

NARMADA KSHIPRA MULTIPURPOSE PROJECT


COST BENEFIT ANALYSIS

PARAMETER FOR EVALUATION OF LOSSES OF FOREST

S.No.	Parameter	Irrigation + Drinking & Industrial water Project
1	2	3
01	Increase in productivity attribute specified project.	The Narmada Kshipra Multipurpose Project is conceived to cater irrigation Water to 30,000 Hact. of CCA in 70 villages of Tarana, Ghatia and Shujalpur Tehsil of District Ujjain and Shajapur respectively & to provide drinking and industrial water to Dewas, Makshi, Shajapur, Nagda, Guradia Gurjar, Tarana, Jhangra, Ghosla and Ghatia. Total amount annual benefit from increased to productivity have been workout 1,63,950 Tonnes from 51,789 Tonnes. Therefore total profit in next 100 year would be 85339 lacs.
02	Benefits to economy	The main objective of Narmada Kshipra Multipurpose Project is to provide irrigation water in 30,000 hact. and to provide drinking and industrial water in different towns and after completion of project assured will be given to boost up their economy and daily life.
03	Number of population benefited	The Narmada Kshipra Multipurpose Project is conceived to cater irrigation Water to 30,000 Hact. of CCA in 70 villages of Tarana, Ghatia and Shujalpur Tehsil of District Ujjain and Shajapur respectively & provide drinking and industrial water to Dewas, Makshi, Shajapur, Nagda, Guradia Gurjar, Tarana, Jhangra, Ghosla and Ghatia. will be benefited by this scheme by way of irrigation and drinking and industrial water so, the cultivators 24,000 and citizens benefited through, drinking 9 towns+2 industrial cities.
04	Employment Potential	During the construction stage temporary employment to 200 persons up to 4 year and permanent to 75 person shall be generated for 5 years.
05	Cost of acquisition facility on non-forest land wherever feasible.	No human commodity will affected due to construction of project.
06	Loss of (a) Agriculture (b) Animal Husbandry production due to diversion.	No loss of agriculture envisaged. In fact present object of the project has been proposed for the improvement of agriculture and drinking in this area. No loss in the animal husbandry production.
07	Cost of rehabilitating the displacement person has different from.	Not Applicable based on survey, it was found that there were no displacement due to the project as this is the lift irrigation project and maximum of the construction activity would have been done underground.
08	Cost of supply of free fuel would to workers residing in are near forest area during period of construction.	The labour camp will be facilitated with Kerosene/LPG facilities and hence no tree cutting shall be there for fuel wood.
09	Total benefit due to project	Rs. 72450.16 lacs yearly.

Cost benefit Analysis :

- (i) Total Benefit due to project (Rs. 72450.16 lacs)
- (ii) Total Annual cost (Expenditure Rs. 37247.41lacs)
- (iii) Benefit Cost Ratio 1.95


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On the basis of Guidelines for forest Land Diversion 2018

Table A Cases Under which A cost Benefit Analysis for forest Diversion Area Required

S. No.	Nature of proposal	Applicable / Not Applicable	Remarks
1	2	3	4
01	All categories of proposal involving forest land up to 20 ha in plains and up to 5 ha. in hills.	Not applicable	
02	Proposal for defense installation purposes and of prospecting (prospecting only)	Not applicable	
03	Habitation establishment of industrial units tourist lodges, complex and other building construction.	Not applicable	
04	All other proposal involving forest land more than 20 Hact. in plain and more than 5 hact. in hills including roads, transmission lines minor, medium and Major irrigation project, hydro projects, mining activity, railway lines, location specific installation like micro wave station, auto repeater centers TV towers.	Applicable.	These are cases where a cost benefits analyses is necessary to determine when diverting the forest land to non-forest use of overall public interest, the Narmada-Kshipra Multipurpose Project under this category.


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Table - B : Estimation of Cost of Forest Diversion:

S.No.	PARAMETER	Remarks
1	2	3
01	Ecosystem Services losses due to proposed forest diversion.	Ecosystem Services due to diversion of forest land suggested by the forest classification report of proposed Narmada Kshipra Multipurpose PROJECT is Rs. 8.03 lacs per hact. Cost of land Rs. 79.934 hact x 8.03 = 641.870 lacs. Eco class III consisting of tropical dry deciduous.
02	Loss of animal husbandry productivity including cost of fodder.	As per the cost of benefit guide lines i.e. 10% of N.P.V. 0.803 lacs per hac. 79.934 x 0.803 = 64.187 lacs.
03	Cost Human Resettlement.	There is no human settlement due to proposed Narmada Kshipra Multipurpose Project hence cost of human resettlement is NIL.
04	Loss of public facility and administrative infrastructure (Road, building, Schools, Dispensaries, Electric lines, Railways etc.) on forest land if these facilities were diverted due to the project.	There is no loss public facility and administrative infrastructure (Road, building, Schools, Dispensaries, Electric lines, Railways etc.) on forest land due to construction of Narmada Kshipra Multipurpose Project. No cost has been added on this account.
05	Possession value of forest land diverted.	The Possession value of forest land diverted is taken 30% of N.P.V. due to loss of forest i.e. 706.057 @ 30% = 211.817
06	Cost of suffering to outsets	Not Applicable.
07	Habitat fragmentation cost	Forest land is being acquired for laying of pipe line of Narmada Kshipra Multipurpose Project. There is no amount is taken under this account.
08	Compensatory forestation and solid and moisture conservation cost.	The cost of @Rs. 6.00 lacs per hac. is taken for Compensatory afforestation and soil and moisture conservation cost. Hence amount will be 79.934 x 6.00 = 479.604 lacs.
09	Total cost due to forest land diversion.	Total cost due to forest land diversion for Narmada Kshipra Multipurpose Project will be Rs. 641.870+64.187+211.817+479.604 = 1397.478 lacs.


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Table - C : Existing Guideline for estimating benefits of forest diversion in CBA:

S.No.	PARAMETER	Remarks
1	2	3
01	Increase in productivity attribute to the specific project.	The crop production benefits due to Narmada Kshipra Multipurpose Project will be Rs. 72450.16 lacs yearly in designed life of the project and water level will be increased economy growth of the project.
02	Benefit to economy due to the specific project.	Narmada Kshipra Multipurpose Project will trigger economic development and also influenced with irrigation facility to the land of 30,000 hact. in command area and to provide drinking and industrial water & Irrigation proposed by underground pipeline system up to the 2.5 hac. chak.
03	Number of population benefited due to the specific project.	After completion of project 30,000 hact. land irrigated and near above 24000 cultivators will be benefited and ground water level will be increased in surrounding area.
04	Economic benefits due to of direct and indirect employment due to the specific project.	The project will be provide temporary employment to 200 persons up to 4 years and permanent employment to 75 persons.
05	Economic benefits due to compensatory afforestation.	An economic benefits due to compensatory afforestation has considered as per the benefit C.A. guideline of ministry of N.P.V. estimation.


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Total Cost due to Forest land	:	Rs. 1379.478 lacs.
Total benefits due to project	:	Rs. 72450.16 lacs.
Benefits Ratio of Project	:	Rs. 1.95


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