

Name of the Project:-

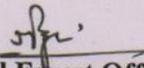
Uttar Pradesh Core Road Network Development Project- Application for diversion of Forest land due to Improvement and Upgradation "Badaun-Bilsi-Bijnaour Road" (Bahjoi to Gajraula of SH-51 from Km 58.500 to Km 107.000 of SH-51 in Sambhal district and from Km 107.000 to Km 137.500 of SH-51 In Amroha (J.P. Nagar) district of Uttar Pradesh)
Forest Proposal No.: FP/UP/ROAD10923/2015

COST-BENEFIT ANALYSIS

Annexure (A)

District:- Sambhal & Amroha

Sl. No.	Particulars	Amount (Rs. Crores)	Remark
1	Total cost (Investment Incurred)		
(A)	Construction Cost of Project	363.11	
(B)	N.P.V. Amount to be disposed @ 6.26 Lakh/Hactare (63.20) both Districts=63.2x6.26=395.632 Lacs=3.96 Cr	3.96	
(C)	Substitute/Alternate Plantation Cost to be deposited:- (153.63 Lasc+83.30Lacs) for both Districts=236.93 Lacs=2.37 Cr	2.37	
	Total	369.44	
2	Benefits:- Benefits from (Taking Age of Road As 50 Years)	50 Years	
(A)	Economic Benefits- Market Development.	Saving in vehicle operating costs. Benefits to trade especially in movement of perishable goods, Reduced maintenace costs, All round development of areas.	
(B)	Direct Employment of Labours.	About 400 employee will get direct employment for duration of 3 year	
(C)	Employment Genration Due to other Activities	Petty contracts to local people, vehicles will also generate	
Note :-	Therefore construction is Economically Viable and socially beneficial.	Yes	


Divisional Forest Officer,
Social Foretry Division
Sambhal, U.P.


Divisional Forest Officer,
Social Foretry Division
Amroha, U.P.


Executive Engineer
World Bank
Division,
Moradabad.


Suprintending Engineer
World Bank Project Circle,
Moradabad

Name of the Project:-

Uttar Pradesh Core Road Network Development Project-
Application for diversion of Forest land due to Improvement and
Upgradation "Badaun-Bilsi-Bijnaour Road" (Bahjoi to Gajraula of
SH-51 from Km 58.500 to Km 107.000 of SH-51 in Sambhal district
and from Km 107.000 to Km 137.500 of SH-51 In Amroha (J.P.
Nagar) district of Uttar Pradesh)

Forest Proposal No.: FP/UP/ROAD10923/2015

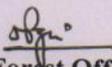
COST-BENEFIT ANALYSIS

Parameters For Evaluation of loss of Forests

Annexure (B)

Sl. No	Particulars	Details
1	Loss of value of timber, fuelwood and minor forest produce on an annual basis, including loss of man hours per annum of people who derived livelihood and wage from the harvest of these commodities	Approximately Rs. 6.00 Lacs per hectare for 63.2 hectare@ 6.00 Lack =379.2 Lacs Say =3.79 Cr.
2	Loss of Animals husbandary	Nil
3	Cost of human resettlement	Nil
4	Loss of public facilities and administrative infrastucture (Roads, Buildings, Schools, dispensaries, Electric Lines, Railway etc.) on forest land or which would require forest land is these facilities were diverted due to the project.	No loss of Roads, Buildings, Schools, dispensaries and Railway line, Electric Lines will be shifted at the end of ROW, at the cost of civil construction work.
5	Environmental losses; (Soil erosion, effect on hydrological cycle, wildlife habitat, microclimate upsetting of ecological balance.	Density of forest of Sambhal (38.8 hect. area) is 0.3 Density of forest of Amroha (24.4 hect. area) is 0.2 The environment loss of density 1 is 126.74 lacs /hect. as per forest (conservation Act.) for 50 years. So environment loss for 50 years for sambhal (38.8 hect. area & Amroha (24.4 hect. area) is $0.3 \times 38.8 \times 126.74 = 1475.25$ $+ 0.2 \times 24.4 \times 126.74 = 618.49$ <u>2093.74</u> Say 20.94 Cr.
6	Suffering to oustees	Nil

Total loss=3.79+20.94=24.73 Cr


Divisional Forest Officer,
Social Forestry Division
Sambhal. U.P.


Divisional Forest Officer,
Social Forestry Division
Amroha. U.P.


Executive Engineer
World Bank Division,
Moradabad.


Suprintending Engineer
World Bank Project Circle,
Moradabad

Name of the Project:-

Uttar Pradesh Core Road Network Development Project-
Application for diversion of Forest land due to Improvement and
Upgradation "Badaun-Bilsi-Bijnaour Road" (Bahjoi to Gajraula of
SH-51 from Km 58.500 to Km 107.000 of SH-51 in Sambhal
district and from Km 107.000 to Km 137.500 of SH-51 In Amroha
(J.P. Nagar) district of Uttar Pradesh)

Forest Proposal No.: FP/UP/ROAD10923/2015

COST-BENEFIT ANALYSIS

Parameter For Evaluation of Benefit, notwit

Annexure (C)

Sl. No.	Particulars	Roads, Tr. Lines & Railway line						
1	Increase in productivity attributable to the specification project.	<p>The compensatory afforestation will be done in 126.6 ha of degraded forest land, which is expected to having a density of minimum 0.5 after 10 years. The ecological value of the forest land for a 50 years period for the density of 1.0 is INR 126.74 lacs per hectare.</p> <p>Considering current density of proposed CA land is 0.1, then Current ecological value of proposed CA land for 50 years: $126.6 \times 126.74 \times 0.1 = 1604.5$ Lakh Current ecological value of proposed CA land for 30 years: $1604.5 \times 30/50 = 962.7$ Lakh</p> <p>It is expected, density of proposed CA land after 10 year of plantation will be 0.5, then Ecological value of proposed CA land after 10 year of plantation for 50 years: $126.6 \times 126.74 \times 0.5 = 8022.6$ Lakh Ecological value of proposed CA land after 10 year of plantation for 30 years: $8022.60 \times 30/50 = 4813.6$ Lakh Net increase in productivity: $4813.6 - 962.7 = 3850.9$ Lakh Say = 38.51 Cr</p>						
2	Benefits of economy	<p>Socio-economic benefit due to the project will be:</p> <ul style="list-style-type: none"> • Better accessibility to social infrastructure like educational Institution, health facilities, markets etc. • Saving in vehicle operating costs; • Saving in travel time; • Benefits to trade especially in movement of perishable • Reduction in accidents and; • Overall enhancement of socio-economic condition of area along the project corridor. <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">Project</th> <th style="width: 15%;">EIRR (%)</th> <th style="width: 35%;">NPV @ 12% (Rs. Lakhs)</th> </tr> </thead> <tbody> <tr> <td>widening of existing road to 2 lane with paved</td> <td style="text-align: center;">18.1%</td> <td style="text-align: center;">13500.00</td> </tr> </tbody> </table> <p>So benefit of Economy: Rs. 13500.00 laksh. Say=135.00 Cr.</p>	Project	EIRR (%)	NPV @ 12% (Rs. Lakhs)	widening of existing road to 2 lane with paved	18.1%	13500.00
Project	EIRR (%)	NPV @ 12% (Rs. Lakhs)						
widening of existing road to 2 lane with paved	18.1%	13500.00						

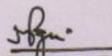
2	No. of populatoin benefited.	More than 5 Lacs
3	Employment potential.	About 400 employee will get direct employment for duration of 3 year and indirect employment will also be generated construction of project road.
4	Cost of acquisition of facility on non forest land wherever feasible.	Nil
5	Loss of of (a) agricultural & (b) animal husbandry production due to diversion of forest land.	Nil
6	Cost of rehabilitation the diplaced persons as different from compensatory amount given for displacement.	There will be no displacement due to the project, so resettlement is not required.
7	Cost of supply of free fuel-wood to workers residing in or near forest area during the period of construction.	No Fuel wood will be supplied to the workers during the consrtuction period. Contractor will supply fuel for the cooking and other purposes in the worker's camp to the workers.

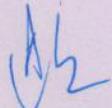
Therefore Net Benefit of the Project notwithstanding loss of forest accruing during design period=

38.51+135.00=173.51 Cr

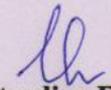
Benefit Cost Ratio as per guidelins= $\frac{173.51}{24.73}$ =7.02 times

24.73


Divisional Forest Officer,
Social Foretry Division
Sambhal, U.P.


Divisional Forest Officer,
Social Foretry Division
Amroha, U.P.


Executive
Engineer
World Bank
Division,


Suprintending Engineer
World Bank Project Circle,
Moradabad