

Project: Additional Proposal for diversion of 1.953 ha. of forest land for Improvement of Hayuliang - Hawaii Road from 0.00 km to 51.78 km by NHIDCL under Anjaw forest division in Anjaw district of Arunachal Pradesh.

Table-A: Case under which a cost-benefit analysis for forest diversion is 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 | |
| 2 | Proposal for defence installation purposes and oil prospecting (prospecting only) | Not applicable | |
| 3 | Habitation, establishment of industrial units, tourist lodges complex and other building construction. | Not applicable | |
| 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 projects, hydro projects, mining activity, railway lines, location specific installations like micro-wave station auto repeater centres, TV towers etc. | This is Highway Project and the total community land under USF (Unclassed State Forest) required is 52.45 ha. Hence a cost benefit analysis may be necessary as per MoEF & CC, RO Shillong letter dated. 26 th February' 2018 to determine when diverting the community land under USF to non-forest use in the overall public interest. The cost benefit analysis as per prescribed format is enclosed in the subsequent pages | |



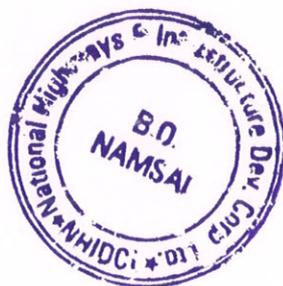
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COST BENEFIT ANALYSIS

Project: Additional Proposal for diversion of 1.953 ha. of forest land for Improvement of Hayuliang - Hawai Road from 0.00 km to 51.78 km by NHIDCL under Anjaw forest division in Anjaw district 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 unclassed forest (for ECO class-I) tropical Semi evergreen density 0.30 to 0.40 being diverted i.e. Forest = 1.953 ha. X 9.39 lacs = Rs. 18.34 lacs Total Cost = Rs. 18.34 lac Say 18 Lacs. |
| 2 | Loss of animal husbandry productivity, Including loss of fodder | NIL Productivity of livestock will not be affected due to construction & widening of existing highway. It is also a strategic road connecting to Border with china. |
| 3 | Cost of human resettlement | NIL No, as area is not habited hence there is no displacement of any oust sees in the project & hence three would be no resettlement. |
| 4 | Loss of public facilities and administrative infrastructure (Roads, buildings, schools, dispensaries, electric line, railways etc) on forest land, which would require forest land if these facilities were diverted due to the project | NIL As existing road is being widened to two lane and existing electric line will be re-erected within ROW of Highway. |
| 5 | Possession value of forestland diverted | NIL |
| 6 | Cost of suffering to outtees | 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 | Compensatory afforestation cost 6.836 Lac (Approx 0.50 lac/ha.) Soil & Moisture Conservation cost included in Compensatory Afforestation cost. |
| | Total Loss (Against the proposed forest land diversion) | Rs. 25.336 Lacs Say 25 Lacs |



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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).

| Sr. No | Parameters | Remarks |
|--------|--|---|
| 1 | Increase in productively attribute to the specific project | The road is GS (Army) road sponsored by Ministry of Defence. The road connects mainland to the North Eastern border which is strategically very important road for enhancing the defense 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 productively of the local population. Project Cost Rs. 51399 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 may lead to China Border. |
| 3 | No of population benefited due to specific project | Widening of road is going to benefit the population @ 3.50 lac approx of Lohit & Anjaw District as well as huge Army and Paramilitary forces are deployed in the border Area. |
| 4 | Economic benefits due to direct and indirect employment due to project | During the improvement stage employment will be generate for skilled and unskilled manpower about 300 persons will be employed during the peak working season for construction of the Road resulting in about 16,400 man days would be required during the construction phase of two 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 and horticulture where local population as per there experience and qualification will be benefited. |
| 5 | Economic benefits due to compensatory afforestation | C.A. for 3.906 ha. of degraded forest land @ Rs. 3.5 lacs/ha. for 50 Years (as per Guideline issued by MoEF vide letter No. 5-3/2007-FC/ Dated 05.02.2009 = Rs. 13.671 Lacs |
| | Total | Rs. 51412.671 Lacs Total Say Rs. 51413 Lacs |

C. Cost Benefit Ratio i.e. Project Benefit/Forest loss = 51413/25= 2056:1

Hence the Project has very high benefit to the country as compared to forest loss. **The benefit to loss ratio is approximate 2056 times.**



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