


Cost-Benefit analysis

Name of the project: Diversion of 61 ha of forest land for construction of Tumkur Branch Canal of Upper Bhadra 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	Nil
2	Proposals for defense installation purposes and oil prospecting (Prospecting only)	Not applicable	Nil
3	Habitation, establishment of industrial units, tourist lodges/complex and other building constructions.	Not applicable	Nil
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.	Applicable	These are cases where a cost benefit analysis is necessary to determine whether diverting the forest land to non-forest use is in the overall public interests.
5	Proposal for renewal of Mining Lease for forest land.	Not Applicable	Nil


ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಇಂಜಿನಿಯರ್
ವಿ.ಜ.ನಿ.ನಿ., ಭ.ಮೇ.ಯೋ. ಉಪ ವಿಭಾಗ,
ನಂ.24. ಕಳ್ಳಂಬೆಳ್ಳಿ ಕ್ಯಾಂಪ್, ಶಿರಾ.


Executive Engineer
Visvesvaraya Jala Nigama Limited,
Upper Bhadra Project Division (No.9)
Sira Tumkur Dist.

Table-B: Estimation of Cost of Forest Diversion

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 = 9,57,780/- Present NPV for 61 Ha forest land = 61 Ha. X 9,57,780/- = 5,84,24,580/-	584.24	17,527.2
2	Loss of animal Husbandry Productivity, Including loss of Fodder.	10% of the NPV	58.424	1,747.26
3	Cost of Human resettlement	No R&R involved in the project	-	-
4	Loss of public facilities and administrative infrastructure (roads, building, schools, dispensary, electric lines, railways, etc)	No loss public facilities involved in the project	-	-
5	Possession Value of Forest land Diverted	30% of the NPV	175.272	5,258.16
6	Cost of suffering to oustees	No R&R involved in the project	-	-
7	Habitat Fragmentation Cost	50% of the NPV	292.12	8,763.6
5	Compensatory afforestation and Soil & moisture conservation cost	Rate of C.A. for 1 Ha of forest land = 18,36,000 (as per Karnataka Forest Dept SR for the year 2022-23) Value of C.A. for 61 Ha forest land x 18,36,000 = 11,19,96,000/-	1,119.96	33,598.8
Total			2,230.016	66,900.48

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	Net value of the Produce=Total gross receipts-Total Expenses	1,41,391	42,41,730
2	Benefits to economy due to the	Net annual Benefits	1,62,511	48,75,330


Calculation of Benefit/Cost Ratio

Total Benefits (As per II calculations) = Rs. 92,00,910 Lakhs

Total Losses (As per I calculations) = Rs. 66,900.48 Lakhs

Hence, Benefit/Cost Ratio $\frac{92,00,910}{66,900.48} = 137.53$

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


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ವಿ.ಜ.ನಿ.ನಿ., ಭ.ಮೇ.ಯೋ. ಉಪ ವಿಭಾಗ,
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