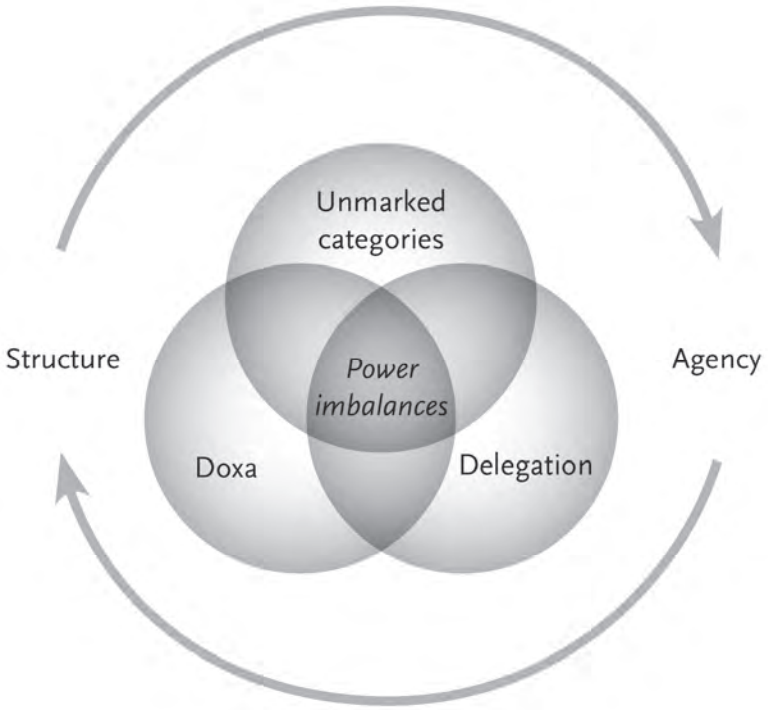

Figure 3.1 Explaining power imbalances and their persistence: Constructs applied

3.3.1 Unmarked categories

Bucholtz and Hall (2004, p. 372) describe the phenomenon of unmarked categories as "an ideological process of erasure". The concept, with its roots in feminism and linguistics, offers a lens into power imbalances by highlighting the phenomenon of more dominant, powerful categories of actors being understood as constituting the norm or the standard for all other categories of social actors. As the dominant actors are taken to constitute the norm (the 'unmarked category'), other identities are implicitly delegated to outlier status (the 'marked' categories). Buchholtz and Hall (2004) describe unmarked categories thus:

> "When one category is elevated as an unmarked norm, its power is more pervasive because it is masked. By being construed as both powerful and normative, its special status is naturalized and the effort required to achieve this status is rendered invisible.....Because markedness implies hierarchy, differences between groups become

> socially evaluated as deviations from a norm and, indeed, as failures to measure up to an implied or explicit standard. Hence such differences are used as a justification for social inequality....” (p. 373).

The construct is illustrated in the local CBNRM context in terms of dominant, visible and powerful actors—such as wealthier, non-minority men embodying the norm or unmarked category. Other categories of actors—such as poor, female or minority people, and especially those for whom such markers of identity overlap—constitute the marked categories. Being perceived as outliers, or deviants from the norm, these non-dominant actors have tended to be implicitly overlooked or subsumed (erased) while more dominant, visible and powerful actors—such as wealthier, non-minority men—can claim to or are perceived to speak and act for the community (Chambers, 1995).

If this aspect of power imbalances is considered in terms of systemic erasure—or a form of myopia—then the question emerges, ‘What shifts in process or otherwise would contribute to making less powerful groups visible?

3.3.2 Doxa

Here we shift from actors going unnoticed, to beliefs or understandings going unnoticed, which evokes the concept of doxa. In the words of social theorist Pierre Bourdieu, doxa refers to “a particular point of view, the point of view of the dominant, which presents and imposes itself as a universal point of view...” (Bourdieu, 1998, p. 57). As “key aspects of the social order are naturalized....they are (or appear to be) beyond the social order itself, indeed becoming part of the taken-for-granted, ‘natural’ order (in Bourdieu's system, doxa). Practices thus tend, regardless of the actor's intentions, to reinforce the claims of the powerful” (http://science.jrank.org/pages/10821/Practices-Pierre-Bourdieu-Anthony-Giddens.html). Doxa reflects the dominant discourse, values, standards, procedures or beliefs (of the unmarked categories), which is taken for granted to be the norm. In doing so, doxa simultaneously legitimates otherwise potentially illegitimate practices (such as inequitable access to natural resources) and reduces the perceived need for deliberation and critical thought (Ojha, 2006).

In this reflection, we extend the notion of doxa to include taken-for-granted perspectives on process. Specifically, we consider the phenomenon in which less powerful actors are present in natural resource governance processes, but are de facto excluded because of process designs being standardly applied that accommodates and serves the needs of dominant actors. In other words, we propose that the notion of doxa may be relevant in

terms of what is considered to be the appropriateness of modes of interaction. For example, the use of assemblies or other large meetings in which community members need to effectively communicate with and in front of large, heterogeneous, mixed gender groups, sometimes in a language other than their mother tongue, and sometimes in relation to written information, may inhibit the participation of people from minority language groups, nonliterate, less practiced in public speaking, or less confident. This is significant because even if less powerful actors have a de jure right to be included and to be present in CBNRG processes, they may still be de facto excluded. We can use here the old analogy of a fox and crane each being offered food from an identical shallow dish: while they are equally offered the dish, accessibility is by no means equitable, because the dish suits only the fox's physiology – the crane can get next to nothing in such a context. This raises the question of what, if anything, can allow actors to take a cognitive step back and perceive doxa and thus become more conscious of its implications and alternative perspectives?

3.3.3 Delegation

We build on the above point regarding 'who makes decisions' by drawing on strands of critical social theory. Despite the expansion of participatory discourse in natural resource governance, the historical legacy of centralised bureaucratic systems of control over natural resources persists (Li, 1999, 2002). Within these systems the responsibility for informed (policy) decisions has been delegated from 'citizens' to 'experts'", either in the form of politicians (at many scales, including local leaders), bureaucrats or scientists (Ojha, 2006).

Three considerations arise in relation to our reflection on power. First, in broad terms, following critical theorist Jürgen Habermas's thinking (1996), "any use of coercion and power (such as the constitution of a small group or legislation of a state) is legitimate only when it is constituted through reasoned debate among citizens…" (Ojha et al., 2007, p. 2). In practice, however—as part of a larger techno-bureaucratic system and reflecting an objectivist analytical framework—delegative decision making tends to disembed issues from their normative and interpretive contexts and thus settle policy debates instead of stimulating them (Fisher, 1998; Ojha, 2006). Second, delegation from citizens to experts (of various kinds) gives primacy to one type of knowledge over others, namely scientific over traditional and local knowledge (Bäckstrand, 2004). Broadly speaking, in CBNRM a tension exists between knowledge worlds in that elite actors tend to have closer ties to external political and bureaucratic forms of knowledge, while marginalised actors tend to place a higher reliance on experiential. The third consideration relates to representation. Drawing broadly on critiques of representation and delegation (Foucault & Deleuze, 1977; Radhakrishnan, 1990), we note that representative governance grows from an assumption

of people being able to be categorised into groups based on shared interests—an assumption that fails to acknowledge the multi-faceted characteristic of identities. As such, there is an underlying dilemma in terms of a representative being able to represent the interests of a group when each member of the group themselves embodies multiple categories. Ribot (2012) and others similarly challenge deficits in representation in the context of decentralisation of natural resources on the basis that "the potential of decentralisation to be efficient and equitable depends on the representativeness of local institutions. But there are few cases where democratically accountable local institutions are being chosen and given discretionary powers" (Ribot, 2012, p. xix). Instead, political space available for the community in its internal governance and external dealings tends to be made accessible to and claimed by members of dominant groups. The needs of marginalised groups (if at all considered) are assumed to be represented by the dominant groups. In this way, the pre-existing power relations serve to legitimate the power and authority of dominant actors as representatives (Nightingale & Ojha, 2013), resulting in 'participatory exclusions' (Agarwal, 2001) in CBNRG.

The above considerations raise the questions: Can CBNRM decision-making processes engender inclusive engagement and thoughtful local debate rather than settling issues through delegation? And, if delegation of decision making potentially disempowers by diminishing certain kinds of knowledge and by misrepresenting or excluding the interests of marginalised people, what is a constructive alternative?

3.3.4 Structure and agency

To better understand the persistence and reproduction of power imbalances over time, we draw on potentially synergistic ideas regarding the shaping of social systems from Bourdieu, sociologist Anthony Giddens, and social theorist Margaret Archer. While theirs are divergent and contrasting—even opposing (Kemp, 2010)—perspectives in many ways, taken together, these elucidate the reinforcement or reproduction of power imbalances by explaining their roots in terms of structure and agency. Structure here refers to "the institutions, traditions, norms, values and ethos of a community" or society (Banjade et al., 2006, p. 23). Agency, as used in this paper, can be understood in terms of a person's ability to choose their actions, even in the face of structural constraints. Their differences notwithstanding, these theorists share common ground in so far as they highlight social structure and human agency as forces that jointly reinforce and mutually re-create social systems (Jones, 2005).

Within his larger social theory (encompassing field, habitus and forms of capital), Bourdieu suggests social structure as being "propelled by people, who take action…[yet people are] locked into patterns of identification with the groups to which they belong. The struggle for their interests, both as individuals and as part of this group, tends to reproduce the group" (Jones, 2005, p. 2). In this view, through practice:

> "…actors are socialized to particular embodied dispositions….[This] does not determine particular actions, but orients actors to particular goals and strategies. Acting on their (socially determined) intentions, the improvised and contingent practices of social actors thus tend to reproduce the symbolic and material orderings of the social world" (http://science.jrank.org/pages/10821/Practices-Pierre-Bourdieu-Anthony-Giddens.html).

For Bourdieu, a social institution tends to reproduce itself, through existing forms of doxa and entrenched relations of power that go 'misrecognised' by both the more and less powerful. This implies that power imbalances in CBNRG are related to beliefs, practices and knowledge that have been produced historically in their particular contexts, as well through the influence of broader supralocal fields. The possibility of change—rather than reproduction—thus lies in the prospect of crisis that can unsettle underlying doxa, mindsets and habituated practices (Ojha et al., 2009).

Giddens (1984), in his theory of structuration, describes social relations as shaped by what he calls the duality of structure. He suggests that "social structures are both constituted by human agency, and yet at the same time are the very medium of this constitution" (Giddens 1993, p. 128). Agency and structure are seen are connected in "…a never ending recursive process…each agent draws upon structure (that is, stocks of knowledge) to reproduce sets of spatially and temporally specific practices which in turn contribute to the total constitution of society at any one point in time in any one spatial location" (Thrift, 1985, p. 612). Giddens acknowledges emergent changes in social patterns, but frames these as largely unintended effects, as agents generally act without consciousness (Jones, 2005). Archer's approach to structure and agency also emphasises their mutual influence. She reconceptualises them, however, to be less "instantly and simultaneously" co-generated than Giddens (Jones, 2005, p. 4), rather proposing them as interrelated, but separate entities. This view, and her focus on the interplay between the two (and with cultural systems), creates greater scope for (conscious) causal power to create change (Jones, 2005, Vandenberghe, 2005).

With this reproductive or recursive nature of structure and agency in mind, the potential transformation of persistent power imbalances hinges around the questions: What can

create a 'break' in these reinforcing patterns of structure of agency? What can spark a perception of crisis or conscious causal influence on change? In the next section, we explore these questions in relation to adaptive collaborative governance, and in particular the linkage of reflexivity and social learning to these questions.

3.4 TRANSFORMING POWER IMBALANCES THROUGH ADAPTIVE COLLABORATIVE GOVERNANCE

Adaptive collaborative governance has emerged to in response to the complexity of socio-ecological systems as well as to problems of technocratic and elite actor dominance in environmental decision-making. As an approach, ACG considers how multiple actors can learn and act together and move ahead in the face of uncertainty. Actors "intentionally use social learning as the basis for decision making (see Leeuwis & Pyburn, 2002), emphasise inclusion and equity in processes and outcomes, and seek to engender effective connections among actors and/or groups of actors" (McDougall & Banjade, 2015, p.2, see also Olsson et al., 2006; Plummer et al., 2013). The emerging body of research on adaptive collaborative governance has signalled the need to pay increasing attention power relationships and imbalances (Plummer & Armitage, 2007; Nadasday, 2007). Studies into the practice of ACG approach continue to demonstrate challenges pertaining to the imbalance of power (Ojha et al., 2013). Moreover, the means by which shifts in power imbalances such shifts would occur however are not explicit in the literature. More understanding is needed regarding the means and logic by which adaptive collaborative governance may contribute to shifting power imbalances, in particular, how such changes may occur in the face of the contributing and reinforcing phenomena conceptualised above.

To address this need, we ask here: How can adaptive collaborative governance's potential influence in shifting power imbalances be understood? We propose that the contribution of ACG to shifting power can be elucidated by using the concept of reflexivity as a theoretical entry point. We pursue this here first by elucidating how reflexivity relates to the above described reinforcing phenomena of structure and agency. Next, we look towards transformation of power imbalance, by considering reflexivity in relation to adaptive collaborative governance, in particular, in relation to ACG's central element of social learning.

3.4.1 Reflexivity as an opening for change

While observing the recursive nature of structure and agency, each of the above theorists (in their own ways and to differing degrees) allow for feedback that implies that "history is

likely to develop rather than simply reproduce itself" (Jones, 2005, p. 2). In particular, they recognise the role of *reflexivity* in contributing to change. Reflexivity—or in Giddens' language, 'reflexive monitoring of actions'—broadly framed, refers here to conscious self-consideration or monitoring of one's own actions and behaviours in relation to the social context or the others' actions (Archer, 2007; Kemp, 2010). In this synthesis, we follow Kemp (2010) in expanding Bourdieu's more narrow focus of reflexivity as a competency or cultural capital primarily of researchers and intellectuals, while still recognising the role of crisis or lack of synchrony in prompting reflexivity (Kemp, 2010). In doing so, we engage with Archer's view of reflexivity as "an inherent ability that all social actors possess" (Kemp, 2010, p. 8).

Reflexivity thus unsettles habituated thinking and practices, including doxa (Ojha, 2008, p. 45). In doing so, it serves as a "bridge between structure and agency…mediating deliberatively between the objective and structural opportunities confronted by different groups and the nature of people's objectively defined concerns" (Archer, 2007, p. 61 in Kemp, 2010, p.8). And yet, while this signals reflexivity as enabling social systems to change rather than conform to history, Giddens has raised the constraint that even reflexivity itself is a construct of the social system (Giddens, 1984 in Banjade et al., 2006, p. 23). This is a line of thinking pushed further by Bourdieu in his notion of doxa. In other words, in the context of this discussion, actors are so deeply embedded in the system that although inequity may be experienced, it is difficult for it to be critically perceived, reflected upon and addressed, including by those adversely and beneficially affected by it. From within a self-reinforcing system, it is difficult for actors to step entirely outside of that system and achieve an alternate view, stock of knowledge or practice that would enable a break in the reinforcing social feedback loops of structure and agency. If this is the case, then how can new configurations emerge in NRG to challenge the status quo? How can reflexivity be effectively tapped into for transformative change by actors who are themselves part of the structure and who tacitly accept doxic forms of knowledge that have historically sustained such relations? These questions become even more critical when viewed in relation to the queries highlighted above regarding phenomena that contribute to power imbalances (unmarked categories, doxa, and delegation): What shifts in process or otherwise would contribute to making less powerful groups visible? What, if anything, can allow actors to take a cognitive step back and perceive doxa and thus become more conscious of its implications and alternative perspectives? Can CBNRG decision-making processes engender engagement in inclusive consideration rather than by settling issues through delegation? And, if delegation of decision making potentially disempowers, what is a constructive alternative?

3.4.2 Social learning and transformation of power imbalances

Interestingly, responses to the above questions dovetail towards one concept in particular: social learning. Social learning, as defined here, is a multi-faceted process in which multiple stakeholders bring together their different knowledge, experiences, perspectives, values and capacities in social spaces where communication, and joint deliberation, critical reflection, and analysis are facilitated as a means of identifying ways forward in relation to a shared issue (Prabhu et al., 2007; see also Leeuwis & Pyburn, 2002). An emphasis is placed on shared or co-learning and facilitation and it involves the negotiation of power relations, including conflict management (Leeuwis, 2000; Edmunds & Wollenberg, 2001; Prabhu et al., 2007). While ACG literature has already engaged with social learning as its key element, it has not yet recognised it in relation to the forces underlying power imbalances outlined in the previous sections. What is of particular interest here is the productive dialogue that readily emerges amongst these concepts when we consider them in relation to the convergence of the above questions towards social learning.

A first observation relates to the issue of what may make less powerful actors more visible and shift their outlier status. Social learning emerges as a response here because it is widely understood to be based in the pooling of knowledge and perspectives (Pahl-Wostl et al., 2008; Reed et al., 2010). To be effectively pooled, diverse knowledge and perspectives need to first be acknowledged and their value recognised. For this to occur, diverse actors themselves must themselves be recognised and acknowledged. Social learning may thus theoretically contribute to ACG's potential shifting of power imbalances by serving as a potential counterforce to unmarked categories and doxa.

A second observation relates to the question of what can help actors 'step back' and experience a 'break in thinking'. We note a link between social learning and Bourdieu's notion of crisis as an inducement of reflexivity. The forms of crisis or lack of synchrony that induce reflexivity—such as those raised by Kemp (2010) relating to the interface of socio-cultural diversity and divergence in subjective expectations and objective conditions—are inherent in social learning processes. The nature of social learning as oriented to problem solving across diverse views means that it is oriented towards challenging actors' perceptions and thinking. This implies that, by its nature, social learning generates openings for, and even embodies, reflexivity, and thus creates opportunities for actors to take cognitive 'step back'.

The third point relates to the question of making doxa more explicit. In particular, it relates to Giddens' suggestion that even reflexivity is a construct of the social system—thus how can doxa be made more explicit? We speculate that this may be addressed through social

learning in ACG bringing into question not only material inequities in the context, but also facilitating the critical questioning of actors' own individual and collective perceptions, norms and values, including those that shape processes and practices. This is in line with facilitated social learning encouraging shared critical reflection on and deconstruction of "the existing structures and value systems that hinder the transformation of society" (Banjade, 2006, p. 24). By making such implicit doxa explicit, a social learning process may provide a 'break' in thinking. This may allow actors to step briefly outside their normal frame of reference and to view the world from a different perspective in ways that helps them understand and question their own perspectives. As Wacquant (2004, p. 97) argues, "knowledge of the social determinants of thought is indispensable to liberating thought". In turn, we suggest that 'liberating thought' is indispensable to adjusting structure and agency and thus to adapting relations.

Finally, the above questions also dovetail towards social learning in relation to a deliberative—as opposed to delegative—approach to decision-making. This is proposed to be widely missing from current natural resource decision making (Ojha, 2006, 2007), but is an implicit element of an adaptive collaborative approach to governance. As a key constituent element of ACG, social learning nurtures and creates space for deliberation in decision making. We propose that ACG's potential to negotiate power imbalances may be further explained through its deliberative approach to decision making. Specifically, in contrast to delegative decision making, the concept of deliberation both theoretically engenders space for debate and for the integration of diverse forms of knowledge. The concept of deliberation also reflects the notion of democratically legitimate decision making involving the communicative power of citizens being translated into administrative power (Habermas, 1996; Ojha et al., 2007).

3.5 CONCLUSION

Given the implications of power imbalances in CBNRG, the questions of why imbalances persist and what can enable transformative change are paramount. And yet, the literature on adaptive collaborative approaches to governance so far responds to these questions with only a very broad brush stroke. In this article we have drawn on the work of several synergistic strands of social theory to explore these questions with the aim of advancing the potential of adaptive collaborative governance to more potently engage with power imbalances. We brought together the constructs of unmarked categories, doxa and delegation to help to elucidate and 'unpack' power imbalances. We then presented the mutually reinforcing constructs of structure and agency—perpetually re-inventing each other—to shed light on how why these imbalances perpetuate over time.

Linking adaptive collaborative governance with these theoretical perspectives offers insights into the tension and opportunities between stasis and change. First, there is value in the explanatory emphasis on recursiveness in that it helps to explain the long-enduring nature of power imbalances and inequities. Deeply entrenched doxa, unmarked categories, delegated decision making, and the interdependence of structure and agency contribute to the reproduction and resilience of inequitable patterns of power relations over extended periods of time. Second, on the other hand, the proposed role of reflexivity suggests that purposeful, critically reflexive thinking may contribute to transformative change in power imbalances. At the crux of this theoretical exploration is this link between the concepts of reflexivity and social learning, with the latter being a key element of adaptive collaborative governance. Purposeful efforts to introduce a 'break' in recursive patterns of doxa, unmarked categories and delegation through social learning are theoretically promising. The nature of social learning as engendering reflexivity, including with regards to unquestioned assumptions and beliefs stands out as particularly compelling. The character of pooling of knowledge and perspectives, and the connection to deliberative decision making in adaptive collaborative governance, also emerge as theoretically significant.

Overall, the exploration thus suggests a clear theoretical reasoning linking adaptive collaborative governance to potential transformation of power imbalances. Looking ahead, our hope is that this theoretical exploration may enrich empirical studies of adaptive collaborative governance, and itself be tested and improved by them, as the field moves towards more explicitly addressing power-related challenges.

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CHAPTER 4

Engaging Women and the Poor: Adaptive Collaborative Governance of Community Forests in Nepal

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Chapter 4. Engaging women and the poor: Adaptive collaborative governance of community forests in Nepal

Abstract

Forests are a significant component of integrated agriculture-based livelihood systems, such as those found in many parts of Asia. Women and the poor are often relatively dependent on, and vulnerable to changes in, forests and forest access. And yet, these same actors are frequently marginalised within local forest governance. This article draws on multi-year, multi-case research in Nepal that sought to investigate and address this marginalisation. Specifically, the article analyses the influence of adaptive collaborative governance on the engagement of women and the poor in community forestry decision making. A description of adjustments to governance processes and arrangements is followed by the consequent changes in engagement observed, in terms of: efforts made by female and poor members to be involved, express views and exercise rights; leadership roles played by female and poor members; and the extent to which the user groups' priorities and actions reflect the marginalised members' interests and needs. The main finding is that the engagement of women and the poor increased across sites with the shift from the *status quo* to adaptive collaborative governance, although not without challenges. The article explores interconnected factors underlying the changes, then considers these through the lens of the 'three-gap analysis of effective participation'. This leads to specific insights concerning the conceptualisation and strengthening of engagement in community forestry including the central roles of power and learning.

Key words: adaptive governance; community forestry; gender; power; participation; Nepal

4.1 INTRODUCTION

Forests play a significant role in integrated agriculture-based livelihood systems, such as those found in many parts of Asia. And yet, even while the devolution of forest rights to rural people has gained ground in various parts of the world over the past two decades (Leach, 2002), patterns of exclusion and inequity *within* local resource decision making remain. Community forestry in Nepal offers a cogent example of this. Forestry makes a vital contribution to rural livelihood security in Nepal: over 70% of Nepal's population rely on agricultural livelihoods. Yet, despite Nepal's well-established devolution of forest use rights, marginalised peoples—such as women and the poor—who rely deeply and directly on and affect forests tend to have little effective voice in community-based forest governance (Lachapelle et al., 2004). This is imbalance is found in many developing countries and is of concern because of equity's pragmatic significance (relating to poverty) as well as its intrinsic significance (social justice).

The persistence of such inequity draws attention to the nature of governance and its underlying assumptions, processes, and arrangements. Changing notions of governance are becoming associated with the understanding of communities as diverse, and of community forests as complex and dynamic human-natural systems. Forest actors—including community groups—are thus confronted with the question 'how to govern inclusively and equitably in a diverse and complex context?'. This article draws on multi-year research that addressed this dilemma. In particular, the article analyses the influence of an adaptive collaborative approach to governance on the engagement of women and the poor in community forest user group (CFUG) decision making in Nepal. It explores the questions: did engagement change with adaptive collaborative governance? If so, how did the elements of adaptive collaborative governance influence the changes? Using the 'three-gap analysis' framework as a lens, were common barriers or 'gaps' to engagement overcome, and, if so, in what way? And, what broader insights emerge about engendering engagement in natural resource management?

The article begins by outlining the socio-political and community forestry context in Nepal. It then shares three relevant conceptual areas: engagement in governance (the article focus); adaptive collaborative governance (the approach to community forestry applied by local groups during the research); and three-gap analysis (the lens we apply to generate broader insights relating to participation and engagement). Following this, the methodology and sites are outlined. Next, the findings are presented: (1) changes in governance in terms of processes, arrangements, networking, and facilitation; and, (2) changes in the engagement of women and the poor, comparing 'before' and 'with' adaptive collaborative governance. The article then analyses the influence of adaptive collaborative

governance on the engagement of women and the poor, tracing the shifts in terms of several threads (mutual understanding, accountability and leverage, awareness, pressure, leadership, and feedback and incentives). It then links to broader natural resource governance and development discourse with an exploration of 'barriers' and 'bridges' to engagement using—and adapting—the lens of Osmani's (2008) three-gap analysis of effective participation. In conclusion, the article synthesises insights regarding the conceptualisation, and strengthening, of the engagement of women and the poor in local forest governance.

4.2 CONTEXT

Nearly two thirds of Nepal's 28 million people depend on agriculture for their livelihoods (FRA, 2010). Forests are a fundamental part of rural livelihoods, supplying agricultural inputs such as fodder and wooden implements as well as fuelwood, timber, and nontimber forest products for subsistence or sale. Factors such as caste, ethnicity, gender, occupation, and wealth shape people's relationships with and reliance on forests. Poorer and/or trade-based households—such as those from *Daure* (fuelwood sellers) groups—typically lack private resources or alternative fuels and thus tend to be more directly dependent on community or public forests. Women frequently are responsible for gathering fuelwood, may spend considerable time collecting fodder, and may rely on their traditional knowledge of wild plants for their households' subsistence needs. As such, women and poor households tend to be distinctively vulnerable to changes in forest use rights, rules or conditions.

Although caste-based discrimination was legally abolished in Nepal in 1963, a correlation between caste and access to resources persists (World Bank & DFID, 2006). Social hierarchy in this context is multidimensional: caste, wealth, gender, and ethnicity, as well as geopolitical and linguistic factors, all play roles (World Bank & DFID, 2006). While women overall have less access to resources and less input to decision making than men in community forestry throughout South Asia (Agarwal, 2001), women's household and public power vary. For example, indigenous and *Dalit*[6] women may be less subject to cultural norms limiting public voicing of opinion than *Brahmin*[7] women (Agarwal, 2001). As a whole, the caste system and gender discrimination pose significant challenges to the

[6] I.e., 'Oppressed people', traditionally so-called 'untouchables' in the Hindu-based caste system.
[7] I.e., Traditionally considered the 'highest' status group in the Hindu-based caste system.

development of effective participatory decision making in Nepal (World Bank & DFID, 2006).

The Nepal Community Forestry Programme reflects these broader socio-political challenges. The programme operates in 74 of the country's 75 districts. Since its inception in the late 1980's it has established more than 17,600 CFUGs (DoF, 2012). The CFUGs involve approximately 1.4 million households and govern roughly 1.6 million ha of forest (DoF, 2012). Yet, community forestry in Nepal faces critical 'second generation' challenges. Not least among these challenges is that the poor, *Dalit*, women, and in some cases indigenous people, tend to be marginalised from governance of the forests. They have relatively little voice in CFUG decision making and tend to receive small shares of community forest benefits relative to their needs (Malla, 2001; Kanel, 2004; Nurse & Malla, 2005). The article explores this critical dilemma, in particular the engagement aspect, and one potential response to it, adaptive collaborative governance.

From the late 1990's to 2006 Nepal experienced violent armed conflict between the government and Maoist rebels, which embodied the above socio-political challenges and related issues of power and governance. The widespread struggle and associated civil movement increased the political consciousness of Nepalis, including women, the poor, and *Dalit* people.

4.3 CONCEPTUAL ORIENTATION

4.3.1 Engagement in governance

Governance is increasingly recognised for its critical role in influencing wellbeing (Graham et al., 2003). Our analytical focus in this article is on *engagement* in governance, which we frame as people:

- making efforts to express their views and exercise their rights, including challenging dominant power;
- taking leadership roles; and
- having their 'voice' effectively integrated into group understanding and decisions.

This conceptualisation acknowledges communities as internally diverse rather than homogeneous units (Leach, 2002). Contestation and struggle over values are recognised as an unavoidable part of decision making (see Wollenberg et al., 2005). This resonates with the insight underscored by Röling (2002, p. 25): resource dilemmas are anthropogenic in nature and rooted in the question "how can we deal with ourselves?".

Engagement refers to the 'higher rungs of the ladder of participation', such as Agarwal's (2001) active and interactive participation, as opposed to passive or manipulative participation (see also Arnstein, 1969; Pretty, 1995). Motsi (2009, p. 3) emphasises a distinction between 'consultation' and 'engagement', with the former constituted as dialogue and the latter as (often facilitated) dialogue "with more emphasis on …making a decision and working in partnership". Power, expressed as multi-dimensional manifestations of control (Plummer, 2009, p. 7), is central to these distinctions. Power is a complex concept: it is relational, dynamic, contextual, and underpinned by resources and economics. All resource management processes are inherently political (Nadasdy, 2007).

We focus on engagement because of its instrumental and intrinsic value. Engagement's instrumental value refers to its potential to contribute to more equitable and efficient outcomes (Osmani, 2008). Conversely, marginalisation of women, the poor or others contributes to less robust decisions (i.e., based on partial information and input), as well as to local perceptions of unjust resource distribution (Agarwal, 2001; Malla, 2001). Engagement's intrinsic value is illuminated in Sen's (1999) understanding of social choice as contributing to development as freedom. Hickey and Mohan (2005, p. 238) add depth to this discussion through their investigation of participation in terms of the extent to which it generates "transformations to existing social, political, and economic structures and relations in ways that empower the previously excluded or exploited". In practice, Osmani (2008, p. 28) notes that although "there are some spectacularly successful examples of participatory governance in some parts of the world, they are far outnumbered by cases of failed and spurious participation".

4.3.2 Adaptive collaborative governance

The CFUGs involved in the research described here began to take an adaptive collaborative approach to community forest governance. This is an approach in which groups of actors:

- consciously and explicitly base decision making in social learning and critical reflection;
- emphasise inclusion and equity in governance; and
- strive for balanced and strategic relations with other actors or groups, including seeking to effectively manage conflict (McDougall et al., 2008).

The inclusion and equity aspect relates explicitly to the notion of engagement in governance (the article focus); the significance of the other two aspects (learning and relations) to engagement is highlighted in the analysis and discussion of this article.

The above conceptualisation emerged from adaptive collaborative management (Colfer, 2005; Prabhu et al., 2007) and resonates with 'adaptive co-management' as an approach that "explicitly links learning (experiential and experimental) and collaboration to facilitate

effective governance" (Armitage et al., 2009, p. 95). Within this approach, social learning can be understood as a "process in which multiple stakeholders bring together their different knowledge, experiences, perspectives, values, and capacities for a process of communication and critical reflections as a means of jointly understanding and addressing shared issues, challenges, and potential options" (McDougall et al. 2008, p. 30; see also Leeuwis and Pyburn, 2002; Blackmore, 2007).

In our conceptualisation, the approach is purposeful in terms of facilitating equity regarding processes (i.e., relating to engagement) and distribution. By equity, we refer to a subjective quality of 'fairness'—as opposed to equality, which refers to a quality of 'sameness' (Cochran & Ray, 2009). Equity is significant to natural resource governance and development in pragmatic terms, i.e., the instrumental value of participation in planning. Similarly, inequitable access to resources has clear implications for poverty and wellbeing, which in turn has been linked to some forms of environmental degradation. Moreover, equity has intrinsic value, i.e., social justice as a meaningful social goal.

In practice, the adaptive collaborative approach varies from context to context, but follows overall patterns of inclusive, bottom-up decision making based in shared critical reflection, including visioning and ongoing joint monitoring of process and outcomes. Facilitation may be used to support the processes; equity may be a focal point of joint reflection.

4.3.3 Three-gap analysis of effective participation

In the latter part of this article we apply the three-gap analysis of effective participation as an analytical lens (Osmani, 2008). We do so in order to illuminate broader insights regarding barriers to and strategies for engendering engagement, including making linkages between an adaptive collaborative approach and wider discourse on participation in natural resource governance and development.

In this framework, the capacity gap refers to shortages of both general skills (such as communicating effectively in a diverse group) and specific skills or knowledge. The incentive gap refers to there being 'costs' (broadly defined) to participation, including opportunity costs of time and effort, and social risks of retribution. "Most people would not be keen to participate actively unless they perceive the potential gains to be large enough to outweigh the costs" (Osmani, 2008, p. 29). The power gap reflects the power imbalances that exist between women and men, poor and wealthy, *Dalit* and *Brahmin* or *Chhetri* and others. It emerges from "systematic asymmetries of power that [are] inherent in unequal societies" (Osmani, 2008, p. 30). We note that while the framework is a relatively straightforward tool, the situations analysed are neither simple nor generic.

4.4 METHODS AND PROCEDURES

The article draws on a multi-scale six-year collaborative research initiative in Nepal; this article focuses on the local scale.

4.4.1 Research design

Two key design features in the local level research were:

- comparing across multiple in-depth multi-year case studies (Yin 2009); and
- combining qualitative and quantitative social science assessment with participatory action research (PAR).

The first phase (1999–2002) involved four CFUG case studies (i.e., long-term sites). Research continued in these sites through the second phase (2004–7), in which an additional seven sites were added (total of 11). A final field visit to each site took place in 2008.

The research began in each site with social science background studies, then shifted to PAR, and concluded with final assessments (see Colfer, 2005; Fisher et al., 2007). The background studies and final assessments involved gathering sets of comparable socio-economic and institutional information to enable before-and-after analysis and analysis across sites. Continuous field recording and periodic shared reflection were complemented by document reviews, key informant interviews, participant observation (of formal and informal practices), participatory wealth ranking, focus group discussions, participatory mapping, pebble distribution (matrix ranking, using pebbles for ranking and scoring) (Colfer et al., 1999a, 1999b), and, in some sites, use of Social Analysis System tools (http://www.sas2.net/tools/tools-introduction).

By PAR we refer to participant-centred (as opposed to researcher-centred) research that both generates knowledge and catalyses social change (Selener 1997; Fisher et al. 2007). The PAR created the opportunity to investigate firsthand the process of sparking or strengthening adaptive collaborative governance and its outcomes. In Phase I, this was facilitated by researchers, with efforts to handover to local facilitators by this phase's conclusion. In Phase II, facilitation was provided from the outset by teams of local and district actors who were trained and backstopped by the researchers and periodically networked across teams. These facilitators were women and men from a range of socio-economic backgrounds who were selected on the suggestion of the community and district actors using agreed criteria such as commitment to social justice, ability to commit the time required, and potential to be accepted in this role by diverse local groups. The district level

facilitators included staff of nongovernmental organisations, networks, bilateral projects, or forest offices. The PAR was conducted for 13–16 months in Phase I and approximately 19 months in Phase II.

Analysis was based in the iterative examination of observed and documented changes, processes and forces in order to identify and understand plausible causal connections between them (Fisher et al., 2007). The research team identified and developed themes, and examined patterns, connections, exceptions, and surprises, through in-depth case experience and manual comparisons of information across cases (Yin, 2009). A central feature was the iteration between field experience and analysis. Quantitative data were analysed descriptively, comparing pre- and with- periods, using Excel (Microsoft 2007). Descriptive analysis of the pebble distribution data (perception of satisfaction with engagement) was carried out across sites by wealth group using Excel (drawing on Colfer et al., 1999a; Salim et al., 1999).

4.4.2 Sites

The eleven sites were all formally established CFUGs within Nepal's Community Forestry Programme, which means that each group held legal use and management rights to their designated forest area. The sites (Table 4.1) were chosen from seven districts and spanned eastern Nepal to the mid-Western region, and the southern Terai (plains) to the mid-Hills area. The sites were selected through consultation with district level stakeholders and CFUG visits. Sites were considered to be within the normal range for their districts in terms of activeness (i.e., regularity of meetings and activities), internal and external relations, governance, and 'success' (in implementing activities and achieving goals), while yielding diversity across districts. They were all internally heterogeneous, composed of between five to 12 ethnic and caste groups (such as *Magar*, *Gurung*, *Brahmin*, *Chhettri*, and *Dalit*). Using the CFUGs' own wealth ranking criteria, approximately 11% of all member households fell into the 'rich' category, 51% into the 'medium' category, and 37% into the 'poor' category.[8]

[8] Percentages add up to less than 100% due to rounding error.

Table 4.1 CFUG research sites

	Name of CFUG	District	Households (no.) [b]	Wealth categories[c]
Long-term sites[a]				
1.	Bamdibhir CFUG	Kaski	128	R : 1% M: 72% P: 27%
2.	Deurali Bagedanda CFUG	Kaski	144	R: 14% M: 40% P: 46%
3.	Andheribhajana CFUG	Sankhuwasabha	180	R: 21% M: 39% P: 40%
4.	Manakamana CFUG	Sankhuwasabha	158	R: 23% M: 41% P: 36%
Short-term sites [a]				
5.	Kajipauwa CFUG	Palpa	111	R: 18% M: 42% P: 40%
6.	Chautari CFUG	Nawalparasi	751	R: 11% M: 38% P: 52%
7.	Patle CFUG	Lalitpur	158	R: 7% M: 62% P: 31%
8.	Handikharka CFUG	Dhankuta	133	R: 17% M: 41% P: 41%
9.	Khanuyubas Salleri CFUG	Dhankuta	140	R: 17% M: 57% P: 26%
10.	Chautari CFUG	Morang	421	R: 3% M: 80% P: 17%
11.	Pathivara CFUG	Sankhuwasabha	156	R: 10% M: 59% P: 31%

Notes: Percentages (%) rounded to the nearest whole number; some percentages add up to more than 100% due to rounding error.
[a] Long-term sites, i.e., involved in both phases one (1999–2002) and two (2004–7); short-term sites, i.e., involved in phase two (2004–7) only.
[b] At time of inception of background studies (i.e., long-term sites [n=4] in 2000; short-term sites [n=7] in 2004).
[c] Based on participatory wealth ranking during beginning of PAR using each CFUG's own criteria for categories of Rich (R), Medium (M), and Poor (P).
Sources: CFUG records, key informant interviews, and participatory wealth ranking exercises (N=11 sites).

4.5 FINDINGS

4.5.1 Changes in governance: Processes, arrangements, networking, and facilitation

In this section we outline key design elements that gradually emerged at the sites with the transition to the approach, namely social learning processes, nested arrangements, networking, and facilitation.

With the transition to adaptive collaborative governance, the CFUGs adjusted their long-term and annual decision-making processes to become more learning-oriented and inclusive (Figures 4.1a and 4.1b). The CFUGs' formal, five to 10 year operational plans and annual plans previously had been based largely on standard local plans or the 'in the moment' interests of the chairperson or one or two committee members. With the shift to adaptive collaborative governance, all CFUGs began to use participatory visioning and self-monitoring as the basis for long-term and annual planning. The new practices encompassed cycles of shared visioning, assessment of strengths and weaknesses using the CFUG's own indicators, shared reflection, and subsequent adjustment and implementation of plans. Self-analysis of equity, as well as critical reflection on forests and livelihoods, was a key part of the self-monitoring. The equity-tracking processes involved the use of participatory wealth ranking data as the basis for each CFUG's monitoring involvement in, and distribution of benefits from, the CFUG.

Similarly, CFUG members were encouraged by facilitators and researchers to take a 'learning approach' to CFUG governance by viewing each innovation in process or arrangement as an experiment, a chance to learn and improve overall governance. For example, the executive committee of Patle CFUG set itself the goal of making its next

assembly more inclusive and deliberative. Upon completing the assembly the committee reflected on the experience (with support of the facilitators), and realised it had fallen into its prior patterns of no input from members, little deliberation, and long speeches by outside actors. The committee immediately re-planned the assembly so as to embody a more inclusive and participant-oriented process; when the assembly was re-held shortly thereafter, it focussed on *tole* (hamlet) priorities and informed deliberation of key issues.

In terms of arrangements, the CFUGs shifted from centralised decision making by executive committees (Figure 4.1a) towards multi-level, multi-node (i.e., nested) decision-making arrangements (Figure 4.1b). With adaptive collaborative governance, *toles* (hamlets) became the first level of decision making. They began to regularly discuss key issues, assess CFUG strengths and weaknesses, draft visions and priorities, and, in some cases, manage conflict or select executive committee candidates. Joint meetings and negotiation between the *toles* and executive committees evolved as the second decision-making level. Members attended the general assembly as the third—and final—level in a decision-making process in which they were already engaged via *toles*. (In previous practice, the assembly had been a forum for the formalisation or contestation of completed committee decisions.) Volunteer action groups—ranging from women raising cardamom for income to subcommittees on distributional equity—became another key decision-making node. Some of the influences of these developments are illustrated in Table 4.2 (based on observations from Chautari CFUG, Morang).

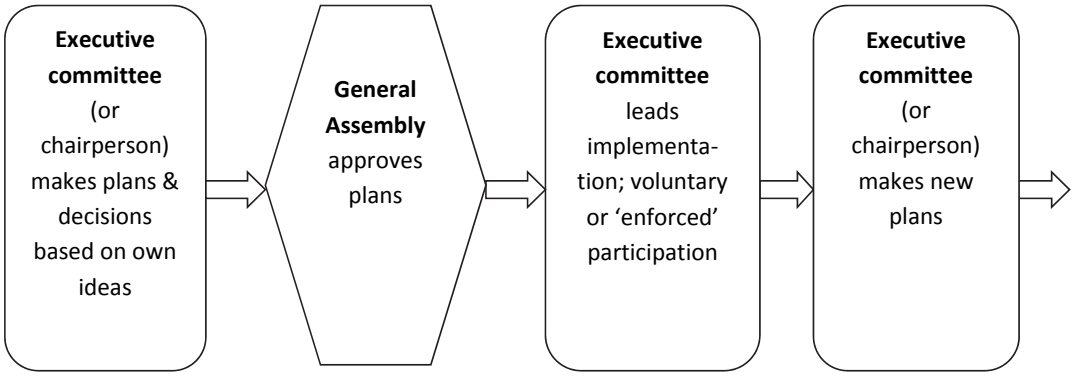

Figure 4.1a Status quo CFUG governance processes and arrangements
Source: Adapted from McDougall et al. (2008)

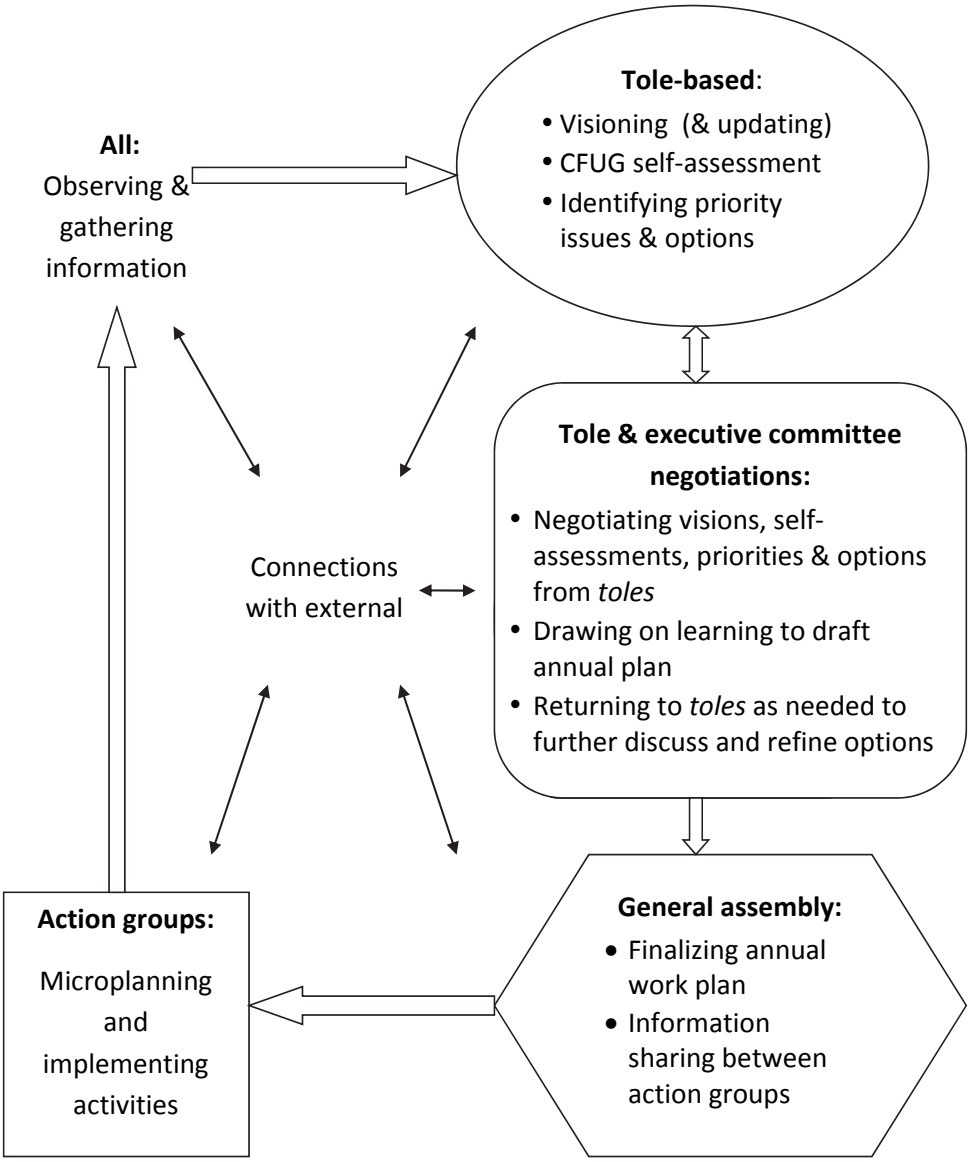

Figure 4.1b Adaptive collaborative governance processes and arrangements
Source: Adapted from McDougall et al. (2008)

Table 4.2 Participation in decision making in Chautari, Morang (2004 and 2006 compared)

Elements	2004	2006
Agenda setting	Mainly a few members (Chairperson, Secretary, one Advisor) set agenda; consult a few *toles* while making annual plans.	Key plans developed through the input of all *toles* (via representatives). Chairperson and secretary ask other members if they have agenda items.
Decision-making mechanism	Only a few members influence decisions; others usually contribute little. Members did not know the assembly agenda or resolutions prior to the assembly.	All members are openly invited for discussions before making any decisions in the executive committee. Prior to the assembly, agenda and plans are shared with *toles*; *toles* then send their inputs.
Decision made by (level)	Usually by the executive committee. Major policy decisions are endorsed at the assembly.	*Toles* and their representatives play key roles in decision making. The executive committee involves *tole* leaders in their meetings regarding key decisions.
Tone of meeting	Relatively hegemonic and bureaucratic	Relatively harmonious and shared
Nature of participation in decision making	General Assembly: usually key leaders set the agenda and made decisions before formal assembly began. Nonexecutive members do not contribute to assembly decisions. Executive committee: usually the chairperson and a few of his 'allies' talk in the meeting.	General Assembly: agenda is discussed in *toles* before an assembly. Executive committee: most members contribute to setting the agenda and take part in discussions before making decisions.

Note: Table edited for grammar and clarity (only).

Source: Chautari CFUG (Morang) Final Assessment Report (2007).

Through the discussions and self-monitoring processes CFUG members began to reflect on and adjust their external relations. They became more involved in district-level (or sub-district) CFUG networks or forums and more proactive in information exchange and collaboration with area nongovernmental organisations, bilateral projects, and other

CFUGs.[9] Their network development also included routinely inviting equity-sensitive staff or representatives of these agencies (or sometimes researchers) to participate in CFUG processes as critical observers or additional facilitators. As well as bringing in outside information and insights, this supported learning in that outsiders sometimes offered discussion-provoking questioning of CFUG practices and their underlying assumptions and attitudes.

Throughout the PAR each CFUG's facilitators tried to enable the above-described inclusive and deliberative decision making. In line with the approach's emphasis on equity, the facilitators purposely took a pro-inclusion approach, i.e., facilitation was intended to actively support the involvement of previously excluded members. They tried to create an accessible and relatively safe social environment through means such as actively inviting input from the women and the poor, recognising their contributions, and strategically managing disagreements.

4.5.2 Changes in engagement

The engagement of women and poor CFUG members increased throughout the research period, as measured by each of the three focal aspects (involvement, leadership, CFUG priorities). Members' satisfaction with engagement also recorded an increase.

i) Efforts to be involved (attendance, speaking out, challenging)

At seven sites gendered data was available concerning general assembly attendance prior to the PAR; the researchers collected comparable data in the final research phase. While overall assembly attendance increased, the percentage of women also increased, almost doubling from 17 to 31% (see Figure 4.2). Within this, the long-term sites showed more consistent increases than the short-term sites. Although wealth class data were not recorded, poor members stated that prior to the adaptive collaborative governance, they felt that other members discouraged their involvement in the assemblies. Noted one poor member, "We were also enthusiastic to participate in the general assembly of the CFUG in the past, but when we participated we were blamed repeatedly as forest destroyers, and this made us feel ashamed. It forced us to leave the venue before reaching any decision. Such assemblies were nothing but the venue to get scolded" (female, *Daure* CFUG member).

[9] In some cases, the networks or forums themselves were trying to use an adaptive collaborative approach to their own governance and management in connection with the district level research.

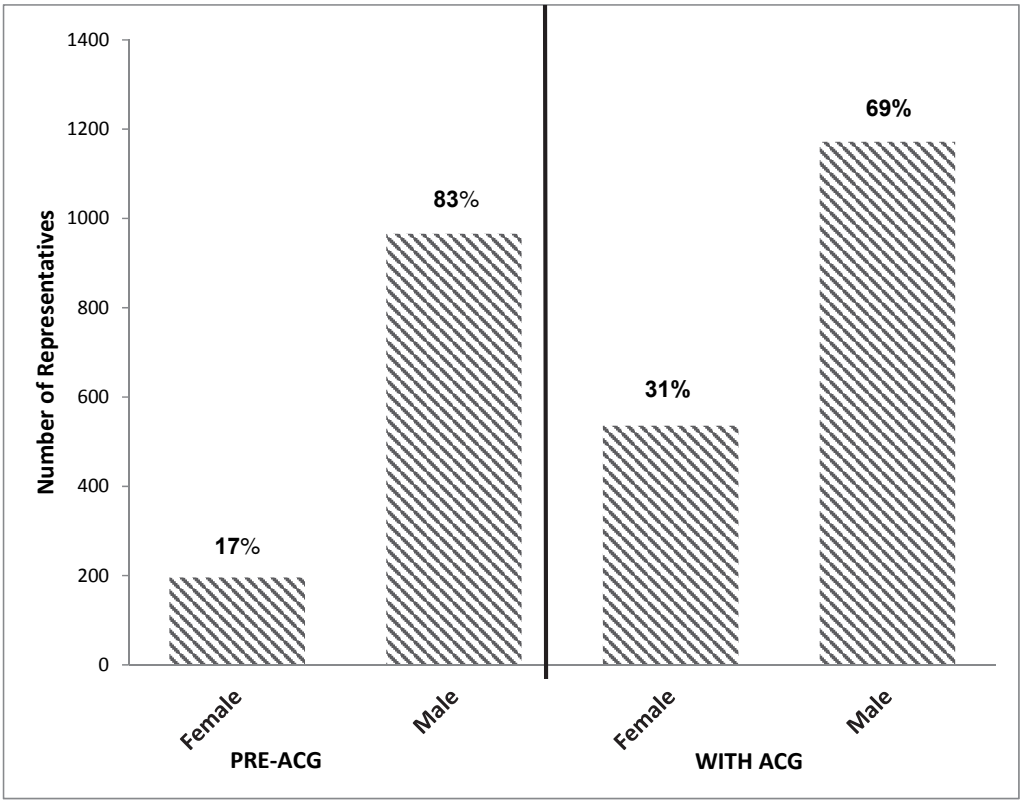

Figure 4.2 Attendance in general assemblies prior to and with adaptive collaborative governance, by number of attendees (n=7)

Notes: ACG=adaptive collaborative governance. Percentages (%) rounded to the nearest whole number.

Source: CFUG assembly records (1999–2006); validated with executive committee members

Researchers observed that by the end of the PAR women and the poor spoke actively in *tole* meetings—much more so than in executive and assembly meetings (even when encouraged by other members), although they appeared to be listening actively in these. One exception to this was the *Daure* members (i.e., firewood sellers—who are mainly poor, *Dalit* women) in one site whom researchers observed 'speaking their voice strongly' in any forum, as long as they had had time to discuss and organise beforehand.

Researchers also noted that women increasingly challenged power imbalances, both as individuals and collectively. In one site in early 2007, for example, the Mothers' Group—

led by a *Dalit* woman—successfully removed the CFUG chairperson who had been illicitly using CFUG cooperative funds for himself. In another site, during the PAR the women successfully pushed the committee to form a separate subcommittee to voice women's interests. In 2006, the Women's Group in the same CFUG took on the leadership and coordination of a community development project for culvert construction.

In some cases, the claiming of rights by marginalised members caused tensions to surface or conflict to erupt. For example, tensions increased between the committee and poor members in one site as the latter began to demand more benefits. More powerful members were sometimes resistant to shifts in power. For example, in one site a powerful member did not want a women's group to take a leadership role on a community forestry-related initiative, but the women opposed him. The member angrily blamed "*sikaimuki*" (adaptive collaborative approach) for the women's daring to challenge him. Despite—or perhaps ultimately because of—this outcome, researchers noted overall improvements in conflict management. For example, in some cases, conflicts improved as processes became more inclusive or issues were overtly addressed. In other cases, conflicts triggered the formation of new committees (with different representatives, see below), and different standards and processes of accountability. The resistance of more powerful members appeared to shift in relation to ongoing shared learning processes (such as facilitated discussions, joint visioning, and self-monitoring), to repeated involvement of external actors who raised questions relating to equity, and to observations of emerging benefits of more decentralised decision making (such as decreased social tensions and decreased demands on their time). Similarly, while researchers observed that the apparent willingness of more powerful members to be challenged and to allow others control varied, CFUG self-monitoring records show overall improvements in intra-group relations. These slow and nonlinear changes are explored more fully in a forthcoming article (McDougall and Banjade, *in press*).

ii) Representation in leadership roles

During the research period, the representation of women in the executive committees (averaged across all sites) approximately doubled, from 18 to 34% (Figure 4.3). Within this, poor women made the largest percentage increase, shifting from 31 to 40% of female representatives. In terms of wealth groups (Figure 4.3), the representation of poor members (comprising roughly 37% across sites) on the executive committees increased from 15 to 29%. Comparing changes in long-term versus short-term sites, while women's representation increased roughly equally (by 17 and 16% respectively), representation of the poor increased more in the long-term than the short-term sites (by 22 and 10% respectively).

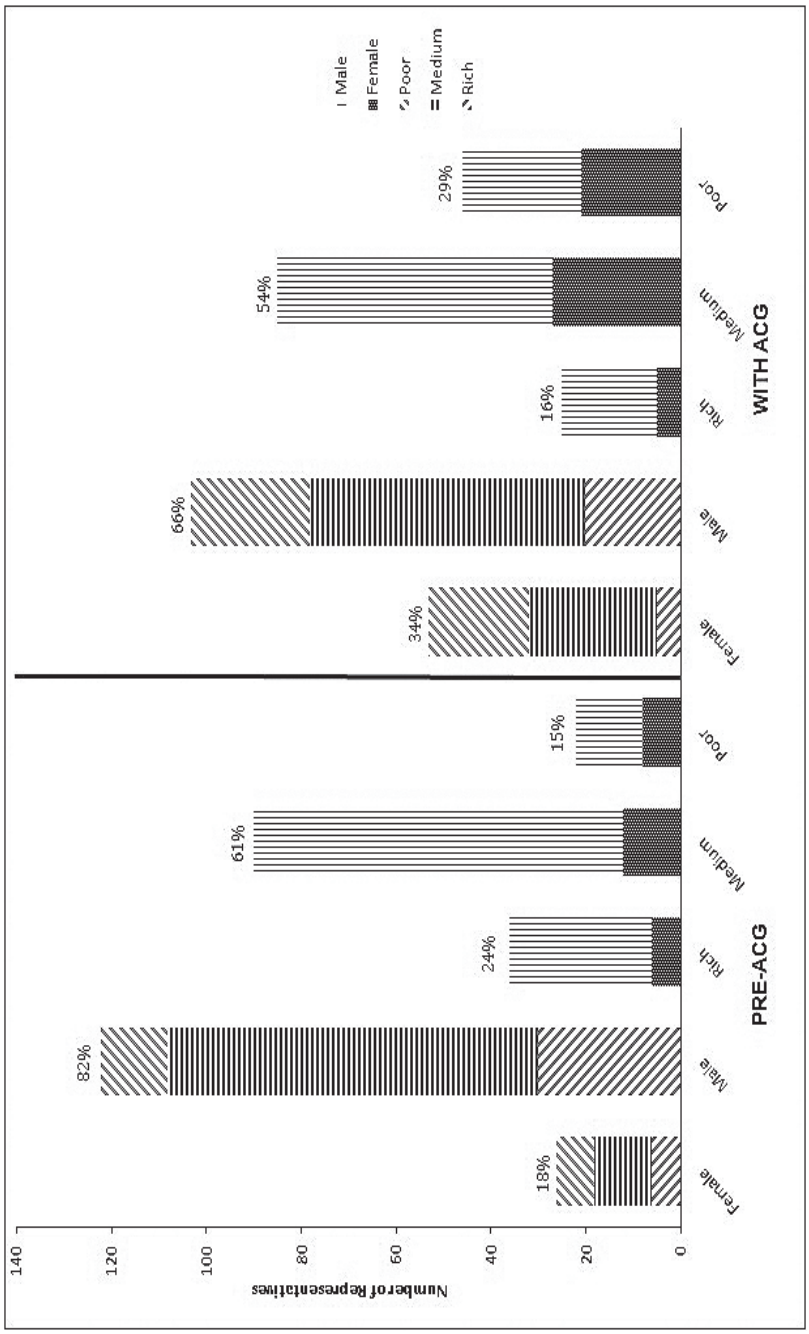

Figure 4.3 Representation in executive committees by gender (n=11)
Notes: Figure shows both gender by wealth group and wealth group by gender. ACG = adaptive collaborative governance. Pre-ACG=2000 at long-term sites (n=4); 2004 at short-term sites (n=7). With ACG=2006 all sites (n=11). Percentages (%) rounded to the nearest whole number.
Source: Compiled from CFUG election and executive committee records

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Leadership roles expanded during the PAR as a result of the development of *tole* committees, whose members led *tole* meetings and represented their *toles* in the *tole*-executive committee meetings. *Tole* committees were relatively gender balanced (in both long-term and short-term sites): 49% female and 51% male representatives. In terms of wealth, poor members accounted for approximately 35% of *tole* committee representation overall, while rich and medium groups held 11 and 54% respectively. By long-term and short-term sites, poor members accounted for 39 and 34% respectively. Additional leadership roles were created for each action group. Although the specifics of action group leader identities were not documented, researchers observed women and the poor assuming some of these new roles.

Of the seven CFUGs that self-monitored their satisfaction with representation-related issues, six CFUGs' scores indicate improvements.[10] One woman commented: "Now women representatives in the Executive Committee are three, and are being heard. We are satisfied and encouraged…" (female, indigenous (*Limbu*) CFUG member). Marginalised members from one site stated that while they were not entirely satisfied with *tole* committee representation (because *toles* do not align entirely with socio-economic groups), they felt that *tole* representatives more effectively represented their interests than executive committee members.

iii) CFUG priorities: Income generation activities, micro-credit, and rules

By the end of the research period (2006), CFUGs' priorities reflected poor and female members' priorities more than they had previously (see McDougall et al., 2013). For example, the number of sites with established CFUG-related income-generation initiatives targeted at women or the poor increased from two of 11 to 10 of 11 (and the eleventh was planning one for the post-research period). In terms of micro-credit, the number of sites with pro-poor small loan programmes grew from five of 11 to nine of 11 (the remaining two had some planned for the post-project period). The five that already had pre-existing pro-poor loan programmes increased their funding (through making connections with external organisations). Noted one poor member, "After…tole-level reflection and discussion, the real poor have accessed the community forest fund for income-generation activities in an equitable manner and increased [the participation of the] poor . . ." (male, *Damai* (*Dalit*) CFUG member).

[10] Only Pathivara CFUG's indicator regarding equitable representation did not change—likely because an executive committee election was not held there during the PAR period.

iv) Members' satisfaction with engagement

The self-monitoring records of all CFUGs (over both phases) indicate that members perceived their engagement to be increasing. Of the 28 self-assessed indicators (in total, all sites) relating to participation and/or 'voice', 27 increased. One *tole* representative noted: "in the past our [women's] voice was not considered but nowadays our sayings also are counted and we are asked as well" (female, *Brahmin*, CFUG member).

Similarly, across all sites, members reported that executive committee decision making had become more inclusive and deliberative—although not fully so. In one site, for example, one poor member who had joined the executive committee commented, "now we women are counted in the decision-making process, which was much less in the past" (female, *Dalit* CFUG member). In another site, in contrast, marginalised members expressed in a final focus group that they were not yet satisfied with the effectiveness of their representation on the executive committee.

In the final assessment of the long-term sites, pebble distribution exercises were used to assess changes in relatively marginalised (poor, non-executive members) *versus* non-marginalised (rich and medium wealth group and executive committee) members' satisfaction with their own engagement, in terms of voice and knowledge gained. *Both* groups indicated increased satisfaction (Figure 4.4). Moreover, as illustrated by the figure, the differences in the pattern of perception between marginalised and non-marginalised diminished.

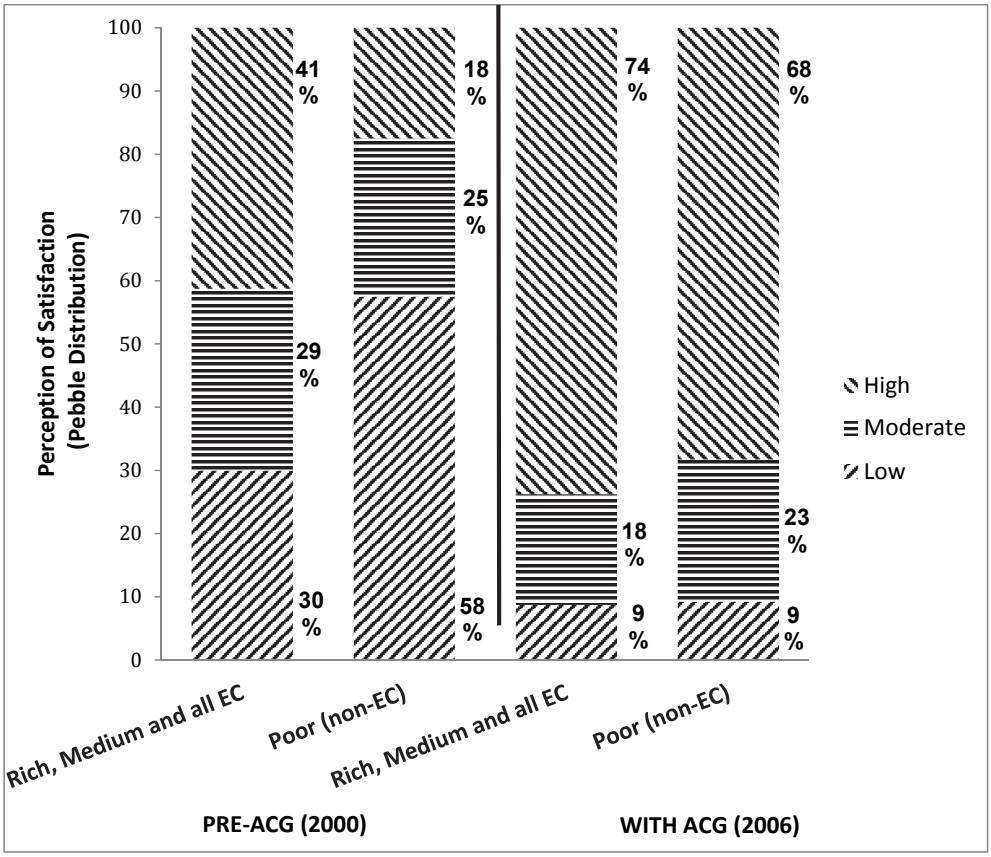

Figure 4.4 Members' perception of satisfaction with own engagement, contrasting poor, non-executive members with medium, rich, and executive members (n=4)

Notes: ACG = adaptive collaborative governance. EC = executive committee. Low = Enforced participation, voice not heard and low level of knowledge gained. Moderate =Voice heard but not incorporated in planning and enhanced knowledge. High = Voice heard and incorporated in planning and awareness level increased.

Source: Pebble distribution exercises with discussion in focus groups in the four long-term sites, 2006

4

4.6 THE INFLUENCE OF DESIGN ELEMENTS

Here we trace our perception of the influence of the key design elements that emerged at the sites (social learning processes, nested arrangements, networking, and facilitation). We consider them in terms of several interconnected aspects of change that we observed to be significant: mutual understanding; accountability, leverage, and influence; awareness of rights; pressure for change; leadership positions and skills; and, feedback and incentives.

4.6.1 Mutual understanding

The social learning processes (such as facilitated discussions, shared visioning, and self-monitoring including equity-tracking) contributed to mutual understanding and respect among members. As noted by the Secretary of one CFUG: "We never realised the say of women and poor in the past, but adaptive collaborative management[11] opened my eyes that every user knows something…" (male, *Thakuri Chhettri* executive committee member). They did so by creating iterations of sharing and joint reflection in socially safer environments. This was a slow and winding process, punctuated by challenges and tensions. These were addressed over time through ongoing reflective interaction, self-monitoring and other processes, and interaction with external actors who prompted addressing of equity. Persistent and inclusive facilitation, which repeatedly encouraged equity, promoted shared learning, and facilitated dialogue on contested issues, underlay these changes.

4.6.2 Accountability, leverage, and influence

The self-monitoring processes generated more information, and made it more accurate and accessible to CFUG members, thereby increasing the accountability of leaders and the leverage of marginalised members. One poor *Dalit* woman in Bambibhir CFUG, for example, effectively drew on equity-tracking data to challenge leaders' decision to exclude her from an income generating opportunity (see McDougall et al., 2007). Self-monitoring regarding governance, made issues such as information sharing, participation, and transparency explicit and kept them in public discourse, thereby contributing to accountability. Moreover, self-monitoring opened the door for developing shared plans to improve governance, for instance by means of a subgroup to act as a 'watchdog' on the executive committee.

[11] During the field research, researchers and participants used the term 'adaptive collaborative management,' this being the overall research program's terminology.

The nested decision-making arrangements contributed to increasing the input and influence of marginalised actors by stimulating information sharing and shifting the locus of decision making. As one poor member affirmed: "This type of *tole* meeting led to my getting firewood free of cost—as all learned of my [wealth] status" (male, *Bisankhe* (*Dalit*) CFUG member). Marginalised members reported they previously had lacked information about formal CFUG operations, experienced language barriers or overt discrimination, and lacked confidence and skills in public speaking. Their new direct involvement in *tole*-level meetings and action groups increased their access to information and to procedures. The regular verbal exchanges of information meant that marginalised members—many of whom were not literate—did not have to rely on written minutes or attempt to join meetings where they perceived they were not welcome. In the new arrangements they contributed directly and garnered information in relatively homogenous and familiar small groups that they perceived as more socially safe and which fed directly into decision making.

4.6.3 Awareness of rights

The increasing demands for input, accountability, and benefits illustrate marginalised members' increasing awareness of their community forest rights. The processes of nested decision making, including the CFUG Constitution revisions, contributed to this growth in awareness. Awareness also increased through interaction with critically reflective outsiders such as facilitators and power-sensitive external actors who provoked reflection on governance norms by means of critical questioning. The Maoist conflict and related civil movement also likely pushed leaders and pulled marginalised members towards addressing power issues. This included, for instance, the 'education' of rural people by Maoists through voluntary and/or forced listening to speeches, the actual and/or perceived threat of physical attack on those perceived by Maoists to be elite, and the widespread escalation of social discourse on governance reform and equity.

4.6.4 Pressure for change

The increases in marginalised members' confidence, awareness, and knowledge noted above appeared to trigger their increasing individual and collective pressure on CFUG leadership to respect their rights and views. The increased networking and increased exchanges with equity-oriented outsiders appeared to play important underlying roles in this. For example, in one site upon request, researchers shared information with marginalised members about benefit sharing in neighbouring CFUGs. Immediately following this, a group of marginalised members confronted their executive committee about why they did not receive similar subsidies. Moreover, the presence of, and involvement with, equity-oriented external actors (related to adaptive collaborative

governance, as well as to the Maoist movement) likely put (intangible) external pressure on leaders to recognise the rights of, and expand the effective space for, marginalised users.

4.6.5 Leadership positions and skills

The increase in marginalised representation in the executive committees appeared to be triggered by increases in overall equity-consciousness, by the growing confidence and capacity of marginalised members, and, in some cases, by the *toles'* shift to selecting executive committee representatives. At times, the willingness to challenge the existing leadership resulted in committee members being replaced. The increasing number of women and the poor in leadership roles overall was associated with the expansion of total leadership positions through the development of nested decision making. The development of local women, poor, and/or *Dalit* members as facilitators—and thus effective community actors—may have contributed to the confidence of marginalised members to take on other leadership roles. The greater increase in representation of the poor in executive committees in long-term versus short-term sites suggests the potential influence of time on this issue. Interestingly, by comparison, the changes in women's representation appeared to be more elastic, i.e., roughly equal, regardless of time. These differences could benefit from additional research.

Marginalised members' leadership and facilitation skills increased through the expansion of their involvement in *tole* and executive committees and facilitation roles. Facilitation capacity was strengthened through training, experience, and reflection as well as ongoing mentoring and networking. Practical skills and knowledge increased through involvement in action groups, such as for income generation, culvert construction, or conflict management. Periodic formal capacity-strengthening events at some sites, led by actors external to the research, likely also contributed to technical skills, knowledge, and confidence.

4.6.6 Feedback and incentives

The increase in pro-poor and pro-women decisions and actions served to boost these subgroups' sense of ownership of, and perceived value from, their CFUG. This, in turn, fed back positively into the level and quality of engagement of the poor and women in decision making. As one poor woman stated,

> "Local women and marginalised users' representation has increased in *tole* committees, which has generated enthusiasm in us. The *tole* committees are making decisions in favor of women and the poor to provide CFUG funds and forest resources in an equitable manner. After this type of direct

> benefits, women and the poor's participation have been increasing in CFUG activities including decision making. We are hopeful that *tole*-level decision-making and planning forums will continue in the future" (Femal e, *Dalit* CFUG member).

As these changes took root the established leaders began to perceive the benefits of higher levels of engagement of marginalised users, such as reduction in the burden of responsibility for executive members and reduced tensions within the CFUGs. This provided incentives for leaders to continue to support the approach.

4.7 GAPS AND BRIDGES TO ENGAGEMENT

Application of Osmani's (2008) three gap-analysis to effective participation framework offers further generaliseable insights. Broadly speaking, we note that the term 'gaps', and the framework as a whole, could be potentially re-framed in the positive, i.e., as 'bridges' to engagement. We begin with the three gaps (capacity, incentive, power), then offer a possible adaptation of the framework in the form of two additional aspects (space and learning). We perceive the consideration of space and learning, together with power, as useful to the framework in that they expand it from 'effective participation' towards 'engagement as transformation' (see Hickey & Mohan, 2005) (Figure 4.5).

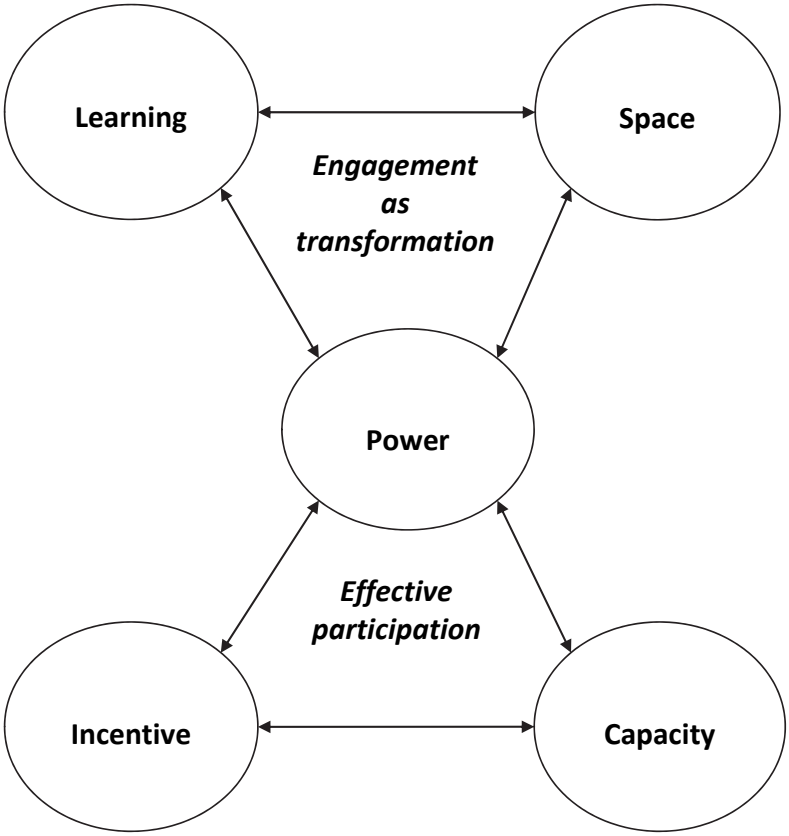

Figure 4.5 Five gaps—or bridges—to engagement
Notes: Draws on Osmani (2008) and Hickey and Mohan (2005). Power is at the center of the figure because of the centrality of power to any discussion of engagement.

While in-depth discussion of overall sustainability of adaptive collaborative governance is beyond the scope of this paper, the below acknowledges the risk of externally dependent change unravelling when external involvement withdraws. As such, it frames approaches increasing engagement in terms of a slow, internally relevant and internally driven process (even while it may involve and/or be sparked by external influences).

We first briefly highlight two points, underscored by the findings, about the nature of engagement itself: (1) equity in engagement is a subjective, long-term change process that is contested and re-negotiated among the actors over time; (2) the fact that marginalised

and non-marginalised members alike indicated increased satisfaction with engagement indicates that engagement need not be approached as a 'zero sum game'. We propose the latter as an area for further exploration and research.

4.7.1 Capacity gap

Osmani (2008) suggests that the long-term development of both general and specific skills contributes significantly to effective participation. Our experiences dovetail with this in terms of local facilitation skills. These skills—developed among diverse members—are particularly important, along with other forms of effective and inclusive local leadership, in terms of avoiding external dependency and thus vulnerability. The development of external networking—as distinct from classic 'external project dependence'—builds internal skills and also creates a larger pool of external skills on which to draw: well-networked communities can more easily access training for their local facilitators as well as access external actors for institutional or other support when needed.

In epistemological terms, however, we diverge from (our interpretation of) the three-gap framework's emphasis on 'transfer of knowledge'. Our experience underscores the relevance of a constructivist approach to knowledge, i.e., one in which people actively construct their own understanding of the world rather than the world embodying a single ('true') reality. Thus we highlight the role of multi-directional information sharing and learning—such as the routinised exchanges at the *tole* and *tole*-executive levels—as key features of overcoming the capacity gap.

4.7.2 Incentive gap

Our findings also align with Osmani's (2008) suggestion that incentives to participate are influenced by personal perceptions (rather than only narrow utilitarian calculations) of costs and by intrinsic as well as instrumental values. We have noted the significance of social costs (such as being repeatedly scolded) in our cases as well both marginalised and non-marginalised members' pride in achieving greater equity in process, not only in material benefits. Cochran and Ray (2009) similarly underscore the importance of equity in relation to people's contributions to management. The shift towards adaptive collaborative governance altered the balance of incentives and disincentives. The disincentives relating to social risk were reduced (as understanding developed). Material benefits increased (as pro-poor and pro-women decisions and capacity-strengthening increased) and opportunity to make contributions and take leadership roles offered visible symbolic gains.

4.7.3 Power gap

Osmani (2008, p. 30) describes the power gap as "perhaps the most pernicious [gap] of all". Imbalances in power reflect imbalances in social status, as well as in access to, and control over, information, decision-making processes, outcomes, and resources. Armitage et al. (2009, p. 98) highlight that if power is not understood and addressed in an adaptive collaborative approach then the "tendencies that constrain flexibility and the sharing of governing authority will go unchallenged".

The power gaps in the sites at the outset of the research were illustrated by the relative exclusion of female and poor members from decision-making forums, by these members being 'blamed', 'driven away', and 'ashamed', and by the weak incorporation of these members' needs and interests into CFUG priorities. We concur with Springate-Baginski and Blaikie's (2003) view that CFUG formation processes contribute to this replication of traditional village hierarchy, which places individuals of the overlapping categories of female, poor, and *Dalit* at the lowest level. As indicated by the findings, with the adaptive collaborative approach this gap diminished and these members transitioned to 'being counted'.

At a fundamental level, the forces underlying the change in power in the CFUGs can be understood in terms of two of Hickey and Mohan's (2005) key characteristics underlying participation as transformation. First, the shift to adaptive collaborative governance embodied "a project that [sought] to directly challenge existing power relations rather than simply work around them for more technically efficient service delivery" (Hickey and Mohan 2005, p. 250). Secondly, by challenging historical socio-political hierarchies within the CFUGs, and with the (contextual) influence of the Maoist conflict and civil movement, there was an "engagement with underlying processes of development, rather than remain[ing] constrained within the frame of specific policy processes or interventions" (Hickey and Mohan 2005, p. 251).

At a more practical level, we envision the multiple interconnected forces underlying the slow, nonlinear shifting of power at the sites in terms of *pulls* and *pushes* in a landscape of ongoing negotiation. These jointly influenced perspectives and motivations of marginalised and non-marginalised members, and gave marginalised members more leverage in the decision-making arena. Together these constructively addressed the emergence of tensions or conflicts that accompanied changes in power and nurtured the perception of engagement as a potentially mutually beneficial scenario, rather than a zero-sum game. *Pulls* involve the incentives for claiming and accepting power sharing and persisting with the approach. They included the positive feedback of increasing mutual understanding as well as tangible (e.g., income generation) and intangible benefits (e.g., reduction in conflict, reduced workload for executive committees, development of symbolic capital) for

marginalised and non-marginalised members. The civil movement created a *pull* by increasing awareness of dialogue about power and governance. The concept of *pushes* links with the useful notion of 'countervailing power' (Osmani, 2008) and with the concept of bargaining power in community-based natural resource management (Agarwal, 2001). In our cases, countervailing power was created through combinations of: changes in decision-making processes and arrangements that created leverage (including through access to information); enhanced accountability; and, established routine critical assessment of equity and other power-related issues in CFUGs. The active involvement and connections with pro-equity facilitators and others also contributed. Increases in marginalised members' information, knowledge, and confidence formed the foundation for power shifts in subtle ways (such as ability to communicate interests and rights) as well as in more overt ways (such as challenging power). Changes in power relations were mediated by the culture and nature of the individuals and groups involved (both elite and marginalised), as illustrated by *Daure* members being more willing to speak their mind than other groups.

The multi-faceted emphasis on equity—as opposed to an undifferentiated or singular focus on gender, poverty, or caste and ethnicity on their own—likely contributed to the influence of the approach. It created a CFUG dialogue with relevant entry points for diverse members of the communities. It also supported the CFUGs applying a more differentiated internal analysis and approach than they had in the past, for example recognising poor and/or poor *Dalit* women as distinct from women from more powerful caste groups and/or wealthier women.

4.7.4 Space

By space we refer to an available and socially accessible arena (Steyaert and Jiggins 2004) created by decision-making arrangements such as the *tole* committees. The introduction of such spaces in the CFUGs resonates with Hickey and Mohan's (2005) understanding of participation as transformation. The shift to adaptive collaborative governance aimed to "not only bring people into the political process, but also to transform and democratise the political process..." (Hickey & Mohan, 2005, p. 251). As such, the notion of space is fundamentally linked to power and engagement and thus may add further depth to the framework.

More specifically, our initial research had revealed that the existing entry points to decision making worked for elite actors but not for women or the poor; in other words, it indicated a 'gap' in terms of space. The shift to adaptive collaborative governance intentionally developed space for marginalised members by increasing the number and quality of available—and linked—spaces for interaction and locating these at societal scales accessible to women and the poor. In doing so, the groups made progress in addressing the

cultural, procedural, and informational factors that limit participation (internal exclusion) underscored by Peterson (2011). The role of facilitation by outsiders and, over time, increasingly by members of the communities themselves, clearly was important to making the CFUG decision-making environments more inclusive. Similarly, the purposeful orientation to social learning, including reflection on processes and the culture of decision making, contributed to shifting norms and expectations towards integrative leadership and the development of more effective spaces. Overall, the success of the nested decision making makes an interesting contrast to Manor's (2005) reflections on the potential of (forest) user groups to undermine democratic processes.

4.7.5 Learning

At the start of the research there was a gap in the CFUGs in terms of their learning about CFUG governance itself. The shift to adaptive collaborative governance was supported by the routinisation of learning by means of practices such as systematic joint reflection on governance processes and outcomes. CFUG members began to regularly practice discussing key issues, as well as shared visioning, monitoring and reflection, and experimenting with how to improve their practice accordingly. By taking a social learning approach to governance, the CFUGs began to feel their way towards what they perceived as more equitable engagement in their own dynamic and complex socio-ecological contexts. Their experiences, and the emergent mutual understanding, support the proposition that social learning is a bridging of cognitive divides, i.e., a shift from "multiple to collective or distributed cognition" (Röling, 2002, p. 37). This underscores the significance of learning as a gap or bridge to engagement, in that for collaboration among diverse actors to be effective, actors need to identify their interdependence and recognise the need to work together (Röling 2002).

The CFUGs' learning can be seen as a form of double and triple loop learning (Prabhu et al., 2007). The learning encompassed perceptions and attitudes supportive of engagement as well as the related processes, arrangements, and practices. The CFUGs members were not just learning to better manage forests but deepening their understanding of governance and learning processes. In other words, they were ultimately learning to respond to Röling's (2002, p. 25) question "how can we deal with ourselves?".

4.8 CONCLUSIONS

This article opened with the articulation of the dilemma facing forest actors: how to govern forests equitably and inclusively in a diverse and complex context? Research-based lessons responding to this dilemma may be relevant to community-based natural resource management and development fields more broadly.

On its own, even well-established and widely implemented community forestry policy, such as Nepal's, is not sufficient to enable effective engagement in local forest governance. Our research indicates that social learning and collaboration-based processes, arrangements, practices and attitudes, and active pro-equity facilitation, make a significant contribution in responding to the dilemma.

Specifically, the adaptive collaborative approach to governance enabled women and poor members to shift from marginal to more effective engagement in local forest decision making. Women and the poor—and, notably, poor women—increased their involvement in decision-making processes, exercised their rights, expanded their leadership roles, and shaped CFUG decisions. Adaptive collaborative governance appeared to decrease social hardship such as scoldings and humiliation. The approach did not resolve all local governance issues to all actors' satisfaction nor create permanent 'solutions'. Rather, it enabled diverse actors to better understand each other and collectively 'learn their way' towards greater inclusion and equity. From a gender perspective, part of the approach's success appeared to be rooted in its emphasis on a multi-faceted conceptualisation of equity, which increased the relevance of equity to diverse members and encouraged a more nuanced approach to gender.

From a policy perspective, the study underscores the value of further investment in the social and institutional aspects of community forestry and natural resource governance. In particular, it suggests seeking windows of opportunity to engage and support nuanced approaches to equity and to nurture constellations of equity-oriented social learning, nested-decision making, facilitation, and networking. In looking to offset tendencies for local resource governance to perpetuate socio-cultural hierarchies, attention could be paid to building and linking local and district capacities for equity-oriented leadership, facilitation, and networking. The nurturing of wider learning and equity-oriented discourse may support ongoing negotiations of local power.

Broadly speaking, there is prevalence of significant gaps in power, incentive, and capacity in natural resource governance and these gaps are barriers to effective engagement by the poor and women. Based on our research, we suggest the need for attention to two additional, interrelated gaps or potential bridges: space and shared learning. The standard entry points to local community forestry governance work for elite actors but not for

women or the poor. The enhancement of 'space' for marginalised people through increasing the number and quality of available—and linked—spaces for interaction, and locating these at societal scales accessible to women and the poor, contributes to addressing the cultural, procedural, and informational factors that limit participation. A social or shared learning approach can support local groups in enhancing mutual understanding and in 'feeling their way' towards what they perceived as more equitable governance. We propose that it is in the synergy among power, space, and learning that engagement may become transformative.

Finally, the study reinforces that equity is fundamentally relevant to governance itself, and not only to its outcomes. Engagement in governance can vary significantly in terms of equity—and this can be influenced by the processes involved as well as by arrangements, facilitation, and networking. Moreover, equitable engagement matters to people for both intrinsic and instrumental reasons. While perceptions of equity in governance are normative, and embedded in ongoing processes of negotiation, the pursuit of increasing equity may be usefully perceived as a potential win-win scenario, rather than a zero-sum game.

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CHAPTER 5

Does Adaptive Collaborative Forest Governance Affect Poverty? Participatory Action Research in Nepal's Community Forests

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Chapter 5. Does adaptive collaborative forest governance affect poverty? Participatory action research in Nepal's community forests

Abstract

Despite recognition of forests' roles in rural livelihoods, there has been relatively little empirical exploration of community forestry's contribution to poverty alleviation. Similarly, there has been little study of the interaction of social learning-based approaches to forest governance with poverty alleviation. This article draws on six years of research on community forestry in Nepal to explore if, and how, adaptive collaborative forest governance influences the financial and forest assets of women and the poor. The study includes impacts on income generation, access to micro-credit, and employment. The findings indicate that the financial and forest assets of both women and the poor—and especially poor women—increased as a result of adaptive collaborative forest governance. They also suggest a strong role for social learning in poverty alleviation. The article concludes by considering whether poverty alleviation might usefully be re-conceptualised as a power-related transformation process.

Key words: adaptive collaborative governance; equity; gender; livelihoods; Nepal; power; social learning

5.1 INTRODUCTION

The World Bank estimates that "more than 1.6 billion people worldwide depend on forests for their livelihoods; 1.2 billion of these people live in extreme poverty" (Profor, 2008, p. 2). There is relatively little empirical information, however, regarding the specific connections between poverty alleviation and community forestry (Luintel et al., 2009; Ojha et al., 2009)[12]. Gilmour et al. (2004, p. 3) note "[t]hough Community Forestry was always linked to poor people, there have not been until recently any specific strategies linked to operational methodologies to address poor people's needs….empirical examples are few…even where evidence exists…they ignore equity aspects". Literature linking poverty alleviation to social learning-based approaches to forest governance and management is similarly limited.

Adaptive collaborative governance (ACG) is an approach to the governance of socio-ecological systems in which groups of actors: purposefully base their decision-making on social learning and critical reflection; emphasise inclusion and equity; and strive for balanced and strategic collaboration with other actors (McDougall et al., 2008). Conflict management plays an important role. This resonates with Folke et al.'s (2002, p. 75) conceptualisation of adaptive co-management as "a process by which institutional arrangements and ecological knowledge are tested and revised in a dynamic, ongoing, self-organised process of learning-by-doing" (see also Armitage et al., 2009; Jacobson et al., 2009). Social learning—the lynch-pin of the approach—is a "process in which multiple stakeholders bring together their different knowledge, experiences, perspectives, values and capacities for a process of communication and critical reflections as a means of jointly understanding and addressing shared issues, challenges and potential options" (McDougall et al., 2008, p. 30; see also Leeuwis & Pyburn, 2002).

The objective of this article is to explore and elucidate these connections. It does so based on six years of research on community forest user groups (CFUGs) in Nepal (1999-2002; 2004-2007). It focuses on the forest assets and forest-related financial assets of women and the poor. Specifically, it explores the following questions: To what extent do CFUGs prioritise and meet the needs of women and the poor? What is the influence of adaptive collaborative governance of community forests on the generation and distribution of subsistence and income-related benefits, especially for women and the poor? How do the various elements of an adaptive collaborative approach have such an influence? And, in broader terms, what insights does the research suggest in terms of the conceptualisation of poverty alleviation, including the significance of internal power relations?

[12] See Nath and Inoue (2010) for one example in participatory forestry.

The article first describes community forestry in Nepal, the research methodology and the sites. It then outlines the processes and arrangements for ACG that emerged in the research sites. The key findings regarding subsistence and income-related community forest benefits are presented and analysed by comparisons of wealth group and gender data pre- and with-ACG. The article concludes by drawing broader insights concerning the conceptualisation and practice of poverty alleviation.

5.2 CONTEXT

5.2.1 Poverty and social landscape

Nepal is amongst the poorest counties in the world, ranking 157th out of 187 countries on the Human Development Index (World Bank, 2012). Poverty varies by social group: it is most severe among the *Dalit* ('oppressed people' within the Hindu-based caste system) and some *Janajatis* (indigenous people). There are also acute gender dimensions to poverty and Nepali women face "much greater economic insecurity than men" (World Bank & DFID, 2006, p. 24). The norms and practices of social hierarchy are multifaceted and 'deeply entrenched' in all aspects of daily and political life (Jones et al., 2009, p. 17), with caste, wealth, gender and ethnicity, geopolitics, language and religion all playing a role (World Bank & DFID, 2006).

From the late 1990's to 2006 Nepal experienced violent armed conflict between the government and Maoist rebels, which was accompanied by a broader civil movement with discourse focused on equity and governance. The conflict affected the functioning of CFUGs in various ways, including that many district forest offices were closed, and some members limited their gathering of forest products for fear of being harmed or killed. CFUGs none the less showed reasonable resilience for the most part (Baral & Stern, 2011). The equity and governance focus of the national conflict and related civil movement also appears to have increased the political consciousness of many citizens, including rural Nepalis.

5.2.2 Community forestry

Forests in Nepal play an integral role in rural livelihoods, providing basic resources for households and agriculture, including fuelwood, timber and fodder. Moreover, forests provide essential inputs for some rural livelihoods, such as wood for pot-making or fuelwood for selling.

Nepal's Community Forestry Programme has been widely implemented since its inception in the late 1980's. It was established out of concern regarding deforestation and

environmental degradation. By 2011, over 17,600 CFUGs held legal use and management rights over designated forest areas. They involve approximately 1.4 million households and govern roughly 1.6 million ha of the forest area, representing approximately 35% of the country's population (DoF, 2012). Each CFUG chooses an executive committee which is empowered to make and implement decisions on behalf of its members (Baral & Stern, 2011).

While the programme has maintained its conservation priorities, it has begun to embrace development goals and some CFUGs have started expanding from basic subsistence use to generating various small income streams (Kanel & Dahal, 2008; Luintel et al., 2009). In fact, two of the programme's key second-generation challenges are to increase the level of livelihood benefits and their distributional equity (Kanel & Dahal, 2008). The CFUGs' contributions to livelihoods are limited by numerous external conditions, including poor market access and infrastructure (Pandit et al., 2008a; Dhakal et al., 2011). Local socio-political and institutional factors, such as weak CFUG governance and the tendency of CFUGs to replicate traditional village hierarchies, also limit the benefits for the poor and women (Pokharel & Niraula, 2004).

5.3 METHODOLOGY

5.3.1 Research design

The research is based on comparison across multiple in-depth, multi-year case studies of CFUGs (Yin, 2009). There were four CFUG case studies in phase I (1999-2002) ('long-term sites'); an additional seven CFUGs ('short-term sites') were added in phase II (2004-2007)(n=11). In 2008 the research team conducted a final field visit to each site.

The research began in each site with background studies, transitioned to participatory action research (Selener, 1997; Lilja & Ashby, 2000), and concluded with a round of final assessments. Socio-economic and institutional data were collected by means of document reviews, key informant interviews, participatory wealth ranking (using each site's own criteria), focus group discussions, participatory mapping, pebble distribution/matrix ranking, participant observation of formal and informal processes and occurrences, and ongoing field recording (Colfer et al., 1999a; 1999b). Quantitative data on CFUG income generation activities, micro-credit and employment was generated and validated at each site through review of CFUG records, interviews with executive committee members and leaders of the activities, and focus group discussions with involved members. Quantitative data were additionally cross-checked through field observation and interviews with CFUG members. Data regarding perceptions of 'needs met' (regarding forest products) were

generated through pebble distribution exercises at each site, carried out separately with members from each wealth category (poor, medium, rich) (based on Colfer et al., 1999a).

In phase I, the facilitation roles were played by researchers during the participatory action research (for 13-16 months). In phase II, teams of local and district-level actors from community forestry networks, non-governmental organisations, bilateral agencies or district forest offices took on the roles of facilitators (for approximately 19 months). These facilitators were chosen on the suggestions of local and district actors, using agreed criteria, such as representation of gender and diverse internal groups, ability to commit the time required, commitment to social justice (equity), willingness to learn new skills, and willingness to work with and potential to be accepted in this role by diverse groups in the community.

The main approach to analysis of the research material was by means of iterative examination of the observed and documented changes, processes, and forces at work in order to seek 'plausible causal connections' between them (Fisher et al., 2007). Analysis emphasised the in-depth case experience, as well as drawing out thematic comparisons across cases. Themes and patterns, as well as exceptions and 'surprises' in the material, were identified by the research team. Quantitative data were analysed using descriptive statistics, through comparison of the data for 'pre-' and 'with-' periods using Excel (Microsoft 2007). Data on the identified themes were compiled across sites for each wealth group (rich, medium, poor), and by gender. Analysis of the pebble distribution data (averages by wealth group) was carried out using Excel (drawing on Colfer et al., 1999a; Salim et al., 1999).

5.3.2 Sites

The CFUG research sites (Table 5.1) were spread from east to mid-west and from the southern Terai (plains) to the mid-Hills area. They were selected in consultation with district-level stakeholders and CFUGs as being relatively 'typical' in terms of group activeness, relationships, governance, and 'success'. They were all socially heterogeneous, ranging from 5 to12 ethnic and/or caste groups per site. Looking across sites, participatory wealth ranking exercises indicated that approximately 11 percent of member households were considered to fall in the 'rich' category, 51 percent in the 'medium' category, and 37 percent in the 'poor' category[13].

[13] Percentages add up to less than 100% due to rounding error. Variation in wealth group distribution between sites is to be expected across sites that are diverse and internally heterogeneous. Sites differed from one another in terms of caste and ethnic composition (which is related to access to resources/wealth), and in terms of economic history, status and opportunities.

Table 5.1 Research sites (n=11)

	Community Forest User Group	District	Households (no.)	Wealth categories			Forest size (ha)
				Rich	Medium	Poor	
Long-term sites (1999-2002 and 2004-2007)							
1.	Bamdibhir	Kaski	128	1%	72%	27%	48
2.	Deurali Bagedanda	Kaski	144	14%	40%	46%	181
3.	Andheribhajana	Sankhuwasabha	180	21%	39%	40%	113
4.	Manakamana	Sankhuwasabha	158	23%	41%	36%	132
Short-tem sites (2004- 2007)							
5.	Kajipauwa	Palpa	111	18%	42%	40%	24
6.	Chautari	Nawalparasi	751	11%	38%	52%	355
7.	Patle	Lalitpur	158	7%	62%	31%	104
8.	Handikharka	Dhankuta	133	17%	41%	41%	112
9.	Khanuyubas Salleri	Dhankuta	140	17%	57%	26%	120
10.	Chautari	Morang	421	3%	80%	17%	129
11.	Pathivara	Sankhuwasabha	156	10%	59%	31%	197

Notes: Some percentages add up to more than 100% due to rounding error. Households data are from period of the background studies (longterm sites in 2000; short-term sites in 2004). Wealth data are based on participatory wealth ranking during the beginning of PAR, using each CFUG's own criteria.

Sources: CFUG Constitutions and Operational Plans, key informant interviews, and participatory wealth ranking.

Additionally, this variation reflects that wealth ranking was participatory, and communities self-assessed wealth distribution according to their own criteria (such as regarding food security, house, land, and livestock).

5.4 FINDINGS AND ANALYSIS

5.4 1 Forest governance: Processes, arrangements and practice

The CFUGs' governance shifted over time towards more inclusive and learning-oriented processes of deliberation (see McDougall et al., 2008; McDougall et al., 2013). In terms of decision-making arrangements, the CFUGs transitioned from highly centralised executive decision making to multi-level, multi-node (i.e., 'nested') decision making arrangements. Previously, members' only points of access to decision making were the executive committee or the annual general assembly. Both fora were dominated by wealthier men (McDougall et al., 2013), and presented various social barriers for marginalised members, such as speaking up in front of groups of more powerful members. With the transition to AGC, the sites developed additional, lower scale, less formal access points to decision making. Specifically, *toles* (hamlets) became the first level of decision making, and the basis for the participatory planning processes described below. *Tole* members began to meet regularly—once a month or as needed—to share information, draft priorities, monitor and assess CFUG strengths and weaknesses, and to address issues such as conflict. Input from all *toles* was pooled and negotiated at the next level of decision making, namely meetings between *tole* representatives and executive committees. The CFUG general assemblies came to be the final stage of a process in which members already were engaged. Additionally, volunteer action groups formed, for example, to develop forest products for sale, to oversee equitable distribution of benefits, to monitor CFUG loans and repayments, or to develop linkages and networking with external agencies. The overall increases in the engagement of women and the poor are explored in (McDougall et al., 2013).

In terms of processes, prior to ACG, the CFUGs' 5-10 year operational plans and annual plans (if they existed), were based on standard plans or developed from the interests of the chairperson or a few committee members. As ACG became embedded, the CFUGs began to engage in participatory planning on the basis of cycles of shared visioning, self-monitoring (assessment of strengths and weaknesses using the CFUG's own indicators), reflection, and iterative re-design, adjustment and implementation of their plans. These cycles were semi-annual or annual, depending on the site. Within these cycles, members engaged in critical reflection on forests[14] and livelihoods, and self-analysis of equity and of their external relations. In some cases, members used the information and understanding generated through the joint planning and reflection processes as leverage to hold executive members accountable to group goals and decisions. Following reflections on their goals and

[14] Indicators created and used by CFUGs regarding forest health/environmental sustainability included those regarding presence of plants/trees of diverse age groups, diversity of plant/tree species, abundance of wildlife, restoration of barren areas and landslides being controlled.

their external relations, the CFUGs began to be more proactive in networking and collaborating with external actors such as non-governmental organisations, bilateral projects, and other CFUGs. This engagement with their 'external world' included more active sharing of information, pro-actively expressing their needs to outside agencies, and more regularly inviting outside actors to participate in or facilitate CFUG processes.

The facilitators encouraged practices and attitudes that supported ACG, for instance by coaching CFUG members to question and routinely reflect on the CFUG's own practices. Action groups tried to apply this learning approach by setting themselves 'learning questions' and developing strategies for shared learning. Bambdibhir CFUG, for example, wanted to establish a bamboo nursery enterprise but their earlier efforts had failed. Their action group began by exploring their own experience, through developing and exploring technical, social, and institutional learning questions around their initial failure. They improved their nursery success rate by conducting in-depth interviews with the previous nursery worker, by garnering technical information from outside actors, and developing trial plots for experimental learning. Together with their non-governmental partner, they analysed their prior unsuccessful collaboration and developed a new arrangement to address the identified weaknesses. They also undertook a system analysis of the bamboo enterprise, to help them deal with business risks and uncertainty.

The facilitators purposefully took an approach of pro-inclusion of marginalised members. They sought to enable an accessible and socially safe environment, for example by actively inviting the input of women and the poor, recognising their contributions, and by acknowledging and addressing disagreements. Facilitators (and invited outside actors) regularly posed questions relating to equity issues, to encourage members to take a cognitive 'step back' from their (unacknowledged) assumptions and perceptions, for example about social hierarchy and entitlements.

We note that the above changes in governance and engagement—and the implicit shifts in power relations—did not occur quickly nor in a linear manner. They unfolded over the course of months and years, and included numerous conflicts, challenges and surprises[15]. Researchers observed that tensions surfaced or new conflicts began to erupt in some cases as women, *Dalit,* and/or poor members began to be more active in expressing their demands. Despite—or perhaps ultimately because of—this outcome, researchers noted overall improvements in conflict management over the research period. For example, in some cases, conflicts between members and executive committees improved as processes became more inclusive or controversial issues were overtly addressed (see the fuelwood example, below). In other cases, conflict triggered the selection of new executive committee

[15] This will be the focus of an upcoming article on conflict, social capital and social learning.

representatives, or changes in distribution, access, or standards and processes of accountability, such as an 'executive committee watchdog group', a loan monitoring committee, and a forest product distribution committee. The resistance of some more powerful members appeared to shift in relation to the learning processes and the iterative involvement of external actors who posed questions and shared observations relating to equity and decision-making practices. Over time, leaders expressed that they were motivated to continue supporting shifts in control over CFUG decision making because they were observing and experiencing benefits from the increasing role of previously marginalised members. For example, they indicated valuing increased member participation in CFUG activities, eventually decreasing social tensions, and reduced demands on leaders' time as action groups and others took initiative.

5.4.2 Changes in financial and forest assets

In each subsection below we present a comparison of data from pre- versus with-adaptive collaborative governance across all sites.

Changes in CFUG rules and fees affecting access

Seven of the eleven CFUGs made pro-poor changes in the rules affecting access to membership and forest products (Table 5.2). Five of these CFUGs changed their fee structure for timber—which is the most costly and often contentious forest product—from a uniform fee for all users to reduced fees or subsidies for poor or very poor users. For example, Chautari CFUG (Morang) began to offer its poorest users—particularly single, *Dalit* women—5 cubic feet of timber for free each year and 10 cubic feet of timber free for the construction of toilets. Chautari CFUG (Nawalparasi) allocated 30 percent of its timber to poor members, and developed four different rates for timber and three for fuelwood for different wealth groups.

Table 5.2 Changes in CFUG rules affecting distributional equity (n=11)

	Rule changes
Membership fees and levies	• Membership fee reduced for poor members (MM; AD; PV; BD; CH-MG; CH-NP) • Household levy reduced (MM; AD; BD)
Access to and sale of community	<u>Timber</u> • Timber fee reduced for the poor (CH-NP; CH-MG; MM; AD; BD)

forest products	• Poorest members (particularly single *Dalit* women) receive 5 cubic feet free annually (CH-MG); • Poor members receive 10 cubic feet free to construct toilet (CH-MG) • Free timber for fire and landslide victims (CH-MG) • 30% of timber allocated to the poor at a discount (CH-NP) <u>Fodder</u> • Poor members encouraged to begin cattle raising and provided CF area for fodder (CH-MG) <u>Fuelwood</u> • Differential rates for fuelwood (CH-NP, PL) • Poor users allowed to sell fuelwood legally (HK; KB; MM; AD) (informally allowed in Ch-M) <u>NTFPs</u> • Poor members can collect and sell NTFPs (PV)
Other	• Policy to increase women's representation in decision-making bodies (AD; BD; CH-NP; CH-MG; HK) • Quota for representation of *Dalits* and *toles* (PL; CH-NP) • Prioritized, or provided training opportunities for, women and poor members (CH-MG; AD; DB; PV, HK) • Subsidized rates for health insurance for poor members(CH-MG) • Priority to the poor in CF-related employment (CH-MG, HK)

Notes: Changes between pre- and with adaptive collaborative governance (2000/2004-2007). NTFPs=Non-timber forest products. AD=Andheri Bhajana; BD=Bamdibhir; CH-M=Chautari Morang; CH-NP=Chautari Nawalparasi; DB= Deurali Bagedanda; HK=Handikharka; KB=Khanyubas; KP=Kajipauwa; MM=Manakamana; PL=Patle; PV=Pathivara.
Sources: CFUG records, key informant interviews.

An additional significant change in CFUG rules was the 'legalisation' of fuelwood sales. At the start of the research the CFUGs were enforcing a ban on fuelwood sales (on the grounds of forest conservation), despite it being a traditional source of income, mainly for women from *Daure* families (fuelwood sellers). The ban created social hardship and the risk of reprisals for sellers. In one site, for instance, members routinely reacted aggressively towards fuelwood sellers and confiscated their sickles, ropes and bundles of wood. One female (*Dalit*) fuelwood seller lamented: "No one recognised our problems. We were always blamed as forest destroyers". As ACG evolved, four of the CFUGs formally revised their rules

to allow fuelwood selling by the poor and one began to allow it informally. Additionally, one CFUG organised technical training in sustainable fuelwood harvesting. Fuelwood sellers were offered alternative income generating opportunities at some sites. In Handikharka CFUG, for example, a series of facilitated joint reflection sessions with leaders and fuelwood sellers resulted in CFUG support for alternative options for the sellers. One *Dalit* fuelwood seller expressed her situation thus: "I am happy that I got the loan from the CFUG to run an income-generation activity [pig-raising] and formally got permission from the executive committee to sell the dry fuelwood for my family's livelihood needs. Now I don't need to steal fuelwood from the community forest to sell".

Income generation activities

The number of income generation activities increased over the research period across the sites: from 4 sites with a total of 6, to 10 sites with a total of 31 (and the remaining site with 2 activities in planning). Notably, the number of sites with CFUG-related income generation activities targeting women and/or the poor increased from 2 to 10 of 11; the number of such activities increased from 2 to 20 total, with an additional 3 being planned. One female *Damai* (*Dalit*) member noted: "After… tole-level reflection and discussion, the real poor have accessed the community forest fund for income-generation activities in an equitable manner and increased [the participation of the] poor …". While many of the income generation activities were small and traditional, such as goat-raising, some were more innovative and ambitious. For example, after overcoming resistance from other CFUG members, the *Biswokarma* (*Dalit*) *tole* of Deurali-Bagedanda CFUG, successfully established a sawmill.

The numbers of individuals involved in, and the income from, income generation activities increased (Figure 5.1a,5.1b). The poor experienced the most significant change in participation in such activities. They more than quadrupled their involvement (from 24 to 105 individuals), which represents an increase from 55 to 76 percent of total participants (Figure 5.1a). Women experienced a larger increase than men, and poor women's involvement grew the most—expanding almost eight-fold (from 8 to 63 individuals, representing a shift from 18 to 46 percent of total individuals involved). In terms of changes in financial returns comparing pre- and with-ACG periods (Figure 5.1b), the aggregate income from CFUG-related income generation activities increased for all wealth groups. Poor members' more than six-fold increase was the largest; their share of income from these activities expanded from 51 to 74 percent.

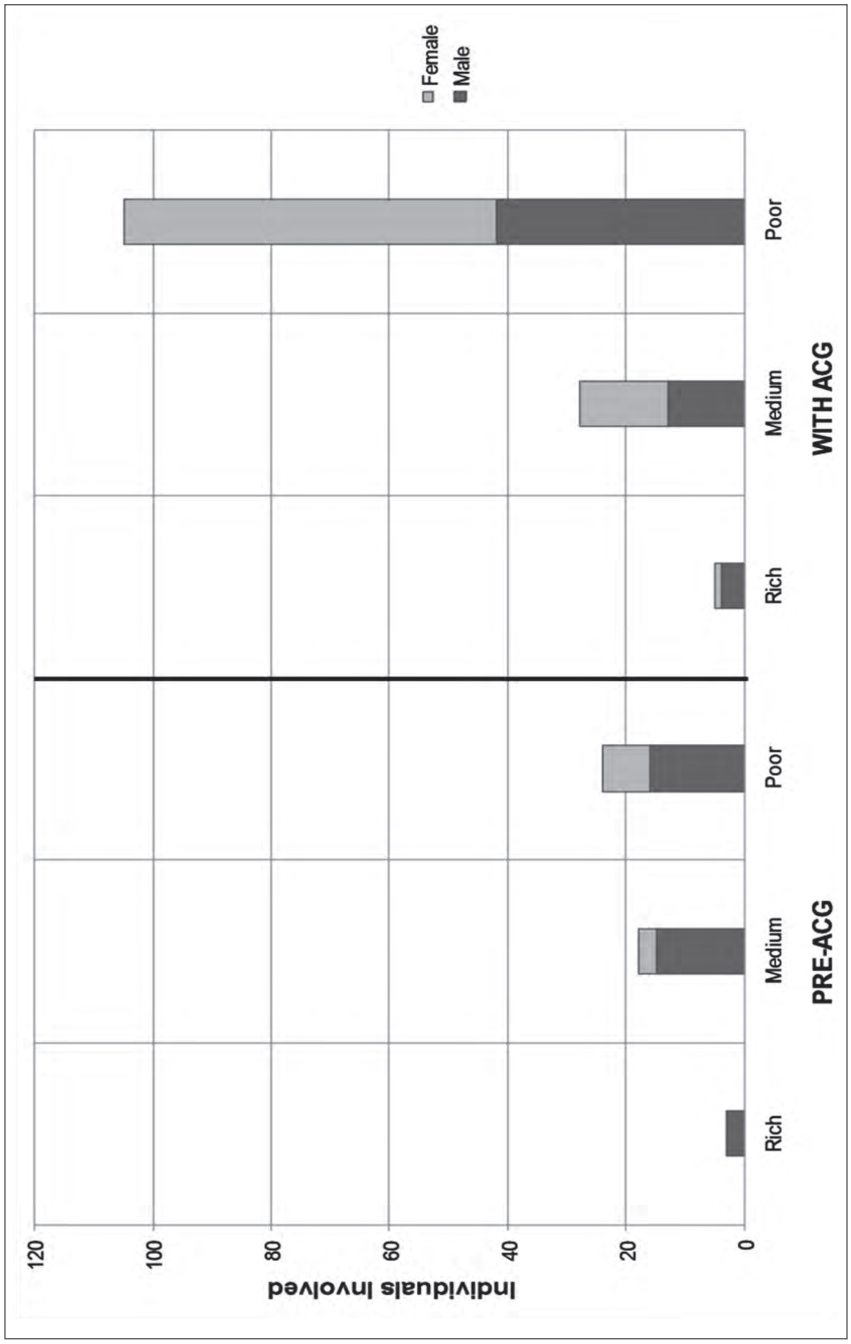

Figure 5.1a Individuals involved in CFUG income generation activities (by gender and wealth group), comparing pre- versus with-adaptive collaborative governance (ACG)

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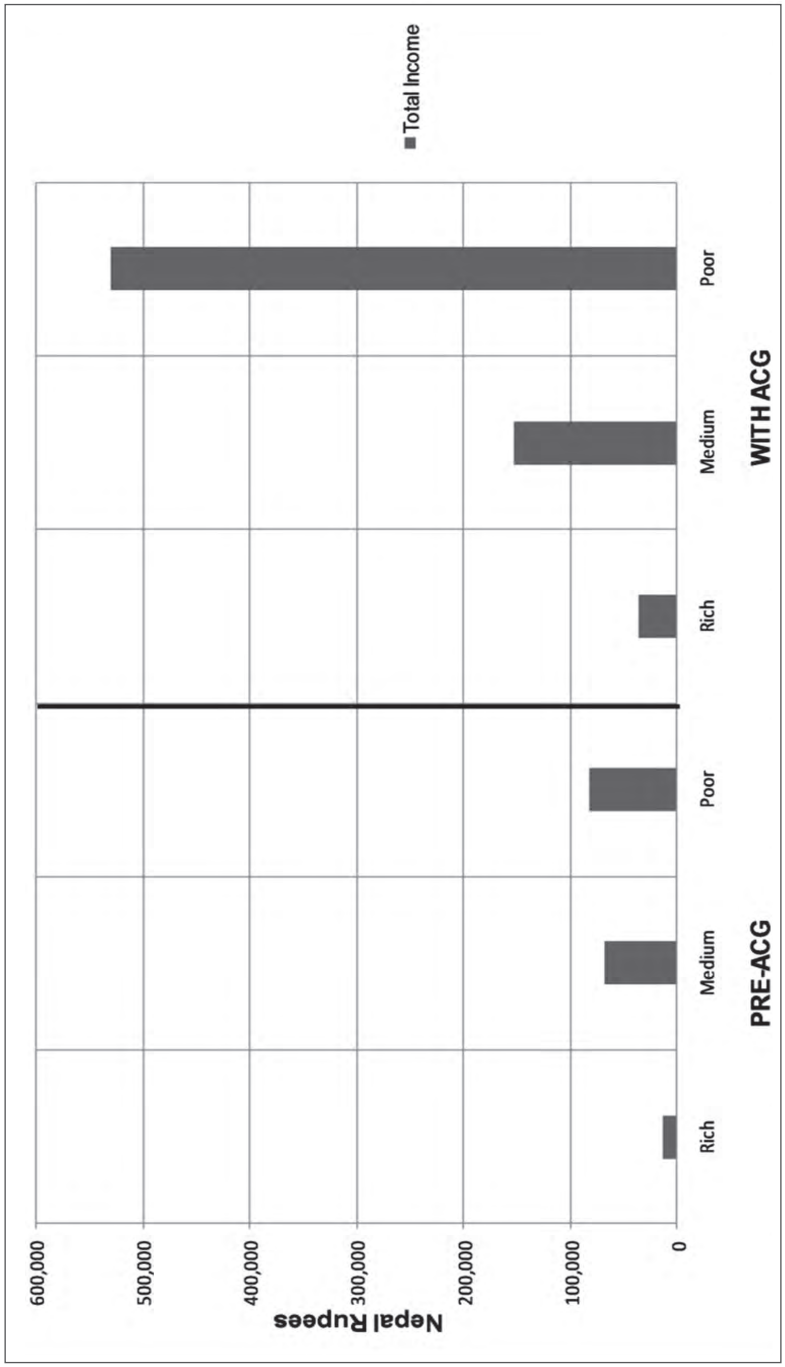

Figure 5.1b Aggregate annual income from CFUG-related income generation activities (IGAs) (by wealth group), comparing pre- versus with-adaptive collaborative governance (ACG)

Notes: CFUG-related IGAs refers to income generation activities led and/or funded by the CFUGs, including through household loans and in-kind subsidies (e.g., CFUG provision of goats to households for income generation). Aggregate data were generated by first calculating in each site the annual CFUG-related IGA income of each wealth group (poor, medium, rich), based on: number of involved households, by wealth group; and, average income from the site-specific CFUG-related IGAs, per involved household. The data were

compiled across all sites (n=11) to determine aggregate annual incomes from CFUG-related IGAs by wealth group, comparing pre- and with-adaptive collaborative governance time periods.

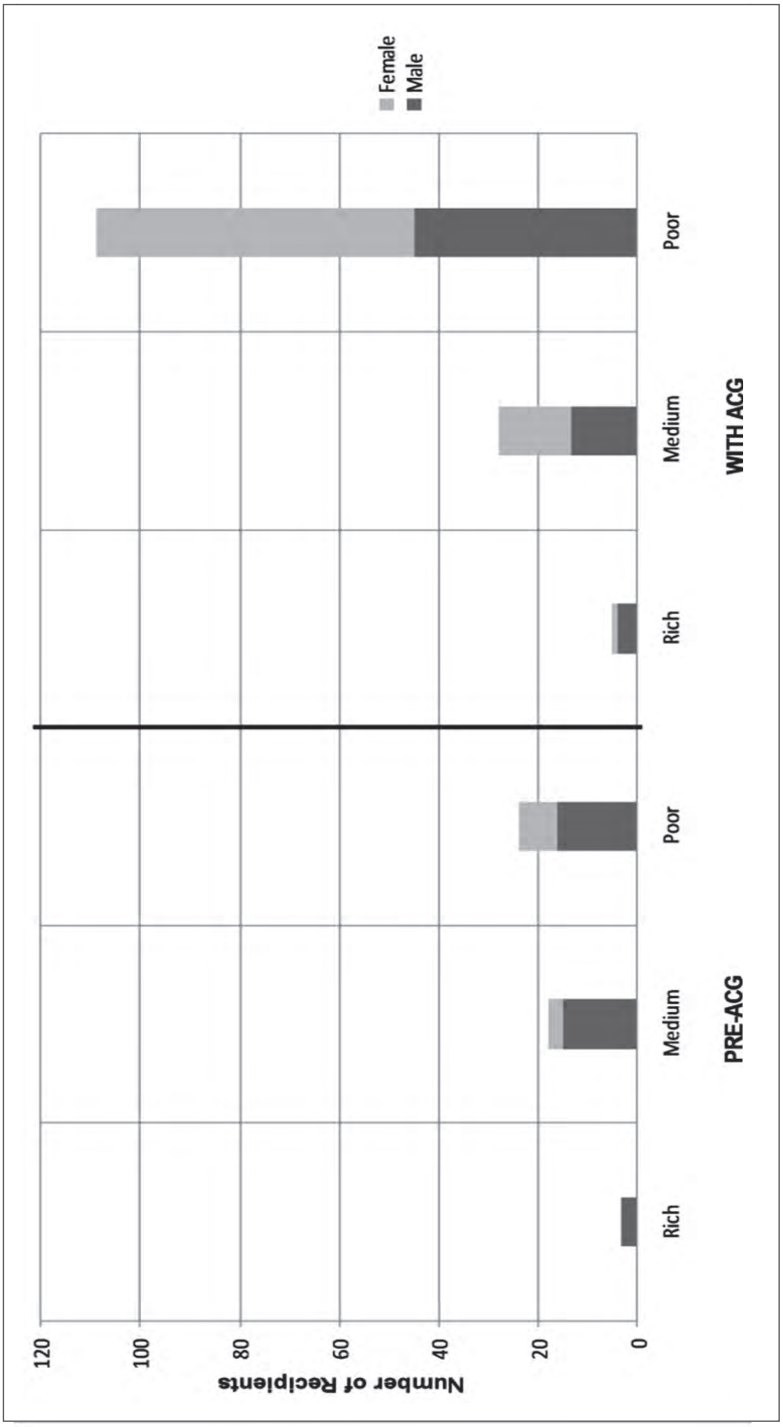

Figure 5.1c CFUG loans by recipient (individuals, by gender), comparing pre- versus with-adaptive collaborative governance (ACG)

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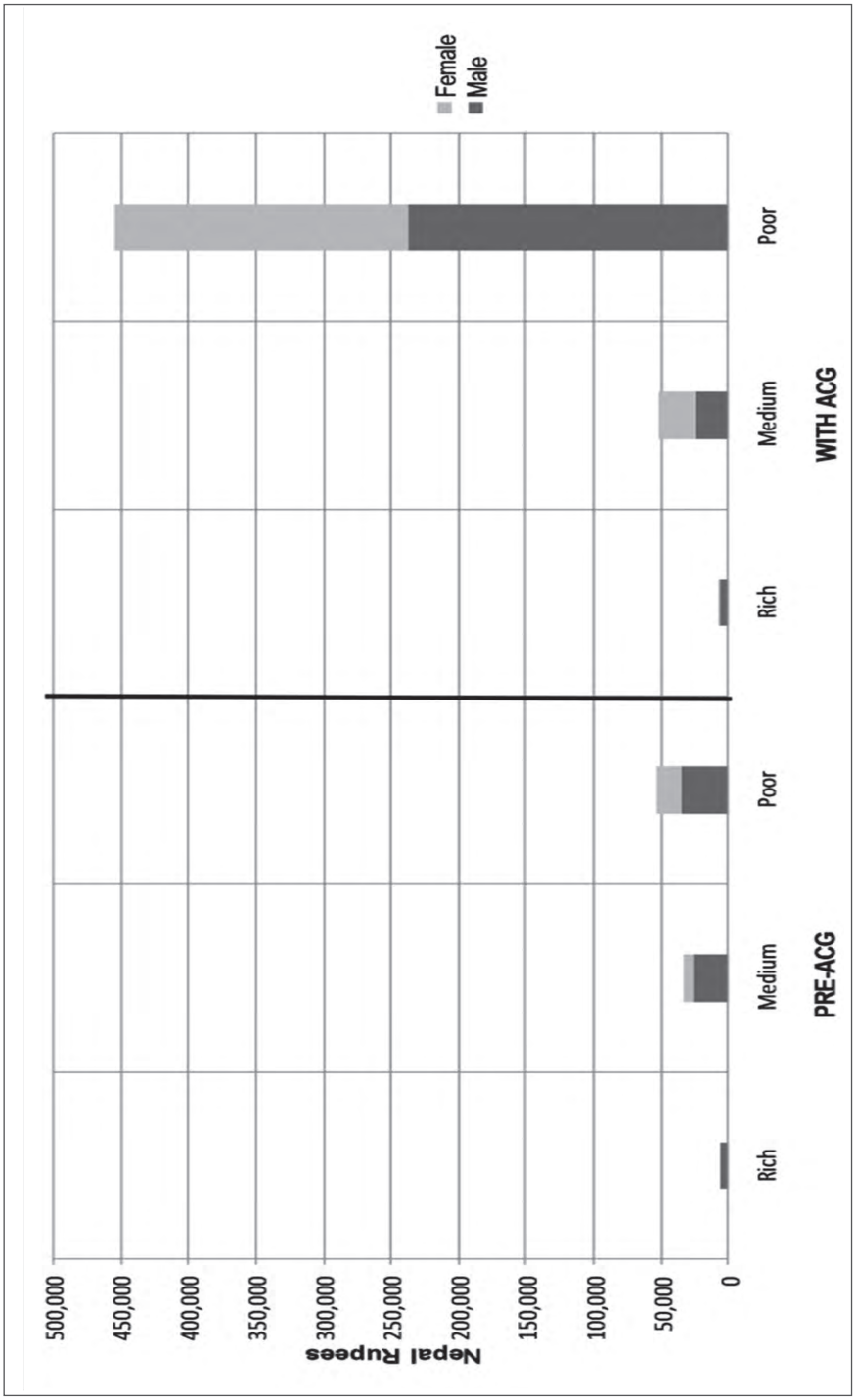

Figure 5.1d Aggregated CFUG loans (by gender of individual recipients, in Nepal Rupees), comparing pre- versus with-adaptive collaborative governance (ACG)

Microcredit

The number of sites with pro-poor small loans programmes grew from 5 to 9 (of 11 CFUGs). The remaining two CFUGs had plans for the post-project period. The five existing loan programmes increased their funds through external collaboration.

Although CFUG loans were all designated as 'pro-poor', in practice the loans were distributed to members of all wealth categories. Figure 5.1c indicates a with-ACG growth in the total number of poor recipients; it also shows an almost 25 percent shift towards the prioritisation of poor members as recipients. Women recipients more than doubled, from 24 to 56 percent of total recipients. Poor women made the greatest (absolute) increase of any group, shifting them from 18 to 45 percent of total recipients.

Figure 5.1d indicates that while total loan amounts increased roughly five-fold, the loan amounts distributed to the poor increased more than nine-fold (from 54,000 to 455, 000 Nepalese rupees). This represents a considerable shift in distribution, with poor member's share of total loan amounts increasing from 58 to 88 percent (Figure 5.1d). Poor men increased their total loans roughly six-fold (from 35,600 to 238,000 Nepalese rupees), as well as expanding the proportion of total loan funds they received (from 38 to 46 percent). The proportion of the loan funds received by women increased from 28 to 48 percent. Poor women made the most significant jump, increasing their loan amounts by more than eleven-fold (from 18,400 to 217,000 Nepalese rupees), and doubling their share of the total (from 20 to 42 percent).

CFUG-related employment

CFUG-related employment—involving part-time positions such as forest watcher, nursery worker, non-timber forest product collector and, in some cases, executive committee roles— increased as the CFUGs became more active. The number of positions grew overall (all sites) from 14 (pre-ACG) to 37 positions by the end of the research (with-ACG). The poor increased their employment from 4 (of 14) to 22 (of 37) paid CFUG-related positions, representing a shift from holding 29 to 59 percent of positions. Women's employment increased from 1 to 11 positions (from 7 to 30 percent); poor women's share increased from 0 (of 14) to 6 (of 37), representing a shift from 0 to 16 percent of positions.

Fulfillment of needs for forest products

The assessment of members' perceptions regarding the extent to which their need for forest products had been met indicated that the poor expressed the most 'unfulfilled needs' in both time periods. Comparing the pre- versus with-ACG periods, poor members expressed having 25 versus 19 percent of their forest needs 'unfulfilled', while medium expressed 10 versus 7 percent, and wealthy expressed 2 versus less than 1 percent respectively.

Wealthier members expressed the least 'unfulfilled needs' largely due to their private resources and, in several cases, alternative fuel sources. The data indicate that all wealth groups perceived that their needs had been somewhat better met with the shift to ACG, with the poor making the slightly larger shift.

5.5 DISCUSSION

5.5.1 Livelihoods and differentiated poverty

By virtue of all CFUG members being financially 'poor' by many standards, community forestry is clearly making some contribution to poverty alleviation (Gilmour et al., 2004). However, in line with other studies (Gilmour et al., 2004; Kanel & Dahal 2008; Sunam & McCarthy 2010), our pre-ACG findings indicate a default practice of CFUGs' not prioritising women and poorest members in terms of forest product access, income generation, micro-credit or employment—despite their particular needs and hardships. This underscores the differentiated nature of communities and of 'the forest-dependent poor' as social categories, including gendered differences. Moreover, it reinforces the need for a nuanced approach to poverty alleviation and forest governance (see Colfer, 2011). The development of secure additional, alternative or enhanced livelihood strategies is especially important for the poorest forest users, including women, because of their relative vulnerability and limited private resources. Marginalised members' access to such strategies is influenced internally by CFUG governance, as well as externally by CFUG capacity to exploit opportunities in the rural economy through ties to, and collaboration with, district level organisations or networks.

The transition towards ACG appears to have contributed directly to the CFUGs responding to differentiated needs and opportunities in a more nuanced and meaningful way. Marginalised members' access to CFUGs improved (through reduced membership fees), as did their CFUG-related subsistence benefits and income. In parallel with Fosu's (2010) national level analysis, the findings suggest that addressing inequality may have a favourable effect on overall growth in CFUGs' contributions to livelihoods. The fact that some needs remain unmet leaves open the question of whether these will be met with more time or if additional policy, practice or support strategies are needed.

5.5.2 Transforming processes, structures and norms

Allison et al. (2004) underscore the importance of transforming processes and structures, flagging the former as where "the most strategic impact on poverty reduction" (p. 178) takes place. This leads us to the question of whether a transition towards ACG contributed to

shifts in processes and structures—and underlying power issues—that support poverty reduction, and if so, how?

Similar to Dev et al.'s (2003) study, our data suggest that *status quo* CFUG processes and arrangements were embedded in relationships and patterns that reinforce top-down decision making, and which are thus relatively unresponsive to the most marginalised. Our findings flag the significance of four inter-related institutional innovations that contributed to shifting power relations, especially in terms of influence on group decisions: nested decision-making; facilitated social learning processes; networking; and equity as a focus for (self)assessment and as a distributional principle. The shifts were not rapid, smooth or uniform, nor are they an end that has been achieved. We explore each of these here as aspects of ongoing inter-mediation of power in an ever-changing socio-political and ecological landscape.

Our experience is that nested decision-making arrangements positively influenced the engagement of the poor and women (through *tole-level* and action groups) and the power of *tole* members to influence and negotiate CFUG decisions. As explained by one member, "*tole* representatives can raise the voices for the respective *tole* users, especially of the poor and marginalised households" (male, *Magar* [indigenous] member). This resonates with Dev et al.'s (2003) observation that *tole*-based decision making supports the engagement of previously marginalised members.

In terms of processes, our analysis suggests that social learning-based processes—in combination with nested decision making, an equity focus, and networking—influence poverty alleviation through contributing to a pro-poor and pro-women orientation in priority setting, planning, decision making, and action. It likely does so by means of three drivers: increasing the engagement of women and the poor in CFUG decision making (through *toles* and action groups that engage in critical reflection) (McDougall et al., 2013); increasing the leverage of marginalised members (through more access to information including via selfmonitoring and direct input to governance) (McDougall et al., 2013); and through increasing mutual understanding amongst members through exchange of values, aspirations, perceptions, and information, as in the fuelwood example. While the first two contributed to surfacing tensions as marginalised members became more vocal, together these three drivers created sufficient momentum to offset the long-standing conservation-orientation of the CFUGs. Learning-based approaches to forest governance may also contribute to poverty alleviation through their potential to strengthen management and income generation decision making (e.g., Bamdibhir CFUG bamboo income generation activities). While van den Ban (2002) explores this proposition in terms of knowledge and

poverty alleviation amongst small farmers, the inter-connection is relatively little documented in forest management[16]. We suggest it as an area for further investigation.

Our research also highlights the significance of networking between local groups and external actors at a range of scales. While the various connections were of practical importance to poverty alleviation initiatives, they were also significant in terms of prompting CFUG reflection about equity-related assumptions and practices, and thereby possibly contributing pressure and (symbolic) incentives for CFUG leaders to change. Baral and Heinen (2006) observe the significance of non-governmental and civil society organisations in forest conservation in times of conflict; we extend this observation to networks/networking, which seem to have contributed to the robustness of the CFUGs during the nation-wide conflict. Additionally, the permeation of the Maoist and civil movement's discourse regarding power and governance into rural communities seems to have contributed to opening space for change in rigid local social hierarchies, including through increasing consciousness of rights.

Finally, the routinisation of an equity focus in the self-monitoring and other reflection appeared to allow persons and groups to be more effectively held to account in both formal and informal ways. The explicitness of the principle in governance appeared to help drive the leadership and members towards more habitually seeking and considering information and points of view that otherwise previously tended to be over-looked or dismissed. Moreover, the adoption of equity as a distributional principle did appear to be "crucial to improving livelihoods" (Ojha et al., 2009, 11) in that it created an explicit norm for developing pro-poor rules regarding access to forest benefits. As noted, the Maoist conflict and civil movement—while posing challenges—likely contributed momentum to equity-consciousness.

In-depth exploration of the sustainability of the pro-women, pro-poor shifts in forest governance and associated negotiations of power are outside the scope of this article. However, we note that sustainability is likely influenced by CFUGs being actively networked (as opposed to external project-dependent), via increased access to training and support for communities' facilitators, well as access to institutional, technical, financial or entrepreneurial collaboration, shared learning and support. More broadly, the multi-dimensional networking relationships likely contribute to sustaining the learning approach and equity focus, so long as these are features emphasised by/in the networks and external agencies.

[16]See Pandit et al. (2008b) regarding learning in a District-level nontimber forest product network.

5.5.3 Re-conceptualising poverty alleviation

Brocklesby and Fisher (2003) critique the predominant normative framing of poverty in terms of combinations of assets because such frameworks "tend to focus on the technical aspects of development…ignoring or rejecting the transformative aspirations, values and principles" (p. 194; see also Kasi, 2011). Our study brings forward the significance of the latter to poor people themselves, who frame poverty and well being in terms that fit their own life-worlds including nonmaterial aspirations such as acceptance and respect.

Brocklesby and Fisher (2003) further flag the risk of assuming an "increasingly simplistic and lineal or monothematic understanding of sustainable livelihoods or social change" (p. 195). We echo that risk, in reference to the temptation in forest governance to approach sustainable livelihoods in a lineal manner as if they are 'outputs' of an equation that emphasises technical and financial 'inputs', but minimises (recognition of) power dynamics as a shaping force. As Allison et al. (2004) note, "[f]ocusing on building up resources or assets alone will not necessarily help poor people use them to widen their livelihood choices or reach their outcomes" (p. 178). Translating to practice, Brocklesby and Fisher (2003)) suggest that "dominant development discourse promotes group mobilisation as the vehicle for change regardless of the social dynamics underpinning group formation in any given context" (p. 190). The use of technical or even pro-poor interventions, such as the inclusion of poor members in user groups, will likely do little to transform livelihoods unless internal power dynamics are addressed, including in terms of the processes and arrangements that shape decision making and mutual understanding, and in terms of poor members' sense of their own rights and abilities. In our sites, while technical, financial and capacity aspects all contributed to generating the benefits recorded, it is unlikely that they were primarily responsible for the observed pro-poor, pro-women transitions. Rather, it seems that it was the direct and persistent attention to issues of power and equity in decision making through facilitated social learning processes, nested arrangements, and networking that catalysed the transitions.

Moreover, it is likely significant that governance issues, including equity and power, were addressed over a multi-year period, as an ongoing process involving challenges, twists, and turns. Hickey and Mohan (2005) conceptualise development as "an underlying process of social change rather than…discrete technocratic interventions" (p. 237). We suggest that poverty alleviation through adaptive collaborative forest governance is best seen as part of a larger process of socio-political transformation. In such a conceptualisation, poverty is multi-faceted, and power and livelihoods can be perceived as intertwined drivers of an ongoing process of transformation.

5.6 CONCLUSIONS

Adaptive collaborative governance of community forests, including pro-active development of relations with external agencies, led to increases in income generation, micro-credit, and employment for the poorest and female CFUG members. Poor women in particular made advances in these areas. Women's and the poor's perception of the degree to which their forest needs were being met also increased—although there continued to be unmet needs. These changes reflect both an 'increase in the CFUG pie' and a 'redistribution of the pie'.

In practical terms, the ways in which adaptive collaborative governance influenced the forest and financial benefits of poor and women were multidimensional and interconnected. Critical elements included the increasing engagement and influence of previously marginalised members, decision making based in social learning processes and nested arrangements, and CFUGs becoming more pro-active in terms of networking and collaboration. The ongoing exploration of and focus on equity in process and outcomes—and hence power—appeared to be a fundamental point.

The research reinforces the need for policy makers and practitioners to recognise and address communities and poverty in nuanced manner. It also suggests that addressing local inequality may contribute to fuelling local income generation overall. Moreover, the research also highlights that social learning-based approaches, such as adaptive collaborative governance, are potentially effective avenues to do so. More fundamentally, the research raises the possibility of re-conceptualising the notion of poverty alleviation, so that it might be perceived as a co-joined core—fundamentally intertwined with power—in an ongoing process of socio-economic transformation.

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CHAPTER 6

Social Capital, Conflict and Adaptive Collaborative Governance: Exploring the Dialectic

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Chapter 6.
Social capital, conflict and adaptive collaborative governance: Exploring the dialectic

Abstract

Previously lineal and centralized natural resource management and development paradigms have shifted towards the recognition of complexity and dynamism of socio-ecological systems, and towards more adaptive, decentralized and collaborative models. And yet, certain messy and surprising dynamics remain under-recognized, including the inherent interplay between conflict, social capital and governance. In this study we consider the dynamic intersections of these three often (seemingly) disparate phenomena. In particular, we consider the changes in social capital and conflict that accompanied a transition by local groups towards adaptive collaborative governance. The findings are drawn from multi-year research into community forestry in Nepal using comparative case studies. The study illustrates the complex, surprising and dialectical relations amongst these three phenomena. Findings include: a demonstration of the pervasive nature of conflict and 'dark side' of social capital; that collaborative efforts changed social capital, rather than simply enhancing it; and, that conflict at varying scales ultimately had some constructive influences.

Key words: governance; equity; community forestry; livelihoods; Nepal; participatory research methodologies

6.1 INTRODUCTION

With the global population projected to reach 9 billion by the middle of this century (Godfray et al., 2010), the intertwined goals of sustainable natural resource management and human development pose challenges worldwide. Researchers and practitioners in natural resource management (NRM) and governance have begun to recognise the complexity and dynamism of the socio-ecological systems involved in these challenges. Resource management and governance has been moving towards more adaptive, decentralised and collaborative models (Jiggins and Röling, 2002; Armitage et al., 2007).

Adaptive collaborative governance, based on social learning and inclusion, is one such approach. Social capital—or the "goodwill that is engendered by the fabric of social relations and that can be mobilized to facilitate action" (Adler & Kwon, 2002, 17) —is significant to adaptive collaborative approaches in that it is posited as enabling the development of collaborative regimes (Plummer & FitzGibbon, 2006), including community-based natural resource management (Pretty 2003; Bodin & Crona, 2008). And yet, there is thus far relatively little literature relating social capital and adaptive collaborative approaches (Plummer & Fitzgibbon, 2007). In this article, we apply social capital as a lens in order to shed light on some of the often overlooked, messy and surprising dynamics and outcomes entwined in socio-ecological systems, in particular, in relation to adaptive collaborative governance. Conflict is one such dynamic. Although the literature on conflict has grown over the past decades, conflict — and related power asymmetries — are neglected in adaptive governance (Voβ & Bornemann, 2011). Similarly, Sanginga et al. (2007) suggest that conflict is relatively little recognised in relation to social capital in NRM. The separation of these phenomena—conflict, social capital and adaptive collaborative governance—creates several limitations and risks for policy and practice. Governance and management, including adaptive approaches, take place in "real-world political contexts that influence their functioning and impair their effectiveness" (Voβ & Bornemann, 2011, p. 2). Lack of cognisance of social capital limits opportunities to build on existing strengths for learning or collaboration, such as networks. Lack of awareness of conflict, including power relations, contributes to the potential for policy or practice to marginalise or exacerbate the marginalisation of more vulnerable subgroups of resource-dependent people (Voβ & Bornemann, 2011).

To address the above we focus on the dynamic intersections of social capital, conflict, and adaptive collaborative governance. In particular, we explore the complex and surprising dialectical relations amongst these phenomena at the local level in the context of community forestry. We do so by considering the changes in social capital and conflict that

took place as 11 local community forest groups in Nepal shifted towards adaptive collaborative governance. Specifically, we explore the following questions: what was the nature of conflict in the sites at the outset of the research? Did conflict and social capital change as the groups shifted to adaptive collaborative governance, and if so, in what ways? And, in what ways did adaptive collaborative governance, conflict and social capital interact and influence one another?

The article's structure is as follows. We begin by exploring the key concept of adaptive collaborative governance, conflict and social capital, then outline the methodology, including research sites and the analytical framework applied in this study. Contextual information, including Nepal's socio-political landscape and hierarchies, community forestry and livelihoods, and the backdrop of the Maoist insurgency and civil movement, are presented in Appendix 6.1 (this chapter). We then present key findings and analysis, progressing through: an overview of conflict in the sites at the outset; the shifts in governance that illustrate an adaptive collaborative approach; related changes in social capital; and, the evolution of the conflict in the sites. Additional supporting examples and insights from the cases are found in Appendix 6.2 (this chapter). The discussion focuses on the multi-directional feedback processes and influences of adaptive collaborative governance, conflict, and social capital on each other, including the surprises that emerged. We conclude with a synthesis of the surprises and dialectical interplay and highlight a number of lessons for policy and practice in NRM, governance and sustainable development.

6.2 KEY CONCEPTS

Here we first introduce the concept of adaptive collaborative governance and highlight its areas of implication for governance, then briefly introduce conflict in community-based natural resource management. We then explore the concept of social capital. Given the wide and varying usages of social capital as a concept, we take the time here to elucidate the aspects most relevant to its application as an analytical lens in this study.

6.2.1 Adaptive collaborative governance

Adaptive collaborative governance has its roots in adaptive co-management (Olsson et al., 2004; Colfer, 2005; Fisher et al., 2007; Armitage et al., 2007), and draws on related fields including social, transformative, and organisational learning (Senge, 1990; Argyis & Schön, 1996; Mezirow, 1997; Leeuwis & Pyburn, 2002), community and participatory development

(Chambers, 1983; Barndt, 1989), and community-based resource management (Leach et al., 1999; Kellert et al., 2000). The concept takes both the environmental and governance contexts—including the perceptions, knowledge, needs, and priorities of actors—to be diverse, complex and dynamic. As such, previously-dominant lineal, topdown, command and control approaches are considered less appropriate to these contexts than learning-oriented, adaptive approaches that involve and connect stakeholders (Lee, 1993; Leeuwis & Pyburn 2002; Berkes et al., 2003).

More specifically, adaptive collaborative governance can be defined as an approach in which groups of actors intentionally use social learning as the basis for decision making (see Leeuwis & Pyburn, 2002), emphasise inclusion and equity in processes and outcomes, and seek to engender effective connections among actors and/or groups of actors (McDougall et al., 2013a; see also Olsson et al., 2006, Plummer et al., 2013). These parameters have implications in terms of the involved governance processes, arrangements, leadership and facilitation. Specifically, they logically suggest that adaptive collaborative governance processes, norms, and arrangements need to be learning-oriented, and engender effective involvement and linkages, and that leadership and facilitation need to be enabling towards those ends. What these implications effectively mean in practice, however, needs further exploration and elucidation in the literature (Plummer et al., 2013; Ojha et al., 2013).

6.2.2 Conflict

Conflict over exhaustible resources is inherent in community-based natural resource situations (Cox et al., 2010; Gruber, 2010), such as community forestry. Such conflict is recognised to lead to outcomes such as reduction in efficiency of resource management regimes, the possible collapse of initiatives, or even, in extreme cases, physical violence (Warner, 2000). Yasmi et al. (2006) note that the literature examining why conflict arises commonly point to stakeholders' "differences or incompatibilities in interests, values, power, perception and goals" (p. 538). They further flag Glasl's (1999) observation that differences may be considered the basis for conflict, but "conflict only occurs if an actor feels 'impairment' from the behaviour of another actor due to these differences" (Yasmi et al., 2006, p. 539).

The inherence of conflict in such natural resource contexts has suggested the need for the presence of conflict management mechanisms in such regimes (Ostrom, 1990; Cox et al., 2010). In particular, studies underscore the need for such mechanisms to be accessible and low cost (Ostrom, 1990; Cox et al., 2010).

6.2.3 Social capital

Inspired by Adler and Kwon's (2002) work in teasing apart the concept of social capital, here we first consider the 'substance' of social capital as a concept, then its effects, followed by its sources (how it is formed or enhanced).

What is social capital?

The concept of social capital has multiple roots and varying definitions and usages, and has been applied to a range of social issues in a number of fields, including to participatory and rural development (Uphoff, 2000; Uphoff & Wijayaratna, 2000) and to problems of collective action (Ostrom & Ahn, 2008). As introduced above, the concept of social capital can be understood—in broad terms—to refer to "the goodwill that is engendered by the fabric of social relations and that can be mobilised to facilitate action" (Adler & Kwon, 2002, p. 17). The concept draws attention to the value of social ties and bonds (Pretty & Ward, 2001) through its recurring themes, which include norms, rules, trust and networks (Putnam, 1993; Pretty & Smith, 2004; Ostrom & Ahn, 2008). Given its wide usage and evolving nature, the concept has multiple points of possible divergence and contradiction, and these influence its application and use as an analytical lens. Taking the above broad definition as a starting point, we consider the following three conceptual nuances for the purpose of this study.

First, while some conceptualisations of social capital focus on it as a resource that may be embodied in or held by groups, others expand to include social capital as a resource held by individuals. For example, Putnam's widely known framing of social capital in terms of "the features of social organisation, such as trust, norms, and networks that can improve that efficiency of society by facilitating coordinated actions" (Putnam, 1993, p. 167) implies the former. For the purpose of this study, we embrace Adler and Kwon's (2002) more encompassing framing of the concept as a resource "available to individuals or groups" (2002, p. 23).

A second nuance relates to the inter-related notions of scale and boundaries. Social capital can be explored and understood at a range of scales from micro through to macro-scales (Lyon, 2000). Moreover, the focus can be within a group or internal ('bonding' social capital), or it can be on horizontal or vertical connections of an actor or groups with actors or groups external to them ('bridging' and 'linking' social capital, respectively) (see Pretty & Smith 2004; Patulny & Svendsen, 2007). In this study we follow Adler and Kwon (2002) in noting that the "distinction between the internal and external views is…a matter of perspective and unit of analysis….Moreover the views are not mutually exclusive" (p. 21). As such, in this study we take a 'nested' approach, considering groups (community forestry

user groups), and subgroups within these, as well as linkages to actors outside of both of these.

Finally, a third—and related—nuance is the analytical focus. We follow Adler and Kwon (2002) in addressing both structural aspects (such as groups and networks) as well as content-related aspects (such as norms, rules, and shared understanding). Plummer and Fitzgibbon (2007) similarly recognise 'objective' or 'structural' and 'subjective' or 'experiential' aspects, while Uphoff (2000) and Krishna (2007) frame them in terms of 'structural' and 'cognitive' aspects.

Effects of social capital

As expressed by Coleman (1988, p. S98) "social capital is defined by its function". Social capital facilitates actions and is productive, "making possible the achievement of certain ends that in its absence would not be possible" (Coleman, 1988, p. S98). This is framed in different ways, including social capital as facilitating "coordination and cooperation for mutual benefit" (Putnam 1998, p. 236), enhancing actors' "ability to solve collective-action problems" (Ostrom & Ahn, 2008, p. 20), or increasing "the amount (or probability) of mutually beneficial cooperative behaviour" (Uphoff, 2000, p. 216).

Despite these positive effects, there are some justified caveats regarding social capital. Ostrom (1999) and Ballet et al. (2007) have noted that although the concept is framed largely in positive terms, it also has a "dark side" (Ostrom, 1999, p. 176). For instance, Bolton (2005) notes that "tight bonds and group loyalties may accentuate negative features of the groups—antisocial behaviour, insularity, exclusionary practices, inhibition of initiative" (p. 24). Such bonds may limit innovation (Ballet et al., 2007). In this study, we observe and discuss both potential positive and negative effects.

Sources and formation

Despite its popularity as a concept, more needs to be done to elucidate the formation and sources of social capital (Adler & Kwon, 2002; Krishna, 2007). In line with its overall conceptual complexities, social capital formulation reflects a chicken-and-egg dilemma (Krishna, 2007; Plummer & Fitzgibbon, 2007), which we take to suggest the need for a nonlinear approach to its understanding.

In line with the above conceptual nuances, we follow Adler and Kwon (2002) in considering the potential role of both structural and content aspects of relations in creating social capital. Networks of social ties, for example, generate opportunities for social capital transactions, although these ties may differ in terms of frequency, intensity and other factors (Adler & Kwon, 2002). Such social linkages give actors the opportunity to leverage

others' resources (including information) and create opportunities to act together (Coleman, 1988; Adler & Kwon, 2002). Content aspects, such as norms, rules and trust, may play a motivational role in developing social capital (Adler & Kwon, 2002). Not all rules and shared norms however are likely to contribute to social capital—a point which is implied in Putnam's emphasis on norms whose content contributes directly to trust (Adler & Kwon, 2002; Ostrom & Ahn, 2008).

Krishna (2007) usefully grounds the question of purposive social capital formulation in the community development context. In doing so, he assesses the influence of factors both within and outside of the groups of interest. Our study similarly reflects a consideration of both internal and external influences, as it explores how social capital—and conflict—change in and through multi-directional interaction with each other and with adaptive collaborative governance.

6.3 METHODOLOGY

6.3.1 Research design and analysis

The study reported here is based on comparison across multiple in-depth, multi-year case studies (Yin 2009). Four case studies ('long-term sites') were developed in the first phase (1999 – 2002); an additional seven ('short-term sites') were added in the second phase (2004 – 2007). In 2008 the research team conducted a final field visit to each site (n=11). All of the case studies were community forest user groups (CFUGs) (see Sites).

The research design created the opportunity to investigate both the catalysation and development of adaptive collaborative governance and its outcomes at the local level, i.e., with CFUGs. The study thus combined participatory action research (PAR) with qualitative and quantitative social science assessment. PAR is an established participant-centered methodology that both generates knowledge and catalyses social change (Lilja & Ashby, 2000; Fisher et al., 2007), and seeks to empower research subjects as partners of the knowledge generation processes (Fals-Borda & Rahman, 1991). The PAR enabled the catalysation and development of the adaptive collaborative innovations in governance (processes, arrangements, facilitation and leadership), while the social science assessments generated baseline and longitudinal data.

In each of the two study phases, the research began at each site with background studies conducted by the researchers, then transitioned to PAR, had interim assessments at the midpoint, and concluded with a round of final assessments. The PAR involved each CFUG—together with researchers and facilitators (see below)—developing and applying

innovations in governance (processes, arrangements, leadership and facilitation) as a means of better achieving its goals. In particular, the innovations were intended to make governance more inclusive and learning-based, i.e., to support the CFUGs in developing and applying an adaptive and collaborative approach to governance. The PAR-based innovations were sparked initially through discussion amongst CFUG leadership, members, researchers and facilitators and through visioning and selfmonitoring workshops in each site. Cycles of visioning and selfmonitoring, and resulting adjustments of CFUG strategies, plans, activities, rules or ways of operating, then continued to be carried out by the CFUGs in conjunction with and supported by facilitators (see below), with periodic input by researchers during site visits. The innovation process was emergent in nature, with the CFUGs' ongoing learning shaping the innovations, strategies and outcomes that developed. The PAR-based innovations in processes, arrangements, leadership and facilitation, including selfmonitoring and nested decision making, are outlined in the 'Changes in Governance' section of the Results portion of this article; the outcomes relating to conflict and social capital are outlined in the Changes in Conflict and Changes in Social Capital sections respectively.

The PAR was facilitated in the first phase by researchers (for 13-16 months), accompanied by effort to handover to local facilitators by the end of Phase I. Throughout Phase II, facilitation was provided (for approximately 19 months) by teams of 2-4 local (CFUG) and meso actors in each site, drawn from community forestry networks, nongovernmental organisations, bilateral agencies or district forest offices. The facilitators were women and men from a range of socio-economic backgrounds who were selected according to suggestions of community and district actors, based on agreed criteria, such as commitment to equity, ability to commit the time required, and potential to be accepted in the role by diverse local actors. The facilitators were trained and backstopped by the researchers; the teams of facilitators also periodically networked with each other through reflection workshops and study tours.

The background, interim, and final assessments involved gathering sets of comparable socio-economic and institutional information to enable before-and-after analysis and analysis across sites. For the purpose of this study, as well as changes in governance, the information gathered centered on changes over time in external forces (conditions or influences), internal and external relations (including conflict), as well as norms, decisions, rules and practice (including distributional equity). Socioeconomic and institutional data were collected through participant observation of formal and informal processes and occurrences, participatory wealth ranking (using each site's own criteria), focus group discussions, participatory mapping (Colfer et al., 1999a, 1999b), document reviews, and ongoing field recording, as well as in some sites, Social Systems Analysis tools

(http://www.sas2.net/tools/). Document reviews were of CFUG materials (committee records, assembly meeting minutes, Operational Plans, selfmonitoring records of CFUGs) to source and validate data such as formal group decisions and plans, activities, selfmonitoring assessments, and subgroup formation. Data regarding perceptions of distributional equity were gathered through participatory pebble distribution exercises at each site (based on Colfer et al., 1999a). Participatory methods, including pebble distribution, were carried out separately in terms of gender, wealth, and/or interest groups as appropriate, such as women and men, *Dalits*[17] and non-*Dalits,* poor and non-poor members, and executive and non-executive members. Data were triangulated through the use of multiple sources as well as multiple methods, including through cross-checking with CFUG members and through field observations.

The central analytic approach was the iterative examination of the observed and documented changes and influences in order to seek 'plausible causal connections' between them (Fisher et al., 2007). A key feature was the iteration between in-depth field experience and analysis. The research team identified and repeatedly assessed emergent themes and patterns in the material across cases (Patton, 2003; Yin, 2009). This included searching for exceptions (negative or deviant cases) and 'surprises' in the material (Patton, 2003). Data were compiled and analysed across sites by gender and by locally-identified wealth groups (rich, medium, poor), as well as by other relevant groupings as appropriate, such as executive committee and non-executive committee members. Quantitative data were analysed using descriptive statistics through comparison of 'pre-' and 'with' periods data using Excel (Microsoft 2007). Following Yin (2009), the combination of in-depth case experience with comparison across cases contributes to the robustness of the study.

6.3.2 Sites

Nepal was selected for the research because of its well-established community forestry programme, which assigns formal management and use rights to designated community forestry user groups (CFUGs). For the purposes of rigour through regional diversity of the comparative cases, and based on the recommendations of national stakeholders, the sites were based in the districts of Kaski, Sankhuwasabha, Palpa, Nawalparasi, Lalitpur, Dhankuta, and Morang. The districts and thus sites spread from east to mid-west and from the southern plains (Terai) to the mid-Hills area. The far-western region was avoided for safety reasons relating to the Maoist insurgency (see Appendix6. 1). During the course of the research, the conflict extended across the country and influenced all sites, with the

[17] *Dalit* is a generic term used for the so-called 'lowest' caste category within the Hindu caste system, a category which was historically also termed the 'untouchables'. In Nepal, *Dalits* are the most marginalised groups in terms of access to public decision-making structures, resources, and incidence of socio-cultural discrimination.

long-term sites being the most significantly affected.

Selection of the sites (CFUGs) involved consultation with district-level stakeholders and field assessments of potential sites. The sites were selected for being average (i.e., 'normal', not already highly innovative or successful) for their districts, based on the criteria of: governance (processes, arrangements and leadership), activeness (regularity of meetings and activities), internal and external relationships, occurrences of conflicts (within the group and with external actors), and success in implementing activities and achieving goals.

While fitting the above criteria, together the sites offered variation across groups in terms of group size, and within groups in terms of socio-economic diversity. The number of households per CFUG ranged from 111 to 751 (with a median value of 156). All sites were socially heterogeneous, comprising from 5 to 12 ethnic and/or caste groups. Based on each CFUG's own criteria, participatory wealth ranking exercises indicated that across all research sites approximately 11% of member households were considered to fall in the "rich" category, 52% in the "medium" category, and 37% in the "poor" category.

6.3.3 Analytical framework

In framing changes in governance, we focus on processes, arrangements, leadership and facilitation. In particular, within these we consider aspects flagged as relevant to adaptive collaborative governance ('Key Concepts', above), namely learning-orientation, involvement (inclusiveness) and linkages, and enabling roles.

In framing of changes in social capital we draw on Adler and Kwon's (2002) working definition, which highlights that "[social capital's] source lies in the structure and content of the actor's social relations. Its effects flow from the information, influence and solidarity it makes available to the actor" (p. 23). Drawing also on Pretty and Ward (2001) and Nath et al. (2010), we thus focus on three aspects, each represented by a set of proxies: structural (groups, networks); content (group orientation, rules and norms); and, effects (information sharing, equity and inclusion, collaborative activities and joint actions). For the nonstructural aspects, proxies are utilised because of the challenges inherent in measuring social capital (Plummer & FitzGibbon, 2006). The specific proxies are selected to be context-appropriate, which is important for relevance (Krishna, 2007). Thus in addressing content, we focus on group orientation (conservation versus subsistence and/or income) and pro-poor rules and norms because they reflect norms and rules relating to cooperation for mutual benefit and trust, and because they address to issues of forest benefits and equity, which are central challenges in the Nepal community forestry context (Kanel & Dahal, 2008). Similarly, in measuring changes in terms of effects, as well as considering 'information sharing' (as per Adler and Kwon's (2002) definition, we consider changes in

perceptions of distributional equity and inclusion, collaborative activities and joint actions. As indicators these are highly contextually relevant, as well as reflecting the beneficial end goal aspects of social capital as per Coleman (1988), Putnam (1998), and Uphoff (2000). Moreover, within the measurement of perceptions of distributional equity, changes in the degree to which group member perceptions are shared, corresponds to 'shared understanding' as an indicator of social capital (Plummer & Fitzgibbon, 2007).

In presenting conflict, we focus on conflict that arose within the local level, but also touch on meso-related (up to the district level) conflicts, and the influence of national scale conflict (the Maoist insurgency). When we describe observed changes in conflict, we are referring to observed changes in tensions (such as complaints and arguments), as well as to the establishment of alternative strategies, including adjustments and compromises in processes, decisions or distributional outcomes.

6.4 RESULTS

In this section we begin by introducing the status and nature of site conflicts. We then describe the changes in governance in terms of the key shifts and patterns in CFUG governance processes, arrangements, and leadership and facilitation that emerged with the adaptive collaborative approach. Next we present the associated changes in social capital in terms of groups and networks, rules and norms, and social cohesion, followed by the evolution of conflict in relation to the above.

6.4.1 CFUG conflicts at the outset

The early rounds of research revealed that all the CFUGs had some form of conflict at the start of this study, most of which had persisted over many years. Three CFUGs had multiple ongoing conflicts. The issues around which the more explicit intra-CFUG tensions or conflicts revolved are as follows; for clarity, based on our field experiences, we group them into three categories:

i) Power and access to decision making:

- control over/inclusion in the CFUG, including class, caste or gender conflict (3 sites);
- corruption and transparency issues/low trust of members towards the executive committee (2 sites); and
- political party rivalries (1 site).

ii) Rights and resources (distributional equity):

- forest product distribution/benefit sharing (4 sites);
- 'illegal' collection and sale of firewood by *daure* (firewood sellers) (1 site); and
- boundary/encroachment issues (4 sites).

iii) Non-community forestry related conflicts:

- disputes between members about non-community forestry issues (1 site); and
- rivalry between ethnic groups (1 site).

6.4.2 Changes in governance

Several governance-related patterns emerged across the sites that illustrate the shift to adaptive collaborative governance. We present these here in terms of process, arrangements, and leadership and facilitation roles (Table 6.1; see also McDougall et al., 2013b). These shifts were sparked and supported through the PAR (above). This involved being catalysed initially through discussions between CFUG members, facilitators and researchers, subsequently through community-based visioning and selfmonitoring process development workshops at each site, and then supported in an open-ended way through ongoing encouragement and facilitation at each site by facilitators and, periodically, researchers. Contextual and internal feedback influences relating to these changes in governance are presented in an integrative manner in the following sections of this study (see also McDougall et al., 2013b).

Table 6.1. Governance processes, arrangements, and leadership roles: Comparing pre- and with adaptive collaborative approach (n=11)

Processes, arrangements & roles	Prior to adaptive collaborative governance ('Before')		With adaptive collaborative governance ('After')	
	Key characteristics	**Specifics**	**Key characteristics**	**Specifics**
Planning & decision-making processes	Linear or *ad hoc* in nature with little reflection or link to goals	Plans developed from standard area 'blueprints' or from leaders' at-the-time interests.	Planning based in social learning	CFUG goals based on an explicit shared vision.
		Decisions generally taken by chairperson or one or two members.		Planning through CFUG self-monitoring, including tracking equity.
				CFUG processes, including planning by action groups, involved regular reflection and other learning tools (e.g., trial plots, experiments, analysis of risk and uncertainty).
				Process design, active facilitation and encouragement of shared learning to encourage participation of marginalized members and build understanding across subgroups.
				Ongoing two-way communication between executive committee and *toles.*

Institutional arrange-ments (structures)	Hierarchical structure	Executive committee (central decision-making body).	'Nested decisionmakin g' based on linked nodes	*Tole* (hamlet) meetings—the basis for planning and decision making and forum for direct member input.
		General assembly--primarily for informing members and formalising decisions taken by the committee; sometimes also forum for argument regarding decisions.		Executive committees—working routinely with *toles* through joint meeting of *tole* representatives and executive committee.
				General assemblies—the final step in decision making and for additional information sharing.
				Action groups—the hubs of leadership and implementation for each activity (e.g., income-generation group, equitable forest product distribution committee, etc.).
Leadership & facilitation roles	Leadership by executive committee	Decisions taken by executive committee, in particular, by the chairperson.	Shared and distributed leadership	Leadership shared amongst *tole*, executive committee and action group leaders; process leadership by facilitators.
		Top-down and delegated (decisions made on behalf of members).		Oriented towards communication, enabling input and integration of members' views and priorities.

Notes: The 'Before' data are from the pre-adaptive collaborative governance period (1999 in the long-term sites and 2004 in the short term sites); the 'After' data are from the 'with' period (2006/2007 in all sites). CFUG=community forest user group.
Sources: Key informant interviews, observation, review of CFUG meeting records, background study and final assessment reports.

Process

During the PAR the CFUGs adjusted their long-term and annual decision-making processes to become more learning-oriented and inclusive (Table 6.1). Specifically, the CFUGs began to routinise participatory planning based on cycles of shared visioning, selfmonitoring, reflection, and iterative re-design, adjustment and implementation of their plans. The agreed vision for each CFUG was developed initially through a CFUG workshop and revisited semi-annually or annually by each CFUG. All CFUGs used their respective visions as the basis to identify indicators by which they could monitor their own progress. The ongoing cycles of selfmonitoring involved shared, bottom-up assessment by CFUG members (see 'Arrangements' below) of strengths and weaknesses in their own CFUG, with reference to these indicators. This was generally done annually or semi-annually, using a pictorial representation of success (generally five scoring options represented by a 'full' to 'new' moon), and discussion of factors and possible ways to improve. The selfmonitoring covered all aspects of each CFUG's own vision, including aspects relating to governance, internal equity, information sharing, and external relations. To support in selfmonitoring equity, the CFUGs undertook what we refer to as "equity-tracking". This involved the CFUGs using their own participatory wealth ranking and other data to monitor the relative access of members from different wealth groups to CFUG positions, benefits and opportunities. The learning from the selfmonitoring, including governance and equity-related, was applied by each CFUG to adjust its strategies, including rules, activities, decisions regarding distribution or access to opportunities, plans to link to external organisations, or even to the decision-making processes or arrangements themselves.

Arrangements

Decision-making arrangements in the CFUGs shifted from centralised decision-making by executive committees towards nested (i.e., multi-level, multi-node, interconnected) arrangements (Table 6.1). The CFUGs began to use *toles* (hamlets) as the primary nodes for discussion and reflection in recognition of tensions relating to power and access to decision-making, and weaknesses in information flow. *Tole* members began to meet regularly—monthly or as needed—to share information and/or address conflict. Toles also became the starting point for 'bottom up' selfmonitoring processes outlined above, meeting every six months or as decided to undertake the visioning and selfmonitoring processes outlined above, considering indicators to spark reflection on strengths and weaknesses and draft and revise priorities and strategies. A new, routinised linkage between the *toles* and the executive committees was used for negotiating and integrating ideas and priorities from all *toles*. General assemblies became the final phase in a process in which members were involved (via the *tole* discussions), rather than a forum at which they were informed about and asked to endorse—or tried to contest—committee decisions. Volunteer action groups

also emerged as nodes of local decision-making and action, such as women's groups selling forest products or (mixed) groups overseeing equitable forest product distribution or monitoring CFUG loans. These emerged from the revised decision-making processes above, and were connected to the CFUGs through the general assemblies and the committees.

Leadership and facilitation

With the transition to adaptive collaborative governance, leadership roles expanded from a delegative, centralised mode (in which executive committee acted on behalf of others) to a distributed leadership mode (with members at the level of *toles* or action groups providing leadership, as well as facilitators). The facilitators purposively engaged in a pro-inclusion approach to facilitation, in other words, they consciously sought to enable the engagement of previously marginalised members. Specifically, they sought to enable a more socially accessible and non-threatening decision-making space through means such as actively inviting input from and recognising the contributions of the women, the poor and *Dalit* members, and by recognising and strategically addressing disagreements. Moreover, the facilitators (and invited outside actors) frequently offered critical questions regarding equity in the CFUGs as a means of encouraging members to recognise their (previously unacknowledged) assumptions and views, for example about gender, wealth, or caste and entitlements.

The growing pool of trained facilitators and the researchers also encouraged CFUG members to adopt and routinise a "learning approach". As such they encouraged the CFUGs to approach each process and activity as an experiment and an opportunity to learn and improve. They supported learning by coaching the CFUGs to routinely reflect on their own planning and decision-making practices and their consequences. Such routinisation is illustrated by the facilitators and CFUG members' starting to commonly use the phrase '*pharkera herne*' ('looking back') as both a regular expression and a general process guideline in their discussions. Further, an example from one site illustrates the reflective approach to process. This CFUG had tried selfmonitoring (prior to the study) but had abandoned this practice because the members had found it unhelpful. Early in the PAR, the facilitators encouraged the members to analyse and discuss their selfmonitoring experience and outcomes. The group realised that it had approached selfmonitoring as if it were an external competition or posed a risk to the CFUG in terms of possible retribution by the district forest office if they showed weaknesses. They had thus given themselves exaggeratedly positive scores. The members also perceived their procedures to have been rushed and to have had limited participation. They subsequently chose to begin a process of more realistic group self-assessment to identify their (actual) strengths and weaknesses as part of the development of plans.

6.4.3 Changes in social capital

We present the social capital-related findings in 3 subsections: structural (groups, networks); content (CFUG orientation and pro-poor rules and norms); and effects (information sharing, influence and solidarity). In each of these, we present data regarding changes and briefly note observed factors in, and consequences of, these changes.

Structure: Groups and networks

i) Groups

The changes in governance outlined above were coupled with changes in groups (composition, numbers) and networking. Each CFUG continued to have one group—an executive committee—that played a central role in its governance, but with the shift to adaptive collaborative governance the composition of these executive committees changed in terms of the representation of women and poor members. Composition is significant here in that it reflects the growing involvement of a greater diversity of members, including marginalised ones, in the formal decision-making centers of the CFUGs. The representation of women in the executive committees (averaged across all sites) approximately doubled, from 18 to 34 percent between the pre- and with-adaptive collaborative governance periods. Amongst female representatives, poor women made the largest percentage gain, from 31 to 40 percent. In terms of wealth groups, the representation of people on the executive committee considered by their CFUGs to be poor (comprising roughly 37 percent across all CFUGs) increased from 15 to 29 percent.

Over the same period, at each site the number of internal groups increased. Specifically, while some CFUGs formally had *tole* (hamlet) divisions, they were not actively used as forums for information sharing, problem solving or decision-making. With adaptive collaborative governance, all the CFUGs created and/or activated *toles* as nodes of communication and governance. These *tole*-level groups were small and relatively geographically and socially accessible for members, including marginalised ones. They were also directly linked to the executive committees through *tole*-executive meetings. Through these, CFUG members came to have direct access to an effectively connected subgroup within the formal structures of the CFUG. Additionally, with adaptive collaborative governance each CFUG developed multiple action groups to lead its initiatives. As with *toles*, the action groups were connected to other decision-making nodes through routinised meetings, exchanges, and joint decision making (Figure 6.1).

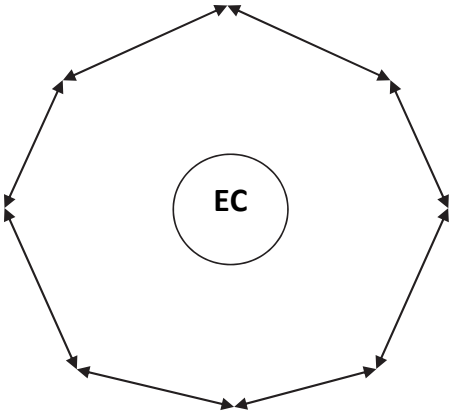

Figure 6.1a Flowchart of internal structural relations (groups) pre-adaptive collaborative governance
Notes: EC=executive committee. The executive committee was the only formal decision-making group in the CFUGs. It communicated largely in a unidirectional manner with members, mainly via the annual general assembly (in some sites the assembly was not held at all).

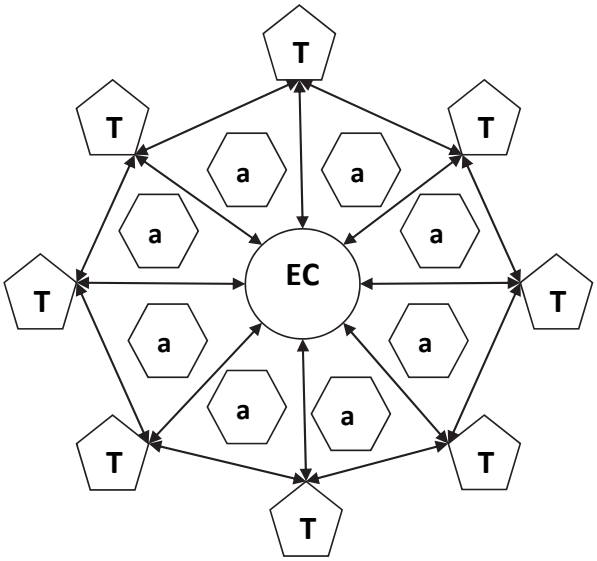

Figure 6.1b Flowchart of internal structural relations (groups) with adaptive collaborative governance
Notes: T=*tole* (hamlet). ag=action group, for example women's savings group, bamboo handicraft production and sales group, forest encroachment monitoring committee, loan monitoring committee. The *toles*, led by *tole* committees and representatives, had direct input to CFUG

annual planning and decisions and direct access to executive committee information through routinized executive committee-*tole* representatives meetings and negotiations (i.e., two-way communication). Action groups emerged mainly from the annual planning process to lead CFUG initiatives and engaged in two-way communication with executive committees and general assemblies, as well as with *toles*, as needed.

ii) Networks

In terms of external linkages, prior to the shift to adaptive collaborative governance, the CFUGs' networking activities were limited. All CFUGs had a formal connection to the district forest office in relation to the required approval of their 5-10 year Operational Plans; several sites had been somewhat involved with a national community forestry network, or with nongovernmental or bilateral development organisations for advocacy, training, or technical and institutional support. In some cases, the CFUG had become part of a meso level network of CFUGs; members reported, however, that there was little meaningful sharing or learning amongst the network.

In the course of the PAR the CFUGs became more aware of the potential of networking (see Appendix 6.2). As PAR progressed, the CFUGs became more proactive in building networks and in collaborating with other actors, both horizontally (with other CFUGs) and vertically (with meso actors). Specifically, once the CFUGs had identified their own needs, they began to take steps to access additional information or resources, or to develop partnerships with external agencies, which they had not done previously. For example, the CFUGs in three sites each formed teams to investigate options for accessing markets, technical information or financial support. These teams strategically visited appropriate organisations to discuss potential partnerships. In another site, the CFUG took the initiative to jointly reflect on a past failed partnership with a nongovernmental organisation, and to jointly re-plan this relationship in order to avoid past mistakes. Across sites, the main forms of networking and collaborating became:

- Increasing collaboration with local (community) institutions;
- CFUG-CFUG sharing;
- New involvement in meso (district or subdistrict) CFUG networks or forums (and, in one case, a multi-CFUG commercial enterprise [non-timber forest product enterprise]); and,
- Pro-active expression of needs for information, resources or collaboration to outside agencies, and more regularly inviting outside actors to participate in or facilitate CFUG processes.

The increase in inter-organisational connectivity and in relations with external agencies is also evidenced by the CFUGs' selfmonitoring, in particular, by the assessment of indicators relating to such external relationships. As outlined above ('Processes'), these selfmonitoring systems were the basis for the CFUGs' learning-oriented governance processes, and the indicators were developed by each CFUG based on their own CFUG vision. The CFUGs created and monitored a total of 23 such indicators relating to external relationships; 20 of these indicators improved and 3 (all at one short-term site) stayed the same over the research period.

We note in addition, in terms of external linkages, that the CFUGs were at some point all exposed to the Maoist insurgency and broader civil movement's pro-equity discourse, through word-of-mouth, various media, or direct interaction with Maoists and exposure to their educational speeches. Also, the Maoist insurgency affected the stability and quality of the CFUGs' external connections and access to services, especially those provided by the government. District forest offices' activities and support were interrupted. For example, in one district that was home to two sites, six of the eight rangepost offices were closed and the local government office ceased to function. The rangepost responsible for one site was burned down. One ranger was assaulted; other forest office staff reportedly did not visit CFUGs in some areas of their district for nearly a decade. In response to the decline in meso services, in two of the sites the facilitators worked with CFUGs to catalyse the development of two active CFUG networks between 2005 and 2006, even in the absence of government-related actors. Despite the absence of active rangepost offices, within these networks many CFUGs still planned and implemented collaborative activities such as silviculture, road construction, and the investment of CFUG funds, as well as continuing to promote learning and sharing among network members.

One key observed consequence of the overall changes in networking, was that greater involvement with meso actors often meant increased CFUG exposure to pro-equity ideas and values, resources and support for pro-poor and pro-women changes. This raised awareness of equity issues and options for change, helped motivate marginalised members to raise their concerns and demands, and likely increased the pressures on dominant actors to be more inclusive. The Maoist insurgency contributed to this pressure in an evident—albeit tragic—way at one site, where the CFUG chairperson was attacked by Maoists and hospitalised. There were also documented changes in some meso actors regarding their attitude towards marginalised members over the research period. For instance, one forest officer said: "It seems that we can conserve the forest through *Daure* [firewood sellers] at the same time giving them opportunity of making a living from it. When we started discussing with them regularly we came to know that they were ready to change their

livelihood strategy if forest destruction was caused by them. When they are included in the CFUG process, they are receiving the same level of benefits as before—or even more—and surprisingly, the forest is growing. We were wrong in the past for blaming *Daure* for destruction of forest" (male, District Forest Office staff person).

Content: CFUG orientation and pro-poor rules and norms

i) CFUG orientation

Prior to adaptive collaborative governance, the CFUGs were oriented mainly toward conservation (Figure 6.2). This orientation reflected the conservation-based interests of the forest offices and elite members, while excluding other management purposes and forms of activity such as livelihood activities that aligned with the priorities of the poorer members. The former chairperson of one site had asserted: "We should stop any kind of business from the forest—not to sell firewood, timber or anything else…". With adaptive collaborative governance, the CFUGs began to accept a wider range of purposes and activities (Figure 6.2), including meeting subsistence needs, and income generation. Interestingly, the CFUGs at the same time became more active in their conservation and protection measures, for example by developing rotating "forest watcher" systems, hiring forest guards, and/or enforcing rules.

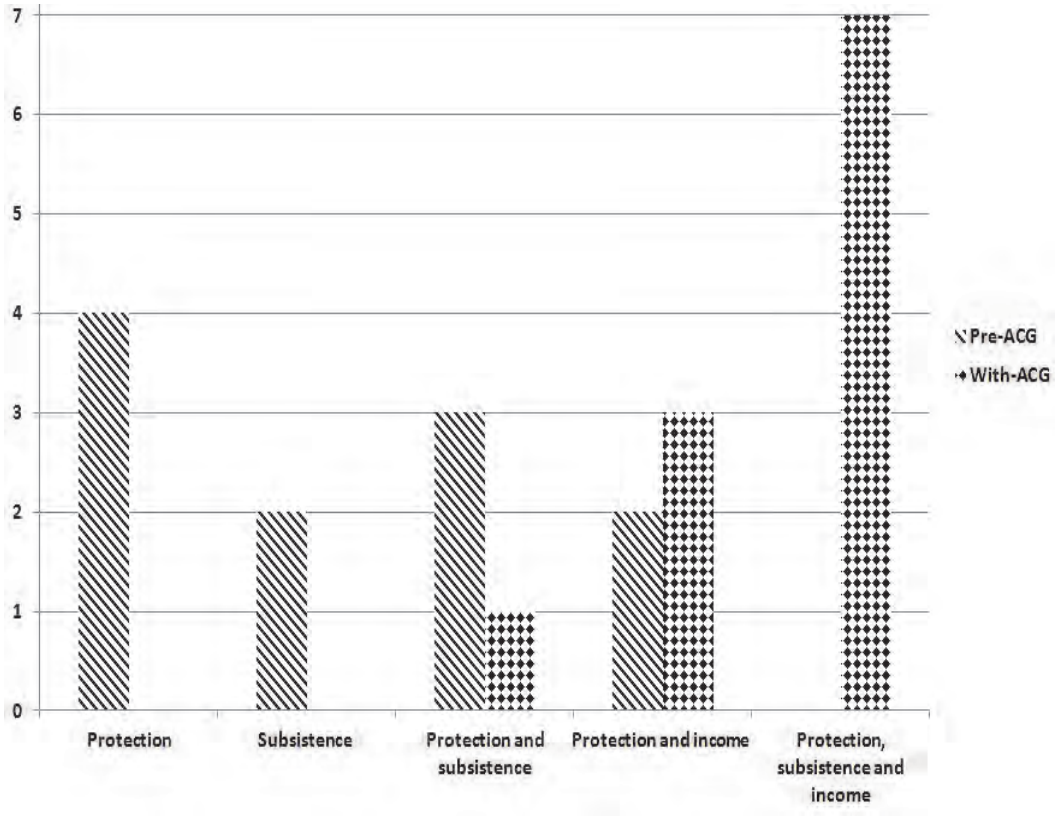

Figure 6.2. Changes in CFUG Orientation: Comparing Pre- and With-Adaptive Collaborative Governance (*n*=11)

Notes: ACG= adaptive collaborative governance. Pre-ACG= 2000 in the long-term sites and 2004 in the short-term sites. With ACG=2006 in all sites. CF=community forest. CFUG=community forest user group. Examples of the emerging mixed orientation include: one site divided its forest blocks (one protected, one for income generation via coffee, and two for subsistence use of fuelwood, timber, and grass for goat-raising by poor households); another site started patrolling community forest areas to control illegal extraction of NTFPs while also beginning income generation through *allo (Girandinia diversifolia)* and *lokta (Daphne)* collection; another continued to prioritize protection because of its young forest (and so reduced timber extraction), while also adding income generation for the poor through fuelwood.

Sources: CFUG record review (Constitution, Operational Plan, annual plans, meeting minutes), key informant Interviews, observation of CFUG meetings and forest management implementation, forest walks.

ii) Pro-poor rules and norms

Prior to adaptive collaborative governance, the CFUGs did not offer reduced fees or subsidies to the poor nor recognise their relative inability to pay when setting the level of membership or product fees. Table 6.2 indicates the substantial changes to rules and norms that were designed to increase accessibility and benefits for the poor.

Table 6.2 Changes in CFUG rules and norms affecting distributional equity (*n*=11)

CFUG policy areas	**Rule changes [number of sites]**
Membership fees and levies	Membership fee reduced for poor members [6], e.g., reduced by 75%, 50% and 25% for the poorest, poor and lower medium members respectively.
	Household levy reduced [3].
Access to & sale of CF products	Timber fee reduced for the poor [5].
	Poorest members (particularly single *Dalit* women) receive 5 cubic feet of timber free annually [1].
	Poor members receive 10 cubic feet of timber free to construct toilet [1].
	Free timber for fire and landslide victims [1].
	30% of timber allocated to the poor at a discount [1].
	Poor members encouraged to begin cattle-raising and are provided CF forest area for fodder production [1].
	Differential rates for fuelwood for different wealth groups [2].
	Poor users allowed to collect and sell fuelwood either legally [4] or informally [1].
	Poor members can collect and sell nontimber forest products [1].
Representation, opportunities and health	Policy to increase women's representation in CF decision-making bodies [5].
	Quota for representation of *Dalits* and/or *toles* in CF decision-making bodies [2].
	Women and poor members are prioritized for, or provided with, CF-related opportunities [5].
	Subsidized rates for health insurance for poor CFUG members [1].
	Priority to the poor in CF-related employment [2].

Notes: Changes between pre- and with adaptive collaborative governance (2004-2007). CF=community forestry.
Sources: CFUG executive committee and general assembly records, key informant interviews.

The changes in fuelwood rules and norms were especially notable for *Daure* members (fuelwood sellers, mainly *Dalit* or more marginalised ethnic groups members). Previously,

these members had routinely broken CFUG rules in order to support their livelihoods, which had exposed them to risks of confiscation of tools, fines and social retribution. Executive and other members regularly accused them of being "forest destroyers", scolded them in public, and drove them away from the general assemblies. As the changes in norms and rules began to gain traction, *Daure* members were no longer in a position of having to act illegally; this had the noticeable effect of reducing conflict at the sites. One *Dalit* woman stated "I am happy that I ....formally got permission from the executive committee to sell out the dry fuelwood for the option of my family livelihoods. Now I don't need to steal the fuelwood from the community forest..." (female CFUG member) .

The above changes in norms and rules were influenced by marginalised members beginning to have direct input into CFUG decision-making (above). Women, the poor and *Dalit* members progressively exercised this influence with greater knowledge and confidence than they previously had done because of the related increase in information flows (above). One *Dalit* member commented: "The local women's and marginalised users' representation has increased in *tole* committees, which has generated enthusiasm in us. The *tole* committees are making decisions in favour of women and the poor to provide CFUG funds and forest resources in an equitable manner. After this type of direct benefits, women's and the poor's participation has been increasing in CFUG activities including decision making" (female CFUG member).

The ongoing adjustment of rules was also influenced by the CFUGs being more pro-active in information finding and generating (such as equity tracking) and joint reflection. For example, at one site members realised during one selfmonitoring exercise that the existing pattern of forest product distribution was not equitable, especially regarding timber. As such they constituted a "forest product distribution monitoring committee" which was responsible for helping each *tole* assess the actual needs of their member households, so that could be used as the basis for distribution. In another example, at a different site a rule dictated that certain *Dalit* members (the *Biswokarma)* had to go to distant areas of the community forest in order to collect their fuelwood, while other members could collect from nearby areas. During the research period, *Biswokarma* members began to express their objections to this in executive meetings and assemblies; researchers observed that over time other members also started to express that this was socially biased and unjust. As a result, the rule was changed and *Biswokarma* members gained the same access rights as other members. This learning approach appeared to be supported by the increasing involvement with outside actors. As noted earlier, as well as bringing in outside information and insights, these actors sometimes offered discussion-provoking questioning of CFUG practices and their underlying assumptions and attitudes. Members were also increasingly

exposed to the questioning of prior assumptions about equity and rights through interactions with or exposure to Maoists (through 'educational speeches', dialog, posters, radio) or to the broader civil discourse that emerged.

Finally, in terms of consequences, the changes in rules and norms and the underlying changes in governance contributed to members' sense of ownership, which in turn positively influenced the implementation of, and compliance with, forest management strategies and rules. Table 6.3 illustrates this with reference to one CFUG's thinning and pruning operations. Compliance is significant both in terms of the degree to which forest management rules are followed, and in terms of a larger discussion of social capital and conflict because noncompliance can be a form of passive resistance. These positive trends in forest management and compliance across all sites are indicated in the CFUG's selfmonitoring, as is the related CFUG perception of improvements in community forest condition (Appendix 6.2).

Table 6.3 Changes in working approach and ownership: Thinning and pruning operation pre- and with-adaptive collaborative approach at one site (2004 & 2007 compared)

Aspects of operation governance & outcomes	Pre-adaptive collaborative approach	With adaptive collaborative approach
Discussions	Executive committee decided; asked *toles* to participate in the operation	Discussed and decided in the meeting of *tole* leaders, who later discussed in the respective *toles*
Monitoring and supervising	Executive committee members	In addition to the executive committee members, paid members and *tole* leaders also monitor
Making and following decisions	Executive committee decided; users did not follow the directives	Since decided together (with or without the executive committee), users follow the decision
Sense of ownership of members	Users felt that they were doing it for the executive committee	They owned it and sensed that they were doing it for themselves

Source: Notebook record of local facilitator.

Effects: Information sharing, distributional equity and inclusion, collaborative activities and joint actions

i) Information sharing

The information sharing at the research sites changed with the routinisation of active multi-level discussions and decision-making nodes (above), and the overall change in the CFUGs' emphases on more participatory, communicative and accountable governance. This change is evidenced by the CFUGs' selfmonitoring, in particular by the CFUGs' information-related indicators. The indicators—developed by each CFUG based on their own visions (see 'Processes', above)—included members' awareness of CFUG decisions and financial information, whether *toles* were directly informed of assembly and executive decisions, members' awareness of CFUG rights, roles, rules and responsibilities, and whether members shared the knowledge and skills they gained from training sessions with other members. Of the total of 59 such information-related selfmonitoring indicators developed and self-assessed by the respective CFUGs, 53 improved, 6 remained unchanged (all at short term sites), and none deteriorated over the research period.

Information sharing did not relate solely to 'hard' information, such as about rules or technical forestry, but also to information regarding the needs, values and perspectives of diverse subgroups. This included members' reflections on relative well-being and equity. Repetition of learning-oriented and inclusive information sharing practices—such as brainstorming about internal diversity and the positions of subgroups, wealth ranking and 'equity-tracking', critical questioning of practices—appeared to contribute to building mutual understanding and to an increase in regard for others' perspectives. As one executive committee member remarked "We never realised the say of women and the poor in the past, but adaptive collaborative management[18] opened my eyes that every user knows something" (male executive committee member).

ii) Distributional equity and inclusion

Members' perception of distributional equity is relevant here because this was a major and divisive issue that relates centrally to the degree of trust and cohesion in the CFUGs. The increased focus on equity, combined with the shifts in decision-making arrangements, processes, facilitation and leadership, networking and the external (Maoist and civil) influences described above led to shifts in distribution of forest products over the course of the research (see McDougall et al., 2013a), and thus shifts in members perception of distributional equity. Pebble distribution exercises conducted at all sites at the conclusion of the research indicated that marginalised CFUG members perceived that benefit sharing had become more equitable with the transition to an adaptive collaborative approach (Figure 6.3). The scores, however, all remain in the mid-range, indicating scope for further improvement. Not all distribution issues are yet resolved to marginalised members' satisfaction. In 2 of the 11 CFUGs, for example, marginalised users expressed some remaining dissatisfaction with the degree of distributional equity regarding timber in their CFUGs at the end of the project period.

[18] During the field research, researchers and participants used the term 'adaptive collaborative management' (ACM) rather than 'adaptive collaborative governance', this being the overall research program's terminology.

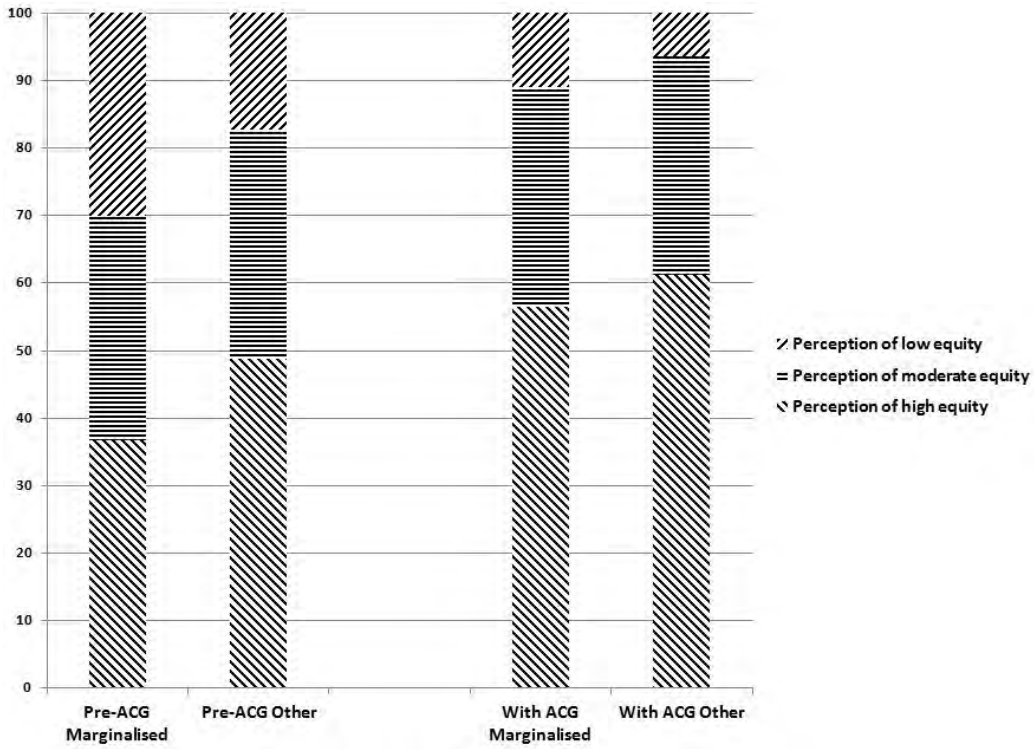

Figure 6.3 Perception of distributional equity: comparing marginalized and non-marginalized members in the pre- and with-adaptive collaborative governance periods (n=11)

Notes: Perception of distributional equity here refers to perceptions of equity regarding access to key forest products (timber, nontimber forest products, fodder, fuelwood), CFUG loans and income generation activities, and trainings. Pre-ACG=prior to adaptive collaborative governance; with ACG=with adaptive collaborative governance, i.e., by the time of the final assessments. Marginalized members=poor, *Dalit*, and female members (all non-executive committee). Non-marginalized members=rich and medium wealth group, male, non*Dalit* members and executive committee members. A comparison of marginalized members perceptions from the pre-ACG and with ACG periods (the 1st and the 3rd columns) indicates an increase in perception of equity amongst marginalized members. Comparison of both groups of members across these periods (the 1st and 2nd columns compared to the 3rd and 4th columns) illustrates a decrease in the gap between perceptions of marginalized and nonmarginalized members.

Source: Pebble distribution exercises, 2006.

Figure 6.3 also sheds light on this issue from the perspective of the 'distance' (difference) between perceptions of marginalised and non-marginalised members. Figure 6.3 illustrates that the differences between the perceptions of marginalised and nonmarginalised members on this issue decreased with the transition to adaptive collaborative governance—in other words, their perceptions regarding a controversial issue became closer and more similar.

There were also documented increases in the CFUG members' sense of inclusion as they became more involved in decision making, received more respect from other members and received more benefits. For example, *Daure* members at one site—who at the start of the project were treated by others as non-legitimate rights holders, including being regularly scolded—became 'proud members' to whom others proffered acknowledgement of their rights. Female members at another, began to increasingly voice their views and seek expanded roles in governance, and began to express a sense of ownership in the CFUG processes and decisions. A female *tole* representative from a different CFUG noted "In the past our voice was not considered, but nowadays our sayings are counted and we are asked as well" (female CFUG member/*tole* representative).

iii) Collaborative activities

Explicit and inclusive visioning and routinised self-monitoring significantly expanded the number of action plans that the CFUGs created and implemented, compared with the pre-adaptive collaborative governance period (Figure 6.4). While some of the increased activities were relatively typical (such as thinning and pruning, fire protection, protecting trees from illegal harvest), others were surprisingly ambitious (such as membership in a networked non-timber forest product enterprise, initiation of a *Dalit*-led sawmill, or formation of action groups such as a loan monitoring committee). The number of livelihood-oriented (income generation) activities increased from 6 to 31 activities across all sites, including animal raising and non-timber forest products. The number of such activities that were pro-poor and/or pro-women oriented also increased, from 2 to 20 across all sites (see McDougall et al., 2013a). One *Dalit* woman from the poor wealth category stated, the adaptive collaborative governance process "has increased the representation of women in decision-making bodies, the participation is increasing for collective [activities] and access to resources is also increasing—that's why women are ready to continue the process in collaborating with men even in the future" (female CFUG member). Conversely, some plans, especially those related to income generation, were not successfully implemented if the external connections, leadership and/or follow-up were lacking or ineffective. Some activities were delayed or not implemented because of security problems.

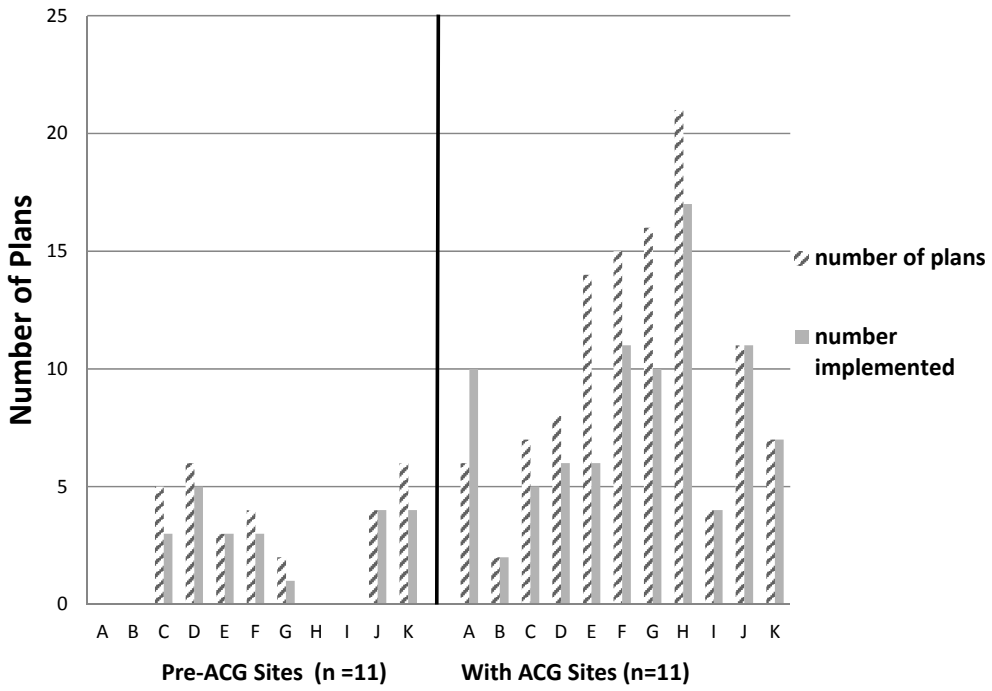

Figure 6.4. Action plans and implementation: comparing pre- and with-adaptive collaborative governance (n=11)

Notes: ACG=adaptive collaborative governance. Pre-ACG=2000 in the long-term sites (n=4); 2004 in the short-term sites (n=7). With-ACG=2006 in all sites (n=11).

In the pre-ACG period, the most common action plans included some forest protection, plantation, or silvicultural activities and community development such as trail building. In three of the sites with no formal CFUG-agreed action plans in that period, the executive committees did undertake some forest protection or silviculture. In the with ACG period, action plans expanded to additionally include more subsistence and income generation (such as animal-raising or non-timber forest products development), capacity building, and additional forest protection or conservation measures, including fireline construction. In this period, one site had 6 plans but 10 plans implemented because—in addition to these 6 plans—the CFUG implemented 4 additional, previously unimplemented, plans from the prior year.

Sources: CFUG Annual Plan, executive committee and general assembly records, key informants, meeting and field observation.

iv) Joint actions

There was an increase in joint actions as adaptive collaborative governance took hold, in particular in terms of marginalised members' claiming their rights. For example, members of a *Dalit tole* at one site identified their interests through *tole* reflection, organised and struggled for several years to be recognised and ultimately successfully backed by their CFUG and outside actors in their hopes of starting a sawmill. At another site, a group of women led by a *Dalit* woman successfully organised to remove the chairperson of the CFUG because he had been using the CFUG cooperative funds for his own salary without authority. At a different site, during PAR women successfully organised to petition the executive committee to form a separate subcommittee to voice women's interests.

Additionally, during the research period there were instances of CFUG members engaging in joint actions *viz-a-viz* external actors, to an extent and in a way that appeared to be unprecedented in this context. Examples are presented in Appendix 6.2, including members at one site successfully rallying against the District Forest Officer to retain their CF rights, and at another site collectively deciding against outside commercialisation of their community water.

6.4.4 Evolution of CFUG conflicts

Increased engagement in decision making, related development of understanding between groups, and changes in norms and rules contributed to decreased conflict, for example, between *Daure* and other members/executive committees over firewood. The changes in power relations with which these were coupled reflected 'pulls' or incentives to accommodate multiple interests (such as committee members valuing decreases in internal conflict and increases in respect of external actors), as well as 'pushes' (such as increasing demands of marginalised members and intangible pressure emanating from the presence of outside actors, both forest-related and Maoists).

However, the shift to adaptive collaborative governance also contributed to some existing conflicts flaring up and some hitherto latent or hidden tensions surfacing. Of the 12 conflicts identified at the outset (Table 6.4), 3 flared up in the early stages of the PAR, before eventually improving. Four additional tensions or conflicts surfaced during the PAR, which appeared to be latent issues brought to a 'boil' as they were discussed more openly. At one site, for example, as poor users became more conscious of their rights and equity issues, especially through facilitated *tole*-level discussions, they began to develop a greater stake in the CFUG. A delegation of poor users went to the executive committee to demand more community forest rights and benefits for poor users, which initially led to an open clash. The conflict dissipated, however, after CFUG leaders began to respond to the needs of the

poor by, for example, organising free CFUG membership and reduced prices for timber for the poor. In another example, at a different site the growing empowerment of female CFUG members led to some conflicts. For example, a subgroup of women asked to collaborate with the executive committee in leading the construction of a culvert in a road—an arrangement that was not taken comfortably by a male CFUG member who held power through their affiliation with a strong political party. This man angrily expressed, "it is because of *sikaimukhi* [adaptive collaborative approach] these women dared to challenge us". He resisted the women's involvement, but the women challenged him. This conflict was resolved through the engagement of the CFUG leadership and the leadership of other political parties. The women held their ground and successfully co-led the initiative.

Table 6.4 Main Intra-CFUG conflicts: Issues, actors, timing and evolution (*n*=11)

Conflicts (n=16)	Key issue(s) (and actors)	Emergence of conflict	Direction of change during PAR	Key changes in management of issue with ACG
1.	Power conflict: domination of EC (poor and women versus wealthy and male members)	Multiple years pre-PAR	↑ then ↓	Reflection processes on relations and equity; distribution of leadership through *tole* committees; creation of EC positions for *Dalit* and women.
2.	Distributional equity: forest products (especially poor *versus* elite/EC)	Multiple years pre-PAR	↑ then ↓	Agreement that priority given to poor in distributing forest benefits and opportunities; use of equity tracking tool.
3.	CFUG membership, nonparticipation and domination (members versus EC; *Tamang*, *Magar* and *Rai* indigenous groups versus *Brahmin*/*Chhetri*)	Multiple years pre-PAR	↓	Involvement of members through *tole* discussions and collaborative work; facilitated negotiation (and subsequent re-involvement of indigenous members in CF activities and leadership).
4.	Boundary/CF land encroachment (individual members versus EC)	Multiple years pre-PAR	↓	Shift from EC control to active role of 'forestland encroachment monitoring committee' and rotational forest patrolling system.
5.	Inequitable distribution of timber (medium and poor wealth class members versus EC)	Multiple years pre-PAR	↓	Shift from EC control to active role of 'forest product distribution committee' working with *toles* and committee.

6.	Governance/power: non-transparent accounting system (EC versus members)	Multiyear pre-PAR	↓	Initial reflection processes sparked replacement of all EC members; establishment of more transparent financial system.
7.	Selling of fuelwood (fuelwood sellers versus nonfuelwood sellers and EC)	Multiyear pre-PAR (intense since CFUG inception)	↓ (and (↑) regarding others' new demands)[a]	Adjustment in processes that led to changes in rules and livelihood options: *tole* level discussions, reflections about equity, discussions with meso actors, 'legalisation' of fuelwood sale for poor.
8.	Power and governance: corruption/misuse of power and illegal cutting and sale of timber by EC (EC versus members)	Pre-PAR: Severe for four years prior	↓ (with new EC)	Change in EC selection process to *tole*-based one; increasing member-EC and CFUG-meso forum communication; strengthened accountability and transparency; (stopped illegal harvest and sale).
9.	Governance: distrust/noncooperation (EC versus members, wealthy versus poor)	Multiple years pre-PAR	↓	Development of common vision, decentralization of EC roles to thematic groups and *toles*, *tole*–EC communication mechanisms established, began EC documentation processes.
10.	Settlements and resource distribution between *toles* (*Rai* versus *Newar* leaders and *toles*)	Multiple years pre-PAR	---	Not directly addressed: EC considered it an inter*tole* conflict, not directly CF-related. However, indirectly addressed by making the EC leadership more inclusive of the less powerful *Rai* group.

11.	General nonCF conflicts (amongst members, e.g., women's group versus political party cadre)	Multiple years pre-PAR (periodic)	↑ then ↓	EC and *tole* committees are now regularly called on to support management of nonCF conflicts.
12.	Power conflict: domination of key EC roles and influence (male versus female, EC versus members)	Pre-PAR since CFUG formation	↓	Established rule regarding reserved EC seats and portfolios and *tole* committee seats for women.
13.	Rivalry/ clash of political ideology in local leaders (between followers of different political parties)	'Hidden' (became clear during PAR)	↓	Change in leadership selection process: Use of *toles* to select EC in less partisan manner; *tole* level meetings, and planning and self-monitoring enabling more interaction and communication.
14.	Distributional equity (marginalized members versus EC)	'Hidden'; flared following *tole* discussions in background studies	↑ then ↓	Development of pro-poor activities; increased interface and negotiation between members and EC.
15.	Encroachment/boundary issues ('encroaching member(s)' versus CFUG)	Unclear start; surfaced during PAR	(↓)[b] .	Meso forum and EC negotiated resolution with alleged 'encroacher' who was from a poor household. Individual was given *tole* committee role and 4 year use and management rights to a plantation area.
16.	Resource use plan for resin income generation	Towards the end of PAR	(↑)	Conflict resolution plan prepared; proactive management of conflict by committee.

	(EC/*tole* committees versus a few members)

Notes: PAR=participatory action research; ACG=Adaptive collaborative governance; EC = executive committee; CF=community forest(ry). CFUG = community forestry group. ↑= increased conflict; (↑) slightly increased conflict; ↓= decreased conflict; (↓) slightly decreased conflict.

[a]Improvement of this fuelwood issue, but the addressing of this issue sparked vocalization of discontent from members with other interests who would like similar support from the EC regarding their issues. These new issues were starting to be raised through *tole* and other processes.

[b] The one case that was raised formally was resolved; other alleged cases not yet formally raised.

Sources: Focus group discussions, key informant interviews, observation.

Increased conflict, when combined with participatory and nested decision making and learning, gave rise to more proactive addressing of conflict and the use of varied conflict management mechanisms. The CFUGs began to rely on *toles* and other groups, rather than the executive committee or chairperson, to manage conflicts or potential conflicts. At one site, the CFUG was able to overcome a longstanding political rivalry that formerly overwhelmed their executive elections by basing the election in the *toles*. At another site, the chairperson observed: "When any conflicting issues arise in the CFUG, we do not play the role of the judge as we used to do previously, we send the issue to the concerned *toles* and the *tole* people themselves manage the case and come to the committee with their resolution, and the conflicting issues no longer remains in the CFUG" (male CFUG member). Special action groups were created at some sites to address conflict. For instance, conflict resolution committees that operated as needed to address illegal cutting and other issues were created at one site, and an encroachment monitoring committee was developed at another.

The improvement in conflict management is evidenced by the evolution of the main conflicts at each site. Of the 12 conflicts identified at the outset as pre-existing, 11 had improved significantly or been resolved by the end of the research, and the 1 remaining had not been directly addressed because the executive committee did not consider it to be CFUG related (Table 6.4). This improvement is also evidenced by the CFUGs' selfmonitoring of intra-group relations, which showed increases over time (Appendix 6.2).

Three of the four newly surfaced latent conflicts improved during the PAR and at the remaining site the CFUG put a plan in place to address the remaining conflict (a disagreement about a resin collection plan). Some key points of contestation remained at some sites, however, in particular regarding timber, the most financially valuable of the forest resources.

Finally, some CFUGs began to extend their learning regarding conflict management to other spheres. For example, as outlined in Appendix 6.2, one *tole* extended their experiences down to the household level.

6.5 DISCUSSION

In broad terms, in line with Plummer et al. (2013), the evidence of this study underscores the relevance of adaptive collaborative approaches specifically to environmental governance. Moreover, in line with Anderson (2001), Jiggins and Röling (2002), Armitage et al. (2007), and others, it underscores the claim that adaptive collaborative approaches,

while ripe with challenges, have contributions to make to NRM and development. The significance of the adaptive collaborative approach—and concomitant changes in social capital and conflict—to both NRM and development-related goals were evident in several ways in this study. The emergent changes were tied to an increase in collaborative activities supporting community development through livelihood opportunities, especially for the poor. These increases were linked to a shift away from the conservationist-orientation traditionally associated with the patron-client paradigm, which Malla (2001) argues is one of the most important limiting factors to the achievement of pro-poor outcomes. The changes were also tied to an expansion of joint actions relating to community rights and good governance. At the same time, these changes were linked to greater collaborative activities in forest protection and management, which imply a potential strengthening of environmental sustainability.

Turning more specifically to this study's main lines of inquiry, the evidence indicates that although not all issues were resolved, nor universal satisfaction achieved, positive changes in social capital and reductions in conflict did occur during the research period and that these trends can be plausibly attributed to adaptive collaborative governance. Equally compelling as these findings, are the 'surprises' that emerge in terms of the dialectical patterns and dynamics amongst conflict, social capital, and adaptive collaborative governance. It is these we now discuss. In order to explore the dialectic in more depth, we explore the interplay between the following: adaptive collaborative governance and conflict; adaptive collaborative governance and social capital; and conflict and social capital.

6.5 1 Adaptive collaborative governance and conflict

Although the sites were considered typical in terms of internal relations at the time of site selection, conflict was pervasive within the CFUGs. This signals the first of two interesting points that emerged in terms of conflict. First it emphasises that collaborative resource management—even within well established programs such as Nepal's—is inherently potentially prone to conflict. This is not to suggest that such conflict is intractable, but rather that some conflict—including latent and hidden tensions—is an inevitable part of NRM. Similarly, "power—with its many faces—is a fundamental issue in natural resource management" (Ballet et al., 2007, p. 364). This is true as well in community development more broadly, as indicated by Chambers' and his underscoring the need to recognise power and relationships in that context (2004). Our study reinforces this, indicating that explicit recognition of conflict and power in natural resource governance policy, practice and institutional support —and by extension, in these facets of development—would allow these issues to be better addressed (Voβ & Bornemann, 2011).

The second point of interest is the largely unanticipated effect of efforts to collaborate bringing latent tensions to the surface and sparking simmering tensions into more open conflict. This underscores that social and institutional, and thus power-related, change is not smooth but rather is full of twists and challenges. This is not, however, simply a case of 'two steps forward, one step back'. We perceive the surfacing of conflict in these cases as having also been a useful part of conflict management in that it brought the underlying power-related issues to light. Once surfaced, they could be acknowledged and addressed within the context of the shared reflection and reform of power and governance. From this perspective, the surfacing of the conflicts—within this constructive context—was an integral part of the CFUGs' ultimately becoming better equipped to address conflict over time.

This has implications for the framing of collaboration and conflict in governance. Instead of an assumption of neutral relations as the starting point for collaboration, and the premise of seeking to 'work together' in an undifferentiated power field, collaboration might usefully be framed as the nuanced convergence of measures to redress power imbalances, to manage or heal conflict, and to identify the need and ways for working together. As Funder (2012) suggests, "this may include taking a more politically explicit and polycentric approach, in which conflict of interests within and beyond communities are treated not as a problem, but as a necessary and dynamic aspect of the political process" (p. 1725). In the case of adaptive collaborative-related approaches, this would be intertwined with equity-oriented social learning and action.

6.5 2 Adaptive collaborative governance and social capital

This study indicated that—despite the sites being considered typical in their relations—the nature and level of social capital in the CFUGs was far less than optimal prior to adaptive collaborative governance. The internal groups' information sharing and external networking were limited, rules reflected a non-inclusive environment, and trust and social cohesion were low within CFUGs. In the terms of Pretty (2003), this reflects low bonding, bridging and linking social capital.

Moreover, the study indicates subtleties and nuances that are not much explored in the literature. Taking Leach et al.'s (1999) emphasis on diversity within communities, we suggest that there were multiple and overlapping spheres of social capital that differed and needed to be addressed. While it was significant that the social capital of each site as a whole was low at the outset of the research, it was equally significant that the social capital of the elite members as a group (wealthier, male, high caste) was high relative to that of the marginalised members as a group (women, the poor, *Dalit*). Elite members together

dominated the available groups (the executive committees) and networks (the scant relations with outside actors), and thus controlled information, and shaped the rules and norms. By their own expressed views, and from an external perspective, the elite—represented by the chairperson and executive members—'were' the CFUG. This is in line with the FAO's (2006) noting that community forestry could be equally referred to as "committee forestry" (p. 17). The CFUGs' conservation-orientation was reflective of the alliance between the techno-bureaucracy and CFUG elite (Malla, 2001; Nightingale, 2005; Ojha, 2006). This phenomenon of domination is not limited to community forestry, but poses a risk in community development more broadly (Fritzen, 2007). Ballet et al. (2007) warn of the risk that if development interventions do not address these power-related patterns, then attempts to strengthen ties between communities and external agents may contribute to the perpetuation or even the increase of inequalities within communities by reinforcing the elite's advantages (Ballet et al. 2007). We concur and note that external or internal efforts to increase community social capital could inadvertently reinforce existing domination and marginalisation, if such efforts mistake the dominant group for the more complex whole.

In contrast, marginalised members had relatively low social capital as a group and in relation to the CFUG as a whole prior to adaptive collaborative governance. In particular, they had little engagement in the CFUG's groups or networks, they had little influence over the rules to which they were formally bound, in some cases they consistently broke the rules, and, there was low observable cohesion amongst marginalised members (e.g., no observed joint actions) as well as low cohesion with the rest of the CFUG (expression of low sense of ownership and perception of being under-valued). Overall, this can be seen as an example of the effects of the 'dark side' of social capital (Ostrom 1999; Bolton, 2005; Ballet et al., 2007): the elite members' relatively high social capital, reinforced by their domination of and identification with the CFUGs, contributed to ongoing exclusion of marginalised members.

The findings indicate that adaptive collaborative governance positively influenced social capital over time, although there were remaining issues and room for improvement. The CFUGs increased their internal groups and external networks, worked more inclusively to develop rules and enhance compliance, and became more cohesive and better at managing conflict. The rapprochement of perceptions of equity illustrates a lessening of the cognitive divides (see Röling, 2002) between the elite and non-elite members.

The change in social capital in the CFUGs was not a uniform, lineal increase in overall CFUG social capital. Rather, it can be (albeit simplistically) interpreted as a two-fold change: a re-shaping of the social capital of the elite and the CFUG as a whole, away from over-

identification of the elite as 'the CFUG'; and, a building of the marginalised members' own social capital. The shift to adaptive collaborative governance—and the surfacing of conflict—appeared to contribute to breaking down the resilience of the previous negative aspects of elite social capital. The transition towards a livelihoods-orientation illustrates, for example, both increasing inclusiveness and also the stimulation of innovation (i.e., movement away from the traditionally-held conservation orientation of elite–technobureaucratic interests and development of new and alternatively-oriented initiatives). Meanwhile, marginalised members' social capital expanded in terms of their involvement in groups and networks (with each other, the CFUG, and outside actors), their involvement in shaping rules, and their sense of ownership and cohesion with the CFUGs. Linking to community development, these findings echo Krishna's (2007) study that found 'involvement in self-initiated organisations' (in our study, *tole* meetings and action groups) and 'agreement with rules' as key contributors to social capital. As Plummer and FitzGibbon (2007) highlight, it appears that there are potentially mutually enforcing feedback loops between social capital and collaboration, rather than a one-way influence. Social learning may play as key role in this: as Pretty and Ward (2001) note, "advances in social capital creation have been centred on participatory and deliberative learning processes" (p. 214).

6.5.3 Conflict and social capital

Above we have flagged two surprises that emerged in the sites that indicate the inter-related nature of conflict and social capital. First, some surfacing of conflict within the local level was an unanticipated outcome of efforts towards better internal collaboration. Second, is that the surfacing of conflict—in the context of facilitated social learning with an equity focus—was ultimately constructive in terms of social capital in that it contributed to the more effective and equitable addressing of long standing issues and power imbalances. Additionally, the study indicates that the successful navigating of conflicts—in terms of marginalised members or by CFUGs as a whole challenging perceived inequities—may have contributed to strengthening social confidence and cohesion and making constructive change. This corresponds to Fabricius et al.'s (2007) observation that, if appropriately managed, conflict may contribute positively to communities' capacity to respond to external threats.

More broadly, the national level conflict indubitably caused tremendous human suffering, loss and hardship. Some of its widespread effects—including challenges to building trust, ability to travel and gather safely, and loss of meso-level operations—were directly contrary to the needs and aims of adaptive collaborative governance. At the same time, the study indicated that as well as these considerable negatives, a couple of aspects of the conflict—

embedded within a context of a broader civil movement and discourse—ultimately appeared to have had a surprising constructive influence on adaptive collaborative governance and social capital. For example, we concur with Pokharel and Paudel (2005) that the conflict may have acted as a motivating factor in local power shifts, contributing to a reluctance amongst dominant members to risk being perceived by Maoists as abusive of power. More broadly, the widespread discourse about rights, equity and governance that was central to the civil movement and the Maoist conflict permeated rural areas, including *Dalit* and poor Nepalis. While this specific link cannot be concretely established, we suggest that the discourse aspects of the movement and the conflict contributed to increasing marginalised CFUG members'—and others'—awareness of *Dalit* and other marginalised peoples' rights and value as citizens (symbolic capital) and equity issues in general. It may thus potentially have strengthened these members' willingness to work together to challenge authority (social capital), as well as potentially engendered more rapid and possibly more significant responses of CFUG leaders to demands from marginalised members.

We suggest that this influence reflects not only the conflict's and broader civil movement's discourse heralding in a certain pro-democracy, anti-corruption *zeitgeist*, but more fundamentally reflects its contributing to a window of opportunity for marginalised members'—and others—to perceive and challenge previously uncontested "doxa". Drawing on Bourdieu (1991), doxa refers to society's "unquestionable orthodoxy that operates as if it were the objective truth" (Chopra, 2003, p. 419). In other words, it is social agents' sets of "deeply held assumptions and values" (Cameron & Ojha, 2007, p. 69). Tacit acceptance of these unquestioned 'truths' entrench stability of social order (Bourdieu, 1991; Cameron & Ojha, 2007). In the case of Nepal, and the CFUGs themselves, the doxa being brought to light was the previously unquestioned socio-political hierarchy, exclusions, and *de facto* limits on rights.

In this sense there was a certain unexpected synergy between the equity focus of the civil movement and national conflict and that of the adaptive collaborative governance. Assumptions regarding social equity being drawn into public scrutiny and discourse at multiple levels and spheres—in parallel with the increased deliberative focus of the adaptive collaborative governance within the CFUG—plausibly contributed subtly to eroding the resilience of previously inequitable patterns in CFUGs, including exclusionary effects of dominant groups' (internal) social capital. While this was eroding, these same forces were transforming (increasing) the social capital between dominant and nondominant groups. While the conflict's human impact was tragic and its long-term national influence still unknown, the emergent associated pro-equity discourse of the conflict and movement may have played an unexpected role in the sites in contributing to

social cohesion amongst marginalised CFUG members, while also creating space for innovation in the form of more collaborative (and equitable) CFUG governance.

6.6 CONCLUSION

Social capital, rather than being 'low' or 'high' in the sites, was better understood as overlapping combinations: relatively low within the marginalised groups and in each CFUG as a whole, but relatively high amongst each CFUG's elite members. Adaptive collaborative governance changed, rather than uniformly built, social capital. While the social capital of the marginalised members grew, the exclusionary effect and lack of innovation in orientation associated with the dominant members' own (internal) social capital eroded. At the same time, the CFUGs' overall (whole group) social capital developed in a manner that reflected an expanded sense of identity: more diverse and with an orientation that accommodated marginalised members' needs.

One contrasting element that emerged in the study was that despite the sites being part of a well-established participatory community-based NRM program that acknowledges equity as a priority, conflict was found to be pervasive, including regarding equity. Interestingly, while efforts to increase collaboration through adaptive collaborative governance necessitated more active conflict management and led to more effectiveness in that sphere—it also led to the surfacing of some conflicts. In fact, the path to more equitable and effective internal collaboration and the changes in social capital was arguably based on the underlying power relations and tensions—and conflict—being brought to the surface and addressed. A surprising connection to the macro-context emerged in relation to conflict: while adaptive collaborative governance was elucidating the need for equity and inclusion within CFUGs, the national-scale conflict and civil movement were reinforcing this (through different means) more broadly. All were bringing previously unquestioned *doxa* regarding hierarchies and exclusions into public discourse.

Thus the sites reveal a messy and dynamic reality, woven through feedback loops: multifarious and overlapping subsets of dynamic social capital including perverse aspects; efforts towards collaboration contributing to conflict; and the constructive aspects of the conflicts at different scales ultimately contributing in some ways towards the changes in power and social capital needed for collaboration. As such, the study generates several insights for policy and practice. First, the study generates a caveat: policies or initiatives that do not make effective efforts to assess the complexities of social capital within communities and CBNRM groups, could easily confuse building the social capital of the dominant actors for building the social capital of the whole communities or groups, thus

unintentionally reinforcing perverse effects. Second, with sufficient time and commitment, social learning-based approaches to NRM, such as adaptive collaborative governance, have the potential to make a contribution to conflict management and improved relations, as well as contribute to positive shifts in social capital. Moreover, based on the changes in actively implemented plans and external connections, these approaches can plausibly contribute to more pro-active and successful CBNRM groups, and more broadly, to sustainable development.

The relationships and forces amongst these, however, are neither lineal nor straightforward. Conflict in NRM, governance and development, even within local groups, needs to be acknowledged as part of the socio-ecological landscape, and NRM group formation and institutional support needs to recognise and address this. Actors in policy and practice need to be cognisant of the nuances of groups and communities, including power relations within and between NRM groups and other external actors, in order to support the development of social capital that supports sustainable—including equitable—development. Collaboration—within communities or between them and external actors—could be usefully framed as multifaceted, embodying the convergence of addressing power imbalances, healing conflict, and working together, possibly linked through social learning and action. The fact that shifts in meta-discourse appeared to influence local level CFUG governance, implies the need for conscious scrutiny of assumptions in NRM and development at all scales.

More broadly, the intertwined and living landscape of NRM, governance and development needs to be understood as messy and full of surprises. As well as implying the need for sufficient human capacities within local groups and supporting agencies, this underscores the need for a perspective on NRM, governance and development that is adaptive and collaborative in nature. In other words, it reinforces the call for an equity-oriented, inclusive, nuanced, flexible, and social learning-based perspective to help actors at all scales effectively navigate the "murky" and unexpected in NRM, governance and the pursuit of sustainable development.

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Appendix 6.1 Context

Socio-political landscape

Nepal is highly diverse, with 125 social groups based on caste and ethnicity and 123 languages (CBS 2012). Political and economic power was consolidated historically in Nepal through the integration of the Hindu caste system into all aspects of society (World Bank and DFID 2006). Within this multi-layered system, members of *Dalit* groups (previously so-called "low caste" or "untouchable" people), such as *Biswokarma* and *Damai*, are perceived as holding the lowest positions and thus least symbolic and political power. There is a continuing correlation between caste and poverty and access to resources, despite the fact that caste-based discrimination was legally abolished in 1963 (World Bank and DFID 2006). In practice, social hierarchy in Nepal is multi-dimensional, shaped also by gender and ethnicity, as well as geopolitics, language and religion. In this context, people who are poor, female and/or *Dalit* or from some indigenous groups face considerable and overlapping socio-political barriers.

Community forestry and livelihoods context

Over 60% of Nepalis rely on integrated forest and agriculture systems for their livelihoods (CBS 2002). As well as providing slope stabilization, forests are a fundamental component of rural livelihood systems, for instance, providing food and bedding materials for livestock, wood for agricultural implements, and fuelwood. They are also a source of income generation for some households, through the sale of fuelwood, charcoal, wooden pots, and non-timber forest products.

Nepal has a large and well-established community forestry program. The program was catalyzed in the 1990s by international environmental concerns; over time it has evolved towards formal acknowledgement of livelihoods and equity. Today, over 17,000 Community Forestry User Groups (CFUGs) hold legal management and use rights to a total of 1,652,654 hectares of forest (Department of Forests [date unknown]). Community Forestry has emerged as a dynamic sphere in which a multitude of actors overtly and tacitly negotiate. The main actors include the CFUGs and their socio-ethnically diverse membership, district forest offices (and their subsidiary area forest offices and rangeposts), nongovernmental organizations, bilateral organizations, and participants in sectoral and multi-sectoral forums and networks. Moreover, the socio-political features of the community forestry landscape are in continual flux. CFUGs thus face an ongoing need to meet the changing demands of diverse actors, as well as to deal with uncertainties in knowledge, and adapt to evolving forest ecologies, environments, socio-political contexts, and markets (McDougall et al. 2008).

Maoist insurgency and civil movement

Nepal was home to a violent and widespread armed conflict between Maoist rebels and the government from the late 1990s to 2006. The services provided to CFUGs by the district forest offices—and, in some cases, by nongovernmental or bilateral agencies—came to a halt or were disrupted as offices were closed or even destroyed. In some cases CFUGs had to pay for "approval" (permission) from the Maoists' parallel administration. CFUG members were "requested", with varying degrees of pressure, to make donations to the Maoists and/or to listen to, sometimes multi-hour, "educational" speeches. CFUG members, as with rural Nepalis in general, were directly or indirectly affected by the violence, including being harmed or killed either intentionally or caught in the crossfire. Members of some CFUGs were judged by the rebels or their supporters to be elite, and thus threatened, harmed, or even killed; some relocated in fear. Fear and mistrust became widespread. Some CFUGs limited or stopped the harvesting of forest products for fear of encountering Maoists or army. Despite these disruptions, and at a time that various other levels of governance had all but ceased operating, many CFUGs did manage to continue to function at least at a low level—underscoring the significance of community forestry as one of Nepal's most resilient local democratic institutions (Pokharel and Paudel 2005).

A widespread civil pro-democracy movement grew in parallel with the Maoist insurrection. Its widely-supported protests played a key role in the monarchy's relinquishing of powers, the reinstatement of parliament, and subsequent democratic elections for a new constituent assembly, which reflected public demands for greater equity, transparency and accountability.

Appendix 6.2 Findings and analysis: Further evidence and examples

Networking: An increase in awareness of the potential value of networking

During an initial community workshop about adaptive collaborative governance, leaders of three CFUGs were "quite ignited" when they realized that there were opportunities available that they had missed because they had not been linked to meso organizations. As one CFUG leader said "We did not know the importance of collaboration with external organizations. We have to move in a collaborative way onwards" (male CFUG Chairperson). Local awareness regarding the value of networking appeared to develop through experiencing networking in practice by means such as study visits and learning tours and through routine reflection on external relations as a part of the self-monitoring process. This awareness was supported by specific exercises during action planning by the members, including the identification of gaps and risks in their external relations.

Here we offer examples from the cases illustrating the four main forms of networking and collaborating that emerged:

- *Increasing collaboration with local (community) institutions*. For example, at one site the 2006 Assembly was jointly managed for the first time by a local children's club, a youth club, a women's group and the CFUG; the CFUG also collaborated with a women's group on culvert construction.
- *CFUG-CFUG sharing*. For example, several CFUGs asked their neighboring CFUG(s) to observe, share ideas, and give feedback for process or activity improvement.
- *New involvement in meso (district or subdistrict) CFUG networks or forums* (and, in one case, a multi-CFUG nontimber forest product enterprise), including involvement of marginalized members as representatives. At five sites where meso forums were or became quite active, meso actors began to visit the CFUGs more frequently and increasingly provide institutional, technical and regulatory support. In cases where the forums or networks were applying an adaptive collaborative governance approach themselves they specifically reflected on how to better connect with and meet CFUG needs.
- *Pro-active expression of needs* for information, resources or collaboration to outside agencies, and more regularly inviting outside actors to participate in or facilitate CFUG processes. Increasing numbers of marginalized members participated in trainings that emerged from these relationships, whereas prior to adaptive collaborative governance, elite members had accessed the majority of such opportunities.

Changes in forest management, compliance, and condition as indicated by selfmonitoring

The CFUG selfmonitoring records show that the CFUGs perceived forest management to have improved in 51 of 77 total relevant indicators between pre- and with-adaptive collaborative governance, compiled from all sites, while 26 out of the 77 stayed the same and none declined.

Among the 15 indicators created and monitored by the CFUGs (in total) relating to compliance with rules, 9 were assessed as improving and 6 as staying the same from the pre-adaptive collaborative governance to the adaptive collaborative governance period.

The changes in forest management and compliance in the sites were likely influences in the locally-perceived changes in forest condition (including slope stabilization) identified in the CFUGs' self-monitoring records: 23 out of the CFUGs' 30 relevant indicators (compiled across all sites) indicated improvements in forest condition, 7 stayed the same, and none declined.

Additional examples of joint actions viz-à-viz external actors

At one site the chairperson disagreed with the CFUG's felling of some trees during road construction. Without discussion he reported this to the District Forest Officer (DFO) who initiated a revocation of the CFUG's forest rights. The chairperson then handed over all the CFUG's legal documents to the DFO without notifying the CFUG. When members learned of this, the executive, the road committee, and members went to the DFO to ask him to return the documents and reinstate their rights. After numerous discussions, the DFO agreed to do this, on the condition that each executive and road committee member pay a fine. The CFUG rejected this condition and threatened to complain to the regional forest office if the DFO persisted with this demand. In the face of this pressure, the DFO returned the fines and the chairperson resigned. The CFUG formed a new executive committee after the next general assembly, composed of six women and five men who had taken lead roles in this collective process. There was similar successful resistance at a different site, where members challenged a DFO's penalizing the CFUG for felling trees during fireline construction.

At another site, the CFUG applied the skills and procedures they had learned through adaptive collaborative governance to respond to a water issue. When a conflict arose regarding potential commercialization of the CFUG's water source by outside interests, the executive took the issue to the *toles*. The *toles* unanimously decided not to allow it because of its potential to cause a future community water shortage. The issue pulled the previously

divided community together: "It was the first time that I have seen such a unity in our village. It is because we discussed the issues at *toles*" (male, CFUG Secretary).

Intra-group relations and conflict management: selfmonitoring and extension

As well as the improvements in conflict management presented in the text, the self-monitoring records of the CFUGs evidence related improvements in intra-group relations. Of the CFUGs that chose to explicitly monitor indicators of intra-group relations, including power and conflict, all recorded improvement: from the total of 11 indicators applied, all increased.

Moreover, some sites applied their learning about conflict management to other spheres. In one site for example, a *tole* leader emphasised to researchers that *tole* members had realized that the *tole* meetings were decreasing intra-*tole* conflict; this had stimulated a *tole* discussion about self-esteem and conflict. Members of the *tole* drew the lesson that *tole* members should maintain their and the *tole's* self-respect by members not shouting at each other during household or inter-household conflicts so loudly that members of other *toles* could hear. Rather, the *tole* members agreed, conflict within households and in the *tole* should be addressed more calmly and systematically. *Tole* members indicated that this adjusted norm began to take root and that *tole* conflict subsequently decreased.

CHAPTER 7

Discussion and Conclusions

Chapter 7. Discussion and conclusions

7.1 INTRODUCTION

Community forestry and other forms of community-based natural resource management (CBNRM) have taken root around the globe through the formal devolution of resource rights to community groups. And yet, as demonstrated by community forestry in Nepal, such programmes have not yet generally lived up to their goals and expectations. In Nepal, more than three decades after its active implementation, community forestry faces several key challenges including the need to increase equity in participation in CFUG decision making and benefit sharing, as well as increase the livelihood benefits from community forestry overall.

This study is based on research that sought to address these challenges at the local (CFUG) scale. The study's objective is to contribute empirically-based insights regarding if and how adaptive collaborative governance of community forests in Nepal can constructively influence engagement, livelihoods, social capital and conflict, especially in regard to women and the poor. Further, the study aims to elucidate the related underlying issue of power in CBNRM. In particular, it aims to contribute to deeper, theoretically-based understanding of the persistence of power imbalances in community forestry, and of the potential of adaptive collaborative governance to shift such imbalances. The main research questions were:

1. *From a theoretical perspective, why do power imbalances persist in community-based natural resource management and what role could adaptive collaborative governance play in shifting them?*
2. *What is the influence of an adaptive collaborative governance approach at the CFUG scale, on engagement in CFUG decision making, in particular, in relation to women and the poor?*
3. *What is the influence of an adaptive collaborative governance approach at the CFUG scale on the generation and distribution of CFUG-related livelihood benefits?*
4. *What is the influence of, and relationship between, adaptive collaborative governance, social capital and conflict at the CFUG scale?*

The study was based on longitudinal, multiple case studies of CFUGs (n=11) in seven districts of Nepal. The first phase of the research took place between 1999 and 2002; the second phase spanned 2004 to 2007, with a follow-up assessment in all sites in 2008. The methodology in each case study site, in both phases, applied both traditional social science assessment drawing on participatory methods and participatory action research. These

were integrated in each site through a research process that started with background studies, was followed by PAR, was accompanied by ongoing observation and documentation during the PAR, and concluded with a final assessment. Iteration between field experience and analysis was a key feature. Other key characteristics of the methodology were an explicit focus on gender and human diversity and the application of an adaptive and collaborative approach to the research process itself. Scientific rigour was designed and maintained in several ways, including the combination of in-depth case experience with comparison across cases, triangulation of sources and methods, the use of systematic case protocols, and the validation of findings.

This chapter begins by highlighting the study's main findings (7.2), which were presented in the journal articles that comprise chapters 3, 4, 5 and 6. These findings respond to the study's four research questions. Next, the chapter draws on chapters 3 – 6 and links to scientific and social debates, in particular to the knowledge gaps related to capacity, incentives, and power that were identified at the outset of this thesis. It discusses: the contributions to theory relating to the roles of social learning in adaptive collaborative governance (7.3); the enactment of adaptive collaborative governance at the local scale (7.4); and, visual representations synthesizing how learning and change occur in adaptive collaborative governance (7.5). The chapter then wraps up the thesis with Conclusions and Final Remarks (7.6).

7.2 MAIN FINDINGS

This section highlights the main findings of the study, organized according to the thesis chapter(s) in which they are presented (3, 4, 5, 6).

7.2.1 The persistence—and transformation—of power imbalances in community-based natural resource management

As a theoretical investigation of power in CBRNG, Chapter 3 addressed the question 'Why do power imbalances persist?', and the issue of transformation, asking: 'How can we understand adaptive collaborative governance's potential influence in shifting persistent power imbalances'?

The chapter first proposed three concepts as useful in elucidating power imbalances and their persistence: unmarked categories, doxa, and delegation. The concept of 'unmarked categories' draws attention to the phenomenon that more dominant, powerful categories of actors in any social context are taken to constitute the norm, or the 'unmarked category' for all categories of actors. With dominant actors as the standard, other identities are

relegated to outlier status. The construct of doxa highlights how the beliefs of dominant actors are taken for granted as the norm, or universal point of view. The construct of delegation examines the issue of who takes the responsibility for making decisions, emphasizing that delegative approaches tend to give primacy to forms of knowledge benefitting local elite actors, and that representations have an inability to respond to the multi-faceted characteristics of identities and tend to allow political spaces to be dominated by elite actors. Further, the chapter articulated the reproduction of power imbalances in society over time through the lens of structure and agency, highlighting that "agency produces structure produces agency produces structure in a never ending recursive process…" (Thrift, 1985, p. 612).

With respect to the issue of transformation of persistent power imbalances, the chapter asked, 'What can create a "break" in these reinforcing patterns?' It proposed that responses to this question converge towards the concept of social learning, which is a cornerstone of adaptive collaborative governance. The nature of social learning as engendering reflexivity was noted as a particularly compelling contribution to change and the evolution of structure and agency. Through reflexivity, doxa can be explicitly articulated and examined. Processes of social learning can thus catalyse a 'break in thinking' and enable actors to step outside of their usual frames of reference. The chapter further proposed that social learning provides opportunity and levers for recognizing diverse voices and pooling diverse knowledge and perspectives. Finally, the chapter signalled that social learning may contribute to transformative change through being a part of what Ojha (2006; Ojha et al., 2007) suggest is missing from much current decision making in NRM: a deliberative approach to governance. The key insights from this chapter are synthesized in Box 7.1.

Box 7.1 Chapter 3: Key Findings

Finding 1
a) The theoretical constructs of 'unmarked categories', 'doxa', and 'delegation' are useful in elucidating forces contributing to power imbalances and their persistence.
b) The theoretical constructs of structure and agency can together help to elucidate how such imbalances are reproduced over time in society.
Finding 2
a) Overall, the potential contribution of adaptive collaborative governance to shifting power imbalances can be usefully understood by using the concept of *reflexivity* as a theoretical entry point.
b) From a theory perspective, reflexivity is perceived as enabling change to emerge, in contrast to an ongoing reproduction of structure and agency.
c) Social learning—which is a cornerstone of adaptive collaborative governance—is proposed as significant to the potential transformation of persistent power imbalances. Its significance emerges through it reflexive nature.

7.2.2 Engaging women and the poor

Chapter 4 addressed the challenges of, and potential for, engagement of marginalised actors in community-based natural resource governance. It did so through an empirical inquiry into the engagement of women and the poor in community forest user group (CFUG) decision making in Nepal. In particular, it explored the influence of adaptive collaborative governance on the engagement of these actors. It asked: did engagement change with adaptive collaborative governance? If so, how did the approach influence such changes? Using the 'three-gap analysis of effective participation' framework (Osmani, 2008), were the 'gaps' to engagement overcome, and, if so, in what way? And, what broader insights emerged about engendering engagement in natural resource management?

The evidence showed that the *status quo* (at the outset of the research) reflected traditional Nepali village hierarchies, in terms of the marginalisation of female, poor and *Dalit* members, and a correlated dominance in CFUGs' decision making of high caste and wealthy men. The key finding of the study was that engagement of previously marginalised members increased as the CFUGs shifted to adaptive collaborative governance. In particular, the study tracked and observed increases in four aspects of their engagement: 'being involved' (attendance, speaking out, challenging); representation in leadership roles; CFUG priorities (income generation activities, micro-credit and rules); and satisfaction with the degree and manner of their engagement.

Within the adaptive collaborative approach, social learning processes and learning-oriented self-monitoring, nested decision-making arrangements, and interactions with outside actors played major roles in effecting these changes. Exogenous factors also played into the change process, notably the equity message of the Maoist protagonists and accompanying social movement. Feedback amongst changes and effects also was important—for instance, the pro-poor and pro-women activities served to boost these subgroups' sense of ownership of the community's forests and their perceptions of the value derived from their CFUGs, which fed back positively into the level and quality of engagement of women and the poor in decision making. This in turn created incentives for the leaders to continue the approach because it reduced the burden of responsibility for executive members and reduced tensions within the CFUGs.

This analysis generally confirmed the significance of the three gaps (capacity, incentive and power) identified by the analytic framework, as well as further nuancing their meaning. The significance of external networking in building and access skills, and the value of multi-directional information sharing and learning (such as in the routinised exchanges at the *tole* and *tole*- executive levels) were highlighted as important in terms of overcoming capacity gaps. The ability of adaptive collaborative governance to alter the balance of

incentives and disincentives, reducing the latter via reduced social costs and increasing the former via material and symbolic benefits, was revealed. The chapter also illuminated the multiple interconnected forces underlying the slow, non-linear shifting of power relations at the sites, that could be envisioned as a dynamic of 'pulls' and 'pushes' enacted in negotiation of daily life. Further, the chapter showed that two additional areas could usefully be recognized as gaps: space and learning. Prior to adaptive collaborative governance, the entry points to governance were not accessible to marginalised members. Wider participation grew through increasing the number and quality of available space for interaction and input, and by locating these opportunities at scales of inter-action that were socially accessible to women and the poor. These changes allowed a range of cultural, procedural, and informational factors—that had previously constrained participation—to be addressed. Further, at the outset there was little reflection on or learning within the CFUGs regarding CFUG governance itself. The shift to adaptive collaborative governance routinised reflexive learning processes and norms in the CFUG, and this provided the space for improved collective oversight of governance of the forests. Overall, through the social learning-based governance, the CFUGs began to 'feel their way' towards more equitable engagement. The key findings are outlined in Box 7.2.

Box 7.2 Chapter 4: Key Findings

Finding 1

a) At the outset of the research, prior to adaptive collaborative governance, the status quo across the sites mimicked traditional Nepali socio-political hierarchies.

b) The engagement of women and the poor in CFUG governance increased across all sites with the shift to adaptive collaborative governance, although not without challenges.

Finding 2

There were several interconnected threads of change underlying the shifts in engagement, most notably changes in: mutual understanding; accountability, leverage, and influence; awareness of rights; pressure for change; leadership positions and skills; and, feedback and incentives. These were shaped by interactions amongst the social learning processes, nested arrangements, networking and facilitation of adaptive collaborative governance.

Finding 3

The 3-Gap Framework of Participation (Osmani 2008), which focuses on capacity, incentive and power, can usefully be nuanced as well as expanded through recognition of 'space' and 'learning' as gaps.

7.2.3 Does adaptive collaborative governance affect poverty?

Chapter 5 explored whether, and how, adaptive collaborative forest governance can address the challenge of the limited livelihoods benefits derived from community forestry in Nepal. In particular, through empirical analysis it asked whether adaptive collaborative governance influenced financial and forest assets (i.e. subsistence and income-generation benefits and opportunities) of the female and poor members of community forest user groups.

Ex-ante analysis indicated that the default practice was the non-prioritization of women and poorest members in terms of access to forest products, income generation, micro-credit, and employment opportunities, despite these members' particular needs and livelihood challenges, and the formal 'pro-poor orientation' of Nepal's Community Forestry Programme. The implementation of adaptive collaborative governance by the CFUGs, including proactive development of relations with external agencies, led both to overall increases in livelihood-related community forestry benefits, as well as notable increases for the poor and female CFUG members. Poor women in particular made advances in these areas. Moreover, the CFUG members' perceptions regarding the extent to which their need for forest products was fulfilled indicated that while the poor expressed the most 'unfulfilled needs' of any wealth group in both time periods, all wealth groups perceived that their needs had been somewhat better met with the shift to adaptive collaborative governance, with the poor making the slightly larger shift. These findings reflect both an 'increase in the CFUG pie' and a 'redistribution of the CFUG pie' under adaptive collaborative governance.

The *ex-ante* CFUG processes and arrangements were embedded in relationships and patterns that reinforced top-down decision making, and thus were relatively unresponsive to marginalised members. The chapter showed that the ways in which adaptive collaborative governance influenced the forest and financial benefits of poor and women were multidimensional and interconnected. Marginalised members' access to livelihood strategies were influenced internally by CFUG governance, as well as externally by CFUG capacity to exploit opportunities in the rural economy through ties to, and collaboration with, district-level organizations or networks. Critical elements included the increasing engagement and influence of previously marginalised members, decision making based in social learning processes and nested arrangements, and CFUGs becoming more proactive in terms of networking and collaboration. The study revealed that the ongoing explorations of, and focus on, equity in process and outcomes—and thus the shifting of relations of power—were fundamental to the changes documented. The study suggests that shifts in livelihoods and distributional equity are not rapid, smooth, or uniform, nor are they an 'end' to be achieved. Rather, they—and poverty alleviation more broadly—can be better

conceived as part of a long-term process of power-related transformation. The key findings are outlined in Box 7.3.

Box 7.3 Chapter 5: Key Findings

Finding 1
a) Prior to adaptive collaborative governance, the CFUGs did not actively prioritize women and poorest members in terms of community forestry-related livelihood opportunities or benefits.
b) Adaptive collaborative governance increased the generation of forest-related livelihood opportunities and benefits for CFUG members across the sites overall.
c) In particular, the study indicated a relative increase in the generation of community forestry-related financial and forest opportunities and benefits of both women and the poor—and especially poor women—as a result of adaptive collaborative forest governance.
Finding 2
a) The study indicates a strong role for adaptive collaborative governance in poverty alleviation, including in relation to distributional equity.
b) The significance of power in shaping livelihood outcomes within the CFUGs, and the livelihood-related changes that occurred with the re-shaping of power in the CFUGs, suggest that poverty alleviation might usefully be re-conceptualized as a power-related transformation process.

7.2.4 Social capital, conflict and adaptive collaborative governance: Exploring the dialectic

Chapter 6 generated understanding about the dynamic intersections of social capital, conflict, and adaptive collaborative governance. In particular, it focused on the intersection of these three phenomena at the local level in the context of community forestry in Nepal, exploring the following questions: What was the nature of conflict in the CFUG sites at the outset of the research? Did conflict and social capital change as the groups shifted to adaptive collaborative governance, and if so, in what ways? And, in what ways did adaptive collaborative governance, conflict and social capital interact and influence one another?

A key finding was that, at the outset of the research, conflict was pervasive at all the sites. Moreover, the study revealed that while not all issues were entirely resolved over the period of the research, adaptive collaborative governance positively influenced social capital. This was evidenced, for instance by the CFUGs' increased number of internal groups and engagement in external networks, more inclusive rule development and enhanced compliance, and enhanced group cohesion and conflict management. The study also found

that efforts to increase internal collaboration had the largely unanticipated effect at times of bringing latent tensions to the surface and sparking simmering tensions into more open conflict. The findings indicate that this was a useful part of conflict management in that it caused a surfacing of latent power-related issues in ways, and in social spaces, that they could finally be addressed.

The analysis showed that although the sites were typical for their districts, the nature and level of social capital in the CFUGs was less than optimal prior to adaptive collaborative governance. The analysis also showed that there were multiple and overlapping spheres of social capital, and that the relative strength of the social capital of the elite members (wealthier, male, high caste) compared to the marginalised members (women, the poor, *Dalit*) was particularly marked at the outset of the study. The relatively high social capital of the elite members, reinforced by their domination of and identification with the CFUGs, contributed to marginalised members' exclusion and resultant inequities. As the transition to adaptive collaborative governance progressed there was an observed constructive re-shaping of social capital in terms of structures (groups and networks), content (CFUG orientation and pro-poor rules and norms), and effects (information flow, distributional equity, collaborative activities and joint actions). These were linked to multiple interacting changes, including: increases in marginalised members' input to decision making, which were related to increased information flows; joint reflection on governance; increasing engagement with external actors; and, increased understanding between subgroups and associated changes in rules and norms, and related decreases in conflict. Overall, a key finding was that adaptive collaborative governance changed—rather than uniformly or linearly building—social capital.

Moreover, the chapter showed that in contrast to the significantly negative social consequences of the national conflict overall, some aspects of the national conflict and the broader civil movement in which it was embedded ultimately had a surprisingly constructive influence on adaptive collaborative governance and social capital. The equity-oriented discourse of the movement and the conflict, associated increases in awareness of equity and of marginalised peoples' rights and value as citizens, and associated social pressures, strengthened marginalised members' motivation to collectively challenge authority, as well as potentially engendered more rapid and significant responses by CFUG leaders to their demands. The key findings are outlined in Box 7.4.

Box 7.4. Chapter 6: Key Findings

Finding 1
a) Conflict was commonplace in the sites at the outset of the research, including longstanding conflict.
b) While not all issues were resolved, nor universal satisfaction achieved, positive changes in social capital and reductions in conflict occurred at the sites during the research period and these trends can be plausibly attributed to adaptive collaborative governance.
a) The reduction in conflict did not occur in a linear manner; rather, adaptive collaborative governance contributed to a surfacing of latent issues and conflict, which enabled them to be addressed for overall longer term improvements in relations. In fact, the transition towards more equitable and effective internal collaboration and the concomitant changes in social capital were arguably founded on underlying power imbalances, tensions, and conflict being brought to the surface and addressed by the CFUGs.
Finding 2
a) The nature and levels of social capital was weak in all sites prior to adaptive collaborative governance.
b) Social capital, rather than being best understood in simple terms of 'low' or 'high' in each site, was better understood as overlapping combinations of: relatively low within the marginalised groups and in each CFUG as a whole, but relatively high amongst each CFUG's elite members.
c) The change in social capital with adaptive collaborative governance was not a uniform, lineal increase in overall CFUG social capital. Rather, it can be better (albeit simplistically) interpreted as a two-fold change: a re-shaping of the social capital of the elite and each CFUG as a whole, away from over-identification of the elite as 'the CFUG'; and, a building of the marginalised members' own social capital.
Finding 3
Conflict and social capital are interrelated, and conflict can have some surprisingly constructive effects on social capital.

7.3 CONTRIBUTIONS TO THEORY: THE MULTIPLE ROLES OF SOCIAL LEARNING IN ADAPTIVE COLLABORATIVE GOVERNANCE

The Introduction of this thesis highlighted that while social learning has been recognized as significant to NRM (Pinkerton, 1994; Pahl-Wostl, Mostert, and Tàbara, 2008), its specific role in adaptive collaborative governance has not yet been much elucidated in the literature. This thesis has contributed to filling this gap, by proposing a conceptualization of the way in which adaptive collaborative governance may contribute to shifting power imbalances through social learning (Chapter 3).

The empirical evidence of the study suggests, in fact, that dilemmas relating to power, diversity and resilience all converged on the same response: social learning. Social learning thus emerged in this study as a linchpin of adaptive collaborative governance, linking the adaptive and collaborative aspects of practice. Conceptually, the study indicates that social learning plays at least three fundamental roles in adaptive collaborative governance. Specifically, it enables a constructive evolution of social-ecological relationships in terms of: re-inventing structure and agency for social justice through reflexivity; bridging diversity and mental models to enable collective action; and, enabling the managing of resilience through both enhancing adaptive capacity and enabling transformation(Figure 7.1).

In this section, these theoretical insights generated by the preceding chapters are deepened and rounded out. Specifically, this is done first by testing and discussing the theoretical conceptualization regarding the persistence and transformation of power imbalances that was presented in chapter 3, with reference to the material in the three empirical chapters of this thesis. Next, this section broadens this theoretical discussion by considering the other significant roles that social learning plays in relation to adaptive collaborative governance: bridging diversity in ways that enable collective action; and, managing resilience.

Figure 7.1 Addressing resilience, diversity and power: Three roles of social learning in adaptive collaborative governance

7.3.1 Power, social learning, and adaptive collaborative governance

As background, this section begins by discussing the persistence of power imbalances, testing the proposed conceptualization (Chapter 3) against the empirical findings (Chapters 4, 5, 6). Next, it draws on the empirical material to discuss and refine the conceptualization of social learning in adaptive collaborative governance in relation to power balances.

The persistence of power imbalances

The study showed that the power imbalances in the CFUGs not only had social justice implications, but also pragmatic ones, in particular, those relating to imbalances in decision making (Chapter 4), distributional equity (Chapter 5), and members' sense of ownership of the CFUGs (Chapter 6). The fact that the study sites were selected based on being 'average' in terms of intra-group relations, underscores the ubiquity and persistence of such power imbalances in community forestry in Nepal.

The constructs of unmarked categories, doxa and delegation (introduced in Chapter 3), prove to be useful in 'unpacking' power imbalances when applied to the empirical findings

(Chapters 4, 5, 6). The lens of *unmarked categories* helps to deconstruct unbalanced nature of power in the context: the wealthier, male, and dominant caste groups comprised the 'unmarked' categories within the CFUGs, while the poor, female and *Dalit* groups represented the 'marked' categories. Prior to adaptive collaborative governance, the unmarked categories' dominance of decision making was the norm, and these members, as represented by the committee, were equated with 'the CFUG'. Marked categories, such as the *Daure*—with their interest in firewood—were taken by the CFUG committees as aberrant. The *Daure*, for example, were 'shamed' into leaving Assembly meetings. Applying the concept of *doxa* to the empirical cases elucidates previously unquestioned norms and traditions at the sites that reflected or influenced power imbalances. Its application helps to reveal the overarching—yet unquestioned—-reproduction of the socio-cultural hierarchy in CFUG governance. Similarly, it illuminates the implicit pro-conservation rationale prior to adaptive collaborative governance, which was shown to have significant implications for the livelihoods of the poor, and thus power balances within the groups and communities. Consideration of the concept of *delegation* elucidates that, prior to the transition towards adaptive collaborative governance, governance systems at all the sites rested on the assumption that marginalised members could be adequately and sufficiently represented by non-marginalised members. The findings and analysis revealed numerous consequences of implementing a delegative approach that significantly affected power balances in community foresty governance. For instance, decision making by committee or by the CFUG chairmen had provided limited scope for discussion and debate by less powerful members. CFUG decision making initially was delegated to executive committees whose membership did not represent the diversity of the CFUGs, especially in terms of the women, the poor, and *Dalit* members. This, in turn, affected resource distribution, which fed back to entrench power imbalances. Furthermore, (although not specifically assessed in the study) governance based on representation was coupled with elite linkages between executive committee members and forest bureaucracies. It thereby reinforced the primacy of scientific, bureaucratically relevant knowledge to which the elite had access, over the more experiential knowledge of other members.

The constructs of structure and agency (introduced in Chapter 3) similarly prove to be useful in understanding the persistence of power imbalances in the cases (Chapters 4, 5, 6). Specifically, they help to illuminate the recursive nature of power relations at the sites and the underlying structure and agency-related feedback loops that sustained them. For example, the socio-cultural hierarchy and exclusive, top-down decision-making had multiple interconnected effects: they mutually reinforced the prevailing structures of power, privileging agency of the powerful while excluding marginalised members; they sanctioned the systematized imposition of social costs on any poor or marginalised

individual or groups who tried to claim their rights (e.g. by scolding and shaming); and, they constrained the agency of poor and marginalised members by restricting subgroup interactions and opportunities for engagement. These effects served to reinforce hierarchy and exclusion and perpetuate power imbalances. In doing so, they limited the livelihood options of the poor and marginalised members, which both further disenfranchised them from the CFUGs and fed back to reinforce the existing power imbalances. Overall, the *ex ante* study confirms that power imbalances persist in CBNRG response to a complex of, and feedback between, reinforcing elements that entrench, perpetuate and reproduce systemic inequities.

Social learning and shifting power imbalances

The empirical case experiences confirm Chapter 3's proposition that social learning can play a key role in shifting power relations. At the same time, the cases further elucidate that while intra-group social learning is an important causal mechanism in shifting power as proposed, supra-local influences may also play a significant role at the local scale.

Looking more closely at the roles of social learning viz-a-viz shifting power, the cases analysed in this thesis particularly underscore the significance of social learning as engendering reflexivity within and between groups. Archer (2007) and Kemp (2010) similarly in highlight the role of reflexivity in enabling social systems to consciously change rather than to conform to history. Yet what of the important constraint identified by Giddens (1984) that reflexivity is itself a construct of a social system? Chapter 3 proposed that this constraint may be addressed if social learning is used by actors to question not only elements of the context 'external' to them, but also 'internal' elements—in particular their individual and shared perceptions, behaviours, practices and so on. This study provides persuasive evidence supporting that claim. Social learning, embodied by the cycles of shared visioning, self-monitoring, critically reflective discussions and so forth, provided a 'break' in thinking and ultimately practices. It allowed actors to step outside their normal frames of reference and to become aware of and reflect on their own perspectives, behaviours, and institutions, and their effects. Embedded in the adaptive collaborative approach and dovetailing with the larger socio-political context's equity focus, the social learning -represented a window of opportunity for all the actors concerned to perceive and challenge previously uncontested doxa. Wacquant (2004, p. 97) observed in relation to this point that "knowledge of the social determinants of thought is indispensable to liberating thought". The evidence presented in this thesis suggests that 'liberating thought', in turn, can create a break in recursive patterns, thereby enabling new trajectories in the direction of greater equity.

The analysis indicated that social learning also played a role at the sites in relation to the pooling of knowledge, and the coupling of social learning with the recognition and valuing of human diversity, as was proposed in Chapter 3. The recognition and valuing of diversity was evidenced in the cases in the transition to more inclusive decision making, and illustrated through statements such as 'every user knows something'. The empirical cases further refine the earlier theoretical conceptualization of this thesis: they suggest that of recognition and re-valuation of diversity is not best framed as a prerequisite. Rather, the winding, iterative and dynamic nature of the changes that played out in the cases suggests that while some manifestations of the shifts arose early on (such as in the wealth ranking exercises), valuing of diversity more likely emerges *parti passu* with transition towards adaptive collaborative governance.

The study indicated that deliberative aspects of governance were introduced at the sites through the adaptive collaborative approach. In practice, they were nested in discussion-based decision-making procedures and new social spaces; they were allied to the social learning-based shared visioning and self-monitoring processes that the study has identified as both co-evolving and causative processes in shifting power balances. This study suggests a theoretical connection between deliberative approaches and shifts in power. In particular, it suggests linkages between deliberative approaches developing social capital of marginalised members and contributing to shifting social capital of the whole CFUGs.

7.3.2 Social learning's role in bridging diversity

The empirical chapters have presented the high degree of human diversity in the study's cases, in terms of wealth, gender and caste and ethnic group, and have shown that this diversity shaped priorities, well being, and relational dynamics. The dissatisfaction of many CFUG members with the pre-existing top-down, exclusive governance and its outcomes, indicated collective resource management dilemmas, which as Röling (2002) highlights, requires concerted action. The potential value of diverse knowledge and information in the search for concerted action has been acknowledged (Folke et al., 2002). However, Anderson (2001) warns that, paradoxically, diversity can engender differences, tensions and conflicts that limit the potential for pluralism, collaboration and concerted action. This raises the question: How can the diversity of perspectives and interests and so forth be negotiated in order to create a sufficient shared basis for collaboration to occur?

This study indicates that social learning processes can offer a way forward in relation to this question. In particular, analysis of the case material indicates that it was the social learning—manifest in shared visioning and self-monitoring processes, equity-focused reflection within groups and across groups, and shaping of CFUG priorities based on

reflective processes—that contributed to better mutual understanding. This understanding and the concomitant changes in engagement and distributional equity reduced internal conflicts and thereby enabled collaboration and joint action. How might this role of social learning be understood from a theoretical, rather than purely practical, perspective? From this perspective, the study suggests the importance of social learning in terms of supporting the formation of shared meaning among diverse mental models. Individuals have their own mental models of the reality they experience and that surrounds them, shaped by their 'windows on the world' (Bawden et al., 1989 in Gonzalez, 2002). Checkland (1993 in Gonzalez, 2002) uses the German term '*Weltanschauun'* or 'the law of the lens' (Zaltman, 1982 in Gonzalez, 2002) in order to emphasize that different people attribute different meanings to what they perceive and this shapes how they handle the issues, and how they engage with the issue and others in their context (Gonzalez, 2002). Differences in worldviews pose enormous challenges to managing common resources, such as forests because even 'defining the problem is itself problematic' (Gonzalez, 2002, p. 19). If collective action is required, as it is in community forestry and NRM in general, "then collective learning becomes necessary in order to negotiate the meanings each makes of the problematic situation" and to reach a common understanding of the problem and what to do about it (Gonzalez, 2002, p. 19). Social learning is thus a process moves the actors toward a coherent *weltanshauun* (Leeuwis, Pyburn and Boon, 2002) and supports emergence of collective (shared or distributed) cognition (Röling, 2002). As Kates et al. (2001, p. 641) note, "combining different ways of knowing and learning will permit different social actors to work in concert, even with much uncertainty and limited information". Bawden et al. (1989, p. 13 in Gonzalez, 2002) similarly describe "sharing different ways of seeing the world as a first step to doing new things in it". Our case material provides further evidence that the power of social learning to enable concerted action by enabling the re-construction of meaning and the bridging of mental models is one of its key roles in adaptive collaborative governance.

7.3.3 Managing resilience

The study showed that the CFUG cases were embedded in internally diverse, dynamic contexts with multiple uncertainties and risks (Chapters 4, 5, 6). For example, as well as uncertainties regarding technical forest management (such as seedling production), the sites faced ongoing turbulence, challenges and surprises in the broader socio-political landscape, uncertainties in market opportunities, risks of violence, and even threats of losing community forest rights. The CFUGs needed to maintain or build resilience in order to continue to function in the face of these stressors. In other words—focussing here on the social aspect of resilience as the ecological is outside the scope of this thesis—the CFUGs

needed to build their ability to stay in a desired configuration (functioning CFUGs), and weather shocks and stresses through adaptation and adjustment rather than collapsing. At the same time, however, the ex ante findings indicated persistent socio-political hierarchies (Chapters 4, 5, 6) that entrenched the power-imbalanced *status quo* and created vulnerability in the CFUGs in terms of weak social capital, conflict, and low sense of ownership. These weaknesses presented the CFUGs with a need to manage resilience in the sense of engendering conscious transformation. As such, the CFUGs faced the need to manage resilience both in the sense of building capacity to weather stressors, and in the sense of breaking down and transforming entrenched norms, practices and relations.

The empirical evidence generated by this study suggests that social learning played a key role in managing resilience in both the above senses. First, it related to resilience-building, in particular through the development of in governance. As noted in the Introduction of this thesis, adaptive capacity in social systems relates to "the existence of institutions and networks that learn and store knowledge and experience, create flexibility in problem solving…"(Folke et al., 2002, p. 17). Resilience-building in this sense was evident in the CFUGs' institutionalisation of shared learning in governance, as embodied by self-monitoring and regular formal and informal reflection processes, as well as in the emergence of relatively elastic responses to longstanding challenges in livelihoods, conflict management and other issues (Chapter 4, 5, and 6). Moreover, social learning contributed to adaptive capacity through pooling of the knowledge of diverse actors at the sites. Specifically, this reflects Folke et al. (2002, p. 46) highlighting that social (and institutional) learning develops "a collective memory of experiences…[which] increases the likelihood of flexible and adaptive responses". Second, social learning also played a critical role in managing resilience at the sites in the sense of managing transformation. In particular, the analysis indicates reflection, self-monitoring and dialogue processes having contributed to undermining the resilience of inequitable patterns in the CFUGs. This was evidenced in the erosion of the exclusionary governance (Chapter 4), inequitable distribution patterns (Chapter 5), and dominant groups' longstanding exclusionary social capital (Chapter 6).

7.4 THE ENACTMENT OF ADAPTIVE COLLABORATIVE APPROACHES AT A LOCAL SCALE

This chapter now turns to the gaps in the literature identified in the Introduction of this thesis relating to the potential for wider application of adaptive collaboration at local scales and the issue of how adaptive collaborative approaches are enacted. This section begins by

discussing feasibility of the approach at the local scale, then addresses the gaps: 'Is there a general process?'; and, 'What roles do institutional arrangements play?' Further, it adds to and nuances these gaps by asking, 'More fundamentally, what might guide the overall design of an adaptive collaborative approach?' (7.4.1). This is followed by a discussion of drivers and shapers of adaptive collaborative governance and its outcomes (7.4.2).

7.4.1 Local scale application

Jiggins and Röling (2002) note the paucity of experience concerning the potential of adaptive management at the local scale This study's findings indicate the feasibility of an adaptive collaborative approach at the community scale, in particular, at the community forest user group level. The unanimous transition to ACG by all CFUG sites evidences this, especially in contrast to the meso scale (range post to district levels) findings of the larger CIFOR Nepal research study of which this study is the local component. At the meso scale, adaptive collaborative governance was only effectively catalysed in 5 of 7 sites, due to difficulties at the meso level in identifying an agreed need for change amongst actors (McDougall et al., 2008).

Ostrom (1990) has identified resource arrangements that allow multi-layered nesting of governance in terms of design principles for robust common pool resource institutions (Cox et al., 2010). The empirical material described and analysed in this thesis support her conclusion that multi-layering is both possible and significant in relation to governance processes. In particular, this study suggests a general multi-layered model of the process(es) of adaptive collaborative governance (Figure 7.2) as a nested set of learning cycles, in which facilitators and conflict management play a periodic but significant role .

Figure 7.2 Nested (social) learning cycles as the basis for adaptive governance

The largest and slowest moving cycle in this study's cases was the shared visioning, in which members of each group jointly negotiated a long-term vision over approximately 5 years (in line with their formal Operational Plans). This cycle represented the overall 'navigational direction' of the group. The medium term cycle was represented by the annual or semi-annual self-monitoring procedures, in which members collectively reflected on how they were doing relative to indicators they had developed themselves (based on their evolving shared visions) and why (i.e., causes and influences). These reflections generated insight into their progress towards (or away from) their governance and outcome goals as well as suggesting potential adjustments in their plans (what activities or actions/creation or modifying action groups, who should be involved/who should benefit) and in the rules (such as firewood collection. In this cycle, the focus of the learning was substantive, i.e., relating to the quality of governance, power and networking relations and so forth, and not simply to monitoring whether tasks or plans were being implemented. The equity tracking process as a critical sub-process of this cycle, enabled more accurate and transparent information, reflection and decision-making. This cycle thus allowed shared learning-based 'steering adjustments' and 'course corrections' in governance on an ongoing basis. The third nested cycle was the smallest in scope and fastest moving: the action group learning-based action cycles. The action groups applied learning as the basis for their decision-making and planning in different ways, either using their learning to directly improve their forest activity (e.g., nursery improvements, Chapter 5) or, in the case of governance-related

action groups (such as the 'executive committee watchdog' group, Chapter 4), by feeding their learning into CFUG governance.

The Introduction of this thesis flagged a gap in understanding regarding the role of institutional arrangements in adaptive collaborative processes. The study has highlighted the importance of nesting internal decision-making and the arrangements for active external networking. This nesting opened opportunity for the actors to play several new roles. First, they created new entry points and spaces for better informed and more inclusive decision-making by the CFUGs. Secondly, they enabled leadership in the CFUGs to be distributed over a larger set of social actors. Thirdly, the arrangements contributed to changes in social capital in the sites by enhancing in-group connections amongst poor and marginalised members.

The external linkages analysed in this study emphasized the utility of cross-scale institutional relations. The horizontal interactions among the CFUGs proved significant in terms of the sharing of ideas, innovative practices, opportunities, joint learning. This included in terms of filling the void of supporting actors created by the national conflict. Vertical networking supported feedback by external actors that improved governance as well as opening access to additional information and resources.

Several important design principles emerge from the discussion so far. Overall, the study demonstrates that while the significance of the learning and collaboration-based processes and arrangements should not be underestimated, neither should they be taken as substitutes, guarantees or blueprints for social learning, adaptiveness or collaboration themselves. Cox et al. (2013) similarly echo the caution that general principles for robust common pool resource institutions should not be "seen as something of a magic bullet or institutional panacea and thus be misapplied as a prescription" (p. 13). While self-monitoring processes, for instance, were shown to be significant in engendering change, they were arguably so only because of their underlying learning-orientation and the synergy that developed with other elements, such as nested decision making and reflexive discussions. This highlights several key points. First, it signals the importance of synergy and indicates that no single component can be elevated above the others as a causative agent. Second, the study strongly underlines that the internalization of learning and collaboration-oriented *norms* and *attitudes* are highly significant to the functioning of adaptive collaborative governance processes. Third, it flags the significance to CBNRG of the rule of thumb 'form needs to follow function', with 'function' here being the effective manifestation of social learning and collaboration, oriented to the context and group goals. This leads to the conclusion, in line with Leeuwis, Pyburn, and Boon (2002), that while

social learning processes are relatively amenable to design (relative to outcomes), the evolution of the processes cannot be predicted.

7.4.2 What drives and shapes the development and outcomes of adaptive collaborative governance?

Plummer (2009) flagged the gap in understanding about what variables shape adaptive collaborative approaches. During the first phase of the research reported in this thesis, inductive analysis led to my conceptualization of this gap in terms of three interrelated areas: **need**, **space** and **engine** for change (McDougall et al., 2002). In the subsequent field work and analyses these concepts were further elaborated and refined (Table 7.1). This section re-visits each briefly in turn in light of the findings presented in this thesis.

Table 7.1 Drivers and shapers of adaptive collaborative governance and outcomes

Need	Space	Engine
Perception of crisis/desire for change	Resource tenure	Norms and Attitudes
	Geographical context	Facilitation
	Poverty and time	External linkages
	Social capital, cultural and gender barriers	Feedback amongst outcomes
	Space as useable entry points to decision making	
	Time needed for (pace of) change	

i) Need

The need for change can be summed up in terms of one key aspect: that the actors involved share a perception that the situation needs to be improved, and that the need is significant enough to warrant expending effort and incurring the risks of change. In other words, there is a widespread perception of 'crisis' or urgent 'burning issue' of some kind, i.e., pressing social, environmental, or livelihoods issues, that fall within the scope of the actors' potential influence.

The perceived need for change in CFUG governance was evidenced in the following:

- *Dependence on forest/limited forest resource:* To differing degrees, CFUG members were directly dependent on the community forest for some household need or

aspect of their livelihoods; this dependence created an incentive to invest in the CFUG as the means to secure their livelihoods.

- *Less than optimal benefits from forests*, in terms of almost all actors' interests, created a sense of a need for improved outcomes.
- *Perceptions of distributional inequity within the CFUGs and dissatisfaction with equity in governance and with decision-making* contributed to a pressing interest among a significant number of actors in change in the equity aspects of governance.
- *Internal conflict and low social capital in the CFUG as a whole* were perceived as disruptive and counter-productive, stimulating perception of a need to change CFUG governance.

These perceived areas of need (and agreement) for change emerged in all sites, and served to 'open the door' for CFUGs to experiment with new (adaptive and collaborative) ways of operating. The fact that all CFUG sites in this study fairly readily such a clear shared need and agenda for change, while some meso sites in the associated larger CIFOR ACM research failed to do so (McDougall et al., 2008) suggests that various factors, such as relative group size, lower scale of interaction, relatively higher dependence on the involved resources, or severity of perception of 'crisis' may influence the ability of groups to identify and be activated by their sense of a shared 'crisis' or need. This could usefully be a point for further investigation.

ii) Space

The concept of space here refers to the freedom to apply adaptive collaborative governance, including the freedom to change and experiment. This relates to the CFUGs having 'room to move': possessing the acknowledged right and the power to make changes to their CFUG-related practices, arrangements and processes, and to use benefits that emerge from the community forest. Within this broad understanding, space is identified here as significant in influencing the development and thus outcomes of adaptive collaborative governance in the following six senses:

Space as secure tenure over resources (policy environment)

Secure tenure over forest resource, as well as the support of DFO staff to make changes in CFUG processes, provided the basic space for the CFUGs to engage in change processes and legally benefit from the income or other benefits generated, without undue struggle or competing claims for these rights. The evidence indicates that secure tenure (on its own) is a necessary, but not sufficient, condition for meeting community forestry-related livelihood and equity goals.

Space as geographical context

Geographical factors shaped space in several senses, including terrain: local, small-scale gatherings such as *tole* meetings are more accessible than large central gatherings for rural people in terrain such as Nepal's Middle Hills. External connectivity was influenced by similar factors: accessibility (or remoteness) influenced the presence of external actors and the ease and degree of external linkages and cross-group bridging. Additionally, the space for external and intra-group connections was influenced by the national conflict, both in terms of reduced ability of actors to gather or travel without risk, and in relation to offices of external actors being closed due to the violence.

Space in relation to poverty (time available)

While poverty contributed to the need and motivation for ACG (above), it also restricted the space for change. The 'hand-to-mouth' nature of livelihoods of the poorest community members limits their time to participate in decision-making processes, as well as in 'long-term' investments in forest resources. This is a challenge relevant to participatory development processes more broadly and it has no 'easy' solutions. Any participatory process imposes some additional time costs on its members. In broad terms, there is a need to find a balance of participation and efficiency, so that all sub-groups are engaged at a cost that is considered by them to be fair and acceptable. The study suggests that adaptive collaborative governance's small-scale and nested arrangements can reduce some time (and social) costs for marginalised members (such as through closer, smaller meetings, and by marginalised actors not being relegated to using remote areas of the forest). On the other hand, overall, any increases in CFUG activities (such as more income generation), and in distributed leadership, represent increases in time investments in community forestry. The interest of marginalised members in the continuation of adaptive collaborative governance ('we are hopeful….' [Chapter 4]) suggests that, ultimately, the tangible (income generation) and symbolic (increased respect and acceptance) benefits of pro-poor and pro-women catalysed by adaptive collaborative management offset increased time costs.

Space in relation to social capital, cultural barriers and openness to change

Perceptions of low social capital and of cultural barriers (including gender, class and caste) fed into local actors' desire for an alternative approach in the CFUGs. Conversely, these also inhibited efforts to enhance engagement and internal collaboration. The analysis indicated that with sufficient time and momentum, these inhibitors did not prevent an adaptive collaborative approach from taking root; in turn, the approach contributed to re-shaping social capital and cultural norms, thereby reducing the salience of these barriers over time.

It is important to additionally note the attitudes of local and meso-level leaders as a factor, in terms of the degree of openness to or supportiveness for change and experimentation.

The study suggests that at least a minimal degree of willingness to experiment and to re-negotiate power is necessary at the outset to allow the 'ball to start rolling'. The creation of greater access to CFUG decision making and benefits implied a change in control and benefit-sharing. The findings illustrated that this created difficulties, but not insurmountable ones. Hobley (2007) has emphasised that local elites, including leaders, are themselves diverse in their views on the poor and change (i.e., on a patron-client, neutral, to pro-poor spectrum). This study further elaborates that this diversity in leadership is also reflected in leaders' willingness to experiment and be open to change, an attribute which is influenced by extrinsic factors as well as intrinsic ones, in this case, the Maoist conflict and civil movement.

Space as useable entry points to decision making

The study indicated the significance of space in terms of available and socially accessible entry points or arenas (Steyaert and Jiggins, 2007) for decision-making. This focuses attention on processes, arrangements, and capacity. Initially there were few accessible entry points through which women and the poor could connect to governance. Because of traditional socio-cultural hierarchies and related doxa, and capacity imbalances, marginalised members tended to lose out in the 'free competition' of the large public forums and committee elections, even though they formally had equal access.

The findings suggest that this concept may usefully be framed in terms of 'taken' and 'given' space. 'Given' space is here understood as the accessibility that is allocated, such as the collectively created *tole* meetings in the CFUG. 'Taken' space is space created through the agency of actors who benefit from such space, for example, through marginalised members gathering to demand their rights. The expression of demands becomes more socially accessible as marginalised members become confident, organised and powerful enough to carry out their act of demanding. The study thus indicates that these are connected: taken space creates given space (e.g., a marginalised group demanding more formal representation), and given space contributes to taken space (e.g., *tole* meetings increasing the capacity of marginalised members such that a previously inaccessible forum becomes accessible).

Space in terms of pace of change

Although development project, research, and policy timelines are often short, institutional change is a slow process. Williamson (2000)'s framework analysing institutional change, for example, highlights the long timeframes involved in changing socially embedded institutions (such as informal rules, values, beliefs and so forth), relative to the shorter time involved in changing the institutional environment (formal rules and so forth), and the even shorter time involved in changing governance structures or institutional

arrangements. This study indicates the relevance of the pace of institutional change to adaptive collaborative governance, including the addressing of conflicts. This echoes with Armitage et al.'s (2007, pg. 7) recognition that "institution building, trust building and social learning all require time and repeated rounds of learning-by-doing".

iii) Engine

This section considers space in relation to motivation, capacity and feedback: these all build or drive momentum. They are addressed in terms of six interrelated aspects: risks and benefits; norms, attitudes and expectations; facilitation; external linkages; and, feedback.

Risks and benefits

The findings indicated that the generation of benefits—such as reduction in conflict, more voice or livelihood-related returns—was a clear motivator to continue with adaptive collaborative governance. The generation of material benefits from adaptive collaborative governance is not a rapid process, however, including when there are resource-related time lags (such as waiting for income generating species to grow). This underscores the importance of understanding and negotiation of expectations. It also underscores that the generation of relatively short-term outcomes, even interim ones, such as the satisfaction of successfully completing an inclusive community forestry vision or jointly implementing micro-loan initiative, become important in terms of building and keeping up momentum. Moreover, as the approach involves 'experimentation', actors had to be prepared to embrace 'failures' as learning opportunities. If this is to be possible in a low-risk tolerance situation, such as amongst vulnerable groups, these risks have to be acceptably small (for example technical experiments being undertaken in the form of nursery trial plots).

Norms, attitudes and expectations

In addition to underscoring that norms and attitudes—such as a 'spirit of collaboration', a commitment to equity, and a learning attitude—drive the momentum and outcomes of adaptive collaborative governance, study additionally highlights the relevance of dependence versus self-initiation or self-organisation. While this is an issue in development more broadly, it is of contextual relevance in Nepal, where the larger historical patron-client culture and linked expectations of immediate benefits from external actors create a risk of potential passivity and exacerbated external dependence of the CFUGs. Of particular interest here is that the study highlights potential tension between the adaptive collaborative governance approach's embodying selforganization, while its catalysation and ongoing processes involved actors external to the sites (researchers, meso facilitators, collaborators). With this risk being negotiated from the outset in the cases through repeated discussions regarding the intention and the mode of study, the findings suggested that as adaptive collaborative governance builds momentum, it nurtures counterforces to

passivity such as interdependence and self-organization. There is an additional risk that as community groups increase their connections with external actors, they could become overly dependent on them for resources or support. This signals the significance of reflexivity regarding the nature of external relations as an important moderating role, along with the development of intra-CFUG capacity, including facilitation and leadership.

Facilitation

The study signals that facilitation plays a central and strategic role (Leeuwis, Pyburn and Boon, 2002) in adaptive collaborative governance through enabling inclusive and reflective processes, as well as supporting conflict management. Notable in this study is that neither the researchers as facilitators (Phase 1) nor the meso and local teams of facilitators (Phase 2) were professional or highly experienced facilitators. Rather, the study suggests that more important than a high level of experience initially are factors such as commitment, equity-orientation, available time, training, and having facilitators work in teams, be networked with other facilitators, and backstopped by supportive external actors. Moreover, the success in the empirical cases also underscores the viability and effectiveness of meso and community actors as facilitators. The locally-led facilitation is plausibly more sustainable, as long the motivation and capacities are in place—which relates back to the above point of teams and networking of facilitators. That being said, there are multiple potential constraints to mobilization of effective facilitators, including bias in selection, and/or lack of locally available individuals able to commit the time required. Further investigation into the subtleties of the facilitation, including motivation, training, networking and teamwork as well as cross-scale linkages would be of value.

External linkages

The study pinpoints external linkages as a driving and momentum-building force for change. The 'outsider' status of meso facilitators, for example, brings 'weight' to the social pressure for reform. Connections between groups and scales—representing 'bridging' and 'linking' social capital—spark reflection and momentum for change, as well as provided access to new ideas (such as from other CFUGs) and resources (such as from NGOs). The findings also indicated that while both vertical and horizontal linkages are important, if the former is compromised, creative horizontal bridging can play a compensatory role.

Feedback amongst outcomes

The study elucidates that feedback loops between various emerging outcomes are significant as 'engines' driving and building momentum in adaptive collaborative governance. For example, even if leaders were somewhat hesitant or resistant to the approach at first, as changes took root they began to perceive the benefits of higher levels of engagement of marginalised users, such as reduction in the burden of responsibility for

executive members (as action groups took over activities) and reduced tensions within the CFUGs (with increased mutual understanding and shifts in priorities). This created incentives for leaders to continue to support the approach. In line with complex adaptive systems thinking, the study suggests that these feedback loops were not pre-planned or intentionally constructed; rather the feedback pathways emerged organically as the approach unfolded.

7.5 HOW DO LEARNING AND CHANGE OCCUR IN ADAPTIVE COLLABORATIVE GOVERNANCE? GENERATING A VISUAL REPRESENTATION

The study has shown social learning to be central to adaptive collaborative governance, and has elucidated that adaptive collaborative governance catalyses change both in governance and in its outcomes. At this point, the discussion turns to the gap identified in the Introduction of this thesis regarding how the phenomenon of ACG can be understood and represented (Plummer, 2009), or in other words, how it can be conceptualized and visually represented. In particular, this section draws on the study to develop a multi-faceted conceptual and visual representation of how learning and change occur in adaptive collaborative governance.

At the outset of the study and thesis, adaptive collaborative governance was conceptualized as a loop of reflection and adjustment of understanding and practice (Introduction, Figure 1.1). Now, at this stage, this conceptualization can be refined based on the empirical experiences. Rather than a *single loop headed in a predictable direction,* the refined model reflects three interlinked points:

i) *the multi-loop and transformative nature* of the learning in adaptive collaborative governance;
ii) the *three forms of interaction embodying learning and change* in adaptive collaborative management; and,
iii) adaptive collaborative governance as '*zig-zagging' towards improvement*.

7.5.1 The nature of learning in adaptive collaborative governance

The study indicates that learning in ACG can be understood in terms of multiple loops (Figure 7.3a), and usefully conceptualized in relation to Holling and Gunderson's (2002) lemniscate or 'eight curve' (Figure 7.3b).

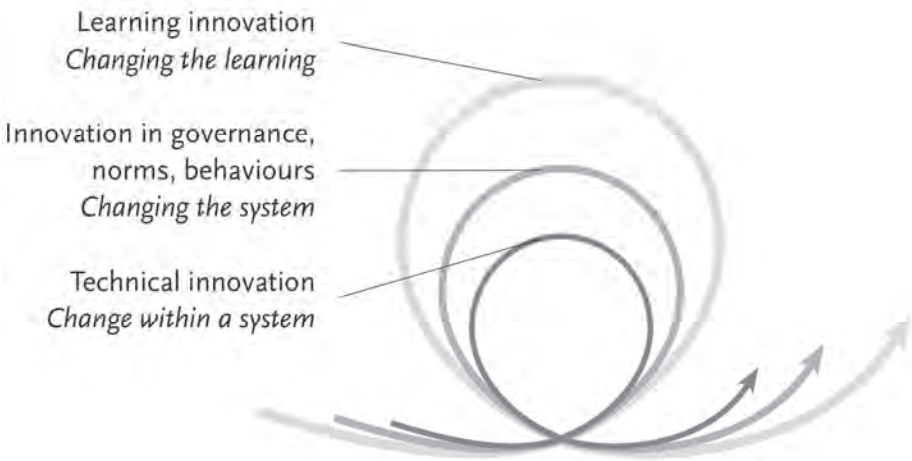

Figure 7.3a Multiple loops of learning

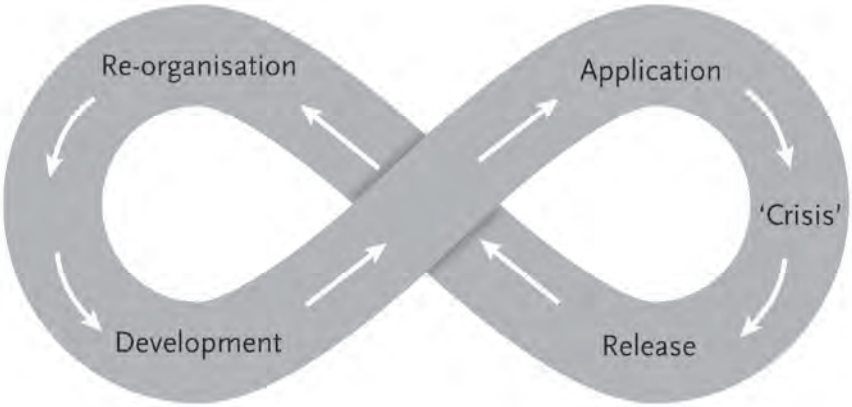

Figure 7.3b Cycle of transformation in adaptive collaborative governance
Source: Adapted from Holling (1986), Holling & Gunderson (2002), and Colfer (2005).

In terms of the multi-loop nature, the Introduction to this thesis highlighted that while adaptive collaborative governance may include some reproductive learning, the emphasis is rather on constructive, and even transformative, learning. The discussion of this point in the Introduction focused on 'who' is learning (the actors involved, together) and how (through cycles of action-reflection-action, or 'praxis'). Now, based on the empirical chapters, this understanding can be nuanced in terms of 'what' is being learned and the scale of the learning focus. The empirical chapters indicate three, interconnected forms operated simultaneously (Figure 7.3a):

- single-loop learning: learning regarding practical or technical improvements (for example regarding a improvements to seedling-raising in a nursery);
- double-loop learning: learning regarding strategic adjustments and improvements (such as regarding governance itself, and including orientation); and,
- triple-loop learning: improvements to learning processes themselves (such as learning to use monitoring for learning and improvement).

The study gives credence to Guijt (2007)'s observation that having all three forms of learning loops operating is important to effective learning. A single-loop focus in the cases (such as technical improvements to the raising of nontimber forest products), on its own would have had little effect on livelihoods. Because the overarching orientation was conservationist, there would have been little scope for livelihood generation, regardless of technical strides made in production. It took double-loop learning to shift this orientation, and thus create the possibility for application of the single loop learning towards actual livelihood increases. The intertwined triple-loop learning underpinned these other two loops, allowing for a evolving learning system to drive and keep the other two types of learning loops effective and relevant.

The nature of learning and change in adaptive collaborative governance can be further deepened through integrating Holling and Gunderson's (2002) lemniscate (or 'eight curve'). Originally generated in relation to the adaptive cycle of ecosystems (Holling, 1986; Holling & Gunderson, 2002), the lemniscate is a tool for thought that has been used in relation to organizations (Crossan & Hurst, 2006), the transformations in socio-ecological systems (see also Rotmans & Kemp, 2003; Colfer, 2005), and in Gunderson et al.'s (2002) application to policy development (policy plan, implementation, failure and alternatives). The leminscate is useful as a visual metaphor for the ongoing (single, double and triple loop) social learning and change that embodies transformation in adaptive collaborative governance. Specifically, it is a useful nuancing of the representation of ACG as a simple cycle, which was the starting point of conceptualization at the outset of this study (Introduction, Figure 1.1). The simple cycle usefully represents the planning, action and reflection (learning) and adjustment of plans based on learning. But in its simplicity, and linear layout of the cycles

(one after another in a progressively upward movement), there is an implication that understanding and knowledge is continuously built (through the learning from experience). In contrast, the lemniscate makes explicit that knowledge and understanding is not always simply built upon and applied, but rather is also challenged and broken down or released as a part of the process of learning and change—and more broadly transformation—in adaptive collaborative governance.

As interpreted here (Figure 7.3b), the lemniscate expresses the ongoing transformative loops of *development* of understanding (building knowledge, mental models, norms, and plans [and capabilities], *applying* understanding and implementing in practices and through and structures, then '*crisis*' (failures, surprises, feedback and so forth) sparking learning and *release*, followed by renewal, involving re-*organization* and re-structuring (of knowledge, mental models, norms, and plans (and capabilities…), and returning to a phase of *development*. This more subtle conceptualization better reflects some of experiences in the empirical cases, in which existing understanding, norms and practices were challenged and 'undone' as a part of building new understanding, norms and practices. For example, the findings of the empirical cases regarding the breaking down of robust, pre-existing hierarchical norms and governance practices illustrate transformations that involved not a simple 'building on' understanding, but rather a challenging of and re-shaping of understanding, as well as norms and practices systems. Similarly, the widely held understanding of distributional equality (equal shares of community forestry products) being synonymous with distributional equity was challenged—involved 'crisis' in the form of surfaced tensions—and a different understanding (and new norms and practices) took its place (equity-based distribution).

7.5.2 Learning and change as three forms of interaction

The findings presented learning and change in a range of practical areas, including norms, connections, and practices. What sense can be made of these from a conceptual perspective? Borrowing from, and adapting Prabhu, et al.'s (2007) explanatory model, the study suggests that understanding of ACG can be strengthened by considering learning and change as embodied in three types of interaction: cognitive (relating to generating understanding and meaning); relational (regarding relationships and connections); and instrumental (involving material change) (Figure 7.4). Overall, this aligns with Steyaert and Jiggins' (2007) reflection that purposefully managed transformative social learning processes spark change in interconnected patterns of knowing, being and doing.

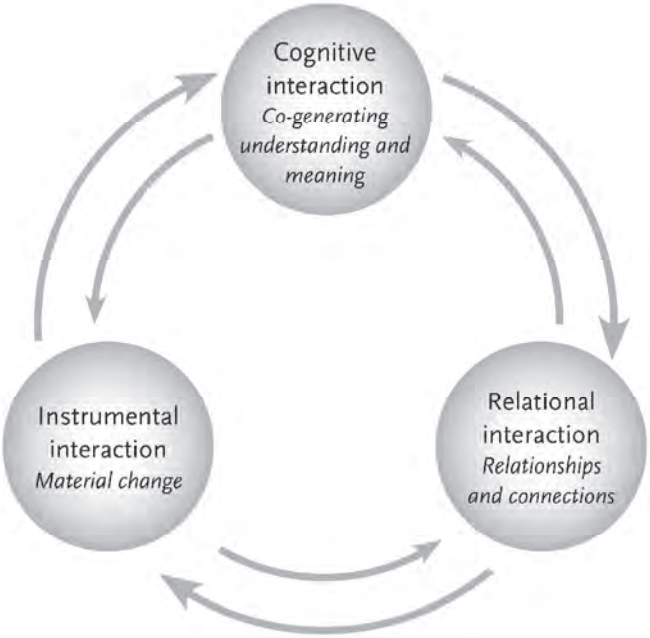

Figure 7.4 Three forms of interaction embodying shared learning and change in adaptive collaborative governance
Notes: Draws on Prabhu et al. (2007).

Cognitive interaction was evident in the cases in practical terms in the shared visioning and joint development and participatory assessments of indicators, and other shared reflection processes. In conceptual terms, this type of interaction represents the articulations and negotiation of diverse mental models and the negotiation of shared understandings and meanings, including around challenges. For example, assessment of indicators included dialogue and debate amongst diverse CFUG members, frequently with divergent perspectives, regarding key issues such as equity. The rapprochement of understanding regarding distributional equity illustrates the move towards shared perceptions. Based on the cases, the study suggests that this form of interaction was significant to ACG through its role in creating a shared cognitive basis for forward movement in the learning and change processes, in the sense of shared meaning and purpose, as well as updated understanding of the system. As per Röling (2002), this movement from multiple to collective or distributed cognition is a central aspect of addressing sustainability-related dilemmas.

The study pointed to a second form of interaction: relational interaction. In practical terms, this was represented by the negotiation of new or adapted forms of formal or informal relations, groups and linkages (for example internal groups and external connections. Conceptually, this type of interaction reflects connectivity in terms of internal groups and networks 'connecting the system to more of itself' (Prabhu et al., 2007, p. 33). In the cases, this was evident in both formal and informally terms (such as connections between *tole* groups and executive committees, and stronger bonds between subgroups, respectively), and within the groups and between the groups and other actors. Moreover, the spontaneous creation of a multitude of different types of action groups (such as a 'committee watch dog' group to defend against executive committee wrongdoing and 'loan monitoring committee'), and the development of other spontaneous forms of linkages (such as CFUG-CFUG networking during the conflict), can be understood conceptually as forms of self-organization. This emergence of non-centrally directed new structures and coordinated behaviours represents the 'living' nature aspect of CBNRG groups (Prabhu et al., 2007, p. 32). This nature is characterized by openness and willingness to be 'disturbed' to set processes of change in motion (Prabhu et al., 2007, p. 38)—which is a key element of learning and change in ACG. Relational interaction is significant in its underpinning self-organizing, living characteristic.

The study also pointed to a third form of interaction that embodied learning and change: material interaction. This type of interaction was represented by plans being created and translated into action for material results, such as protection of a slope or income from income generating activities. In line with Prabhu et al. (2007), the cases suggest that the material form is shaped by the other two forms of interaction and several factors, including the degree to which the environment is enabling, and the capacity of the group, including attributes and resources that can help the group reach its goal such as facilitation. In this study, adaptive collaborative governance involved actors' looping back from material interaction to cognitive interaction, negotiating interpretations of their experiences, successes, failures, understandings, and implications for their future actions. While there was thus (generally) a flow through the three forms, the cases concur with Prabhu et al.'s (2007): while one form may predominate at one point in time, they can better be understood as interconnected, overlapping and iterative, as well as continuous with no discernible end point. Also in line with Prabhu et al. (2007), each form of interaction was moderated by, and in turn moderated, relevant institutional aspects, for example cognitive interaction being moderated by traditional socio-political norms and structures, the emergent understanding from the cognitive interaction contributing to shifts in norms and structures. This aligns with Steyaert and Jiggins' (2007) observation that key variables in contexts of social learning in integrated catchment management both influence transformational change, and may themselves be transformed by such change.

7.5.3 'Zig-zagging' towards improvement

This section highlights the nonlinear nature of shared learning and change in adaptive collaborative governance, in other words, its 'zig-zagging' towards improvement (Figure 7.5).

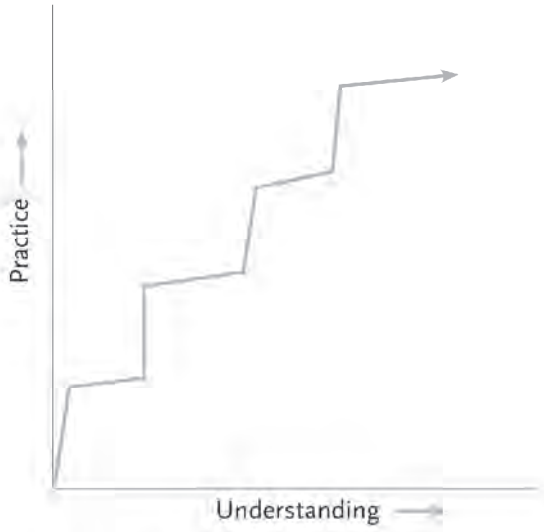

Figure 7.5 Adaptive collaborative governance: Zig zagging towards improvement

The empirical chapters indicate that even after the CFUGs had agreed on intended directions of change, the progress in that direction was not a straight line embodying 'one successful step in the intended direction after another'. Rather, the unfolding of learning and change can better be described as unpredictable as 'zig-zagging' towards progress, as the group oscillates between understanding and practice. This can be seen in the case in which the CFUG decided to pursue equity and income generation activities, but the emergence of a *Dalit tole's* plan to start a sawmill was an unexpected (and not initially welcomed) surprise to them. In other cases, groups aimed to make progress, but were confronted with 'failures'. For example, in the case in which the committee realized upon completion of the Assembly that—despite their plans to make more inclusive and participatory—it had unintentionally replicated its traditional topdown, exclusive approach. They 'course corrected' by re-planning and re-holding the Assembly. Such 'zig zagging' was similarly outlined in McDougall et al.'s (2007) vignette drawn from this study,

in which the committee created plans to prioritize poor women in an income generation initiative, but were later confronted by a poor female member pointing out that she had still been excluded. Similar to the above, the committee revisited and adapted their decision to be more inclusive. Each of these examples illustrates that while making overall progress towards CFUG goals with ACG, a closer look indicates that the progress unfolds in an unpredictable zig zag pattern—not a straight line—towards those goals.

7.5.4 Synthesis: An integrated model

Combining the above three insights on the nature of shared learning and change in adaptive collaborative governance reveals a fuller understanding of how adaptive collaborative governance, in particular how it may be conceptualized and visually represented. This synthesis is illustrated in Figure 7.6(a, b) with reference to a CFUG.

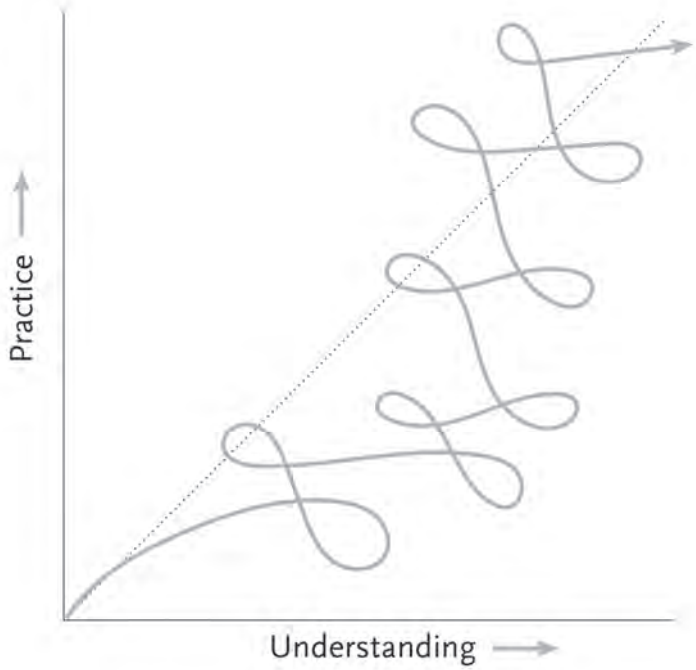

Figure 7.6a. Learning and change in adaptive collaborative governance: an integrated model

Figure 7.6a helps to visualize a more nuanced conceptualization of adaptive collaborative governance than the initial 'loop' figure presented in the Introduction of this thesis. It illustrates transformation occurring through lemniscates' embodying building, releasing, renewing and innovating, and re-organizing as the CFUG learns and adapts over time with adaptive collaborative governance. These cycles flow into each other, one after another. As per the above, rather than flowing uniformly or predictably towards a goal, they move with 'zig zagging' course changes that emerge as the group makes 'course adjustments' in their understanding, knowledge, practices, management, governance, and in learning itself. The figure illustrates the ongoing overshooting or undershooting the 'optimal' line as surprises and errors unfold. This 'zig zag' also illustrates that the negotiating tradeoffs between variables as well as between actors involved, and an implicit associated ever-evolving perception of 'optimal', create a target that is virtually impossible to 'hit and stick with'. The point is rather the successful evolution in the right direction.

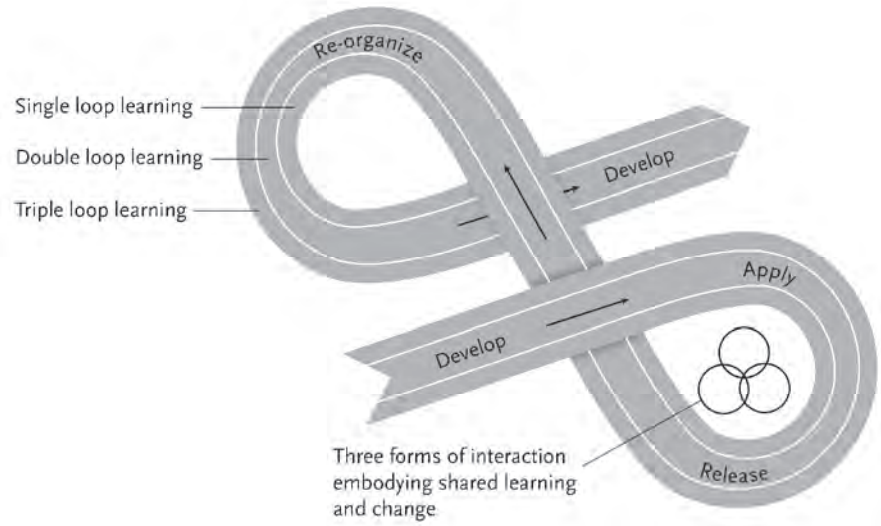

Figure 7.6b Close up of integrated model: Transformation in adaptive collaborative governance, with multiple learning loops and three forms of interaction driving shared learning and change

Inspired by Steyaert and Jiggins' (2007) heuristic for exploring the dynamic of transformational change, Figure 7.6b provides a close up perspective. This 'close up' opens the black box of each 'course change' in the 'big picture' presented in Figure 7.6a. It illustrates the integrated elements of this conceptualization of adaptive collaborative

governance: within a single lemniscate, multiple loops of learning occur at the same time, working in connection to the three forms of interaction driving the shared learning and change.

7.6 FINAL CONCLUSIONS AND REMARKS

In conclusion, this thesis identifies four overarching insights, under the headings of: tenure; contribution to CBNRM and development outcomes; design elements; and, risks and challenges.

Secure tenure is a necessary but not sufficient condition for successful outcomes in CBNRM.
The study confirmed that even well-established CBNRM programmes have shortcomings in key areas, notably in engagement, equity and livelihoods generation. Even a relatively secure community group tenure framework, such as in community forestry in Nepal, is not sufficient on its own to enable the intended sustainable development outcomes. Moreover, secure tenure, even, within a CBNRM programme that acknowledges equity as a priority, is not sufficient to lead to prioritization of benefits for the most vulnerable community group members. Further, secure tenure does not necessarily give rise to optimal social capital, greater social equity or a reduction in conflict.

Adaptive collaborative governance at the local level can constructively influence CBNRM outcomes, and through these, contribute to broader development goals.
The study showed that adaptive collaborative governance can constructively influence engagement, livelihoods, and social capital, conflict and underlying power imbalances. In particular, adaptive collaborative governance can enable women and poor members to shift from marginal to more effective engagement in local forest decision making, including increasing their involvement in decision-making processes, exercising rights, expanding leadership roles, and shaping group decisions. This has implications far beyond Nepal in addressing the widespread CBNRM challenge of 'participatory exclusions' (Agarwal, 2001). An adaptive collaborative approach can also contribute to community resource groups increasing livelihood returns from forests overall, while also responding to differentiated needs and opportunities in a more nuanced and effective manner. Similarly, the approach can contribute to innovation in the use of the community resources and funds to create secondary livelihood strategies not directly dependent on the community-based natural resources. As such, adaptive collaborative governance may help to tackle the limited livelihoods contributions of CBNRM to date, through its favourable effect on overall growth of livelihoods. In addressing these integrated issues—and the fundamental challenges of social capital, conflict and power imbalances that pervade community-based natural

resource management—adaptive collaborative governance speaks to issues ranging from empowerment and development (Sen, 1999), inclusive development (Garikpati, 2008), and equity and conflict, which in turn influence compliance. As such adaptive collaborative governance has broader implications for sustainable development in both in instrumental and intrinsic terms.

The nature of governance is paramount; the nature of adaptive collaborative governance embodies multiple overlapping design elements.

CBNRM policy and practice would benefit from greater attention to the nature and quality of governance. Our study has emphasized the mismatch between CBNRM's complex and dynamic context and the common practices of linear and top-down approaches to governance. This study's evidence thus argues for policies and practices that enable and support the design and enactment of governance that is more adaptive and collaborative, and investments to support this. Based on this study, key design elements of governance that is adaptive and collaborative in nature include the following overlapping aspects:

- Applying a **pluralistic** approach focused on enabling **inclusion and engagement,** including **s**eeking to address power, incentive, and capacity gaps, as well as gaps in space and shared learning;
- Addressing **power imbalances** and building an explicit focus on **equity;**
- Recognizing **diversity and nuancing approaches to poverty alleviation;**
- Applying a nuanced approach to developing **social capital**, recognising multiple and overlapping spheres within communities and groups, and recognising that changes in social capital are winding, nonlinear processes, and that social learning and networking play key roles;
- Recognising and addressing **conflict,** including framing collaboration in terms of a convergence of measures to redress power imbalances, to manage or heal conflict, and to identify the need and ways for working together, and intertwining collaboration with equity-oriented social learning and action
- Drawing on complex adaptive **systems thinking**, including building in ways to learn from feedback through learning-oriented monitoring, and being flexible enough to enable and support self-organized horizontal and vertical linkages;
- Anchoring governance in **social learning**, including processes, arrangements, and norms that nurture single, double and triple loop learning, support deliberative decision making, and nurture reflexivity and critical and creative thinking;
- Recognising that some **knowledge will be challenged** and released rather than simply built upon, and that progress towards goals will not progress linearly;

- Supporting **nested decision-making arrangements** that create space for engagement of marginalised members, disperse learning, information and power, and create direct lines of input to decisions; and
- Developing enabling and representative **leadership** and **facilitation**, including an openness to change, encouragement of the above elements, and committed facilitators having at least basic competencies, being networked with each other, and backstopped, as needed, by other actors.

A shift in policy and practice towards adaptive collaborative governance has challenges and risks—including that it is inherently political.

Systemic change embodies power-related challenges and risks, including potential resistance from power-holders, difficulties engaging marginalised actors, and unintentional surfacing of tensions, as well as changes and challenges in the external environment. These risks need be identified, assessed and managed in processes of purposeful change including adaptive collaborative governance. This study suggests that facilitation, conflict management, networking, and attention to social capital, as well as awareness of developments in the wider socio-political landscape, and adequately long time frames, can support local actors in successfully negotiating the risks and challenges Additionally, there is a risk in adaptive collaborative governance, similar to other development-related initiatives, that externally-catalysed initiatives could encourage external-dependence. The study underscores that negotiation of this risk relates to a transition to adaptive collaborative governance being approached in terms of a slow, internally relevant and internally-driven process (even while it may involve and/or be sparked by external influences). This flags again the significance of the need for policy and CBNRM actors to investment in communities and meso actors' own relevant capacities, including facilitation, leadership and conflict management.

The fact that the adaptive collaborative approach is not a blueprint, but a principle-based approach, constitutes both a blessing and an additional risk. Collaborative learning-based adaptation as a principle of governance allows freedom for contextualization, adaptation and evolution and allows for processes of informed, timely and appropriate risk management. On the other hand, the degree of openness and flexibility embodied by the approach also creates room for misappropriations or weak application of the central principles of the approach. This is an inherent challenge in relation to scaling and speaks to issues of aims and intentions of actors catalyzing and using the approach as an influence on it (Sherwood, Shut and Leeuwis, 2014). It also underscores the need for resources invested in the development of 'soft skill' capacities (such as facilitation), and investments in networking and backstopping community groups and facilitators.

In conclusion, the overarching lesson is that adaptive collaborative governance, while not without obstacles, is one effective approach to navigating the complex contexts of CBNRG. While not a panacea, adaptive collaborative governance provides a useful option for a way forward: a dynamic, albeit unpredictable, unfolding of a collaborative, learning-based process of transformation in which diverse community groups 'learn their way' towards equity and their self-generated visions of wellbeing and sustainability.

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ANNEXES

Annex 1. Study research activities

Study Research Activities: Phase 1

	1999				2000				2001				2002			
	Jan-March	April-June	July-Sept	Oct-Dec	Jan-March	April-June	July-Sept	Oct-Dec	Jan-March	April-June	July-Sept	Oct-Dec	Jan-March	April-June	July-Sept	Oct-Dec
Overall Initiative start up																
• International CIFOR research initiative development • Country selection: Nepal																
Nepal Phase 1																
1. Research start up and groundwork • Research team establishment • National, meso and community forest user group (CFUG) partnership-building and consultation • Site selection studies • Site selection (*n=4*) • Developing assessment frameworks																
2. Background studies (each site)																

	1999				2000				2001				2002			
	Jan-March	April-June	July-Sept	Oct-Dec	Jan-March	April-June	July-Sept	Oct-Dec	Jan-March	April-June	July-Sept	Oct-Dec	Jan-March	April-June	July-Sept	Oct-Dec
3. Participatory Action Research • CFUG workshops (each site) to initiate adaptive collaborative governance (ACG) approach • Researchers-as-facilitators catalysing ACG (each site), such as *tole*-based visioning, self-monitoring, through facilitation in *tole* and action groups, general assemblies and other CFUG processes • CFUGs adjusting plans, practices, rules and norms • Transferring facilitation from researchers to local actors																
4. Ongoing data gathering and assessment • Participant observation and field diaries • Monthly/bi-monthly reports (each site) • Interim Assessment and analysis (each site) ***[IA]***												*[IA]*	*[IA]*			

	1999				2000				2001				2002			
	Jan-March	April-June	July-Sept	Oct-Dec	Jan-March	April-June	July-Sept	Oct-Dec	Jan-March	April-June	July-Sept	Oct-Dec	Jan-March	April-June	July-Sept	Oct-Dec
5. Final Assessments & Analysis • Final assessment (each site) • Analysis across all sites • Final sharing with CFUG and district actors including post-research planning																
6. Supporting studies • Nepal Forest Policy • Review: Monitoring in Nepal's community forests • Comparative CFUG Studies																
7. Research team reflection and capacity building • 10 day concepts and methodology workshop with international ACM research initiative (CIFOR) **[MW]** • Routine team reflections • Team retreats ***[TR]*** • International ACM initiative writing workshop ***[WW]*** • External courses, workshops • Meetings with national advisors & international steering committee					*[MW]*						*[TR]*	*[WW]*	*[TR]*			

	1999				2000				2001				2002			
	Jan-March	April-June	July-Sept	Oct-Dec	Jan-March	April-June	July-Sept	Oct-Dec	Jan-March	April-June	July-Sept	Oct-Dec	Jan-March	April-June	July-Sept	Oct-Dec
8. Dissemination of findings • Hosting Nepal national ACM conference ***[NC]*** • Regional ACM workshop ***[RW]*** • Final research report ***[FRR]*** • Additional presentations and publications															*[NC, RW]*	*[FRR]*

Study Research Activities: Phase 2

	2004				2005				2006				2007			
Nepal Phase 2	Jan-March	April-June	July-Sept	Oct-Dec	Jan-March	April-June	July-Sept	Oct-Dec	Jan-March	April-June	July-Sept	Oct-Dec	Jan-March	April-June	July-Sept	Oct-Dec
1. Phase 2 startup and groundwork • Establishment of research teams • Networking, consultations, workshops and scoping visits with CFUGs, meso and national stakeholders • Team planning: deepening conceptual understanding; refining site selection criteria, analytical frameworks and methodology • Site Selection *(n=11*: 4 from Phase 1 + 7 new)																
2. Background (context) studies in main case sites																

	2004				2005				2006				2007			
Nepal Phase 2	Jan-March	April-June	July-Sept	Oct-Dec	Jan-March	April-June	July-Sept	Oct-Dec	Jan-March	April-June	July-Sept	Oct-Dec	Jan-March	April-June	July-Sept	Oct-Dec
3. Participatory action research in main case studies[19] • CFUG and meso actors select facilitators (each site) • Initial facilitator trainings (approx 5 days/district) ***[FT]*** • Local facilitation teams support or catalyse ACG (each site), such as *tole*-based visioning and self-monitoring, through facilitation of CFUG workshops, *tole* and action groups, general assemblies and other CFUG processes • CFUGs adjusting plans, practices, rules and norms • Researchers support, backstop, and learn with facilitators on ongoing basis: occasional facilitator-researcher joint facilitation, joint brainstorming regarding solving challenges, joint reflection amongst facilitators and researchers, researcher involvement in local processes as requested • Selection of additional or replacement 'facilitators' as needed • Training for replacement/new facilitators ***[RFT]*** • Refresher trainings for facilitators ***[RT]*** • Facilitator study tour/workshop ***[ST]***					*[FT]*	*[NFT, RFT]*		*[ST]*		*[RFT]*	*[RFT]*					

[19] The adaptive collaborative governance approach remained in use in the sites and facilitation continued after September 2006; this date is indicated as the 'end of the PAR' because this is when the research project shifted to data gathering for final assessments.

	2004				2005				2006				2007			
Nepal Phase 2	Jan-March	April-June	July-Sept	Oct-Dec	Jan-March	April-June	July-Sept	Oct-Dec	Jan-March	April-June	July-Sept	Oct-Dec	Jan-March	April-June	July-Sept	Oct-Dec
4. Ongoing data gathering and assessment in main case studies • CFUG members, facilitators, field researchers and team researchers observe and reflect on site learning • Researchers document events, processes, and changes • Interim assessments and analysis ***[IA]*** • Team reflection (mini-workshops) on learning to date ***[R]*** • Analysis as per agreed framework for all CFUG sites						*[R]*		*[IA, R]*								
5. Final Research assessments and analysis • Reflection and revision of assessment framework • Final field assessments and analysis using agreed framework (longitudinal comparisons *within* sites) • Longitudinal analysis *across* cases using research framework • Refinement and application of themes for multi-site analysis ***[TA]***												*[TA]*				

	2004				2005				2006				2007			
Nepal Phase 2	Jan-March	April-June	July-Sept	Oct-Dec	Jan-March	April-June	July-Sept	Oct-Dec	Jan-March	April-June	July-Sept	Oct-Dec	Jan-March	April-June	July-Sept	Oct-Dec
6. Research team reflection and capacity building • Team development workshop ***[DW]*** • In-house scientific report writing workshop ***[WW]*** • Team reflection on learning to date ***[R]*** & planning retreats • Ongoing learning via routine team reflection, including circulation and discussion of discussion documents, drafts, and literature, and feedback on draft reports • Participation in external courses and workshops • Periodic reflection meetings with national project collaborators and international project advisors		*[DW]*	*[DW]*			*[R]*		*[R]*								

	2004				2005				2006				2007			
Nepal Phase 2	Jan-March	April-June	July-Sept	Oct-Dec	Jan-March	April-June	July-Sept	Oct-Dec	Jan-March	April-June	July-Sept	Oct-Dec	Jan-March	April-June	July-Sept	Oct-Dec
7. Sharing, Dissemination and Wrap up • Ongoing discussions within CFUG groups • Dialogue between CFUG and meso actors and National Policy Learning Group: field-based policy workshops ***[FPW]*** • National-Meso-CFUG Sharing Workshop ***[NMC]*** • Ongoing researcher updates to National Policy Learning Group, Ministry of Forests and other actors • Presentations/submissions to national and international conferences • National-level dialogues • Hosting ACG training workshops ***[T]*** • Field-level wrap up and closure in each site: discussions and mini-workshops ***[FC]***							*[T]*	*[FPW]*		*[FPW, T, NMC, FC]*	*[T]*	*[FC]*	*[FC]*		

Annex 2.
Nepali research partner organisations and researchers involved in this study

PHASE 1		
New ERA team	**ForestAction team**	**Independent researchers** (based at NORMs)
Shibesh Regmi	Kamal Bhandari	Sushma Dangol
Kalpana Sharma	Hemant Ojha	Chiranjeewee Khadka
Narayan Sitaula	Krishna Paudel	Raj Kumar Pandey
Laya Uprety	Bharat K Pokharel[20]	Netra Tumbahangphe
	Him L Shrestha	
	Hima D Upreti	
PHASE 2		
New ERA team	**ForestAction team**	
Sushma Dangol	Mani Ram Banjade	
Manik Maharjan	Kamal Bhandari	
Bishnu Hari Pandit	Tara Bhattarai	
	Sushila Rana Magar	
	Hemant Raj Ojha	
	Raj Kumar Pandey	
	Krisha Paudel	
	Naya Sharma Paudel	

[20] With the Ministry of Forests and Soil Conservation, partnering with ForestAction team.

SUMMARY

Summary

Community-based natural resource governance regimes, such as community forestry, have taken root around the globe. And, yet, as demonstrated by community forestry in Nepal, such programmes have generally not yet lived up to their goals and expectations. As presented in **Chapter 1** of this thesis, after more than three decades of formal implementation, community forestry in Nepal faces several key challenges. Central to these are the need to increase equity in participation in community forest user group (CFUG) decision making and benefit sharing, as well as to increase the livelihood benefits from community forestry overall. The research project on which this study is based sought to address these challenges at the CFUG scale. The research objective was to contribute empirically-based insights regarding if and how adaptive collaborative governance of community forests in Nepal can constructively influence engagement, livelihoods, social capital and conflict, especially in regard to women and the poor. Further, the research aimed to elucidate the underlying issue of power in community-based natural resource governance. In particular, it sought to contribute deeper, theoretically-based understanding of the persistence of power imbalances in community forestry, and of the potential of adaptive collaborative governance to shift such imbalances.

As described in **Chapter 2** of this thesis, the study was based on longitudinal, multiple case studies of CFUGs (n=11) in seven districts of Nepal. The first phase of the research took place between 1999 and 2002; the second phase spanned 2004 to 2007, with a follow-up assessment in all sites in 2008. The methodology in each case study site, in both phases, applied both traditional social science assessment drawing on participatory methods and participatory action research. These were integrated in each site through a research process that started with a series of formal background studies, followed by participatory action research (PAR), accompanied by ongoing observation and documentation throughout the PAR process, and concluding with a final formal assessment. Key features of the design were the iteration between field experience and analysis throughout, an explicit focus on gender and diversity, and the application of an adaptive and collaborative approach to the researching process .

Chapter 3 sets out the theoretical backdrop and framing of the study with regards to power in community-based natural resource governance. Natural resource governance literature increasingly has recognized the prevalence of power imbalances in socio-ecological landscapes. Moreover, the literature signals that these imbalances undermine livelihoods and well-being and reinforce the vulnerability of the least powerful groups. And yet, to date, there is limited exploration of why such imbalances persist. While adaptive collaborative

approaches to natural resource governance have been proposed as potentially contributing to power shifts, this connection is relatively little explored and explained. Chapter 3 addresses this gap by advancing a theoretical understanding of the persistence of power imbalances in community-based natural resource governance. In particular, it addresses the first of this study's four research questions: *From a theoretical perspective, why do power imbalances persist in community-based natural resource management and what role could adaptive collaborative governance play in shifting them?* It explores the question of persistence by means of a theoretical synthesis highlighting the concepts of unmarked categories, doxa and delegation, and of the recursive nature of structure and agency. Next, the chapter applies this lens to understand why and how adaptive collaborative governance may influence power imbalances. In doing so, the chapter asks, 'What can create a "break" in these reinforcing patterns? This reflection proposes reflexivity as a theoretical entry point to this question. From this basis, the chapter proposes a multifaceted role for social learning in explaining adaptive collaborative governance's potentially transformative influence on power imbalances.

Turning to the empirical manifestation of power in community forestry, **Chapter 4** addresses the study's second research question: *What is the influence of an adaptive collaborative governance approach at the CFUG scale, on engagement in CFUG decision making, in particular, in relation to women and the poor?* The evidence showed that the status quo at the outset of the research reflected traditional Nepali socio-cultural hierarchies, in terms of the marginalisation of female, poor and *Dalit* members, and a correlated dominance of CFUGs' decision making by high caste and wealthy men. The key finding was that, although not without challenges, the engagement of previously marginalised members increased as the CFUGs shifted to adaptive collaborative governance. In particular, the study tracked and observed increases in four aspects of their engagement: 'being involved' (attendance, speaking out, challenging); representation in leadership roles; CFUG priorities (income generation activities, micro-credit and rules); and satisfaction with the degree and manner of their engagement.

Chapter 4 also explores the interconnected factors underlying the changes, considering these through the lens of a 'three-gap analysis of effective participation'. This leads to specific insights concerning the conceptualization and strengthening of engagement in community forestry including the central roles of power and learning. The analysis generally confirms the significance of the three gaps identified by the analytic framework (capacity, incentive and power), as well as further nuancing them. Further, the chapter indicates that two additional areas could usefully be recognized as gaps: space and learning.

Turning to livelihoods, **Chapter 5** investigates the third research question: *What is the influence of an adaptive collaborative governance approach at the CFUG scale on the generation and distribution of CFUG-related livelihood benefits?* The chapter responds to the relative dearth of empirical exploration of community forestry's contribution to poverty alleviation, and in particular, of understanding of social learning-based approaches to forest governance and poverty alleviation. The study includes analysis of impacts on income generation, access to micro-credit, and employment. *Ex-ante* analysis indicated that the default CFUG practice was the non-prioritization of women and poorest members in terms of access to forest products, income generation, micro-credit, and employment opportunities. The *ex-post* findings indicate that the financial and forest assets of both women and the poor—and especially poor women—increased as a result of adaptive collaborative forest governance. They also suggest a strong role for social learning in poverty alleviation. The findings reflect both an 'increase in the CFUG pie' and a 'redistribution of the CFUG pie' under adaptive collaborative governance.

The chapter demonstrates that the ways in which adaptive collaborative governance influenced the forest and financial benefits of poor and women were multidimensional and interconnected. Critical elements included the increasing engagement and influence of previously marginalised members, decision making based in social learning processes and nested arrangements, and CFUGs becoming more proactive in terms of networking and collaboration. The analysis suggests that shifts in livelihoods and distributional equity are not rapid, smooth, or uniform, nor are they an 'end' to be achieved. Rather, they—and poverty alleviation more broadly—can be better conceived as part of a long-term process of power-related transformation.

Chapter 6 highlights that messy and surprising dynamics remain under-recognized in natural resource governance, including the inherent interplay between conflict, social capital and governance. To address this, the chapter explores the fourth and final research question of the thesis, '*What is the influence of, and relationship between, adaptive collaborative governance at the CFUG scale, in terms of social capital and conflict?*' The chapter considers the dynamic intersections of these three often seemingly disparate phenomena, in particular, examining the changes in social capital and conflict that accompanied a transition by local groups towards adaptive collaborative governance. Focusing on the intersection of these three phenomena, it explores the following questions: What was the nature of conflict in the CFUG sites at the outset of the research? Did conflict and social capital change as the groups shifted to adaptive collaborative governance, and if so, in what ways? And, in what ways did adaptive collaborative governance, conflict and social capital interact and influence one another? The analysis illustrates the complex and dialectical relations amongst these three phenomena. Key findings include: a

demonstration of the pervasive nature of conflict and 'dark side' of social capital; that collaborative efforts changed social capital, rather than simply uniformly enhancing it; and, that conflict at varying scales ultimately had some constructive influences.

The thesis brings the above strands together to deepen and round out the analysis and insights in **Chapter 7**, the Discussion and Conclusions. This is done first by testing and discussing the theoretical conceptualization regarding the persistence and transformation of power imbalances (Chapter 3) with reference to the material in the three empirical chapters of this thesis (Chapters 4, 5, 6). Next, this section broadens the theoretical discussion by asking: What other significant roles does social learning play in relation to adaptive collaborative governance? The chapter determines that social learning can be understood in terms of (at least) three key cross-cutting roles in adaptive collaborative governance, namely contributing to: shifting power imbalances; bridging diversity in ways that enable collective action; and, managing resilience.

Chapter 7 then draws on the empirical material of this study to discuss the gaps in the literature identified in the Introduction to this thesis. In particular, it considers the feasibility of the adaptive approach at the local scale, and the questions, 'Is there a general process?' and, 'What roles do institutional arrangements play?' The study adds to and nuances these questions by additionally asking, 'More fundamentally, what might guide the overall design of an adaptive collaborative approach?'. Key findings include process(es) of adaptive collaborative governance being usefully conceptualized as a nested set of learning cycles, and an underscoring of the significance of norms and attitudes and the non-prescriptive nature of the approach. This is followed by a discussion of drivers and shapers of adaptive collaborative governance and its outcomes. These are framed in terms of need, space and engines for change. They include, respectively, factors such as a perception of 'crisis', socially acceptable entry points to decision making, and facilitation. The discussion then turns to the gap identified in the Introduction of this thesis regarding how the phenomenon of adaptive collaborative governance can be understood and represented, or in other words, how it can be conceptualized and visually represented. In particular, this section draws on the study to develop a multi-faceted conceptual and visual representation of how learning and change occur in adaptive collaborative governance. Rather than a single loop process headed in a predictable direction, the refined model reflects three interlinked processes: the multi-loop and transformative nature of the learning in adaptive collaborative governance; the three forms of interaction embodying learning and change in adaptive collaborative management; and, adaptive collaborative governance as 'zig-zagging' towards improvement.

Finally, the thesis identifies four broad insights from the study in relation to adaptive collaborative governance and tenure, contributions to CBNRM and development outcomes, design elements, and risks and challenges. The overarching lesson is that adaptive collaborative governance, while not without obstacles, is one effective approach to navigating the complex contexts of community-based natural resource governance. While not a panacea, adaptive collaborative governance provides a useful option as a way forward: a dynamic, albeit unpredictable, unfolding of a collaborative, learning-based process of transformation in which diverse community groups may 'learn their way' towards equity and their self-generated visions of wellbeing and sustainability.

SAMENVATTING

Samenvatting

Gemeenschapsgerichte bestuursvormen betreffende natuurlijke bronnen, zoals bosbeheer door lokale gemeenschappen, krijgen wereldwijd voet aan de grond. Toch hebben zulke projecten, zoals in Nepal aangetoond, over het algemeen nog niet aan hun doelen en verwachtingen voldaan. Zoals in **Hoofdstuk 1** van dit proefschrift wordt betoogd, staat bosbeheer in Nepal na drie decennia van formele uitvoering nog verscheidene uitdagingen te wachten. Centraal staan hier de noodzaak om gelijkheid te verhogen in de participatie en besluitvorming van de gemeenschappelijke bosbeheer-groep (CFUG), en in het delen en verhogen van de baten er van voor het levensonderhoud. Het onderzoeksproject waar deze studie op gebaseerd is had als doel deze uitdagingen te relateren aan de CFUG schaal. Het onderzoeksdoel was om empirische inzichten aan te dragen met betrekking tot of en hoe adaptief samenwerkend bestuur de betrokkenheid, het levensonderhoud, het sociale kapitaal en conflicten kan beïnvloeden, met name ten behoeve van vrouwen en de armen. Verder richtte het onderzoek zich op het toelichten van de onderliggende machtsproblemen binnen gemeenschapsgerichte bestuursvormen betreffende natuurlijke bronnen. In het bijzonder zocht het onderzoek naar een dieper op theorie gebaseerd begrip betreffende het voortbestaan van machtsongelijkheid binnen het gemeenschappelijke bosbeheer en de mogelijkheden binnen adaptief samenwerkend bestuur om deze ongelijkheden recht te trekken.

Zoals in **Hoofdstuk 2** van dit proefschrift beschreven wordt is dit onderzoek gebaseerd op langdurige, meerdere casestudies van CFUGs (n=11) in zeven districten van Nepal. De eerste fase van het onderzoek gebeurde in de periode 1999-2002, de tweede fase van 2004 tot 2007, met een opvolgende evaluatie op elke locatie in 2008. De methodiek die in beide fases op elke casestudy-locatie werd gehanteerd bestond uit traditionele sociaal wetenschappelijke evaluatie met behulp van participatieve methoden en participatief actieonderzoek. Dit werd op elke locatie geïntegreerd door middel van een onderzoeksproces beginnend met een aantal formele achtergrondstudies opgevolgd door participatief actieonderzoek (PAR) gepaard gaand met voortdurende observatie en documentatie van het PAR proces, en werd afgesloten met een uiteindelijke formele taxatie. Sleutel kenmerken van het ontwerp waren de afwisseling tussen veldervaring en voortdurende analyse, een nadrukkelijke focus op gender en diversiteit en het toepassen van een adaptieve en collaboratieve aanpak voor het onderzoeksproces.

Hoofdstuk 3 beschrijft de theoretische achtergrond en inkadering van de studie ten aanzien van machtsstructuren binnen gemeenschapsgerichte bestuursvormen betreffende

natuurlijke bronnen. In literatuur over dit onderwerp wordt de heersende machtsongelijkheid in het socio-ecologische landschap steeds vaker erkent. Sterker nog, deze literatuur geeft aan dat deze ongelijkheid welzijn en levensonderhoud ondermijnt en de kwetsbaarheid van de minst sterke groeperingen versterkt. En toch is er tot op heden slechts een zeer beperkte hoeveelheid onderzoek naar waarom dit soort ongelijkheid blijft bestaan. Hoewel adaptieve collaboratieve benaderingen van het besturen van natuurlijke bronnen zijn voorgesteld als mogelijkheid om machtsverschuivingen te bewerkstelligen, is dit verband nog relatief weinig onderzocht en toegelicht. Hoofdstuk 3 adresseert deze kloof door het bevorderen van een theoretisch begrip van de persistentie van machtsongelijkheid binnen Gemeenschapsgerichte bestuursvormen betreffende natuurlijke bronnen. Dit hoofdstuk behandeld in het bijzonder de eerste van de vier onderzoeksvragen: Vanuit een theoretisch oogpunt, waarom is machtsongelijkheid zo hardnekkig binnen Gemeenschapsgerichte bestuursvormen betreffende natuurlijke bronnen, en welke rol kan adaptieve collaboratieve besturing daarin spelen om de macht te verschuiven? Het hoofdstuk onderzoekt de vraagstelling van persistentie door middel van een theoretische synthese met nadruk op de concepten van ongemarkeerde categorieën, doxa en delegatie, en die van de terugkerende aard van structuur en vertegenwoordiging. Daarna wordt in het hoofdstuk dit oogpunt gebruikt om te begrijpen waarom en hoe adaptief collaboratief bestuur machtsongelijkheid kan beïnvloeden. Daarbij stelt dit hoofdstuk de vraag: 'Wat kan deze versterkende patronen doorbreken?' Deze reflectie stelt reflexiviteit voor als een theoretisch startpunt van dit vraagstuk. Vanuit deze basis beschrijft het hoofdstuk een veelzijdige rol van sociaal leren bij het verklaren van de potentieel transformatieve invloed van adaptief collaboratief bestuur op machtsongelijkheid.

Met betrekking op empirische manifestatie van macht binnen de gemeenschappelijke bosbeheer, richt **Hoofdstuk 4** zich op de tweede onderzoeksvraag: *Wat is de invloed van een adaptieve collaboratieve bestuursaanpak op de CFUG schaal op betrokkenheid binnen CFUG besluitvorming, met name gerelateerd aan vrouwen en de armen?* Het onderzoek toont aan dat de status quo tijdens de aanzet van het onderzoek de traditionele Nepalese socio-culturele hiërarchieën reflecteert; de marginalisatie van vrouwen, armen en *Dalit* leden en de daaruit volgende overheersing van besluitvorming binnen CFUG door de hoge Kaste en welvarende mannen. De hoofdbevinding was dat, hoewel niet zonder uitdagingen, de betrokkenheid van voorheen gemarginaliseerde leden een stijging doormaakte zodra de CFUGs verschoven naar adaptief collaboratief bestuur. De studie volgde en observeerde met name vier aspecten van deze betrokkenheid: 'Betrokken zijn' (aanwezigheid, uitgesprokenheid, uitdagendheid); representatie binnen het leiderschap; CFUG-prioriteiten (inkomens generende activiteiten, micro-krediet en regelgeving) en tevredenheid over de hoeveelheid en manier van betrokkenheid.

Daarnaast onderzoekt Hoofdstuk 4 de onderling verbonden onderliggende factoren van de veranderingen en bekijkt deze vanuit het oogpunt van een 3-kloven-analyse van doeltreffende participatie. Dit leidt tot specifieke inzichten betreffende de conceptualisatie en het verstevigen van betrokkenheid binnen gemeenschappelijke bosbeheer, waaronder de centrale rol van macht en leerprocessen. De analyse bevestigt over het algemeen de significantie van de drie kloven die eerder werden geïdentificeerd bij de analytische inkadering (capaciteit, motivatie en macht) en weet deze ook te nuanceren. Verder toont het hoofdstuk aan dat twee aanvullende gebieden nuttiger wijs als kloven gezien kunnen worden: ruimte en leervaardigheid.

Met betrekking tot levensonderhoud onderzoekt **Hoofdstuk 5** de derde onderzoeksvraag: *Wat is de invloed van een adaptieve collaboratieve bestuursvorm op de CFUG schaal betreffende het genereren en verdelen van CFUG-gerelateerde voordelen voor levensonderhoud?* Dit hoofdstuk speelt in op de relatieve schaarste van empirisch onderzoek van de invloed van gemeenschappelijke bosbeheer op armoedebestrijding. Het onderzoek bevat analyses van de invloeden op inkomstenvergaring, toegang tot micro-krediet en werkgelegenheid. *Ex-ante* analyses gaven aan dat het de standaard CFUG handelswijze was om vrouwen en de armste leden geen prioriteit te geven op het gebied van toegang tot bosproducten, inkomstenwerving, micro-krediet en kansen op werkgelegenheid. De *ex-post* bevindingen geven aan dat zowel de financiële acquisitie als die van bosgrond voor zowel vrouwen en de armen, met name arme vrouwen, toegenomen zijn als resultaat van adaptieve collaboratieve beleidsvoering ten opzichte van bosbeheer. De bevindingen suggereren ook een grote rol voor sociale leerprocessen bij armoedevermindering. De bevindingen tonen zowel een 'toename op het CFUG-taart' als een 'herverdeling op het CFUG-taart' binnen adaptief collaboratief bestuur. Het hoofdstuk laat zien dat de manieren waarop adoptief collaboratief bestuur het bos en de financiële voordelen voor armen en vrouwen beïnvloedde multidimensionaal en onderling verweven waren. Belangrijke elementen waren de toenemende betrokkenheid en invloed van eerder gemarginaliseerde leden, besluitvorming binnen het sociale leerproces, en CFUGS die meer proactief werden op het gebied van netwerken en samenwerking. De analyse suggereert dat veranderingen binnen levensonderhoud en gelijkheid van distributie niet snel, makkelijk of gelijkmatig gaan, noch een 'einddoel' zijn om gehaald te worden. Ze kunnen beter gezien worden, evenals armoedebestrijding op een breder vlak, als een onderdeel van een langdurig proces van machtsgerelateerde verandering.

Hoofdstuk 6 legt de nadruk op de miskenning van de slordige en verrassende dynamiek binnen het bestuur van natuurlijke bronnen, waaronder de inherente wisselwerking tussen

conflict, sociaal kapitaal en bestuur. Om dit aan te tonen onderzoekt dit hoofdstuk de vierde, en laatste, onderzoeksvraag van het proefschrift: *Wat is de invloed van, en relatie tussen, adaptief collaboratief bestuur op de CFUG schaal, in termen van sociaal kapitaal en conflict?* Het hoofdstuk neemt de dynamische kruising van deze drie, vaak als ongerelateerd geziene, fenomenen in acht, met in het bijzonder het onderzoeken van de veranderingen op het gebied van sociaal kapitaal en conflict die de verschuiving van lokale groeperingen richting adaptief collaboratief bestuur met zich meebracht. Met een focus op de kruising van deze drie fenomenen onderzoekt het hoofdstuk de volgende vraagstukken: Wat was de aard van de conflicten op de CFUG gebieden aan het begin van het onderzoek? Zijn de conflicten en het sociale kapitaal veranderd naarmate de groepen de verschoven in de richting van adaptief collaboratief bestuur? En zo ja, op welke manier? En, ten laatste, op welke manier kruisten en beïnvloeden adaptief collaboratief bestuur, conflict en sociaal kapitaal elkaar? De analyse laat de complexe en dialectische betrekkingen zien die deze drie fenomenen onderling hebben. Hoofdbevindingen zijn onder meer: een voorbeeld van de hardnekkige aard van conflict en de 'donkere kant' van sociaal kapitaal; dat collaboratieve inspanning het sociaal kapitaal veranderd heeft in tegenstelling tot het gelijkmatig versterken, en dat conflict op verschillende schalen uiteindelijk enkele constructieve invloeden had.

Hoofdstuk 7 van dit proefschrift brengt bovenstaande bevindingen samen om de analyses en bevindingen uit te diepen en af te ronden; de Discussie en Conclusies. Dit wordt ten eerste gedaan door het testen en bespreken van de theoretische conceptualisatie betreffende de persistentie en verandering van machtsongelijkheden (**Hoofstuk 3**) met referenties naar het materiaal binnen de drie empirische hoofstukken van dit proefstuk (**Hoofdstukken 4, 5, 6**). Daarnaast verbreed dit onderdeel de theoretische discussie door de volgende vraag te stellen: Welke andere significante rollen heeft sociaal leren in relatie tot adaptief collaboratief bestuur?' Het hoofdstuk stelt vast dat sociaal leren in termen van (op z'n minst) drie transversale hoofdrollen binnen adaptief collaboratief bestuur, namelijk het bijdragen aan verschuivende machtsverhoudingen, het overbruggen van diversiteit op een manier waardoor collectieve actie kan ontstaan, en het onderhouden van veerkracht.

Daarna gebruikt **Hoofdstuk 7** het empirisch materiaal van dit onderzoek om de kloven binnen de literatuur, beschreven in de introductie van dit proefschrift, te bespreken. In het bijzonder wordt de haalbaarheid van de adaptieve aanpak op lokale schaal in acht genomen, en de vragen: 'Is er een algemeen proces' en 'welke rol spelen institutionele arrangementen?' Het onderzoek bouwt verder op deze vragen en nuanceert ze door daarnaast de vraag te stellen: 'Wat zou, fundamenteel gezien, het algemene ontwerp van een adaptieve collaboratieve aanpak kunnen zijn?' Hoofdbevindingen omvatten hier dat

proces(sen) van adaptief collaboratief bestuur nuttig geconceptualiseerd kunnen worden als een verweven verzameling van leercycli, en een onderstreping van de significantie van normen en houdingen en de niet-voorschrijvende aard van de aanpak. Dit wordt opgevolgd door een bespreking van de drijvende krachten van en invloeden op adaptief collaboratief bestuur en haar uitkomsten. Deze worden gekaderd in de termen noodzaak, ruimte en drijfveren voor verandering. Ze bevatten respectievelijk factoren zoals de beleving van 'crisis', sociaal geaccepteerde beginpunten voor besluitvorming en facilitering. De discussie richt zich daarna op de kloof als geïdentificeerd in de introductie van dit proefschrift betreffende hoe het fenomeen van adaptief collaboratief bestuur begrepen en weergegeven kan worden, of, met andere woorden, hoe het geconceptualiseerd en visueel gepresenteerd kan worden. Dit gedeelte gebruikt het onderzoek in het bijzonder om een veelzijdige conceptuele en visuele representatie te ontwikkelen van hoe leren en verandering zich voordoen binnen adaptief collaboratief bestuur.

Tot slot identificeert het proefschrift vier brede inzichten van het onderzoek gerelateerd aan adaptief collaboratief bestuur en eigendomsrecht, bijdragen aan CBNRM en ontwikkelingsuitkomsten, ontwerpelementen, en risico's en uitdagingen.
De overkoepelende conclusie is dat adaptief collaboratief bestuur, hoewel zeker niet zonder obstakels, een effectieve benadering is voor het navigeren van de complexe contexten waarin gemeenschapsgerichte bestuursvormen betreffende natuurlijke bronnen plaatshebben. Hoewel het geen wondermiddel is, blijkt adaptief collaboratief bestuur een nuttige optie voor vooruitgang: een dynamische doch onvoorspelbare ontwikkeling van een collaboratief, op leren gebaseerd proces van verandering waarin diverse groepen binnen een gemeenschap 'hun eigen weg vinden' richting gelijkheid en hun zelf ontwikkelde visies op welzijn en duurzaamheid.

ABOUT THE AUTHOR

About the author

Cynthia McDougall was born in Winnipeg in 1968 and raised in Ottawa, Canada. Her B.A. Honours in Comparative Development Studies and Political Science at Trent University (Ontario, Canada)—in conjunction with study, volunteer and travel experiences in Central America—marked an entrypoint to a lifelong journey in sustainable development and equity issues. While at Trent, a hands-on extended course on Participatory Action Research catalysed a lasting interest in participatory methodologies and facilitation, as well as adult and transformative learning. Cynthia's Masters in Environment and Development at Cambridge University (UK) expanded her focus, connecting to and exploring food security issues in developing country contexts.

Cynthia merged the above food security focus with earlier skills upon her move back to Canada (Vancouver), to engage in nonprofit research and participatory action research, as well as in environmental and experiential education. Her experience with learning-oriented monitoring and facilitation led her to the Center for International Forestry Research (Indonesia) in 1997. There she joined a dynamic international team to develop a multi-year research initiative on adaptive collaborative approaches (ACM) to community forestry, and take on the leadership and development of the Nepal ACM research for both of its phases (1999-2002; 2004-2007). This opened a window into the field of complex adaptive systems, which continues to shape her thinking today.

Having returned to Canada's west coast, the participatory methodology background and gender focus combined with an environment-related injury (2012) to galvanize an interest in ecohealth. Building on this interest, she took on a Research Award with the Ecosystems and Human Health Programme of Canada's International Development Research Centre (Ottawa, Canada) in 2013. Connecting with the inspiring IDRC ecohealth team and broader network, Cynthia focused on analysis of ecohealth methodologies in vulnerable people-oriented research, as well as developing discourse around research excellence in ecohealth, and developing a Research Chair Programme in Ecohealth in subSaharan Africa. Setting aside independent consulting work in early 2015, Cynthia is now embarking on a journey to apply the deepened learning from this thesis regarding power, gender, and participatory action research in a new context. Specifically, she is taking on a Senior Scientist and Gender Theme Leader position, focusing on gender transformative research, with the innovative WorldFish Center and Aquatic Agricultural Systems Programme. She is currently relocating to Penang (Malaysia) with her wonderful husband and daughter.

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