

Benefit Cost Analysis - Notorious Drylands of Ramanathapuram District, Tamilnadu, India

Economic values of the services

Activities	Pre-Development		Post Development			
	Cost	Benefit	Cost	Benefit		
1	1368750	0	0	250 families with 4 member average	Saved 20 litre a day at Rs15	1368750
2	0	0	3600000			752000
3	0	0	0	250 families	Rs. 1000 saving per month	3000000
4	0	2400000	0			1200000
Total	1368750	2400000	3600000			6320750
Net Benefits		1031250				2720750

Benefits are taken in Agriculture operations, only cost are accounted for. Rs. 45,000 per Ha and total area considered is 80 Ha including 2 waterbodies, waterways and channels

120 Ha of area under Prosopis is assumed

Farm Model

Irrigation potential estimated

80.00 Ha

Sl. No.	Crops	Pre development					Post development				
		Crop Coverage(ha)	Productivity (Kg per Ha)	Price (Rs./ Kg)	Income (Rs)	Cost of cultivation (Rs)	Crop Coverage(ha)	Productivity (Kg per Ha)	Price (Rs. per Kg)	Income (Rs)	Cost of cultivation (Rs)
1	Paddy (Pre development) Paddy (Post development)	4.00	800	12.00	38400	40000	32.00	3000	15.00	1440000	320000
2	Jowar (Pre development)/Paddy (Post Development)	10.00	800	15.00	120000	50000	32.00	3000	15.00	1440000	1920000
3	Gram (Pre development) Vegetables (Post development)	16.00	300	20.00	96000	56000	16.00	4000	8.00	512000	400000
	TOTAL	30.00			254400	146000	80.00			3392000	2640000
4	Net income					108400					752000

5	Cropping intensity (%)					100.00
6	Net incremental income (Rs)					1689500
7	Net incremental income per ha. (Rs)					21119

B) Project Summary					
1	Cost of the project			lakh	36.00
2	Pre development coverage			ha, (Gross)	30.00
3	Post development coverage			ha, (Gross)	80.00
4	New area under irrigation			ha, (Gross)	50.00
5	Cropping intensity envisaged				100%

C) Computation of ERR & BCR

Calculation of ERR

Sl. No.	Particulars	Years								
		1	2	3	4	5	6	7	8	9
1	Cost of investments (Rs. lakh)	18.000	18.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2	O & M costs (Rs. lakh) \$	0.000	0.000	1.080	1.080	1.080	1.080	1.080	1.080	1.080
3	Total cost (Rs. lakh)	18.000	18.000	1.080	1.080	1.080	1.080	1.080	1.080	1.080
4	Benefit (Rs. lakh)	0.000	0.000	16.895	16.895	16.895	16.895	16.895	16.895	16.895
5	Net benefit (Rs. lakh)	-18.000	-18.000	15.815	15.815	15.815	15.815	15.815	15.815	15.815

\$O & M cost is assumed at 3% of the project cost from 1st year after completion of the project
Discount rate 15%

Present Value of Costs @ DF 15 %					32.66
Present Value of Benefits @ DF 15 %					53.15
Net Present Value					20.49
ERR					33%
BCR					1.63 :1