Cost Benefit Analysis for

CHHITAKHUDRI MEDIUM IRIGATION PROJECT

On the basis of guidelines for Forest Land Diversion 2017

(as per GOI.MOEP4CC No. 7-69/2011 dtd. 01.08.2017)

Table - A Cases Under which a Cost Benefit Analysis for forest diversion are required

No.	Nature of Proposal	Applicable/ Not Applicable	Remark
1.	All categories of proposal involving forest land upto 20 hectares in plains and upto 5 hectares in hills.	Not Applicable	
2.	Proposal for defence installation purposes and oil prospecting. (prospecting only)	Not Applicable	
3.	Habitation, establishment of industrial units, tourist lodges complex and other building construction.	Not Applicable	
4.	All other proposals involving forest land more than 20 hectares in plain and more than 5 hectares in hills including roads, transmission lines, minor, medium and major irrigation project, hydro projects, mining activity, railway lines, location specific installations like microwave station, auto repeater centres, TV towers, etc.	Applicable	These are cases where a cost benefit analysis is necessary to determine when diverting the forest land to non-forest use of overall public interest. The Chhitakhudri Medium Irrigation Project falls under this category.

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Table-C Existing guidelines for estimating benefits of forest diversion in CBA.

1	Increase in productivity attribute to the specific project.	The crop production benefit due to Chhitakhudri Medium Irrigation Project will be Rs. 5394.20 Lakhs in designed life of 100 year and ground water level will increase economy growth of the project. Project also reserves the water for Drinking purpose for Kundam and Sihora blocks of Distt. Jabalpur.
2	Benefits to economy due to the specific project.	Chhitakhudri Medium Irrigation Project will trigger economy development and also influence with irrigation facility to a land of 8920 Ha. In the surrounding area. Irrigation is proposed by pressurized pipe system.
3	No. of population benefited due to specific project.	Project is located in backward area of the village. After completion of project 17840 Cultivators will be benefitted and water level will be increased in surrounding area. This project will also facilitate drinking water supply to Kundam and Sihora blocks of Distt. Jabalpur.
4	Economic benefits due to of direct and indirect employment due to the project.	The project will be provided direct employment for approximate 90,000 man-day during construction period. (24 Month)
5	Economic benefits due to compensatory affrestation.	An economic benefit due to compensatory afforestation has considered as per the benefit of C.A. guidelines of ministry for N.P.V. estimation.

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CHHITA KHUDRI MEDIUM IRRIGATION PROJECT

Cost of Benefit Analysis

(as per GOI.MOEP4CC No. 7-69/2011 dtd. 01.08.2017)

Table-B Estimation of forest diversion.

1	Ecosystem services losses due to proposed forest diversion.	Ecosystem services due to diversion by the central powered committee as per the forest classification report of proposed Chhitakhudari Medium Irrigation Project is Rs. 6.29 Lakhs/Ha. Cost of land = 69.555x6.26 = 435.41 Lakhs
2	Loss of animal Husbandry productivity including cost of fodder	As per the cost guidline i.e. 10% of N.P.V. 0.626 Lakh per Ha. = 69.555 X0.626 = 43.54 Lakhs
3	Cost of human resettlement	There is no human resettlement due to proposed Chhitakhudari Medium Irrigation Project. Hence cost of Human resettlement is Nil.
4	Loss of public facilities 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 of public facilities and administrative infrastructures of forest land due to construction of Chhitakhudari Medium Irrigation Project. No cost has been added on this account.
5	Possession value of forest land diverted.	The possession value of forest land diverted is taken 30% of the N.P.V. due to loss of forest i.e. Rs. 1.878 Lakhs/Ha. = 69.555x1.878 = 130.62 Lakhs
6	Cost of suffering to oustees.	Not applicable
7	Habitat fragmentation cost.	Forest land is being acquired for submergence of Chhitakhudari Medium Irrigation Project. There is no amount taken under this account.
8	Compensatory afforestation and soil and moisture conservation cost.	The cost @ Rs. 4.00 Lakhs per Ha. Is taken for compensatory afforestation and soil moisture conservation. Hence amount will be: = 69.555x4 = 287.22 Lakhs
9	Total cost due to forest land diversion	Total cost due to forest land diversion for Chhitakhudari Medium Irrigation Project will be: = 435.41+43.54+130.62+278.22 = 887.79 Lakhs

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CHHITAKHUDARI MIDIUM IRRIGATION PROJECT

Benefit to Cost Analysis

Total cost due to forest land	-	887.79 Lakhs
Total benefit due to project	-	5946.32 Lakhs
Benefit Cost ratio of project :-		
@ 10% Interest on Capital	-	1.51
@ 5 % Interest on Capital	-	2.42

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