

कार्यालय अधिशाषी अभियन्ता, जल संसाधन खण्ड (तृतीय) बारां

क्रमांक :- 1266

दिनांक :- 20.11.2024

श्रीमान उप वन संरक्षक

बारां

प्रसंग :- P.1 (48) VAN/2019-001141 dated 04.10.2024 के क्रम में।

प्रस्ताव का नाम :- Proposal for diversion of 286.47 ha. of forest land in favour of Executive Engineer, Water Resource Division III, Baran for Construction of Hathiadeh Medium Irrigation project in Baran district, Rajasthan State

यूजर एजेन्सी का नाम :- EXECUTIVE ENGINEER WR DIV.III BARAN

प्रत्यावर्तित वन क्षेत्र :- 286.50 ha. (Baran)

प्रभावित जिला एवं वन मण्डल : Baran distt. & Baran Territorial

प्रस्ताव संख्या एवं पंजीकरण तिथि :- No.FP/RJ/IRRIG/27263/2017

S. No.	Query	Reply
1	A copy of the approved CAT Plan as per para 9.2 (vii) of Chapter 9 the consolidated guidelines and clarifications issued under the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 which stated that "the CAT plan shall be approved by the Principal CCF & HoFF or any other officer authorized by him for the purpose" need to be submitted	अनुमोदित केट प्लान में प्रस्तावित कार्य वन विभाग के विभागीय मॉडल अनुसार ही प्रस्तावित है, जो की पूर्व में ही इस कार्यालय के पत्रांक 3096-97 दिनांक 27.01.2022 द्वारा आपको प्रस्तुत किया जा चुका है। केट प्लान के संदर्भ में नोडल अधिकारी एफ.सी.ए. राजस्थान जयपुर के पत्रांक 5121-31 दिनांक 08.03.2023 के क्रम में यूजर एजेन्सी द्वारा केट प्लान पर मुख्य वन संरक्षक कोटा/उप वन संरक्षक बारां से टिप्पणी चाही गई थी। जो पूर्व में कार्यालय द्वारा भिजवा दी गई है। उक्त केट प्लान के अनुमोदन के क्रम में केट प्लान को प्रधान सी.सी.एफ.और होफ या इस उद्देश्य के लिये उनके द्वारा अधिकृत कोई अन्य अधिकारी द्वारा कार्यावाही की जायेगी।
2	The State Govt. reported that the 286.47 ha Non-forest land has been proposed for CA out of which 242.50 ha Non-forest land for CA reported दो तिहाई भाग पर जुलिपलोरा होने से वृक्षारोपण कराया जाना सम्भव नहीं है। परन्तु सत्पमर्ण गैर वन भूमि का उपचार कराया जायेगा। and in the balance 43.996 ha Nonforest CA land reported as दो तिहाई भाग पर प्राकृतिक सघन वन होने से वृक्षारोपण कराया जाना सम्भव नहीं है। परन्तु सम्पूर्ण प्राप्त गैर वन भूमि का उपचार कराया जायेगा whereas as per the DSS analysis (copy enclosed) the newly proposed 44 ha NFL for CA appear barren and devoid of vegetation cover as depicted through satellite imagery. This needs clarification.	श्रीमान उप वन संरक्षक बारां से सम्बन्धित है।

3	The State Govt. has not informed as to how much area of the proposed NFL (village wise/ patch wise) for raising compensatory afforestation is having specified density as per the Rule-13 of the Van (Sanrakshan Evam Samvardhan) Rules, 2023. Moreover, the State shall also ensure that the area (NFL) proposed for CA is suitable for raising Compensatory Afforestation as per the provisions of Van (Sanrakshan Evam Samvardhan) Rules, 2023 and the crop improvement programme of the forest crop in the NFL proposed for CA shall be submitted	श्रीमान उप वन संरक्षक बारों से सम्बन्धित है।
4	Para 2, Rule-13 of the Van (Sanrakshan Evam Samvardhan) Rules, 2023 says that "Provided that in case the non-forest land or portion thereof provided by the user agency is not fit for raising compensatory afforestation of a specified density, then additional compensatory afforestation shall be raised on a degraded notified or unclassified forest land under the management control of the Forest Department which is twice in size of such shortfall in the given compensatory afforestation land and the user agency shall also bear the additional cost on such account". Keeping this in view, the KML file of the Degraded forest land which is twice in size of such shortfall in the compensatory afforestation land needs to be submitted(if applicable)along with Maps, CA scheme, Site suitability certificate etc.	श्रीमान उप वन संरक्षक बारों से सम्बन्धित है।
5	The details about the command area, irrigation potential, present cropping pattern, total population of the villages to be benefited and the likely impact of the project on cropping pattern in future is essential for evaluating the socio-economic benefits of the project. The State shall submit a detailed report on these aspects.	The details of project submit about the command area, irrigation potential, present cropping pattern, total population of the villages to be benefited and the likely impact of the project on cropping pattern in future is essential for evaluating the socio-economic benefits of the project by this reply latter.



अधिशायी अभियन्ता

जल संसाधन खण्ड तृतीय, बारों

HATHIADH IRRIGATION PROJECT

TEHSIL : KISHNGANJ

DISTRICT : BARAN

PROFORMA REPORT

PART - I DATA SHEET

1	Name of project and state attach index Plan indicating catchment area, submergence, state boundary, existing and proposed project up stream	Hathiadeh Irrigation project (Rajasthan) Index Plan ref. drawing No.1 Salient feature - Enclosed
2	Total estimated cost of the project and foreign exchange componet.	Rs...23253.00.00 Lacs Foreign exchange required -Nil
3	Salient features of the work G.C.A., C.C.A., type of dam, maximum height ofdam, Length of dam, type of spillway, number and capacity of river,	G.C.A. - 10091 Hect C.C.A. - 6885 " I.C.A. - 6128 " Intensity - 89 % type of dam - Earthen
(ii)	Sluice number & capacity of river, sluice number and capacity of irrigat-on outlets, F.R.L., MWL dead storage level,	Max. height - 19.73 M Length of dam - 9.21 KM Type of spillway - Ogee shape and by wash River sluice - Nil
	gross storage capacity area of submergence at F.R.L./D.S.L. silt provision number and length of canals whether any lifts involved attach details.	Irrigation outlet - 2 Nos. Discharge RMC - 1.2423 Cumec Discharge LMC - 1.6867 Cumec F.T.L. - 259.27 M Sill level - 253.50 M M.W.L. - 261.00 M T.B.L - 264.00 M Lift Involved - Nil Gross storage - 46.972 M. Cum Live storage - 42.970 M. Cum Dead storage - 4.00 M. Cum (For silt provision) Area of submergence at F.T.L. - 12.85 Sqkm D.S.L - 2.65 Sqkm No. & Length of canal - 2 Nos. Sqkm R.M.C. - 12.96 km L.M.C. - 19.32 km

4 PROPOSED ANNUAL IRRIGARION CROP WISE : (TOTAL C.C.A. 6685 HA)

S.No.	Details of crops	Irrigable Area in Hect. (Acres)	% age of C.C.A.	Delta at canal head in cms (excludin	water requirement at head
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1	2	3	4	5	6
1	Jowar	344	5%	112.50	1.1407
2	Maize	344	5%	112.50	1.1407
3	Groundnut	413	6%	135.50	1.3690
4	Soyabean	826	12%	270.00	2.7380
5	Wheat	2066	30%	1800.00	18.2520
6	Bearly	138	2%	80.00	0.8110
7	Gram	620	9%	270.00	2.7380
8	Mustard	826	12%	360.00	3.6500
9	Coriander	482	7%	210.00	2.1290
10	R.Fodder	69	1%	135.00	1.3690

- 5 (a) Cost per hect/Acre of annual gross irrigated area i.e. C.C.A. 3.48 Lacs per ha
- (b) Cost per M. Cum/M.cft. of live storage 541.14 Lacs/MCum
- 6 (a) Financial return at the end of year after completion
- (b) If the project is "Unproductive" what are special grounds for under taking it. B.C. Ratio of the project is Rs...1.56:1, Hence the project is productive.
- 7 Has the project report been prepared after detailed investigations and is available, if required. -yes-
- 8 Has the detailed project report been examined and cleared by the state Irrigation Department. -yes-

SAILENT- FEATURES

CHAPTER -IV

4.0 TECHNICAL DETAILS

4.1 MAIN DAM

S.NO.	PARTICULARS	M.K.S	F.P.S
1	Location (a) Latitude		
	(b) Longitude	25°17'	
2	Gross catchment area	269.31 Sqkm	105.2 SqMile
	Catchment area of M.P.	66.56 Sqkm	26.0 SqMile
	Catchment of Rajasthan	202.75 Sqkm	79.2 SqMile
	TOTAL	269.31 Sqkm	105.2 SqMile
3	Intercepted catchment area	NIL	NIL
4	Free catchment area	269.31 Sqkm	105.2 SqMile
5	Type of catchment as per classification of N.L. strange.	Good	Good
6	Maximum weighted rain fall (Annual) in the catchment	1284.33 mm	50.56 Inch.
7	Expected Monsoon yield as per regression analysis of khatoli gauge site at 75% dependability	48.83 Mcum	
8	Gross storage capacity	46.972 Mcum	
9	Dead storage at sluice sill level	4.00 Mcum	
10	Live storage capacity	42.972 Cum	
11	Total Length of Bund (including diversion Dam)	9.21 Km.	
12	Length of over flow (ogee) and By wash	450 M.	
13	Length of earth Dam section.	8.63 Km.	
14	Full tank level	259.270 m	
15	Maximum water level	261.14 m	
16	Top Bund level	264.14 m	
17	Dead storage level	253.50 m	
18	Maximum flood discharge	2121.76 Cumecs	
19	Flood lift	1.87 m	
20	Free Board	3.00 m	
21	Top width of Earthen Dam	6.00 m	
22	Type of overflow spillway section	Ogee & By wash	
23	Sluice and sill level	253.50 m	
24	U/S slope of Earthen Dam	3:1	
25	D/S slope of Earthen Dam	2.25:1	
26	Gross command area	10091.00 ha.	
27	Culturable command area	6885.00 ha.	
28	Dependability	75%	

29	Duty of Irrigation	143 Ha/Mcum
30	Expected Annual bed cultivation	82 Ha.
31	Maximum height of dam at deepest portion.	19.91
32	Lift of reservoir	50 years
33	Irrigation area	6126 Ha.
34	Intensity of Irrigation	89%
	(i) Rabi	61%
	(ii) Kharif	28%

HATHIADH IRRIGATION PROJECT

TEHSIL : KISHNGANJ

DISTRICT : BARAN

4.2 CANAL

(A) RIGHT MAIN CANAL

S.NO.	PARTICULARS	M.K.S	F.P.S
1	Length of canal	12.96 km.	8.1 Miles
2	Discharge of Head	1.2444 Cumec	43.94 Cusecs
3	Type of canal section	Mehboob	Mehboob
4	F.S.D.	1.2 m	3.9369 ft.
5	Bed slope	1 in 4,000	1 in 4,000
6	C.B.L. at Head	253.50 m	-
7	Side slope	Mehboob	(1:1)
8	G.C.A.	3223 Hect.	7961 Acres.
9	C.C.A.	2181 Hect.	5387 Acres.
10	Intensity of Irrigation	89%	89%
	(i) Rabi	61%	
	(ii) Kharif	28%	
11	Proposed Irrigation	1941 Hect.	5120 Acres.
12	Duty of Irrigation for design of canal	1430 Hect.	100 Acre/cusec.

HATHIADH IRRIGATION PROJECT

TEHSIL : KISHNGANJ

DISTRICT : BARAN

(B) LEFT MAIN CANAL

S.NO.	PARTICULARS	M.K.S	F.P.S
1	Length of canal	19.32 km.	12.07 Miles
2	Discharge of Head	2.6649 Cumec	94.11 Cusecs
3	Type of canal section	Mehboob	Mehboob
4	F.S.D.	1.50 m	4.92 ft.
5	Bed slope	in 4,000	
6	C.B.L. at Head	253.500 m	831.68 ft.
7	Side slope	Mehboob section	(1:1)

8	G.C.A.	6868 Hect.	16964 Acres.
9	C.C.A.	4704 Hect.	11619 Acres.
10	Intensity of Irrigation	89%	
	(i) Rabi	61%	
	(ii) Kharif	28%	
11	Proposed Irrigation	4187 Hect.	11042 Acres.
12	Duty of Irrigation for design of canal	1430 Hect. Cumec.	100 Acre/cusec.

HATHIADH IRRIGATION PROJECT

TEHSIL : KISHNGANJ

DISTRICT : BARAN

(C) DISTRIBUTARY OF L.M.C.

S.NO.	PARTICULARS	M.K.S	F.P.S
1	Length of canal	13.05 km.	8.16 Miles
2	Discharge of Head	1.23 Cumec	43.43 Cusecs
3	Type of canal section	Mehboob	-
4	F.S.D.	1.2 m	3.93 ft.
5	Bed slope	in 4,000	
6	C.B.L. at Head	246.640 m	809.7 ft.
7	Side slope	Mehboob section	(1:1)
8	G.C.A.		
9	C.C.A.	2144 Hect.	5295.68 Acres.
10	Intensity of Irrigation	89%	
	(i) Rabi	61%	
	(ii) Kharif	28%	
11	Proposed Irrigation	1908 Hect.	5033 Acres.
12	Duty of Irrigation for design of canal	1430 Hect. Cumec.	100 Acre/cusec.

(एम.के.गोयल)
अधिसाधी अभियन्ता
जल संसाधन खण्ड तृतीय बारां

Pinesh
सहायक अभियन्ता
जल संसाधन उपखण्ड प्रथम, बारां

HATHIADEH MEDIUM IRRIGATION PROJECT

TEHSIL-KISHANGANJ **DISTRICT-BARAN**

COST-BENEFIT ANALYSIS

S.NO.	PARAMETERS	Rs. (In Lakh)
1	Estimation of cost of forest diversion (Including Construction Cost) as per Table B	34411.52
2	Estimating Benefits of forest diversion as per Table-C	499063.00
	Ratio of Benefit/Cost	14.50 ✓
<p>Note:- Therefore construction of Hathiadeh medium irrigation project is economically viable and socially beneficial.</p>		



Executive Engineer
Water Resources Division III Baran

Table-B

HATHIADEH MEDIUM IRRIGATION PROJECT
TEHSIL-KISHANGANJ
DISTRICT-BARAN

Estimation of cost of forest diversion

S.No.	Parameters	Remarks	Amount (In Lakh)
1	Ecosystem services losses due to proposed forest diversion	N.P.V. amount to be disposed towards forest land diversion of 286.47 Ha. @ 9.5778 Lakh/Ha.	2743.75
2	Loss of animal husbandry productivity, including loss of fodder	10 % of N.P.V. cost i.e. 0.95778 Lakh/Ha. (10% of 9.5778) For 286.47 Ha.	274.37
3	Cost of Human Resettlement	As per R&R plan	3197.68
4	Loss of public facilities and administrative infrastructures (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	Cost of road for 3 Kms.	500.00
		cost of LT lines in 3 Kms.	500.00
		Cost of 1 no. of Primary School	15.00
		Cost of other public facilities and administrative offices	20.00
5	Possession value of forest land diverted	50% of N.P.V. amount to be disposed towards forest land of 286.47 Ha. @ 9.5778 Lakh/Ha.	823.12
6	Cost of suffering to oustees	150% of R&R Plan (1.5*3197.68)	4796.52
7	Habitat Fragmentation Cost	Cost due to Habitat fragmentation is pegged at 1.98 lakh/Ha. Forest land (286.47@ 1.98Lakh/Ha.)	1371.87
8	Compensatory afforestation and soil and moisture conservation cost	Compensatory Afforestation in Diverted Land of 286.50 Ha. @ 1.98 Lakh/Ha.	567.21
9	Construction Cost of Project		19602.00
		Total	34411.52

Lakh


Executive Engineer
Water Resources Division III Baran

HATHIADEH MEDIUM IRRIGATION PROJECT

TEHSIL-KISHANGANJ

DISTRICT-BARAN

Estimation of benefit of forest diversion

S.No.	Parameters	Remarks	Amount (In Lakh)
1	Increase in Productivity attribute to the specific project	This project will provide irrigation facility in G.C.A. of 10091 Ha. And CCA 6885 Ha. of land Benefits after Introduction of Canal System For 100 Yrs. (As reservoir Life will be 100 yrs.) @ 4990.63 Lakh/annum (This is taken as per B.C. Ratio approved by agronomist at IMTI Kota)	499063.00
2	Benefits to Economy due to the specific project	1. Population about 90,000 of 45 Villages will be benefitted from this project.	
		2. Employment will be generated to landless people of 45 No. Villages in Command area of project.	
		3. Direct employment to labour during construction period of Tehsil-Kishanganj, District-Baran.	
3	No. of population benefitted due to specific project	Population about 90,000 of 45 Villages will be benefitted from this project of Tehsil-Kishanganj, District-Baran	
4	Economic benefits due to of Direct and Indirect Employment due to the project	Direct employment will be generated during construction period and Indirect employment in command area of project in 45 nos. of villages in tehsil-Kishanganj District-Baran	
5	Economic benefits due to Compensatory afforestation	The compensatory afforestation will develop new forest which will be helpful to Environment as well as animals	
		Total	499063.00
			Lakh



Executive Engineer

Water Resources Division III Baran

HATHIADEH MEDIUM IRRIGATION PROJECT

SNO.	VILLAGE	AREA	FOREST	GOVT LAND	PRIVATE/ CCA	GOPALPU RA COMMAN	REMAINING CCA HATHIYADEH
1	PALI	228.2	146.41	46.85	34.94		34.94
2	GORILA	372.47	0	242.57	129.9		129.9
3	GOPALPURA	241.85	0	60.87	180.98		180.98
4	SHREEPURA	125.22	0	23.31	101.91		101.91
5	THANA	191.17	0	37.99	153.18		153.18
6	ASHNAVAR	680	360	50	270		270
7	thagriya dhani	368	0	209.82	158.18		158.18
8	bislaai	262.84	4.27	126.31	132.26		132.26
9	arjunpura	673.12	0	184.51	488.61	142.54	346.07
10	RAMGARH	1737.58	12.83	1178.07	546.68	23.02	523.66
11	NIMUDA	69.01	22.29	6.51	40.21		40.21
12	LAKSHMI URF KARWAL	178.64	62.8	18	97.84		97.84
13	PIPALDA KHURD	739.87	334.7	72.33	332.84		332.84
14	BRAHMPURA	92.2	0.48	13.22	78.5	64.63	13.87
15	PREMPURA	53.45	5.95	3.5	44		44
16	DUGER	169.65	5.13	21.87	142.65	113.08	29.57
17	KISHANPURA	202.64	0	10.46	192.18	1.1	191.08
18	UDPURIYA	248.83	0	19.61	229.22		229.22
19	FATEHPURA	123.16	0	24.99	98.17	37.64	60.53
20	DEVPURA	129.82	42.6	3.29	83.93		83.93
21	MAYTHA	329	88.75	44.3	195.95		195.95
22	MEGHPURA	107.35	3.53	44.04	59.78		59.78
23	MADHOPURA	236.73	0	25.41	211.32	46.28	165.04
24	KANWADIYA	74.05	0	17.32	56.73		56.73
25	PIPALDA KALA	503	0	151.67	351.33		351.33
26	BOREDA	219.38	80.01	57.91	81.46		81.46
27	MEHTABPURA	423.58	140.5	110.16	172.92		172.92
28	LOLKYA	264.51	3.2	68.28	193.03	137.71	55.32
29	CHAKLOLKYA	33.69	0	0	33.69		33.69
30	SEWNI	623.69	352.86	78.61	192.22	27.77	164.45
31	BHAWANIPURA	240.24	0	29.51	210.73		210.73
32	BRIJNAGAR	358.26	0	79.48	278.78		278.78
33	SIMLIYA SOPAN	460.28	357.59	24.74	77.95		77.95
34	JHAGAR	283.34	0	25.73	257.61		257.61
35	BALAPURA	127.89	0	7.97	119.92		119.92
36	CHINDALIYA	156.56	0	12.61	143.95		143.95
37	FATEHPURA KACHDA	27.8	18.09	0	9.71		9.71
38	KARWARI KALA	3046.17			373.72		373.72
39	RELAWAN	540.22			238		238
40	ASNAWAR	661.02			250.29		250.29
TOTAL		15604.48	2041.99	3131.82	7045.27	593.77	6451.5
RMC							
1	DHOLPURA	344.48	95.15	12.66	236.67		
2	JAIPURA	656.25	222.47	67.46	366.32		
3	CHANDRAPURA	285.38	51.21	31.2	202.97		
4	BALON	127.8	70.12	4.85	52.83		

5	PIPALKHEDI	143.33	0	23.64	119.69
6	KUNJI	208.38	103.87	24.45	80.06
7	LAHURNI	890.19	474.86	199.38	215.95
8	KARIRIYA	315.7	150.99	129.19	35.52
9	SAWANTRI	577.35	538.36	38.99	0
10	GORDHANPURA URF BANJAMLI	429.8352	243.64	44.1052	142.09
11	SUWAS	727.46	257.03	160.46	309.97
12	KHANDELAKHEDI	659.579	308.01	70.93	280.639
13	DOLATPURA SUWAS	529.669	230.1	75.783	223.786
14	KARWARI KHURD	308.3	3.53	13.47	262.428
	TOTAL	6203.703	2749.34	896.5682	2528.923

	G. TOTAL	21808.18	4791.33	4028.388	9574.193	18393.91
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