

PROPOSAL FOR DIVERSION OF ADDITIONAL FOREST LAND FOR THE CONSTRUCTION OF 2-LANING OF JORAM-KOLORIANG ROAD SECTIONS FROM CH 20.00 TO CH 44.770 (KM 20.000 TO 51.000 OF EXISTING JORAM-KOLORIANG ROAD) FOR EXECUTION IN EPC MODE IN THE DISTRICT OF LOWER SUBANSIRI IN THE STATE OF ARUNACHAL PRADESH UNDER "SARDP-NE"

COST BENEFIT ANALYSIS

PARAMETER FOR EVALUATION LOSS OF FOREST HAS BEEN ACCORDED FOR A PERIOD OF 50 YEARS AS PER GOVERNMENT DIRECTIVES

Quantum of forest land applied for : 16.729 Ha. (Additional Forest Land Including Muck Disposal Sites)

Life of Project : 99 years

Division : Hapoli Forest Division, Lower Subansiri District

1. Forest Loss Calculations

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| 1. | Present NPV for 1 Ha of forest land | = 6.26 Lakh |
| | Present NPV for 16.729 Ha forest land | = 16.729 X 6.26 |
| | | = 104.723 Lakh |
| | Rate of C.A. for 1 Ha of forest land | = 4.1035 Lakh (2015-16) |
| | Value of C.A. for 16.729 Ha forest land | = 16.729 X 4.1035 |
| | | =68.6474 Lakh |
| | Double the amount of C.A. | = 2 X 68.6474 |
| | | = 137.2949 Lakh |
| | TOTAL LOSS | = 104.723 + 137.2949 |
| | | = 242.0179 Lakh |
| 2. | Loss of animal husbandry productivity including loss of fodder | NIL, There is no loss of animal husbandry productivity. |
| 3. | Loss of human re-settlement | NIL, as the area is not habited, hence there is no major displacement of any outsees in the project & hence there would be no resettlement |
| 4. | Loss of public facilities and administrative infrastructure (roads, buildings, schools dispensaries, electric line, railway, etc.) on forest land or which would require forest land if these facilities were diverted due to this project. | NIL, as there is no public facilities service existing. |
| 5. | Environmental losses (soil erosion effect on hydrological cycle, wild life habitat, microclimate, upsetting of geological balance) | The details of environmental losses are determined as per given thumb rule for the forest area required for the project and are as follows: |
| | | (i) Density of the forest – 0.2 |

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| | | (ii) | Average density for the area proposed to be acquired for the project - 0.2 |
| | | (iii) | Environmental value per hectare for density 1.0 (Rs in Lakh) – 126.74 Lakh |
| | | (iv) | Environmental loss per hectare for forest of density to be acquired (Rs in Lakh) – $0.2 \times 126.74 =$ 25.348 Lakh |
| | | (v) | Total forest area required for the project – 16.729 Ha |
| | | (vi) | Total environmental loss for the forest area to be acquired for the project – $16.729 \times 25.348 =$ 424.0466 Lakh. <u>There will be minimal impact on the Environmental as plantation will be carried out on the open face of the degraded forest. The compensation for Environmental losses will be paid as per the assessed Net Present Value (NPV) for the diverted forest land.</u> |
| 6. | Suffering of oustees. | | There will not be any losses on this account as diversion of the forest land to this project will not affect any house or structure. |


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PROPOSAL FOR FOREST CLEARANCE FOR THE CONSTRUCTION OF 2-LANING OF JORAM-KOLORIANG ROAD SECTIONS CH 20.00 TO CH 44.770 (KM 20.000 TO 51.000 OF EXISTING JORAM-KOLORIANG ROAD) FOR EXECUTION IN EPC MODE AT KRA-DADI DISTRICT IN THE STATE OF ARUNACHAL PRADESH UNDER "SARDP-NE"

EVALUATION OF BENEFIT, NOTWITHSTANDING LOSS OF FORESTS

| SL NO. | PARAMETER | FOR STRATEGIC ROAD CONSTRUCTION |
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| 1 | Increase in productivity attributed to the specific project. | <p>The planned project is a strategic road project of Ministry of Road Transport & Highways (NHIDCL), a fully-owned company of Ministry of Road Transport & Highways (MoRTH), Government of India, under <u>Special Accelerated Road Development Programme in North East (SARDP-NE)</u>.</p> <p>The aim of SARDP-NE programme is to:</p> <ul style="list-style-type: none"> ▪ Upgrade National Highways connecting State Capitals to 2/4 lane ▪ To provide connectivity of all 88 District Headquarter towns of NER by at least 2- lane road; ▪ Improve roads of strategic importance in border area. ▪ Improve connectivity to neighbouring countries <p>With an aim to achieve the aforesaid objectives, the widening and realignment of Joram–Koloriang Road sections from Km 20.000 to Km 70.000 & Km 138.000 to Km 158.000 will be developed as a 2-Lane carriageway with paved shoulders with a proposed Right of Way (RoW) of 18-35 meters as compared to existing RoW of 9-12 metres which will not only improve the journey speed to 30-40 km/h from existing 18-20 km/h speed but will also save the traveling time and vehicle operating costs (VOC) because of improved traffic condition on a widened and geometrically improved road alignment.</p> <p>The project road stretch is further aims to provide better, smooth and quick transportation to local inhabitants as well as the Army and paramilitary forces deployed in the border and also aims to provide a hassle free connectivity to all the project districts.</p> |
| 2 | Benefits to economy | <p>The direct and indirect benefits of the up-gradation of existing road from the Joram–Koloriang section of Km 20.000 to Km 70.000 & Km 138.000 to Km 158.000 of NH-713 are as given below:</p> <p><u>Direct Benefits</u></p> <ul style="list-style-type: none"> ▪ Fast and Safe Connectivity ▪ Decongestion of traffic on the road ▪ Savings in fuel, travel time and total transportation cost of road users. ▪ Reduction in road accidents. ▪ Reduction in pollution due to constant flow and |

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| | | <p>segregation of traffic from other roads</p> <p><u>Macro Level Benefits</u></p> <ul style="list-style-type: none"> ▪ Employment opportunity to people. ▪ Quick transportation of goods and services for the Army and paramilitary forces deployed in the border areas. ▪ Quick transportation of agricultural produce and perishable goods. ▪ Development of tourism in Arunachal Pradesh and North East States. |
| 3 | Number of population benefited | Widening and realignment of the project road Joram–Koloriang Road section from Km 20.000 to Km 70.000 & Km 138.000 to Km 158.000 is going to benefit the entire population of Lower Subasiri and Kra Daadi and of Kurung Kumey districts as well as Army and paramilitary forces deployed in the border areas. |
| 4 | Employment Potential | During the construction stage employment will be generated for skilled and unskilled manpower. About 110 persons will be employed during the peak working season for construction resulting in about 16,500 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 10 people will be employed upkeep and maintenance of use road and other structures – The road will facilitate in tourism and horticulture where local population as per their experience and qualification will get benefitted |
| 5 | Cost of Acquisition facility on non-forest land wherever feasible | The cost of acquisition of land will amount to Rs. Fifty-Seven Lakhs (Approx.) for project stretch from Km 20.00 to Km 51.00 as mentioned in R&R policy, 2008 of Arunachal Pradesh State Government |
| 6 | Loss of (a) Agriculture and (b) Animal Husbandry products due to diversion of forestland | There is no any agriculture or Animal Husbandry activity going on along the project road stretch. |
| 7 | Cost of Rehabilitating the displaced persons as different from compensatory amounts given for displacement | <p><u>Not Applicable</u></p> <p>There is no displacement due to the diversion of the land for the project purpose.</p> |
| 8 | Cost of Supply of free fuel –wood to workers residing in or near forest area during period of construction | During the construction, alternative source of fuel like LPG and Kerosene will be provided to the workers residing in or near the forest area. A wood depot will be setup for supply of firewood as a backup fuels to avoid illegal felling of trees for cooking purpose. |



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