Political Ecology of the Implementation of Scientific Forest Management in Nepal

Deepak Gautam1,2, Pawan Karki1, Kshitij Paudel1, Bishal Humagain1, Manoj Burlakoti1, Catherine Mhae B. Jandug2,3, Garima Sharma1, Dhruba Bijaya G. C1*

1Institute of Forestry, Tribhuvan University, Pokhara, Nepal
2College of Forestry, Beijing Forestry University, Beijing 100083, China
3College of Forestry and Environmental Science, Caraga State University, Philippines

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*Corresponding author: Dhruba Bijaya GC

Abstract

Scientific Forest Management (SFM) is an emerging modality for managing forests of Nepal based on active silvicultural interventions. It is an application of scientific methods to achieve the most efficient means to optimum utilization and revenue generation from forest resources. The plan and application of context-specific forest management alone with the cooperation of key stakeholders play a significant part in sustainable forest management. On the other hand, this usually helps in outlining power dynamics between the forestry sector bureaucracy and the user groups. Key forestry stakeholders, however, sometimes hold specific, and often conflicting, standards about forest management policies and goals. This study revealed that from the beginning of its implementation, the involvement of key stakeholders remained disputed, largely due to differences in understanding and interpretation of SFM. From the beginning, community forest users and their networks did not own the concept, as they were suspicious of recentralization and bureaucratic dominance in forest governance through SFM. Since then, trust-building environments have been adversely affected by traditionally rooted mistrust between government officials and community forest users. Besides, maintaining stakeholder relationships through regular and substantive meetings and simplifying the bureaucratic procedures for implementing and increasing the capacity of key players may be instrumental in achieving SFM objectives.

Keywords: Sustainable forest management; Management policies; Recentralization; Bureaucratic dominance.

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INTRODUCTION

Forestry is an indispensable part of the rural livelihood of Nepal. Nearly 76% of the total inhabitants are reliant on forest products for their basic livelihood that includes firewood and fodders as a traditional form of energy sources and timbers for construction and sales purposes [1]. Whereas 64 percent of the population, in particular, is not dependent on forest resources such as fuelwood as the central energy supply [2].

For more than four decades, the Community Forest Program has become one of the Government of Nepal (GON) most successful national forest management strategies [3-6]. With the aim of conservation of forest assets and sustainable use of the woodland product, the concept of Scientific Forest Management (SFM) was re-introduced in Nepal with the support of the Multi-Stakeholder Forestry Program in 2013 [7]. The concept of SFM was not successful in the beginning days due to various circumstances in the 1990s. As per the 2014 Guideline on Scientific Forest Management, “scientific forest management is the comprehensive use of forest discipline expertise to appropriate forest management analyses of a forest crop attributes to optimize and preserve the benefits (containing secondary benefits, including ecological and environmental services) obtained from a forest.” Scientific forest management takes after silvicultural frameworks [8]. Initially, the idea of scientific forest management centered on “sustainable timber production and achieving economic objectives;” conversely, the possibility has now grown to encompass social, cultural, and environmental values [9].

In recent decades, throughout the global forestry context, the term 'scientific forest management' and 'sustainable forest management' have been used and interpreted interchangeably, linking environmental activities to sustainable development goals and focusing on the unity of three key pillars: ecological, economic
and social-cultural. There remained continuous debate among different stakeholders of the forestry sector on whether “SFM” describes ‘scientific’ or ‘sustainable’ forest management. Furthermore, all stakeholders agree that to achieve the planned management goals, SFM needs to ensure a forest management partnership between government and local communities, irrespective of both the definition [10].

The United Nations has described SFM as “a complex and changing concept that seeks to conserve and strengthen the cultural, social, and environmental values of all forms of the forest for the benefit of present and future generations” [9].

This designates that the major purpose of SFM is to maintain and ensure forest productivity and services in perpetuity. The global vision of SFM finds it to be a multi-dimensional term that combines a broad variety of commercial and pseudo-commercial standards, economic and environmental needs. It also considers global effects on the environment as climate change. In Nepal’s background, SFM is now seen as a promising way to boost the sustainability and profitability of degraded forests and to unlock the real economic value of forest resources [11].

This paper aims to analyze the policies, uses, and practices of scientific forest management from a political ecology perspective and to discuss major strains and to reflect on how scientific forest management practices are shaped in Nepal. This paper tends to focus on the review of the various articles published on the subject of the implementation and practice of scientific forest management, together with its involvement in the context of Nepal.

LITERATURE REVIEW

Various times in the context of the Nepalese forest sector have seen distinctive practices in management – Some are on the brink of national resource exploitation to collect income, while others are more concerned with resource conservation to provide critical forest resources at the grassroots level. The GoN developed policies and administrative instruments to execute the techniques for forest management appropriately [12, 7].

During the Rana Regime in Nepal (1846-1951), the forests were largely exploited and used for a revenue generation and maximizing the personal benefits of the ruling family and their allies [13]. At that time, the state used to grant certain forest areas to local elites but also promoted the change of forests into agrarian arrive. After the Rana Regime, was abolished in 1951, and subsequent endorsement of the Forest Nationalization Act in 1957, the GoN nationalized the forests. This led to a state-controlled and centralized forest management practice, which had the unfortunate result of further accelerating the exploitation of forest resources. It was followed by the felling of private forests before the state took over, and more elite forest management control. The elite control and exploitation could not be controlled even after providing the management authority to locally elected bodies, the Panchayats, as provisioned in the Forest Protection Act of 1967 [12].

Acknowledging the persistent limitations of government-controlled forest management, the master plan for the forestry sector, first reported in 1989, recognized its central role of indigenous communities or even guided a GoN to implement as well as enhance community-based forest management (CBFM). Since the ratification of the Forest Act in 1993 and also the Forest Regulations in 1995, the CBFM, in particular, Community Forestry (CF) has become a preferred program throughout the forest sector. Through the 2000 Forest Policy, the GoN launched collaborative forest management (CBFM) model in the Terai to satisfy local demand for forest products by near and distant users through the creation of the collaboration between government and community [7].

Major steps forward have been made since 2000, although there remain many challenges. For example, the CBFM model is quite a protection orientated, through adopting basic silvicultural operations and imposing very low allowable harvests even on the annual increment (AAC) [11].

During the 1990s, the GoN made its first attempts to manage forests ‘scientifically’ in the Terai, developing operational forest management plans, but did not succeed due to various reasons and different circumstances like an absence of guidelines, and an innate fear of felling green trees [7]. This failure has undermined the economic potential of the forestry sector as forest resources remained underutilized and the impact on overall productivity was negligible – the gap between demand and supply remains significant, especially in terms of timber. In 2012, the GoN launched the concept of ‘Forestry for Prosperity’ learning from previous mistakes and understanding the need to manage forest resources sustainably. The vision advocated sustainable forest management activities, especially in high-value timber species.

As a result, in 2012, and with later support from MSFP in 2013, the Department of Forests (DoF) re-piloted a scientific forest management approach in the high-value Sal (Shorea robusta) forest in Tilaurakot CBF in Kapilbastu, employing advanced silvicultural systems. The success of this piloting has opened up new avenues and opportunities and has built momentum for further work on SFM.

The Nepalese government started to encourage Scientific Forest Management. It was identified by the government, as applying the correct method of
silviculture and the principles of forest management by designing systematic compartments of fixed rotation periods. The Government of Nepal has started introducing Scientific Forest Management following the conventional planning method for forest management, which involves (a) documentation of the possible forest part, (b) dealings of stakeholders concerning operational paradigm and profit-sharing process, (c) surveying and separating the forest boundaries into a periodic block, felling series, and annual coupe, (d) evaluation of growing stock, forest area, and annual increment through inventory and (e) discussion of stakeholders and execution of administration plan [14].

Despite compelling arguments for implementing the SFM strategy and expanding its application to a wider geographical scope, SFM has struggled to achieve strong traction in gaining significant stakeholder engagement and encouraging good governance in its execution. In general, the design of SFM in community forests has also been highly criticized for all of the dominance of professional forestry authorities and for limiting the role of forest user groups (FUGs) in forest management planning and execution [15].

Similarly, the Federation of Forest-based Industry and Trade, Nepal (FENFIT), the Community-based Forestry Supporter's Network, Nepal (COFSUN), the Himalayan Grassroots Women's Natural Resource Management Association of Nepal (HIMAWANTI), and the Association of Collaborative Forest Users Nepal (ACOFUN) stands the main players directly engaged in the introduction of SFM. Since the presence of all these key stakeholders in forest management and policy implementations retained prominently, it is important to evaluate their viewpoints to ensure SFM successful implementation and sustainability. Analysis of stakeholder viewpoints is one of the foundational pillars for discussing conflicting views and behavior of forest and resource management stakeholders [16].

DISCUSSIONS

The Government shall enact insurance plans for magnificent forest management activities following the requirements of the forest-related valuable assets and their land protection priorities. Although, there may be still specific and regular disagreements among key forest stakeholders on community perceptions of forest management policies such as forest resource conditions and management objectives [17].

Potential explanations and the consequences of differences between stakeholders in logical understandings of SFM

Some of the possible explanations for SFM points of view vary with (a) the lack of adequate debate on the SFM policy framework besides its modalities of implementation (b) the political structure of the owners' foundations and the aspirations of the FUGs; and (c) the ingrained hostilities of each other (policy networks and civil society). The results showed that the underlying reason for various stakeholder perceptions on SFM is correlating with the programmed appellation and paradigm. From the outset, the channel politicians took issue with the word ‘scientific’ because of its interpretation by forest technicians of inherent superiority [6]. Certain stakeholders (including timber entrepreneurs and ACOFUN) recognizing challenges in action and confirmed by the experts who are optimistic about the execution of SFM have backed the arguments of inadequate consultative consultations during policy and strategy planning. Stakeholders, on the other hand, support the 'Forestry for Prosperity' vision, however opposing the SFM approach ensures that they have the least commitment to do so and to organize the forest management process, demonstrating the political discourse after their points of view. Meanwhile, it advertises a forum for policy debates in addition to promotes constructive engagement and encourages the articulation of society's needs, expectations, and values [18].

Relevance and Effectiveness of SFM

Stakeholders have contrasting viewpoints on SFM importance and effectiveness [19]. The government considers this as a closely compatible paradigm for forest management, but FECOFUN considers this as insignificant from the start, often without clear political realities [20]. Based on the findings identified in this review, the regulations on inventories tend to be found predominantly to address bureaucratic concerns. As a result, governance continues to establish a favorable environment for centralizing the authority assigned to collective forest user groups by manipulating inventories to construct a 'scientific concept' widely recognized by stakeholders. The forest bureaucracy is being hegemonic as a consequence of the general recognition, not through drastic improvements in the legislation, rather than by circulars and directives that preserve the academic appearance of community forestry. The above align with those of the arguments put forward by Ojha [21], who claims to be able to counter bureaucratic supremacy by multi-stakeholder engagement throughout policy planning. Data inventories done so far to implement the SFM approach has not been included in the management plan. While the management plan is a plan to monitor and control the people's forest, participants are still ignorant of the forestry approaches stated in the plan, i.e. they know what and when to do but are still in confusion regarding the harvesting, thinning and pruning mechanism [22]. The further schedule included in the program to carry out different forest management activities was found to be inconsistent, as papers revealed that people carry out silvicultural activities according to their needs and not according to the forest conditions [15].
Responses from all stakeholders to the higher complexities of SFM implementation suggest that policymakers’ efforts will indeed be centered on the capacity to strengthen forest authorities on both the floor and also FUGs. For technocrats, at least in Nepal, extensive technological management of natural forests in this modern way is negligible, despite their potential to advance scientific management plans [22]. The SFM approach would only be fruitful if all stakeholders are equally and fairly involved, but the study exposed that stakeholders are still not guaranteed of good supremacy and transparency problems inside the current SFM frameworks, which is one of Nepal's major challenges in implementing SFM.

CONCLUSION

From this study, we conclude that the country needs to import the larger quantity of timbers from foreign countries, despite the abundance of forest resources. We also conclude that if the issue of equal participation and accounting can be well versioned, the SFM approach could be a fruitful and meaningful model in the context of forest management in Nepal. SFM approach should not be seen as a policy guideline, but also needs to implement as per policies. Forest bureaucrats should not only assist in the technical aspect but also need to clarify on what, why, and how the SFM approach could be made a long time successful program. Sophisticated thoughts of core forestry stakeholders and hostility against each other based on their previous knowledge and experiences of forest management have modified within the wider interests of communities, the country, and the environmental benefits. Since the Ministry of Forests and Environment, as either a leading policymaker or even FECOFUN as just a proactive organizational agency and a group of more than 22,000 CFUGs, ought to facilitate discussions efficiently and effectively. The part of further stakeholders is additionally similarly imperative to solve acceptable forest management and benefit-sharing issues. The possible ramifications of SFM for a forest commodity supply, regional and national economy, and the field of possible improvements to learning-centered modality and existing knowledge may be further in research areas for sustainable management of Nepal production forests.

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