

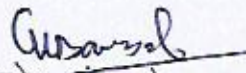
लागत लाभ का विश्लेषण

यह एक पुराना राजमार्ग है, जिस पर पत्थर की गिट्टी, बोल्टर, सीमेन्ट, स्टील, पेट्रोलियम पदार्थ, बालू अनाज, कृषि व स्टील के बायलर इत्यादि के वितरण एवं खदान उद्योग से सम्बन्धित विभिन्न वाहनों का आवागमन बढ़ जाने के कारण मार्ग का चौड़ीकरण एवं सुदृढ़ीकरण आवश्यक है। मार्ग का विकास 4-लेन स्तर पर सार्वजनिक-निजी- सहभागिता से किया जाना है। परियोजना की लागत 828.32 करोड़ आकलित की गयी है। इस परियोजना के निर्माण से क्षेत्रीय जनता उत्तर प्रदेश, उत्तराखण्ड, दिल्ली-हरियाणा व पंजाब के यातायात के आवागमन से सुविधा होगी तथा क्षेत्र का तीव्र गति से विकास होगा।

तिथि—

हस्ताक्षर

स्थान—


(ए०के० बंसल)

परियोजना महाप्रबन्धक (पश्चिम),
उ०प्र० राज्य राजमार्ग प्राधिकरण (उपशा),
क्षेत्रीय कार्यालय, मुजफ्फरनगर।

Name of Project: Improvement of Muzaffarnagar-Saharanpur Road section of State Highway No.59 from existing Km 5.9 to Km 16.00(Proposed km0.00 to km10.100) of SH-59 in Muzaffarnagar District of Uttar Pradesh.

COST BENEFIT ANALYSIS

Purpose: Cost Benefit Analysis for Proposed Diversion of Protected Forest within Existing ROW of SH-59 for Widening Project.

a) Parameter for Evaluation of Loss of Forests

| S.No. | Parameters | Descriptions |
|-------|---|---|
| 1. | Loss of value of timber, fuel wood and minor forest produce on an annual basis including loss of man hours per annum of people who derived livelihood and wages from the harvest of these commodities. | A. Total no. of trees affected in roadside plantation declared as Protected Forest=5281 Nos. B. Total value of Trees=18691950 C. Cost of felling and extraction =Rs. 3544926.00 Total Cost: Rs22236876.00 |
| 2. | Loss of animal husbandry productivity, including loss of fodder | Nil |
| 3. | Cost of human resettlement | Nil |
| 4. | Loss of public facilities and administrative infrastructure (Roads, buildings, school, dispensaries, electric lines, railways etc) on forest land, or which would require forest land if these facilities were diverted due to the project. | Nil |
| 5. | Environmental losses: (Soil erosion, effect on hydrological cycle, wildlife habitat, microclimate upsetting of ecological balance) | The total area of protected forest land along the project road required for the widening is 30.30 hect. The environmental loss for density 1.0 is Rs 126.74 lacs per hectare (As per Forest (Conservation) Act) for 50 years. Considering density of the forest as 0.4, the cost of environmental losses per hectare is Rs. 50.696 Lac. for 50 years. So, Environmental losses for total protected forest affected are Rs1536.0888 Lakhs for 50 years. Therefore, Therefore, cost of current environmental loss will be=Rs.30.721 lac |
| 6. | Suffering to oustees | Nil |

Therefore Net Loss=22236876+3072100=25308976

b. Parameter for Evaluation of Benefit, notwithstanding Loss of Forests

| S.No. | Parameters | Descriptions |
|-------|---|---|
| 1. | Increase in productivity attributable to the specific project | In lieu of total trees to be affected in protected forest land, it is proposed to be undertaken atleast twice of affected trees as compensatory afforestation as per Forest (Conservation) Act. So the total trees to be planted as per compensatory afforestation = 10562 Trees cost of plantation considering for protected forest including trees guards under compensatory afforestation = Rs. 28686392 |

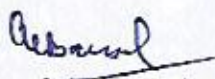
| 2. | Benefits of economy | So Economic benefit due to the project will be: better accessibility to social infrastructure like educational institutions, health facilities, markets etc. | | | | | | |
|---|---|---|---------|---------|---------------------|---|-------|---------|
| S.No. | Parameters | Descriptions | | | | | | |
| | | <ul style="list-style-type: none"> • Saving in vehicle operating costs, • Saving in travel time, • Benefits to trade especially in movement of perishable goods. • Reduced maintenance costs, • Reduction in accidents, and • Overall enhancement of socio-economic condition of area along the project corridor. <p>Based on economic analysis of the project, Economic Internal Rate of Return (EIRR) is as below:</p> <table border="1"> <thead> <tr> <th>Project</th><th>EIRR(%)</th><th>NPV@ Rs. 8.75 Lakhs</th></tr> </thead> <tbody> <tr> <td>widening of existing road to 4 lane with paved shoulder</td><td>12.5%</td><td>265.125</td></tr> </tbody> </table> <p>So benefit of Economy due to the Project=Rs.265.125 Lakhs</p> | Project | EIRR(%) | NPV@ Rs. 8.75 Lakhs | widening of existing road to 4 lane with paved shoulder | 12.5% | 265.125 |
| Project | EIRR(%) | NPV@ Rs. 8.75 Lakhs | | | | | | |
| widening of existing road to 4 lane with paved shoulder | 12.5% | 265.125 | | | | | | |
| 3. | No. of population benefited | The project road is an important road connecting M.P., Jharkhand, Chhattisgarh, Bihar state . About 5 lakhs people residing along project corridor including Sonebhadra, Renukoot, Obra, Singrauli, Anpara, Shaktinagar, Beena Towns will be benefited due to the project/ | | | | | | |
| 4. | Employment potential | <p>About 200 employees will be working directly/indirectly in the project for the construction period of 2 years.</p> <p>Apart from direct employment, indirect employment will also be generated during construction of project road in the form of petty shops, local petty contractors, etc.</p> | | | | | | |
| 5. | Cost of acquisition of facility on non-forest land wherever feasible | Nil | | | | | | |
| 6. | Loss of (a) agricultural & (b) animal husbandry production due to diversion of forest land | Nil | | | | | | |
| 7. | Cost of rehabilitating the displaced person as different form compensatory amounts given for displacement | Nil | | | | | | |
| 8. | Cost of supply f 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 construction period. Contractor will supply fuel for the cooking and other purposes in the worker's camp to the workers. | | | | | | |

Therefore the Net Benefit due to the Project= 253.08976+265.125 =518.21476 Lakhs.

Benefit-Cost Ratio=518.21476/253.08976=2.04755

Place:

Date:


 (Signature of User Agency)
परियोजना महाप्रबन्धक
उ०प्र० राज्य राज मार्ग प्राधिकरण
 वि.नं. : लखनौ, मुजफ्फरनगर

Name of Project: Improvement of Muzaffarnagar-Saharanpur Road section of State Highway No.59 from existing Km 16.00 to Km 58.85(Proposed km10.10 to km 52.950) of SH-59 in Saharanpur District of Uttar Pradesh.

COST BENEFIT ANALYSIS

Purpose: Cost Benefit Analysis for Proposed Diversion of Protected Forest within Existing ROW of SH-59 for Widening Project.

a) Parameter for Evaluation of Loss of Forests

| S.No. | Parameters | Descriptions |
|-------|---|---|
| 1. | Loss of value of timber, fuel wood and minor forest produce on an annual basis including loss of man hours per annum of people who derived livelihood and wages from the harvest of these commodities. | A. Total no. of trees affected in roadside plantation declared as Protected Forest=20043 Nos. B. Total value of Trees=70941632 C. Cost of felling and extraction =Rs. 13454073.00 Total Cost: Rs. 84395705.00 |
| 2. | Loss of animal husbandry productivity, including loss of fodder | Nil |
| 3. | Cost of human resettlement | Nil |
| 4. | Loss of public facilities and administrative infrastructure (Roads, buildings, school, dispensaries, electric lines, railways etc) on forest land, or which would require forest land if these facilities were diverted due to the project. | Nil |
| 5. | Environmental losses: (Soil erosion, effect on hydrological cycle, wildlife habitat, microclimate upsetting of ecological balance) | The total area of protected forest land along the project road required for the widening is 128.55 hect. The environmental loss for density 1.0 is Rs 126.74 lacs per hectare (As per Forest (Conservation) Act) for 50 years. Considering density of the forest as 0.4, the cost of environmental losses per hectare is Rs. 50.696 Lac. for 50 years. So, Environmental losses for total protected forest affected are Rs.6516.9708 Lakhs for 50 years. Therefore, Therefore, cost of current environmental loss will be=Rs.130.339Lacs. |
| 6. | Suffering to oustees | Nil |

Therefore Net Loss=84395705+13033900=97429605

b. Parameter for Evaluation of Benefit, notwithstanding Loss of Forests

| S.No. | Parameters | Descriptions |
|-------|---|---|
| 1. | Increase in productivity attributable to the specific project | In lieu of total trees to be affected in protected forest land, it is proposed to be undertaken at least twice of affected trees as compensatory afforestation as per Forest (Conservation) Act. So the total trees to be planted as per compensatory afforestation = 40086 Trees cost of plantation considering for protected forest including trees guards under compensatory afforestation = Rs. 108893082.00 |

| 2. | Benefits of economy | So Economic benefit due to the project will be: better accessibility to social infrastructure like | | | | | | |
|---|---|--|---------|---------|---------------------|---|-------|-----------|
| S.No. | Parameters | Descriptions | | | | | | |
| | | <p>educational institutions, health facilitates, markets etc.</p> <ul style="list-style-type: none"> • Saving in vehicle operating costs, • Saving in travel time, • Benefits to trade especially in movement of perishable goods. • Reduced maintenance costs, • Reduction in accidents, and • Overall enhancement of socio-economic condition of area along the project corridor. <p>Based on economic analysis of the project, Economic Internal Rate of Return (EIRR) is as below:</p> <table border="1"> <tr> <th>Project</th><th>EIRR(%)</th><th>NPV@ Rs. 8.75 Lakhs</th></tr> <tr> <td>widening of existing road to 4 lane with paved shoulder</td><td>12.5%</td><td>1124.8125</td></tr> </table> <p>So benefit of Economy due to the Project=Rs. 1124.8125 Lakhs</p> | Project | EIRR(%) | NPV@ Rs. 8.75 Lakhs | widening of existing road to 4 lane with paved shoulder | 12.5% | 1124.8125 |
| Project | EIRR(%) | NPV@ Rs. 8.75 Lakhs | | | | | | |
| widening of existing road to 4 lane with paved shoulder | 12.5% | 1124.8125 | | | | | | |
| 3. | No. of population benefited | The project road is an important road connecting M.P., Jharkhand, Chhattisgarh, Bihar state . About 5 lakhs people residing along project corridor including Sonebhadra, Renukoot, Obra, Singrauli, Anpara, Shaktinagar, Beena Towns will be benefited due to the project/ | | | | | | |
| 4. | Employment potential | <p>About 200 employees will be working directly/indirectly in the project for the construction period of 2 years.</p> <p>Apart from direct employment, indirect employment will also be generated during construction of project road in the form of petty shops, local petty contractors, etc.</p> | | | | | | |
| 5. | Cost of acquisition of facility on non-forest land wherever feasible | Nil | | | | | | |
| 6. | Loss of (a) agricultural & (b) animal husbandry production due to diversion of forest land | Nil | | | | | | |
| 7. | Cost of rehabilitating the displaced person as different form compensatory amounts given for displacement | Nil | | | | | | |
| 8. | Cost of supply f 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 construction period. Contractor will supply fuel for the cooking and other purposes in the worker's camp to the workers. | | | | | | |

Therefore the Net Benefit due to the Project= 108893082+112481250=221374332 Lakhs.

Benefit-Cost Ratio=2213.74332/834.95705=2.65

Place:

Date:

(Signature of User Agency)