

**कार्यालय प्रधान मुख्य वन संरक्षक (वन बल प्रमुख) राजस्थान,**

अरण्य भवन, झालाना संस्थानिक क्षेत्र, जयपुर-302004

क्रमांक: एफ. 14( )2018/एफसीए/प्रमुखसं/ **3596** दिनांक **9.12.21**  
शासन सचिव,  
वन विभाग,  
राजस्थान, जयपुर।

विषय:-Diversification of 32.3264 ha. forest land in favour of ADD. CHIEF ENGINEER PPP PWD Laxmipura-Dora-Dabi-Ranaji ka Guda NH-12 (Proposal No.- FP/RJ/ROAD/29812/2017)

संदर्भ:-आपका पत्रांक प.1(69)वन/2021 दिनांक 30.09.2021

महोदय,

उपरोक्त विषयान्तर्गत संदर्भित पत्र के क्रम में निवेदन है कि मुख्य वन संरक्षक, कोटा के पत्रांक 5014 दिनांक 26.11.2021 से चाही गई सूचना की पूर्ति कर संलग्न निम्नानुसार प्रेषित हैं:-

S.N.	EDS	Reply
1.	Cost-benefit Analysis of the Project.	उप वन संरक्षक, बूंदी ने पत्रांक दिनांक 25.11.2021 से अवगत कराया है कि प्रयोक्ता एजेन्सी द्वारा ऑनलाईन संशोधन कर अपलोड कर दिया है, हार्ड कॉपी संलग्न है।
2.	Duly counter-signed by DCF at Bar-chart.	उप वन संरक्षक, बूंदी ने पत्रांक दिनांक 25.11.2021 से अवगत कराया है कि Bar-chart पर हस्ताक्षर कर संलग्न कर दिया है।
3.	To include specific recommendation in site inspection report of DCF/CCF/No Subject to acceptance of the proposal.	उप वन संरक्षक, बूंदी ने पत्रांक दिनांक 25.11.2021 से अवगत कराया है कि अनुशंषा पत्र में विशेष शर्त का उल्लेख कर, संलग्न कर दिया है।
4.	CD of KML file.	उप वन संरक्षक, बूंदी ने पत्रांक दिनांक 25.11.2021 से अवगत कराया है कि प्रयोक्ता एजेन्सी से के.एम.एल. फाईल की सी.डी. प्राप्त कर संलग्न कर दी है।
5.	Undertaking of user agency to raise strip plantation on both side and central verge of the road.	उप वन संरक्षक, बूंदी ने पत्रांक दिनांक 25.11.2021 से अवगत कराया है कि प्रयोक्ता एजेन्सी से वचनबद्धता प्राप्त कर, संलग्न कर दिया है।

संलग्न:-उक्तानुसार (दो सैट मय सी.डी. संलग्न)।

भवदीय

(डॉ. गोविन्द सागर भारद्वाज)

अति० प्रधान मुख्य वन संरक्षक,

प्रोटेक्शन एंव नोडल अधिकारी एफसीए,

राजस्थान, जयपुर

दिनांक

क्रमांक: एफ. 14( )2018/एफसीए/प्रमुखसं/

प्रतिलिपि:-मुख्य वन संरक्षक, कोटा को सूचनार्थ एवं आवश्यक कार्यवाही हेतु प्रेषित है।

( भवानी सिंह )

उप वन संरक्षक (एफ.सी.ए.)

अरण्य भवन, जयपुर

Table-B: Estimate of Cost of Forest Diversion in Bundi District

Sr. No.	Parameters	Given Guideline	Evaluation
1	Ecosystem Services losses due to Proposed Forest Diversion	<p>Economic value of loss of ecosystem services due to diversion of forests shall be the net present value (NPV) of the forest land being diverted as prescribed by Central Government (MoEF&amp;CC)</p> <p>Note:- in case of National Parks the NPV shall be Ten (10) times the normal NPV and in case Wildlife Sanctuary the NPV shall be five (5) times the normal NPV or otherwise prescribed by the Ministry or any other competent authority.</p> <p>Note:-1: Net Present Value (NPV) of environment and ecosystem service loss:- The concept of Net Present Value (NPV) of environment and ecosystem services loss:- The Concept of Net Present Value of the forest land diverted is a scientific method of calculating the environment cost and other losses Caused due to diversion of forest land for non-forestry purposes, the NPV represents the net value of various ecosystem services and other environmental services in monetary terms which the forest would have provided if the forest would not have been diverted.</p>	<p>NPV value (as per of Forest Conservation act, 1980 is in between Rs. 4.38 to 10.43 lac per Hectare Accordingly, Net Present Value of Forest Land Proposed For Diversion is 6,26,000/- per ha. therefore Total NPV Shall be</p> <p><math>626000 \times 32.3264 = 2,02,36,326/-</math> Rupees.</p>
2	Loss of animal husbandry productivity including loss of fodder.	To be quantified and expresses in monetary terms of 10% of NPV applicable whichever is maximum.	<p>Loss of Animal husbandry due to proposed diversion is very moderate and calculated below.:</p> <p>Gross loss @ 5 ton/Ha/year @ Rs. 100/- per tonne. Therefore, loss of fodder as estimated for about...<b>32.3264</b> Ha. will be <math>32.3264 \times 5 \times 100 = 16163/YR</math> X 50 Years = Rs. 808150 (8.08 Lac) So considered amount (maximum one ) is Rs. <b>20.24 lac.</b></p>
3	Cost of human resettlement	To be quantified and expressed in monetary terms on actual terms as per approved R&R Plan.	Nil Human Resettlement is not required since no family is residing in forest land.
4	Loss of public	To be quantified and expressed in monetary	No loss of public

	facilities and administrative infrastructure (roads, buildings, schools, dispensaries, electric lines, railways etc) on forest land or which would require forest land if these facilities were diverted due to: the project.	terms on actual cost basis of the time of diversion.	infrastructure like Roads, hospital etc are investigated. However, there will be some utility shifting like electricity pole, telephone line, OFC cable etc from proposed ROW located in forest land. The likely cost of these utility shifting is estimated Rs. 345.00 Lac.
5	Possession Value of Forest land	<p>30% of environmental cost (NPV) due to loss of forest or circle rate of adjoining area in the district should be added as a cost component as possession value of forest lands whichever is maximum.</p> <p>Note 2: Possession value of forest land diverted:- The forest land diverted for the project such as irrigation, hydropower, railways, roads, wind and transmission lines and mining etc are unlikely to be returned and remains in the possession of the user agencies, Therefore 30% of the net present value(NPV) of forest land diverted or market rate of adjoining area in the district should be added as a cost component as "possession value of forest land" in addition to the environment cost due to loss of forests.</p>	<p>Possession value of forest land will be (considering 30% of NPV = <math>0.3 \times 202.36 = 60.708</math> Lac.</p> <p>Per hectare land rate along the highway in district Bundi is approx. 75 lac/ha.</p> <p>So possession value of forest land (as per average circle rate) = <math>32.3264 \text{ Ha} \times 75.00 \text{ Lac} = 2424.48 \text{ Lac}</math></p> <p>So considered amount (Maximum one) is Rs. 2424.48 Lac.</p>
6	Cost of Suffering to ousters	The social cost of rehabilitation of ousted (in addition to the cost likely to be incurred in providing residence, occupation and social services as per R&R plan) be worked out as 1.5 times of what ousted should have earned in two years had he not shifted.	<p>NIL, no resettlement &amp; rehabilitation is identified or required in forest land which is proposed to be diverted. Also the community residing along the project road is not dependent on forest or forest produce.</p> <p>There will not be any losses on this account as diversion of the forest land to this project will not affect</p>

			any house or structure in protected forest area which is basically a linear plantation.
7	Habitat Fragmentation Cost	While the relationship between fragmentation and forest goods and services is complex for the sake of simplicity the cost due to fragmentation has been pegged at 50% of NPV applicable as a thumb rule.	Habitat fragmentation cost is 50% of NPV that is Rs. 202.36 X 50% = 101.18 Lac.
8	Compensatory afforestation and soil & moisture conservation cost	The actual cost of compensatory afforestation and soil & moisture conservation and its maintenance in future at present discounted value.	As per DFO Office, Bundi CA cost estimated Rs. 55.79 Lac for 32.3264 Ha. Forest land to be diverted.

Table -C- Existing guideline for estimating benefit of forest diversion in Cost Benefit Analysis (CBA)

Sr No.	Parameter	Given guidelines	Evaluation
1.	Increase in productivity attributable to the specific project.	To be quantified & expressed in monetary terms avoiding double counting.	<p>Socio economic benefits due to the road project will provide the</p> <ul style="list-style-type: none"> <li>• Connectivity to state capital to district head quarter</li> <li>• With high speed corridor leading reduced travel time and fuel consumption.</li> <li>• The benefit to trade specially in moment of perishable goods.</li> <li>• Access to new industrial area.</li> <li>• Overall enhancement of socio-economic condition of the area along the project corridor.</li> <li>• Through overall mission to increase the GDP of the said region and make it comparable/above the nation GDP</li> <li>• Again, directly approximately 146000-man days of temporary and 1000 permanent employment will be generated during the construction of the project for a period of 2 years.</li> </ul>
2.	Benefits to economy due to specific project	The incremental economic benefit in monetary terms due to the activities attributed to the specific project.	<p>Economic benefit in terms of increase in trade saving in vehicular operation and maintenance cost better connectivity, safer journey to commuter and saving of travel time.</p> <p>Improved road connectivity helps in better implementation and management of government schemes. It will provide last and economical transport of goods.</p> <p>After completion of project, the local people and industries situated in the area will be greatly benefited. The widening of project road will provide safe, fast, economic and environmental friendly transportation to the state which in term will accelerate the rate of growth in this area.</p> <p>In addition to that there area several other benefits that may accrue due to saving in fuel, reduction in time to commute, vehicle maintenance, reduction in carbon</p>


			emission etc.  "However, they have not been quantified as it will be a function of various govt. policy variables" Exact quantification of the value is not possible as it is time and policy dependent.										
3.	No. of population benefited due to specific project.	As per detailed project report.	The Population of 250000 people from district Bundi will be benefited directly.										
4.	Economic benefit due to direct and indirect Employment potential.	As per detailed project report	Approximately 73000 man days of temporary and 300 permanent employment will be generated during the construction of the Project for a period of 2 Years and Wages @rs. 550/day (average) = Rs. 550 X 73000 = 401.00 Lac.										
5.	Economic benefit due to compensatory afforestation	Benefit from such compensatory afforestation accruing over next 50 years monetized and discounted to the present value should be included as benefit of CA the guideline of the Ministry for NPV estimation may be consulted.	<p>The benefit of Economy shown in table below:</p> <table border="1"> <thead> <tr> <th>Project Details</th> <th>Increasing Rate of cost year</th> <th>Project after 50 years</th> <th>Current cost involves in construction project</th> <th>Net Profit in 50 Year</th> </tr> </thead> <tbody> <tr> <td></td> <td>5%</td> <td>258.125 Cr.</td> <td>103.25 Cr.</td> <td>154.875 Cr.</td> </tr> </tbody> </table> <p>So. Benefit of economy in 50 years = 154.875 crores</p> <p>In lieu of total forest land to be affected it is proposed to be undertake at least twice of the affected trees as Compensatory afforestation as per Forest (Conservation) Act 1980.</p> <p>Apart from compensatory plantation and on road divider plantation. The compensatory will be done on 32.3264 Ha. of Non forest land, which is down the line would be having a density of minimum 0.7. The ecological value for a 50 years period of density of 1.0 is 126.74 lac per hectare ( As per FCA 1980). By considering minimum 0.7 density, the ecological gain for this project would be 126.74 lac X 0.7 X 32.3264 = 2867.9335</p>	Project Details	Increasing Rate of cost year	Project after 50 years	Current cost involves in construction project	Net Profit in 50 Year		5%	258.125 Cr.	103.25 Cr.	154.875 Cr.
Project Details	Increasing Rate of cost year	Project after 50 years	Current cost involves in construction project	Net Profit in 50 Year									
	5%	258.125 Cr.	103.25 Cr.	154.875 Cr.									

### Summary of Cost-Benefit Analysis for the project.

Sr No.	Loss in Lac	Benefit in Lac
1.	Ecosystem Services losses = Rs. 202.36 Lac.	Ecological gain for this project would be 126.74 lac X 0.7 X 32.3264 = 2867.9335 Lac. <b>Benefit of Economy for the present year = 2867.9335 Lac.</b>
2.	Loss of animal husbandry productivity including loss of fodder = Rs. 20.2363 Lac	73000 man days will be generated for unskilled/semi-skilled worker in terms of salary and Wages @ Rs. 550/day (average) = Rs. 550 X 73000 = 401.00 Lac  Basic living amenities including alternative fuel (LPG solar cooker etc) will be supplied to labours/workers in construction period by contractor-2 years. Number of labours at peak time -225 Approx.50% labour assume to be local.

		Per head cost of fuel - Rs. 2.00/day for rest 112 labours. Total Cost = Rs. 2.00X112 laboursX803days = Rs. 179872.00/- of Rs. 1.798 Lac
3.	Loss of public facility = Rs. 345 Lac	
4.	Possession value of forest land diverted = Rs. 2424.48 Lac	As per detailed project report
5.	Habitat Fragmentation Cost = Rs.101.1800 Lac.	
6.	Compensatory afforestation and soil & moisture conservation cost = Rs. 55.79 Lac.	
7.	Total Cost/Loss = 202.36 Lac + 20.2363 Lac + 345 Lac + 2424.48 Lac + 101.1800 Lac + 55.79 Lac = 3149.0463 Lac.	Total gain/benefit from project = Rs. 2867.9335 Lac + 154.875 Lac + 401.00 + 1.798 Lac = 18885.408 Lac

**Cost Benefit Ratio = Total Benefit/Total Loss = 3425.6065/3149.0463 = 1.0878 which is >1 so project is found valuable based on given .above described criteria.**

  
 परियोजना निदेशक  
 पीपीपी सा.नि.वि., कोटा

**Full Title of the Project:** "Diversion of 32.3264 hectare Forest Land for Development of Laxmipura-Dora-Dabi-Ranaji Ka Guda NH-12, in the state of Rajasthan".

**Proposal No. :** FP/RJ/ROAD/29812/2017

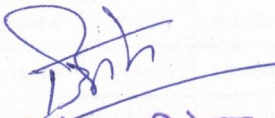
**Date of Proposal:** 09.06.2018

**Purpose:** The Cost Benefit Analysis is being undertaken as the proposed diversion of forest land being affected due to widening (Two Laning) of existing road for above said project is > 20 Ha.

**Cost Benefit Analysis as per Guidelines for Forest Land Diversion - 2017:**

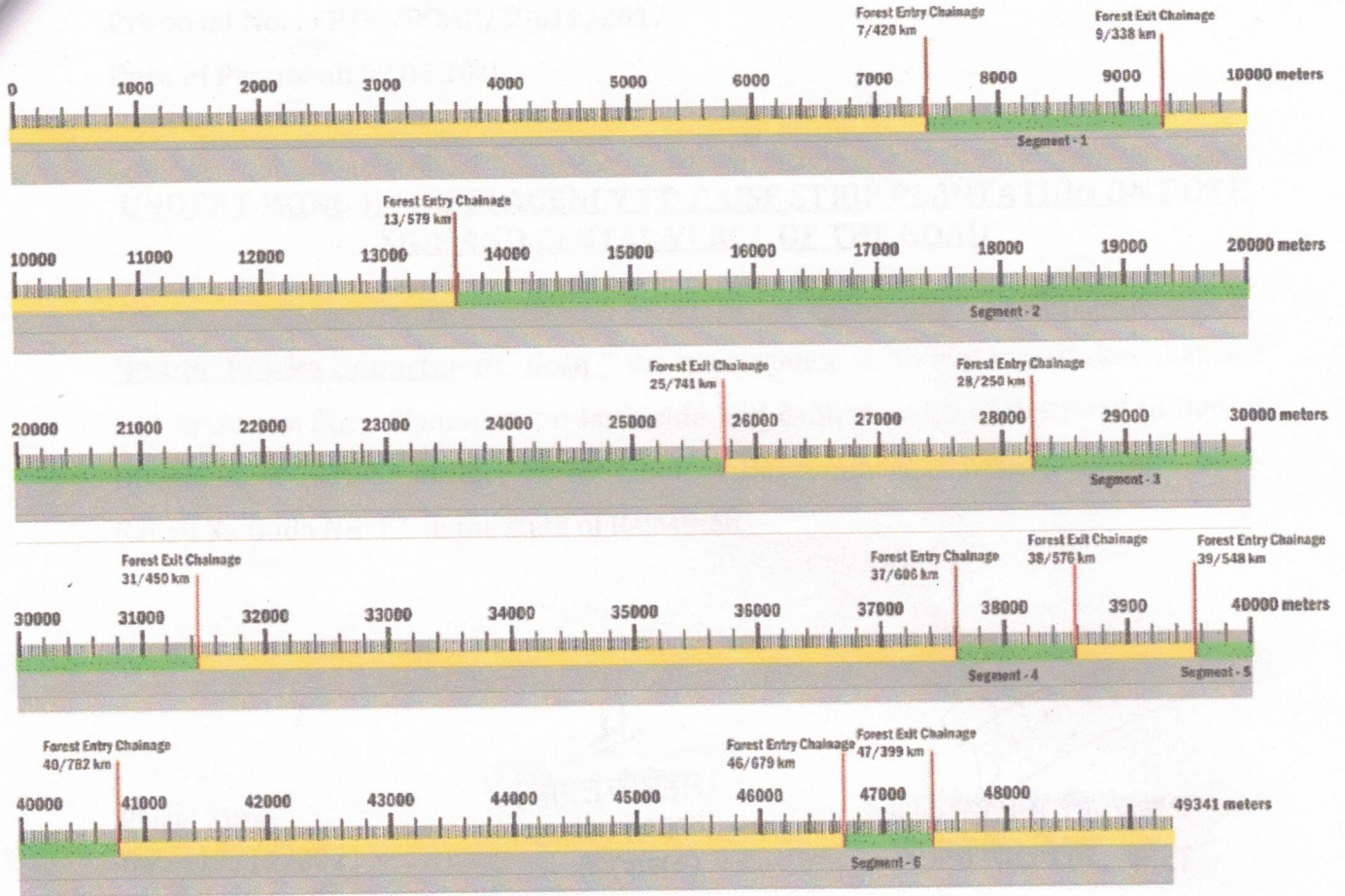
Sr No.	Nature of Project	Applicable/Not Applicable	Remarks
1.	All categories of proposal involving forest land upto 20 ha. In plains and upto 5 Ha. In hills.	Not Applicable	These proposals may be considered on a case to case basis and value judgments.
2.	Proposal for defense installation purpose and 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, tourists lodge complex and other building construction.	Not Applicable	These activities being determined to protection and conservation of proposal would be rarely entertained.
4.	All other proposals involving forest land more than 20 Ha. In plains and more than 5 Ha. In hills including roads, Transmission line, minor, medium and major Irrigation projects, hydro projects, mining activity, railway line, location specific installations like microwave stations, auto repair centres, TV towers etc.	Applicable	These are the cases where a cost-benefit analysis is necessary to determine when diverting the forest land to non-forest use in the overall public interest.

Since the proposal is for diversion of forest land measuring more than 20 Ha. In the plain area for road project, cost benefit analysis report is applicable.

  
परियोजना निदेशक  
पीपीपी सानि.वि., कोटा

## BAR CHART SHOWING THE FOREST AND NON FOREST AREA STATUS

Name of Project : "Development of Laxmipura-Dora-Dabi-Ranaji Ka Guda NH-12, In the state of Rajasthan"  
 Proposal No. : FP/RJ/ROAD/29812/2017 (Applied Area - 32.3264 Hectare)



### LEGEND

	Forest Land
	Non Forest Land

S. No.	Division & District	Villages	Segment	Forest Area			Non Forest Area			Total Forest Area (ha.)	Total Non Forest Area (ha.)
				Length (M)	Width (M)	Area (Sqm)	Length (M)	Width (M)	Area (Sqm)		
1	Bundi	Bharta Bavdi & Laxmipura	Segment 1	1918.000	16.0000	30688	29137	16.0000	466192	32.3264 Hectare	46.6192 Hectare
2		Maradi Talab, Dora, Kachaliya & Kanwarpura	Segment 2	12162.000	16.0000	194592					
3		Kanwarpura	Segment 3	3200.000	16.0000	51200					
4		Dabi	Segment 4	970.000	16.0000	15520					
5		Chhant ka Khera	Segment 5	1234.000	16.0000	19744					
6		Lambakoh	Segment 6	720.000	16.0000	11520					
				Total Area (Sqm)		323264	Total Area (Sqm)		466192		



**Full Title of the Project:** "Diversion of 32.3264 hectare Forest Land for Development of Laxmipura-Dora-Dabi-Ranaji Ka Guda NH-12, in the state of Rajasthan".

**Proposal No. :** FP/RJ/ROAD/29812/2017

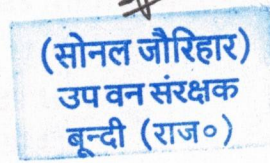
**Date of Proposal:** 09.06.2018

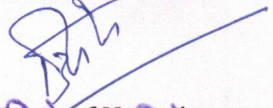
**UNDERTAKING BY UGER AGENCY TO RAISE STRIP PLANTATION ON BOTH SIDE AND CENTAL VERGE OF THE ROAD**

**"Public Works Department, Kota "** the user agency is hereby undertakes that, we will Raise the Strip Plantation on both side and central verge of the Road in lieu of Diversion, of 32.3264 hectare Forest Land for Development of Laxmipura-Dora-Dabi-Ranaji Ka Guda NH-12, in the state of Rajasthan.

Place: Kota

Date: 17/11/2021



  
Signature of User Agency  
With Office Seal  
बुन्दी वन विभाग, कोटा

Counter signed by:-  
Divisional Forests Officer  
Bundi Forest Division  
Office Seal\_\_\_\_\_

# Deputy Conservator of Forest, Bundi

RECOMMENDATION NOT BELOW THE RANK OF DCF

(For the Forest Land to be diverted under FCA)

**Name of Project:** Construction of Laxmipura-Dora-Dabi-Ranaji Ka Guda NH-12 Dist bundi.

Specific recommendation for acceptance or otherwise of the Proposal. I recommend the Proposal for acceptance in Public interest on following two conditions

- 1- Since the proposed forest area Laxmipura-Dora-Dabi-Ranaji Ka Guda NH-12 will divide the protected forest land into two parts, It will become prone to encroachments, so for effective protection of remaining forest land on both the side of ROW pakki stone wall is required
- 2- Underpass must be constructed to ensure connectivity of wild animals in that stretch of forest land. Proposed underpass with gps in the area proposed as mentioned below.

1- 25°12'41"N 75°39'15"E

2- 25°10'04"N 75°38'1"E

3- 25°09'0"N 75°37'21"E

4- 25°6'56"N 75°35'22"E

5- 25°6'2"N 75°34'26"E

Proposal NO: FP/RJ/ROAD/29812/2017

Recommended Area: 32.3264 Ha.

Place : Bundi

Date: 19-07-2021

(Sonal Jourihar)

DY. CONSERVETAR FOREST

BUNDI