


COST BENEFIT ANALYSIS FOR GANGA BAWARI TANK PROJECT NEEMUCH

Table-A Cases User which A Cost Benefit Analysis for Forest Diversion Area Required

S. No.	Parameters	Applicable/Not Applicable	Remark
1	All categories of proposal involving forest land up to 7.98 Ha. In plains and up to 30 Ha. In hills.	Applicable	
2	Proposal for defense 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 proposal involving forest land more than 7.98 Ha. In plain and more than 30 Ha. 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 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 Ganga Bawari Tank Project falls under this category.


(Himanshu Bhabor)
 Sub Divisional Officer
 W.R. Sub Division, Rampura




(Vimal Shrivastav)
 Executive Engineer
 W.R. Division, Neemuch

Table-B Estimate of Cost of Forest Diversion

S. No.	Parameters	Remark
1	Ecosystem service losses due to proposed forest diversion	Ecosystem services due to diversion of forest land suggested by the forest classification report of proposed, Ganga Bawari Irrigation Project is Rs. 12.2859 lakhs/Ha. Cost of land = 43.149 Ha. X 12.28590 lakhs/Ha. = 530.12 Lakhs
2	Loss of animal husbandry productivity including cost of fodder.	As per the cost benefit guideline i.e. 10 % of N.P.V 1.228 Lakh per Ha.= 43.149 x 1.228 = 53.01 Lakh
3	Cost Human Resettlement	There is no human settlement due to proposed Ganga Bawari Tank Project Hence cost of human resettlement is Nil.
4	Loss of public facilities and administrative infrastructure (road, building, School, 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 infrastructure of forest land due to construction of Ganga Bawari Tank 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. 3.686 Lakhs/Ha. Hence amount will be = 43.149 x 3.686 = 159.04 Lakhs
6	Cost of Suffering to oustees	No Applicable
7	Habitat fragmentation cost	Forest land is being acquired the submergence of Ganga Bawari Tank 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 = 43.149 x 4.00 = 172.596 Lakhs
9	Total cost due to forest land diversion	Total cost due to forest land diversion for Ganga Bawari Tank Project will be 530.12+53.01+159.04+172.596 = 914.766 Lakhs.


(Himanshu Bhabor)
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 W.R. Sub Division, Rampura





(Vimal Shrivastav)
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 W.R. Division, Neemuch

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

S. No.	Parameters	Remark
1	Increase in productivity attribute to the specific project.	The Crop production benefit due to Ganga Bawari Tank Project will be Rs. 24044 Lakhs in designed life of 100 Years and water level will increase economic growth of the nearby Villages.
2	Benefits to economy due to the specific project	Ganga Bawari Tank Project will trigger economic development and also influence with irrigation facility to a land of 430 Ha. In the surrounding area Irrigation is proposed both by Lift & Canal System.
3	No. of Population benefited due to specific project	Project is located in back ward area of the village. After completion of project 472 No. cultivators will be benefited and ground water level will be increased in surround area. This Project will also facilitate drinking water supply to adjacent villages.
4	Economic benefits due to of diret and indirect employment due to the project	The project will provide direct employment for approximate 300 people (18 month) during its construction period.
5	Economic benefits due to compensatory afforestation.	An economic benefit due to compensatory afforestation has considered as per the benefit of C.A. guidelines of Ministry for N.P.V estimation.


(Himanshu Bhabor)
 Sub Divisional Officer
 W.R. Sub Division, Rampura


(Vimal Shrivastav)
 Executive Engineer
 W.R. Division, Neemuch

GANGA BAWARI TANK PROJECT

TEHSIL –MANASA

DISTRICT- NEEMUCH

COST BENEFIT ANALYSIS

PARAMETER FOR EVALUATION OF FOREST

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

S. No.	Parameters	Remark
1	Increase in perceptivity attributed to specified project	The Ganga Bawari Tank Project is conceived to cater irrigation water to 430 Ha. Of CCA in Village. Ganga Bawari, Hundi Bherpura and Deori of Manasa Tehsil of Neemuch district. Irrigation intensity will increase. Total amount of annual benefits in terms of productivity have been work out 11504 quintal from 1440 quintal, therefore total profit in next 100 Years would be 24044 Lakh.
2	Benefits to economy	The Main objective of Ganga Bawari Tank is to provide irrigation water to 430 ha land which mainly owned by triabls and after completion assured water will be given to boost up their economy.
3	Number of the population benefited.	The Ganga Bawari Tank is conceived to cater irrigation water to 430 ha of CCA in village Ganga Bawari, Hundi, Bherpura and Deori of Manasa Tehsil of District Neemuch will be benefited by this scheme by way of irrigation so the total cultivators benefited through irrigation shall be near by 472 Nos
4	Employment Potential	During the construction stage temporary employment 300 man days and permanent employment 10 person shall be generated for 18 months.
5	Cost of acquisition facility on non forest land wherever feasible	No human commodity will affected due to construction of project.
6	Loss of (a) Agriculture (b) Animal Husbandry	No loss of agriculture envisaged In fact

	Production due to diversion.	present object has been proposed for the improvement of agriculture in this area No loss in the animal husbandry production.
7	Cost of rehabilitating the displacement person has different from.	Not applicable based on survey it was found that there no displacement due to project and as such
8	Cost of supply of free fuel would to workers residing in are near forest area during period of construction	The labour camps will be facilitated with kerosene/LPG facilities and hence no free cutting shall be there for fuel woo.
9	Total benefit due to project	Rs. 240.44 Lakh per year Rs. 24044 Lakh after 100 years.

Cost Benefit Analysis :-

1. Total Benefit due to project = Rs 240.44 Lakhs
2. B.C (Cost Benefit) Ratio 5% Interest = 2.65
B.C (Cost Benefit) Ratio 10 % interest = 1.45



Sub Engineer
W.R. Sub Division, Rampura



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COST BENEFIT RATIO

1. Project Cost = Rs 1501.24 Lakh
2. Irrigation (Rabi) = 430 Hact.

Pre Development

S No.	Name of Crop	Area under cultivation	Cost of Cultivation per hact.	Total Cost of Cultivation	Yield per hact. In quintal	Total Yield	Rate per Quintal	Total Value of produce in lakh
1	2	3	4	5	6	7	8	9
1	Wheat Hyb	40	8000	3.20	24	960	1800	17.28
2	Gram	60	5500	3.30	08	480	4000	19.20
	Total	100	-	6.50	-	1440	-	36.48

(A) Net benefit – 36.48 -6.50 = 29.98 lakh

POST DEVELOPMENT


S No.	Name of Crop	Area under cultivation	Cost of Cultivation per hact.	Total Cost of Cultivation	Yield per hact. In quintal	Total Yield	Rate per Quintal	Total Value of produce in lakh
1	2	3	4	5	6	7	8	9
1	Wheat Hyb	232	10000	23.20	35	8120	2000	162.40
2	Gram	90	7000	6.30	16	1440	4000	57.60
3	Mustard	108	7000	7.56	18	1944	4500	87.48
	Total	430	-	37.06	-	11504	-	307.48


(B) Net benefit – 307.48-37.06 = 270.42 lakh

B.C Ratio

S. No.		5% Interest	10% Interest
1	Project Cost	1501.24 lakh	1501.24 Lakh
2	Project cost interest	75.062 lakh	150.124 lakh
3	Depreciation@ 1% on (1) above	15.0012 lakh	15.012 lakh
4	Administrative expenses @ 100/hact. (Design irrigation 430 x 100)	0.430 lakh	0.430 lakh
5	(C)	90.49 lakh	165.56 lakh
6	B.C Ratio = B-A/C	2.65	1.45


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