

## Carbon Pool Assessment in Community Forests, Nepal

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**Abstract :** Forest itself is a factory as well as product. It supplies tangible and intangible goods and services. It supplies timber, fuel wood, fodder, grass leaf litter as well as non timber edible goods and medicinal and aromatic products additionally provides environmental services. These environmental services are of local, national or even global importance. In Nepal, more than 19 thousands community forests are providing environmental service in less economic benefit than actual efficiency. There is a risk of cost of management of those forest exceeds benefits and forests get converted to open access resources in future. Most of the environmental goods and services do not have markets which mean no prices at which they are available to the consumers, therefore the valuation of these services goods and services establishment of paying mechanism for such services and insure the benefit to community is more relevant in local as well as global scale. There are few examples of carbon trading in domestic level to meet the country wide emission goal. In this contest, the study aims to explore the public attitude towards carbon offsetting and their responsibility over service providers. This study helps in promotion of environment service awareness among general people, service provider and community forest. The research helps to unveil the carbon pool scenario in community forest and willingness to pay for carbon offsetting of people who are consuming more energy than general people and emitting relatively more carbon in atmosphere. The study has assessed the carbon pool status in two community forest and valuated carbon service from community forest through willingness to pay in Dharan municipality situated in eastern. In the study, in two community forests carbon pools were assessed following the guideline "Forest Carbon Inventory Guideline 2010" prescribed by Ministry of Forest and soil Conservation, Nepal. Final outcomes of analysis in intensively managed area of Hokse CF recorded as 103.58 tons C /ha with 6173.30 tons carbon stock. Similarly in Hariyali CF carbon density was recorded 251.72 mg C /ha. The total carbon stock of intensively managed blocks in Hariyali CF is 35839.62 tons carbon.

**Keywords :** carbon, offsetting, sequestration, valuation, willingness to pay

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