

MULTIPLE FOREST VALUES ACROSS MULTIPLE FORESTS STAKE HOLDERS - DISTRIBUTION OF COSTS & BENEFITS OF VALUES AND INCENTIVES AMONGST STAKE HOLDERS : A CASE OF HIMACHAL PRADESH STATE OF INDIA

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INTRODUCTION

The Biodiversity rich forests of the Himalayan state of Himachal Pradesh of India through their multiple value contribution play a very important role in reducing the vulnerability of poor by making safety nets and safety ropes and not poverty traps. Many other stakeholders ranging from local population to regional and global population draw enormous benefits on account of Himachal Forests. Many such contributions go unaccounted in the economic calculus of the state and as a result the forestry sector of Himachal does not receive due attention from the policy and decision makers which has resulted in smaller budget allocations and forest degradation.

PURPOSE OF THE STUDY

- To estimate total economic value of Himachal forests specially the ecosystem services values to justify positive impacts of forest Conservation
- To recognize real cost of conservation & status of public sharing of cost burdens by multiple stake holders
- To suggest provision of safety nets and safety ropes for individual, communities and institutions which have so far been disadvantaged by policy changes.
- To develop incentive mechanism for communities conserving Himachal Forests.

HYPOTHESIS

The study assumes :

- That the total Economic value of Himachal Forest is immense which is not reflected in the states accounting system
- That the social benefits from Himachal forests are far more than private cost of forest management.
- That no incentive mechanism is available for stakeholders conserving Himachal Forests.

SCOPE OF THE STUDY

The estimation of multiple forest values would put forward the case for better allocation of funds to enhance contribution of forests towards safety nets and safety ropes functions and would help in developing financial incentive mechanism for ensuring participatory and sustainable management of Himachal forests.

FOREST AREA OF HIMACHAL PRADESH

22.49% of total geographical area i.e 12521 Sq.km. is under forest land and tree cover. 76% of the forest land and tree cover has crown density more than 40% and remaining 24% has crown density ranging between 10-40%

METHODOLOGY

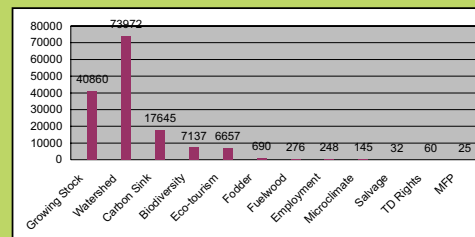
- Stakeholders Identification and analysis.
- Identification and valuation of multiple forest benefits using primary and secondary data.
- Analysis of Multiple forest values across multiple forest stakeholders - distribution of costs & benefits
- Analysis of current forest management scenario and exploring alternate management scenarios.
- Exploring set of incentives for continued safety net functions of Himachal forests.

Himachal Pradesh Forest Cover by Different Types			(Area in Sq.km.)
1. Tropical Dry Deciduous Forest	-		2272
2. Tropical Thorn Forests	-		45
3. Sub tropical pine forests	-		4088
4. Sub tropical dry evergreen forest	-		500
5. Himachal Moist Temperate Forest	-		4313
6. Sub-alpine and alpine forests	-		1303
TOTAL	-		12521

FINDING

I. Forest Resource contribution vs. Investment (US\$ in billions)	
1. Value of Growing Stock	8.69
2. Total Economic Value of Forests	22.69
3. Total Expenditure incurred in forest (Annual Budget)	0.02
4. Revenue realised by forests	0.008
II. Contribution of Forests to the GSDP	
1. Total GSDP	1.96
2. Forestry as logging	0.10
3. Forestry as % of GSDP	5.26 %
4. TEV of forests of HP (as per current estimation)	22.69
5. Corrected GSDP	24.56
6. Forestry as % of corrected GSDP	(92.40%)

Comparative picture of economic value of forestry goods & services



Stakeholders of Himachal forests as per their economic status

- (a) Primary stakeholders - economically vulnerable groups (TDRs & NTFPs), disadvantage and migratory population (NTFPs, Fodder), economically privileged group (fuelwood, fodder, timber), community based institutions -VFDCs, VDCs, VEDCs, VFDSs (for forest protection).

- (b) Secondary stakeholders - Govt. of HP, HPFD, HPSFC, private sector, NGOs, politicians, forest departments (management of forest) and forest mafias (illegal removal).
- (c) Tertiary stakeholders - Govt. of India, downstream population for watershed benefits, national and international tourists and international community (policy & funding).

Note : Parenthesis provide type of use.

Benefits extracted by (i) primary stakeholders - Salvage, TDR, NTFP, Fuelwood, Fodder, Microclimatic values, Employment (ii) secondary stakeholders - Salvage, NTFP, Ecotourism, watershed, Microclimatic, Carbon sink, Biodiversity values (iii) tertiary stakeholders - Eco-tourism, watershed, Microclimatic, Carbon sink, Biodiversity values; **Costs borne by** - Community based institutions, Forest department, NGOs and International Donor agency only; **Threats imposed by** - migratory population, economically advantaged groups, sectoral departments and forest mafia.

Economic Dependence of local population on Himachal Forest

- Total population of the state: 5.17 million
- 91.31% of total population is rural
- 0.861 million Rural Households
- Requirement for energy: 80% from forests
- Total livestock population of the State: 5.11million cattle
- Per capita availability of Forests: 0.71 Sq. kms (both for fuelwood and fodder)
- Fuelwood requirement: 2.76 mt/annum
- Fodder requirement : 11.5 mt /annum
- 26.5% of rural households below poverty line
- Additional xtraction: .064 mt of minor forest produce, 0.35 mt of salvage timber, 0.10 mt of TDRs
- Employment generated by various forestry schemes: 0.55 million mandays

STAKEHOLDERWISE PROPOSED SET OF INCENTIVES FOR SFM

Local community: Decentralised administration; conditions facilitating participation; secure tenure; employment opportunities; equitable sharing of forest produces; other rights and privileges, self organized private deals, trading schemes with downstream users of watershed services, public payment scheme.

Private Forest owners: Sound and practical macro-economic policies; stable administration; extension facilities; policies and legislation facilitating development; trade liberalization (removal of unnecessary controls); availability of institutional credit; financial incentives to compensate for cost involved in providing externalities **Research Institutions:** Freedom from administrative controls; professional autonomy; research facilities; facilities to upgrade skills; availability of venture capital; networking facilities; attractive salaries and service conditions for researchers.

Users of the Forest Products and Services: Fair and stable prices; adequate quality; consistent availability; knowledge about sustainability

Forest Dwellers: Support and respect for indigenous culture and customs; application / improvement of traditional practices; secured rights and privileges; possibility to participate in decision regarding the forest. **Policy makers:** Increased economic and environmental benefits; increased revenue; improved rent capture and retained values; enhanced employment and income generation opportunities; increased contribution to GNP

Alternate Management Scenarios

- * Base Scenario: Green felling (commercial logging) ban, unsustainable use and highly active forest mafia
- * Production Scenario: Timber production and output of NTFPs
- * Complete Preservation Scenario: Environmental protection and resource conservation
- * Ecotourism, Recreation & Other Services Scenario : forest based recreation and flow of watershed benefits
- * Integrated Protection & Management Scenario: needs of various stakeholders considered without lessening the forest capital

CONCLUSION

Exclusion of indirect benefits from the Forest Resource Accounting System has resulted in gross underestimation of forestry sector's contribution to the Himachal's economy. These forest render vital safety net functions to local people in terms of TDRs, fuelwood, fodder, biodiversity and water resources. If these are not managed properly, local dependent communities do not have enough means to manage their risk. The study proposes integrated forest accounts and proper configuration of forestry practices to help the policy makers to take appropriate decisions when forests are diverted for alternative land use purposes; to put forward the case of developing markets for watershed benefits of Himachal forests, to justify and substantiate the demand for better allocation of funds in forestry sector and the incentive mechanism would help in practising SFM in Himachal forest.

POLICY IMPLICATION OF THE STUDY

Based on the estimate of the study since august 2002 the Himachal govt. has notified imposition of an 'environmental levy' for compensation for loss of environmental values on user agencies against forest lands diverted for non forest use. This one time levy has been fixed at Rs. 8 lakhs per hectare where forest density is above 10% and Rs. 5 lakhs per hectare for other forest areas where density is less than 10%. This levy is in addition to the compensatory afforestation and cost of catchment area treatment, rehabilitation of dumping sites wherever applicable. The revenue so generated from the levy would be used to compensate communities who shall be deprived of benefits on account of forest diversion.