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Management of Knowledge Systems in Natural Resources Some Lessons on Policy and Institutional Framework in Nepal

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Introduction

Nepal is facing increasingly tough challenges to get access to and benefit from the rapidly globalized knowledge resources and networks. This is especially true in the case of the natural resource sector, which directly supports local livelihoods and crosscuts the global agendas of biodiversity conservation and natural products' trade. The majority of the country's overwhelming numbers of poor continue to live at the interface between land, forest and water, often without adequate access to such vital resources. State policies and institutional strategies have typically remained insensitive to the means by which opportunities for learning and innovation can be fully exploited within and between the institutions so that livelihoods of such people can be enhanced by harnessing both local and global opportunities.

Currently, political governance is in crisis and pressures for social change are growing. Political leaders are being challenged to learn from past mistakes and to demonstrate new visions and strategies in their approaches to governance. Academic institutions are being challenged to develop courses and methodologies that better address the issues encountered in daily life. Development projects are being challenged to justify their continuing presence despite their limited impact on and benefit to the livelihoods of the poor. Bureaucrats are being challenged to deliberate with citizens on public policy within publicly accessible fora. NGOs are being challenged to demonstrate the long-term impacts of conducting "empowerment" trainings or forming community saving groups. Today, people from different walks of life are critically reflecting on the past 15 years of democracy, 40 years of planned development efforts, and 235 years of modern statehood.

But our reflections and responses appear to be too limited on at least two fronts: *a)* critiques have not explored the areas beyond current experience and pre-conceiving mode of thinking and *b)* the transformative potential of communicative interactions has not been harnessed. Often, we have not been able to liberate ourselves from the unwanted legacies of the past; rather, we value *experience* as the sole basis of learning, which can quite often be a liability. This is particularly true when we fail to recognize our own mental frames that guide our interpretation of the individual experience. "Experiential learning" within such inadequate conceptual frames lead only to even narrower and irrelevant views of the world,

Summary of Policy Conclusions:

- *Recognise inclusive and deliberative processes of policy-making and institutional change.*
- *Bring policy processes into public domains including those accessible to disadvantaged groups*
- *Decentralize learning opportunities, resources and practices.*
- *Promote and recognize civil networks for learning and policy deliberations.*
- *Allow spaces for experimental innovations and promotion, and allocate resources to absorb sharing opportunities.*
- *Create multi-stakeholder forums, cross-institutional alliances and collaborative action to promote knowledge interface and transformative learning.*
- *Promote holistic reflection on practices beyond pre-conceived linear frameworks.*

which in turn leads to inappropriate and ineffective actions.

Likewise, we are closing the frontiers of *transformative dialogues* and deliberation through the creation of zones of political and institutional security. It is natural for humankind to feel insecure as we begin to think in new ways. Leaders and powerful groups tend to preserve the old legacies from which they draw legitimacy for their thoughts and actions, and they feel threatened when their ideas are challenged. To remove these barriers, we need to engage in new ways of learning that promote an unconstrained democracy of both knowledge and power, which together form the means to facilitate social and institutional change. We need new tools to assist us in the exploration of new frontiers of learning – within oneself, between the self and others, and between the self and the material world.

To address these issues, we have recently completed research on knowledge system management within the natural resource sector in Nepal. This research intended to explore policy and institutional frameworks of social learning and transformation. Through the analysis of seven empirical cases, we have generated several insightful findings that we hope will be relevant across the larger social and political domain. The seven case studies are taken from local, sub-national and national level institutions and policy processes. Please see Table 1 for details on these cases.

Table 1: Types and nature of case studies

SN	Title of case studies	Institutions selected	Level	Specific characteristics
1.	Democratizing Knowledge and Power: Action Learning in Community Forestry	Gagan Khola (Siraha), Sundari (Nawalparasi), Karmapunya (Kabre) and Baisakheswori (Dolakha) CFUGs	Local	Diversity in terms of geography, natural characteristic and social-political compositions
2.	Interface of Knowledge Systems: A Case of Chhatis Mauja Irrigation in Nepal	<i>Chhatis Mauja</i> irrigation system (Nawalparasi district)	Local	Farmers managed irrigation system
3.	Culturally Embedded Knowledge in Irrigation: People's Ways of Thriving in a Himalayan Village	Lomanthang (Mustang district)	Local	Formal and informal leadership; resistant to external interventions
4.	Civil Forum and Deliberative Governance: The Case of FECOFUN	Federation of Community Forest Users Nepal (FECOFUN)	Sub-national	A network of more than 14,000 CFUGs - a strong civil actor in the field of natural resource management
5.	Agricultural Knowledge Systems in Nepal – Perception, Production and Practice	Nepal Agricultural Research Council (NARC)	National	Government institution for agricultural research
6.	Knowledge Authenticity: The Case of Forest Inventory in Community Forestry	CF inventory policy	National	Instrumental versus local knowledge
7.	Knowledge Creation and a Learning Process: The Case of Australian Forestry Projects	Nepal-Australia Community Resource Management and Livelihoods Project (NACRMLP)	National	Bilateral forestry project working for more than 30 years in Nepal

Findings

The five key conclusions from the study are as follows.

First, in every human institution, knowledge and power are inextricably linked. Addressing knowledge in isolation gives an incomplete view of the systems of learning and innovation. Power is grounded in diverse dimensions of social class (e.g. caste, ethnic group, and gender), economic assets, and symbolic capitals (e.g. social status), to varying degrees. Several of the tensions that have been reported within knowledge domains – theoretical versus practical, technical versus social, formally-organized versus socio-culturally embedded – are actually created and sustained by the inherent power relations among the social agents and institutions which have internalized their structures of cognition and motivation. The case of community forestry inventory policy investigation at the national level indicates how two broadly defined groups, the state forest officials and local communities, appear to be contesting over the legitimacy of two contrasting systems of knowledge – technical/instrumental and local/indigenous – in the management of community forests. However, the alliance between local elites and state officials around the same domain of knowledge (i.e. using scientific forest management tools to determine the nature and quantity of forest harvest) leads us to conclude that the divide between “indigenous” and “scientific” knowledge may not be as sharply differentiated as is usually believed, but is very much mediated by the local power relations amongst the actors.

Second, the inherent diversity and differentiation (socio-political stratification) among social agents means that dominant groups are structurally in a better position

to more holistic and legitimate claims of knowledge through the more effective allocation of effort for action and reflection. This is one of the reasons to explain why, within forest user groups, local elites have been able to justify their positions and argue for collective decisions in their favor, even when the policies and institutions mandate the use of participatory decision-making processes. This raises challenges on how to foster democratic deliberation both within civil society as well as between civil society and the state in order to achieve the equitable governance of natural resources.

Third, through our analysis of a recent action and learning initiative in four forest user groups, we found that critical and self-reflexive engagements of the marginalized groups, in conjunction with inputs from civil society activists, can allow them to challenge dominant discourses and narratives. The marginalized groups can thus take some control over the power-knowledge nexus to influence institutional decisions. This finding has challenged our own initial assumption that institutional frameworks and policies are pre-conditions for development of effective and transformative knowledge systems. We now see tremendous scope of maneuver within the existing institutions if social agents start to engage in critical self-reflection. However, this is again related to how the macro-level policies and institutional environments encourage the development of civil society activism at the grassroots level with a potential for such change.

Fourth, the role of civil society in challenging the over-scientization of political and social issues is also demonstrated by the case of the federation of forest users. Though the internal learning system is not free from hierarchical influences, the federation, as a network

within civil society, has been able to challenge the expansion of the instrumental position of forest officials in resolving the issues of roles, rights, and responsibilities within forest management. This indicates that deliberation and political/public spheres can expand the spaces for creating knowledge and shifting power relationships.

Fifth, a common observation emerging from all of the cases is that learning tends to be more incremental and less transformative. This means that, for the most part, neither individuals nor institutions explore their basic assumptions, “mental models,” or “doxa” that guide the perceptions and methods of knowing. Discursive knowledge is thus inscribed within a more widely encompassing cognitive structure, which is rarely challenged, unless there is a serious crisis or break. This is supported by our observations of micro-level groups (water users changing norms due to demographic compositions). This observation also resonates with the lack of any significant shift in the strategy of developmental actions on the part of the affiliated, associated and supporting development agency, in this case, the Australian government-funded bilateral forestry project, which was renewed several times over a period of 30 years. This project adopted more or less same approach in implementing community forestry and did not demonstrate any transformative shifts in learning during the successive phases. However, this (the bilateral project) has contributed (financial/otherwise resources) to facilitate an interface between the local communities and national forest bureaucracy to better link policy and practices, especially at the beginning of community forestry policy.

Policy Recommendations

Based on the findings and conclusions, the following policy recommendations are made:

Recognize inclusive and deliberative processes of policy-making and institutional change.

Our case studies show that the policies and practices based on the framework of **liberal democracy** appeared to be insufficient to promote the diverse forms of knowledge. The knowledge and power of the scientists/experts and that of the people's representatives did not seem to be an appropriate mechanism for inclusion, deliberation and institutional change. The meaning, knowledge, and perspectives of the people are often ignored by the technical approach in development. For example, the inventory policy process of 2000 was wholly guided by the instrumental, expert-based knowledge that ignored the perspectives of the people. However, the policy processes within the local levels, such as in CFUGs and Water User Groups, appeared to be more participatory and inclusive. The poor and marginalized involved themselves in changing the rules and regulations of resource utilization and representation in decision-making process at local level. The policy-making process is itself not linear; rather it is both chaotic and circular. Therefore, an environment needs to be

created for the equitable and genuine participation of marginalized people in learning processes that facilitate processes of deliberation among social agents with diverse perspectives and knowledge systems.

Bring policy processes into public domains

In bringing issues of policy processes to the public domain, the bureaucrats and political representatives will allow ample space to enhance the civil actions moving toward the democratization of knowledge and power relationships. Such types of horizontal dialogue of knowledge lead to appropriate policy. In the case of the CFUGs studied, the policy dialogue in public spheres (small hamlet level to village level) changed the knowledge and power nexus by lowering the influence of the rich and supporting the poor and marginalized in the decision-making process. In the case of Baraforest privatization (see the case of FECOFUN for details), FECOFUN brought the issue of privatization into the public sphere, leading to the withdrawal of the multinational corporation from the timber business through the generation of public pressures.



Decentralize learning

The current practices of learning are centralized and there is limited recognition of the learning arising from the grassroots. Knowledge-generating research practices should be decentralized and devolved to the local level in order to demonstrate that authentic knowledge can also be generated from the grassroots. For example, NARC should not only conduct research itself, but should also facilitate the development of the learning systems of others through the creation of a conducive multi-site learning environment. Facilitating the learning of local actors in a dynamic context could be an important role of national institutions. Widespread recognition of the validity of public knowledge and familiarity with the mechanisms for consolidating local and national perspectives, thereby synthesizing diverse knowledge perspectives, would enhance the processes of deliberative and inclusive governance.

Promote and recognize civil networks for learning

Organizing groups at the grassroots level alone did not appear to be effective in changing the policy and institutional framework unless the actors/agents had forged links with different layers of institutions (local, sub national, national)

through discursive politics. Therefore, policies and practices should recognize civil networks, promote inclusive governance, and provide an unconstrained environment for civil action as well as for the strengthening and institutionalizing of civil forums.

Allow space for experimental innovations and promotions

The learning/knowledge component is related to how various groups (i.e. those who use, depend, or otherwise have some interest in natural resources) make their way into an uncertain and complex environment, through their self-engagement within a process of learning. Space for practical innovations in approaches and methodologies of natural resource management, should be provided, as diverse knowledge perspectives, which can be integrated for transformative social change. Greater recognition should be provided to the cases of failures in order to develop new policies and institutions. In our study, the case of action learning in CFUGs demonstrated that the users have created inclusive institutional processes after space for experimentation was provided to them. External agents should recognize and promote the innovations coming from the locally (includes cultural aspects as well) devised strategies that are working in difficult environments (both geo/biophysical and socio-political) containing critical resources for the livelihoods of the residents.

Create multi-stakeholder forums, cross-institutional alliances and collaborative action to promote knowledge interface and transformative learning

Informal processes and dialogues held outside of the formal institutional framework often contribute to policy change. Such policy influence can be supported through multi-stakeholder forums and cross-institutional alliances that could provide space to engage stakeholders in dialogue, planning, and reformulation of social agendas. For example, the inventory guidelines revision process in 2004 appeared to be more participatory than that of

2000. This shift was made possible because of informal alliances and multi-stakeholders' fora that had been organized between FECOFUN, various NGOs and individuals working in the Department of Forests. Similarly, the case of *Chhatis Mauja* irrigation system has evolved through the incorporation of ideas emerged from interfaces between the scientific and local knowledge systems.

Promote holistic reflection on practices

Often, the technical rationality is derived from fragmented views without analyzing or reflecting upon other related elements of policy. For example, the inventory policy was enacted without considering the human resource capacity of the Department of Forests to provide services, financial support for cost requirements, and the implication of a technically derived inventory policy upon local knowledge. In the case of NACRMLP, a significant shift in approaches and practices did not appear due to the lack of holistic reflection of practices, beyond narrowly conceived frameworks of monitoring and evaluation. Therefore, holistic reflection on practices needs to be promoted to facilitate learning at various levels.



About ForestAction

ForestAction has a vision of a progressive and democratic society, free from injustice and domination. Our mission is to mobilize citizen efforts and professional creativities for transformative change in political, cultural, social, economic, and environmental aspects. Our mission is based on the premises of deliberative governance, transformative learning, and partnership and collaboration.

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