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## 2. Profile of the District

### Location

Situated between north latitude 32°11'030'' and 33°13'6'', and east longitude 75°49' and 77°3'30'' with J&K on the north-west and west; Lahaul and Bara Bhangal on the north –east; District of Knagra on the south –east; District of Gaudaspur (Punjab) on the south

### Area

6,528 sq. Km. (11.72% of HP)

### Elevation

The district is wholly mountainous with elevation ranging from 2000 to 21000 ft

### Climate

Range from semi-tropical to semi-arctic.

### Population

Total population of Chamba is 460887 as per the 2001 census out of which 235218 are females and 225669 males. The rural population of the district is 426345. There are 87029 household in the district. The sex ratio is 959 females to 1000 males. The total scheduled cast population is 1,17,569. The density & population per Sq. km is 71 persons and the decadal growth of population 18.22 percent. The district Chamba is surrounded by the state of Gurdaspur and with in the state boundary of Chamba touches district of Lahaul and Kangra.

## 2010-2011

### Land use Pattern of Chamba District

#### Classification of Area

Sr. No.	Particular	Total Area (ha)
1.	Total geographical area	692419
2.	Forest Land	272008
3.	Irrigated Land	4332
4.	Pasture Land	348869
5.	Waste/ Barren Land	6871
6.	Fallow Land	733
7.	Uncultural Land	4748
8.	Land put to Non Agriculture use	75380

#### (I) Cropping Pattern

Sr.No.	Particular	Total Area (ha)
1.	Wheat	20801
2.	Maize	27871
3.	Paddy	3507
4.	Barley	3756
5.	Small cereal others	1320
6.	Pulses	3369
7.	Vegetable	1631
8.	Fruit	2194
9.	Oil seed	3135
10.	Others, Tomato, Cherry	45
11.	Spices	146

#### (II) Detail of the live stock population

Sr.No.	Particular	Total population
1.	Cattle	317256
2.	Buffalo	39409
3.	Yak	220
4.	Sheep	316565
5.	Goat	240564
6.	Horse	764
7.	Pony	54
8.	Mule	423
9.	Donkey	406
10.	Pig	4

*Source:- Department of Animal Husbandry, 2007*

### 1.0 INTRODUCTION

#### 1.1 INTRODUCTION OF THE PROJECT AREA

The IWMP-V (Integrated Watershed Management Programme) Chamba was sanctioned for the Salooni Development Block in the year 2011-12 by the ministry of rural development (GOI). The project is being executed by the state government under rural development department. The district rural development agency is the nodal agency to execute the programme at district level. At the block level Block Development Officer Salooni is the project implementing agency (PIA) to coordinate with different gram panchayats at field level. There are 14 Gram Panchayats in Salooni block. The IWMP project is being started in 14 Gram Panchayat in different watershed/ catchment area. The different Nallahs and Khuds of the watershed drains into Suel khad which is a tributary of river Ravi. The main feature of the watershed area is as under:

1. Acute shortage of drinking water.
2. The water resources for irrigation are drying day by day and existing resources have been fully utilized.
3. Problems of soil erosion.
4. The contiguity of the watershed area.
5. People awareness and participation of the watershed area for natural resource management is good.
6. The watershed area comprises of schedule caste and schedule tribe population too.
7. Productivity potential of the land is high.
8. Whole area of the watershed is rain fed.
9. Fruit crops, cereals, Pulses and vegetables are the major crops of the watershed.
10. Animal rearing is also an integral part of the watershed.
11. Basic infrastructure of roads, electricity and communication are available.
12. Majority of people are dependent on farm land based activities.

## 1.1a Sanctioned Budgetary Provisions

Watershed : IWMP- V - Chamba  
Area : 8660 ha  
Amount : 12,99,00,000

### Gram panchayats under IWMP- V -Chamba

Sr. No.	Catchment area	Gram Panchayat	Area (ha.)	No. of villages
1	Kashni nala & Suel khad	Mouda	825	13
2	Nagled, tappar & Gatti nala	Nadal	1170	7
3	Jhal khad & Tirodi	Bhunad	745	24
4	Kareu nala & Suel khad	Kanged	716	21
5	Dibru nala & Ravi river	Simini	571	18
6	Bera Suel & Ravi river	Wangal	461	15
7	Suel & Ravi river	Ohra	430	05
8	Suel khad & Salandri nala	Thakri matti	435	19
9	Sayar nala	Karwal	367	18
10	Bhajtra nala & Dheew nala	Bhajotra	1378	24
11	Suel khad & Khudi nala	Seri	571	35
12	Salandri khad & Suel khad	Manjhli	340	15
13	Salandri khad & Suel khad	Drekadi	301	05
14	Suel khad	Ligga	350	11
	<b>Total</b>		<b>8,660</b>	<b>230</b>

## 1.1b: ACTIVITY AND BUDGET

Amount

Sr. No	Budget Component	% of the budget	Mouda	Nadal	Bhunad	Kanged	Simini	Wangal	Ohra	Thakri matti	Karwal	Bhajotra	Seri	Manjhli	Drekadi	Ligga	Total
<b>A) Administrative Cost</b>																	
1	Administrative cost	10%	1237500	1755000	1117500	1074000	856500	691500	645000	652500	550500	2067000	856500	510000	451500	525000	<b>12990000</b>
2	Monitoring	1%	123750	175500	111750	107400	85650	69150	64500	65250	55050	206700	85650	51000	45150	52500	<b>1299000</b>
3	Evaluation	1%	123750	175500	111750	107400	85650	69150	64500	65250	55050	206700	85650	51000	45150	52500	<b>1299000</b>
<b>B) Preparatory Phase</b>																	
1	Entry point activities	4%	495000	702000	447000	429600	342600	276600	258000	261000	220200	826800	342600	204000	180600	210000	<b>5196000</b>
2	Institution & capacity building	5%	618750	877500	558750	537000	428250	345750	322500	326250	275250	1033500	428250	255000	225750	262500	<b>6495000</b>
3	Detailed Project Report (DPR)	1%	123750	175500	111750	107400	85650	69150	64500	65250	55050	206700	85650	51000	45150	52500	<b>1299000</b>
<b>C) Watershed Works Phase</b>																	
1	Watershed Development Works	56%	6930000	9828000	6258000	6014400	4796400	3872400	3612000	3654000	3082800	11575200	4796400	2856000	2528400	2940000	<b>72744000</b>
2	Livelihood activities for the asset less persons	9%	1113750	1579500	1005750	966600	770850	622350	580500	587250	495450	1860300	770850	459000	406350	472500	<b>11691000</b>
3	Production system & micro enterprises	10%	1237500	1755000	1117500	1074000	856500	691500	645000	652500	550500	2067000	856500	510000	451500	525000	<b>12990000</b>
<b>D)</b>	Consolidation phase	3%	371250	526500	335250	322200	256950	207450	193500	195750	165150	620100	256950	153000	135450	157500	<b>3897000</b>
	<b>Total</b>		<b>12375000</b>	<b>17550000</b>	<b>11175000</b>	<b>10740000</b>	<b>8565000</b>	<b>6915000</b>	<b>6450000</b>	<b>6525000</b>	<b>5505000</b>	<b>20670000</b>	<b>8565000</b>	<b>5100000</b>	<b>4515000</b>	<b>5250000</b>	<b>129900000</b>

### 1.1c: Component wise Physical and Financial Details (as per MIS)

Sr. NO	Name of the activities	Physical		Budget allocation %	Financial Amount ₹		
		Name of the scheme	Numbers of works		Budget under Watershed (₹)	Convergence proposed under work component (₹)	Total (₹)
1.a	Administration cost			10 % Project Cost	12990000	-	12990000
b	Monitoring			1%	1299000	-	1299000
c	Evaluation			1%	1299000	-	1299000
	<b>Sub total (a+b+c)</b>			<b>12%</b>	<b>1,55,88,000</b>	-	<b>1,55,88,000</b>
2.1	Preparatory Phase					-	
	Entry Point Activities			<b>4%</b>	<b>51,96,000</b>	-	<b>51,96,000</b>
a		Kuhal with tank	01		300000	-	300000
b		irrigation tanks	03		286800	-	286800
c		Kaccha talab	10		1494800	-	1494800
d		Check dam	17		2337800	-	2337800
e		Kuhal	15		776600	-	776600
		<b>Total</b>	<b>46</b>		<b>51,96,000</b>	-	<b>51,96,000</b>
2.2	Institutional & Capacity Building		No. of training			-	
a.		Awareness	17		340000	-	340000
b.		Block level	17		749000	-	749000
c.		Institutional/ Specialized training	36		2717500	-	2717500
d.		Exposure visit	16		855000	-	855000
e.		Kissan melas	20		685000	-	685000
f.		PIA, WDT members	16		665000	-	665000
g.		Expert visits/services and Misc.			483500	-	483500
	<b>Sub total</b>		<b>122</b>	<b>5%</b>	<b>64,95,000</b>	-	<b>64,95,000</b>
2.3	Detailed Project Report ( DPR)			<b>1%</b>	<b>12,99,000</b>	-	<b>12,99,000</b>
	<b>Sub Total (2.1+2.2+2.3)</b>			<b>22%</b>	<b>2,85,78,000</b>	-	<b>2,85,78,000</b>

<b>3</b>	<b>WATERSHED WORKS PHASE</b>						
<b>3 A</b>	<b>Watershed Development Works</b>						
<b>3 A-1</b>	<b>Land Development (for productive use)</b>				-	-	-
<b>3A -1-1</b>	<b>A forestation</b>				-	-	-
	For Raising of fodder plantation		149		1861780	200380	2062160
<b>3A-2.2</b>	<b>Pasture development</b>				-	-	-
	For Raising of hybrid grasses		145 ha		1740960	265840	2006800
	<b>Sub Total (3A 1.1 +2.2)</b>				<b>36,02,740</b>	<b>4,66,220</b>	<b>40,68,960</b>
<b>3 A-2</b>	<b>Vegetative and Engineering structure</b>						
i	Loose boulder		589		820800	1299600	2120400
ii	Gabion structure		686		2134000	1639000	3773000
	<b>Total</b>		<b>1275</b>		<b>29,54,800</b>	<b>29,38,600</b>	<b>58,93,400</b>
<b>3 A-3</b>	<b>Water harvesting structure (WHS)</b>						
i	Kacha talab		149		1865700	3679250	5544950
ii	Poly tank		26		638400	6720	645120
<b>C</b>	<b>Others</b>		<b>0</b>		<b>-</b>	<b>-</b>	<b>-</b>
iii	Check dam		3		230200	115200	345400
iv	Roof water		248		14720840	2242360	16963200
v	Irrigation Tank		242		21800480	1518960	23319440
vi	Kuhal		69		16960020	4787540	21747560
vii	Bawari (drinking)		142+15(rep.)		7222220	1532000	8754220
viii	Tank (drinking)		29		1748600	328400	2077000
ix	Carriage charge		0		1000000	-	1000000
	<b>Sub total (3 A 1.1+2.2)</b>				<b>6,61,86,460</b>	<b>1,42,10,430</b>	<b>8,03,96,890</b>
	<b>Grand total</b>		<b>2355</b>	<b>56%</b>	<b>7,27,44,000</b>	<b>1,76,15,250</b>	<b>9,03,59,250</b>



<b>3.B</b>	<b>Livelihood activities for the assets less and landless person 30% grant in aid of the 9%</b>	<b>Household beneficiaries</b>					
	<b>Non farm activities</b>						
1.	Carpentry	15 (group)			450000	-	450000
2.	Masonry	10 (group)			280000	-	280000
3.	Embroidery	23 (group)			850000	-	850000
4.	Black smith	4 (group)			70000	-	70000
5.	Weaver	3 (group)			65000	-	65000
6.	Pattal making	10(group)			250000	-	250000
7.	Poultry	1 (group)			30000	-	30000
8.	Mule rearing	7 (group)			710000	-	710000
9.	Goatry	3 (group)			152000	-	152000
10.	Cobbler	1 (group)			20000	-	20000
11.	PHT	1 (group)			30000	-	30000
12.	Welding	1 (group)			20000	-	20000
13.	Khaddi	1 (group)			20000	-	20000
14.	Basket Making	3 (group)			70000	-	70000
	<b>Total</b>	<b>83(group)</b>			<b>30,17,000</b>	-	<b>30,17,000</b>
	<b>Revolving funds available</b>				8674000	-	8674000
<b>3.C</b>	<b>Total</b>		<b>9%</b>		<b>1,16,91,000</b>	-	<b>1,16,91,000</b>
<b>Production system &amp;micro Enterprises</b>							
	Agriculture for crop seed	25019 kg			1441240	-	1441240
	Insecticide Pesticides / gradual	37.7 kg			16420	-	16420
	Vermin compost	74			441000	77000	518000
	Fruit Plants	87013			2528700	93800	2622500
	Fodder trees	163900			1639000	-	1639000
	Hybrid Grasses (seed)	5075 kg			609000	-	609000
	Vegetable seeds	18778			2014270	-	2014270

	Goatry	253			2338000	-	2338000
	Dairy farming	32			735000	-	735000
	Poultry	24			140000	10000	150000
	Bee keeping	9			45000	-	45000
	Fishery	1			10000	-	10000
	PHT	1			25000	-	15000
	Spain	1			300000	-	300000
	Mushroom	4			50000	60000	110000
	Vegetable collection centre	1			312000	-	312000
	Miscellaneous				345370	-	355370
	<b>Total</b>		<b>10%</b>		<b>1,29,90,000</b>	<b>2,40,800</b>	<b>1,32,30,800</b>
	<b>Sub Total (3A+3B+3C)</b>		<b>75%</b>		<b>9,74,25,000</b>	<b>1,71,17,330</b>	<b>11,45,42,330</b>
4	<b>Consolidation Phase</b>		<b>3%</b>		<b>38,97,000</b>	-	<b>38,97,000</b>
	<b>Grand Total</b>		<b>100%</b>		<b>12,99,00,000</b>	<b>1,78,56,050</b>	<b>14,77,56,050</b>

**Note:**

- a) Total funds available under watershed Rs. **12,99,00,000**
- b) Convergence proposed under works, Component with MNREGAs ₹ **1,78,56,050**
- c) Grant in aid proposed to the selected beneficiaries **23.1%** under Livelihood activities for ₹ **30,17,000** and ₹**86,74,000** kept as Revolving funds which is **76.9%** available under livelihood
- d) As per the provision provided under the Guidelines of GOI for livelihood activities **70 %** revolving funds is maximum and to be kept for support of livelihood and maximum **30 %** to be given as grant-in-aid. The funds not to be utilized under grant in aid will be treated under revolving fund

## 1.1d Methodology

### A. District level exercise

- a. Collection of data at district level
  1. DRDA and Line department
- b. Meeting with CEO (DRDA), Project Officer, Heads of Line Departments

### B. Block level Exercise

- a. Data collection
- b. One day orientation with pradhan secretaries and panchayat sahayak at block level
- c. Meeting with line department officials of agriculture, horticulture and animal husbandry department for convergence

### C. Micro watershed /Panchayat /Revenue village wise Exercise

- a. General meeting at Panchayat level with members of Panchayat Samiti, Pradhan and Ward members
- b. Collection of revenue data from Patwari
- c. Collection of socio economic data from Panchayat Secretary
- d. Village level meeting organized, PRA exercises and transect walks
- e. Identification of beneficiary group for different activities
- f. Participatory Rural Appraisal Exercise with the local community while contacting the peoples
- g. Transit walk with the line department and local community to ascertain the position of back ward and forward linkage
- h. Selection of site with technical expert /Junior Engineer and expert of soil science to analyses soil strata for construction of Check Dam .Irrigation tank and other mega projects
- i. Selection of need based community and homogeneous Groups for involvement under livelihood activities
- j. Selection of landless/assetsless community under the watershed catchment area
- k. Selection of SC/ST community under the project.
- l. Social economical condition of the watershed community.

## 2.0 GENERAL DESCRIPTION OF PROJECT AREA

### 2.1 Socio economic profile of IWMP-V -Chamba

Total number of Panchayat	:14
Total number of families	:4769
Total population of the Panchayat	:23854
General families	:3379 (8210 male + 8011 female=16221)
Schedule caste families	:1063 (3009male +2859 female =5868)
Schedule Tribe/OBC families	:317(920 male +845 female = 1765)

#### 2.101: Population of different categories (ward wise/village wise)

Name of Panchayat	General Families				SC Families				Schedule Tribe/OBC				Grand Total
	No of families	Male	Female	Total	No of families	Male	Female	Total	No. of families	Male	Female	Total	
Mouda	158	411	383	794	62	180	162	342	173	492	462	954	2090
Nadal	132	470	477	947	198	588	566	1154	-	-	-	-	2101
Bhuned	241	646	549	1195	29	82	55	137	-	-	-	-	1332
Kanged	375	974	844	1818	30	111	99	210	-	-	-	-	2028
Simini	412	1103	1031	2134	7	20	14	34	-	-	-	-	2168
Wangle	133	227	312	539	68	100	119	219	-	-	-	-	758
Ohara	202	537	480	1017	18	53	48	101	39	135	115	250	1368
Thakri Matti	481	836	718	1554	40	82	85	167	-	-	-	-	1721
Karwal	234	625	585	1210	163	466	445	911	5	15	21	36	2157
Bhajotra	69	208	187	395	173	546	515	1061	40	113	95	208	1664
Seri	321	784	885	1669	146	367	344	711	18	43	31	74	2454
Manjhli	303	670	694	1364	4	7	9	16	-	-	-	-	1380
Drekadi	203	466	586	1052	30	92	107	199	10	28	32	60	1311
Ligga	115	253	280	533	105	315	291	606	32	94	89	183	1322
<b>Total</b>	<b>3,379</b>	<b>8,210</b>	<b>8,011</b>	<b>16,221</b>	<b>1,073</b>	<b>3,009</b>	<b>2,859</b>	<b>5,868</b>	<b>317</b>	<b>920</b>	<b>845</b>	<b>1,765</b>	<b>23,854</b>

Source: Gram Panchayat, 2012

### 2.2 BPL Families

Total BPL families	: 1256
Total Antodaya Families	: 1128

#### 2.201a Population of BPL and Antoyadaya families (ward wise)

Name of panchayat	Antodaya				BPL				Grand Total		
	General	SC	OBC	Total	General	SC	OBC	Total	Antodaya	BPL	Total
Mouda	45	18	52	115	26	7	26	59	115	59	174
Nadal	51	115	-	166	17	12	-	29	166	29	195
Bhuned	61	9	-	70	51	4	-	55	70	55	125
Kanged	68	15	-	83	107	16	-	123	83	123	206
Simini	133	4	-	137	30	-	-	30	137	30	167
Wangle	56	-	-	56	83	-	-	83	56	83	139
Ohara	66	10	8	84	41	2	7	50	84	50	134
Thakri Matti	74	6	-	80	132	10	-	142	80	142	222
Karwal	23	9	-	32	62	67	5	134	32	134	166
Bhajotra	17	68	3	88	16	23	3	42	88	42	130
Seri	-	-	-	-	161	79	4	244	-	244	244
Manjhli	69	1	-	70	135	3	-	138	70	138	208
Drekadi	30	19	-	49	52	30	-	82	49	82	131
Ligga	46	41	11	98	14	21	10	45	98	45	143
<b>Total</b>	<b>739</b>	<b>315</b>	<b>74</b>	<b>1,128</b>	<b>927</b>	<b>274</b>	<b>55</b>	<b>1,256</b>	<b>1,128</b>	<b>1,256</b>	<b>2,384</b>

Source: Gram Panchayat, 2012

## 2.3 Land use pattern

The total land of IWMP-V panchayats as per revenue record provided by the revenue department is 9827 hectare and existing land fall under watershed treatment area is rainfed. The irrigated land as per the record available is 108.168 hectare and 1309.01 hectare cultivated land is used under different farming system i.e. agriculture, horticulture and vegetables. The fellow land 251.19 hectare, barren land is 303.03 hectare, pasture 3833.24 hectare, Ghasni, forest and other land is 462.78ha, 2158.12 and 1509.8 hectare.

### 2.301 Areas (ha) of micro watershed/ panchayat (village wise) under different land use systems

Name of Panchayat	Total land	Un Irrigated land	Irrigated land	Agri.	Horti.	Veg.	Fellow	Barren	Pasture	Ghasni	Forest	Reagerv forest	Other
Mouda	825	825	-	136	5	-	-	24	594	43	-	-	23
Nadal	1349	102.24	-	24	0.44	-	170	21.4	229.56	99.17	249	410	146.2
Bhuned	1265	5.6	41.5	26.8	1.22	0.376	-	23.84	292	29.9	409	350	131.5
Kanged	716	123.2	7.28	3	5	-	-	-	-	44.69	9.12	-	654.1
Simini	576	100.14	.22	99.39	0.73	0.31	0.19	48.79	318.68	17.02	46	-	45
Wangle	461	130	26	99	3	3	1	39	224	9	71	-	12
Ohara	724	104	22	114	-	1	-	23	229	19	4	-	334
Thakri Matti	435	116.56	1.168	118.2	6.54	-	-	-	252	5	-	-	53
Karwal	367	367	-	52	-	-	9	-	13	6	74	100	13
Bhajotra	1544	1544	-	147	4	-	-	35	1252	42	30	-	34
Seri	571	565	6	40	7	109	20	39	146	57	53	100	-
Manjhli	340	98	4	102	2	-	-	17	44	39	51	50	35
Drekadi	301	301	-	82	7	-	51	13	65	19	4	48	12
Ligga	353	353	-	103	7	-	-	19	174	33	-	-	17
<b>Total</b>	<b>9827</b>	<b>4734.74</b>	<b>108.168</b>	<b>1146.39</b>	<b>48.93</b>	<b>113.686</b>	<b>251.19</b>	<b>303.03</b>	<b>3833.24</b>	<b>462.78</b>	<b>1100.12</b>	<b>1058.9</b>	<b>1509.8</b>

*Source: Revenue department*

## 2.302 Status of Livestock

The animal rearing is the integrated part of farming system in the watershed area. The major animals are cows (local and improved), buffaloes, sheep, goats etc. The peoples are facing acute problem and shortage of fodder and drinking water for their animals during the stress period. The details of livestock reared by the people in panchayat are given below:

### 2.302a Livestock population (ward wise) including Number of milch and dry cows (Local and improved) and Buffaloes

Name of Panchayat	Local cow			Improved cow			Buffaloes			Bullock	Calf	Goat	sheep	Poultry	Mule	Grand Total
	Milch	Dry	Total	Milch	Dry	Total	Milch	Dry	Total							
Mouda	302	103	405	23	2	25	164	46	210	400	255	692	615	210		2812
Nadal	380	100	480	-	-	-	198	32	230	530	185	1010	790	-	8	3233
Bhuned	305	95	400	10	-	10	166	39	205	320	172	1450	1130	30	15	3732
Kanged	258	52	310	8	-	8	158	57	215	582	216	560	460	160	16	2527
Simini	280	82	362	5	3	8	85	30	115	510	230	650	527	-	-	2402
Wangle	163	131	294	27	9	36	12	8	20	202	143	335	160	-	-	1190
Ohara	290	123	413	3	-	3	91	56	147	548	165	840	495	-	-	2611
Thakri Matti	310	80	390	2	3	5	196	54	250	385	290	109	185	70	-	1684
Karwal	150	100	250	-	-	-	18	7	25	140	85	550	270	50	10	1380
Bhajotra	232	113	345	-	-	-	54	37	91	360	125	230	265	-	-	1416
Seri	270	78	348	41	24	65	18	6	24	500	320	259	255	-	-	1771
Manjhli	165	55	220	140	65	205	7	5	12	250	252	260	145	-	-	1344
Drekadi	332	118	450	40	20	60	21	3	24	265	410	660	490	-	-	2359
Ligga	162	79	241	65	41	106	3	4	7	230	215	325	260	-	-	1384
<b>Total</b>	<b>3599</b>	<b>1309</b>	<b>4908</b>	<b>364</b>	<b>167</b>	<b>531</b>	<b>1191</b>	<b>384</b>	<b>1575</b>	<b>5222</b>	<b>3063</b>	<b>7930</b>	<b>6047</b>	<b>520</b>	<b>49</b>	<b>29845</b>

Source: RC, NAEB

### 3.0 SWOT ANALYSES

A critical analysis of strengths, weaknesses, opportunities and threats (SWOT) of any region is a good analysis for developing strategies /programmes as it provides valuable insights on potentials, constraints, opportunities and threats based on the primary, secondary and technical data a detailed analysis of SWOT is carried out.

#### 3.1 Strengths of the watershed area

- Road infrastructure is available in some Panchayats.
- Agriculture is the main cash crop
- Nearest market is available at Chamba, Sundla
- People are well versed with animal husbandry.
- Farmers are innovative and ready to adopt new technologies.

#### 3.2 Weaknesses

- Area is rainfed.
- Soil erosion in the cropped area.
- Unconsolidated land holding
- Unconsolidated land holding
- Scarcity of fodder.
- Hailstorm prone area.
- The pasture land/ grazing land are shrinking.
- Unequal distribution of available water for irrigation.

#### 3.3 Opportunities

- Introduction of organic farming
- Roof water harvesting
- Training to the farmers on horticulture, vegetable and dairy management.
- Revival of Mahila Mandals and SHGs which are dysfunctional presently.
- Installation of vegetable collection centre at ward/panchayat level
- Introduction of crossbred animals

#### 3.4 Threats

- Available land for agriculture is declining Due to the land sliding.
- Soil erosion in the sloppy lands.
- Wild animal/stay cattle are the major threat of the area.
- Unscientific farming practices.
- Deforestation
- Declining of the traditional artisans.
- Social distress.
- Declining of fodder sources.

## 4.0 ENTRY POINT ACTIVITIES

Entry point activities play a very important role in the rural area to orient the local community members towards thrift and credit activities of the project. Success of government initiated program largely depends upon the preference given to the entry point activities suggested under the program. Main objective of entry point activities is to increase social mobilization and people participation and collectiveness in various developmental activities initiated by the government. The money earmarked for entry point activities is 4 per cent of total budget outlay and the amount provided under this component play a indispensable role of community involvement in different activities. Proposed for project implementation. The entry point activity attracts the people participation of local community for social mobilization under one platform.

Need base and priority driven entry point activities suggested by farmers during PRA and transit walk exercise are as given below.

### 4.1 Entry point activities suggested at different locations of watershed

Name of Panchayat	Activity	Location	No. of structure	Amount (₹)	Purpose
Mouda	Kuhal with tank	Japanu	1	300000	Irrigation
	Irrigation tank	Mouda	1	145000	Irrigation
	Kuhal	Jhor	1	50000	Irrigation
Nadal	Check dam	Madhet Nala	1	290000	Check dam
	Kuhal	Sala	1	172000	Irrigation
	Kaccha Talab	Kiyani	1	80000	Animal drinking & recharge resources
	Kaccha Talab	Balnu	1	80000	Animal drinking
	Kaccha Talab	Balach	1	80000	Animal drinking
Bhunad	Check dam	Bhaned Nala	1	250000	Check dam
	Kuhal	Bhaned Nala to Bhaned	1	100000	Irrigation
	Kuhal	Thal	1	97000	Irrigation
Kanged	Kuhal	Sira to Vasa	1	139600	Irrigation
	Check dam	Tikkri Nala	1	100000	Check dam
	Kuhal rep.	Tikkri	1	70000	Irrigation
	Check dam	Kothi	1	120000	Check dam
Simini	Kaccha talab	Drabla	1	80000	Animal drinking
	Kaccha talab	Chamoh	1	62600	Animal drinking
	Check dam	Simini	1	200000	Check dam
Wangal	Check dam	Badyudi	1	106600	Check dam



	Kaccha talab	Kunardi	1	30000	Animal drinking
	Check dam	Drol Nali	1	80000	Check dam
	Check dam	Wangal	1	60000	Check dam
Ohra	Kuhali	Katlu Nala to Gagal Koli	1	258000	Irrigation
Thakri Matti	Check dam	Tiyari vill.	1	90000	Check dam
	Check dam	Salotu	1	91000	Check dam
	Kaccha tank	Janna	1	80000	Animal drinking
Karwal	Kaccha talab	Baga	1	80000	Animal drinking
	Kaccha talab	Mori Yalu	1	50000	Animal drinking
	Check dam	Nagali	1	90200	Check dam
Bhajotra	Check dam	Gatta Nala	1	200000	Check dam
	WST	Kakhlun	1	76800	Irrigation
	Check dam	Chhen Nala	1	200000	Check dam
	Check dam	Debhala	1	200000	Check dam
	Kuhali	Sagoti -1	1	150000	Irrigation
Seri	Kuhali	Badi	1	70000	Irrigation
	Kuhali	Pantah	1	70000	Irrigation
	Kuhali	Mandlei	1	70000	Irrigation
	WST	Bagotu	1	65000	Irrigation
	Kuhali	Gheka	1	67600	Irrigation
Manjhli	Kaccha talab	Manjhli	1	84000	Animal drinking
	Kaccha talab	Sindi	1	70000	Animal drinking
	Check dam	Koond	1	50000	Check dam
Drekadi	Kuhali	Drekadi	1	100000	Irrigation
	Kuhali	Shalogu	1	80600	Irrigation
Ligga	Check dam	Chau Nala	1	110000	Check dam
	Check dam	Ka Suni Nala	1	100000	Check dam
<b>Total</b>			<b>46</b>	<b>51,96,000</b>	

## 5.0 CAPACITY BUILDING

To implement watershed activities more effectively skill development and capacity building at the various level ie. Panchayat /micro watershed level, block level and district level is prerequisite condition before initiating the implementation of the project. The activities proposed are given below:

### 5.1 Modules

#### 5.1a Awareness Camps

- Will be organized at Panchayat level

#### 5.1b Training:

Training will be organized at

- Block level
- DRDA level
- Institutional level

#### 5.1c Exposure Visits:

- Exposure visits will be conducted at University/ Institutions /Field

#### 5.1d Special Trainings will be organized in the professional institutes

#### 5.101 Activities with number of participants

#### 5.101a: Target groups and location of program

Target group	No. of participants	Activity	Location	Duration (days)	No. of training	Budget
Member of Gram Shabha Panchayat secretaries and progressive farmers	All 50 to 60 person	Awareness camps on watershed management	Panchayat level	1	17	340000
PRI, Pradhan ward members & Secretary	10 -20 person	Training and wxposure visit on watershed management	Block level/ Instutional/Univ ersity	3-5	17	749000
Self Help Groups, User Groups and Beneficiary groups	1 to 14 panchayats	Agriculture and Horticulture	Institutional/ Training/ Specialized training	3-5	36	2717500
Self Help Groups User Groups WDT, PIA and exposure visit	1 to 14 Panchayats (max.)15 person	Exposure visit professional institutional field	State /Outside State	3-5	16	855000
Self Help	1 to 14	Kissan Melas/	State/Outside	3-5	20	685000

Groups, User Groups exposure visit	panchayats (max.)15 person	Pradashanis	State			
PIAs, WDTs members	300-350 person	Project implementation and management trainings, report writing and accounts maintenance	Professional institutes/ University (State Outside State)	3-5	16	665000
Miscellaneous/ Expert visit		Expert visits/services and Misc.	Professional institutes/ University (State Outside State)	3-5	-	483500
<b>Total</b>					<b>122</b>	<b>64,95,000</b>

The capacity building of farmers and youth in the watershed areas can also be done under the micro enterprises and livelihood through Industrial Training Institute (ITI) occupation/trades as well as other entrepreneurs programme which provide self-employment or wage employment within the watershed areas.

## 6.0 Land Development for Sub activity

Land Development is a basic tool for raising of fuel and fodder plantation and Hybrid grasses for sowing healthy species and land for this purpose have been selected during peoples participatory appraisal exercise with the local community. The land comprises of hill steep slopes having mixed layers of soil, facing acute problems of massive soil erosion during rainy season. During the field visit the interaction was made with the local people and farmers, it was observed that soil erosion is increasing at a faster rate, due to the degradation of land. On the suggestion of soil science expert some vegetative measure supported with the fuel plantation of fodder species /Hybrid grasses are recommended to check the soil erosion.

### 6.1 Land Development and sub activity (Plantation of fodder trees and improved Seeds of grasses in wards

Name of the Scheme	Area to be treated	Unit cost per	Watershed (₹)	Convergence(₹)	Amount (₹)
Fodder	149 ha	13840	1861780	200380	2062160
Hybrid grasses	145 ha	13840	1740960	265840	2006800
<b>Total</b>	<b>294 ha</b>		<b>36,02,740</b>	<b>4,66,220</b>	<b>40,68,960</b>

### 6.2 Budget form Production system and micro enterprises

Name of Panchayat	Fodder Trees					Grasses					Total Amount ₹
	Area (ha.)	No. of Plants	Unit cost per ha ₹	Watershed ₹	Con.	Area (ha.)	Quantity of seeds (kg)	Rate per Kg(₹)	watershed ₹	Con.	
Mouda	15	16500	13840	104000	103600	21	735	120	145000	145640	498240
Nadal	20	22000	13840	276800	-	10	350	120	138400	-	415200
Bhuned	9	9900	13840	124560	-	6	210	120	83040	-	207600
Kanged	11	12100	13840	147960	4280	6	210	120	83040	-	235280
Simini	13	14300	13840	179920	-	13	455	120	179920	-	359840
Wangle	10	11000	13840	138400	-	7	245	120	96880	-	235280
Ohara	6	6600	13840	-	83040	5	175	120	-	69200	152240
Thakri Matti	7	7700	13840	96880	-	7	245	120	96880	-	193760
Karwal	5	5500	13840	59740	9460	3	105	120	40000	1520	110720
Bhajoktra	30	33000	13840	415200	-	42	1470	120	531800	49480	996480
Seri	7	7700	13840	96880	-	6	210	120	83040	-	179920
Manjhli	5	5500	13840	69200	-	5	175	120	69200	-	138400
Drekadi	6	7700	13840	83040	-	8	280	120	110720	-	193760
Ligga	5	5500	13840	69200	-	6	210	120	83040	-	152240
<b>Total</b>	<b>149</b>	<b>1,65,000</b>		<b>18,61,780</b>	<b>2,00,380</b>	<b>145</b>	<b>5,075</b>		<b>17,40,960</b>	<b>2,65,840</b>	<b>40,68,960</b>

Note: Target for 4<sup>th</sup> year

### 6.2 (a) :Variety and rates of fodder species and hybrid grasses Budget form Production system and micro enterprises

Activity /Item	Breed	Area	Rate per ha. (₹)	Total cost (₹)	Beneficiaries share ₹ 10% cash or kind used as WDF	Convergence
Fodder		149	13840	2062160	1861780	200380
Grasses	Napeir, Steria and orchard grass	145	13840	2006800	1740960	265840
<b>Total</b>		<b>294</b>		<b>40,68,960</b>	<b>36,02,740</b>	<b>4,66,220</b>

## 7.0 Vegetative and Engineering structure

In situ-soil conservation under watershed treatment area comprises of hill steep slopes having mixed layers of soil, facing acute problems of massive soil erosion during rainy season. During the field visit the interaction was made with the local people and farmers, it was observed that soil erosion is increasing at a faster rate, due to the following reasons

- Deforestation in the watershed areas
- Construction of roads and dumping of debris along Nala side
- Cutting of bushes and hedges by local people for fuel and fodder purpose
- Lack of physical and biological structures, which facilitate water conservation
- Excessive use of cultivated land for Veg. purpose.

### 7.1 Structures proposed to check massive soil erosion, the following interventions are recommendation and PIA can planning according

- Construction of check dams from top to bottom to minimize the high runoff water during raining season.
- Construction of Gabion Structures to sloppy land sliding area.
- Construction of Continue Contour / trenches to check soil erosion.
- Proper bunding on the cultivated lands by planting grasses and fodder tree
- Biological/vegetative engineering measures along the slope land
- Construction of Gully plugging
- Construction of Loose boarder check dam
- Loose Boulder to check high runoff and stop flooding of fertile soil
- Bank stabilization proposed to be constructed where the massive soil is flooding

### 7.2 various structures are proposed to be constructed at different location for checking soil erosion

Table7.2a: Structure with number of beneficiaries

Activity	Proposed (No)	Size (m)	Unit Cost (₹)	Watershed Budget(₹)	Convergence Budget (₹)	Amount
Loose Boulder	589	2x1.5x1	3600	820800	1299600	2120400
Gabion Structure	686	1x1x1	5500	2134000	1639000	3773000
<b>Total</b>	<b>1275</b>			<b>29,54,800</b>	<b>29,38,600</b>	<b>58,93,400</b>

Note: Target for 3<sup>rd</sup> year

Soil conservation work includes formation of Loose Boulders and other suitable structure to be constructed to conserve the fertile soil and to protect from high runoff. In this micro watershed total 589 Loose Boulder and 686 gabion structure will be constructed which will benefit all families.

**Vegetative Measure:** Various types of trees (Robinia, kenth), Shrubs (Berbris, Ruses) and grasses (Chrysopogon falues, Cynodon dactylon, Napier etc.) can be grown in the areas prone to soil erosion. Fodder gr newly bride groom asses like Napier grass can be used on farm bunds. For demonstration in each panchayat about 10,000 cuttings could be planted/ distributed to farmers.

### **Outcome**

- To minimize the impact of rainfall
- To reduce high velocity of soil erosion
- To improve moisture rention conditions of the area
- To improve soil properties, etc.
- To improve fertility of cultivated soil

## 8.0 WATER HARVESTING

The main sources of irrigation in the gram Panchayat are Percolation tank, roof water, Check Dam, irrigation tanks and water schemes. The most of the cultivated area is rainfed. The existing water resources are drying due to climatic change and deletion of water. The watershed community /people face acute problem of water during stress period, specifically for the irrigation of vegetable crops etc.

### 8.1 (a) Existing and proposed water harvesting structures with storage capacity

Name of structure	No. of structure Existing structure	Capacity in (m <sup>3</sup> )					Project intervention		No. of beneficiaries benefited
		(m <sup>3</sup> )	Repairable No.	(m <sup>3</sup> )	New structure	(m <sup>3</sup> )	Capacity of Existing	New	
Kacha talab	38	1208	3	288	146	14344	-	-	Entire catchment area
Roof water	-	-	-	-	248	4464	-	-	
Tanks	113	1951	5	129	237	7275	-	-	
Kuhals	40	-	3	-	66	-	-	-	
Check dam	-	-	-	-	3	-	-	-	
Poly tank	-	-	-	-	26	768	-	-	-
<b>Total</b>	<b>191</b>	<b>3,159</b>	<b>11</b>	<b>417</b>	<b>726</b>	<b>26,851</b>	-	-	-

## 8.2 Repairable water bodies and construction of New structure with size, capacity and budget of each structure under water harvesting

Sr. No.	Name of structure	Existing structure / repairable and storage capacity (₹)							Construction of New structure storage capacity cost (₹)							Grand total
		No.	Capacity (m <sup>3</sup> )	Unit cost (₹)	Size	Total	Watershed	Convergence	No.	Capacity (m <sup>3</sup> )	Unit cost (₹)	Size m	Total	Watershed	Convergence	
1.	Kaccha talab	38	1208	18350	8x6x2	-	-	-	139	13344	36700	8x6x2	5101300	1615700	3485600	5101300
		-	-	-	-	-	-	-	4	640	62500	10x8x2	250000	250000	-	250000
		-	-	-	-	-	-	-	3	360	46200	10x6x2	138600	-	138600	138600
	Repair	3	288	18350	8x6x2	55050	-	55050	-	0	-	-	-	-	-	55050
2.	Roof water	-	-	-	-	-	-	-	248	4464	68400	3x3x2	16963200	14720840	2242360	16963200
3.	WST (repair)	113	1951	-	-	-	-	-	-	-	-	-	-	-	-	-
		2	80	49200	5x4x2	98400	98400	-	-	-	-	-	-	-	-	98400
		1	19	34200	3x3x2	34200	34200	-	-	-	-	-	-	-	-	34200
		1	24	41400	4x3x2	41400	41400	-	-	-	-	-	-	-	-	41400
		1	16	34240	4x2x2	34240	34240	-	-	-	-	-	-	-	-	34240
		-	-	-	-	-	-	-	155	4600	98400	5x4x2	15252000	14327040	924960	15252000
		-	-	-	-	-	-	-	15	720	126000	6x4x2	1890000	1710000	180000	1890000
		-	-	-	-	-	-	-	26	468	68400	3x3x2	1778400	1778400	-	1778400
		-	-	-	-	-	-	-	34	816	82800	4x3x2	2815200	2401200	414000	2815200
		-	-	-	-	-	-	-	5	480	196800	8x6x2	984000	984000	-	984000
		-	-	-	-	-	-	-	1	128	237600	8x8x2	237600	237600	-	237600
		-	-	-	-	-	-	-	1	63	154000	7x4.5x2	154000	154000	-	154000
4.	Kuhai	40	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Kuhai (rep.)	3	-	300	1264	379160	379160	-	-	-	-	-	-	-	-	379160
		-	-	-	-	-	-	-	66	0	600	35614	21368400	16580860	4787540	21368400
5.	Poly tank	-	-	-	-	-	-	-	9	360	33600	5x4x2	302400	295680	6720	302400
		-	-	-	-	-	-	-	17	408	20160	4x3x2	342720	342720	-	342720
6.	Check dam	-	-	-	-	-	-	-	3	-	115200	7.8x3.45x0.75	345400	230200	115200	345400
	<b>Total</b>	<b>202</b>	<b>3159/417</b>			<b>642450</b>	<b>587400</b>	<b>55050</b>	<b>580</b>	<b>26851</b>			<b>67923220</b>	<b>55628240</b>	<b>12294980</b>	<b>68565670</b>

## 8.1 (II) Total storage capacity and cost through watershed and convergence programme

Particulars	Capacity (m <sup>3</sup> )	Cost (₹)
Watershed	17276	5,62,15,640
Convergence	9575	1,23,50,030
<b>Total</b>	<b>26,851</b>	<b>6,85,65,670</b>



## 8.01 DRINKING WATER

The Panchayat area falls in the rainfed area. Water resources are very limited which has been tapped fully by the local people for drinking and irrigation purposes. In earlier days there were water bodies (Bawaries) from which the people used to take water for drinking purpose. During the field visit and interaction with the local people and transit walk of the watershed area source some of fact regarding drinking water comes up.

- Dried up of the water bawaries due to the climate change.
- Heavy pressure on the existing water bodies due to increase in population.
- Less care of maintenance of water bodies, which is due to the habit of tap water provided at door step provided by the IPH department, lifted from Ravi River.
- Less percolation for the existing Bawaries due to less range and drying up of Johar at the watershed area
- Presently people take the water through taps, which is provided in alternative days.

### 8.02 Availability of water in the panchayat

#### 8.02(a): Availability of water before and project interventions

Sr. No	Particulars	Capacity (lt)	
		Present	After Project intervention
1	Total supply of water per day	876000	1727125
2	Total House holds	4418	4418
3	Total population	22434	22434
4	Water Available per house hold per day	198	390
5	Per capita Availability	39.1	51

### 8.03 Status of Drinking water in different wards of Panchayat

#### 8.03 (a) Existing Structure of water bodies availability on daily and monthly basis

Panchayats	Name of Structure						Availability of water per day from the source	No. of months water available during the year
	Tap/ WST		Hand pump		Bawaries			
	No.	Capacity	No.	Capacity	No.	Capacity		
Mouda	5	42000	3	6000	30	45000	93000	8 month/year
Nadal	5	10000	-	-	53	79500	89500	8 month/year
Bhuned	5	25000	4	8000	11	16500	49500	8 month/year
Kanged	13	75000	6	4500	17	16000	95500	8 month/year
Simini	3	12000	6	6000	17	25500	43500	8 month/year
Wangle	6	32000	3	3000	8	12000	47000	8 month/year
Ohara	7	35000	3	3000	19	28500	66500	8 month/year
Thakri Matti	3	15000	22	22000	24	36000	73000	8 month/year
Karwal	2	5000	-	-	3	4500	9500	8 month/year
Bhajotra	7	70000	-	-	35	35000	105000	8 month/year
Seri	2	10000	13	13000	21	31500	54500	8 month/year
Manjhli	1	5000	16	16000	15	22500	43500	8 month/year
Drekadi	5	25000	6	6000	20	30000	61000	8 month/year
Ligga	1	5000	4	4000	24	36000	45000	8 month/year
<b>Total</b>	<b>65</b>	<b>3,66,000</b>	<b>86</b>	<b>91,500</b>	<b>297</b>	<b>4,18,500</b>	<b>8,76,000</b>	

#### 8.04: Construction/Repair of Drinking water Structure with number and dimensions.

Name of Schemes	Existing Schemes	Size (mt)	Unit Cost ₹	Estimated Budget (₹)
Bawaries	15	-	30000	450000
Tank	1	2x2x2	15260	15260
<b>Grand total</b>	<b>16</b>	<b>-</b>		<b>4,65,260</b>

Note: Target for 3<sup>rd</sup> year

#### 8.04a :Construction/Proposed of Drinking water Structure with number and dimensions.

Name of Schemes	No. of schemes	Size (mt)	Unit Cost ₹	Watershed ₹	Convergence ₹	Total ₹
Bawaries	132		60000	6388000	1532000	7920000
	2		72110	144220	-	144220
	8		30000	240000	-	240000
Tank	5	4x3.5x2	98440	492200	-	492200
	7	3x3x2	82800	579440	-	579440
	14	2.5x2.5x2	68400	629200	328400	957600
	1	2x2.5x1.5	22500	22500	-	22500
	1	1x1x1	10000	10000	-	10000
<b>Grand total</b>	<b>170</b>			<b>85,05,560</b>	<b>18,60,400</b>	<b>1,03,65,960</b>

#### 8.05 Storage capacity and availability of water from existing structures

Sr. No.	Source Collecting structure	No.	Present capacity (lt.) Storage Capacity	Availability of water/day from the source	No. of months water available during the year
1	WST/Tap	65	366000	366000	9-12 month
2	Handpump	151	91500	91500	9-10 Months
3	Bawaries	297	418500	418500	11 Months
	<b>Total</b>	<b>513</b>	<b>8,76,000</b>	<b>8,76,000</b>	

#### 8.06 Proposed activities for increase in the water capacity/ availability through renovation/new construction of structure

##### 8.06(a) Size, location, capacity of structures with beneficiaries

Structure	No. of structure		Repair	Location		capacity (lt)			Total	Benefited families
	Old	New		Old	New	Old	New	After intervention (lt)		
WST/Taps	65	28		As per annexure	366000	508625	874625	874625	4418	
Handpump	151	-			91500	-	91500	91500		
Bawari/Panihara	297	142			418500	310500	729000	729000		
Bawari rep.	-	-	15		-	24000	24000	24000		
Tank rep.	-	-	1		-	8000	8000	8000		
<b>Total</b>	<b>513</b>	<b>170</b>	<b>16</b>			<b>8,76,000</b>	<b>8,51,125</b>	<b>17,27,125</b>		<b>17,27,125</b>

### 8.07 Critical Gaps to be covered (item/activity)

- 1) Regular Supply of drinking water
- 2) Cleanness and colorization of water
- 3) Proper drainage of the catchment area to the pound/Johar
- 4) To sensitization of the community for judicious use of water sources
- 5) After project intervention the fresh and hygienic drinking water will be available to the local community
- 6) Sufficient amount of water can be provided to the beneficiaries within the stress period
- 7) The supplement irrigation facility will provided to the local community
- 8) The livestock will get the water at the door step during stress period
- 9) The water cycle of the project area will improve
- 10) Local hedges and bushes to be planted catchment of the water bodies
- 11) The tradition custom may be revived through worship the specific water bodies to maintain sacredness of the bodies for example the coming up of newly bride groom during local festival which will establish sentimental relation on sustainable basis for the generation to come.

**Table 8.08: Outcome**

Source	Present storage Capacity	Proposed Storage Capacity	Total Storage Capacity	Total Families benefitted	Present Requirement/ Day	Quantity After Intervention (Its)
WST/tap	366000	508625	874625	4418	198	390
Hand pump	91500	-	91500			
Bawaries	418500	310500	729000			
Bawari rep.	-	24000	24000			
Tank rep.	-	8000	8000			
Total	-	-	-			
<b>Total</b>	<b>8,76,000</b>	<b>8,51,125</b>	<b>17,27,125</b>	<b>4,418</b>	<b>198</b>	<b>390</b>

## 9.0 CONVERGENCES

The linkage of the IWMP-V, with the other development programme is also one of the important components. The possibilities of identifying different activities under the IWMP and their association with other activities of different line departments can be explore through convergence. This is the best tool to derive support from different line departments to share their experiences with the farmers and providing funds for the scheme works

The following activities can be converged from one head to another:

- Developmental activities like roads and irrigation facilities can be converged with PMGSY, PWD, IPH and MNREGA programs
- Employment Generation with MNREGA program run by Rural Development Department
- To improve productivity, distribution of improved seeds, fertilizers, insecticides and pesticides can be converged with State Agriculture Department under **Pandit Dindayal Krishi Yojna**
- Construction of poly houses and vegetable Collection Centers at watershed level can be constructed under the Horticulture Technology Mission run by Department of Horticulture
- Income generating activities and micro-enterprises with rural employment program, Prime Minster Employment Generation Program. Self –Employment Schemes etc.
- Dairy development and sheep-goats rearing for the resource less people under **Dudh Ganga Pariyojana** run by the **Animal Husbandry Department**

### 9.01: Activity/ work to be taken other programme/scheme

Sr. No.	Activity /work	No.	Programme /scheme for convergence	Agency/ Deptt	Budget contribution(₹)		
					Watershed ₹	Convergence ₹	Total ₹
1.	Kaccha Talab/ farm pond		MNREGA	RD	624800	3679250	4304050
2.	Check dam		MNREGA	RD	-	115200	115200
3.	Roof water		MNREGA	RD	3571640	2242360	5814000
4.	WST		MNREGA	RD	5966640	1518960	7485600
5.	Poly tank				26880	6720	33600
6.	Kuhali		MNREGA	RD	11053380	4787540	15840920
7.	Bawari/ Drinking tank		MNREGA	RD	2090000	1860400	3950400
8.	Gabion structure		MNREGA	RD	-	1639000	1639000
9.	Loose boulder		MNREGA	RD	-	1299600	1299600
10.	Land development & raising fodder		MNREGA	RD	311700	200380	512080
11.	Grasses		MNREGA	RD	716800	265840	982640
12.	Vermicompost		MNREGA	RD		77000	77000
13.	Fruit plants		MNREGA		566000	93800	659800
14.	Poultry		Animal Husbandry		-	10000	10000
15.	Mushroom				-	60000	60000
	<b>Total</b>				<b>2,49,27,840</b>	<b>1,78,56,050</b>	<b>4,27,83,890</b>

## **10.0 LIVELIHOOD ACTIVITY**

Income generating activity reported in the watershed areas are carpentry, masonry, and weavers, embroidery, black smith poultry, sheep and goats rearing, pattal and basket making etc. These income generating activities can transform the rural poor, if they have given more opportunities in the form of trainings, equipments and machine etc. cutting and tailoring, pickle making, jam, jelly, candy and juices making can be other options for rural women to improve their socio-economic conditions.

The skills of local artisans can be improved by providing more opportunities at their door steps. Keeping in view the above mentioned facts, the following activities will be taken up under watershed program for innovative farmers. The provision for training programme for the tradition rural artisan have been provided with in training budget to develop their capacity building.

### **10.101 Income enhancement and employment generation through different income generating activities**

#### **10.101a Number of households with activities and income, The list of beneficiaries selected during the PRA exercise attached.**

<b>S. No</b>	<b>Activity</b>	<b>Existing No. of household</b>	<b>Proposed No. of household</b>
1	Carpentry	25	15(group)
2	Masonry	18	10(group)
3	C & T Embroidery	50	23(group)
4	Black Smith	15	4(group)
5	Weaver	3	3(group)
6	Doona pattal	-	10(group)
7	Poultry	3	1(group)
8	Mule rearing	20	7(group)
9	Goat/Sheep	12	3(group)
10	Cobbler	1	1(group)
11	PHT	-	1(group)
12	Welding	1	1(group)
13	Khaddi	1	1(group)
14	Basket making	1	3(group)
	<b>Total</b>		<b>83(group)</b>

## 10.102 Livelihood Plan For Landless/Asset less (9% Budget)

As per the provision provided in the common Guideline for livelihood, 2008

Name of Block: Salooni

Livelihood budget (9%): ₹ 1,16,91,000

- i. Revolving funds (SHG/Individuals) (76.9%): ₹ 86,74,000
- ii. Grant –in – aid (SHGs/SHG Federations) (23.1%): ₹ 30,17,000

Need base planning under livelihood activities for landless /asset less beneficiaries of watershed area by PIA

Sr. No	Activity	No. of Beneficiaries	Total Project cost to be decided by PIA on the basis application	Watershed Project funds ₹ Grant in aid ₹
1.	Carpentry	15(group)	Micro enterprise component Revolving fund for individual beneficiaries should be maximum ₹5000/- and ₹ 25,000/- for SHGs. GIA should be maximum 24,000 (30,000-6000) for General beneficiaries and ₹27,000(30,000-3000) for SC/ST beneficiaries. GIA for SHGs/ SHG Federation should be 50% of the Project Cost or maximum of ₹ 2.00lacs.	450000
2.	Masonry	10(group)		280000
3.	C & T Embroidery	23(group)		850000
4.	Black Smith	4(group)		70000
5.	Weaver	3(group)		65000
6.	Doona pattal	10(group)		250000
7.	Poultry	1(group)		30000
8.	Mule rearing	7(group)		710000
9.	Basket making	3(group)		70000
10.	Khaddi	1(group)		20000
11.	Welding	1(group)		20000
12.	Goat/Sheep	1(group)		152000
13.	Cobbler	1(group)		20000
14.	PHT	3(group)		30000
	<b>Total</b>	<b>83 (group)</b>		<b>3017000</b>
	Revolving fund			8674000
	<b>Grand total</b>			<b>1,16,91,000</b>

**Note:** it has been decided in the convergence meeting of the District resource group on dated 4-02 -12, the need based proposal of different activities to be undertaken by the beneficiaries, the application on the merit and ranking of the each case will be decided by the programme implementing agency on uniform basis.. The priority and preferences of each case for financial assistance will be decided by the gram sabha. The application/project proposal received from the beneficiaries of landless/ assetsless under different activities are attached. The need based planning of this project will be prepared by the PIA based on the capacity of the groups and merit and ranking of the each case. The ceiling of the grant in aid to be provided for basic tools to the beneficiaries of different has been recommended by the district resource group.

**10.102 (a) Livelihood Plan For Landless/Asset less (9% Budget)**

Name of the panchayat	Carpenter		Masonry		Black smith		Welding		Weaver		Cobbler		Doona Pattal making		Khaddi		Mule rearing		C&T/ Embroidery		Goatry		Basket making		Poultry		P.H.T		Revolving fund (₹)	Grand Total		
	Total no.	Cost(₹)	Total no.	Cost(₹)	Total no.	Cost(₹)	Total no.	Cost(₹)	Total no.	Cost(₹)	Total no.	Cost(₹)	Total no.	Cost(₹)	Total no.	Cost(₹)	Total no.	Cost(₹)	Total no.	Cost(₹)	Total no.	Cost(₹)	Total no.	Cost(₹)	Total no.	Cost(₹)	Total no.	Cost(₹)		Total no.	Cost(₹)	
Mouda	2	50000	1	25000	1	15000	1	20000			1	20000		-	-	-	1	50000	-	-	3	152000		-	-	-	-	-	-	781750	-	1113750
Nadal	1	40000	-	-		-	-	-			-	-		-	-	-	3	360000	2	50000	-	-	1	20000	-	-	-	-	-	1109500	-	1579500
Bhuned	1	25000	3	120000		-	-	-			-	-	1	25000	-	-	1	100000	1	25000	-	-	-	-	-	-	-	-	710750	-	1005750	
Kanged	1	50000		-	-	-	-	-	1	25000	-	-	3	75000	-	-	1	100000	1	25000	-	-	-	-	-	-	-	-	691600	-	966600	
Simini	1	25000	1	20000	-	-	-	-	-	-	-	-	1	25000	1	15000	-	-	3	145000	-	-	-	-	-	-	-	-	535850	-	770850	
Wangle	1	20000		-	1	25000	-	-	-	-	-	-	-	-	-	-	-	3	140000	-	-	-	-	-	-	-	-	437350	-	622350		
Ohara	-	-	-	-	-	-	-	-	-	-	-	-	3	75000	-	-	-	-	-	-	-	-	2	50000	1	30000	-	-	425500	-	580500	
Thakri Matti	1	25000	1	15000	1	15000	-	-			-	-	-	-	-	-	-	2	90000	-	-	-	-	-	-	1	30000	412250	-	587250		
Karwal	2	90000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	405450	-	495450		
Bhajotra	1	40000	-	-		-	-	-	1	25000	-	-	-	-	-	-	1	100000	1	20000	-	-	-	-	-	-	-	-	1675300	-	1860300	
Seri	1	15000	1	30000	1	15000	-	-	-	-	-	-	-	-	-	-	-	4	165000	-	-	-	-	-	-	-	-	545850	-	770850		
Manjhli	1	25000	1	20000	-	-	-	-	-	-	-	-	1	25000	-	-	-	-	2	65000	-	-	-	-	-	-	-	324000	-	459000		
Drekadi	1	30000	1	25000		-	-	-	-	-	-	-	-	-	-	-	-	2	65000	-	-	-	-	-	-	-	-	286350	-	406350		
Ligga	1	15000	1	25000	-	-	-	-	1	15000	-	-	1	25000	-	-	-	-	2	60000	-	-	-	-	-	-	-	332500	-	472500		
<b>Total</b>	<b>15</b>	<b>450000</b>	<b>10</b>	<b>280000</b>	<b>4</b>	<b>70000</b>	<b>1</b>	<b>20000</b>	<b>3</b>	<b>65000</b>	<b>1</b>	<b>20000</b>	<b>10</b>	<b>250000</b>	<b>1</b>	<b>10000</b>	<b>7</b>	<b>710000</b>	<b>23</b>	<b>850000</b>	<b>3</b>	<b>152000</b>	<b>3</b>	<b>70000</b>	<b>1</b>	<b>30000</b>	<b>1</b>	<b>30000</b>	<b>8674000</b>	<b>-</b>	<b>11691000</b>	

## 11.0 PRODUCTION SYSTEM & MICRO ENTERPRISES

The land resource is the primary and major source of livelihood activities in the watershed area. These natural resources can be used properly by adopting integrated farming system to get more return per unit space per unit time. Area is suitable for the cultivation of apple, pear, pomegranate and walnut. These fruits plants can be integrated with agriculture and animal's husbandry to increase the productivity of land. The shortage of fodder leads farmers to rear only local breeds of animals that are too for self consumption of milk and farm yard manure. This shortage of fodder can be overcome by introducing multipurpose tree species. Other option of livelihood is the revival of rural artisans and for this best options with the rural artisans are carpenter, masonry, weaving, crafting and shoe making. The rural poor can earn good amount of money from these professions. These are some of important income generating activities need to be introduced in the watershed area. There is a dire need to aware, motivate and trained the local poor artisans. These artisans should be provided with equipments to earn their livelihood and to improve their socio economic conditions.

### 11.101 Income enhancement and employment generation through different income generating activities

11.101a : Number of households with activities and income, The list of beneficiaries selected during the PRA exercise attached.

S. No	Activity	Existing No. of household	Proposed No of household
1	Agriculture seed	Whole Panchayat	Whole Panchayat
2	Vermicompost		Eight Panchayat
3	Goatry	110	253
4	Dairy	-	32
5	Fodder	-	Whole Panchayat
6	Grasses	-	Whole Panchayat
7	Fruit plants	35	Whole Panchayat
8	Vegetable seed	Whole Panchayat	Whole Panchayat
9	Poultry	8	24
10	Bee keeping	2	9
11	Fishery	-	1
12	PHT	-	1
13	Span	-	1 Panchayat
14	Mushroom	-	4
15	Vegetable collection centre	-	1
16	Insecticide/Pesticide/Granule	-	7 Panchayat
17	Miscellaneous	-	7 Panchayat



**Production System and Micro- Enterprises (10% Budget)**

**Name of Watershed IWMP-V**

**Production budget (10%) ₹ 1,29,90,000**

**11.101a: Income enhancement and employment generation through different income generating activities**

Name of the panchayats	Agriculture		Vermin compost		Goatry		Dairy		Fodder		Grasses		Poultry		Bee-keeping	
	Total no.	Cost (₹)	Total no.	Cost (₹)	Total no.	Cost (₹)	Total no.	Cost (₹)	No. of plants	Cost (₹)	Qnt. in kg	Cost (₹)	Total no.	Cost (₹)	Total no.	Cost (₹)
Mouda	427	26810	11(w)+ 1(Co.)	77000 (W)+ 7000 (Co.)	-	-	5	90000	15	165000	21	88200	6	30000	2	10000
Nadal	5187	298290	12	84000	33	330000	4	100000	20	220000	10	42000	3	24000	-	-
Bhuned	1465	77280	10	70000	2	30000	6	150000	9	99000	6	25200	-	-	-	-
Kanged	912	55380	11	77000	3	30000	2	50000	11	121000	6	25200	2	16000	-	-
Simini	2820	154800	-	-	27	243000	-	-	13	143000	13	54600	2	10000	-	-
Wangle	1675	89250	-	-	42	378000	-	-	10	110000	7	29400	1	5000	-	-
Ohara	1086	69640	8	56000	9	81000	5	100000	6	66000	5	21000	-	-	-	-
Thakri Matti	2670	151500	5	35000	22	198000	-	-	7	77000	7	29400	1	10000(c)	-	-
Karwal	1234	89560	-	-	3	27000	-	-	5	55000	3	12600	-	-	-	-
Bhajotra	840	66000	-	-	13	130000	-	-	30	330000	42	176400	2	20000	-	-
Seri	1140	62100	-	-	40	360000	-	-	7	77000	6	25200	3	15000	-	-
Manjhli	1670	88500	-	-	25	225000	-	-	5	55000	5	21000	2	10000	-	-
Drekadi	2358	128880	-	-	9	81000	-	-	6	66000	8	33600	-	-	-	-
Ligga	1535	83250	-	-	25	225000	-	-	5	55000	6	25200	2	10000	-	-
<b>Total</b>	<b>25,019</b>	<b>14,41,240</b>	<b>73 +1 =74</b>	<b>4,41,000 +77,000 =5,18,000</b>	<b>253</b>	<b>23,38,000</b>	<b>32</b>	<b>7,35,000</b>	<b>149</b>	<b>16,39,000</b>	<b>145</b>	<b>6,09,000</b>	<b>4</b>	<b>1,50,000</b>	<b>9</b>	<b>45,000</b>

### 11.101b: Income enhancement and employment generation through different income generating activities

Name of the panchayats	Fruit plants		Vegetable seeds		Insecticide/ Miscellaneous		Fishery		PHT		Span		Mushroom dem.		Vegetable collection centre		Total cost (₹)
	Total no.	Cost(₹)	Total no.	Cost (₹)	Total no.	Cost (₹)	Total no.	Cost (₹)	Total no.	Cost (₹)	Total no.	Cost (₹)	Total no.	Cost (₹)	Total no.	Cost (₹)	
Mouda	15720	566000 (w) +62800 (c)	1305.46	199300	-	5190	-	-	-	-	-	-	1	50000	-	-	1187500(w) 139800 (c)
Nadal	9900	264000	4266.8	345700	-	47010	-	-	-	-	-	-	-	-	-	-	1755000
Bhuned	5400	135000	955.41	94050	-	124970	-	-	-	-	-	-	-	-	-	-	1117500
Kanged	12150	303750	3241.98	358980	-	11690	-	-	1	25000	-	-	-	-	-	-	1074000
Simini	6285	157125	102.7	73500	1.1 lt	475	1	10000	-	-	-	-	-	-	-	-	856500
Wangle	2010	50250	50.22	27700	4.6 lt	1900	-	-	-	-	-	-	-	-	-	-	691500
Ohara	5180	129500	1080.63	118210	-	3650	-	-	-	-	-	-	-	-	-	-	645000
Thakri Matti	5210+1188	130250+31000 (W+C)	50.22	27700	8.9	3650	-	-	-	-	-	-	3	60000(c)	-	-	652500+101000
Karwal	2640	99000	2913.33	203080	-	9260	-	-	-	-	-	-	-	-	-	-	550500
Bhajotra	8460	310200	4401.24	288800	-	143600	-	-	-	-	1	300000	-	-	-	-	2067000
Seri	4850	121250	292.02	194300	4 lt	1650	-	-	-	-	-	-	-	-	-	-	856500
Manjhli	3070	76750	49.28	31900	4.5	1850	-	-	-	-	-	-	-	-	-	-	510000
Drekadi	2430	91125	36.24	25400	1.2	495	-	-	-	-	-	-	-	-	-	-	451500
Ligga	2520	94500	32.27	25650	13.4	6400	-	-	-	-	-	-	-	-	-	-	525000
<b>Total</b>	<b>87,013</b>	<b>2528700(w) +93800(c) =2622500</b>	<b>18778 kg</b>	<b>20,14,270</b>	<b>37.5</b>	<b>3,61,790</b>	<b>1</b>	<b>10,000</b>	<b>1</b>	<b>25,000</b>	<b>1</b>	<b>3,00,000</b>	<b>4</b>	<b>50,000+60000 =110000(w+c)</b>	<b>1</b>	<b>3,12,000</b>	<b>1299000+240800 = 13230800 (w+C)</b>

**Note:- (W)- Watershed & (C)- Convergence**

The proposal/ applications under production system and micro enterprises have been received/procured from the beneficiaries during the course of participatory Rural appraisal exercise (PRA) of watershed treatment area to undertake different activities individually / SHGs are attached and the need based planning of these project will be prepared by the PIA based on the capacity of the groups and merit and ranking of the each case. The priority and preferences of each case for financial assistance will be decided by the gram sabha.

## 11.1 AGRICULTURE

The main stay of the farmers of watershed catchment area is agricultural crops grown such as wheat, maize, among cereal crops Rajmash and Mash among pulses. The productivity of crop was observed very low due to rainfed condition and texture and structure of soil is rough. This can be increased through supplementary irrigation facilities and adoption of latest technology for conservation of fertile soil. The ridge to valley method is to be adopted for water management

### 11.101(a) Prevalent Farming System under Agriculture

1. Agriculture (Maize/ pulses + Wheat/mustard)
2. Agriculture + Animal Rearing
3. Agriculture + Horticulture (fruit crops+ Vegetables) + Animal Rearing
4. Agriculture + Labour + Rural Artisans

### 11.102b Present status of Agriculture Crops and Proposed interventions:

#### 11.101c Cereals Crops

**Crops grown** : Maize and wheat

**Total Productions** :16640 qt (based on PRA exercise)

**On the demand of the farmer the following activities under Agriculture is proposed**

Status	Particulars	Maize	Wheat	Barley
<b>Existing</b>	Area under cultivation	9380 Bigha	6132 Bigha	692 Bigha
	Production	9970 qt	6122 qt	.548 qt
	Productivity	1.062 qt/ bigha	0.99 q/ bigha	0.79 q/ bigha
	Variety	Local, Pioneer	Madurai S-308 Sonalika and local	Local
	Technology	Kera method	Broad casting	Broad casting
<b>Proposed</b>	Increase in area	556 bigha	368 bighas	89.6 bighas
	Variety	Proline, pioneer	Kalyan, S-308 Sonalika and local	Kalyan, S-308 Sonalika and local
	Seed Quantity required by beneficiary group	29808Kg	97500 kg	11724 kg

*Source: Household survey, Regional Centre, NAEB, UHF, 2012*

#### 11.101d Pulses

**Crops grown** : Rajmash, Sarson, Urad, Kulth, Soyabeen

**Total Productions** : 1577.5 qt (based on PRA exercise)

Status	Particulars	Rajmash	Sarson	Urad	Kulth	Soyabeen
<b>Existing</b>	Area under cultivation	455 bigha (Intercropping with maize)	2565 Bigha (Intercropping with maize)	150 Bigha (Intercropping with maize)	25 Bigha (Intercropping with maize)	10 Bigha (Intercropping with maize)
	Production	199.5 Q.	1282.5 Q.	84 Q.	8.5 Q.	3 Q.
	Productivity	0.43	0.50 kg/	0.56 kg/	0.35 kg/	30 kg/ bigha

	ty	kg/bigha	bigha	bigha	bigha	
	Variety	Local	Local	Local	Local	Local
	Technology	Line method	Line method	Line method	Line method	Line method
<b>Proposed</b>	Increase in area	75 bigha	1470 Bigha	31.25 Bigha	25 Bigha	5 Bigha
	Variety	Red capsule	Red capsule	Red capsule	Red capsule	Red capsule
	Seed Quantity required by beneficiary group	5300 kg	4035 Kg	725 Kg	200 Kg	120 Kg

Source: Household survey, Regional Centre, NAEB, UHF, 2012

#### 11.101 e Requirement of improved seed under different crops

Particulars	Quantity ( kg)	Project contribution with 10% & 20% Seed replacement rate (Kg)	Market rate per kg (₹)	Estimated Budget (₹)
<b>Cereals</b>				
Maize	29808	5062	60	303720
Wheat	97500	15601	50	780050
Barley	11724	2357	50	117850
Rajmash	5300	1060	10	106000
Urad	745	145	120	17400
Kulth	200	40	120	4800
Sarson	4035	730	150	109500
Soyabean	120	24	80	1920
<b>Total</b>	<b>1,49,432</b>	<b>25,019</b>		<b>14,41,240</b>

Note: target for 3<sup>rd</sup> and 4<sup>th</sup> year

- Lack of irrigation facilities.
- Lack of scientific agricultural practices.
- Timely unavailability of seeds, fertilizers and chemicals for insect-pest management.
- Improved seed varieties not adequately used.

#### 11.101 g Marketing

- Agriculture produced are not sold in the market used only for self consumption

#### 11.101 h Project Interventions

##### a) Introduction of improved seed

Improved seed of maize, wheat and pulses will be introduced as demonstration units & 74 unit of vermicompost will be introduced as demonstration

Name of Panchayats	No. of beneficiaries	Dimension (m)	Unit cost seed cost	No. of unit	Budget (₹)	Convergence (₹)	Watershed (₹)
Mouda	Whole Panchayat	3x1.80x0.45	7000	12	84000	77000	7000
Nadal	Whole Panchayat	3x1.80x0.45	7000	12	84000	-	84000
Bhuned	Whole Panchayat	3x1.80x0.45	7000	10	70000	-	70000
Kanged	Whole Panchayat	3x1.80x0.45	7000	11	77000	-	77000
Ohara	Whole Panchayat	3x1.80x0.45	7000	8	56000	-	56000
Thakri Matti	Whole Panchayat	3x1.80x0.45	7000	5	35000	-	35000
Karwal	Whole Panchayat	3x1.80x0.45	7000	05	35000	-	35000
Bhajoktra	Whole Panchayat	3x1.80x0.45	7000	11	77000	-	77000
<b>Total</b>				<b>74</b>	<b>5,18,000</b>	<b>77,000</b>	<b>4,41,000</b>

**b) Human Resource Development (HRD)/ Capacity Building and training in Agriculture**

- Training on cultivation practices of various agriculture crops.
- Training on insects & pests management.
- Training on vermin composting for organic farming
- Exposure visits and experience sharing outside state progressive farmers

**c) Numbers of trainings / Exposure visits**

- Number of Trainings =1
- Number of Trainees =30 to35
- Duration = 2-3 days

**d) Exposure visit**

- One exposure visit of 30 to 40 farmers

**11.101i Project Impact**

Crops	Existing area	Addition in area	Total area after project interventions	Seed requirement after project intervention (kg)	Unit cost (₹)	Amount (₹)
Maize	9380	556	9936	5062	60	303720
Wheat	6132	368	6500	15601	50	780050
Barley	692	89.6	781.6	2357	50	117850
Sarson (oil seeds)	2565	1470	4035	730	150	109500
Urad	150	31.25	181.25	145	120	17400
Rajmash	455	75	530	1060	100	106000
Kulth	25	25	50	40	120	4800
Soyabeen	10	5	15	24	80	1920
<b>Total</b>	<b>19,409</b>	<b>2619.85</b>	<b>22028.85</b>	<b>25,019</b>		<b>14,41,240</b>

b) Skill development and capacity building of about 25 to 30 farmers from the Panchayat for adoption of latest technology of watershed management

c) Encouragement towards organic farming and improving fertility of soils through vermin compost

## 11.2 HORTICULTURE

The chapter deals with the vegetable crops. among fruits Plum, apricot Pear, peach and walnut etc. are grown. Vegetable is the major cash crop. The watershed area is also cultivated with different types of vegetables. These includes cabbage, beans, capsicum, peas, cauliflower, red chilli etc. the vegetable production is the main farm activity and a good source of employment and income.

### 11.201(a) Prevalent Farming Practices under Horticulture

- Horticulture + vegetables
- Vegetable + Animal rearing
- Vegetable crops(Cabbage+Beans) (Capsicum+Tomato)(Cauliflower +Peas)
- Fruit crop (Lemon + Pear+ Plum + Pomegranate + Apricot )
- Agriculture + Horticulture + Animal rearing.

### 11.201(b) Present status of horticulture crops and proposed interventions:

#### 11.201(c) Fruits

Status	Particular	Mango	Lemon	Apple	Apricot
Existing	Area under cultivation	179 bigha	90 bigha	60 bigha	36 bigha
	Present Production	1790 qt	87 qt	72 qt	206 qt
	Productivity	10 qt	0.96 qt/bigha	1.2 qt/bigha	5.7 qt/bigha
	Variety	Dusheri, Langra	Local	Local	Local
	Technology	Indigenous	Indigenous	Indigenous	Indigenous
Proposed	Increase in area	1236.5 Bigha	636 Bigha	413.4 bigha	270 bigha
	Varieties	Dusheri, Langra	Kegzi lime	Royal Delicious	New casel
	Plants requirement	12365 plants	25440 plants	14475 plants	8100 plants

*10 mixed plant as demonstration*

Status	Particular	Pomegranate	Plum	Galgal	Walnut
Existing	Area under cultivation	Nil	Nil	20 bigha	30 bigha
	Present Production	Nil	Nil	20 qt	60 qt
	Productivity	Nil	Nil	1 qt/bigha	2 qt/bigha
	Variety	Nil	Nil	Local	Local
	Technology	Nil	Nil	Indigenous	Indigenous
Proposed	Increase in area	33 Bigha	343 Bigha	184.5 bigha	582 bigha
	Varieties	Kandhari, Ganesh	Centa Roza	Local	Local
	Plants requirement	1295 plants	10680 plants	7350plants	6120 plants

### 11.201(e): Present status of horticulture crops and proposed interventions:

#### Fruit plants

Name of the panchayat		Area		Lemon		Pomegranate		Apricot		Apple		Mango		Galgal		Walnut		Plum		Total cost (₹)			
		No. of household	Area	No. of Plant	Cost (₹) @ 25/PI	No. of Plant	Cost (₹) @ 25/PI	No. of Plant	Cost (₹) @ 25/PI	No. of Plant	Cost (₹) @ 50/PI	No. of Plant	Cost (₹) @ 25/PI	No. of Plant	Cost (₹) @ 25/PI	No. of Plant	Cost (₹) @ 30/PI	No. of Plant	Cost (₹) @ 30/PI			No. of Plant	Water shed cost (₹)
Mouda	Pro.	393	487	-	-	-	-	-	-	7860	393000	-	-	-	-	-	-	7860	235800	15720	566000	62800	628800
Nadal	Pro.	330	495	3300	82500	-	-	-	-	-	-	-	-	3300	82500	3300	99000	-	-	9900	264000	-	264000
Bhuned	Pro.	270	337.6	2700	67500	-	-	-	-	-	-	2700	67500	-	-	-	-	-	-	5400	135000	-	135000
Kanged	Pro.	405	339	4050	101250	-	-	4050	101250	-	-	-	-	4050	101250	-	-	-	-	12150	303750	-	303750
Simini	Pro.	419	331.4	2095	52375	-	-	2095	52375	-	-	2095	52375	-	-	-	-	-	-	6285	157125	-	157125
Wangle	Pro.	201	125.5	1005	25125	-	-	-	-	-	-	1005	25125	-	-	-	-	-	-	2010	50250	-	50250
Ohara	Pro.	259	142	2590	64750	1295	32375	1295	32375	-	-	-	-	-	-	-	-	-	-	5180	129500	-	129500
Thakri Matti	Pro.	521	325.1	2605	65125	-	-	-	-	-	-	2605	65125	-	-	-	-	-	-	5210	130250	-	130250
Karwal	Pro.	132	75	660	16500	-	-	660	16500	1320	66000	-	-	-	-	-	-	-	-	2640	99000	-	99000
Bhajora	Pro.	282	457	-	-	-	-	-	-	2820	141000	-	-	-	-	2820	84600	2820	84600	8460	310200	-	310200
Seri	Pro.	485	303.05	2425	60625	-	-	-	-	-	-	2425	60625	-	-	-	-	-	-	4850	121250	-	121250
Manjhli	Pro.	307	191.7	1535	38375	-	-	-	-	-	-	1535	38375	-	-	-	-	-	-	3070	76750	-	76750
Drekadi	Pro.	243	64.8	1215	30375	-	-	-	-	1215	60750	-	-	-	-	-	-	-	-	2430	91125	-	91125
Ligga		252	67.2	1260	31500	-	-	-	-	1260	63000	-	-	-	-	-	-	-	-	2520	94500	-	94500
<b>Total</b>		<b>4499</b>	<b>3741.35</b>	<b>25440</b>	<b>636000</b>	<b>1295</b>	<b>32375</b>	<b>8100</b>	<b>202500</b>	<b>14475</b>	<b>723750</b>	<b>12365</b>	<b>309125</b>	<b>7350</b>	<b>183750</b>	<b>6120</b>	<b>183600</b>	<b>10680</b>	<b>320400</b>	<b>85825</b>	<b>2528700</b>	<b>62800</b>	<b>2591500</b>

#### 11.201 (f) Vegetables crops

Status	Vegetable crops	Bean	Peas	Capsicum	Tomato	Cabbage	Potato	Red Chilli	Khira	Cauliflower
Existing	Area under cultivation	430 bigha	597 bigha	240 bigha	485 bigha	115 bigha	390 bigha	20 bigha	35 bigha	8 bigha
	Present Production	1042 qt	1771 qt	300 qt	1990 qt	810 qt	3580 qt	40qt	105 qt	49 qt
	Productivity	2.4qt	2.4 qt	1.6 qt/bigha	4.1 qt	7.1qt/bigha	9.1 qt/bigha	2 qt/bigha	3 qt/bigha	6.5 qt/bigha
	Variety	Falguni	Azad, P-1, Linken	Bharat/dollar	Himsona	Local	Improved	Improved	Improved	Improved
	Technology	Indigenous	Indigenous	Indigenous	Indigenous	Indigenous	Indigenous	Indigenous	Indigenous	Indigenous
Proposed	Increase in area	249 Bighas	288 Bighas	273 Bighas	328 Bighas	84.6	116 bigha	10 bigha	21 bigha	43 bigha
	Variety	Falguni	Azad, P-1, Linken	Bharat/dollar	Himsona	Improved hybrid				
	Total seed requirement	2716 Kg	4425 kg	15390 gm	16260 gm	5990 gm	7599 kg	900 gm	2800 gm	1530 gm

The quantity of plant for each crop has been determined by the total number of plants x Bigha i. e Lemon 40, Pomegranate 40, Apricot 30, Mango 10, Galgal 40, Walnut 10, Apple 35 /bigha and Plum 30/bigha.

### Project impact

Species	Existing area	Additional in area	Total area	Total area after project intervention
<b>Fruits</b>				
Lemon	90	636	726	4499
Pomegranate	0	33	33	
Apricot	36	270	306	
Galgal	20	184.5	204.5	
Mango	179	1236.5	1415.5	
Walnut	30	582	612	
Plum	0	343	343	
Apple	60	413.4	473.4	
<b>Total</b>	<b>415</b>	<b>3698.4</b>	<b>4113.4</b>	<b>4,499</b>

<b>Vegetable</b>				
Cabbage	115	84.6	199.6	4499
Bean	430	249	679	
Peas	597	288	885	
Potato	390	116	506	
Capsicum	240	273	513	
Tomato	485	328	813	
Khira	35	21	56	
Red Chilli	20	10	30	
Cauliflowers	8	43	51	
<b>Total</b>	<b>2320</b>	<b>1412.6</b>	<b>3732.6</b>	

#### 11.201(g) Critical Gaps in Horticulture Production

- Lack of vegetable collection centre
- Lack of sufficient irrigation facilities
- Quality seedling of fruit crop.
- Lack of technical knowledge for cultural operation
- Knowledge about Post Harvesting Technology .
- Lack of value addition.
- Availability of fertilizers
- Lake of post harvesting Management
- Lake of CCA Store to improve shelf life of the produce

#### 11.201(h) Marketing

- Vegetable produced are sold at Chamba & Dalhousie



### 11.201 (i) Project Interventions

- a) Supply of improved varieties of fruit crops seedlings.
- b) Vegetable collection centre.
- c) Training on cultural operations and on value addition.
- d) Farm based enterprises
- e) Irrigation through moisture conservation measures
- f) Drip irrigation Sprinkler
- g) Vegetable seed production area

### 11.201 (j) Community requirement of Improved Vegetable Seed in Project Area

Crops	Seed requirement Quantity (Kg)	Project contribution with 20% & 60%	Seed requirement for two years	Estimated Budget(₹)
Cabbage	5990 g	1670 g	350770 g	58450
Potato	75900 kg	17100 kg	60	1026000
Beans	2716 kg	639 kg	500	319500
Peas	4425 kg	1029 kg	180	185220
Cauliflower	1530	310 g	350110 g	10850
Capsicum	15390 g	3320 g	750110 g	249000
Tomato	16260 g	3630 g	400110 g	145200
Red Chilli	900 g	200 g	350110 g	7000
Khira	2800 g	870 g	150110 g	13050
<b>Total</b>		<b>18778 kg</b>		<b>20,14,270</b>

*Note: Target for 3<sup>d</sup> and 4<sup>th</sup> year*

The quantity of seed for each vegetable crop has been determined by multiplying the seed rate per bigha with the total area cultivated under different crops i.e. Beans (4 kg), Peas (5 kg), Capsicum (30 gm), tomato(20), by number of beneficiaries (list annexure). The project intervention would be replacement of local varieties by improved varieties at 10 per cent replacement rate each year for 2 years. This seed may be given as samples among the beneficiaries for development and demonstration units

### 11.201(k) Impact/Project Outcomes

1. Skill development /capacity building of 40 farmers
2. Conventional Cropping pattern changed. Area under vegetable increased (1412.6 bighas)
3. Mono crop to cash crop
4. Farming systems changed. Areas under fruit crops increased (413.4 bighas)
5. Production of fruit and vegetable enhanced through supplementary irrigation facility
6. Livelihood of 40 more farming families linked with horticulture practice.

### 11.201 (l) Vegetable Collection Centre

Name of Panchayat	Location	No.	Cost (₹)
Bhuand	Bhuand	1	312000

## 11.3 ANIMAL HUSBANDRY

Animal rearing is the secondary thought for livelihood activity after Agriculture. Animals are reared by farmers mainly for milk, FYM, meat as well as for wool. Cows and buffaloes are reared for milk production which is used for self consumption. Milch animals are local as well as improved. Hence milk production is low due to non availability of green fodder and nutrient feeding to the animals.

### 11.301 Milk Production and fodder requirement

Total no. of milch cattle in the watershed area is 5154 and average production of milk per day is 4.47 lt. from buffalo's local cows, 2.9 lt. from cow improved and 6.563 lt. per day from local cow.

#### 11.301(a) Average and Total milk production

Milch cattle	Total Milch	Average milk production lt./day	Total production (lt.)
Buffaloes	1191	4.47	5332
Local cows	3599	2.9	10659
Cows (improved)	364	6.563	2389
<b>Total</b>	<b>5154</b>	<b>13.933</b>	<b>18380</b>

#### 11.301 (b) Fodder availability, requirement and Deficit (tons)

Green fodder available in project area is 109962 tons whereas dry fodder available is 52781 ton. Total 162743 ton fodder is available in project area. But requirement of green fodder is 263908 ton whereas requirement of dry fodder is 131954 ton. Total fodder required is 395862 ton. Deficit of green fodder in project area is 153946 ton and that of dry fodder is 79173 tons.

#### 11.301(b-i) Fodder availability, requirement and Deficit (tons)

Available			Required			Deficit		
Green	Dry	Total	Green	Dry	Total	Green	Dry	Total
109962	52781	<b>162743</b>	263908	131954	<b>395862</b>	153946	79173	<b>233119</b>

**Total Animal :** 24436

**Note** - Available Fodder

**Green** - 25kg/day x 30 days x 6months x Total live stock

**Dry** - 12 kg/day x 30days x 6months x Total live stock

**Required Fodder**

**Green** - 30kg/day x 30days x 12months x Total live stock

**Dry** - 10kg/day x 30days x 12months x Total live stock

#### 11.301(b-ii) Gap between Demand and supply of total Fodder

Supply	162743
Demand	395862
Deficit	233119

### 11.301(c) Project interventions

- Plantation and cultivation of fodder trees and grasses
- Construction of talabs , Johars in grass land and community lands
- Training/Capacity building

a) Plantation and cultivation of fodder trees and grasses

#### Species:

Tree: Morus, Ban, Robinia , Shatoot, Beul. Kachnar

Grasses: Steria, Berseem, Orchard, Napier etc.

### 11.301(c-i): Budget form Production system and micro enterprises

Name of Panchayat	Fodder Trees				Grasses				Total budget ₹
	Area (ha.)	No. of Plants	Unit cost/ plants ₹	Budget ₹	Area (ha.)	Quantity of seeds (kg)	Unit cost/ ha ₹	Budget ₹	
Mouda	15	16500	10	165000	21	735	120	88200	253200
Nadal	20	22000	10	220000	10	350	-	42000	262000
Bhuned	9	9950	10	99000	6	210	-	25200	124200
Kanged	11	33000	10	121000	6	210	120	25200	146200
Simini	13	143.00	10	143000	13	455	120	54600	197600
Wangle	10	11000	10	110000	7	245	120	29400	139400
Ohara	6	6600	10	66000	5	175	-	21000	87000
Thakri Matti	7	7700	10	77000	7	245	120	29400	106400
Karwal	5	5500	10	55000	3	105	-	12600	67600
Bhajotra	30	33000	10	330000	42	1470	120	176400	506400
Seri	7	7700	10	77000	6	210	120	25200	102200
Manjhli	5	5500	10	55000	5	175	120	21000	76000
Drekadi	6	6600	10	66000	8	280	-	33600	99600
Ligga	5	5500	10	55000	6	210	120	25200	80200
<b>Total</b>	<b>149</b>	<b>1,70,693</b>		<b>16,39,000</b>	<b>145</b>	<b>5,075</b>	<b>1,080</b>	<b>6,09,000</b>	<b>22,48,000</b>

Note: Target for 4<sup>th</sup> year

### 11.301(c-ii) b :Variety and rates of fodder species and hybrid grasses Budget form Production system and micro enterprises

Activity /Item	Breed	Area	Rate per ha. (₹)	Total cost (₹)	Beneficiaries share @10% cash or kind used as WDF
Fodder	Morus, Ban, Robinia, Shatoot, Beul	149	11000	1639000	163900
Grasses	Napier , Steria and orchard grass	145	4200	609000	60900
<b>Total</b>		<b>294</b>		<b>22,48,000</b>	<b>2,24,800</b>

b) Construction of talabs , Johars in grass land and community lands

c) Training and Capacity Building

- Live stock management
- Animal Health
- Artificial insemination
- Improved grasses / Fodder trees
- Exposure visits

### Number of Training

- Four trainings with 5-7 farmers in each trainings
- Exposure visits for 5-7 farmers

### 11.301(d) Project outcome/impact

#### 11.301(d-i) Estimated production of milk after project intervention

Milk production after project intervention will increase to 6.192 to 8.14 lt. /day and total production of milk after project intervention will be 26775 liters.

#### 11.301(d-ii) Milk production from cows and buffaloes after project intervention

Sr. No.	Milch cattle	Milch No.	Milk production lt./day	Total production (lt.)
1	Local cows	3599	4.567	16437
2	Cross breed cows	364	8.14	2963
3	Buffaloes	1191	6.192	7375
	<b>Total</b>	<b>5154</b>	<b>18.899</b>	<b>26,775</b>

#### 11.301(d-iii) Milk production from cows and buffaloes before project intervention

Sr. No.	Milch cattle	Milch No.	Milk production lt./day	Total production (lt.)
1	Local cows	3599	2.9	10659
2	Cross breed cows	364	6.563	2389
3	Buffaloes	1191	4.47	5332
	<b>Total</b>	<b>5154</b>	<b>13.933</b>	<b>18,380</b>

#### 11.301(d-iv) Total milk production before and after project intervention.

Increase in milk production is 8395 lt. with total production of 26775 lt.

Sr. No.	Milch cattle	Production Before project (lt.)	Production After project (lt.)	Quantity of milk Increase after project (lt.)
1	Local cows	10659	16437	5778
2	Cross breed cows	2389	2963	574
3	Buffaloes	5332	7375	2043
	<b>Total</b>	<b>18,380</b>	<b>26,775</b>	<b>8,395</b>

## 12.0 PISCICULTURE

Fisheries can be one of the additional sources of income to the farmers of the watershed area, but due to the lack of plenty of fresh water, the people enable to take up this activity as a additional source of income. Secondly the people of the watershed area are practicing agriculture, horticulture and vegetable cultivation which is a main stay of the farmers. Hence fish cultivation cannot suggest for the watershed areas of the Salooni Block.

### 12.101a Existing and Proposed water bodies for fish culture

Existing water bodies			Proposed water bodies			Owner ship private /common
No	Size (ft)	location	No	Size (ft)	Location	
1	Nil	Nil	Nil	Nil	Nil	Nil
2	Nil	Nil	Nil	Nil	Nil	Nil

### 12.101b Availability and requirement of fish seed /fingerlings

Ward	Existing families	Proposed families	Present quantity of fish	Requirement of fish seed	Breeds
1	Nil	1	Nil	96	Nil
2	Nil	Nil	Nil	Nil	Nil

### 12.102 Project Interventions

- Introducing of fisheries among more families
- Requirement of improved seed (fingerlings)
- Training on fish culture