

## CERTIFICATE

Certified that the undersigned have proposed the appropriate and need based activities required in the watershed project area with active participation of beneficiaries along with consultation of Watershed Committees(WCs). Approval of watershed project plan and DPR as been obtained from WC, Gram Sabha. The plan and DPR document of IWMP-17 project, at P.S.- Chauth ka Barwara District- Sawai madhopur is technically sound, viable and appropriate for implementation during the period 2013 - 2014. To 2018-2019

We recommend that this plan be sanctioned and put to implementation.

Signature Chairman/ WC	Signature Secretary WC	Signature WDT members	Signature Junior Engineer P.S.- Chauth ka Barwara	Signature Assistant Engineer & PIA P.S.- Chauth ka Barwara	Signature Executive Engineer P.S.- Sawai Madhopur
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Signature  
Project  
Manager &  
Superintendent  
Engineer,  
WDSC Distt-  
Sawai  
Madhopur

Government of Rajasthan  
**Deptt. of Watershed Development & Soil  
Conservation**  
District Watershed Development Unit,  
Sawai Madhopur



**IWMP-XVII (Sarsop II) (2013-14)**

**Net Treatable Area :- 2905.19 ha.**

**Project Cost :- Rs. 348.6 Lacs**

**Macro/ Micro No.- 1/3, 1/5**

**Block :- Chauth Ka Barwara District :- Sawai Madhopur**

Junior Engineer  
WDSC,  
Panchayat Samiti,  
Chauth ka Barwara

Assistant Engineer  
WDSC,  
Panchayat Samiti,  
Chauth ka Barwara

Executive Engineer  
WDSC,  
Panchayat Samiti,  
Sawai Madhopur

Superintendent Engineer &  
Project Manager,  
WCDC,  
Sawai Madhopur

## **Detail of Project**

1. Name of Project : Sarsop II
2. Sanction No. & date of Project : 2013-2014
3. Macro & Micro Nos :1/3,1/5
4. Deviation from Project Sanctioned :

Items	As per Project Sanctioned	As proposed in DPR
Project Area	2905	2905
Macro/Micro No	1/3,1/5	1/3,1/5
Name of Gram Panchayats	Sarsop, Tapur	Sarsop, Tapur
Name of Villages	Sarsop, Tapur, Encher, Jharoda, Kachhipura	Sarsop, Tapur, Encher, Jharoda, Kachhipura
Project Cost (Rs in Lakhs)	348.6	348.6

# DPR TEMPLATE

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• CHAPTER – I

**INTRODUCTION**

**Location.**

IWMP17/2013-2014 Sawaimadhpur (Sarsop-II) Project is located in Chauth ka Barwara Block, of Sawaimadhopur district. The project area is between the latitudes 26°9'to26°14' & longitudes 76°3'to76°8'. It is at a distance of 25 km from its Block head quarters and 45 Kms from the district head quarters. There are 1949 no. of habitations in the Project area and other details are given below.

**General features of watershed**

S.No.	Name of Project(as per GOI)	IWMP- 17/2013-14		
(a)	Name of Catchment	Banas		
(b)	Name of watershed area(local name)	Sarsop-II		
©	Project Area	3167.79		
(d)	Net treatable Area	2905		
e)	Cost of Project	348.6		
f)	Cost/hectare	0.12 lac.per hac		
g)	Year of Sanction	2013-14		
h)	Watershed Code	070701		
i)	No. of Gram Panchayats in project area	2		
j)	No. of villages in project area	4		
k)	Type of Project	Other		
l)	Elevation (metres)	125M 370 to 245		
m)	Major streams	Banas River		
n)	Slope range (%)	0-3 %		
Macro/micro	Name of Gram Panchayat	Name of Villages Covered	Census code of villages	Area
1/3,1/5	Sarsop	Sarsop	077547	1905.92
1/5	Tapur	Tapur	077540	375.46

1/5	Tapur	Encher	077544	270.62
1/5	Tapur	Jharoda	077542	151.0
	Tapur	Kachhipura		202.0
<b>Total</b>				<b>2905.0</b>

The watershed falls in Agroclimatic Zone 3B. The soil texture is Sandy Loamy. The average rainfall is 66.7cm . The temperatures in the area are in the range between 24°C to 48°C centigrade during summer and 9°C to 2°C centigrade during winter. The major crops in the area are blackgram, pearl millet, Mustard and wheat. 11.42 % land is under cultivation 3.83 % land fallow, 2.34 % land is wasteland. 68.42 % land is irrigated through Open well, Tube well, and Canal.

207 No of households are BPL( 10.62 % households) 4 are landless households( 0.20 % households) and 1201 household are small and marginal farmers( 61.62 % household) .Average land holding in the area is 1.29 ha. 35.35 % area is single cropped area and 44.50 % is double cropped. The main source of irrigation is Open well. The average annual rainfall (5 years) in the area is 673.2 mm. The Major streams in the Watershed is Banas. The major festivals in the village are Diwali, & Holi. At present these village are having 9877 population with Communities like meena, Rajput and Kachhi.

#### Climatic and Hydrological information

<b>1</b>	<b>Average Annual Rainfall(mm)</b>	
	Year	Average Annual Rainfall(mm)
1	2008	963
2	2009	546
3	2010	717
4	2011	935
5	2012	578
6	2013	731
7	2014	750
8	2015	440
9	2016	994
10	2017	451
<b>2</b>	<b>Average Monthly rainfall (last ten years) 710.5</b>	
	Month	Rainfall(mm)
i)	June	32
ii)	July	481
iii)	August	426
iv)	September	33
<b>3</b>	<b>Maximum rainfall intensity (mm)</b>	
	Duration	rainfall intensity(mm)
	i) 15 minute duration	06
	ii) 30 minute duration	10
	iii) 60 minute duration	16
<b>4</b>	<b>Temperature (Degree C)</b>	

	Season	Max	Min
	i) Summer Season	48°C	24°C
	ii) Winter Season	2°C	9°C
	iii) Rainy Season	21.5°C	40.5°C
5	<b>Potential Evaporation Transpiration (PET) (mm/day)</b>		
	Season	PET	
	i) Summer		
	ii) Winter		
	iii) Rainy		
6	<b>Runoff</b>		
	i) Peak Rate (cum/hr)	3860	
	ii) Total run off volume of rainy season (ha.m.)	560	
	iii) Time of return of maximum flood	5 years	10 years
	iv) Periodicity of Drought in village area		In-Year

### Other Development Schemes in the project area

S.No	Scheme	Name of the department	Key interventions under the Scheme	Targeted Beneficiaries	Provisions under the Scheme
1					
2					
3					
4					

### Details of infrastructure in the project areas

Parameters		Status			
(i)	No. of villages connected to the main road by an all-weather road	4			
(ii)	No. of villages provided with electricity	4			
(iii)	No. of households without access to drinking water	-			
(iv)	No. of educational institutions :	(P)	(S)	(HS)	(VI)
	Primary(P)/ Secondary(S)/ Higher Secondary(HS)/ vocational institution(VI)	13	2	1	Nil
(v)	No. of villages with access to Primary Health Centre	1			
(vi)	No. of villages with access to Veterinary Dispensary	1			
(vii)	No. of villages with access to Post Office	2			
(viii)	No. of villages with access to Banks	2			
(ix)	No. of villages with access to Markets/ mandis	1			
(x)	No. of villages with access to Agro-industries	-			
(xi)	Total quantity of surplus milk				
(xii)	No. of milk collection centres	(U)	(S)	(PA)	(O)
	(e.g. Union(U)/ Society(S)/ Private agency(PA)/ others (O))	0	0	0	0
(xiii)	No. of villages with access to Anganwadi Centre	5			



(xiv)	Any other facilities with no. of villages (please specify)				
(xv)	Nearest KVK		No		
(xvi)	cooperative society		2		
(xvii)	NGOs		-		
(xviii)	Credit institutions				
	(i) Bank		4		
	(ii) Cooperative Society		2		
(xix)	Agro Service Centre's		Nil		

Institutional arrangements (SLNA,DWDU,Exen,PIA,WDT,WC, Secretary)DWDU Details

1	2	3
S.NO.	Particulars	Details of DWDU
1	Name	Sh. Puranmal Gupta
2	PM,DWDU	Zila Parisad sawai Madhopur
3	Mob. No.	9413709490
4	Telephone	07462-220486
5	Fax	
6	E-mail	dwdu.s.madhopur@gmail.com

Exen Particulars

1	2	3
S.NO.	Particulars	Details of Exen
1	Name	Sh. Chandra Prakash Goyal
2	Exen,(W/S)	Panchayat Samiti Sawai Madhopur
3	Mob. No.	9414297033
4	Telephone	07462-220217
5	Fax	
6	E-mail	<a href="mailto:xen121swm@gmail.com">xen121swm@gmail.com</a>

PIA Particulars

1	2	3
S.NO.	Particulars	Details of PIA
1	Name	Shailendra Singh Tomar
	Name of PIA	Panchayat Samiti Chauth ka Barwara
2	Designation	Aen & Pia
3	Mob.no.	9414203450
4	Telephone	
5	Fax	
6	E-mail	Stomar65@gmail.com

JEN Particulars

1	2	3
S.NO.	Particulars	Details of JEN
1	Name	Jeetesh Kumar Meena
2	Designation	JEN(Panchayat Samiti Chauth ka Barwara)
3	Mob. No.	7426029487
4	Telephone	
5	Fax	
6	E-mail	<a href="mailto:Jeeteshmeena93@gmail.com">Jeeteshmeena93@gmail.com</a>

WDT Particulars

1	2	3	4	5	6	7	8
S.NO.	Name of WDT member	M/F	Age	Qualification	Experience in Watershed (yrs)	Description of professional training	Role / Function
1	Amjad Khan	M	25	Polytechnic Diploma (civil)	4 years	4 years	Engineer
2	Rakesh Kmar Meena	M	42	Diploma in Vetenary Science (LSA)	5years	5 years	Vetenary
3	Hemlata Sharama	F	41		4years	4years	Social
4	Amarsingh gurjar	M	30	B.Science (Agriculture)	1year	2year	Agriculture

### Details of Watershed Committees (WC)

S. N.	Name of WCs	Date of Gram Sabha for WC	Designation	Name	M/F	SC/ST/OBC/General	Landless/MF/SF/BF	Name of UG/SHG	Educational qualification
	Sarsop		President	Desraj S/o Sitaram meena	M	ST			
			Secretary	Prakash chand meena s/o Prahlad meena	M	ST			
			Member	Damodar s/o Gangadhar kushwah	M	OBC			
			Member	Ratiram s/o Mangalal meena	M	ST			
			Member	Mitha lals/o Sualal meena	M	ST			
			Member	Kamlesh s/o Morpal meena	M	ST			
			Member	Shanti devi W/o Ramphul meena	F	ST			
			Member	Manvar devi W/o Satynarayan meena	F	ST			
			Member	Sita w/o Sitaram Nakwal	F	GEN			
			Member	Pooja kanvar d/o Ramsingh	F	GEN			
			Member	Nirmala w/o Trilok sain	F	OBC			
			Member	Sakuntala w/o Babulal gaur	F	SC			

### Details of Watershed Committees (WC)

S. N.	Name of WCs	Date of Gram Sabha for WC	Designation	Name	M/F	SC/ST/OBC/General	Landless/MF/SF/BF	Name of UG/SHG	Educational qualification
	Tapur		President	Kamlesh meena	M	ST			
			Secretary	Heeralal s/o Narayan jatt	M	OBC			
			Member	Bharatsingh	M	OBC			
			Member	Dayal s/o Ramkishore	M	ST			
			Member	Badrilal gurjar	M	OBC			
			Member	Shivraj	M	GEN			
			Member	Hemraj meena	M	ST			
			Member	Mithalal	M	GEN			
			Member	Heeralal s/o Narayan jatt	M	OBC			
			Member	Barji w/o ramrosh meena	F	ST			
			Member	Ladbai w/o rameswer prjapat	F	OBC			
			Member	Parwati w/o bhurlal gurjur	F	OBC			

## **Problems and scope of improvement in the project area**

The socio economic conditions of the area can be improved through increased production which can be achieved through expansion in cultivated area and productivity enhancement.

86 ha land is arable wasteland and 38 ha is fallow can be brought under cultivation.

2168 ha is only irrigated and with efforts this can be increased to 2300. The productivity gap of major crops in the area as compared with district and with areas in the same agro climatic zones indicate potential to increase the productivity. The demonstration of improved package of practices, improved varieties, increased irrigation facilities and soil conservation measures under the project can bridge this gap. Due to small land holdings in the area focus of the project would be on diversification in agriculture (horticulture, vegetables, green houses, Agro forestry, fodder crops) and diversification in Livelihoods (Agriculture, Animal husbandry, self employment)

30000 Quintal fodder scarcity can be met out through Pasture development .Improved animal Husbandry practices can increase the productivity of livestock. 665 no of persons migrate due to unemployment this migration can be checked through creation of employment opportunities in the project area through increase in production and diversification in agriculture and Livelihoods as mentioned above.

<b>Mention specific problem of the area in land degradation, water , Agriculture and in Animal Husbandry</b>
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## Base Line Survey Format for IWMP MIS website

Project Name :- Sarsop-II

Total Geographical Area of Project ( Hectares):- 3167.79

### **Treatable Area**

Wasteland (Hectares)	113	Rainfed Agricultural Land ( Hectares)	1673
Total Cropped Area (Hectares)	2529	Net Sown Area ( Hactares)	2529
Total no. of Water Storage Structure	24	Total no. of Water Extracting Units	216
Total storage capacity of water storage structures (cubic meters)	191.43		

### **No. of Household**

SC	367	ST	485
Others	1097		
Total Population of the project Area	9877	No. of Household of Landless people	4
Total no. of BPL Household	207		
No. of person-days of Seasonal Migration		No. of Marginal Farmer's Household	740

### **Depth of Ground Water (meters) below Ground level**

Pre- monsoon	25	Post-monsoon	21
No. of person-days of Seasonal Migration			

## CHAPTER – II Socio economic Features, Problems and Scope

**Table 2.1 Population & Household Details:**

Total Population				
Male	Female	Total	SC	ST
5086	4791	9877	1676	2548

Household Details						
BPL household	L. Less	Small Farmer	M. Farmer	Total household	SC household	ST household
207	4	461	740	1949	367	485

**Table 2.2 Development indicators**

S. No.	Development Indicators	State	Project Area
1	Per capita income (Rs.)	101353	
2	Poverty ratio	24.82	
3	Literacy (%)	66.11	78.97
4	Sex Ratio	928	922
5	infant mortality rate	41	66
6	Maternal mortality ratio	244	252

The above table indicates (poor,average,good) socio economic conditions.

**Table 2.3 Land Use**

Land Use	Total area in Ha.				
	Private	Panchayat	Government	Community	Total
Agriculture Land					
Temporary fallow	121.36	0	0		121.36
Permanent Fallow	124.84	0	0		124.84
Cultivated Rainfed	1673.46	0	0		1673.46
Cultivated irrigated	855.74	0	0		855.74
Net Sown Area	2529.2				2529.20
Net Area sown more than once					
Forest Land			145.00		145.00
Waste Land			113.38		113.38
Pastures			16.41	.	16.41

Others			117.6		117.6
Total	2775.4	0	392.39		3167.79

The project area has 74.18 ha of cultivable wasteland 246.2 ha of fallow land (total 90 ha) can be brought under cultivation if some irrigation source can be provided through Construction of WHS like Khadin, Tanka, Farm ponds etc. and also through demonstration of rainfed varieties of crops. Construction of WHS can also increase in area under irrigation which is only 68%

113.38 ha. (3.57 % of the project area) is under wastelands and can be brought under vegetative cover, with reasonable effort. Activities like Earthen check dams, Vegetative filter strip, V-ditches, staggered trenches, WHS (Johad) Afforestation of wastelands and Pasture development will be taken up on these lands.

**Pasture development** the land use table shows that there is 16.41 hectare pasture land (0.51%). This emphasizes the need for taking up pastureland development works through sowing of promising species of grasses and plantation

**Table 2.4 .a Agriculture and Horticulture status and fuel availability.**  
**Cropping status**

S.N O.	Season	Crop sown	Rain fed			Irrigated			Total	
			Area (ha)	Production (ton)	Productivity (Kg/ha)	Area (ha)	Production (ton)	Productivity (Kg/ha)	Area (ha)	Production (ton)
1	Kharif	Blackgram	1622	1589	980				1622	1589
		Pearlmillet	283.2	365	1290				283.2	365
		Sesame	129.24	73	560				129.24	73
2	Ravi	Gram				179.35	257	1435	179.35	257
		Mustard				485.93	660	1360	485.93	660
		Wheat				177.04	481	2720	177.04	481
	Total		2034.44			842.32			2876.76	3425

<b>Table 2.4.b Abstract of cropped Area(ha)</b>	
Area under Single crop	2416.52
Area under Double crop	460.24
Area under Multiple crop	-

**\*\*Write for each crop:** The farmers are using Pro Agro 9444, HB varieties of Bajra, whereas varieties like RHB-90 can increase the production.

**Crop Rotation\*\*** will vary from project to project

Blackgram	-	Mustard
Blackgram	-	wheat
Pearlmillet	-	Mustered
Pearlmillet	-	Gram
Seasame	-	Mustard
Seasame	-	Gram



The table 2.4b shows that only 460.24 ha is (14.5%) is double cropped area. Also the crop rotation shows that fallow lands are there. This indicates that there is scope for change in crop rotation in fields where there are fallow lands through Soil and Water conservation measures, crop demonstration and diversification in agriculture.

Soil and Water conservation measures besides putting fallow lands under cultivation can change the area under single cropping to double and multiple cropping.

**Table 2.4.c Productivity Gap Analysis (The table can also be given in bar chart form)**

Name of the crop	Productivity kg/ha				
	India	Highest Average in Rajasthan	Highest Average of Agro climatic zone	District	Project Area
Wheat	2619	2762	3500	3200	2505
Mustard	1177	1232	2200	1419	1190
Gram	808	443	900	800	780
Bajara	802	655	635	1608	1401

Analysis of the above table indicate that besides national gap there is wide gap in productivity within state and even within same agro climatic zones.

The productivity gap and reasons of it indicate potential to increase the productivity through crop demonstration. Crop demonstrations would be carried out on improved crops/ varieties, improved agronomic practices. INM, IPM, Mixed cropping, distribution of fodder seed mini kit. Demonstration of improved methods and economics of fodder crops cultivation and also distribution foundation seeds of Forage Crops for further multiplication, introduction of fodder crops in the existing crop rotations.

Table 2.5 Existing area under horticulture/Vegetables/Floriculture (ha)					
Activity	Area	Species	Varieties	Recommended varieties	Production
Horticulture					
Vegetables					
Floriculture					

Medicinal Plants					

**Table 2.6 Land holding Pattern in project area**

Type of Farmer	Total Households	Land holding (ha) irrigation source wise			Land holding (ha) Social group wise				
		Irrigated (source)	Rainfed	Total	General	SC	ST	OBC	BPL
(i) Large farmer	744	848	156	1004	355	76	305	268	0
(ii) Small farmer	461	508	74	582	96	34	230	190	32
(iii) Marginal farmer	740	811.54	131.66	943.2	370	70	158	300.2	45
(iv) Landless person	4								
(V) No. of BPL households	207								
<b>Total</b>	1949	2167.54	361.66	2529.2	821	180	693	758.2	77

48% land holdings belong to small and marginal farmers who own 60% of total cultivated area. Horticulture/vegetables could be more economical to Small and Marginal farmers with irrigation source. For Large farmers with no irrigation facility Horticulture/vegetables will be promoted in a part of land with farm pond/Tanka construction.

The following activities will be more beneficial for small land holdings and for diversification and income for large farmers.

**Horticulture plantation, Medicinal and Aromatic Crops, floriculture:** As discussed earlier . Horticulture/vegetables could be more economical to Small and marginal farmers with irrigation source. Also the project area has good potential for medicinal & aromatic crops like Sonamukhi, Isabgol, Ashwagandha, Khus, Mehandi etc.

**Agro forestry plantation:** To increase the income of farmers and also for shelter belt plantation as wind velocity is high in the project area.

**Setting of Vermi Compost Units** - Keeping in view the side effect of residues of chemicals and fertilizers on human health the emphasis would be on cultivation of organic produce through motivating farmers and providing assistance for production of organic input, vermi compost.

**Production and distribution of quality seed** – There is need to ensure that good quality seed is available for cultivators for which adequate seed production would be initiated in watershed areas with the assistance of private sector and agriculture department technologies

**Sprinklers and pipelines** for efficient water management practices emphasis on demonstration of sprinklers with adequate financial support and convergence/private partnership.

**Establishment of Green House** - For growing off season vegetables seedlings and other horticultural crops under controlled atmospheric conditions of green house.

**Establishment of nurseries:** Most of the planting material is procured from other parts of the State/ country. The procurement of planting material from distant places causes damage to the planting material and often results in untimely supply. Hence nursery development activity can be promoted in the area.

**Innovative hi-tech/ export oriented activities:** innovative hi-tech/ export oriented projects like mushroom cultivation, floriculture, etc which are in negligible existence at present, can be implemented by individual farmers / private companies.

**Drip irrigation** Drip irrigation will be promoted in all horticulture plantations, vegetables, green houses and in nurseries for rational use of irrigation higher yields and quality produce.

**Table 2.7 Livestock Status - animals/milk production / average yield.**

S.No	Description of animals	Population in No.	Yield(milk/mutton/Wool)	Equ. cow units	Dry matter requirement per year (7Kg per animal.)	Total requirement in M.T.
1	Cows					
	Indigenous	630	2 kg/ day	630	4410	1616
	Crossbreed					
2	Buffaloes	3832	4kg/day	7664	26824	9826
3	Goat	3881	0.8kg/day	431	27167	9951
4	Sheep					
5	Camel					
6	Poultry			NA		
7	Piggery			NA		
	Total	8343			55401	21393

In spite of the large number of livestock, production is less hence increase in productivity across all species, is a major challenge. To enhance production of unproductive cattle and improve the productivity following activities will be taken up:-

,Demonstration of improved methods of conservation and utilization of Forage crops are proposed.

**Table 2.8 Existing area under fodder (ha)**

S.No	Item	Unit	Area/Quantity
1	Existing Cultivable area under Fodder	Ha	100
2	Production of Green fodder	Tonns/year	2500
3	Production of Dry fodder	Tonns/ Year	15000
4	Area under Pastures	Ha	
5	Production of fodder	Tonns/year	

6	Existing area under Fuel wood	Ha	
7	Supplementary feed	Kgs/ day	
8	Silage Pits	No	
9	Availability of fodder	quintals	40000
10	Deficiency/excess of fodder	quintals	25000

The table above shows there is fodder deficiency (Requirement is 7000 and availability 4000MT)

To minimize the large and expanding gap between feed and fodder resource availability and demand there is need for

- Increase in area under fodder crops
- Increase in productivity of fodder crops
- Development of pastures
- And reduction in large number of livestock production through replacement by few but productive animals

**Table 2.9 Agriculture implements**

S. No	Implements	Nos.
1	Tractor	74
2	Sprayers-manual/ power	-
3	Cultivators/Harrows	-
4	Seed drill	48
5	Any Other	

**Farm mechanization and seed banks:** As discussed earlier 48% land holdings belong to small and marginal farmers who own only 60% of total cultivated area so owning of big farm implements by individual farmers is not economical so SHG would be promoted to buy farm implements and rent to farmer

**Table 2.10 NREGA Status - No. of Card Holder, activities taken so far, employment status.**

Sr. no.	Name of village	Total No .of job cards	Employment Status	Activity taken up so far
1	Aecher	314	3272	Field Bunding
2	Jharoda	170	1772	Field Bunding
3	Kachipura	95	990	Field Bunding
4	Sarsop	1079	16814	Field Bunding
5	Tapur	290	3022	Field Bunding
6	Total	1948	25870	

**Table 2.11 Migration Details**

Name of village	No. of persons migrating	No. of days per year of migration	Major reason(s) for migrating	Distance of destination of migration from the village (km)	Occupation during migration	Income from such occupation (Rs. in lakh)
Sarsop	315	200	Livelihood	150	Labour	3-4
Aencher	80	200	Livelihood	150	Labour	3-4
Tapur	225	200	Livelihood	150	Labour	3-4
Jharoda	45	200	Livelihood	150	Labour	3-4
Total	665					

The migration can be check by creation of employment opportunities, enhancing farm level economy, increases the income of the people engaged in animal husbandry by dairy, poultry and marketing and value addition. (As discussed earlier) and diversification in livelihoods .

The existing livelihoods activities are given below

<b>Table 2.12 (a)Major activities (On Farm)</b>		
Name of activity	No of House holds	Average annual income from the
Cultivators	2415	16000-30000
Dairying		
Poultry		
Piggery		
Goatry		
Landless Agri. Labourers	4	16000-18000
Others		

**Table 2.12(b) Major activities (Off Farm)**

Name of activity	Households/individuals	Average annual income from the
Artisans	2	40000
Carpenter	10	50000
Blacksmith	5	35000
Leather Craft	65	40000
Porter	30	45000
Mason	10	48000
Others specify (Cycle Repair ,STD,Craft etc)	2	40000
Others		

The efforts for increase in income through off farm activities will be made under livelihood component through assistance to SHG or individuals

**Table 2.13( a ) Status of Existing SHG**

S.No	Name of SHG	Members	Activity involved	Monthly income	Fund available	Assistance available	Source of assistance	Training received
1	Baba ramdev, Sarsop	10		1000				
2	Jagdamba, Sarsop	10		500				
3	Yuvraj, Sarsop	13		650				
4	Monika, Sarsop	10		500				
5	Shree Raghunathji, Sarsop	10		500				
6	Vaisali Sarsop	10		500				

The table indicates existence of number of groups in the area also these need to be strengthened through trainings and financial assistance

## II. Technical Features

**Table 2.14 Ground Water**

S.No	Source	No.	Functional depth	Dry	Area irrigated	Water availability(days)
i)	Dug wells	535	60	12	1750.51	365
ii)	Shallow tube wells					
iii)	Pumping sets					
iv)	Deep Tube Wells	45	90	5	89	365
	Total					

- The tables above indicate need for judicious use of available Water.
- Encouraging optimum use of water through installation of sprinklers on every operational wells

### Table 2.17 Slope details.



Slope of Watershed		
S.No.	Slope percentage	Area in hectares
1	0 to 3%	1964.74
2	3 to 8%	1018.04
3	8 to 25%	126.04
4	> 25%	58.97

As most of the area has slope less than 3% construction of contour bunds can solve the problem of water erosion in agriculture fields and protect washing of top soil and manures/fertilisers.

### Table 2.18 Water Budgeting

**Good Catchment** – Normally a funnel shaped catchment in hilly terrain with less vegetation.

**Average Catchment** – Catchment in the plains where there is no dense growth of vegetation.

**Bad Catchment** – Catchment with dense growth of vegetation & highly permeable top soil & sub soil.

#### Total available runoff(cum) use Stranges table

Type of Catchment	Area in ha.	Yield of runoff from catchment per ha.(tcm.) use Stranges table	Total Runoff in tcm
Good	0	0	0
Average	3167.79	0.73	2032.17
Bad	0	0	0
Total	3167.79		2032.17

#### Runoff trapped in existing structures

S.No.	Name	No.	Storage Capacity (tcm)
i)	WHS(earthen)	7	27.50
ii)	Khadin/Talab	8	83.73

iii)	Farm Ponds		
iv)	Tanka		
v)	Anicut	1	2.5
vi)	Nadi	1	0.7
vii)	Surface Water strage Tank	7	
	Total	24	114.43

**Runoff to be Trapped in proposed structures:**

S.No.	Name	No.	Storage Capacity (tcm)
i)	WHS(earthen)	6	20.0
ii)	mpt	20	32.0
iii)	Farm Ponds		0
iv)	Tanka		0
v)	Pakka check dam	2	12.50
vi)	pt	3	12.5
	Total	31	77.0

The water budgeting indicates potential for water harvesting in the area

**Table 2.19 Soil details**

Soil Profile		
S.No.	Major Soil Classes	Area in hectares
1	Sandy loam to loam	2460
2	Sandy clay loam to loam	707
Soil Depth :		
B	Depth (Cms.)	Area in hectares
1	0.00 to 7.50	700
2	7.50 to 45.00	2150
3	> 45.00	317

C	Soil fertility Status	Kg/ha	Recommended
	N	30	80
	P	15	40
	K	1500	340
	Micronutrients	Less Available zinc,sulphur	

The analysis of table shows need to improve and maintain soil fertility. Soil health card to every farmer every crop season will be provided, which will include the recommendation for Application micro nutrient and fertilizers

**Table 2.20 Erosion details**

Erosion status in project Area					
Cause	Type of erosion	Area affected (ha)	Run off(mm/ year)	Average soil loss (Tonnes/ ha/ year)	
Water erosion					
a	Sheet	1100	120	22	
b	Rill	1800	120	26	
c	Gully	267	120	28	
Sub-Total				26	
Wind erosion					
<b>Total for project</b>					

The need is:

- To check land degradation
- To reduce excessive biotic pressure by containing the number and increase of livestock
- To check cultivation on sloping lands without adequate precautions of soil and water conservation measures
- To discourage cultivation along susceptible nallah beds
- To check Faulty agriculture techniques
- To check Uncontrolled grazing and developed cattle tracks
- To check Deforestation of steep slopes

- To check erosive velocity of runoff, store Runoff, to arrest silt carried by runoff and to recharge Ground Water structures life Earthen check dams, gully plugs, Bank Stabilisation, Loose stone check Dams, Gabions, Earthen embankment (Nadi) and Anicuts would be taken up.

### **CHAPTER - III Proposed Development Plan:**

The Activities are indicative addition /deletion in activities will be as per local conditions

#### **A) Preparatory phase activities Capacity Building Trainings and EPA**

The IEC activities like Kalajathas, Group meetings, door to door campaign, slogans and wall writings etc. were carried out in all the habitations of IWMP XVII Micro Watershed. A series of meetings were conducted with GP members, community and discussed about the implementation of IWMP programme. User groups were also formed.

Grama Sabhas were conducted for approval of EPA (Village), for selecting the watershed committee and approval of DPR.

<b>S.no</b>	<b>Name of the Gram Panchayat</b>	<b>Date on which Grama Sabha approved EPA</b>
1	Sarsop	24/4/2016
2	Tapur	24/4/2016



**CHAPTER – VI EXPECTED OUT COMES**

1	2	3	4	5	6
S. No.	Item	Unit of measurement	Pre-project Status	Expected Post-project Status	Remarks
1	Status of water table (Depth to Ground water level)	Meters			
2	Ground water structures repaired/ rejuvenated	No.			
3	Quality of drinking water	Description			
4	Availability of drinking water	Description			
5	Change in irrigated Area	Ha			
6	Change in cropping/ land use pattern	Description			
7	Area under agricultural crop	Ha			
	I Area under single crop	Ha			
	ii Area under double crop	Ha			
	iii Area under multiple crop	Ha			
8	Change in cultivated Area	Ha			
9 yield of major crops of area	Yield of Bajra	q/ha			
	Yield of Wheat	q/ha			
	Yield of Gram	q/ha			
	Yield of Mustard	q/ha			
10 production of major crops of area	Production of Bajra	Ton			
	Production of Wheat	Ton			
	Production of Gram	Ton			
	Production of Mustard	Ton			
11	Area under vegetation	Ha			
12	Area under horticulture	Ha			
13	Area under fuel	Ha			
14	Area under Fodder	Ha			
15	Fodder production	Q			
16	Milk production	Litres/day			
17	SHGs Active	No.			
18	No. of enterprising individuals	No.			
19	Income	Rs.in la			
20	Migration	No.			
21	SHG Federations formed	No.			

## **Critical Assumption**

- No severe droughts/ unexpected floods/ natural disasters
- Adequate funds are allocated for the same and released on time.
- There is no significant pest/ disease attack, and if so, then it will have been contained before irreversible damage is done.
- Adverse market conditions do not persist long.
- Sound macro-economic and growth conditions continue and the benefits are widely distributed particularly in the rural areas.
- Facilitating agencies and resource providers have the required competent staff so that timely and appropriate technical advice and services are provided to farmers whenever required.
- The Capacity Building Plan is implemented, monitored and modified to address evolving needs and feedback from participants.

## **Means of Verification of indicators**

- Baseline surveys like household income ,expenditure, health and nutrition etc at the beginning, mid-term and end of the project period
- Annual participatory assessment by communities during project period.
- Regular project monitoring reports prepared by project monitoring teams/ agencies.
- Membership and other Records, Minutes of Meetings maintained by the SHGs, WCs/ Individual beneficiaries/project-related village and local bodies/PRIs.
- External review missions
- Data maintained by Government department (Revenue, Agriculture, Groundwater, Irrigation, Animal Husbandry)

## **CHAPTER VII TECHNICAL DESIGNS AND ESTIMATES**

Technical designs and estimates for proposed activities.

For Estimates GKN of the districts should be used. For Production System activities, rates provided by the Department is to be used & if not available than rates of Agriculture/Horticulture/Animal Husbandry should be used.

For Livelihood activities, project norms provided by the Department is to be used & if not available than cost norms of NABARD, NRLM etc can be used.



## CHAPTER - VIII Enclosures -

- i. Location –District, block, village, watershed location map
- j. Map of \_\_\_\_\_ IWMP Project (Watershed Boundary demarcation in cadastral & Topo Sheet)
- k. PRA Map (along with photos & paper drawing)
- l. Treatment map (Indicate proposed works)
- m. Cadastral Map on watershed boundary
- n. Information on Soils, Soil fertility, Land capability, Soil chemical problems like salinity, alkalinity
- o. Land Use Land Cover map
- p. Information on existing water harvesting structures & well inventory along with GPS co-ordinates.
- q. High resolution, latest Remote Sensing Satellite data

### **Documents of Agreements:**

Proceedings of gram sabha for EPA approval

Proceedings of gram sabha Resolution for committee constitution

Proceedings of gram sabha for DPR approval

Proceeding of Standing Committee of P.S. for DPR approval.

Proceeding of Standing Committee of Z.P. for DPR approval.

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