Cost benefit analysis guide lines for forest land diversion -2017

परियोजना का नाम – जनपद पिथौरागढ़ के विधानसभा गंगोलीहाट में खिरमाण्डे गणाई मोटर मार्ग का निर्माण।
(लम्बाई 12.00 किमी0)

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

No.	Nature of proposal	Applicable / not applicable
1	All categories of proposals involving forest land upto 20 Hac. in plains and up to 5 hac. in hills.	Not applicable
2	Proposal for defence installation purposes and oil prospecting (Prospecting only)	Not applicable
3	Habitatiion establishment on industrial units tourist lodges complex and other building construction.	Not applicable
4	All other proposals involving forest land more than 20 hac. in plains and more than 5 hac. in hiills including roads, transmission projects, hydroprojects, mining activity, Railway lines, location specific installations like micro-wave stations auto repeater centres, T.V. towers etc.	Applicable

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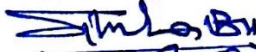अ0 ख0 लो0 नि0 वि0
बेरीनाग (पिथौरागढ)

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Table -B: Estimation of cost of forest diversion

S.N.	Parameters	Remarks	Responses
1	Ecosystem services losses due to proposed forest diversion.	Economic value of loss of eco-system services due to diversion of forests shall be the net present value (NPV) of the forest land being diverted as prescribed by Central Govt.	Economic value of losses of eco system services due to diversion of forestland shall be NPV of forest land being diverted ic 7.785 hac @ Rs 8.97 lacs per hac. = Rs 69.83
2	Loss of animal husbandry productivity, Including including loss of fodder.	To be quantified and expressed in monetary terms or 10 % of NPV applicable whichever is maximum.	Nil (as there is no loss of animal husbandary productivity including loss of fodder) or 10 %of NPV = 10% of Rs. 69.83 lacs ic Rs. 6.983 lacs whichever is maximum hance loss of animal husbandary and fodder = Rs. 6.983 lacs
3	Cost of human resettlement.	To be quantified and expressed in monetary terms.	Due to diversion of forest land in this project there is no loss involved on human re-settlement.
4	Loss of public facility and administrative infrastructure (roads, building, schools, dispensaries, electric lines, railway etc.) on forest land which would required forest land if these facilities were diverted due to the project.	To be quantified and expressed in monetary terms an actual cost basis at the time of diversion.	No administrative infrastructures such as road, buildings, schools, dispensaries, electric lines, railways etc. are effected due to the diversion of forest land to the project. Their will be no loss involved on this account
5	Possession value of forest land diverted.	30% environmental costs (NPV) due to loss of forests or circle rate of adjoining area in the district should be added as a cost component as possession value of forest land whichever is maximum.	30 % of NPV = 0.03 X69.83 = Rs20.949 lacs or circle rates of adjoining are in district Pithoragarh which ever in maxmum. Therefore cost of forest land based on circle rates (Rs 77.00) per Sqm.) as fixed by collector pithoragarh = 7.785 hacs. Rs 77.00 per sqm = Rs. 5994450.00 i.e. Rs 59.94 lacs. hence possession velue = Rs 59.94
6	Cost of suffering to oustees.	The social cost of rehabilitation of oustees (in addition of the cost likely to be incurred in providing residence. Occupation and social servises as per R & R plan) to be worked out as 1.5 times of what oustees should have earned in two had he not been shifted.	Nil (Their will not be any losses on this account as diversion of the forest land to this project will not effect any house or structure)

S.N.	Parameters	Remarks	Responses
7	Habited fragmentation cost.	while the relationship between fragmentation and forest goods and services in complex, for the sake of simplicity the cost due to fragmentation has been pegged at 50 % of NPV applicable as a thumb rule.	Nil
8	Compensatory offorestation & soil moisture conservation cost	The actual cost of compensatory afforestation and soil & moisture conservation and its maintenance in future at present discounted value.	The actual cost of compensatory afforestation and soil & moisture conservation and its maintenance = Rs 29.63 lacs for 10 year for next 50 years = 5*29.63 = 148.15 lacs (as per proposal) it indicates the future value (FV) i.e. Rs 148.15 lacs therefore present value (PV) also called discounted value of this future value (assuring expected rate of return be 8 %) will be PV = $FV/(1+R)^n$ Pv = 148.15 / $(1+0.08)^{50}$ = 3.15 Lakh

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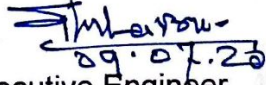परियोजना का नाम – जनपद(पिथौरागढ़ के विधानसभा गंगोलीहाट में खिरमाण्डे गणाई मोटर मार्ग का निर्माण। (लम्बाई 12..00 किमी0)

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

S. N.	Parameters	Remark	Responses
1	Increase in productvely attribute to the specific project.	To be quantified & expressed in monetry terms avoiding double counting.	Saving of time and fuel due to construction of road reduction in travel time 2 hours / passengers total No. of passengers travel through road = 400.00 per day benefits cost of 400 x (2/8) X 400 X365 X50 = 730.00 lakhs
2	Benefits to economy due to the specific project.	The incremental economic benefit in monetary terms due to the activities attributed to the specific project	Benefits due to increase in no. of tourist, employment generation & due to other activities, taking for 10 people per month Rs. 9000/- benefit per month =10X9000 = Rs 90000.00 benefits of per year = 12X90000 = Rs 1080000.00 benefits of 50 year = 50 x 1080000.00 = 54000000.00
3	No. of population benefited due to specific project	As per the detailed project report.	1315
4	Economic benefits due to of direct and indirect employment due to the project.	As per the detailed project report.	Direct employment labour benefit of annual maintenance of road 20 labours benefits for Rs. 8000.00 per month for 1 year 20X8000.00 X12X50 =960.00
5	Economic benefits due to compensatory afforestation.	Benefit from such compensentory aforestation accruing over next 50 years monetized and discounted to the present value should be included as benefits of compensatory afforestation.	For nursery & plantation 12x12x30x250 = Rs 15.12 Lacs for 10 years = Rs 151.20 lacs for 50 years Rs 756.00 lac land selected for compensatory aforestation can be converted in to dense forest by which animal husbandary and fodder will improve it will assist erosion control and invironment After 10 years other benefits (animal husbandary and fodder) = to lacs per year for 50 years = 100 lacs Total RS 856.00 Lacs

Therefore benefits - cost ratio for this project =   hence, project is economically viable

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