Silviculture for Enhancing Economic Contributions of Community Forestry: Experience from Lamjung District

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1. Context

Community forestry is recognized globally as a trailblazing innovation in promoting effective community-based forest governance. It has tremendously contributed in increasing forest stock, promoting biodiversity and offering enormous environmental services. Restoration of ecological integrity, establishment of robust and democratic institutions, strengthening local democracy, empowering marginalized communities are some of the remarkable ecological and social outcomes of community forestry. However, there is virtually no management in Nepal’s forests which in turn result to low forest productivity (also low economic performance). Therefore, economic benefits of community forestry are far below its potential, thereby contributing little in supporting local (and national) economy and livelihoods of the poor. Community forestry user groups (CFUGs) have been protecting their forests despite local community’s decades long forest protection, they are not benefiting much from the forests.

Government is trying to promote silviculture based forest management and has promulgated Scientific Forest Management Guideline in Nov, 2014. In this context, this study is conceptualized to understand how silviculture based management can enhance economic benefits of community forests.

2. Objective

The objective of this study is to compare and contrast economic return(s) from the community forests before and after the application of silviculture based forest management (shelterwood system).

3. Study Area

The study was carried out in five community forests located in Ishaneshwor, Samibhanjyang, Jita and Ramgha villages in Lamjung district (See Map).

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4. Methods

The study methods involved the review of the operational plans (OP) of five CFUGs of Lamjung and analysis of their harvesting and sales records. The year-wise income projection from the sale of timber and fuelwood are copied from OPs and analyzed to calculate yearly cash flow of next five years (FY073/074, 074/075, 075/076, 076/077 and 077/078). Similarly, harvesting and sales records of CFUGs of the last five years (FY 068/069, 069/070, 070/071, 071/072 and 072/073) have been examined to figure out the yearly income of the CFUGs previously. The data are then verified with the records maintained at the District Forest Office (DFO). The timber quantity and cash flow of the next five years (projection) are compared with the same data of the previous five years (actual).

5. Study Limitation

The study is based on the desk review of the OP and meeting minutes of CFUG and relevant documents of DFO Lamjung. It does not cover a host of governance challenges; particularly the institutional practice that shape actual amount of harvest and sale of timber.

6. Findings

Table 1. Sale and distribution of forest products for internal consumption (previous years).

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<tr>
<th>CFUG</th>
<th>FY</th>
<th>068/069</th>
<th>069/070</th>
<th>070/071</th>
<th>071/072</th>
<th>072/073</th>
<th>Total</th>
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<tbody>
<tr>
<td></td>
<td>Qty</td>
<td>Price</td>
<td>Qty</td>
<td>Price</td>
<td>Qty</td>
<td>Price</td>
<td>Qty</td>
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<tr>
<td>Parajuli Besi</td>
<td>Timber</td>
<td>458.5</td>
<td>4585</td>
<td>1161.9</td>
<td>22458</td>
<td>1232.67</td>
<td>24580</td>
</tr>
<tr>
<td></td>
<td>Fuelwood</td>
<td>200</td>
<td>0</td>
<td>250</td>
<td>0</td>
<td>250</td>
<td>0</td>
</tr>
<tr>
<td>Manakama</td>
<td>Timber</td>
<td>137.6</td>
<td>3440</td>
<td>838.26</td>
<td>20825</td>
<td>409.8</td>
<td>10247</td>
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</table>
CFUG records of last five years show that the amount of timber distributed within the community is always greater than the amount of timber they have sold outside through open tender (see table below). However, record of income from external and internal sale shows that the users are getting timber in highly subsidized rate, far lower rate than the market price. Consequently, income from the sale of forest product outside CFUG is higher than from the internal sale even if the amount of timber distributed internally is higher than outside sale.
Proceedings of the First National Silviculture Workshop

Figure 1. Silviculture based FM is profitable, and has potential to generate income and employment.

The year wise timber and cash flow projection of operational plans show that forest management according to the silviculture prescription is profitable. The benefits are higher than the associated costs. The investment (cost) in forest management, fire-line, regeneration management, forest protection, plantation etc is assimilated locally and therefore increases the income and employment opportunity locally.

Net present values of the year-wise income and costs and the financial analysis provided in operational plan have shown that the investment in the silviculture based forest management is viable. Benefit cost ratio of such investment is at least 1.38 and 2.1 at most.
Huge potential in increasing timber production and supply

The operational plans developed and approved according to principles of silviculture have shown a clear potential of huge increase in the timber supply from the forests. The comparison of timber supply in past five years (AAC based management) and next five years (silvi based management) shows that the later supplies far greater amount of timber than the former.

7. Conclusion

1. Silviculture based forest management has potential of substantial increases in production of forest products and revenue.

2. Increased yield due to silviculture based management will provide substantial amount of timber supply to the market which in-turn support in import substitution of timber.

3. Such management helps to increase income and employment in the community and contributes to local (also national) economy.

Acknowledgement

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