

E-Notes

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Cost Benefit Analysis in Social Forestry – A case study

In order to sustainably manage the forests throughout the world including India numerous projects are being implemented with a common goal of socioeconomic amelioration of the forest dependent community, biodiversity maintenance and enhancement and conservation of environment.

Forestry evaluation is not at all similar an activity like valuation of land or Building although it may fall under the same asset class “Land & Building.”

Basis of value: Bases/Basis as postulated in general standards like IVS, RICS, EVS etc. as the **market value, liquidation value** definition of IVS may not have the appropriateness in the event. As the willing buyers (or may be willing leaseholders) are not general public, market participants are initially small mandis then big mandis and may be finally big Corporates. Big Corporates may also consider the Corporate Social responsibility for Reducing carbon footprints, Charitable giving, Policy that may benefit to the environment etc.

Assumption: The value opinion and conclusion on evaluation of forestry, cannot be solely dependent on normal assumption. A special assumption where a special purchaser or special willing lease holder is available.

Approach and Methods of Valuation:

In fact, if we consider the site productivity only for forest evaluation i.e. the value opinion on the “**Income Approach**” considering only the market value of vagaries of produces from forests only, and try to achieve a conclusive sale value of the site, alone it can never be a fair judgement towards the forestry & its management.

“**Cost Approaches**” also not be appropriate as the cost approach provides an indication of *value* using the economic principle that a buyer will pay no more for an *asset* than the cost to obtain an *asset* of equal utility. he approach provides an indication of *value* by calculating the current replacement.

Among the approaches, **Market Approach with appropriate Methodology** may be suitable as

(a) identify the units of comparison that are used by *participants* in the relevant market,

- (b) identify the relevant comparable transactions and calculate the key valuation metrics for those transactions,
- (c) perform a consistent comparative analysis of qualitative and quantitative similarities and differences between the comparable *assets* and the subject *asset*.
- (d) making necessary adjustments, if any and
- (e) apply the adjusted *valuation* metrics to the subject *asset*.

But alone single approach on valuation cannot suffice or not adequate to evaluate.

Multiple approaches with some detailed adjustments in special assumptions have been done.

The scope of departure clause of International Valuation Standard also considered, but *Clause 40 of IVS2 Compliance with Other Standards* says in the *IVS Framework*, when statutory, legal, regulatory or other authoritative requirements *must* be followed that differ from some of the requirements within IVS, a *valuer must* follow the statutory, legal, regulatory or other authoritative requirements (called a “departure”). Such a *valuation* has still been performed in overall compliance with IVS. So in my opinion it is performed in overall compliance with IVS.

The general objectives of contributing to the definition of sustainable forest management

In India both central and State Governments are executing several schemes of their own as well as some foreign aided schemes for last few decades to some extent have been able to control further degradation forests and reduce dependency of the fringe dwellers on forests through introducing participatory/joint or community forest management in which both the department and the community take the responsibility of the forests protection, enhancement and share equitable distribution of the sale value of selected produces. Where the understanding between the department and community remains good the management becomes successful where the first one fails the situation becomes adverse.

Japan International Cooperation Agency (JICA) is one of the main foreign funding agencies which has taken actively initiatives to collaborate with our central Government in implementing state wise forest project.

The site evaluation considers the following parameters as usual namely,

- (i) Soil depth
- (ii) Land slope
- (iii) Aspect i.e. facing of the slope
- (iv) Slope position

- (v) Land capability classes (Type I means excellent timber producing area without any erosion problem, etc.)
- (vi) Grazing damage
- (vii) Protected from wild fire
- (viii) Forest types with species combination
- (ix) Stock size
- (x) Forest inventory and different crown class

The current study envisages to what extent the West Bengal Forest and Biodiversity Conservation Project (WBFBCP) is successful in uplifting economic condition of the poor community through sustainable harvest of not timber yielding species and their marketing.

Name of the Division	Birbhum Forest Division
Name of the Joint Forest Management Committee (JFMC)/Village	Mahishagram JFMC/ Village
Type of Activity from which Remarkable Achievement Recorded	i. Afforestation or plantation activity ii. Village level infrastructure Development iii. Income Generation Activity at SHG & JFMC level
I. Through Self Help Groups (SHGs) Two female SHGs namely, Mahishamardini and Jhinukia Maghiburi were established under the Mahishagram JFMC for income generation purpose. The SHG named Mahishamardini has 7 members and all of them are in carpentry business. All the members took loan from the JFMC revolving fund so that they might invest more in the business. The ladies and their husbands –all were good and skilful carpenters. They have increased their sale of furniture through by establishing contract with big furniture shops in Siuri and Saithia townships. The contractual facility has helped them to get better benefit from the business. All the seven members of the SHG members have taken loan for increased investment in their family business of carpentry. They have agreed that on an average their income has increased by 25%. In last couple of years. The second time loan (after repayment of the first loan of Rs. 62500/-) has been availed by the old recipients was for further increase of investment for the concerned business. The benefit from the business has been augmented by Rs. 70000-80000 annually for each family.	
Income generation from Plantations: The mixed plantation comprises of timber (Acacia, Sissoo, Gamhar, etc.) and non-timber species (like Karanj, Amla, Baheda etc.); Non-destructive harvest of Non-Timber Forest Products (NTFP) species are carried on seasonally depending on their maturity time. Generally, the JFMC members take the decision when to harvest and how much.	

And it varies according to species. The timber species may be replenished following harvest at ripe age and its decision is taken by the Forest Department only.

Impact

1.Short term/Immediate

- A. Good growth in plantations
- B. Created irrigation facility from farm pond
- C. better access to the village through Murram road
- D. better economic return for the SHGs through the business (carpentry)

2. Long term

- A. Forests created in the project period is well conserved
- B. JFMC has become self-dependent to carry on their activities and self-sufficient and manage the forests well in collaboration with the Forest Department
- C. Biodiversity is maintained (Tree/shrubs/herbs)
- D. Environment becomes healthy and conducive for humans as well as animals
- E. Better economic status of the SHG members
- F. The Timber species namely, Akashmoni, Gamhar, and Sissoo will be harvested in due time by rotation that will fetch good market return. A portion of that money by rule is given to JFMC fund for village development followed by immediate replenishment.
- G. The nontimber species such as Amla, Karanj, Baheda and Jamun are harvested in non-destructive mode, i.e. the usable parts like, fruits (Amla, Jamun, Baheda), Seed (Karanj and Neem) and leaves (Neem) are now harvested regularly and marketed so as to use the earnings as supplementary income for the beneficiary families.

Average Annual market potential from the following NTFP species for the community if the forest is managed in a sustainable way

Species	Minimum Produce (Kg) per tree per year	No. Trees (approx..) per	Market rate (Rs. /Kg) in the villages (Approx.)	Average Economic return (Rs.)
Amla	15 Kg	100	30/-	<u>45000/-</u>
Karanj	25Kg	100	25/-	<u>62500/-</u>
Baheda	20 kg	100	15/-	<u>35000/-</u>
Jamun	50Kg	100	50/-	<u>250000/-</u>

The SHGs or other Community based organization should create a federation or cluster in order to make a profit-making sale on a bargained price. The number of trees shown above are an approximate figure. In reality number of trees are more in one hector of land and one village forest area is minimum 10 ha of land for plantation every year.

Thus, it should not be an over estimation, that if sustainably managed, an afforested land in any village forests may yield good number of numerous products which have high economic return on the basis of which JFMC or SHGs may create a Farmers' Producers Organization (FPO) and run a business without degrading the forests but of course, with the approval of the local unit of the State Forest Department.



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