Rethinking Community Forest Management in Nepal

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Community forestry program (CFP) became successful in restoring evergreen forests—which was previously destroyed by over- and open-grazing, firewood collection, fetching livestock forage, and harvesting timber for housing need—by involving over 1.6 million households from more than 14,000 community forest user groups (CFUG) in Nepal. NASA-funded research in published 2021 found that Nepal has nearly doubled its forest covering almost half of the country (46%) in 2016 compared to 26% in 1992 around the time when the community forestry program started. IFPRI discussion paper about community forestry in Nepal stated forest conservation and poverty reduction as two major goals of community forestry. The primary focus of CFP implementation was dominated by restoring and conserving forests. The goal of poverty reduction remains unachieved because the economic benefit of community forestry was largely ignored during the implementation phase. Ignoring the economic facet of community forestry management has led to the underutilization of forest and forest products produced from community forests. The long-term sustainability of community forests is already in doubt because of higher capital and labor cost, inefficient management, and lack of return from the community forests. This article proposed a new policy to overcome the lack of return from well-grown community forests which can at least partially offset the higher cost of management through revenue generation.

The dependency of modern Nepalese society on forest and forest products has shifted from firewood, grazing, and forage to construction materials, furniture, and home appliances. The World Integrated Trade Solution data shows that Nepal imported wood equivalent to United States Dollar (USD) $229,000 in 2019. The United National COMTRADE database on International Trade taken from Trading Economics shows that Nepal imported USD 75.96 Millions of wood, articles of wood, and wood charcoal in 2021. The cost of imported products can be higher than the above-mentioned figure if other wood-based products such as but not limited to paper, plywood, and wood pellets are accounted for.

A newly proposed policy paradigm of community forest management has the potential to restore more forests, conserve biodiversity, and create resilient forests against changing climate. This policy can further reduce the dependency of the Nepalese market on wood and wood-based products in imported materials, support local livelihood, and support the Nepalese economy. These objectives can be achieved by a simple but very effective forest management policy intervention of planting, managing, harvesting, replanting trees, and repeating the cycle perpetually.

A tree cannot grow perpetually although its lifespan can be several hundred years. Trees tend to grow and accumulate timber volume aggressively during the early phase of their lifecycle. Tree growth starts to slow down as it grows older, degrades after certain years, eventually dies, and converts into soil organic matter. This growth cycle is very slow without management. The idea behind managing forests is to speed up the tree growth process so that mature and quality timber can be harvested earlier than its natural growth cycle. A recent research paper published by the author of this article found that the production of marketable timber can be 3.5 times faster by harvesting mature forest alone and leaving a few trees as a seed source for a new forest to grow naturally in about 40 years compared to the natural growth of forests. Nepal doubling community forest coverage in the last 30 years suggests that Nepalese community forests have the potential to grow quality trees to supply quality timer in the Nepalese market.

The community forestry program in Nepal has successfully grown forests for more than 40 years since its formal establishment in 1978. If mature trees are left unharvested, tree growth would slow down, and timber quality eventually starts to deteriorate. The sign of timber deterioration is already visible as signaled by the presence of decayed and hollow cores in harvested trees from the community forest. This can be prevented by harvesting timber when the tree is still growing but mature enough to use timber as construction materials, furniture, and home appliances. Community forest management policies, thus, should focus on harvesting mature trees and using timber as various wood products rather than letting trees grow, die, and decay.

Economically, timber harvesting would increase the flow of Nepalese timber in the Nepalese market, increase the revenue of CFUG from timber, reduce the import of wood and its derivatives, reduce trade deficiency, and increase foreign currency reserve. Nepal has already spent more than 40 years, land, capital, cash, and labor of more than 1.6 million households directly to manage community forestry. Selling timber and wood products produced in community forestry would compensate for investment costs as well as reduce poverty—one of the two goals of the community forestry program in Nepal. Poverty reduction through community forestry can be more effective in the hilly and mountainous regions where the alternative source of income is very limited.

Harvesting trees implies opening space for new trees to grow. Environmentally, new trees grown in newly opened spaces sequestrate new carbon from the atmosphere as woody biomass. Newly grown trees can be harvested after their maturity and converted into furniture and wood products to trap atmospheric carbon longer. This cycle of opening space for new trees by harvesting mature trees and growing new trees to capture atmospheric carbon can be repeated perpetually. Quicker carbon sequestration, relocation of sequestrated carbon in the form of household tools and construction supplies, and creating space for a new carbon sequestrating cycle through management create sustainable and resilient forests against changing climate.

Managing community forests can be beneficial for biodiversity conservation and the preservation of threatened and endangered flora and fauna as well. Poor or lack of management can sometimes lead to poor biodiversity conservation further endangering the biodiversity. Managing forests is more than planting, harvesting, and replanting trees. Forest management also includes systematic research, identification of endangered flora and fauna, their ecological niche and habitat, protecting air, water, and wetlands, and creating ecosystem balance. Sound forest management policies and practices further open opportunities to systematically harvest mature trees and replant or grow new trees in newly harvested land in several cycles without harming existing resources such as forests, land, water, air, biodiversity, and ecosystem balance.

As this article is promoting planting, managing, harvesting, and replanting as a concept of community forest management in Nepal, it is also important to clarify what this article is not about. The policy and practice suggested in this article are not one-fits-all policies for the management of all types of forests in Nepal. This article is indented to provide a new policy perspective for community forest management which otherwise would remain unutilized economically. The author is knowledgeable about the insufficiency of forest research, policy-wise, legal, and regulatory difficulties in managing forests in Nepal to achieve the multifaced objectives discussed in this article. However, research-based literature about sustainable forest management for timber, climate change, biodiversity conservation, and carbon sequestration are sufficiently published globally which could be used to establish a baseline for forest management research in Nepal. Liberal and sustainable forest management policies can be implemented gradually based on forest research findings which further opens timber business opportunities in Nepal.

Transfer of research-based knowledge and adaptation of knowledge to meet the unique need of a country is commonplace practice throughout the world. Modern forest management practices in the US, Australia, and Canada are largely adopted from European forest management practices and adapted to fit their respective context. India formulated its national-level criteria and indicators for sustainable forest management policies in 1999 through a national workshop involving national and international organizations, piloted its sustainable forest management initiative in 2000, and continuously modified it to meet its social, economic, environmental, and ecological needs. Chinese forest management policy has drastically changed in the last five decades. More than 80% of the community-owned collective forest in China are transferred to individual-owned households and state-managed forests are managed to conserve forest and discourage exploitation. Forest management policies implemented outside Nepal may not satisfy the unique social, economic, environmental, and ecological needs of Nepal. However, Nepal can learn from their experience and research that are transferable and adapted to meet the Nepalese unique need.

A common practice of planting or natural regeneration, managing, harvesting, and replanting forests is a common practice globally to meet their wood and timber need. Larger economies such as the US and Europe often benefit by importing wood products from Asia and Africa as well as harvesting timber from their privately managed forest to fulfill their market need. Harvesting trees from community forests and replanting trees could be a better strategy for Nepal to meet its timber demand, reduce rural poverty, reduce the trade imbalance, and preserve foreign currency. Finally, while this article emphasized harvesting, and replanting trees to meet the socioeconomic, ecological, environmental, and conservation needs, the author is strictly against over-exploitation of community forests in Nepal.

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