

**साठवण तलाव ममदापूर, ता. येवला जिल्हा नाशिक**  
**लाभ व्यय गुणोत्तर**

**लाभ**

१	प्रकल्पाच्या सिंचन क्षेत्रातून मिळणारा एकूण लाभ	८८४७६४४.०० /-
२	वजाती प्रकल्पाच्या सिंचन क्षेत्रात तसेच बुडीत क्षेत्रात सध्या होणारी मिळकतीची किंमत रु. २७४६ /-प्रती हेक्टर प्रमाणे	-३९५५८९ /-
३	प्रकल्पाच्या बुडीत क्षेत्रातून गाळपेराद्वारे होणारा संभाव्य लाभ रु. ८६०८८ /- प्रती हेक्टरप्रमाणे २६.४७ / २ हेक्टर करीता	१०७०११० /-

**एकूण वार्षिक लाभ**

**९५२२१६५ /-**

**व्यय**

क) Government Circular, Irrigation & Power Department No. MNS-1966-MI(I) dated 1.3.1966 नुसार  
ब) व्यवस्थापन खर्च - शासन परिपत्रक पाटबंधारे विभाग क्र. एम एन एस - १०८३/७४८/नपा १ दि. २६.६.१९८४

**प्रकल्पाची एकूण किंमत**

**६४५६४३०९ /-**

१	प्रकल्प किंमतीवर १० टक्के व्याजभार	६४५६४३१ /-
२	प्रकल्प किंमतीवर १६.६० टक्के घसारा भार	१०७१७६८ /-
३	प्रकल्पाच्या सिंचन क्षेत्रावर रु. १३६.५०/- प्रती हेक्टर प्रमाणे देखभाल खर्च	
	<b>११६ हेक्टर सिंचन क्षेत्र</b>	<b>२०६१२ /-</b>

**एकूण वार्षिक व्यय**

**७५४८८११ /-**

**गुणोत्तर = एकूण वार्षिक लाभ / एकूण वार्षिक व्यय**

**= ९५२२१६५ / ७५४८८११**

**= १.२६**

पी. बी. सोनकुसरे  
शाखा अभियंता

उपविभागीय अधिकारी  
लघू सिंचन(जलसंधारण) उपविभाग  
चांदवड

कार्यकारी अभियंता  
लघू सिंचन(जलसंधारण) विभाग  
नाशिक

**T Checked**

**(V.D. Pachpend)**  
**Sect. Engr**

**Engineer**  
**Small Scale Irrigation**  
**Water Controller**

साठवण तलाव ममदापूर, ता. येवला जिल्हा नाशिक

प्रकल्पाच्या सिंचन क्षेत्रातून मिळणारा एकूण लाभ

अ. क्र.	पिकाचे नाव	टक्केवारी	मिळकत प्रती हेक्टरी	रक्कम
१	खरीप			
१	भात	१०	७२४०	७२४०० ✓
२	भूईमुग	२०	१०५८८	२११७६० ✓
३	कडधान्ये		१८०६८	
	रब्बी			
१	गहू	१०	१३९३७	१३९३७० ✓
२	हरबरा	२०	२०५९०	४११८०० ✓
३	ज्वारी	३०	१३१५६	३९४६८० ✓
४	भाजीपाला	२०	१०६२६०	२१२५२०० ✓
५	सुर्यफूल	२०	१०६०४	२१२०८० ✓

एकूण

१०० हेक्टर

३५६७२९० ✓

१०० हेक्टर सिंचन क्षेत्रातून मिळणारा लाभ

३५६७२९०.०० ✓

११६ हेक्टर सिंचन क्षेत्रातून मिळणारा लाभ

४१३८०५६.०० ✓

३० अप्रत्यक्ष पाणी वापर (बांधावर घेतलेली इळझाडे)

११६ X ३०% =

३४.८०

१३५३३३

४७०९५८८.०० ✓

पिण्याच्या पाण्याची रक्कम रु ६.६० प्रती १०००० लीटर प्रमाणे

६.६

एकूण

८८४७६४४.०० ✓

मिळणारा प्रती हेक्टरी लाभ

७६२७३.०० ✓

पी. बी. सोनकुसरे  
शाखा. अभि.

उपविभागीय अधिकारी  
लघू सिंचन(जलसंधारण) उपविभाग  
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प्रकल्प क्षेत्रातून सध्या मिळत असलेला एकूण लाभ

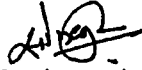
अ. क्र.	पिकाचे नाव	टक्केवारी	मिळकत प्रती हेक्टर	रक्कम
१	भात	२०	१९२८	३८५६० ✓
२	नागली	२५	२४२०	६०५०० ✓
३	वरई	२०	२४२०	४८४०० ✓
४	हरभरा	१०	४१६१	४१६१० ✓
५	इतर तेलबिया	७	५९६८	४१७७६ ✓
६	वैरण	१६	१८७२	२९९५२ ✓
७	इतर खरीप डाळी (तूर, चवळी, उडीद)	२	६९०७	१३८१४ ✓
एकूण		१००.००	हेक्टर	२७४६१२ ✓


१०० हेक्टर क्षेत्रातून सध्या मिळणारा लाभ

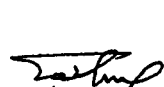
२७४६१२.०० ✓

प्रकल्प क्षेत्रातून सध्या मिळणारा प्रती हेक्टर लाभ

२७४६.०० ✓

  
पी. बी. सोनकुसरे  
शाखा. अभि.

  
उपाविभागीय अधिकारी  
लघू सिंचन(जलसंधारण) उपविभाग  
चांदवड

  
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**COST BENEFIT ANALYSIS GUIDELINES FOR FOREST LAND DIVERSION - 2017**

(As per GOI.MoE No. 7-69/2011-FC. (Pt.) dated 01/08/2017)

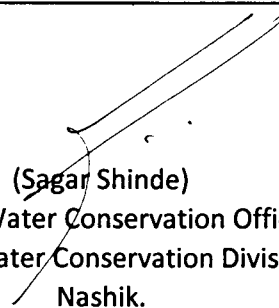
**Table-A: Cases under which a cost-benefit analysis for forest diversion are required.**

<b>Sr. No.</b>	<b>Nature of proposal</b>	<b>Applicable/ Not applicable</b>	<b>Remarks</b>
1	All categories of proposals involving forest land up to 20 hectares in plains and up to 5 hectares in hills.	Not Applicable	These proposals may be considered on a case to case basis and value judgement.
2	Proposals for defence installation purposes and oil prospecting (Prospecting only)	Not Applicable	In view of national priority accorded to these sectors, the proposals would be critically assessed to help ascertain yhat the utmost minimum forest land is diverted for non-forest use.
3	Habitation, establishment of industrial units, tourist lodges complex and other building construction.	Not Applicable	These activities being detrimental to protection and conservation of forest, as a matter of policy, such proposals would be rarely entertained.
4	All other proposals involving forest land more than 20 hectares in plains and more than 5 hectares in hills including roads, transmission lines, minor, medium, and major irrigation projects, hydro projects, mining activity, railway lines, location specific installations like micro-wave stations, 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 in the overall public interest.



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**STORAGE TANK MAMDAPUR, TAL: YEOLA, DIST: NASHIK.**

**COST BENEFIT ANALYSIS**

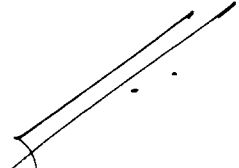
A) Total Cost due to Forest Land                      Rs.    1860.05 Lakhs

B) Total Benefit due to Storage Tank                Rs.    2291.70 Lakhs

Cost Benefit Ratio                                        =            1.23



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(Dr. Sivabala S.)  
Deputy Conservator of Forest  
East Division, Nashik

**STORAGE TANK MAMDAPUR, TAL: YEOLA, DIST: NASHIK.****PARAMETERS FOR EVALUATION OF LOSSES OF FORESTS**(As per GOI.MoE No. 7-69/2011-FC. (Pt.) dated 01/08/2017) **ANNEXURE-VI (b)****Table-B Estimation of cost of forest diversion:-**

Sr.No	Parameters	Remarks
1	Ecosystem services losses due to proposed forest diversion.	Ecosystem services losses due to diversion of forest land suggested by the Central Powered Committee as per the forest classification report of proposed Mamdapur Storage Irrigation tank falls in Tropical dry deciduous forest with category III forest. N.P.V. Rs. 6.26 Lakh/Ha.  Cost of Land: $6.26 \times 28.60 = 179.04$ Lakhs
2	Loss of animal husbandry productivity including loss of fodder.	As per the cost benefit analysis guidelines 10% of N.P.V. = 0.626 Lakh/Ha. Cost: $0.626 \times 28.60 = 17.90$ Lakhs
3	Cost of human resettlement.	There is no human resettlement from forest land due to proposed Mamdapur storage tank, hence cost of human settlement is Nil.
4	Loss of public facilities and administrative infrastructure (Roads, buildings, schools, dispensaries, electric lines, railways etc) on forest land, which would require forest land if these facilities were diverted due to the project.	There is no Loss of public facilities and administrative infrastructure on forest land due to construction of Mamdapur storage tank, no cost has been added in 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. Cost: $1.878 \times 28.60 = 53.71$ Lakhs
6	Cost of suffering to oustees.	Not Applicable. NIL.
7	Habitat FrAGMENTATION Cost.	Forest Land is being acquired for construction of dam, submergence and waste weir of Mamdapur storage tank. There is no amount is taken under this account.
8	Compensatory afforestation and soil & moisture conservation cost.	The cost compensatory afforestation and soil & moisture conservation cost is taken Rs. 4.32 lakhs per Ha. Comensatory afforestation Estimate. Cost: $4.2435 \times 28.60 = 121.36$ Lakhs
9	Total cost due to forest land diversion .	Total cost due to forest land diversion for Mamdapur Storage Tank will be: Total Cost: $179.04 + 17.90 + 53.71 + 121.36 = 372.01$ Lakhs

  
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**STORAGE TANK MAMDAPUR, TAL: YEOLA, DIST: NASHIK.**  
**PARAMETERS FOR EVALUATION OF BENEFIT, NOTWITHSTANDING LOSS OF FOREST**  
(As per GCI.MoE No. 7-69/2011-FC. (Pt.) dated 01/08/2017) **ANNEXURE-VI (c)**

**Table-C Estimation of Benefits of forest diversion:-**

Sr.No.	Parameters	Remarks
1	Increase in productively attribute to the specific project.	The benefit due to Mamdapur Storage Tank will be Rs. 2291.70 Lakhs. In designed life of 60 years. Ground water level will increase <b>economy growth</b> of the scheme. The storage tank also reserves the <b>water for drinking purpose for Mamdapur and nearby villages</b> . The water in submergence will be useful for <b>drinking to Wild Life and will increase grass, vegetation which will be useful for Wild Life Food and environmet.</b>
2	Benefits to economy due to the specific project.	Storage tank Mamdapur will trigger economy development and also influence with drinking water supply, fisheries development, and Irrigation facility to the land of 116 Ha. In the drought-prone region.
3	No. of population benefited due to specific project.	Storage Tank Mamdapur is located in low rainfall zone area. After completion of project 150 cultivators will be benefited.
4	Economic benefits due to the direct and indirect employment due to the project.	The Storage Tank Mamdapur will provide direct employment for approximate 2500 persons during construction period and for aggricultural activities after completion of storage tank.
5	Economic benefit due to compensatory afforestation.	An Economic benefit due to compensatory afforestation has been considered as per the benefit of C.A. guidelines of ministry for N.P.V. estimation..



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Nashik.

**STORAGE TANK MAMDAPUR, TAL: YEOLA, DIST: NASHIK.**

**POSITION OF AGRICULTURE PRODUCE AFTER COMPLETION OF PROJECT**

(After Irrigation)

Ref:- Divisional Joint Director of Agriculture, Nashik Division, Nashik letter No. Agr.-12/5493  
datef 03/08/2007

**A) YIELD**

Irrigable command of the scheme 116.00 Ha.


Sr. No.	Name of crop	%	Area in Ha.	Yield in MT./Ha.	Total Yield in MT.
	<b>Kharip</b>				
1	Paddy	10	11.60	2.50	29.00
2	Groundnut	20	23.20	2.00	46.40
	<b>Rabi</b>				
1	Wheat	10	11.60	4.00	46.40
2	Gram	20	23.20	2.50	58.00
3	Jowar	30	34.80	4.50	156.60
4	Vegetable	20	23.20	30.00	696.00
5	Sunflower	20	23.20	1.50	34.80
	<b>Total</b>	100	116.00	47.00	1067.20

$$\text{Yield} = \frac{1067.20}{116.00} = 9.20 \text{ MT./Ha.}$$

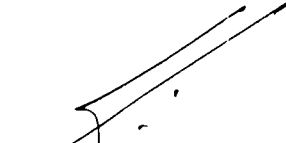
**B) VALUE**

Sr. No.	Name of crop	Total Yield in MT.	Rate per MT.	Total Amount
	<b>Kharip</b>			
1	Paddy	29.00	2896.00	83984.00
2	Groundnut	46.40	5294.00	245641.60
	<b>Rabi</b>			
1	Wheat	46.40	3484.25	161669.20
2	Gram	58.00	8236.00	477688.00
3	Jowar	156.60	2923.56	457828.80
4	Vegetable	696.00	3542.00	2465232.00
5	Sunflower	34.80	7069.33	246012.80
	<b>Total</b>	1067.20	25255.14	4138056.40

$$\text{Rate per M.T.} = \frac{4138056.40}{1067.20} = 3877.49 \text{ MT./Ha.}$$

  
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**STORAGE TANK MAMDAPUR, TAL: YEOLA, DIST: NASHIK.**


**EVALUATION OF BENEFITS DUE TO AGRICULTURAL PRODUCE**

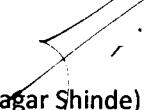
I.C.A. = 116.00 Ha.

Sr. No.	Name of crop	%	Area in Ha.	Yield in Qt./Ha.	Total produce in Qt.	Rate in Rs./Ha.	Rate in Rs./Qt. (Col7/Col5)	Net Amount in Rs. (col6*col8)
1	2	3	4	5	6	7	8	9
	<b>Kharip</b>							
1	Paddy	10	11.60	25.00	290.00	7240	289.60	83984.00
2	Groundnut	20	23.20	20.00	464.00	10588	529.40	245641.60
	<b>Rabi</b>							
1	Wheat	10	11.60	40.00	464.00	13937	348.43	161669.20
2	Gram	20	23.20	25.00	580.00	20590	823.60	477688.00
3	Jowar	30	34.80	45.00	1566.00	13156	292.36	457828.80
4	Vegetable	20	23.20	300.00	6960.00	106260	354.20	2465232.00
5	Sunflower	20	23.20	15.00	348.00	10604	706.93	246012.80
	<b>Total</b>	100	<b>116.00</b>	<b>470.00</b>	<b>10672.00</b>	<b>182375.00</b>	<b>3344.51</b>	<b>4138056.40</b>

**EVALUATION OF BENEFITS DUE TO AGRICULTURAL PRODUCE  
Pre Irrigation**

Sr. No.	Name of crop	%	Area in Ha.	Yield in Qt./Ha.	Total produce in Qt.	Rate in Rs./Ha.	Rate in Rs./Qt.	Net Amount in Rs.
1	2	3	4	5	6	7	8	9
1	Paddy	20	23.20	10.00	232.00	1928	192.80	44729.60
2	Nagli	25	29.00	10.00	290.00	2420	242.00	70180.00
3	Varai	20	23.20	10.00	232.00	2420	242.00	56144.00
4	Gram	10	11.60	10.00	116.00	4161	416.10	48267.60
5	Other oil seeds	7	8.12	5.00	40.60	5968	1193.60	48460.16
6	Fodder	16	18.56	10.00	185.60	1872	187.20	34744.32
7	Other Kharip pulses	2	2.32	5.00	11.60	6907	1381.40	16024.24
	<b>Total</b>	100	<b>116.00</b>	<b>60.00</b>	<b>1107.80</b>	<b>25676.00</b>	<b>3855.10</b>	<b>318549.92</b>

  
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**STORAGE TANK MAMDAPUR, TAL: YEOLA, DIST: NASHIK.**

**POSITION OF AGRICULTURE PRODUCE BEFORE COMPLETION OF PROJECT**

(Pre Irrigation)

Ref:- Divisional Joint Director of Agriculture, Nashik Division, Nashik letter No. Agr.-12/5493  
datef 03/08/2007

**A) YIELD**

Irrigable command of the scheme 116.00 Ha.

Sr. No.	Name of crop	%	Area in Ha.	Yield in MT./Ha.	Total Yield in MT.
1	Paddy	20	23.20	1.00	23.20
2	Nagli	25	29.00	1.00	29.00
3	Varai	20	23.20	1.00	23.20
4	Gram	10	11.60	1.00	11.60
5	Other oil seeds	7	8.12	0.50	4.06
6	Fodder	16	18.56	1.00	18.56
7	Other Kharip pulses	2	2.32	0.50	1.16
	<b>Total</b>	<b>100</b>			<b>110.78</b>

$$\text{Yield} = \frac{110.78}{116.00} = 0.96 \text{ MT./Ha.}$$

**B) VALUE**

Sr. No.	Name of crop	Total Yield in MT.	Rate per MT.	Total Amount
1	Paddy	23.20	1928.00	44729.60
2	Nagli	29.00	2420.00	70180.00
3	Varai	23.20	2420.00	56144.00
4	Gram	11.60	4161.00	48267.60
5	Other oil seeds	4.06	11936.00	48460.16
6	Fodder	18.56	1872.00	34744.32
7	Other Kharip pulses	1.16	13814.00	16024.24
	<b>Total</b>	<b>58.58</b>	<b>38551.00</b>	<b>318549.92</b>

$$\text{Rate per M.T.} = \frac{318549.92}{110.78} = 2875.52 \text{ MT./Ha.}$$

  
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**STORAGE TANK MAMDAPUR, TAL: YEOLA, DIST: NASHIK.**


**ABSTRACT FOR AGRICULTURE PRODUCE**

Sr. No.	Name of crop	Pre Irrigation (Present)		After completion of project		Increase in Value Rs. In Lakhs	Remarks
		Yield in Mt.	Value Rs. In Lakhs	Yield in Mt.	Value Rs. In Lakhs		
1	2	3	4	5	6	7	8
1	Paddy	23.20	0.45	29.00	0.84	0.39	
2	Groundnut	0.00	0.00	46.40	2.46	2.46	
3	Nagli	29.00	0.70	0.00	0.00	-0.70	
						0.00	
4	Wheat	0.00	0.00	46.40	1.62	1.62	
5	Gram	11.60	0.48	58.00	4.78	4.29	
6	Jowar	0.00	0.00	156.60	4.58	4.58	
7	Vegetable	0.00	0.00	696.00	24.65	24.65	
8	Sunflower	0.00	0.00	34.80	2.46	2.46	
9	Varai	23.20	0.56	0.00	0.00	-0.56	
10	Other oil seeds	4.06	0.48	0.00	0.00	-0.48	
11	Fodder	18.56	0.35	0.00	0.00	-0.35	
12	Other Kharip pulses	1.16	0.16	0.00	0.00	-0.16	
	<b>Total</b>	<b>110.78</b>	<b>3.19</b>	<b>1067.20</b>	<b>41.38</b>	<b>38.20</b>	

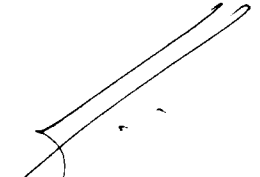
A) Net increase in Agriculture Produce /Year = 956.42 MT./Year

B) Net Benefits per Year = 38.20 Lakhs.

A) Net Benefits for 60 Years = 2291.70 Lakhs.

  
(Sonal Patil)

Sub Divisional W. C. Officer  
Soil & Water Conservation Sub Dn.  
Chandwad.

  
(Sagar Shinde)  
District Water Conservation Officer  
Soil & Water Conservation Division  
Nashik.

**STORAGE TANK MAMDAPUR, TAL: YEOLA, DIST: NASHIK.**

**EVALUATION OF BENEFITS DUE TO AGRICULTURAL PRODUCE**

I.C.A.

116.00 Ha.

Sr. No.	Name of crop	Pre Irrigation					After Irrigation					Increase in Benefits	
		Area in Ha.	Yield/Ha in MT.	Total yield in MT.	Rate /MT. in RS.	Total Value in Rs.	Area in Ha.	Yield/Ha in MT.	Total yield in MT.	Rate /MT. in RS.	Total Value in Rs.	Yield/Ha in MT.	Value in Rs.
1	Paddy	23.20	1.00	23.20	1928.00	44729.60	11.60	2.50	29.00	2896.00	83984.00	1.50	39254.40
2	Groundnut	0.00	0.00	0.00	0.00	0.00	23.20	2.00	46.40	5294.00	245641.60	2.00	245641.60
3	Nagli	29.00	1.00	29.00	2420.00	70180.00	0.00	1.00	0.00	0.00	0.00	0.00	-70180.00
												0.00	0.00
4	Wheat	0.00	0.00	0.00	0.00	0.00	11.60	4.00	46.40	3484.25	161669.20	4.00	161669.20
5	Gram	11.60	1.00	11.60	4161.00	48267.60	23.20	2.50	58.00	8236.00	477688.00	1.50	429420.40
6	Jowar	0.00	0.00	0.00	0.00	0.00	34.80	4.50	156.60	2923.56	457828.80	4.50	457828.80
7	Vegetable	0.00	0.00	0.00	0.00	0.00	23.20	30.00	696.00	3542.00	2465232.00	30.00	2465232.00
8	Sunflower	0.00	0.00	0.00	0.00	0.00	23.20	1.50	34.80	7069.33	246012.80	1.50	246012.80
9	Varai	23.20	1.00	23.20	2420.00	56144.00	0.00	0.00	0.00	0.00	0.00	-1.00	-56144.00
10	Other oil seeds	8.12	0.50	4.06	11936.00	48460.16	0.00	0.00	0.00	0.00	0.00	-0.50	-48460.16
11	Fodder	18.56	1.00	18.56	1872.00	34744.32	0.00	0.00	0.00	0.00	0.00	-1.00	-34744.32
12	Other Kharip pulses	2.32	0.50	1.16	13814.00	16024.24	0.00	0.00	0.00	0.00	0.00	-0.50	-16024.24
	<b>Total</b>	<b>116.00</b>		<b>110.78</b>		<b>318549.92</b>	<b>116.00</b>		<b>991.80</b>		<b>4138056.40</b>		<b>3819506.48</b>

  
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