

COST BENEFIT ANALYSIS

Project: PROPOSAL FOR DIVERSION OF 83.59 HA OF FOREST LAND FOR THE CONSTRUCTION OF 2-LANING OF ARROWA-TIDING-KHUPA-HAYULIANG ROAD OF NH-113 FROM DESIGN KM 1.89 TO KM 24.80 (FROM KM 68.540 TO KM 95.80 OF EXISTING TEZU-HAYULIANG ROAD) FOR EXECUTION IN EPC MODE IN THE DISTRICT OF ANJAW IN THE STATE OF ARUNACHAL PRADESH.

Table-B: Estimation of cost of Forest Diversion (as per MoEF &CC Guideline dated 1st August 2017 related to Cost Benefit Analysis)

Sl. No.	Parameters	Remarks
1	Ecosystem services losses due to proposed forest diversion	NPV of the unclassified forest (for ECO class-1) tropical SEMI evergreen density 0.3 to 0.4 being diverted i.e. Forest = 83.59 ha. X 6.26 lac = Rs. 523.273 lacs. Total Cost = Rs. 523.273 lac Say 523 Lacs
2	Loss of animal husbandry productivity, Including loss of folder	NIL Productivity of livestock will not be affected due to construction & widening of existing highway.
3	Cost of human resettlement	NIL No, as area is not habited hence there is no displacement of any out sees in the project & hence there would be no resettlement.
4	Loss of public facilities and administrative infrastructure (Roads, buildings, schools, dispensaries, electric line, Railways etc) on forest land if these facilities were diverted due to the project	NIL As there is no public facilities service existing.
5	Possession value of forestland diverted	NIL
6	Cost of suffering to out sees	NIL Loss of house/Habitat/Structure is NIL, hence not applicable.
7	Habitat fragmentation cost	NIL
8	Compensatory Afforestation and soil and moisture conservation cost	Compensation afforestation cost 41.795 Lac (Approx. 0.50 lac/ha) Soil & Moisture Conservation cost included in Compensatory Afforestation cost.
	Total Loss (Against the proposed forest land diversion)	Rs. 564.795 Lacs Say Rs. 565 Lacs

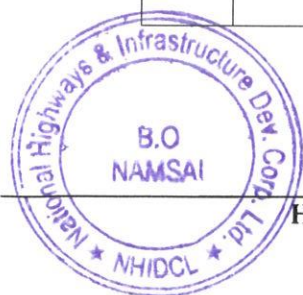
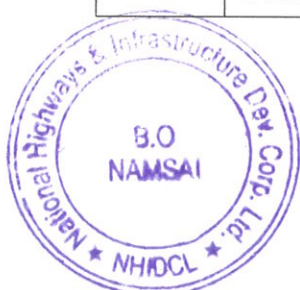



Table C: Estimation of Benefit of Forest Diversion in Cost Benefit Analysis (as per MoEF&CC Guideline dated 1st August 2017 related to Cost Benefit Analysis)

Sl. No.	Parameters	Remarks
1	Increase in productivity attribute to the specific project	The construction road (a National Highway) NH-113 sponsored by MoRTH. The road connects mainland to the North Eastern border which is strategically very important road for enhancing the defence potential of the area. Also many multipurpose hydro electric power projects have been planned along project road which provides connectivity to dam site. This will directly going to enhance the productivity and development of the society and economic upliftment. Hence winding of this road will increase productivity of the local population. Project Cost Rs. 30766 lacs (Approx.) for 20 years.
2	Benefits to economy due to the specific project	As stated in Sl. 1 above widening of the road will facilitate economic growth of the area. Directly it will be and many more in after completion of project as per feasibility report. It will help in trade and local development of border areas. Beside that it is an important strategic road leading to China Border.
3	No. Of population benefited due to specific project	Widening of road is going to benefit the population @ 22 thousand approx. of Anjaw district as well as huge Army & Paramilitary force are deployed in the border areas.
4	Economic benefits due to direct and indirect employment due to project	During the improvement stage employment will be generated for skilled and unskilled manpower about 130 persons will be employed during the peak working season for construction of the road resulting in about 11700 man days would be required during the construction phase of three years. The local people will also get the opportunity to carry out contract works subject to their work capability / expertise – After the completion about 90 people will be employed for upkeep and maintenance of the road and other structures. The road will facilitate in tourism & horticulture where local population as per there experience and qualification will get benefitted.
5	Economic benefits due to compensatory afforestation	CA for 83.59 Ha. of degraded forest land @ 3.5 lac/ha. For 50 Years (as per Guideline issued by MoEF vide letter No. 5-3/2007-FC/ Dated 05.02.2009 = Rs. 292.565 lacs Say Rs. 293 Lacs
	Total	Rs. (42060+293)Lacs, Total Say 42353 Lac



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C. Cost Benefit Ratio i.e. Project Benefit / Forest Loss = 42353 / 565 = 75:1

Hence the Project has very high benefit to the country as compared to forest loss. **The benefit to loss ratio is approximately 75 times.**




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