Participation and economic innovations: Technocracy dilemmas in Community forest management

Kalpana Giri[a], Hemant R. Ojha[b]

[a]ForestAction Nepal, Satdobato, Nepal, kalpana22us@yahoo.com, kg_forestaction@wlink.com.np
[b]ForestAction Nepal, Satdobato, Nepal, ojhahemant1@googlemail.com

Abstract: Despite communities' institutional recognition and improvement in forest condition, livelihood benefits to local communities, especially the poor and disadvantaged groups, remain limited. Drawing upon the experience of a participatory action research project, that aims to understand processes through which economic innovations can address livelihood challenges in Nepal, we contend the need for problematizing the participatory approach itself to unravel the complex pathways of – and constraints to – livelihoods innovations in Community Forestry. We argue that technocracy limits space for economic innovations in community forests through regulatory practices and bureaucratic behaviour. Despite legal autonomy, local communities face significant hurdles and impediments as they plan to undertake innovative actions in forest management, use, marketing, and benefit sharing. A key conclusion is that livelihood innovations in Community Forestry may be more related to the relationship with bureaucratic and regulatory structures rather than the commonly assumed internal processes and capacities of the local communities. Thus, technocracy is impeding economic innovations despite the significant participatory gains in community forestry.

Keywords: Community Forestry, deliberation, hegemony, livelihood, Nepal

1. INTRODUCTION

Over the past three decades, Nepal's Community Forestry program has been marked a tremendous shift from state-centric and top-down to community-based participatory approach to forest governance. Supported by adaptive decentralized and devolved policy processes, Community Forestry is widely recognized as an innovative approach to forest management and governance (Koirala et al., 2008). Based on traditional use pattern of forest patch, the state devolves forest management rights (and not ownership) to local community, commonly known as the community forest user group (CFUG). By granting CFUGs the rights to protect, manage and use the forest and its products, the programme aims to nurture deliberative democratic platform and enhance CFUGs' access and influence in decision-making processes (Banjade and Ojha, 2005). Currently, Nepal has some 16,000 CFUGs, which have the legal rights to manage over a million hectares of forest areas, thus bringing about one third of the country's forest area under Community Forestry (DoF, 2010). Given its history of over three decades, studies have increasingly focused on the extent to which CFUGs implement democratic practices, improve livelihood options and restore ecological benefits.

Most of the previous studies clearly indicate that Community Forestry is especially successful in forest conservation (Yadav et al., 2003; Thoms, 2008). Yet, there are also studies showing that actual livelihood outcomes from Community Forestry has been limited (Khadka and Schmidt-Vogt, 2008; Dhakal and Masuda, 2009), and thus remain below the theoretical potential (Edmonds, 2002; Yadav et al., 2003). Such limited livelihood outcomes have often been attributed to two key factors. First, the weak and inefficient internal governance within CFUGs, such as elite capture, inequitable forest products distribution and benefit sharing mechanisms, and lack of

access to and influence in forest decisions, can hamper the equitable benefit sharing amidst forest users, with limited benefits going to marginalized groups (Agarwal, 2001; Giri, 2006; Nightingale, 2010). Second, stringent emphasis to 'protect' the community forests, despite the productive potential and market values of these forests, have limited and even undermined the potential of enhancing and diversifying livelihood options for the forest users (Edmonds, 2002; Yadav et al., 2003). Central to both challenges is the ways in which CFUGs negotiate rights with the state and the autonomy they have in decision-making. While there are some studies that demonstrate extra-legal techno-bureaucratic control over a CFUG, it is less understood how forest bureaucrats and local forest users negotiate knowledge and political power pertaining to the policy and practice of forest management and governance (Nightingale, 2005; Giri 2005b; Ojha, 2006).

Forest bureaucrats often produce and perpetuate techno-bureaucratic legacies in forest management, with the aim to enact the state's centralized control over forest management (Shrestha, 2001; Mahapatra, 2001; Ojha, 2006). Such legacies can be seen as a "backlash" or "betrayal" to community-based forest management (Mahapatra, 2001), as they undermine the principles of devolution and decentralization in Community Forestry (Shrestha, 2001). While these reflections point to techno-bureaucratic hegemony as a barrier to effective forest management, these studies have not provided an in-depth account of how the hegemonic, techno-bureaucratic power impedes the agency, willingness and incentive of local people to engage in innovation in forest management. Moreover, in case of community forest management, hegemony is treated as being static (similar over time and in all contexts), and as exhibited by a single-actor (i.e. the state). At the wider level, the question is: how can the Community Forestry system nurture democratising power to enable its hegemonic actors to be self-reflexive and prepared to allow and facilitate innovate institutions, technologies and practices for better livelihood results in community forest user groups?.

Drawing on the experience of a participatory action research project, which aims to understand and facilitate innovations systems in forest management in Nepal, we argue that the onset of economic potentialities of community forests can not only reinforce the relative importance of the state agencies, but also generate new hegemonic practices and actors. Such hegemonic practices can further limit the livelihood outcomes in the CFUG. Also, the 'space of economic innovation' is restricted by both (i) regulatory practices and bureaucratic behaviour of state forest agencies, and (ii) the emergence of new forms of hegemonic practices and actors, affecting the transparency and equitable systems in the CFUGs.

This paper starts with a brief conceptual overview of technocracy and innovation with an explicit focus on state agencies in the context of forest and natural resource governance, before presenting the results from the action-research project. Based on an analysis of attitudes and practices of state actors amidst livelihood innovations in CFUGs, we discuss how technocracy and innovation interlink, focussing on the hurdles and impediments to innovative processes in Community Forestry. Thus, our aim is to understand the complexity through which local users and bureaucrats interact, enacting the hegemonic relations of power that limits the space for innovation. While the action research project has identified some change mechanisms, what we focus on in this paper are diverse challenges linked to techno-bureaucratic domination over forest governance that we experienced while working in the field.

2. TECHNO-BUREAUCRATIC PRACTICE IN COMMUNITY FORESTRY FROM INNOVATION PERSPECTIVE

Most of the studies analyzing community forest management and governance in Nepal use the perspective of 'institutional and property rights' (e.g. Ostrom, 1990), and/or of political ecology (e.g. Blaike and Brookfield, 1987). These perspectives tend to highlight the rational behaviour of individuals and the associated power plays within the institutions that in turn, can affect community forest governance (Dahal, 2003; Lachapelle et al., 2004). Yet, most of these studies focus on certain components of community forest system such as internal dynamics of CFUG (Lapachelle et al., 2004; Dahal, 2003), or pluralistic civil actors (Timsina and Paudel, 2003) and their effect on community forest management and governance. While these studies have rightly revealed important dynamics of governance mechanisms and underscored the importance of a pluralistic network for effective forest governance; an in-depth analysis of the ongoing interaction between state and forest communities is essential to reveal the complex processes during which stakeholders inquire, learn, contest and act together (Forester, 1999).

Such an understanding is also deemed essential considering the emerging consensus that techno-bureaucratic values and practices predominate environmental decision-making (Backstrand, 2004; Ojha et al., 2009). This is particularly relevant in developing countries where the legacies of centralised and technically-oriented colonial approaches continue to be reproduced and dominate policies and practices of forest management (Shivaramakrishnan, 2000; Sarin et al., 2003). Only a few studies (Shrestha, 2001; Mahapatra 2001; Ojha et al., 2009) have documented that in Nepal, the relations between CFUG institutions and the state are not progressing through linear trends of participatory and decentralized development (Timsina and Paudel, 2003). Rather, complex forms of contention and collaboration between civic power and techno-bureaucratic power exist, that are usually mediated by a wide range of development and environment actors (Giri, 2005b). Thus, a detailed understanding of how such technocratic interactions surface and affect community forest management and governance is imperative for both research and its use in practice and policy.

While definitions may vary, we understand technocracy as a state of techno-bureaucratic control and regulatory enforcement that does not provide deliberative space to civic actors to enact change, learning and modification (Fischer, 2003). Likewise, we understand innovation as irreversible change in the behaviour, relationship, technology use for greater and equitable benefit.

Our analysis captures experiences as we tried to actively promote innovations in forest governance, focussing particularly on establishing and enabling linkages between local CFUGs and forest offices. We build on the innovation system perspective (see Hall, 2005; World Bank, 2007) to study such interactions. The aim is to understand what enables the techno-bureaucratic hegemony to be challenged and transformed, and which innovative processes of interaction and learning can work to this end. The innovation system perspective provides an explicit focus on interrelated actors who interact in the generation, exchange, and use of forestry-related knowledge in processes of social or economic relevance, and the institutional context that conditions their actions and interactions (Smits, 2002; Hall, 2005; World Bank, 2007). This perspective does not see innovation as mere technologies or products, but as the process through which knowledge is generated, negotiated and

put to use, and again contested, leading to more learning questions and need for research and analysis. Thus, innovation encompasses interactive processes amidst different actors and organizations, often possessing different types of knowledge within a particular social, political, policy, economic, and institutional context that influence these processes. From this perspective, we particularly focus on understanding how the historically entrenched relations of power and knowledge surrounding local communities and the state forest agencies can change, and what drivers facilitate such processes. We also look at the subtle processes of reproduction of hegemony, despite rhetoric and discourse of transformation. This analysis, we expect, could contribute to the current body of knowledge on innovation. Indeed, although there is a consensus on the importance of innovation for economic development, the systemic mechanism through which it can be enhanced is not well understood. The existing literature, with few exceptions (e.g. Hall, 2005; World Bank, 2007), does not explain how economic innovations are embedded within a forest system that, in turn, operates within broader institutional and policy contexts.

3. THE CONTEXT AND PRACTICE OF INNOVATION- SITE OVERVIEW AND COMMUNITY CHARACTERSTICS

Reducing Poverty through Innovation Systems in Forestry (RPISF) is a research initiative that aims to bring research into policy and practice by enabling forest-dependent people to learn, know and improve the environment of policy and practices, and thus, to enhance their livelihood. RPISF is funded by 'Research into Use' (RIU/DFID) and the International Development Research Centre (IDRC). A coalition of five different organizations led by ForestAction has been formed to promote research innovations for active, equitable and effective management of natural resources within the framework of Community Forestry in Nepal. Each of the coalition partners has a specific role. ForestAction seeks to strengthen innovative processes in forest and livelihoods by enhancing collaborative linkages among the diverse coalition partners and through policy-oriented research. The Federation of Community Forestry Users Nepal (FECOFUN) advocates and scales-out the innovative lessons learnt throughout the country. The Central Department of Sociology and Anthropology of Tribhuvan University build academic linkages to conduct quality research on innovation. The Nepal Herbs and Herbal Product Association assesses the possibility of developing enterprises based on forest products, and developing market linkages at national and international level. The Nepal Forum for Environmental Journalists works to disseminate the project activities and innovative responses to a wider audience through Community Radio Stations in the project districts.

RPISF aims to provide a unique opportunity to these diverse groups of actors to work together in repacking, updating, disseminating, adapting and institutionalizing both product and processes of innovation. Especially, RPISF seek to: a) enhance interaction and exchange among diverse actors at different levels, b) put earlier renewable natural resources research strategy and other related research products into effective use; c) disseminate and scale out innovation products and processes; d) strengthen capacity of CFUGs networks and other local actors; and e) develop policy linkages in support of innovation system.

The project includes 15 CFUGs in Lalitpur, 15 CFUGs in Nawalparasi and 30 CFUGs in Baglung. These districts covers all three ecological regions in Nepal,

namely Terai, Mid hills and High hills. The 60 CFUGs in the project receive training and support in the use of forest management methods developed in past projects, and are supported to identify and develop forest-based enterprises as an incentive to good governance and forest management.

To enable an understanding and assessment of situations, changes, and causal connections, the research team undertook extensive social science background studies, interim, and final assessments, as well as ongoing observation by field researchers. Moreover, the coalition partners tabulated their reflection and stories about each event/observation at field sites. After an in-depth discussion and agreement with other partners, conclusions about the particular event/observation were drawn and documented. Different events such as issue-based discussion at CFUG level and multi-stakeholder meeting at district level are used to inform, identify and provide solutions to any emergent issues. Therefore, the ongoing project activities, regular meetings (cluster level meetings, reflective and interactive meetings) and correspondences with CFUGs committee members, Hamlet (lowest administrative unit) representatives, 60 project facilitators, district FECOFUN members, three district advocacy officers of the project are the major sources of information for the research.

4. COMMUNITY FORESTRY AND LIVELIHOODS- EVIDENCE OF INNOVATION SYSTEM PROCESSES AND CHALLENGES

This empirical section describes cases and stories from the field related to hurdles and challenges faced by local communities when attempting to develop innovative practices. To do so, we analyze the key actors, their attitudes, practices and patterns of interaction as well as the effect on the CFUG innovation processes.

As the facilitative actions in support of forest innovations began in the project area, we encountered a variety of techno-bureaucratic resistance that used to challenge the prospects of economic innovation in the CFUGs. Diverse cases of techno-bureaucracy and their effect on economic innovations in Community Forestry are presented in the form of following categories.

4.1 Maintaining the technical complexity of forest management

In many of the CFUGs in the project districts, local people have complained that state forest agencies working at local (district, range post) level, adopt different procedures that increase the complexity and blurs the autonomic functioning of CFUGs. In many instances, the local CFUG/NGO critique forest officials for using forestry science to misinterpret the harvesting potential of community forests. Since the CFUG is not aware of the procedures for measuring the harvesting potential of community forest, they have to rely on state forest agencies. However, even after the allocation of the annually allowable harvestable timber, the CFUGs have to report to and be granted permission from state forest officials before harvesting the timber.As an example, 'Binai' CFUG of Nawalparsi district (Forest size: 63 hectare, number of households involved: 517, natural forest, mix ethnic composition has raised this concern during the stakeholder meeting. Despite having a provision allowing them to harvest a certain amount of timber (which is specified as allowable annual cut in the operational plan), state agencies still play an influential role during the harvesting period. Often, the CFUG is allowed to cut only the dead, dying, deceased trees, irrespective of the assigned allowable annual timber. Additionally during the

harvesting period, the CFUG has to get an approval, i.e. a "tacha" in the form of an official stamp from state forest agencies to remove the allowable annual cut from the CFUG. Such a "tacha" system does not exist in the legal framework of Community Forestry, and is interfering with the autonomous functioning of CFUG. District forest agencies argue that the "tacha" is essential to monitor and control for illegal felling of economically productive trees such as *Shorea roubusta* in some CFUGs. However, the lack of proper justification and counseling of local CFUGs by state forest agencies have added the technical and administrative complexity in managing community forests. Such examples illustrate that state forest officials misuse forestry science to serve bureaucratic power and interests. Similar forms of interventions have made forest management more technically complex than initially assumed is also reported in other districts (Ojha, 2006).

4.2 Protectionist forest science

During its journey of about 30 years, Community Forestry has faced the call for change in management and policy orientation. While Community Forestry in Nepal is especially successful in forest conservation (Yadav et al., 2003; Thoms, 2008), the management system has remained mostly protection orientated. Most of the CFUGs are only removing dead, dying, fallen trees and leaf litter. Due to such passive management, using forest just for the subsistence needs, the productivity of the forest is not completely utilized (Edmonds, 2002; Yadav et al. 2003). This has called for the need of intensive forest management in Community Forestry to achieve sustainable economic transformation (Giri, 2005a).Despite the recognized need for economic transformation to benefit forest dependant people, forestry in RIU project areas has largely been practiced as a restrictive harvesting science with no or limited scope for economic innovations. Our experience and evidence reveals that the state forest agencies and many forest executive committees adopt protection-oriented forest management schemes, while other users prefer use-oriented forest management schemes. Uncooperative behavior of state forest agencies towards entrepreneurial development in CFUGs can undermine the prospects of economic innovation. As an example, in 'Hilejuke' CFUG in Baglung district (Forest size: 37 hectare, number of households involved=168, natural forest, mix ethnic composition), after seeing the potential, the CFUG wanted to establish an enterprise to produce and market locally used bowls and plates from leaves of certain trees found in their community forest. When intimated, state forest officials have discouraged them saying that: "they (CFUG) cannot do everything they want in Community Forestry". In our next visit, 'Hiljuke' CFUG had lost hope of setting up the enterprise.

Likewise, in cases where enterprises are already set up, state forest officials do not provide counseling and networking for sustaining the enterprise. This behavior suggests that despite their motivation and willingness, the CFUGs do not have the autonomy needed for economic innovation. The state still controls the ideas and decisions concerning economic activities under the protectionist attitude in forest management.

4.3 Inefficient service provisioning

Although state forest officials have the mandated roles and responsibilities, and the capability to do so, service provisioning seemed to be rather weak in many of the RIU CFUGs in all districts. As an example, some 84 household of marginalized communities were excluded from CFUG membership during a constitution

amendment in 'Tallo Pakha Pare Bhir' CFUG in Baglung district. Likewise, in 'Manedada' CFUG in Lalitpur district, there was no facilitation from state forest officials at district level to end the four-year long impasse in CFUG management. In many other CFUGs, the state forest officials' commitment to facilitation is either absent or minimal. In Baglung, a hilly district, forest rangers do not visit many of the CFUG giving reasons such as distance (5-6 hours to reach a CFUG) or lack of economic incentives. In Terai district such as Nawalparasi, forest rangers visit CFUGs only during the harvesting period, to monitor the harvesting operations and receive "bhatta" (economic remuneration) for their facilitation with harvesting operations. Moreover, CFUGs indicate that state forest officials tend to behave as if the CFUG were a unit of the District Forest Office, as indicated by their use of a top-down language.

4.4 State's discretionary control through alliances

CFUGs as one of the dominant grassroots community organizations have the opportunity to work with a broader network of alliances (such as FECOFUN) and a plurality of actors. In RIU project sites, several NGOs, researchers and donor agencies have extended their alliances with CFUGs to strengthen the democratic functioning of the CFUG. While the pluralistic context has often allowed CFUGs to link into wider networks, it has also called for an unwarranted interference of state forest officials in CFUG activities with the other actors. Many CFUGs report an increasing negative attitude of some state forest officials towards new alliances by the CFUG. Such negation is reflected in the form of denying the role of external, non-governmental service providers (such as ForestAction Nepal) and threatening the local CFUGs not to entertain the other service providers (other than themselves) or face unwanted consequences by the state forest officials (e.g. hurdles to harvesting operations). Such behavior has often been reported in Nawalparasi district, which harbors expensive timber and complex collaborative challenges in Community Federations. Additionally, in this district, state officials tend to form alliances with selected elites within CFUGs or Community Federations. This emboldens their control and strengthens their influence over forest management decisions through these allies representing CFUGs. While these behaviors are often explained as personal characteristics of a few individuals, the frequent occurrence of such behaviors reinforce the hegemonic tendency to retain the power and influence over CFUGs in different forms and behaviors. Above all, such selective ally mechanisms indicate that state forest officials tend to discourage and derecognize civil society networks that could challenge the legitimacy of bureaucratic hegemony, while they cooperate with those elites who accept it.

5. SPACES FOR INNOVATION IN COMMUNITY FORESTRY AND LIVELIHOODS-KEY ISSUES AND LESSONS

The previous section outlined a number of stories about how regulatory and bureaucratic hurdles impede innovations in forest management in the context of Community Forestry in Nepal. In this section, we analyse how these hurdles are produced and sustained while also exploring the possibilities of expanding the innovation space. There are at least a few key analytical aspects of technocracy and innovation, linked to cases and examples mentioned in the previous section.

5.1 Multiple stakeholders can countervail bureaucratic pressures

While the success of locally focused participatory initiatives such as Community Forestry is lauded to provide a democratic space for decision-making by the local users, decentralisation and increasing market forces have also introduced a wide array of stakeholders. This has lead to changing and conflicting relationships, which can lead to the emergence of local elites and alliances of powerful actors who usurp local control over resources (Wollenberg et al., 2006). As our stories indicate, the state forest agencies that used to cooperate with local forest user groups for protection-oriented forest management are paradoxically exhibiting contradictory negative behaviour and limited extension, on the onset of economic dimensions in community forest management.

5.2 Anticipation of wider-scale changes

Such a conflicting scenario is also due to the fact that most participatory initiatives have not anticipated the changing relationships among actors brought about by wider-scale political economic changes. Though labelled participatory, the challenge of these efforts remain embedded in the complexities of economic and science-normative institutions and broader political economic regimes, leaving little room for process-oriented approaches. Very locally focused participatory forestry initiatives, largely led by NGOs, often assume that local participation and 'community empowerment' suffice to overcome forest management problems. The innovation system project recognized this limit and hence sought to link three levels, i.e. the community, the meso- and the national level. However, the sheer amount of politics needed to achieve a modest level of innovation was too large to be managed within the limits of the project. Hence, the project team realized that what has been achieved is an understanding of the complexity through which local agents and bureaucrats interact and limit the space for innovation, rather than initiating actual changes.

5.3 The actors' relative importance can change during the innovation process

As our case studies indicate, seemingly collaborative and enabling environment and actors can compete for resources, in the event of economic possibilities. FECOFUN that acts as a watchdog organization for CFUGs at the national level has weak links at district level, where the economic incentives and vested interests of the leaders have formed an ally with the state. Conflict due to such changed roles of different actors can again affect innovation processes. As a result, despite being accountable to the local CFUGs' needs and concerns, the FECOFUN district chapter has not raised any concern about the state's technocratic behaviour, particularly in Nawalparasi district. Thus, interventions that seek to develop the capacity for innovation must give particular attention to ingrained attitudes and practices and the way these are likely to interact with and skew the outcome of interventions.

5.4 Systems of relationships between CFUGs and other actors are more important than within the CFUGs

A recent policy emphasis on unpacking communities runs the risk of masking bureaucratic impediments to innovation. CFUGs are not confronted with problems that are independent of each other, but with dynamic situations that consist of complex systems of changing problems that interact with each other. Thus, there is a need to address the complex dynamics of societal change, in particular the changing

relationships between interest groups in evolving political and socio-economic conditions.

5.5 Problems of representation and articulation on the part of communities

As our case studies indicate, collective action often does not suffice to counter the constraints associated with higher-scale dynamics in the context of economic change. The way communities themselves network and federate has been problematic because of the underlying political economic interests of the leaders, who resort to non-transparent and often corrupt way of reaping profits from the innovative processes. Thus, the power and influence exhibited by individuals and organizations (such as within CFUG, district FECOFUN), are embedded in actual social networks and emerging contexts and do not exist as separate, abstract, idealized relationships that follow the rules established by their boards

These examples show that partnerships and linkages are central to innovative performance and must be analyzed in their historical and contemporary context to understand their strengths and weaknesses. One of the key lessons for out-scaling and up-scaling research findings is that we must start by understanding how these interactions may affect the implementation of specific research results or baskets of research findings. Moreover, a description of the changing context is a key diagnostic element. It allows to reveal any divergence between organizations/other actors and their practices, the changing demands imposed by the context, and the overall influence on innovation processes. As circumstances change, an activity might become obsolete, be eliminated and the resources might be used in a new way. In this context, strategy needs to be understood as an unfolding process, which can include both avenues as well as dead-ends.

6. CONCLUSION

In view of research findings suggesting limited livelihoods benefits from Community Forestry, this paper explored the possibility of applying an innovation systems approach to understand how Community Forestry can benefit livelihoods and contribute to poverty reduction. Analysing the concept of technocracy from innovation system perspective, this paper has demonstrated that livelihood outcomes are unlikely to be generated automatically through improved participation and strengthened local institutions such as CFUGs. Instead, improving livelihoods requires a continuous system of innovation and social learning in relation to planning, decision-making, entrepreneurship development, access to information and ideas, market linkages, and empowerment of the poor and disadvantaged. The experience of the RPISF project reveals that while communities have enough volunteers and capable leaders to facilitate innovation, as well as recognised economic and livelihood opportunities, technocratic behaviour of state agencies continues to be one of the key impediments to innovation related to effective, productive and equitable use and marketing of forest resources in the Community Forestry.

Despite legal autonomy and a strong institutional base, CFUGs continue to face significant constrains to make management decisions oriented towards economic innovations, despite the emerging market potential of timber and a wide variety of non-timber forest products. It is also because the underlying political relation, constructed through a historical process of state and community formation, does not

allow the communities and the disadvantaged groups to explicitly challenge such hurdles exercised by state agencies. Likewise, the development agencies working in these communities do not provide critical empowerment services, as they take an apolitical approach, seeking to avoid possible contradictions with the techno-bureaucratic behaviour of state officials. This is not to deny that there are a few foresters in state forest agencies who proactively support and act for devolution of forest policies into practice. However, the role of state forest as an institution is instrumental to overall design and implementation of techno-bureaucratic practice prevalent in community forestry. As a result, these communities continue to face deep-rooted technocratic resistance in a number of ways (asking bribes and fees, threats). These constrain their agency to explore and innovate in forest management and livelihood improvement practices. Thus, any further improvement in livelihoods from Nepal Community Forestry would depend on removing such barriers, hurdles and limited freedoms of local actors to innovate methods, technologies, institutions and practices that harness the economic and livelihood opportunities of forest ecosystems.

These results point to two broader insights. First, there is a need to problematize participatory approaches to forest management that do not question the existing structure of state bureaucracy. Second, there is a need to document lessons on processes that may have triggered self-reflexivity in the agency of the state officials, and to understand how this has worked with other processes to enable overall innovation in forest governance, away from the technocratic hegemony. In the current context of Nepal moving through a political transition, it is relevant to bring the issues related to structure and behaviour of the state when we promote community-based resource management and development. Without problematizing the deep-rooted technocratic behaviour of state forest agency, it is naive to expect significant improvements in livelihoods. However, concepts related to innovation systems can be used as an entry point to understand the linkage between structure and behaviour of state agency as they come to govern and regulate community actions in resource management and innovation.

Acknowledgements

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