

Table-A

**Navnera Barrage across River Kalisindh, near Village -
Abra, Tehsil -Digod, District-Kota, Rajasthan, under Eastern
Rajasthan Canal Project (ERCP) Phase -I (A)**

TEHSIL- DIGOD / PIPALDA / MANGROL / ANTA

DISTRICT-KOTA / BARAN

COST-BENEFIT ANALYSIS

S.NO.	PARAMETERS	Rs. (In Lakh)
1	Estimation of cost of forest diversion (Including Construction Cost) as per Table B	119716.28
2	Estimating Benefits of forest diversion as per Table-C	266052.36
	Ratio of Benefit/Cost	2.22
Note:- Therefore Construction of Navnera Barrage across River Kalisindh, near Village - Abra, Tehsil -Digod, District-Kota, Rajasthan, under Eastern Rajasthan Canal Project (ERCP) Phase -I (A) is economically viable and socially beneficial.		

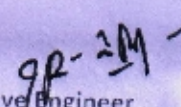

 Executive Engineer
 Water Resources Division Kota

Table-B

**Navnera Barrage across River Kalisindh, near Village - Abra, Tehsil -
Digod, District-Kota, Rajasthan, under Eastern Rajasthan Canal
Project (ERCP) Phase -I (A)**

TEHSIL- DIGOD / PIPALDA / MANGROL
/ANTA

DISTRICT-KOTA / BARAN

Estimation of cost of forest diversion

S.No.	Parameters	Remarks	Amount (In Lakh)
1	Ecosystem services losses due to proposed forest diversion	10 % of N.P.V. amount to be disposed towards forest land diversion of 700.347 Ha. @ 6.26 Lakh/Ha.	438.42
2	Loss of animal husbandry productivity, including loss of fodder	10 % of N.P.V. cost i.e. 0.63 Lakh/Ha. (10% of 6.26) For 700.347 Ha.	438.42
3	Cost of Human Resettlement	No habitation is coming under submergence area of Forest Land	0.00
4	Loss of public facilities and administrative infrastructures (Bridge, Roads, buildings, schools, dispensaries, electric lines, railway lines etc.) on forest land which would require forest land if these facilities were diverted due to the project	One High Level Bridge of SH at Bardod-Dhibri Kalisindh is under Submergence.	46.65
5	Possession value of forest land diverted	N.P.V. amount to be disposed towards forest land of 700.347 Ha. @ 6.26 Lakh/Ha.	4384.17
6	Cost of suffering to oustees	Nil	
7	Habitat Fragmentation Cost	Cost due to Habitat fragmentation is pegged at 50 % of N.P.V. applicable as thumb rule for 700.347 Ha. Forest land @ 3.13 Lakh/Ha. (50% of 6.26)	2192.09
8	Compensatory afforestation and soil and moisture conservation cost	Compensatory Afforestation cost of 700.347 Ha. @ 1.641 Lakh/Ha.	1149.27
9	Construction Cost of Project	As per Estimate	77438.36
10	Permanent Expenditure on Employees		3597.66
11	O&M Cost for 30 Years		30031.25
	Total		119716.28

Lakh

Executive Engineer

Water Resources Division Kota

Table-C

**Navnera Barrage across River Kalisindh, near Village - Abra, Tehsil -
Digod, District-Kota, Rajasthan, under Eastern Rajasthan Canal
Project (ERCP) Phase -I (A)**

TEHSIL- DIGOD / PIPALDA / MANGROL
/ANTA

DISTRICT-KOTA / BARAN

Estimating Benefits of forest diversion

S.No.	Parameters	Remarks	Amount (In Lakh)
1	Increase in Productivity attribute to the specific project	This project will provide Drinking Water Supply for Domestic/ Commercial/ Industrial Purpose for 13 District of Rajasthan for atleast 30 Years	253955.10
2	Benefits to Economy due to the specific project	1. Population of 13 District will benefitted from this project. 2. Employment will be generated to landless people of 42 No. Submergence Village by Fishing Activity 3. Direct employment to labour during construction period of District- Kota & Baran.	
3	No. of population benefitted due to specific project	Population of 13 District will benefitted from this project.	
4	Economic benefits due to of Direct and Indirect Employment due to the project	Direct Permanent employment will be generated during construction period, during O&M of the Project and Indirect employment in Submergence Area of 42 Villages. District- Kota and Baran	3597.66
		Direct Temporary employment during construction period,	8499.6
5	Economic benefits due to Compensatory afforestation		
		Total	266052.36
			Lakh

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Executive Engineer

Water Resources Division Kota

A. Direct Benefit for Permanent Employment

S.No.	Post	Nos.	Salary per Month (Rs.)	Annual Income (Rs.)
1	Executive Engineer	1	90000	1080000
2	Assistant Engineer	2	67000	1608000
3	Junior Engineer	9	35000	3780000
4	Mistry (Civil/ Electrical/ Mechanical)	10	15000	1800000
5	Beldar	16	10000	1920000
6	Security Gard	2	10000	240000
	Total	40	227000	10428000

considering 15% increment in average salary

11992200

Direct Permanant Benefit for 30 years (G.Total A)

359766000**B. Direct Benefit for temporary Employment**

S.No.	Post	Nos.	Salary per Month (Rs.)	Annual Income (Rs.)
1	Project manager	1	90000	1080000
2	Senior Engineer	3	67000	2412000
3	Junior Engineer	6	35000	2520000
4	Mistry	40	15000	7200000
5	Beldar	120	10000	14400000
6	Security Gard	6	10000	720000
	Total	176	227000	28332000

Direct temporary Benefit for 4 years (G.Total B)

849960000

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O&M Cost for the Project

S.No.	Year	Intrest	Cost of O&M
1	1st	0	40 Lacs
2	2nd	12%	44.8 Lacs
3	3rd	12%	52.86 Lacs
4	4th	12%	62.38 Lacs
5	5th	12%	73.61 Lacs
6	6th	12%	86.86 Lacs
7	7th	12%	102.49 Lacs
8	8th	12%	120.94 Lacs
9	9th	12%	142.71 Lacs
10	10th	12%	168.40 Lacs
11	11th	12%	198.71 Lacs
12	12th	12%	234.48 Lacs
13	13th	12%	276.68 Lacs
14	14th	12%	326.48 Lacs
15	15th	12%	385.25 Lacs
16	16th	12%	454.60 Lacs
17	17th	12%	536.42 Lacs
18	18th	12%	632.98 Lacs
19	19th	12%	746.92 Lacs
20	20th	12%	881.36 Lacs
21	21st	12%	1040.01 Lacs
22	22nd	12%	1227.21 Lacs
23	23rd	12%	1448.11 Lacs
24	24th	12%	1708.76 Lacs
25	25th	12%	2016.34 Lacs
26	26th	12%	2379.28 Lacs
27	27th	12%	2807.55 Lacs
28	28th	12%	3312.91 Lacs
29	29th	12%	3909.24 Lacs
30	30th	12%	4612.90 Lacs
		Total	30031.25 Lacs

**Navnera Barrage across River Kalisindh, near
Village - Abra, Tehsil -Digod, District-Kota,
Rajasthan, under Eastern Rajasthan Canal
Project (ERCP) Phase -I (A)**

The Water Storage Capacity = 226.65 Mcum
Lossess due to Evaporation (10%) = -22.665 Mcum
Net Available Water = 203.985 Mcum

Presently Water Share for Drinking Purposes (50%) = 101.9925 Mcum

At Presently Drinking Water Cost for
Domestic Purpose = 3 Rs/KL
Commercial Purpose= 10 Rs/KL
Industrial Purpose = 20 Rs/KL

Share of Watwer for Domestic : Commercial: Industrial is 60%:15%25%
Therefore Cost of water for 1 year = $(101.99 \times .6 \times 3 + 101.99 \times .15 \times 10 + 101.99 \times .25 \times 20) \times 10$

Water Cost for 1 Year = 8465.17 Lacs
Water Cost for 30 Year = 253955.1 Lacs
Direct Benefit of Scheme = 253955.1 Lacs

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