BENEFIT COST RATIO FOR SHEOPUR TO GORAS ROAD PROJECT FOR FOREST PROPOSAL

Table A: Cases under which cost benefit analysis

S.NO	NATURE OF PROPOSAL	APPLICABLE/NOT APPLICABLE	REMARK
1	All categories of Proposal Involving forest land upto 20 hectares in plains and upto 5 heactare in hills	Not Applicable	Not Applicable
2	Proposal for define installation purposes and prospecting (prospection only)	Not Applicable	Not Applicable
3	Habitation establishment of industrial units, tourist lodges complex and other building construction	Not Applicable	Not Applicable
4	All other proposel involving forest land more than 20 hectare in bills including roads, transmission line, minor, medium and major irrigation project, hydro projects, ,mining activity, railway lines, location specific installation like micro, wave station, auto repeater centres, TV tower etc.	Applicable	BC ratio has been calculated as per forest Guidelines

Table B : Estimation of cost of forest diversion

S.NO	Parameter		REMARK
1	Ecosystem services losses due to proposed forest diversion	Applicable	337.760
2	Loss of animal husbandry productivity including loss of fodder	Applicable	33.776
3	Cost of human resettlement	Not Applicable	0.00
4	Loss of Public facilities and administrative infrastructure (Road, building, school, dispensaries, electric lines railways, etc) on forest land, which would require forest land if these facilities were diverted due to the project.	Not Applicable	0.00
5	Possession value of forest land diverted	Applicable	101.328
6	Cost of suffering to ousters	Not Applicable	0.00
7	Habitat fragmentation cost	Applicable	168.880
8	Compernsatory afforestation and soil & moisture conservation cost.	Applicable	506.64
	Total		1148.384

TABLE C : Existing Guildelines for estimating benefits of forest- diversion in CBA

S.NO	Parameter		REMARK
1	Increase in productively attribute ro the specific project	Applicable	2533.200
2	Benefit to economy due to specific project	Applicable	4.22
3	No. of population benefits due to specific project	Applicable	1.078
4	Economic benefits due of direct and indirect employment due to the project	Applicable	3.078
5	Economic benefit due to compensatory afforestation	Applicable	2533.200
	Total		5074.776
	Benefit cost Ratio :	5074.776/1148.384 = 4.419	

Cost Benefit Analysis Guidelines for forest land diversion -2017

Table -A : Cases under which a cost-benefit analysis for forest diversion are required

S.NO	NATURE OF PROPOSAL	APPLICABLE /NOT APPLICABLE	REMARK
1	All categories of proposals involving forest land upto 20 hectares in plains upto 5 hetare in hills	Not applicable	These proposals may be considered on a case to case basis and value judgment
2	Proposal for defence installation purposes and oil prospecting (prospecting only)	Not applicable	In view of national priority accorded to these sectors, the proposals would be critically assessed to help ascertain that the utmost minimum forest land is diverted for non forest use.
3	Habitation, establishment of industrial units, tourist lodges complex and other building construction	Not applicable	These activities being detrimental to protection and conservation of forest , as a matter of policy, such proposals would be rarely entertained
4	All other proposals involving forestland more than 20 hectares in plains and more than 5 hectares in hills including roads, transmission lines, minor, medium and major irrigation project, hydro project mining activity, railway lines, location specific installation like micro wave station, outo repeater centres, TV tower etc.	Applicable	These are cases where a cost benefit analysis is necessary to determine when diverting the forest land to non-forest use in the overall public interest.

Table B : Estimation of cost of forest diversion :

S.NO	Parameters	REMARK
1	Ecosystem services losses due to proposed forest diversion	Economic value of loss of eco-system services due to diversion of forest shall be the net present value (NPV) of the forest land being diverted as prescribed by the central Government (MoEF & CC). Note: In case of national parks the NPV shall be ten (10) times the normal NPV and in case of wildlife sanctuary the NPV or otherwise prescribed by the ministry or any other competent authority.
2	Loss of animal husbandry productivity including loss of fodder	To be quantified and expressed in monetary terms or 10% of NPV applicable whichever in maximum.
3	Cost of human resettlement	To be quantified and expressed in monitory terms as per approved R&R plan
4	Loss of public facilities and administrative infrastructure (Road , building , school , dispensaries , electric lines, railways , etc) on forest land which would require forest land if these facilities were diverted due to the project.	To be quantified and expressed in monetary terms on actual cost basis at the time of diversion.
5	Possession value of forest land diverted	30% of environmental cost (NPV) due to loss of forest or circle rate of adjoining area in the district should be added as a cost component as possession value of forest land which ever is maximum.
6	Cost of suffering to oustees	The social cost of rehabilitation of oustees (in addition to the cost likely to be incurred in providing residence , occupation and social services as per R&R plan) be worked out as 1.5 times of what oustees should have earned in two years had he not been shifted.
7	Habital Fragmentation cost	While the relationship between fragmentation and forest goods and services is complex, for the sake of simplicity the cost due tofragmentation has been simplicity the cost due to fragmentation bas been pegged at 50 % of NPV applicable as a thumb rule.
	Compensatory afforestation and soil & moisture conservation cost	The actual cost of compensatory afforestation and soil and moisture conservation and its maintenance in future at present discounted value.

Table -C Existing guidelines for estimating benefits of forest-diversion in CBA

S.NO	NATURE OF PROPOSAL	REMARK

1	Increase in productively attribute to the specific project	To be quantified & expressed in monetary terms avoiding double counting
2	Benefit to economy due to the specific project	The incremental exonomic benefit in monetary terms due to the activities attributes to the specific project.
3	No. of population benefited due to specific project	As per the Detailed project report
4	Economic benefits due to of direct and indirect employment due to the project	As per the detailed project report
5	Economic benefits due to compensatory afforestation	Benefits from such compensatory forestation accruing over next 50 years monetized and discounted to the present value should be included as benefits of compensatory afforestation. • For benefit of CA the guideline of the Ministry of NPV estimation may be consulted.

Note 1 : Net present value (NPV) of environment and ecosystem services loss :

The concept of Net present value of the forest land diverted id as scientific method of calculating the environmental cost and other losses caused due to diversion of forest land for non-forestry purposes. The NPV represents the net value of various ecosystem service and other environmental services in monetary terms which the forest would have provided if the forest would not have been diverted.

Note -2 : Possession value of forest land diverted :

The forest land diverted for the project such as irrigation, hydropower, railways roads, wind, and transmission lines and mining etc are unlikely to be returned and remains in possession of the used agencies. Therefore 30% of the net present value (NPV) of forest land diverted or market rate of adjoining area in the district. should be added as a cost component as "possession value of forest land" in addition to the environmental costs due to loss of forest.