

Project Name: Construction of High Altitude Hill Roads to Indo- China Border (Todadege-Henkaer) under phase – II in the state of Arunachal Pradesh.

COST BENEFIT ANALYSIS

Purpose: This cost benefit analysis is being undertaken for proposed diversion of Forest Land being affected due to Construction of Proposed road **Todadege To Henkaer Road in the state of Arunachal Pradesh.**

Table A: Cases under which cost benefit analysis for Forest diversion Required

No	Nature of Proposal	Applicable/ Not Applicable	Remarks
1	All categories of proposal involving forest land upto 20 hectares in plains and upto 5 hectares in hills	Not applicable	These proposals may be considered on a case to case basis and value judgement
2	Proposal for defence installation purpose 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 lodge 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 forest land more than 20 hectares in plains and more than 5 hectares in hills including roads, transmission lines, minor , medium and major irrigation projects , hydro projects , mining activity, railway lines, location specific installations like micro-wave stations, auto repeater centres, TV towers 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 Country /public interest .However cost benefit analysis is not required as the road project is required for Defence preparedness of the Country.

Place-Itanagar

Dated: 01 Jul 2021

20 Sep 2021



Sunil *20/09*

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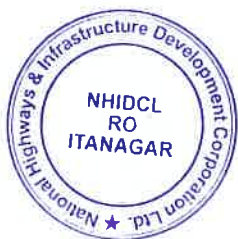
Table B : Estimation of cost of forest diversion

SNo	Parameter	Remarks	Monetary equivalent
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 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 shall be five(5) times the normal 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 is maximum	Nil.
3	Cost of human resettlement	To be quantified and expressed in monetary terms as per approved R&R plan	Nil. There is no human resettlement issue in this project, Hence no cost involved for any R&R Scheme.
4	Loss of public facilities and administrative infrastructure (Roads, 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	Nil. There is no requirement of any diversion of public facilities any administrative infrastructure (Roads, building, schools, dispensaries, electric lines, railways, etc) under this project.
5	Possession value of forest land diverted	30% of 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	Nil. The proposal is strategically alternate important road to Tawang for Army and essential to life line and proximity to International Boarder of Bhutan.
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) he worked out as 1.5 times	Not applicable for this project since there is no resettlement involved

	Cost	fragmentation and forest goods and services is complex, for thr sake of simplicity the cost due to fragmentation has been pegged at 50% of NPV applicable as a thumb rule	
8	Compensatory afforestation and soil and moisture conservation cost	The actual cost of compensatory afforestation and soil & moisture conservation and its maintenance in future at present discounted value	-
		Total cost of forest diversion	

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Table C: Existing Guidelines for estimating benefits of Forest Diversion

SNo	Parameter	Remarks	Monetary equivalent
1	Increase in productively attribute to the specific project	To be quantified & expressed in monetary terms avoiding double counting	
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	
3	No. of population benefited due to specific project	As per the Detailed project report	
4	Economic benefits due to direct and indirect employment due to the project	As per the Detailed project report	Temporary labour engagement (approx 500 Nos per day) during execution of project along with various firms/suppliers /manufacturers will be engaged for a period of three (3) years.
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. <ul style="list-style-type: none">For benefits of CA the guideline of the Ministry for NPV estimation may be consulted	

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