

Cost Benefit Analysis
Morand Ganjal PROJECT
On the basis of Guidelines for forest land diversion 2018

Table- A Cases under which a cost benefit analysis for forest diversion are required

No.	Nature of Proposal	Applicable/ Not applicable	Remarks
1	All categories of proposals involving forest land up to 20 hecares in plains and upto 5 hectares in hills.	Not applicable	
2	Proposal for defence installation purpose 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 plains and more than 5 hectares in hills including roads, transmission lines, minor, medium and major irrigation projects, hydro projects, mining activity railway lines, location specific installations like micro-wave station, auto retreat centers, 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. Morand Ganjal Project falls under this category.

Table- B Estimation of cost of Forest Diversion

No.	Parameters	Remarks
1	Ecosystem services losses due to Proposed forest diversion.	Ecosystem service due to diversion of forest land suggested by the Central Powered Committee as per the forest classification report of proposed Project is Rs 8.03 Lakh/Ha. Cost of Land =2250.05x12.93= 29093.1465 Lakh
2	Loss of animal husbandry productivity including cost of fodder	As per the cost benefits guideline i.e. 10 % of N.P.V. 0.803 Lakh per Ha. = 2250.05 X 1.293 = 2909.314 Lakh
3	Cost of human resettlement	There is no loss of public facilities and administrative infrastructures of forest land due to construction Project, no cost has been added on this account.
4	Loss of Public facilities and administrative infrastructure (Roads, building, schools, dispensaries, electric, railways etc.) on forest land which would required 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 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 . =29093.6Lakh@30% = 8727.943 Lakhs
6	Cost of Suffering to oustees	Not Applicable
7	Habital Fragmentation Cost	Forest land is being acquired for construction of dam, submergence & spill channel of Morand Ganjal Irrigation Project. There is no amount is taken under this account.
8	Compensatory afforestation and soil & moisture conservation cost	The cost @ Rs 5 lakh per Ha. Is taken for compensatory afforestation and soil moisture conservation. Hence amount will be = 2250.05 x 5 = 11250.25 Lakh
9	Total cost due to forest land diversion	Total cost due to forest land diversion for Morand Ganjal Project will be : 29093.1465 + 2909.314 +8727.943 + 11250.25= 51980.6535 Lakh

Table – C Existing guidelines for estimation benefits of Forest diversion in CBA

S.No.	Parameters	Remarks
1	Increase in productivity attribute to the specific project	<p>This project will facilitate irrigation in 64111 ha of agriculture land. Average yield is about 16 quintals per acre or about 4 tonnes per ha.</p> <p>Thus this project will additional production of about $64111 \times 4 = 2,56,444$ tonnes of food grains.</p> <p>The crop production benefit due to Project will be around $256444 \times \text{Rs. } 24000 = \text{Rs. } 61546$ lakh per year in designed life of 100 years.</p> <p>In addition to this, Water level will be increased and economic growth of command area will be boosted. Project also reserves water for Drinking purpose of Seondha town and adjacent villages.</p>
2	Benefits to Economy due to the specific project	Project will trigger economic development with irrigation facility to a land of 64111 ha. In the command area. Irrigation is proposed by pressurized pipe system.
3	No. of population benefitted due to specific project	After completion of project 150000 villagers will be benefitted in over 200 villages with a large no.of tribals.
4	Economic benefits due to direct and indirect employment due to the project.	The project will provide direct and indirect employment for approximate 50000 people due to the project.
5	Economic benefits due to compensatory afforestation	Rs. 5.00 lakh per ha will be spend on compensatory afforestation. Thus about $\text{Rs. } 5 \times 2250 = \text{Rs. } 11250$ lakhs will be spend on CA.

COST BENEFIT ANALYSIS

Total cost due to forest land (Rs. Lakh) : Rs 51980.6535Lakh

Total benefit due to the project (Rs. Lakh) : Rs. 72796 lakhs

Benefit Ratio of project : 1: 1.40