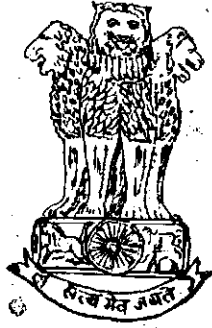


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GOVERNMENT OF MAHARASHTRA

IRRIGATION DEPARTMENT

URMODI IRRIGATION PROJECT

TALUKA:- SATARA,

DISTRICT: SATARA,

VOL. I.

REPORT ESTIMATES & APPENDICES

Irrigation Projects & Water Resources Investigation Circle,

PUNE-1.

Irrigation Projects Investigation Division, KARAD

APRIL-1981

C E R T I F I C A T E

CERTIFIED THAT THIS (UMODI) PROJECT
REPORT HAS BEEN GOT FULLY CHECKED
ARITHMETICALLY WHEREVER NECESSARY AND
THAT ALL NECESSARY CORRECTIONS HAVE
BEEN CARRIED OUT BEFORE SUBMISSION.

ASSISTANT ENGINEER

RIVER GAUGING SUB-DIVISION

S.I.I.R.I

UMCDI IRRIGATION PROJECT

TUMKUR & SIFDE DISTRICT & SIFDE

VOLUME-I

R.R.C.R.I

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EMCDI IRRIGATION PROJECT
TAHSA : S.P.A.R. DISTRICT : S.P.A.R.

VOLUME-I
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URMODI IRRIGATION PROJECT

TALEK : S.P.A. DISTRICT : S.P.A.

A.P.P.E.N.D.I.C.E.S

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URMODI IRRIGATION PROJECT

TALUKA : SAFARA

DISTRICT : SAFARA

VOLUME-I

R E P O R T

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SALIENT FEATURES

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Sr. No.	Items	Particulars	Ref. to Para No.
	v) Topo-Sheet No.	47-G/14 & 47-K/2	
	vi) Latitude	17°-40'-0" (N)	
	vii) Longitude	73°-54'-40" (E)	
viii)	Population affected	3636 souls.	
3.	Upstream Utilisation (Mcum/Mcft)	3.40 Mcum (120 Mcft)	
4.	Yield and Utilisation on the Project.		
	i) Catchment area (Sq.km./Sq.miles)	116.86 Sq.Km. (42.12 Sq.miles)	
	ii) Rainfall (mm/inches)	650 mm to 1270 mm (25" to 50")	
iii)	75% dep. yield (Mcum/Mcft)	201.05 Mcum (7.1 TMC)	
iv)	Proposed utilisation	107.664 Mcum (3.8 TMC)	
v)	Gross annual utilisation (Mcum/Mcft)	107.718 Mcum (3.80 TMC)	
vi)	Percentage of 75% dep. yield to gross annual utilisation.	53.52%	
5.	Dam and Reservoir		
	i) Gross capacity of the Reservoir (at F.R.L.) (Mcum/Mcft)	82.94 Mcum (2929 Mcft)	
ii)	Capacity of dead storage (Mcum/Mcft)	6.212 Mcum (219.4 Mcft)	
iii)	Capacity of live storage (Mcum/Mcft)	76.728 Mcum (2709.6 Mcft)	

III

Sr. No.	Items	Particulars	Ref. to Para No.
iv)	Maximum water level (F.N.L. m/ft)	680.00 m (2231.00 ft)	
v)	Evaporation losses (annual Mcum/Mcft)	11.378 Mcum (401.81 Mcft)	
vi)	Type of the dam	earth dam with gated spillway on the left flank.	
vii)	Maximum height of the dam (m/ft) in the gorge.	32.00 m (105.00 ft)	
viii)	a) Length of Dam (m/ft)	1527 m (5010.00 ft)	
	b) Masonry portion (m/ft)	101 m (331.40 ft) between Ch. 409 to Cd. 510 m	
	c) Earthwork portion (m/ft)	1426 m (4678.60 ft)	
ix)	Total quantity of -		
	a) Earthwork (Cum/Mcft)	1.283 Mcum (45.31 Mcft)	
	b) Masonry (Cum/Mcft)	0.023 Mcum (0.81 Mcft)	
	c) Concrete (Cum/Mcft)	0.001 Mcum (0.036 Mcft)	
	d) Excavation (Cum/Mcft)	0.329 Mcum (11.60 Mcft)	
x)	Submergence		
	a) Land under Submergence	870 ha (2150.0 Ac)	
	b) No. of villages affected	8 Nos. (including wadies)	
xi)	Freeboard (m/ft)	2.50 m (8.20 ft)	

VI

Sr. no.	Items	Particulars	Ref. to para no.																																							
8.	Intensity of irrigated to gross command area.	68%																																								
9.	Normal rainfall in the command (mm/inches)	1270 mm(50") to 712 mm(30")																																								
10.	Soils in the command area.	Reddish black																																								
11.	Existing crop pattern	<table border="1"> <thead> <tr> <th data-bbox="917 1072 984 1109">Sr. no.</th> <th data-bbox="1026 1109 1288 1145">Name of Crop</th> <th data-bbox="1463 1109 1530 1145">%age</th> </tr> </thead> <tbody> <tr> <td data-bbox="935 1218 966 1255">1.</td> <td data-bbox="997 1218 1112 1255">Paddy</td> <td data-bbox="1481 1218 1512 1255">3</td> </tr> <tr> <td data-bbox="935 1296 966 1333">2.</td> <td data-bbox="997 1296 1112 1333">Jowar</td> <td data-bbox="1463 1296 1512 1333">37</td> </tr> <tr> <td data-bbox="935 1374 966 1411">3.</td> <td data-bbox="997 1374 1130 1411">Bajari</td> <td data-bbox="1481 1374 1512 1411">8</td> </tr> <tr> <td data-bbox="935 1453 966 1489">4.</td> <td data-bbox="997 1453 1148 1489">Gr. Nut</td> <td data-bbox="1463 1453 1512 1489">20</td> </tr> <tr> <td data-bbox="935 1531 966 1567">5.</td> <td data-bbox="997 1531 1166 1567">Chillies</td> <td data-bbox="1481 1531 1512 1567">3</td> </tr> <tr> <td data-bbox="935 1609 966 1645">6.</td> <td data-bbox="997 1609 1130 1645">Pulses</td> <td data-bbox="1481 1609 1512 1645">8</td> </tr> <tr> <td data-bbox="935 1687 966 1723">7.</td> <td data-bbox="997 1687 1112 1723">Grass</td> <td data-bbox="1463 1687 1512 1723">17</td> </tr> <tr> <td data-bbox="935 1765 966 1801">8.</td> <td data-bbox="997 1765 1221 1801">Kh. Fallow</td> <td data-bbox="1481 1765 1512 1801">4</td> </tr> <tr> <td colspan="3" data-bbox="917 1828 1239 1864">Follow up crops</td> </tr> <tr> <td data-bbox="935 1906 966 1942">9.</td> <td data-bbox="997 1906 1221 1942">Rabi Jowar</td> <td data-bbox="1481 1906 1512 1942">8</td> </tr> <tr> <td data-bbox="917 1984 966 2020">10.</td> <td data-bbox="997 1984 1093 2020">Gram</td> <td data-bbox="1481 1984 1512 2020">1</td> </tr> <tr> <td data-bbox="917 2062 966 2098">11.</td> <td data-bbox="997 2062 1112 2098">Wheat</td> <td data-bbox="1481 2062 1512 2098">1</td> </tr> </tbody> </table>	Sr. no.	Name of Crop	%age	1.	Paddy	3	2.	Jowar	37	3.	Bajari	8	4.	Gr. Nut	20	5.	Chillies	3	6.	Pulses	8	7.	Grass	17	8.	Kh. Fallow	4	Follow up crops			9.	Rabi Jowar	8	10.	Gram	1	11.	Wheat	1	
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9.	Rabi Jowar	8																																								
10.	Gram	1																																								
11.	Wheat	1																																								
12.	Cost of the scheme (in Rs. lakhs)	1084.93 lakhs																																								
13.	Cost per Mcum/Mcft of gross storage.	15.08 lakhs/Mcum 37033/Mcft																																								

Sr. No.	Items	Particulars	Ref. to Para No.
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7. Irrigated crop-pattern

Sr. No.	Name of Crop	Age
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1.	Sugar Cane O.I., 30%, 40%, 10%	15
2.	Other perennials	5
3.	Chillies	5
4.	Ginger & Turmeric	5
5.	Green Manure	2
6.	Paddy late variety (1/10th seedling)	10
7.	Am. Hy. Jawar	15
8.	Am. Hy. Maize	10
9.	Am. Pulses (b.l.)	10
10.	Am. Gr. Nut	15
11.	Am. Vegetables	3
Follow on crops		
12.	Gram on paddy	10
13.	Am. Hy. Maize on G.M. & Am. Hy. Maize	7
14.	Am. Hy. Jawar on Pulses	10
15.	Am. Hy. Maize on G. Nut	15
16.	Am. Hy. Vegetables	3
17.	Am. Hy. Gr. Nut on Am. Hy. Jawar	15
18.	Am. Hy. Sodder on Maize	5

IV

Sr. no.	Items	Particulars	Ref. to Para No.
xii)	Spillway		
	a) type	masonry with radial gates.	
	b) Maximum flood discharge (cumecs/cusecs)	1570 cum/sec. (55400 cusec)	
	c) Inglis flood	1274 cum/sec (45000 cusec)	
	d) Depth over crest (m/ft)	8 m. (26.25 ft.)	
	e) Length (m/ft)	48 m. (157.50 ft.)	
xiii)	Canal	L.B.C.	R.S.C.
	i) Length	29.5 Km 18.00 miles	27.5 Km 16.78 miles
	ii) Discharge at Head	2.74/ Cumsecs	2.71 Cumsecs
		56.6 cusecs	95.61 cusecs
6.	Commanded Area		
	i) Gross commanded area (Area ha./Ac.)	8822 ha.	21800 Ac.
	ii) Culturable Command area (ha./Ac.)	6704 ha.	16560 Ac.
	iii) Irrigable command area (ha./Ac.)	6030 ha.	14900 Ac.
	iv) Groped area (ha./Ac.)	9632 ha.	23840 Ac.
	v) No. of taluka benefited	One (Satara)	

VII

Sr. no.	Issues	Particulars	Ref. to Para No.
14.	a) Cost per ha./Acr. of irrigable area in Rs.	= 18,000/ha. = Rs. 7,287/Ac.	
	b) Cost per Mcum/Mcft of water utilised in Rs.	10.41 lakhs/Mcum 29475/Mcft	
15.	Benefit cost ratio	1.65 excluding storage required for SAADA water Supply Scheme.	
16.	Percentage return on the scheme.		
	a) On total capital outlay	1.29	
17.	Percentage of submergence to irrigable area.	17.1%	