

Name of the project: Diversion of 4.966 (earlier 0.9789 Ha) Ha of Forest land for construction of Rising Main, Gravity Feeder and Delivery Chamber in Kotipura and other villages of Shikaripura Taluk of Shivamogga District comes under Sagar Forest Division to fill 41 MI/ZP tanks and providing irrigation for 3430 Ha of command area of Shikaripura and Soraba Taluks by lifting 0.429 TMC of water from Kumudvathi River under Kasaba LIS Project.

Table A: Category of proposals for which Cost Benefit Analysis are applicable

Sl.No.	Nature of proposal	Applicable/ Not applicable	Remarks
1	All categories of proposals involving forest land up to 20 Ha in Plains and up to 5 Ha in hills.	Not applicable	
2	Proposals for defense installation purposes and oil prospecting (Prospecting only)	Not applicable	
3	Habitation, establishment of industrial units, tourist lodges/complex and other building constructions.	Not applicable	
4	All other proposals involving forest land more than 20 Ha in plain and more than 5 Ha in hills including roads, transmission lines, minor medium and major irrigation projects, hydel projects, mining activities, Railway lines, location specific installation like Micro-wave station, auto repeater center, TV towers, etc.	Not applicable	
5	Proposal for renewal of Mining Lease for forest land.	Not Applicable	

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Table-B: Calculation of the Cost

(Parameters for Evaluation of Loss of Forests)

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Quantum of Forest Applied For : 4.966Ha

Life of Project : 30 years

Division

: Executive Engineer, Dandavathy Reservoir Project Division, Karnataka Neeravari Nigam Ltd, Shikaripura.

Sl.No	Parameter	Criteria	Cost per Year (lakhs)	Cost for 30 years (lakhs)
1	Ecosystem services losses due to proposed forest diversion	Economic Value of loss of eco-system services due to diversion of forest shall be the Net Present Value (NPV) of the forest land being diverted as prescribed by the Central Government (MoEF&CC). Present NPV for 1 Ha of forest land = 6.26 lakhs (density of 0.4) Present NPV for 4.966 Ha forest land = $6.26 \times 4.966 = 31,08,716/-$	31,08,716/-	93,26,1480/-
2	Loss of animal Husbandry Productivity, Including loss of Fodder.	10% of the NPV	3,10,871/-	93,26,148/-
3	Possession Value of Forest land Diverted	30% of the NPV	9,32,615/-	2,79,78,444/-
4	Habitat Fragmentation Cost	50% of the NPV	15,54,358/-	4,66,30,740/-
5	Compensatory afforestation and Soil & moisture conservation cost	Rate of C.A. for 1 Ha of forest land = 15.93 Lakh (2020-21) Value of C.A. for 4.966 Ha forest land = 79,10,838/-	79,10,838/-	23,73,25,140/-
		Total	1,38,17,398/-	41,45,21,952/-


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Table-C: Calculation of the Benefits

(Parameters for Evaluation of Benefits)
(Not withstanding loss of forest)

Sl.No	Parameter	Criteria	Cost per Year (lakhs)	Cost for 30 years (lakhs)
1	Increase in Productivity attribute to the Specific project	Not Applicable for drinking water projects	-	-
2	Benefits to economy due to the Specific project	Not Applicable for drinking water projects	-	-
3	No of Population Benefited due to specific project	Shikaripura&Soraba taluk as per 2011 Census	30200 People	
4	Economic benefits due to of direct and indirect employment due to this project	Total employment =5,000 (Per day wages as per Dept. of Labor, GOK2019-20)	-	
5	Economic benefits due to Compensatory afforestation	5000 X Rs. 424.80/- (per day) X 20 days X 12 months = Rs. 101,95,20,000/-	50,97,60,000/-	1529,28,00,000/-
		Value of Carbon sequestration per Ha/year = Rs. 1,20,780/- (per Ha/Yr) X 4.966Ha (forest land) = Rs. 5,99,793/-	5,99,793/-	1,79,93,790/-
		Value of Bio-Prospecting per Ha/year = Rs.25,553/- (per Ha/Yr) X 4.966 Ha (forest land) = Rs. 1,26,896/-	1,26,896/-	38,06,880/-
		Value of NTFP Ha/year= Rs.7,631/-(per Ha/Yr) X 4.966Ha (forest land) = Rs. 37,895/-	37,895/-	11,36,850/-
		Value of Eco-tourism Ha/year = Rs.65,113/-(per Ha/Yr) X 4.966 Ha (forest land) = Rs. 3,23,351/-	3,23,351/-	97,00,530/-
		Value of fodder Ha/year = Rs.7631/- (per Ha/Yr) X 4.966 Ha (forest land) = Rs. 37,895/-	37,895/-	11,36,850/-
		Value of Flagship species Ha/year= Rs.2,58,400/- (per Ha/Yr) X 4.966Ha (forest land) =Rs. 12,83,214/-	12,83,214/-	3,84,96,420/-
		Value of Ecological services of forests per Ha/Year= Rs.1,44,332/- (per Ha/Yr) X 4.966Ha (forest land) =Rs.7,16,753/-	7,16,753/-	2,15,02,590/-
		Total	51,28,85,797/-	1538,65,73,910/-

Calculation of Benefit/Cost Ratio

Total Benefits (As per II calculations) =Rs. 1538,65,73,910/-

Total Losses (As per I calculations) =Rs. 41,45,21,952/-

Hence, Benefit/Cost Ratio $\frac{15386573910}{41,45,21,952} = 37.11$

Thus, the project gives positive Benefit/Cost Ratio with minimal environmental losses.

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