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1.0 INTRODUCTION

1.1 INTRODUCTION OF THE PROJECT AREA

The IWMP Project (Watershed) development programme was sanctioned to the Pragpur block in the year 2008 by the Ministry of Rural Development, Government of India. 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 and at the block level; Block Development Office Pragpur will be the field level Project Implementing Agency (PIA) to coordinate with different Gram Panchayats. There are 12 Gram Panchayats in Pragpur Block. The IWMP project is being started in 12 Panchayats in different watershed catchment area. Main catchment area is Beas River followed by the different Nallahs and Khads leading to the watershed area. The main feature of the watershed area is as under:

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

1.1a Sanctioned Budgetary Provisions

Name of Project	: IWMP - VI
Total Area	: 5924 ha
Sanctioned Amount	: 8,88,60,000

Micro watershed/Gram panchayats under IWMP-VI Pragpur

Sr. No.	Gram Panchayat	No. of villages	Area (ha.)	Amount (₹)
1	Aloh	4	354	53,10,000
2	Bharolijadid	3	468	70,20,000
3	Gudarah Chaplah	4	392	58,80,000
4	Katoh Tikkar	2	500	75,00,000
5	Kaulapur	8	583	87,45,000
6	Kudna	4	706	1,05,90,000
7	Kuhna	3	372	55,80,000
8	Maniyala	7	478	71,70,000
9	Pir Saluhi	8	534	80,10,000
10	Punani	6	584	87,60,000
11	Shantla	6	456	68,40,000
12	Sarad Dogri	5	497	74,55,000
Total		60	5924	8,88,60,000

1.1b: ACTIVITY AND BUDGET

Sr. No	Budget Component	% of the budget	Aloh	Bharolijadid	Gudarah Chaplah	Katoh Tikkar	Kaulapur	Kudna	Kuhna	Maniyala	Pir Saluhi	Punani	Shantla	Sarad Dogri	Total amount (₹)
A)	Administrative cost														
1	Administrative cost		531000	702000	588000	750000	874500	1059000	558000	717000	801000	876000	684000	745500	88,86,000
2	Monitoring		53100	70200	58800	75000	87450	105900	55800	71700	80100	87600	68400	74550	8,88,600
3	Evaluation		53100	70200	58800	75000	87450	105900	55800	71700	80100	87600	68400	74550	8,88,600
B)	Preparatory Phase														
1	Entry point activities	4%	212400	280800	235200	300000	349800	423600	223200	286800	320400	350400	273600	298200	35,54,400
2	Institution & capacity building	5%	265500	351000	294000	375000	437250	529500	279000	358500	400500	438000	342000	372750	44,43,000
3	Detailed Project Report (DPR)	1%	53100	70200	58800	75000	87450	105900	55800	71700	80100	87600	68400	74550	8,88,600
C)	Watershed Work Phase														
1	Watershed Development Works	56%	2973600	3931200	3292800	4200000	4897200	5930400	3124800	4015200	4485600	4905600	3830400	4174800	4,97,61,600
2	Livelihood activities for the asset less persons	9%	477900	631800	529200	675000	787050	953100	502200	645300	720900	788400	615600	670950	79,97,400
3	Production system & micro enterprises	10%	531000	702000	588000	750000	874500	1059000	558000	717000	801000	876000	684000	745500	88,86,000
D)	Consolidation phase														
		3%	159300	210600	176400	225000	262350	317700	167400	215100	240300	262800	205200	223650	26,65,800
	Total	100	53,10,000	70,20,000	58,80,000	75,00,000	87,45,000	1,05,90,000	55,80,000	71,70,000	80,10,000	87,60,000	6,840,000	74,55,000	8,88,60,000

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

Sr. No.	Name of the activities	Physical		Budget allocation %	Financial Amount (₹)		Total (₹)
		Name of the scheme	Numbers of works		Budget under Watershed (₹)	Convergence component (₹)	
1.a	Administration cost			10% Project Cost	8886000	-	8886000
b	Monitoring			1%	888600	-	888600
c	Evaluation			1%	888600	-	888600
Sub total (a+b+c)				12%	1,06,63,200	-	1,06,63,200
2.1	Preparatory Phase					-	
	Entry Point Activities			4%			
a		Roof water harvesting Tanks	29 units		3554400	-	3554400
Total			29 units		35,54,400	-	35,54,400
2.2	Institutional & Capacity Building		No. of training			-	
a.	Awareness		12		240000	-	240000
b.	Block level		12		385000	-	385000
c.	Institutional training		16		435000	-	435000
d.	Exposure visit		16		445000	-	445000
e.	Specialized training		17		570000	-	570000
f.	PIA, WDT members		12		556000	-	556000
g.	Kissan mela		13		455000	-	455000
h.	Expert visits/ services and Misc.		21		1357000	-	1357000
Sub total			119	5%	4443000	-	44,43,000
2.3	Detailed Project Report (DPR)			1%	8,88,600	-	8,88,600
Sub Total (2.1+2.2+2.3)				10%	88,86,000	-	88,86,000
3	WATERSHED WORKS PHASE						
3 A	Watershed Development Works			56%			
3A-1	Land Development (for productive use)						
3A-1-1	A forestation						
	For Raising of fodder plantation		62 ha		858080	-	858080
3A-2.2	Land Development (for productive use)						
	For Raising of hybrid grasses		62 ha		858080	-	858080
Sub Total (3A1.1+2.2)			124 ha		17,16,160	-	17,16,160
3A-2	Vegetative and Engineering structure						
	Gully plugging		105 units		378000	-	378000
	Loose boulder		2419 units		7968400	2675200	10643600
Total			2524 Units		83,46,400	2675200	1,10,21,600
3A-3	Water harvesting structure (WHS)						
i.	Kacha talab (farm pond)		58 units		3504900	0	3504900
ii.	Check dam		09 units		691200	345600	1036800
iii.	Poly lining tank		01 units		28000	0	28000
C	Others						
i	Roof water		196 units		11710080	0	11710080
ii	Irrigation Tank		15 units		1653600	98400	1752000
iii	Kuhai		15 units		1284000	180000	1464000
iv	Bawari		89 units		6004320	0	6004320

v	Tank (drinking)	01 units		126000	0	126000
vi	Well	139 units		14696940	0	14696940
	Total	513 units		3,96,99,040	6,24,000	4,03,23,040
	Grand Total 56%	2429 units		4,97,61,600	32,99,200	5,30,60,800
3.B	Livelihood activities for the assets less and landless person grant in aid of the 9%	Household beneficiaries	9%			
	Non-farm activities					
	Carpentry	65		490000	-	490000
	Masonry	84		420000	-	420000
	C&T	87		588520	-	588520
	Black smith	26		130000	-	130000
	Cobbler	3		14000	-	14000
	Painter	7		33000	-	33000
	Earthen pot making	10		30000	-	30000
	Basket making	49		392000	-	392000
	Barber	6		27000	-	27000
	Weaver	1		10000	-	10000
	Sculpture	2		6000	-	6000
	Total	340		21,40,520	-	21,40,520
	Revolving funds available			58,56,880	-	58,56,880
	Total			79,97,400		79,97,400
3.C	Production system & micro Enterprises					
	Agriculture for crop seed	27419 Kg		865045	-	865045
	Vermin compost	77 Unit		539000	-	539000
	Fruit plants proposed	4246		106900	-	106900
	Fruit Plants demonstration	60660 Plants		1516500	-	1516500
	Fodder trees	68200 Plants		682000	-	682000
	Hybrid Grasses (seed)	2170 kg		260400	-	260400
	Dairy farming	21		315000	-	315000
	Goatry	10		100060	-	100060
	Poultry	4		40100	-	40100
	Insecticide	132 lts		52835	-	52835
	PHT	34		262035	-	262035
	Soap making	7		21125	-	21125
	Polyhouse	33		4125000	-	4125000
	Total		10%	88,86,000	-	88,86,000
	Sub Total (3A+3B+3C)		75%	6,66,45,000	32,99,200	6,99,44,200
4.	Consolidation Phase		3%	2665800		2665800
	Grand Total		100%	8,88,60,000	32,99,200	9,21,59,200

Note Beneficiaries share/ *contribution 25,51,260

Note:

- Total funds available under watershed ₹. **8,88,60,000**
- Convergence proposed under works, Component with MNREGA ₹ **32,99,200**
- Grant in aid proposed to the selected beneficiaries **26.77 %** under Livelihood activities for **21,40,520** and ₹ **58,56,880** kept as Revolving funds which is **73.23%** available under livelihood
- 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.

2.6 WATERSHED AREA

2.61 Socio economic profile of IWMP-VI Kangra

- Total number of Panchayat :12
- Total number of families : 4044
- Total population of the Panchayat:19549 (Male=51.35% and Female=48.65%)
- General families :2521(male 6226 female 5887=12113)(61.96%)
- Schedule caste families :983(male 2394 female 2290 =4684) (23.96%)
- Schedule Tribe/OBC families :540 (male 1419 female 1333 = 2752) (14.08%)

2.61a: Demographic profile of different Panchayats

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	
Aloh	74	199	180	379	52	137	101	238	64	171	155	326	943
Bharoli Zadid	243	615	610	1225	45	112	97	209	15	37	39	76	1510
Gudarah Chaplah	201	506	463	969	55	135	125	260	36	85	71	156	1385
Katoh Tikkar	124	542	461	1003	96	233	202	435	24	54	49	103	1541
Kaulapur	280	654	601	1255	150	341	361	702	178	391	404	795	2752
Kudna	164	312	339	651	76	231	193	424	35	111	77	188	1263
Kuhna	206	294	290	584	115	232	266	498	109	317	303	620	1702
Maniyala	351	814	813	1627	122	272	281	553	28	71	74	145	2325
Pir Saluhi	287	682	627	1309	66	193	175	368	22	92	82	174	1851
Punani	155	428	429	857	61	172	165	337	0	0	0	0	1194
Shantla	254	700	640	1340	116	265	249	514	05	10	14	24	1878
Sarad Dogri	182	480	434	914	29	71	75	146	24	80	65	145	1205
Total	2521	6226	5887	12113	983	2394	2290	4684	540	1419	1333	2752	19549

Source: Gram Panchayat, 2011

2.61c: Detail of BPL and Antodaya families under different castes

Name of panchayat	Antodaya				BPL				Grand Total		
	Gen.	SC	OBC	Total	Gen.	SC	OBC	Total	Antodaya	BPL	Total
Aloh	10	5	13	28	2	3	9	14	28	14	42
Bharolijadid	16	6	1	23	10	1	0	11	23	11	34
Gudarah Chaplah	17	3	3	23	9	1	1	11	23	11	34
Katoh Tikkar	5	4	0	9	6	1	1	8	9	8	17
Kaulapur	12	15	14	41	12	4	5	21	41	21	62
Kudna	15	13	6	34	11	3	1	15	34	15	49
Kuhna	11	10	4	25	6	4	5	15	25	15	40
Maniyala	7	2	0	9	2	2	0	4	9	4	13
Pir Saluhi	11	3	0	14	6	1	0	7	14	7	21
Punani	8	12	0	20	9	9	0	18	20	18	38
Shantla	19	19	0	38	14	5	2	21	38	21	59
Sarad Dogri	17	6	01	24	11	1	1	13	24	13	37
Total	148	98	42	288	98	35	25	158	288	158	446

Source: Gram Panchayat, 2011

2.62 The land use pattern of IWMP-VI

Name of Panchayat	Total land	Irrigated land	Un Irrigated land	Agri.	Horti.	Fallow	Barren	Pasture	Ghasni	Reserve forest land	Gair mumkin	Other
Aloh	403	0	61	61	0	0	49	10	156	25	77	25
Bharolijadid	494	0	120	120	0	2	59	0	111	153	0	49
Gudarah Chaplah	447	0	96	96	0	0	67	3	147	20	57	57
Katoh Tikkar	671	2	110	112	0	0	90	2	158	112	156	41
Kaulapur	728	41	145	186	0	0	41	3	199	35	120	144
Kudna	785	16	104	120	1	5	56	13	226	28	255	81
Kuhna	436	70	65	135	0	0	56	0	126	0	16	103
Maniyala	552	0	145	145	0	0	82	1	250	0	30	44
Pir Saluhi	573	4	117	121	0	6	60	5	143	0	179	59
Punani	625	4	91	95	0	2	73	4	218	0	177	56
Shantla	700	3	92	95	0	8	55	4	135	173	194	36
Sarad Dogri	535	0	92	92	0	5	113	4	230	0	14	77
Total	6949	140	1238	1378	1	28	801	49	2099	546	1275	772

Source: Revenue department

2.63 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 the watershed area are as under:

2.63a Livestock population 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	Grand Total
	Milch	Dry	Total	Milch	Dry	Total	Milch	Dry	Total						
Aloh	12	3	15	2	0	2	165	55	220	28	75	17	2	0	359
Bharolijadid	2	5	7	23	8	31	183	37	220	54	108	37	4	100	561
Gudarah Chaplah	15	22	37	39	7	46	200	50	250	46	65	2	0	0	446
Katoh Tikkar	27	8	35	13	4	17	280	125	405	114	176	110	53	50	960
Kaulapur	53	41	94	36	7	43	190	84	274	96	71	41	16	0	635
Kudna	5	3	8	16	1	17	155	35	190	70	23	46	0	0	354
Kuhna	16	7	23	49	9	58	130	55	185	68	74	9	9	0	426
Maniyala	9	7	16	33	7	40	405	75	480	76	127	41	22	382	1184
Pir Saluhi	4	3	7	32	16	48	255	125	380	76	117	196	0	0	824
Punani	7	7	14	15	2	17	110	60	170	52	57	30	0	0	340
Shantla	12	18	30	15	6	21	204	134	338	68	59	26	0	60	602
Sarad Dogri	6	2	8	7	0	7	116	74	190	84	60	329	5	0	683
Total	168	126	294	280	67	347	2393	909	3302	832	1012	884	111	592	7374

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.
- The watershed area is having good plantation of Khair on private and forest land is a good source of income to farmer and Govt.
- Area is also suitable for citrus and mango plants production.
- Nearest market is available at Jwala mukhi, Nadaun, Hamirpur and Regional horticulture research station Neri (Bhota) is the main strength of area in agriculture & Horticulture.
- People are well versed with animal husbandry.
- Farmers are innovative and ready to adopt new technologies.

3.2 Weaknesses

- Area is rainfed.
- Massive Soil erosion in the cropped area.
- Unconsolidated land holding
- Scarcity of fodder.
- 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 vegetable management, and agricultural production etc. through specialized institute
- Installation of polyhouse in Panchayat.
- Introduction of crossbred animals
- Cultivation of low volume high value crops.

3.4 Threats

- Strey cattle's
- Lesser interest of the local community towards NRM Excess
- Growth of *Parthinium* and *Ageratum* weeds
- Soil erosion in the sloppy lands.
- Deforestation and degradation of land
- Declining of the traditional artisans.
- 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	No. of structure	Unit cost Budget (₹)	Amount (₹)	Purpose
Aloh	Rain water storage tank	1	212400	212400	Supplementary irrigation provided to the beneficiaries
Bharolijadid	Roof water Storage Tank	3	100000 100000 80800	280800	Supplementary irrigation provided to the beneficiaries
Gudarah Chaplah	Roof water Storage Tank	2	120000 115200	235200	Supplementary irrigation provided to the beneficiaries
Katoh Tikkar	Roof water Storage Tank	3	100000 100000 100000	300000	Supplementary irrigation provided to the beneficiaries
Kaulapur	Roof water Storage Tank	4	100000 100000 75000	349800	Supplementary irrigation provided to the beneficiaries
Kudna	Roof water Storage Tank	3	115000 200000 108600	423600	Supplementary irrigation provided to the beneficiaries
Kuhna	Roof water Storage Tank	2	100000 123200	223200	Supplementary irrigation provided to the beneficiaries
Maniyala	Roof water Storage Tank	2	146000 140800	286800	
Pir Saluhi	Roof water Storage Tank	2	200000 120400	320400	Supplementary irrigation provided to the beneficiaries
Punani	Roof water Storage Tank	3	125000 125000 100400	350400	Supplementary irrigation provided to the beneficiaries
Shantla	Roof water Storage Tank	2	173600 100000	273600	Supplementary irrigation provided to the beneficiaries
Sarad Dogri	Roof water Storage Tank	2	170000 128200	298200	Supplementary irrigation provided to the beneficiaries
Total		29		35,54,400	

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	Awareness camps on watershed management	Panchayat level	1	12	2,40,000
PRI, Pradhan ward members & Secretary	10 person	Training and exposure visit on watershed management	Block level/ Institutional/ University	3-7	12	3,85,000
Self Help Groups, User Groups and Beneficiary groups	10 person	Agriculture and Horticulture	Institutional/ university (State/Outside State)	3-7	16	4,35,000
Self Help	1 to 2	Exposure visit	State	3-7	16	4,45,000

Groups User Groups WDT, PIA and exposure visit	ward/Panchayat (max.)10-15 person	professional institutional field	/Outside State			
Self Help Groups, User Groups exposure visit	1 to 2 / ward/ panchayat (max.)15 person	Kissan Melas/ Pradashanis	State/Outside State	3-7	13	4,55,000
Self Help Groups, User Groups exposure visit	3 to 4/ activity/ panchayat (max.)15 person	Specialized trainings (masonry, carpentry, dairy farming and vermin composting etc.	Professional Institutes/ University	5-8	17	5,70,000
PIAs, WDTs members	5-8 person	Project implementation and management trainings, report writing and accounts maintenance	Professional institutes/ University (State Outside State)	3-5	12	5,56,000
Miscellaneous/ Expert visit		Expert visits/services and Misc.	Professional institutes/ University (State Outside State)	1-3	21	13,57,000
Total					119	44,43,000

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	Amount (₹)
Land Development for sub activity	124 ha	13840	17,16,160

6.2 Budget form Production system and micro enterprises

Name of Panchayat	Fodder Trees				Grasses			
	Area (ha.)	No. of Plants @ 1100 /hac	Unit cost per ha ₹	Budget ₹ @ 11000 /hac	Area (ha.)	Quantity of seeds (kg) @ 35kg /hac	Rate per Kg(₹)	Budget ₹
Aloh	5	5500	11000	55000	5	175	120	21000
Bharolijadid	5	5500	11000	55000	5	175	120	21000
Gudarah Chaplah	5	5500	11000	55000	5	175	120	21000
Katoh Tikkar	5	5500	11000	55000	5	175	120	21000
Kaulapur	7	7700	11000	77000	7	245	120	29400
Kudna	5	5500	11000	55000	5	175	120	21000
Kuhna	5	5500	11000	55000	5	175	120	21000
Maniyala	5	5500	11000	55000	5	175	120	21000
Pir Saluhi	5	5500	11000	55000	5	175	120	21000
Punani	5	5500	11000	55000	5	175	120	21000
Shantla	5	5500	11000	55000	5	175	120	21000
Sarad Dogri	5	5500	11000	55000	5	175	120	21000
Total	62	68200		682000	62			2,60,400

Note: Target for 4th 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	Beul, Kachnaar, Robinia	62	11000	682000	-	Nil
Grasses	Napier , Steria and orchard grasses	62	4200 kg	260400	-	Nil
Total		124		9,42,400		Nil

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

7.2a: Structure with number of beneficiaries

Name of panchayt	Proposed (No.)	Size (m)	Unit Cost (₹)	watershed Budget(₹)	Convergence Budget (₹)
Loose Boulder					
Aloh	201	2x1x2	4400	228800	655600
Bharolijadid	146	2x1x2	4400	642400	0
Gudarah Chaplah	114	2x1x2	4400	237600	264000
Katoh Tikkar	81	2x1x2	4400	356400	0
Kaulapur	170	2x1x2	4400	748000	0

Kudna	617	2x1x2	4400	2230800	484000
Kuhna	164	2x1x2	4400	682000	39600
Maniyala	85	2x1x2	4400	303600	70400
Pir Saluhi	160	2x1x2	4400	110000	594000
Punani	256	2x1x2	4400	1051600	74800
Shantla	80	2x1x2	4400	352000	0
Sarad Dogri	345	2x1x2	4400	1025200	492800
Total	2419			79,68,400	26,75,200
Gully plugging					
Shantla	105	1x1x1	3600	378000	0
Total	105			378000	0
Grand Total	2524			83,46,400	0

Note: Target for 3rd 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 2419 Loose Boulder and 105 gully plugging 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	Capacity in (m ³)					Project intervention		No. of beneficiaries benefited
		Existing structure (m ³)	Repairable No.	(m ³)	New structure (m ³)	(m ³)	Capacity of Existing	New	
Kacha talab	22	1120	9	1953	49	5832	3073	5832	Entire catchment area
Roof water	0	00	0	0	196	3528	0	3528	
Tanks	5	178	3	114	15	680	292	680	
Kuhals	0	0	1	2000	3	1800	2000	1800	
Check Dam	0	0	0	0	9	0	0	0	
Total	27	1298	12 1(kuhal)	2067 2000mt	269 3(kuhal)	10040 1800mt	3365 2000mt	10040 1800mt	

8.1 (b) Storage capacity and cost of new water harvesting structures under watershed programme and convergence.

Name of Scheme	Watershed					Convergence	
	No.	Capacity (m ³)	Unit Cost ₹	Size (mt)	Budget allocated from project ₹	Capacity (m ³)	Budget Proposed from convergence MNREGA (₹)
Kacha Talab/ farm pond	48	5760	62500	10x8x2	3000000	0	0
	1	67	36700	8x6x2	36700	0	0
Roof water	196	3528	68400	3x3x2	11710080	0	0
Irrigation tank	4	160	98400	5x4x2	393600	40	98400
	10	480	126000	6x4x2	1260000	0	0
Kuhal	2	0	600/m	1140 m	684000	300 mt	180000
Check Dam	6	1260	115200	7.80x3.45x0.75	691200	630	345600
Total	267	11255			1,77,75,580	670 300 mt	6,24,000

Note: Details as in annexure

8.1(c) Storage capacity and cost of existing water harvesting structures under watershed programme and convergence.

Structure	Watershed			Convergence		
	Repairable structure	Capacity (m ³)	Cost (₹)	No.	Capacity (m ³)	Cost (₹)
Kacha Talab/ farm pond	9	1953	468200	0	0	0
Poly Tank	1	40	28000	0	0	0
kuhal	1	2000 m	600000	0	0	0
Check dam	0	0	0	0	0	0
Total	10+(1kuhal)	1993	10,96,200			

8.1(d) Total Storage Capacity of Existing and New structures

Scheme	New structures(m ³)	Existing structures (m ³)	Total capacity(m ³)
Watershed	11255	1993	13248
Convergence	40+630=670	0	670
Total	11925	1993	13918

8.1(I) Budget

Scheme	New structures (₹)	Existing structures (₹)	Total (₹)
Watershed	17775580	1096200	18871780
Convergence	624000	0	624000
Total	1,83,99,580	10,96,200	1,94,95,780

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

Particulars	Capacity (m ³)	Cost (₹)
Watershed	13248	18871780
Convergence	670	624000
Total	13918	1,94,95,780

8.01 DRINKING WATER

The watershed 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.
- 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 (m ³)	
		Present	After Project intervention
1	Total supply of water per day	1413	2373
2	Total House holds	4044	4044
3	Total population	19549	19549
4	Water Available per house hold per day	349	586
5	Per capita Availability	72	121

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

Name of Panchayat	Name of Structure						Availability of water per day from the source	No. of months water available during the year
	Tap/ WST		Well		Bawaries			
	No.	Capacity	No.	Capacity	No.	Capacity (m ³)		
Aloh	0	0	5	5	3	30	127	8month/year
Bharolijadid	2	66	7	7	14	103	131	8month/year
Gudarah Chaplah	1	18	5	5	7	81	82	8month/year
Katoh Tikkar	2	64	11	11	11	53	96	8month/year
Kaulapur	1	48	9	9	20	132	193	8month/year
Kudna	0	0	18	18	4	69	59	8month/year
Kuhna	0	0	6	6	11	102	126	8month/year
Maniyala	0	0	25	25	10	101	132	8month/year
Pir Saluhi	1	48	3	3	20	87	112	8month/year
Punani	0	0	19	19	12	96	143	8month/year
Shantla	0	0	9	9	17	108	119	8month/year
Sarad Dogri	0	0	23	23	7	67	93	8month/year
Total	7	244	140	140	136	1029	1413	

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

Name of Schemes	Existing Schemes	Estimated Budget (₹)
Bawaries	55	1737920
Well	85	4075240
Total	140	58,13,160

Note: Target for 3rd year

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

Name of Schemes	No. of schemes	Size (mt)	Unit Cost ₹	Estimated Budget (₹)
Bawaries	22	3x3x2	44000	968000
	8	3x3x2	394800	3158400
	2	2x2x1	34000	68000
	2	2.5x2.5x1.5	36000	72000
Total	34			4266400
Tank	1	6x4x2	126000	126000
Well	43	10x2	177000	7611000
	11	10x3	273700	3010700
Total	55			10747700
Grand total	89			1,50,17,100

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.

9.0 CONVERGENCES

The linkage of the IWMP-VI, 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
- 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**

Table 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 (₹)	Beneficiaries contribution	Total Amount (₹)
1.	Kaccha Talab/farm pond	58	MNREGS	RD	3504900	0	0	3504900
	Poly lining Tank	1	MNREGS	RD	28000	0	0	28000
2.	Roof water	196	MNREGS	RD	11710080	0	1696320	13406400
3.	WST (irrigation)	15	MNREGS	RD	1653600	98400	0	1752000
4.	Kuhal	3	MNREGS	RD	1284000	180000	0	1464000
5.	Check dam	9	MNREGS	RD	691200	345600	0	1036800
6.	Drinking tank	1	MNREGS	RD	126000	0	0	126000
7.	Gully plugging	105	MNREGS	RD	378000	0	0	378000
8.	Loose boulder	789	MNREGS	RD	7968400	2675200	0	10643600
	Total	1177			2,73,44,180	32,99,200	16,96,320	3,23,39,700

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, patta 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.

Sr. No.	Activity	Existing No. of household	Proposed No. of household to be covered under project
1	Carpentry	65	65
2	Masonry	84	84
3	C&T	87	87
4	Black smith	26	26
5	Cobbler	3	3
6	Painter	7	7
7	Earthen pot making	10	10
8	Basket making	49	49
9	Barber	6	6
10	Weaver	1	1
11	Sulpture	2	2
	Total	340	340

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

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

livelihood budget (9%) ₹ 79,97,400

Revolving funds (SHG/Individuals) (73.24%) ₹ 58,56,880

Grant –in – aid (SHGs/SHG Federations) (26.76%) ₹ 21,40,520

Need based planning under livelihood activities for landless /asset less beneficiaries of Project Area

Sr. No	Activity	No. of Beneficiaries	Category	Watershed funds ₹	Project
				Grant in aid ₹	
1.	Carpentry	65	Gen / SC BPL/Gen		490000
2.	Masonry	84	Gen / SC BPL/Gen		420000
3.	C&T	87	Gen / SC BPL/Gen		588520
4.	Black smith	26	Gen / SC BPL/Gen		130000
5.	Cobbler	3	Gen / SC BPL/Gen		14000
6.	Painter	7	Gen / SC BPL/Gen		33000
7.	Earthen pot making	10	Gen / SC BPL/Gen		30000
8.	Basket making	49	Gen / SC BPL/Gen		392000
9.	Barber	6	Gen / SC BPL/Gen		27000
10.	Weaver	1	Gen / SC BPL/Gen		10000
11.	Sulpture	2	Gen / SC BPL/Gen		6000
	Total				21,40,520

Note: “It is preferred that trainings should be given before providing funds under revolving funds.”

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

Name of the panchayat	Carpenter		Masonry		Cutting & tailoring		Black smith		Cobbler		Painter		Pot maker		Basket making		Barbar		Weaver		Sulpture		Revolving fund (₹)	Grand Total	
	Total no.	Cost(₹) @8000	Total no.	Cost(₹) @5000	Total no.	Cost (₹) @5000	Total no.	cost(₹) @5000	Total no.	Cost(₹) @5000	Total no.	Cost(₹) @5000	Total no.	Cost (₹) @3000	Total no.	Cost(₹) @8000	Total no.	Cost(₹) @5000	Total no.	Cost (₹) @10000	Total no.	Cost(₹) @ 6000		Total no.	Total Cost (₹)
Aloh	4	32000	5	25000	11	55000	1	5000	0	0	0	0	0	0	3	24000	1	2000	0	0	0	0	334900	25	477900
Bharolijadid	5	40000	11	55000	4	20000	2	10000	0	0	0	0	0	0	7	56000	0	0	0	0	2	6000	444800	31	631800
Gudarah Chaplah	8	64000	14	70000	0	0	0	0	0	0	0	0	8	24000	0	0	0	0	0	0	0	0	371200	30	529200
Katoh Tikkar	0	0	0	0	0	0	13	65000	1	4000	0	0	0	0	12	96000	0	0	0	0	0	0	510000	26	675000
Kaulapur	7	56000	7	35000	12	60000	0	0	0	0	0	0	0	0	2	16000	2	10000	0	0	0	0	610050	30	787050
Kudna	10	50000	4	20000	21	105000	8	40000	1	5000	5	25000	0	0	5	40000	0	0	0	0	0	0	668100	54	953100
Kuhna	5	40000	9	45000	0	0	0	0	0	0	0	0	0	0	8	64000	0	0	0	0	0	0	353200	22	502200
Maniyala	5	40000	11	55000	15	75000	0	0	1	5000	2	8000	0	0	0	0	0	0	1	1000	0	0	452300	35	645300
Pir Saluhi	3	24000	8	40000	8	40000	1	5000	0	0	0	0	0	0	1	8000	0	0	0	0	0	0	603900	21	720900
Punani	2	16000	3	15000	3	168520	1	5000	0	0	0	0	0	0	4	32000	0	0	0	0	0	0	551880	13	788400
Shantla	10	80000	6	30000	0	0	0	0	0	0	0	0	2	6000	3	24000	0	0	0	0	0	0	475600	21	615600
Sarad Dogri	6	48000	6	30000	13	65000	0	0	0	0	0	0	0	0	4	32000	3	15000	0	0	0	0	480950	32	670950
Total	65	4,90,000	84	4,20,000	87	5,88,520	26	1,30,000	3	14,000	7	33,000	10	30,000	49	3,92,000	6	27000	1	1000	2	6000	58,56,880	340	79,97,400

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

Name of the panchayats	Vermin compost		Goatry		Dairy		Fodder		Grasses		Poultry		Polyhouse		PHT		Candle/soap making		insecticide		Total cost (₹)
	Total no.	Cost (₹) @7000/U	Total no.	Cost (₹) @10000	Total no.	Cost (₹) @15000/U	No. of plants	Cost (₹) @10/plant	Qnt. in kg	Cost (₹) @120/kg	Total no.	Cost (₹) @5000/U	Total no.	Cost (₹) @125000/U	Total no.	Cost(₹) @100000/Gr.	Total no.	Cost (₹)	Total no.	Cost (₹)	
Aloh	5	35000	1	8000	0	0	5500	55000	175	21000	0	0	2	250000	0	0	7	21125	0	0	390125
Bharolijadid	5	35000	1	14060	0	0	5500	55000	175	21000	0	0	3	375000	0	0	0	0	0	0	500060
Gudarah Chaplah	5	35000	0	0	0	0	5500	55000	175	21000	4	40100	2	250000	0	0	0	0	0	0	401100
Katoh Tikkar	5	35000	0	0	7	105000	5500	55000	175	21000	0	0	3	375000	0	0	0	0	0	0	591000
Kaulapur	7	49000	0	0	7	105000	7700	77000	245	21000	0	0	2	250000	0	0	0	0	0	0	510400
Kudna	5	35000	1	8000	0	0	5500	55000	175	21000	0	0	5	625000	10	134365	0	0	0	0	878365
Kuhna	5	35000	0	0	4	60000	5500	55000	175	21000	0	0	1	125000	0	0	0	0	23	9225	305225
Maniyala	5	35000	0	0	0	0	5500	55000	175	21000	0	0	2	250000	12	70625	0	0	0	0	431625
Pir Saluhi	5	35000	3	30000	0	0	5500	55000	175	21000	0	0	3	375000	12	57045	0	0	0	0	573045
Punani	20	140000	0	0	0	0	5500	55000	175	21000	0	0	4	500000	0	0	0	0	26.65	10660	726660
Shantla	5	35000	0	0	0	0	5500	55000	175	21000	0	0	3	375000	0	0	0	0	5	2190	488190
Sarad Dogri	5	35000	4	40000	3	45000	5500	55000	175	21000	0	0	3	375000	0	0	0	0	74	30760	601760
Total	77	5,39,000	10	1,00,060	21	3,15,000	68,200	6,82,000	2,170	252,000	4	40,100	33	41,25,000	34	2,62,035	7	21125	128.65	52835	63,97,555

Note: "It is preferred that trainings should be given before providing funds under revolving funds."

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 + Animal Rearing
4. Agriculture + Labour + Rural Artisans

11.101(e) Requirement of improved seed under different crops

Name of the panchayat	Maize		Wheat		Paddy		Barley		Sarson		Grand Total	
	Quantity (kg)	cost(₹) @60/kg	Quantity (kg)	cost(₹) @25/kg	Quantity (kg)	Cost(₹) @25/kg	Quantity (kg)	cost(₹) @40/kg	Quantity (kg)	cost(₹) @100/kg	Quantity (kg)	Total cost (₹)
Aloh	195	11700	1005	25125	0	0	0	0	6	600	1206	37425
Bharolijadid	444	26640	1875	46875	0	0	75	3000	12	1200	2406	77715
Gudarah Chaplah	315	18900	1580	39500	0	0	60	2400	6	600	1961	61400
Katoh Tikkar	315	18900	1620	40500	0	0	70	2800	3	300	2008	62500
Kaulapur	645	38700	3060	76500	24	600	360	14400	9	900	4098	131100
Kudna	343.5	20610	1752	43800	0	0	0	0	43.5	4350	2139	68760
Kuhna	411	24660	2175	54375	19.6	490	0	0	15	1500	2620.6	81025
Maniyala	465	27900	2400	60000	0	0	75	3000	6	600	2946	91500
Pir Saluhi	408	24480	2010	50250	0	0	90	3600	9	900	2517	79230
Punani	309	18540	1590	39750	0	0	120	4800	15	1500	2034	64590
Shantla	285	17100	1455	36375	8.4	210	0	0	15	1500	1763.4	55185
Sarad Dogri	294	17640	1455	36375	0	0	0	0	6	600	1755	54615
Total	4429.5	2,65,770	21977	5,49,425	52	1300	850	34,000	145.5	14,550	27,454	8,65,045

11.101(f) Critical Gaps in Agriculture Production

- 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

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 out side state progressive farmers

c) Numbers of trainings / Exposure visits

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

d) Exposure visit

- One exposure visit of 30 to 40 farmers

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:

Fruit plants

Name of the panchayat		Lemon		Pomegranate		Mango		Orange		Harad		Grand Total	
		No. of Plant	Cost(₹) @25/Plant	No. of Plant	Cost(₹) @25/Plant	No. of Plant	Cost (₹) @25/Plant	No. of Plant	Cost(₹) @25/Plant	No. of Plant	Cost(₹) @25/Plant	No. of Plant	Total cost (₹)
Aloh	Pro.	1160	29000	128	3200	0	-	0	0	0	0	1288	32200
	Demo.	950	23750	950	23750	950	23750	0	0	0	0	2850	71250
Bharolijadid	Pro.	320	8000	64	1600	40	1000	0	0	0	0	425	10600
	Demo.	1515	37875	1515	37875	1515	37875	0	0	0	0	4545	113625
Gudarah Chaplah	Pro.	520	13000	0	0	120	3000	0	0	0	0	640	16000
	Demo.	1460	36500	1460	36500	1460	036500	0	0	0	0	4380	109500
Katoh Tikkar	Pro.	160	4000	0	0	40	1000	0	0	0	0	200	5000
	Demo.	1220	30500	1220	30500	1220	30500	0	0	0	0	3660	91500
Kaulapur	Pro.	160	4000	0	0	40	1000	0	0	0	0	200	5000
	Demo.	3040	76000	3040	76000	3040	76000	0	0	0	0	9120	228000
Kudna	Pro.	280	7000	0	0	70	1750	0	0	0	0	350	8750
	Demo.	1375	34375	1375	34375	1375	34375	0	0	0	0	4125	103125
Kuhna	Pro.	260	6500	0	0	0	0	160	4000	0	0	420	10500
	Demo.	2150	53750	2150	53750	2150	53750	0	0	0	0	6450	161250
Maniyala	Pro.	240	6000	0	0	0	0	0	0	0	0	240	6000
	Demo.	2505	62625	2505	62625	2505	62625	0	0	0	0	7515	187875
Pir Saluhi	Pro.	240	6000	0	0	0	0	0	0	84	2100	325	8100
	Demo.	1875	46875	1875	46875	1875	46875	0	0	0	0	5625	140625
Punani	Pro.	120	3000	0	0	30	750	0	0	0	0	150	3750
	Demo.	1080	27000	1080	27000	1080	27000	0	0	0	0	3240	81000
Shantla	Pro.	0	0	0	0	0	0	0	0	0	0	0	0
	Demo.	1875	46875	1875	46875	1875	46875	0	0	0	0	5625	140625
Sarad Dogri	Pro.	40	1000	0	0	0	0	0	0	0	0	40	1000
	Demo.	1175	29375	1175	29375	1175	29375	0	0	0	0	3525	88125
Total	Pro.	3500	87500	192	48,00	340	8500	0	0	0	0	4275	1,06,900
	Demo.	20220	505500	20220	5,05,500	20,220	5,05,500	160	4000	84	2100	60,660	15,16,500
Grand Total		23,720	5,93,000	20412	5,10,300	20,560	5,14,000	160	4000	84	2100	64,936	16,23,400

Insecticide /Pesticide

Name of the panchayats	Insecticide/pesticide		Grand Total (₹)
	Kg	Total cost (₹)	
Aloh	0	0	0
Bharolijadid	0	0	0
Gudarah Chaplah	0	0	0
Katoh Tikkar	0	0	0
Kaulapur	0	0	0
Kudna	0	0	0
Kuhna	23 lt	9225	9225
Maniyala	0	0	0
Pir Saluhi	0	0	10660
Punani	26.65	10660	2190
Shantla	5	2190	30760
Sarad Dogri	74	30760	0
Total	128.65	52,835	52,835

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
- Lack of post harvesting Management
- Lack of CCA Store to improve shelf life of the produce

11.201(h) Marketing

- Vegetable produced are sold at Solan, Delhi market

11.202(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(k) Impact/Project Outcomes

1. Skill development /capacity building of 40 farmers
2. Conventional Cropping pattern changed. Area under vegetable increased (134 bighas)
3. Mono crop to cash crop
4. Farming systems changed. Areas under fruit crops increased (165 bighas)
5. Production of fruit and vegetable enhanced through supplementary irrigation facility
6. Livelihood of 40 more farming families linked with horticulture practice.

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 2841 and average production of milk per day is 11965 lt. from buffalo's local cows, 336 lt. from cow improved and 1680 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.)
Local cows	168/294	2lt./day	336
Cross breed cows	280/347	6 lt/day	1680
Buffaloes	2393/3302	5 lt/day	11965
Total	2841/3943		13981

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

Green fodder available in project area is 24903 tons whereas dry fodder available is 14942 ton. Total 39845 ton fodder is available in project area. But requirement of green fodder is 59767 ton whereas requirement of dry fodder is 19922 ton. Total fodder required is 79689 ton. Deficit of green fodder in project area is 34864 ton and that of dry fodder is 4950 tons.

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

Available			Required			Deficit		
Green	Dry	Total	Green	Dry	Total	Green	Dry	Total
24903	14942	39845	59767	19922	79689	34864	4980	39844

Total livestock 5534

Note - **Available Fodder**
Green - 25kg/day x 30 days x 6months x Total live stock
Dry - 15 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 (ton)

Supply	39845
Demand	79689
Deficit	39844

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.

Grasses: Steria, Berseem, Orchard, Napier etc.

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

Name of Panchayat	Fodder Trees				Grasses			
	Area (ha.)	No. of Plants	Unit cost 10/plant ha ₹	Budget ₹	Area (ha.)	Quantity of seeds (kg)	Rate per Kg(₹)	Budget ₹
Aloh	5	5500	10	55000	5	175	120	21000
Bharolijadid	5	5500	10	55000	5	175	120	21000
Gudarah Chaplah	5	5500	10	55000	5	175	120	21000
Katoh Tikkar	5	5500	10	55000	5	175	120	21000
Kaulapur	7	7700	10	77000	7	245	120	29400
Kudna	5	5500	10	55000	5	175	120	21000
Kuhna	5	5500	10	55000	5	175	120	21000
Maniyala	5	5500	10	55000	5	175	120	21000
Pir Saluhi	5	5500	10	55000	5	175	120	21000
Punani	5	5500	10	55000	5	175	120	21000
Shantla	5	5500	10	55000	5	175	120	21000
Sarad Dogri	5	5500	10	55000	5	175	120	21000
Total	62	68,200		6,82,000	62			2,60,400

Note: Target for 4th 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 (₹)
Fodder	Morus, Ban, Robinia, Shatoot, Beul	62	4200	260400
Grasses	Napier , Steria and orchard grass	62	11000	682000
Total				9,42,400

- 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 2-6 to 3-8 lt. /day and total production of milk after project intervention will be 19495 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	168/294	3	504
2	Cross breed cows	280/347	8	2240
3	Buffaloes	2393/3302	7	16751
	Total	2841/3943		19495

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

Sr. No.	Milch cattle	Production Before project (lt.)	Production After project (lt.)	Quantity of milk Increase after project (lt.)
1	Local cows	336	504	168
2	Cross breed cows	1680	2240	560
3	Buffaloes	11965	16751	4786
	Total	13981	19495	5514

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 Solan 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	Nil	Nil	Nil	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

Add/ View Base Line Survey

Project* IWMP-VI Kangra Block Pragpur			
Total Geographical Area of Project (Lakh Hectares)	6560 ha		-
Project Area Covering*			
Treatable Area	5924 ha		
Wasteland (Lakh Hectares)	797 ha	Rainfed Agricultural Land (Lakh Hectares)	1235 ha
Total Cropped Area (Lakh Hectares)	1375 ha	Net Sown Area (Lakh hectares)	1375 ha
Total no. of Water Storage Structures	275 ha	Total no. of Water Extracting	275 Units
Total storage capacity of water Storage structures (cubic maters)	13918 m ³		
No. of Household	4044		
SC	983		
Gen	2521	ST	540
Total Population in the project Area	19549	No. of Household of Landless People	-
Total no. of BPL household	Ant+288+158 BPL=446		
No. of Small Farmer's House hold	-	No. of Marginal Farmer's Household	-
Depth of Ground Water (meters) below Ground Level	-	-	-

Capacity Building Plan – Add/View

Project*	IWMP- VI
Financial Year *	2011
Achievement Start Date *	2011
No. of Training Planned *	199
No. of Persons to be trained *	2076
* Indicates mandatory	-

Financial Action Plan – Add/View

Project* Financial Year *	IWMP- VI 2011-12	Achievement Start Date *	
Name of Head	Name of Activity	Name of Sub activity	Target (Rs. In lacs)
1. Watershed Development Works	1.1 Land Development (Productive use)	1.1.1 Afforestation	8.58
		1.1.2 Horticulture	16.23
		1.1.3 Agriculture	8.63
		1.1.4 Pasture	8.58
		1.1.5 Others	-
	1.2 Soil & Moisture Conservation	1.2.1 Straggred Trenching	-
		1.2.2 Contour Bunding	-
		1.2.3 Graded Bunding	-
		1.2.4 Bench Terracing	-
		1.2.5 Others	-
	1.3 Vegetative and Engineering Structure	1.3.1 Earthen Checks	-
		1.3.2 Brushwood Checks	-
		1.3.3 Gully plugs	3.78
		1.3.4 Loose boulder	79.68
		1.3.5 Gabion Structure	-
		1.3.6 Others	-
	1.4 Water Harvesting Structure (New Created)	1.4.1 Farm ponds	30.36
		1.4.2 Check dam	6.91
		1.4.3 Nallah Bunds	-
		1.4.4 Percolation tanks	-
		1.4.5 Ground Water recharge structure	40.75
1.4.6 Others		140.47	
1.5 Water Harvesting Structure (Renovated)	1.5.1 Farm ponds	4.96	
	1.5.2 Check dams	-	
	1.5.3 Nallah Bunds	-	
	1.5.4 Percolation tanks	-	
	1.5.5 Ground Water recharge structure	-	
	1.5.6 Others	6.0	
2.Administrative cost	2.2 Others		88.86
3.Monitoring	3.1 Monitoring of Projects		8.88
4.Institution & Capacity Building	4.1 SHG Formation		-
	4.2 UG Formation		-
	4.3 Formation of Federation		-
	4.4 Capacity building		44.43
	4.5 Others		-
6.DPR	6.1 Preparation of DPR		8.88
7.Livelihood activities for the asset-less persons	7.1 Plan for Livelihood activities		79.97
8.Production system & Micro – Enterprises	8.1 Goatry		-

	8.2 Dairy Farming		-
	8.3 Poultry		0.40
	8.4 VCP		-
	8.5 Bio – fuel Plantation		-
	8.6 Others		63.57

Physical Action Plan-Add/View

Project*	IWMP-VI	Achievement Start Date*
Financial Year*	2011-12	

Name of Head	Name of Activity	Name of Sub-activity	Unit (ha/nos/ Rmt/ Cubic meter)	Target
1. Watershed Development works	1.1 Land Development (Productive use)	1.1.1 Afforestation (on waste land)	ha	62
		1.1.2 Afforestation (on total land)	ha	-
		1.1.3 Horticulture (on waste land)	ha	-
		1.1.4 Horticulture (on total land)	ha	255.61
		1.1.5 Agriculture (on waste land)	ha	-
		1.1.6 Agriculture (on total land)	ha	1375
		1.1.7 Pasture (on waste land)	ha	-
		1.1.8 Pasture (on total land)	ha	49
		1.1.9 Others (on waste land)	ha	-
		1.1.10 Others (on total land)	ha	-
	1.2 Soil & Moisture Conservation	1.2.1 Straggred trenching	ha	-
		1.2.2 Contour Bunding	ha	-
		1.2.3 Graded Bunding	ha	-
		1.2.4 Bench Terracing	ha	-
		1.2.5 Others	ha	-
	1.3 Vegetative and Engineering Structure	1.3.1 Earthen Checks	Cubic meter	-
		1.3.2 Brush wood Checks	Rmt	-
		1.3.3 Gully Plugs	Cubic meter	105
		1.3.4 Loose Bolder	Cubic meter	7244
		1.3.5 Gabion Structure	Cubic meter	-
		1.3.6 Others	nos	-
	1.4 Water Harvesting Structure (New created)	1.4.1 Farm ponds	nos	49
		1.4.2 Check Dam	nos	6
		1.4.3 Nallah Bunds	nos	-
		1.4.4 Percolation tanks	nos	-
		1.4.5 Ground water recharge structure	nos	85

		1.4.6 Others	nos	-
	1.5 Water Harvesting Structure (Renovated)	1.5.1 Farm Ponds	nos	10
		1.5.2 Check Dams	nos	6
		1.5.3 Nallah Bunds	nos	-
		1.5.4 Percolation tanks	nos	-
		1.5.5 Ground Water recharge structure	nos	-
		1.5.6 Others	nos	1
	1.6 Water Harvesting Structure (Storage Capacity of New structures)	1.6.1 Farm Ponds	Cubic meter	5827
		1.6.2 Check Dams	Cubic meter	1260
		1.6.3 Nallah Bunds	Cubic meter	-
		1.6.4 Percolation tanks	Cubic meter	-
		1.6.5 Ground water recharge structure	Cubic meter	-
		1.6.6 Others	Cubic meter	4168
	1.7 Water Harvesting Structure (Storage Capacity of Renovated Structures)	1.7.2 Check Dams	Cubic meter	-
		1.7.3 Nallah Bunds	Cubic meter	-
		1.7.4 Percolation tanks	Cubic meter	-
		1.7.5 Ground Water recharge structure	Cubic meter	-
		1.7.6 Others	Cubic meter	-
2.EPA	2.1 No. of EPA activities		nos	29
	2.2 No. of water extracting unit created		nos	-
3.Institution & Capacity Building	3.1 SHG Formation (Newly created)	3.1.1 No. of SHG	nos	-
		3.1.2 Total no. of SHGs members	nos	-
	3.2 Existing SHG	3.2.1 No. of SHGs assisted	nos	-
		3.2.2 Total no. of SHGs members	nos	-
	3.3 UG Formation	3.3.1 No. of UG	nos	-
		3.3.2 Total no. of members of UGs	nos	-
	3.4 Formation of Federation	3.4.1 no. of Federation	nos	-
		3.4.2 Total no. of members of Federation	nos	-
	3.5 Capacity Building	3.5.1 no. of training	nos	199

Financial Target-Add/View

Project*	IWMP-VI	Financial Year*	2011-12
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*Indicates mandatory

Sr. No.	Head	Amount (Rs. In Lakh)
1.	Administrative	88.86
2.	Capacity building	44.43
3.	Monitoring	8.88
4.	Preparation of DPR	8.88
5.	EPA	35.54
6.	Any other	

