

# The Water Cycle

## DETAIL PROJECT REPORT

OF

IWMP (2nd) 2010-11

Distt. SONBHADRA

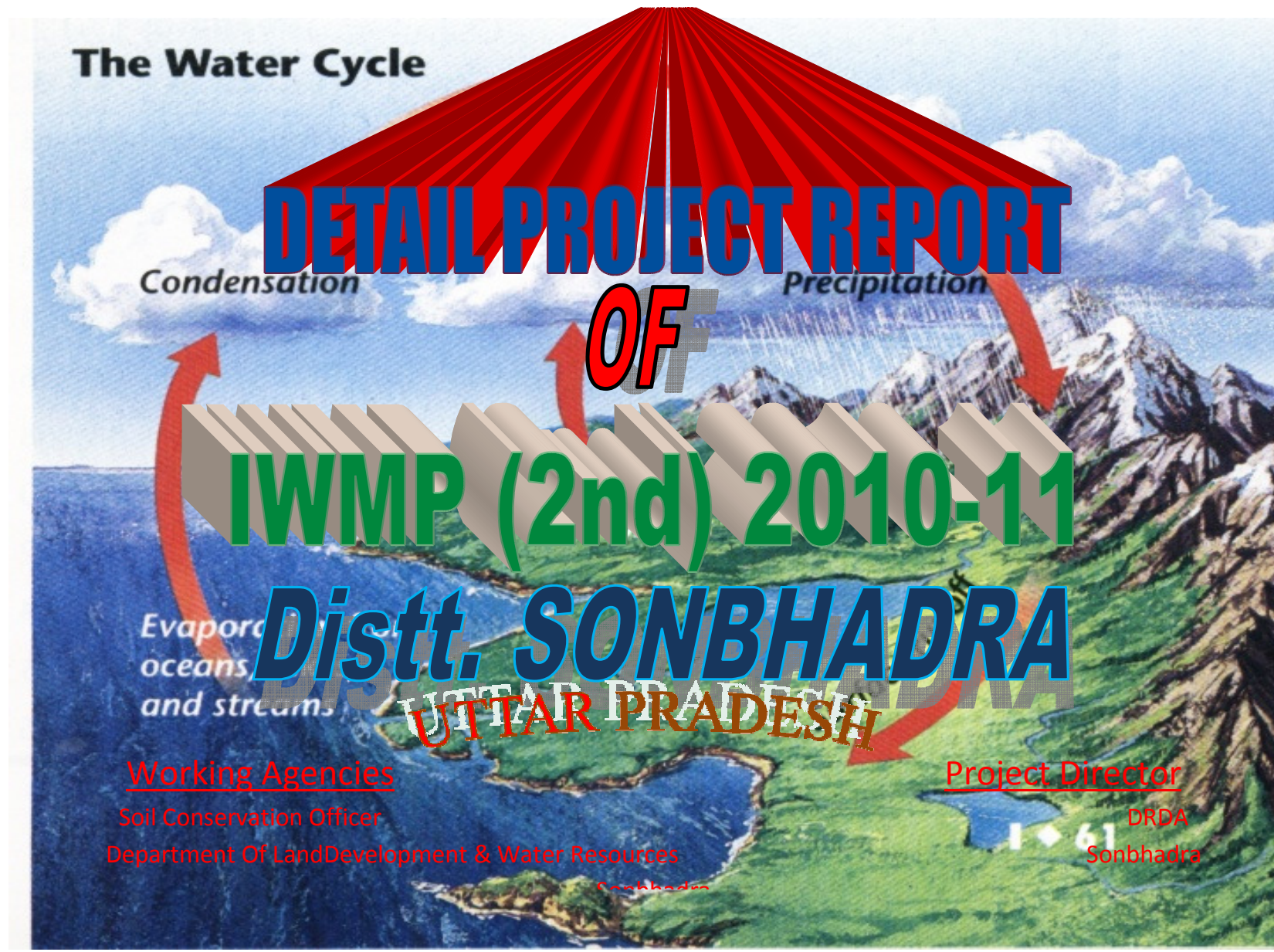
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## **PROJECT AT A GLANCE – IWMP-II, DISTRICT-SONBHADRA**

<b>1. Name of Project</b>	I.W.M.P.- II			
<b>2. Name of State</b>	U.P.			
<b>3. Name of District</b>	Sonebhadra			
<b>4. Name of Block</b>	Dudhi			
<b>5. Financial Year of Sanction</b>	2010-11			
<b>6. Project Duration</b>	05 Years (2010-11 to 2014-15)			
<b>7. Name of Micro-watershed/Watershed</b>	Theema			
<b>8. Name of Project</b>	Sayal I, Sayal II, Sardeeha, Mahuaria, Karri I, Karri II, Guala Jharia, Jharo Khurd, Jampani, Supachuwa, Rannu, Terideeh, Gaursingha, Bhisur, Barahapan			
<b>9. Census Code/ Micro Watershed Code Selected</b>	<b>S. No.</b>	<b>Nam of Village</b>	<b>Census Code</b>	<b>Micro Watershed Code Selected</b>
	1	Sayal I	10729600	2A6C4h2a
	2	Sayal II	10729600	2A6C4h2b
	3	Sardeeha	10729810	2A6C4h2f
	4	Mahuaria	10729700	2A6C4h3d
	5	Karri I	10729500	2A6C4h3a
	6	Karri II	10729500	2A6C4h3c

	7	Gulal Jharia	10729400	2A6C4h3b
	8	Jharo Khurd	10729200	2A6C4h1b
	9	Jampani	10724600	2A6C4h2e
	10	Supachuwa	10724500	2A6C4h2d
	11	Rannu	10720200	2A6C4j2b
	12	Terideeh	10730000	2A6C4j2c
	13	Gaursingha	10730100	2A6C4j2e
	14	Bhisur	10737600	2A6C4e3a
	15	Barahapan	10726000	2A6C4e3b
<b>10. Four Major Reason for Selection of Watershed under IWMP II</b>	i) Poverty Index : above 50 to 80%. ii) SC/ST Population : More Than 60% iii) Marginal and Small Farmers : More Than 80% iv) Moisture Index (DPAP) Block : Degraded Land more problem of Drinking and Irrigation water.			
<b>11. Total Area of the Project</b>	5125.00 ha			
<b>12. Proposed Area For Treatment</b>	4610.00 ha			
<b>13. Cost Per Hectare</b>	12000.00			
<b>14. Project Period</b>	2010-11 to 2014-15			
<b>15. Total Cost of Project</b>	553.20Lacs			
<b>16. Proposed Man Days</b>	3.075 Lacs			

## **INTEGRATED WATERSHED MANAGEMENT PROGRAMME**

### **(Centrally sponsored Scheme)**

#### **PROJECT AT GLANCE**

- |    |                            |  |
|----|----------------------------|--|
| 1. | Title of Project           | :- Integrated Watershed Management Programme, IWMP-II  |
| 2. | No. of Micro Watershed     | :- 15 (As per Remote Sensing & Application Center Lucknow)   |
| 3. | Total Micro Watershed Area | :- 5125.00 (ha)  |
| 4. | Treated Area               | :- 4610.00 (ha)  |
| 5. | Name of P.I.A.             | :- Bhoomi Sarnkashan Adhikari<br>Bhoomi Vikash & Jal Sansadhan Vibhag<br>Sonbhadra   |
| 6. | Total Cost of the Project  | :- (i) Treated Area 4610.00<br>(ii) Cast Norms As per Guideline 2008<br>Rs. 12000.00/Hect.<br>(iii) Total Cost<br>4610 x 12000 = 553.20 Lacs |

**Certificate:-** It is to certified that----

- (i) - The land is physically available on the spot, which is Proposed for treatment in I.W.M.P.
- (ii) - The area covered in the project proposal is not Overlapping with any other scheme and there is no Duplication of central/state external assistance.

B.S.A.  
Bhoomi Vikas Evam Jal Sansadhan Vibhag  
Sonbhadra

Dy. Director  
Narayanpur Pamp Canal Pariyojana  
Mandal-Mirjapur

## **INTRODUCTION AND BACKGROUND**

*Degraded land which can be brought under vegetative cover with reasonable efforts which is currently under utilized (Ministry of Environment and forest, Government of India, 1987) below its full Productive capacity and which can be improved through a reasonable investment (Ministry of rural Department, Government of India, 1994)*

*The land, which is deterioration for lack of appropriate water and soil management or an account of natural causes. About 175 million hectares or more than 50 percent of the total land of area of country has become degraded due to various factors. The most important cause of land degradation is soil and water erosion due to continuous removal of vegetative especially grasses, bushes and trees. As estimated about 6,000 million tones of top soil and 8.40 million tones of plant nutrients are estimated to be loss by erosion every year. It is reported that about 1.5 met. Forest is lost annually in India. If deforestation continues at the rate, very little good forest will be left in India. the result of excessive deformation has been disastrous, leading to tremendous run of losses of valuable soil and Siltation of reservoirs, Flood and Brought in much part of India. The land water and vegetation are the previous natural resources for any the meaning the groaning need for food.*

*Fuel for human and fodder for live stock. The pressure on the available and resources is increasing and less area will be available for producing the required amount to food. Fuel and fodder needs of exploding human and live stock population. The role of Afforestation, grassland development and agroforestry has been highlighted for restoring soil productivity and Ecological balance of the area and reducing soil erosion loss.*

*The I.W.M.P.-II project are selected on the basis of micro watersheds. Detailed discussion were held by survey team with the micro watershed Committee to identify the needs of village/micro watershed for fodder, fuel and timber.*

*To develop the waste/degraded of land on micro watershed basis and a I.W.M.P.-II Project has been proposed which will be improved by application of economically viable vegetative cover on micro watershed basis. Micro watershed may therefore be taken up as the basic unit for planning, conservation of soil and water, regeneration of vegetal cover.*



## **OBJECTIVES**

- 1. Prevention of land degradation by adoption of a multi-disciplinary integrated approach of soil conservation and watershed management in the catchment areas;**
- 2. Improvement of land capability and moisture regime in the watersheds;**
- 3. Promotion of land use to match land capability**
- 4. Prevention of soil loss from the catchments to reduce siltation of multipurpose reservoirs and enhance the in-situ moisture conservation and surface rainwater storage in the catchments to reduce flood peaks and volumes of runoff.**
- 5. Development of methodology to identify prioritized intervention area (s) for watershed planning using modern tools and procedures.**
- 6. Assessment of impact of partial (critical) area treatment concept and full saturation concept on hydrological behavior of watersheds.**
- 7. To validate and update soil erosion prediction equations for different soil groups and agro-eco regions of the country.**
- 8. To evaluate impact of watershed management programmes on ground water recharge or dry weather flows.**
- 9. Diagnosed institutional constraints of new policy paradigm of watershed management programme.**
- 10. To impart need bases watershed management training to young scientist, professors and watershed managers.**

## **PHYSIOGRAPHY OF THE DISTRICT AREA**

District Sonebhadra line between 23.52 to 25.32<sup>0</sup> North latitude and 82.69 to 83.33<sup>0</sup> East latitude having eight development blocks with geographical area 679880 ha the watershed lies entirely within Sonebhadra District Vindhya Zone.

The area of Sonebhadra is hilly tract rolling dissected topography with complex slope owing to numerous ridges and valleys. The whole area varies the different range of slopes. The ground slope direction is from North to South overall. Relief of the area is subnormal, however hummocks and slopy uplands at place display excessive relief.

The scattered and sharp hills are intersected by many streams. The hills are mostly steep and rugged with narrow valleys. They can be divided into four broad physiographical units. Those are hills escarpment convex of plain, plateau, plains and depressional lands. The hills are generally covered with their to moderately thick forest. Those slope range from moderately to very steep. Soil of the hills are shallow. The convex uplands are covered with thin to moderately thick forest and occasionally cultivated and slope.

## EXECUTIVE SUMMARY

In District-Sonbhadra (U.P.) 148 no. of micro watershed having 85978.00 ha. are available for I.W.M.P., out of which 15 watershed named Sayal I, Sayal II, Sardeeha, Mahuaria, Karri I, Karr II, Guala Jharia, Jharo Khurd, Jampani, Supachuwa, Rannu, Terideeh, Gaursingha, Bhisur, Barahapan having 5125.00 ha. Area are selected under I.W.M.P.-II. These micro watersheds are situated in the catchment of river Kanhar. The watershed is situated in the South - East of District-Sonbhadra. It lies between 23.52 to 25.32<sup>0</sup> North latitude and 82.69 to 83.33<sup>0</sup> East longitude.

The climate of the selected project is semi-arid and an average rainfall (preceding five years) is 850 mm. out of which about 90% is received during the monsoon season from July to September. Temperature ranges from very high in the May-June 48° to minimum 3-4° during December-January. The soil of the project is mainly Black and hard. Middle portion of the project has minor to steep slopes. 40% of project area is covered by Vindhya hills. Agriculture is the main occupation of the project area. The main crops are wheat, gram and arhar. Most of the fields are kept fallow during kharif season due to this Green Manuring is proposed to minimize the runoff and to maintain the soil fertility of the soil.

Natural Vegetation of the project area is very poor. Babool, Mahua are the main tree of the area. Occasionally Mango, Neem, Sheesham, Ber, Peepal are found in the project area. There is no reserve pasture in the watershed area. Due lack of irrigation water the rate of mortality of planted trees is very high. P.R.A. exercise conducted in the villages of the watershed area revealed that inadequate irrigation facilities, low production of field crop, fodder shortage, lack of inputs and marketing facility are some of the major constraints being experienced by the farmers. For this plantation of fruit plants and extensive afforestation activities are proposed in the selected area to motivate the farmers to adopt the agro Horticulture in practice because of inadequate irrigation water.

It is expected that the implementation of different watershed management activities will bring down the runoff and soil loss by 35-40% of their present level i.e. 90% and increase the water retention capacity of soil which will lead the crop/agriculture production per ha. It is envisaged to increase the water and land utilization index through Bio-engineering measures and improve the Eco-development index. The proposed plan will improve the crop diversification and crop rotation index, productivity of present crops and thereby will lead in food with nutritional security. The different enterprises of various sectors and the project as whole have been found to be very economically viable with sound rate of internal return and less payback period.

## GENERAL DESCRIPTION OF THE WATERSHED AREA

**Area and Elevation :-** Total geographical area of the watershed is 6519.68 ha., Project area is 5125.00 ha and planned area is 4610 ha. Elevation ranges from 200 m to 250m above mean sea level. 15 Poject namely Sayal I, Sayal II, Sardeeha, Mahuaria, Karri I, Karr II, Guala Jharia, Jharo Khurd, Jampani, Supachuwa, Rannu, Terideeh, Gaursingha, Bhisur, Barahapan are located in the watershed.

**Shape :-** The maximum length and width of the watershed area is 13500 meter and 12000 meter respectively with a length : width ratio is 1.12 : 1

**Physiography :-** The watershed is in the Vindhya region having moderate slopes and drains into river Theema through Son river. About 50% of the watershed area has slopes up to 3% , 25% of the area has slopes up to 1% and 25% area has slopes from 3 to 5%. A number of streams join the main perennial stream of Theema. Total 41 numbers of streams of different order are found in watershed, with a total length of 68225 meters. Stream characteristics of the watershed are present in the following Table :-

### **STREAM CHARACTERISTICS OF SELECTED WATERSHED, IWMP-II, DISTRICT-SONBHADRA**

Stream Order	Stream Number	Mean Stream Length (M)
1 <sup>st</sup> order	19	37250
2 <sup>nd</sup> order	15	21175
3 <sup>rd</sup> order	06	7250
4 <sup>th</sup> order	01	2550
<b>Total</b>	<b>41</b>	<b>68225</b>



**Climate :-** The watershed lies in the semi-arid region having semi-arid region having tropical climate. The average annual precipitation is 750 mm. Most of the annual rainfall (about 90%) is received during the rainy season (July to September) accompanied with high intensity storm. The temperature in the area goes up to 48° during summer and reaches 3-4° in winter.

### **GEOMORPHOLOGY AND SOILS**

**Geomorphology :-** The watershed area of IWMP-II lies in the south-east of District-Sonbhadra of Vindhya region. The soil is mainly black and hard soil which is easily transportable after detaching causing soil erosion.

**Soils :-** In the watershed area mainly four types of soil named Mar, Kaber, Padawa and Rocker are found. Which is the main soil of Vindhya region. Main crops area is pulse.

**Drainage :-** Due to moderate to steep slopes and presence of number of drainage lines, drainage is adequate. The watershed forms part of Son basin.

### **VEGETATION**

**(a) Natural Vegetation :-** Natural vegetation of the watershed area is very poor. The forest vegetation is predominant with Vilayati Babbol followed by Babool. There is occasional occurrence of Neem, Guava, Mahua, Kathal, Peepal, Khair and Sheesham. There is no pasture land in the watershed area. Grass patches area seen on bunds, road sides and other sloppy places. The main grass is Doob and Munj.

**(b) Horticulture :-** though no organized orchard are present in the watershed area, homestead planting of fruit trees of mango, papaya, ber, bel, guava, lemon has been practised by the farmers.

**(c) Agro forestry :-** the agriculture fields of the village do not have any forest or horticultural plantation. At some places isolated trees of Mahua, Babool, Ber can be seen whose frequency is less than one tree per running length of 60-80m.

### **HUMAN AND LIVESTOCK POPULATION**

**Human Population :-** Total population of the villages covered under IWMP II of the watershed area is 22460 with average family size of 07 persons. Details of village population is given in following Table :-

### **VILLAGE WISE HUMAN POPULATION OF IWMP-II, DISTRICT-SONBHADRA**

S. No.	Name of Village	Total number of Families in Watershed	Total Population	Male	Female	Children	TOTAL
1	Sayal	50	393	192	75	126	<b>393</b>
2	Sardeeha	346	2713	1108	1015	590	<b>2713</b>
3	Mahuariya	147	1192	500	504	188	<b>1192</b>
4	Karri	48	477	197	191	89	<b>477</b>
5	Gulal Jhariya	198	1384	563	540	281	<b>1384</b>
6	Jharo Khurd	461	3287	1253	1143	891	<b>3287</b>
7	Jampani	308	2368	886	834	648	<b>2368</b>
8	Supachuha	122	3423	1354	1324	745	<b>3423</b>
9	Rannu	433	2966	1278	1233	455	<b>2966</b>
10	Terideeh	82	706	292	232	182	<b>706</b>
11	Gaursingha	83	529	252	215	62	<b>529</b>
12	Bhisur	600	2500	625	575	1300	<b>2500</b>
13	Barhpan	75	522	224	210	88	<b>522</b>
	<b>TOTAL</b>	<b>2953</b>	<b>22460</b>	<b>8724</b>	<b>8091</b>	<b>5645</b>	<b>22460</b>

**Livestock population :-** Total live stock population of the watershed area is 24993 Cow is preferred as milch animal compare to Buffalow but milk yield is very low due to low feeding standard due to non availability of dry and green fodder. Goats are kept mainly for the meat purpose. Homestead poultry rearing is common among marginal farmers. The breakup of livestock population is given following Table :-

**VILLAGE WISE ANIMAL POPULATION OF IWMP-II, DISTRICT-SONBHADRA**

**ANIMAL POPULATION VILLAGEWISE**

<b>S. No.</b>	<b>Name of Village</b>	<b>Buffalow</b>	<b>Cow</b>	<b>Bull</b>	<b>Pig</b>	<b>Sheep</b>	<b>Goat</b>	<b>Hen</b>	<b>TOTAL</b>
1	Sayal	10	80	120	0	0	152	50	412
2	Sardeeha	63	412	814	18	0	608	973	2888
3	Mahuariya	33	215	150	0	0	298	414	1110
4	Karri	15	100	50	0	300	200	345	1010
5	Gulal Jhariya	23	125	44	0	0	335	445	972
6	Jharo Khurd	35	146	62	0	0	218	315	776
7	Jampani	45	200	228	0	0	211	583	1267
8	Supachuha	156	280	478	25	0	670	640	2249
9	Rannu	24	98	220	0	0	148	400	890
10	Terideeh	20	108	62	0	0	159	160	509
11	Gaursingha	80	400	300	20	0	600	350	1750
12	Bhisur	900	1500	2000	200	0	3100	2000	9700
13	Barhpan	20	250	60	0	0	600	480	1410
	<b>TOTAL</b>	<b>1424</b>	<b>3914</b>	<b>4588</b>	<b>263</b>	<b>300</b>	<b>7299</b>	<b>7155</b>	<b>24943</b>

**Land Holding :-**Majority of the watershed farmers are in category of marginal ( < 1 ha) and small (1-2 ha). These small land holding are further scattered in different places which makes cultivation very difficult. Distribution of farm families according to the size of their land holding is given in the following Table :-

LAND HOLDING VILLAGEWISE

S. No.	Name of Village	Marginal (0-1 ha)	Small (1-2 ha)	Medium (2-4 ha)	Large (upto 4ha)	TOTAL
1	Sayal	35	8	14	0	57
2	Sardeeha	289	44	22	0	355
3	Mahuariya	157	24	0	10	191
4	Karri	83	21	18	0	122
5	Gulal Jhariya	118	40	0	35	193
6	Jharo Khurd	102	250	0	65	417
7	Jampani	191	69	61	0	321
8	Supachuha	212	29	0	3	244
9	Rannu	725	145	0	105	975
10	Terideeh	60	20	0	3	83
11	Gaursingha	127	20	10	0	157
12	Bhisur	120	80	30	10	240
13	Barhpan	64	50	30	10	154
	<b>TOTAL</b>	<b>2283</b>	<b>800</b>	<b>185</b>	<b>241</b>	<b>3509</b>

**Natural Resource Base :-** Out of the total 4610.00 ha area of the watershed under agriculture use an area of 3900.10 ha is under rainfed agriculture (84%). Main source of irrigation water is only rainfall. The natural resource maps of the watershed villages drawn up by the villagers themselves during the PRA exercise area given in the Chapter of PRA Exercise.

**Importance of Development Institution :-** In the Venn diagram, farmers perception was recorded for importance and role of different development institution in relation to infrastructure development in the villages. Importance has been depicted with the size of the circle and role with distance from the village circle. The Venn diagram of selected villages is given in the chapter of PRA Exercise

**Livelihood :-** Out of the total population 22460 in the watershed a majority i.e. more than 70% has farming as their major source of livelihood followed by 28% labourer and 2% Service + Business class.

**Depending on forest for fuel wood and fodder :-**

- (A) **Fuel Wood :-** the main source of fuel is from cow dung cake, woody stem of Arhar crop and Mustard, About 70% of the domestic fuel requirement is met from Agro By-product and cow dung cake. Rest is met out from the forest out side the village and watershed boundary.
- (B) **Fodder :-** Villages under the project watershed area do not have any significant dependency on forest based fodder as these sources are not available in the forests. There is shortage of green fodder in winter and summer due to inadequate irrigation facility. Due to lack of fodder availability Milk production is very low.
- (C) **Labour Requirement :-** Labour requirement is found to be maximum during October-November, when the harvesting of Kharif and sowing of rabi crops are done simultaneously . The other crucial periods are March-April when harvesting and threshing of rabi crop is done and July-August when sowing of Kharif crops takes place. Other income generating enterprises having potential during the remaining months should be planned to reduce the migration of labours.
- (D) **Crop Calander :-** The Present crop calander in the watershed area comprises of fallow-gram, fallow-lentil, fallow-wheat, Arhar-Jowar mixed cropping, Paddy-wheat, Paddy-Massor, Maze/Bajra-Fallow etc.. Fallow-wheat, fallow-gram, fallow-Massor, Arhar + Jowar are the most prevailing crop rotation on the agricultural lands both in rainfed watershed. Organised vegetable cultivation, fruit plantation and traditional agro – forestry system are lacking widely in the watershed. The limited vegetable cultivation in the watershed is confined either to kitchen gardens or to be irrigated conditions in a scattered manner on extremely small area with view to meet out the domestic demand for vegetables. The cultivation of each crop other than the paddy, maize, arhar, wheat, gram, and mustard also lacks in watershed.

**Farmers Preferences :-**



**Fruit Trees :** Farmers Preference for fruit trees are solicited in terms of attributes like production, market availability and timber wood value. Overall Mango, Amla, Guava, Ber, Lemmon, Papaya is found most preferred fruit trees amongst the farmers of watershed area.

**Fodder Trees :** Farmers do not have any preferred fodder trees in the watershed area in spite of the fact that watershed falls in semi-arid tract. But some farmers preferred Gular, Peepal, Pakad, Sahjan and and etc.

**Timber/Commercial Plants :** Farmers Preference for timber plants are Sheesham, Teak, Khair etc.

**House/Decorative Trees :** Farmers Preference for House/Decorative Trees are Asok, Gulmohar, Kadam, Amaltash etc.

The marketing facilities, lack of follow up of modern scientific package of practice or cropping potential in the watershed area, socio-economic factors etc. is found to be most important factors deciding the preferences of farmers pertaining to selection and cultivation of agriculture crops, fruit plants or fodder trees in the watershed area..

**Agriculture :** Paddy-Arhar, Wheat+Mustard, Gram, Massor, Jowar+Arhar, Bajra, are most preferred agriculture crop in the watershed area followed by Wheat and Paddy.

**Historical Time Line :** The Historical Timeline is chronological record of important events in the history of village which is useful in understanding its background in the context of watershed development. Historical Time Line depicting important events in respect of different villages of the watershed has prepared through PRA. 'Historical Time Line' of the selected village are given in the Chapter of PRA Exercise. During PRA exercise the Villagers prepared Land use and hydrology maps, Social Maps and Resource Maps of their respective village. These maps are enclosed in the chapter of PRA Exercise

**Agriculture :** Various agriculture land use in the watershed area are extended to diversified land capabilities starting from marginal to good class II<sup>nd</sup> lands. The watershed area distinctly has three types of land i.e. leveled, sloppy and degraded and undulating. The agriculture is practised in all three type of land but productivity is very low. The total area in agriculture in the watershed area is about 4610 ha out of which 150 ha is irrigated while 3900.19 ha is under rainfed agriculture area. The water both irrigation and drinking is most scarce natural resource in the watershed area.

The agriculture soils in the watershed area have diversified texture i.e. , black and hard, silty, clay sand mixed with graves and loam which are located in patches throughout the watershed area, Four types of soils Mar, Kaber, Padwa and Rackad are the main soil of District-Sonbhadra. The heay soils are almost kept fallow during rainy season. The irrigation water is conveyed inearthen channels and surface irrigation methods following mainly border method of free flodding method of irrigation by farmers in the watershed area. The factors substantially reduce the water use efficiency of limited available and valuable irrigation water in the watershed area. Agriculture of the watershed area is totally depend on mansoon .

Rehabilitation of waste lands with appropriate drought hardy species like Prosopis juliflora, introduction of suitable multipurpose tree, promoting agro foresting on agricultural lands with appropriate fruit and forest species, suitable vegetative barriers on sloping lands can of high future value in meeting out not only fire wood and fodder demands in the watershed but also for water conservation, rehabilitation of wasteland and substantial income generation for socio-economic uplift of farmers in the watershed.

### **One Year Crop Rotation**

**Single Cropping:** Fallow-Gram, Fallow-Wheat, Arhar-Fallow, Fallow-Groundnut.

**Double Cropping:** Bajra-Massor, Arhar + Jowar, Paddy-Gram/Massor/Wheat, Maize+Groundnut

### **Irrigated Agriculture:**

**One Year Crop Rotation:** Urad / Moong-wheat, Maize-Urad , Paddy-Wheat Urad / Moong-Vegetables, Paddy-Gram, Paddy-Massor/Gramm.

**Crop Productivity:** Food crop production is a major land bsed activity in the watershed. Traditional cultivation practices, coupled with poor quality seeds and long duration crop varieties result in low crop yields. Crop are taken under rainfed as well as irrigated conditions. The yield level of rainfed crops are particularly very poor. Large variation has been noticed in productivity of wheat ( 8.00 Qt./ ha) and Paddy (8.00 Qt./ ha) under rainfed and irrigated conditions respectively. At present level of rainfed farming the total produce from Rabi and Kharif crops obtained by a medium size of holding owning family can meet food requirements for upto 6 to 7 months only.

The farmers also do not have a proper farming systems to deal aberrant weather. Weeds impose considerable constraint in producing of both kharif and Rabi crops under irrigation as well as rainfed production system. Use of weedicide is rare in the watershed.

The mixed cropping is in practice in limited area with Kharif crops like bajra and Jowar + Arhar but it is not only irrational but also unscientific and beset with low productivity. Subsequent rabi crops in general are raised on residual soil moisture under rainfed production system during past monsoon season. Imbalanced use of fertilizers is common in not only rabi and kharif crops but also in rainfed and irrigated production system the recommended deep ploughing for enhanced in situ residual soil moisture conservation and higher production is also not followed in the watershed but deep ploughing implements yet need to be introduced.

The soil fertility / health restoration practices like green manuring, crop rotations and intercropping specially with legumes, use of FYM/compost, vermin-compost, biofertilizers, soil and water conservation measures, use of brought up or in situ mulches are widely lacking in the watershed. The soil and water conservation measures are limited to mechanical / earthen measures created by the State Govt. agencies. Conservation agronomical measures like seeding and ploughing across the slope, weed mulching, agro- forestry vegetative barriers etc. are completely lack in the watershed.

Indigenous Technological Knowledge: (I.T.K.) Agriculture is an age old occupation which farmers have practiced and improved in their own manner to earn livelihood under the condition of area. The villagers have their traditional village ponds, practice of field bunding, production of arhar crop on the bunds in paddy area which typically constitute agriculture related ITKs in the watershed. The indigenous farming technology in the watershed is observed to cover a vast spectrum of activities involving tillage, implement crop selection, storage of produce and value condition in Vindhya region line showing is in the traditional practice due to soil condition. Seed drill, seed comfort drill are used with tractor and Nal / chonga with indigenous plough. These ITKs are eco-friendly, cost effective and involve use of local materials with farmers own wisdom. These techniques equip farmers with skill and strength to adopt to the prevailing adverse conditions.

### **Forest and Other Vegetation**

**Forests:** The selected watershed has 259.48 ha forest area.

### **Horticulture / Agro- Forestry:**

### **Agro- Forestry:**

The agro- Forestry practices are highly lacking in the watershed though it has good potential under existing dispositions and may play a vital role particularly with respect to minimization of cropping risk, built up soil fertility and productivity soil conservation, partly meeting out the firewood demand of rural community and moreover, optimizing the watershed the other agro-forestry systems like agri-silvi, silvi-pastoral band and boundry plantations also have good potential to cater the firewood and fodder demands of rural community in the watershed The existing area under agro forestry is almost negligible. Prosopis juliflora may be planted as block or sole plantation especially on marginal and degraded lands in the watershed The agro-forestry interventions comprising of ber, bel, amla, guava, teak, sheesham, khair etc. may be applied for benefit of farmers under rainfed to irrigated production systems on leveled to slopy and marginal agricultural using proper planting techniques and termite control measures. The multipurpose trees also help in supplementing fire wood and fodder demands of rural community in the watershed and may be planted as hedge rows on rain-fed, marginal and degraded lands.

### **Horticulture:**

The watershed does not have organized orchards, however, farmers have fruit plants(mango, ber, bel, amla, guava, mahua etc.) near the homesteads and kitchen gardens. The climate and soil of the area is favorable for fruit growing for sub tropical fruits in the lower reaches. Organized orchards, commercial vegetable cultivation, agro horticulture, and other system of agro forestry etc. are lacking but have good potential in the watershed The watershed is located near the highway and North Central railway line and has good scope to transport the produce to the nearest market Mirzapur, Varanasi, Allahabad, Kanpur, Jhansi, even to Delhi.

**Agriculture :** Various agriculture land uses in the watershed are extended to diversified land capabilities starting from marginal to good class II lands. The watershed distinctly has three types of land i.e. leveled, sloping and degraded and undulating. The agriculture is practiced on all these soil types though the productivity considerably varies, The total area in agriculture in the watershed is about 4610 ha out of which 150 is irrigated while 3900.19 ha is under rainfed agriculture. The water (both for irrigation and drinking) is most scarce natural resource in the watershed. The operation of tube wells for irrigation of agricultural crops frequently leads to the drinking water problem to the farmers for watershed.

The agricultural soils in the watershed have diversified texture i.e. clay, silty clay, sand mixed with gravel and loam, which are located in patches throughout the watershed. Four types of soil Mar, Kaber, Padwa and Rackad are the main soil of district-Sonbhadra. The heavy soil are almost kept fallow during rainy season, The irrigation water is conveyed in earthen channels and surface irrigation methods following mainly border method of free flooding method of irrigation by farmers in the watershed. The factors substantially reduce the water use efficiency of limited available and valuable irrigation water in the watershed .

Rehabilitation of waste lands with appropriate drought hardy species and introduction of suitable multipurpose tree, promoting agro foresting on agricultural lands with appropriate fruit and forest species , suitable vegetative barriers on sloping lands can of high future value in meeting out not only fire wood and fodder demands in the watershed but also for soil and water conservation, Rehabilitation of wasteland and substantial income generation for socio-economic uplift of farmers in the watershed. Some more tables describing general status of the micro-watershed area of IWMP-II are given below :-

#### **LAND USE PATTERN OF THE IWMP-II, DISTRICT-SONBHADRA**

S. No.	Name of District	No. of micro-watershed	Number of the village	Geographic al area of project	Forest Area	Land under agriculture use	Rainfed area	Permanent Pasture	Wasteland	
									Cultivable	Non-cultivable
1	Sonbhadra	15	13	6519.68 ha	1343.75 ha	60095.00 ha	5125.00 ha.	16.88 ha	2750.00 ha	91.00 ha



### DETAILS OF AGRO-CLIMATIC CONDITIONS OF THE IWMP-II, DISTRICT-SONBHADRA

S. No.	Name of District	Name of the project	Name of the Agro-climatic zone covers project area	Area in ha	Number of the village	Major soil type		Topography	Average rainfall in mm (preceeding 5 years average)	Major crops	
						a. Type	b. Area in ha			a. Name	b. Area in ha
1.	Sonbhadra	IWMP-I	Bindhya Zone	5125	13	Clay Lom	4280	Undulating	600 mm	Wheat Paddy Maize Arhar Gram	5125

### DETAILS OF SOIL EROSION IN THE IWMP-II PROJECT AREA, DISTRICT-SONBHADRA

Cause		Type of erosion	Area affected (ha)	Run off (mm/year)	Average soil loss (Tonnes/ha/year)
Wtaer erosion					
	a	Sheet	2040.00	680 mm	16 to 20
	b	Rill	2610.00		
	c	Gully	475.00		
<b>SUB TOTAL :</b>			<b>5125</b>		
Wind erosion			-	N.A.	
<b>TOTAL :</b>			<b>5125.00</b>		

**DETAILS OF SEASONAL MIGRATION IN THE WATERSHED AREA :-**

S. No.	Name of the Project	Number of Persons Migrating/Year		Number of days of Migration/Year	
		Pre-project	Expected Post-project	Pre-project	Expected Post-project
1.	IWMP-II	4115	2360	180	120

**GROUND WATER TABLE :-**

S. No.	Name of the Project	Source	Pre-project Level	Expected Increase/Decrease Post-project
1.	IWMP-II	Open Well	20.00 m	19.50 m

**STATUS OF DRINKING WATER :-**

S. No.	Name of the Project	Availability of Drinking Water (Number of Months in a Year)		Quality of Drinking Water	
		Pre-project	Expected Post-project	Pre-project	Expected Post-project
1.	IWMP-II	8	10	Very Poor	Good

**PRESENT AND PROPOSED LAND USE PLAN OF THE IWMP-II, DISTRICT-SONBHADRA**

<b>S.No.</b>	<b>Land use</b>	<b>Present (ha.)</b>	<b>Proposed area (ha.)</b>
1	Agriculture		
a	Rainfed	4610	4610
	I. Crops	3900.19	3250.82
	II. Agro-forestry	NIL	60
b	Irrigated	150	310
	I. Assured	60.00	120
	II. Partial	90	190
2	Waste Land		
a	Afforestation	NIL	399.37
b	Pasture	16.88	46.88
c	Untreatable	492.00	492.00
3	Village land	50.93	50.93
	<b>Total</b>	<b>4610.00</b>	<b>4610.00</b>

## **AGRICULTURE & PRESENT CROPPING PATTERN OF MICRO WATER SHED**

The soil selected micro watershed unfertile due to erosion of top fertile soil. The present production in the project area is very low.

### **PRESENT FARMING SYSTEM:-**

Presently the following crops are shown in Kharif and Rabi Season –

<u>Khari</u>	<u>Rabi</u>
1. Paddy	1. Wheat/Barley + Mustard
2. Maize	2. Wheat/Barley + Mustard
3. Arher	3. Gram
4. Groundnut	4. Masoor/Alsi
5. Bajra	5. Peanut
1. Paddy	1. Wheat
2. Maize	2. Barly
3. Arher	3. Gram
4. Pea Nut	4. Peanut

**MICRO-WATERSHED-WISE GEOGRAPHICAL/PROJECT/PLANNED AREA AND SANCTIONED AMOUNT OF IWMP-II, DISTRICT-SONBHADRA**

S. No.	Name of Project	MWS Code Number	Connected Village	Gram Sabha	Geographical Area	Forest Land Area	Abadi, Road, Nala, River etc.	Project Area	Planned Area	Sanctioned Amount in Lacs
1	Sayal I	2A6C4h2a	Sayal, Sardeeha	Sardeeha	404.94	85.94	1.00	318.00	286.00	34.32
2	Sayal II	2A6C4h2b	Sayal, Sardeeha	Sardeeha	429.65	91.65	1.00	337.00	303.00	36.36
3	Sardeeha	2A6C4h2f	Sayal, Sardeeha, Mahuaria	Sardeeha	380.43	77.43	4.00	299.00	269.00	32.28
4	Mahuariya	2A6C4h3d	Mahuaria, Murta	Mahuaria	462.3	94.53	4.77	363.00	327.00	39.24
5	Karri I	2A6C4h3a	Rannu, Karri, Japla	Jharo khurd	401.63	80.63	6.00	315.00	283.00	33.96
6	Karri II	2A6C4h3c	Mahuaria, Sayal	Jharo khurd	396.61	80.55	5.06	311.00	280.00	33.60
7	Gulal Jhariya	2A6C4h3b	Karri, Gulal Jharia, Japla, Dumerdeeha	Dumerdeeha	489.68	102.28	3.40	384.00	345.00	41.40
8	Jharo Khurd	2A6C4h1b	Gulal Jharia, Karri, Jharo Khurd	Jharo Khurd	468.05	98.05	3.00	367.00	330.00	39.60
9	Jampani	2A6C4h2e	Supachuwa, Murta, Jampani	Jampani	408.63	84.58	3.05	321.00	289.00	34.68
10	Supachuha	2A6C4h2d	Supachuwa, Murta, Jampani	Supachwa	421.91	88.01	2.90	331.00	298.00	35.76
11	Rannu	2A6C4j2b	Rannu	Rannu	248.62	50.62	3.00	195.00	175.00	21.00
12	Terideeh	2A6C4j2c	Terideeh, Rannu	Mahuaria	327.86	67.86	3.00	257.00	231.00	27.72
13	Gaursingha	2A6C4j2e	Gaursingha, Rannu	Rannu	482.35	100.4	2.95	379.00	341.00	40.92
14	Bhisur	2A6C4e3a	Randa Tola, Bhisur	Bhisur	643.77	129.87	4.90	509.00	458.00	54.96
15	Barhpan	2A6C4e3b	Barahapan, Randa Tola, Gaursingha	Maduban	553.25	111.35	2.90	439.00	395.00	47.40
	<b>Total</b>				<b>6519.68</b>	<b>1343.75</b>	<b>50.93</b>	<b>5125.00</b>	<b>4610.00</b>	<b>553.20</b>

**PROJECT WISE AREA UNDER MICRO WATERSHED, IWMP-II, DISTRICT-SONBHADRA**

<b>S. No.</b>	<b>Name of Block</b>	<b>Name of Porject</b>	<b>Name of Watershed</b>	<b>Name of Connected Village</b>	<b>MWS Code Number</b>	<b>Planned Area in ha.</b>
1	Duddhi	Sayal I	Theema	Sayal, Sardeeha	2A6C4h2a	<b>286.00</b>
2	Duddhi	Sayal II	Theema	Sayal, Sardeeha	2A6C4h2b	<b>303.00</b>
3	Duddhi	Sardeeha	Theema	Sayal, Sardeeha, Mahuaria	2A6C4h2f	<b>269.00</b>
4	Duddhi	Mahuariya	Theema	Mahuaria, Murta	2A6C4h3d	<b>327.00</b>
5	Duddhi	Karri I	Theema	Rannu, Karri, Japla	2A6C4h3a	<b>283.00</b>
6	Duddhi	Karri II	Theema	Mahuaria, Sayal	2A6C4h3c	<b>280.00</b>
7	Duddhi	Gulal Jhariya	Theema	Karri, Gulal Jharia, Japla, Dumerdeeha	2A6C4h3b	<b>345.00</b>
8	Duddhi	Jharo Khurd	Theema	Gulal Jharia, Karri, Jharo Khurd	2A6C4h1b	<b>330.00</b>
9	Duddhi	Jampani	Theema	Supachuwa, Murta, Jampani	2A6C4h2e	<b>289.00</b>
10	Duddhi	Supachuha	Theema	Supachuwa, Murta, Jampani	2A6C4h2d	<b>298.00</b>
11	Duddhi	Rannu	Theema	Rannu	2A6C4j2b	<b>175.00</b>
12	Duddhi	Terideeh	Theema	Terideeh, Rannu	2A6C4j2c	<b>231.00</b>
13	Duddhi	Gaursingha	Theema	Gaursingha, Rannu	2A6C4j2e	<b>341.00</b>
14	Duddhi	Bhisur	Theema	Randa Tola, Bhisur	2A6C4e3a	<b>458.00</b>
15	Duddhi	Barhpan	Theema	Barahapan, Randa Tola, Gaursingha	2A6C4e3b	<b>395.00</b>
		<b>Total</b>				<b>4610.00</b>

**CRITERIA/WEIGHTAGE FOR SELECTION OF THE, IWMP-II PROJECT  
DISTRICT-SONBHADRA**

Project Name	No. of watershed	Weightage													
		I	Ii	iii	iv	V	vi	vii	Viii	Ix	x	xi	xii	Xiii	Total
IWMP-II	15	7.5	10	5	10	0	10	15	7.5	15	10	10	10	0	110

## **Soil and land Capability Classification**

Soil Morphology: The selected area is situated in the middle of District- Sonbhadra. The entire watershed is topographically divided into the three major land forms. Accordingly, soils of watershed have been grouped in the three major categories.

- 1- Plain Land.
- 2- Moderate Slopy Land.
- 3- Ravinous Land

### **Soil Characteristics and fertility Status:**

Four types of soils are in the watershed and the fertility status is about normal range due to the production of major pulses crops. There is scarcity of phosphorous due to continuous growing of pulses. The four soil samples of each village, three for nutrients analysis and one for sulphur and micro nutrients analysis have been sent to laboratory. After receiving the analysis report effort will be made to motivate the farmers to use nutrients and micronutrients according to the any analysis report. For this demonstration of crop in kharif and rabi both seasons have been proposed under agriculture production activity.



Land Capability Classification (LCC). :- Land Capability Classification (LCC) is crucial for appropriate land use planning consisting of practices like choice of vegetation/ crops, tillage practices, use of scientific method of cultivation and desirous conservation practices, detailed LCC Survey carried out in the Paisuni & Ohan watershed brought out the prevailing LCC Classes as I, II, III, IV.

Area Under Various LCC Classes IWMP-II watershed of District – Sonbhadra is Given below :-

LCC Class	Area Ha
I	262.00
II	2825.00
III	862.00
IV	661.00
Total	4610.00

## BUDGET COMPONENT OF IWMP-II, DISTRICT - SONBHADRA

S.No.	Budget Component	Total (Lakhs)
A	MANAGEMENT COSTS	66.38
B	PREPARATORY PHASES	55.32
C	WATERSHED WORKS	
a	WATERSHED DEVELOPMENT WORKS	331.92
b	LIVELIHOOD PROGRAMME (Community base)	38.72
c	PRODUCTION SYSTEM AND MICRO ENTERPRISES	44.26
d	CONSOLIDATION PHASE	16.60
	<b>GRAND TOTAL</b>	<b>553.20</b>

- |                                 |   |                 |
|---------------------------------|---|-----------------|
| 1. Watershed Area               | - | 5125.00 ha      |
| 2. Treatable Area               | - | 4610.00 ha      |
| 3. Total expenditure on project | - | Rs. 553.20 lacs |

## **PRA EXERCISE**

PRA Exercise :-PRA exercise were conducted by the PIA in the respective micro watershed area to collect the basic information by adopting the following PRA methods –

1. Social Mapping
2. Resource Mapping
3. Seasonal Analysis
4. Time Line
5. Matrix Ranking
6. Wealth Ranking
7. Venn Diagram
8. Transect Watershed area.

PRA Exercise were conducted by the PIA along with a PRA team which consist the following experts –

- i) Agriculture Scientist
- ii) Civil Engineer
- iii) Social Scientist
- iv) Horticulture Scientist
- v) Vet-Doctor

- vi) Representative of a forest department
- vii) MBBS Doctor
- viii) And support staff.

After PRA Exercise Village-wise Historical Time Line, Seasonal Analysis, Present and Proposed Land Use Plan, Venn Diagram, Social Map and Resource Map, Present Cropping Pattern were prepared which is shown the chapter of Maps.

After PRA Exercise following plan was prepared :-

- i) EPA Activity Plan
- ii) Institutional and Capacity Building Plan
- iii) Livelihood Plan
- iv) Production Plan
- v) Treatment Plan

## SWOT ANALYSIS

Strength (S)	Weakness (W)
<ol style="list-style-type: none"> <li>1. Cooperative work culture.</li> <li>2. Close ethnic tier.</li> <li>3. Road at the outlet of the watershed.</li> <li>4. Hard working man power.</li> <li>5. Resource pool of crop genetic diversity.</li> <li>6. Awareness of farmers about Watershed management.</li> <li>7. Social outlet of the community.</li> <li>8. Availability of raw materials for IGA.</li> </ol>	<ol style="list-style-type: none"> <li>1. Poor water management.</li> <li>2. Poor farmers.</li> <li>3. Low rate of literacy.</li> <li>4. out migration of youth.</li> <li>5. Problem of soil erosion.</li> <li>6. Low fertility of land.</li> <li>7. Low and erotic rain fall.</li> <li>8. Fragile geography.</li> <li>9. Fragmented land holding.</li> <li>10. Heavy infestation of wild animals.</li> <li>11. Problem of food and fodder.</li> <li>12. Non availability of quality seeds.</li> </ol>
Opportunities (O)	Threat (T)
<ol style="list-style-type: none"> <li>1. Scope for regular employment opportunity to check out migration.</li> <li>2. Strengthening of existing irrigation system.</li> <li>3. Conductive climate for rainfed crop diversification.</li> <li>4. Good scope for agro forestry and dry land horticulture.</li> <li>5. Scope for collective active action and management of CPRs.</li> </ol>	<ol style="list-style-type: none"> <li>1. Prone to adverse climate like drought.</li> <li>2. High market risk.</li> <li>3. Social conflicts.</li> <li>4. Weak coordination among line department.</li> <li>5. Lack of expertise.</li> </ol>

## PROBLEM AND NEED OF AREA

**Problem Identification and Prioritization :** Food sufficiency, economic growth and environmental security has identified as the major issues to be addressed in the watershed area. The area has moderate to steep slope hence highly prone to soil erosion. Efficiency soil depth is unlimited and spatially useful for good crop growth.

Problems identified and prioritized during the transect walk and PRA exercise in all the 12 villages have pooled and a list of 110 problems representing the whole watershed area was prepared. Problems have been marked as per their total weightage in the 12 villages, Lack of irrigation water is the greatest problem experienced by the people followed by the low production of the field crops, lack of fodder availability and low animal productivity.

### Problems Identification and Prioritization

S. No.	Problem	Rank
1	Low Production of field crops	3
2	High Migration Rate	9
3	Non Availability of Income Generation Activity	10
4	Lack of irrigation water	1
5	Lack of drinking water	4
6	Non availability of fuel wood	6
7	Lack of inputs like quality seeds, fertilizers, pesticides etc.	2
8	Medical and health care facilities for milching animals and low productivity	5
9	Lack of fodder availability and low annual productivity	7
10	Lack of medical, educational and transportation facilities	8

## HISTORICAL TIME LINE CHART OF IWMP-II, DISTRICT-SONBHADRA

Village – Jampani		Village – Mahuaria	
Year	Activity	Year	Activity
1766	Village was established and located at a distance of 15 Km on Dudhi road.	1753	Village was established and located at a distance of 13 Km on Dudhi road.
1970	First Radio was purchased in the village by Sri Shiv Narain.	1966	First Radio was purchased in the village by Sri Ram Narain.
1985	Construction of First road.	1976	First Tractor was purchased in this village by Sri Raghu Nandan.
1991	First Motorbike was purchased in this village by Sri Jagat Narain.	1986	First Motorbike was purchased in this village by Sri Ram Sahai.
1998	First Tractor was purchased in this village by Shiv Nath Yadav.	1995	First Television was purchased in this village Sri Ram Sahai.
1998	Village was Electrified .	1998	Construction of First road.
		1998	Village was Electrified .
Village –Sayal		Village –Supachuwa	
Year	Activity	Year	Activity
1780	Village was established, located at a distance of 15 Km on Dudhi road.	1780	Village was established and located at a distance of 22 Km on Dudhi road.
1970	First Radio was purchased in the village by Late Dubraj.	1982	First Radio was purchased in the village by Sri Rajendra.
1985	First Motorbike was purchased in this village by Sri Krishna.	1985	First Motorbike was purchased in this village Sri Ram Lakhan.
2003	First Tractor was purchased in this village by Sri Yogya Narain.	1991	First Tractor was purchased in this village by Sri Santosh.
2005	First Television was purchased in this village Sri Ram Prasad.	1999	First Television was purchased in this village Sri Ram Lakhan.
2007	Construction of First road	2002	Village was Electrified
2007	Village was Electrified	2004	Construction of First road.
Village – Rannu		Village –Terideeh	
Year	Activity	Year	Activity

1810	Village was established and located at a distance of 12 Km on Dudhi road.	1810	Village was established and located at a distance of 14 Km on Dudhi road.
1960	First Radio was purchased in the village by Sri Dhanu Shah.	1960	First Radio was purchased in the village by Sri Keval.
1972	Construction of First road.	1972	Construction of First road
1985	First Motorbike was purchased in this village by Sri Hari Narain.	1985	First Motorbike was purchased in this village Sri Keval.
1990	First Television was purchased in this village Sri Bhagwan Das.	1990	First Television was purchased in this village Sri Keval.
1991	First Tractor was purchased in this village by Sri Ram Prasad.	1990	First Tractor was purchased in this village by Sri Keval.
1995	Village was Electrified	1995	Village was Electrified

Village – Bhisur		Village – Barahapan	
Year	Activity	Year	Activity
1985	Village was established and located at a distance of 12 Km on Dudhi road.	1890	Village was established and located at a distance of 15 Km on Dudhi road from Vindhamganj
1985	First Radio was purchased in the village by Sri Raghu Nath.	1989	First Radio was purchased in the village.
1993	First Television was purchased in this village by Sri Jagdish.	1993	First Television was purchased in this village.
2005	Construction of First road.	2000	Construction of First road.

Village – Gaursingha		Village – Sardeeha	
Year	Activity	Year	Activity
1885	Village was established and located at a distance 13 Km	1780	Village was established and located at a distance 15 Km on



	on Dudhi road.		Dudhi road.
1985	First Radio was purchased in the village by Sri Ayodhya	1975	First Radio was purchased in the village by Sri Mitraj.
2005	Construction of First road	2007	Construction of First road
1986	First Motorbike was purchased in this village Sri Mitraj.	1987	First Motorbike was purchased in this village.
2000	First Television was purchased in this village Sri Ram Prasad.	2002	First Television was purchased in this village.
2000	First Tractor was purchased in this village.	1998	First Tractor was purchased in this village Sri Roop Narain.
2007	Village was Electrified	2007	Village was Electrified
<b>Village – Karri</b>		<b>Village – Gulal Jharla</b>	
Year	Activity	Year	Activity
1890	Village was established and located at a distance of 12 Km on Dudhi road.	1888	Village was established and located at a distance of 12 Km on Dudhi road.
1975	First Radio was purchased in the village by Sri Bechu Singh.	1972	First Radio was purchased in the village.
1990	First Motorbike was purchased in this village Sri Sukhlal Gaur.	1994	First Motorbike was purchased in this village.
2001	First Television was purchased in this village.	2001	First Television was purchased in this village.
2004	Construction of First road	2000	Construction of First road
2005	Village was Electrified	1997	First Tractor was purchased in this village Sri Kuhubddin Ali
		2005	Village was Electrified

## SEASONAL ANALYSIS

Seasonal analysis has done with the help of farmers about rainfall patterns, cultivated crops, employment, income, availability of fuel, fodder, migration, transport and health hazards etc. with respect to seasonal variation in a year which is shown as below :

Item/Month	January	February	March	April	May	June	July	August	September	October	November	December
Festivals			Holi	Baishaki				Raksha Bandhan		Dashhra	Diwali	Guru Parv
Sowing crops/ harvesting						Maize, Paddy, Arhar				Mustard, Wheat		
			Mustard	Wheat, Arhar					Maize, Paddy			
Disease	Cough & Cold					Gastr Intestinal/Loose Motion			Fever			
Purchase/ Expenditure												
Rains												
Fodder scarcity												
Fuel/Wood scarcity												
Loaning period (required)												
Marriage period												
Drinking water scarcity												
Irrigation water scarcity												



**Social map of village--BHISUR**



**Resources map of village--BHISUR**



**Social map of village--JAMPANI**



**Resources map of village--JAMPANI**





**Social map of village--KARRI**



**Resources map of village--KARRI**



**Social map of village--MAHUARIYA**



**Resources map of village--MAHUARIYA**





**Socil map of village--RANNU**



**Resources map of village--RANNU**

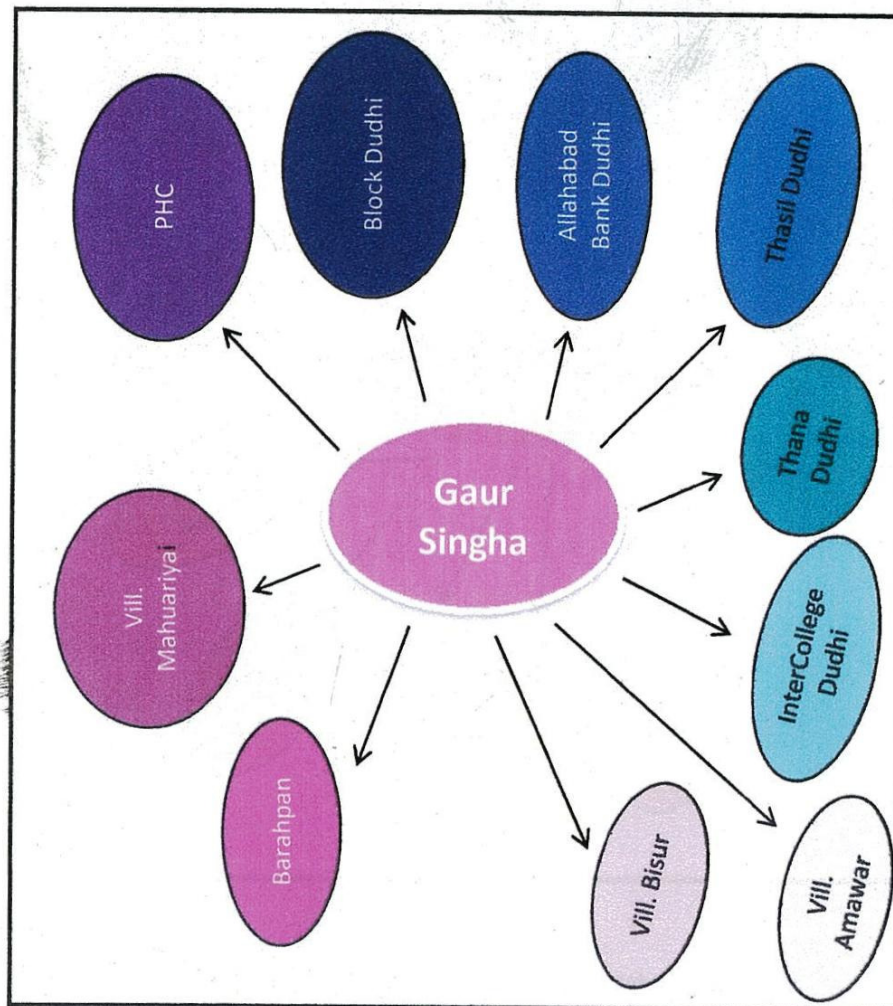


**Social map of village--SUPACHUWA**

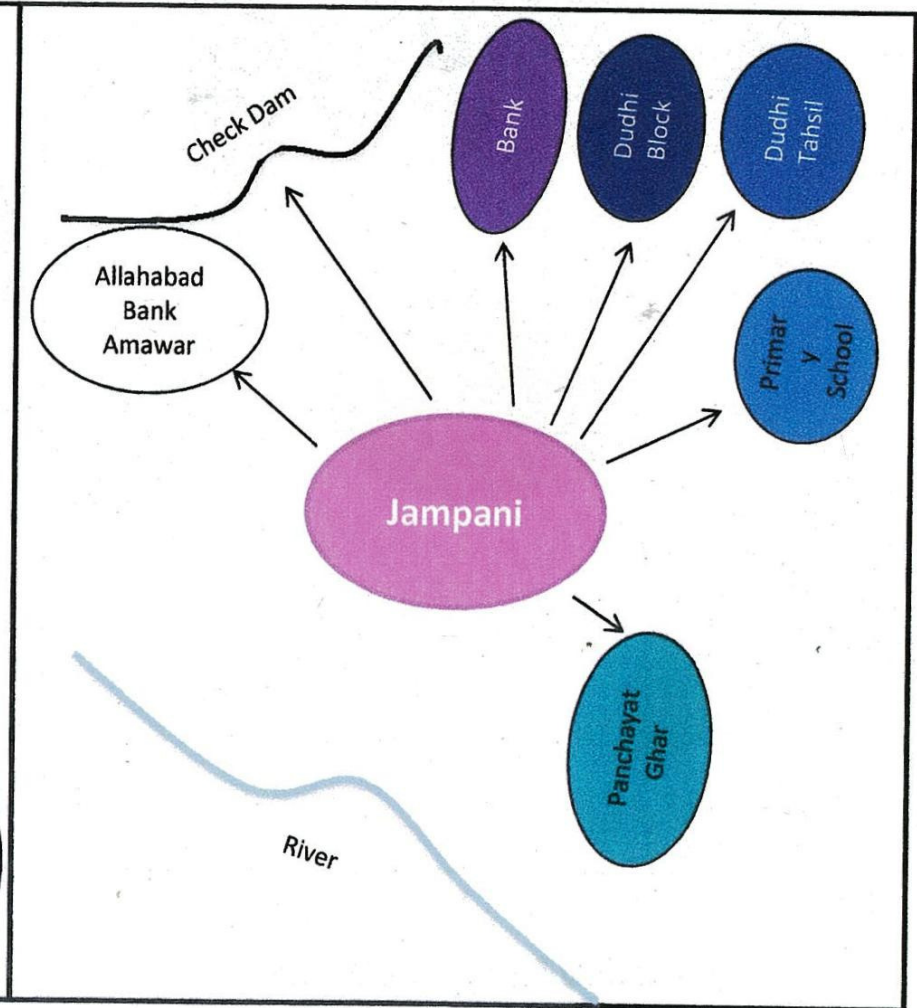


**Resources map of village--SUPACHUWA**

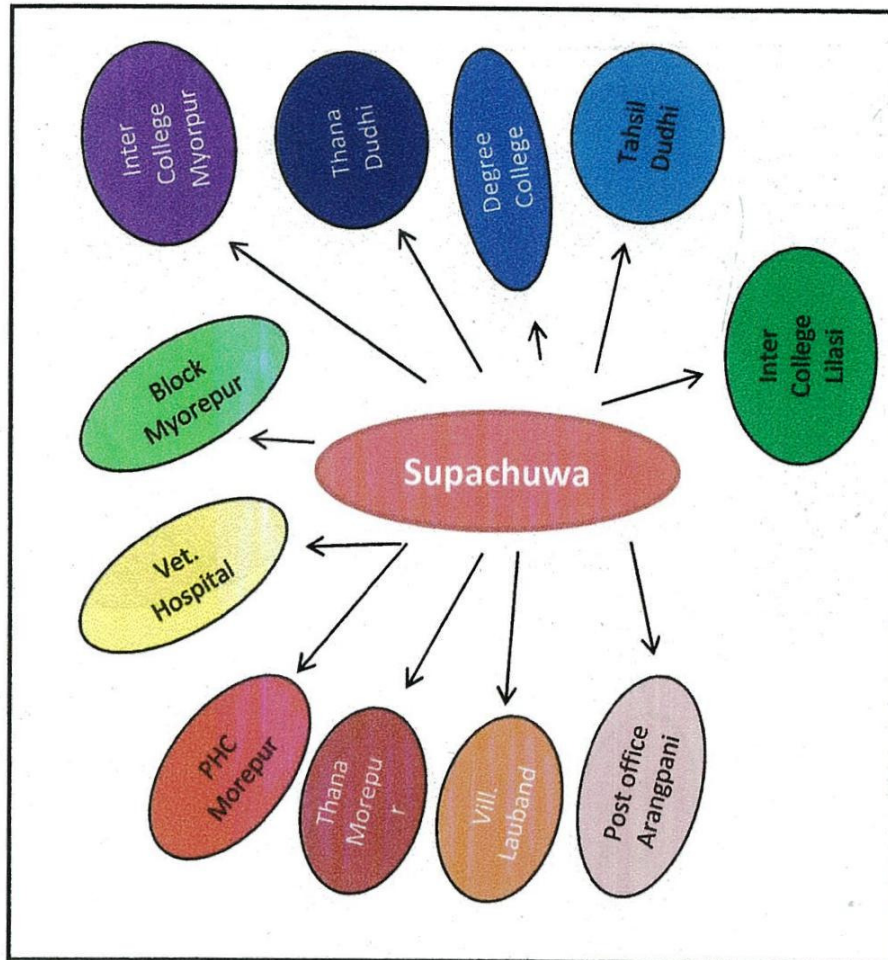




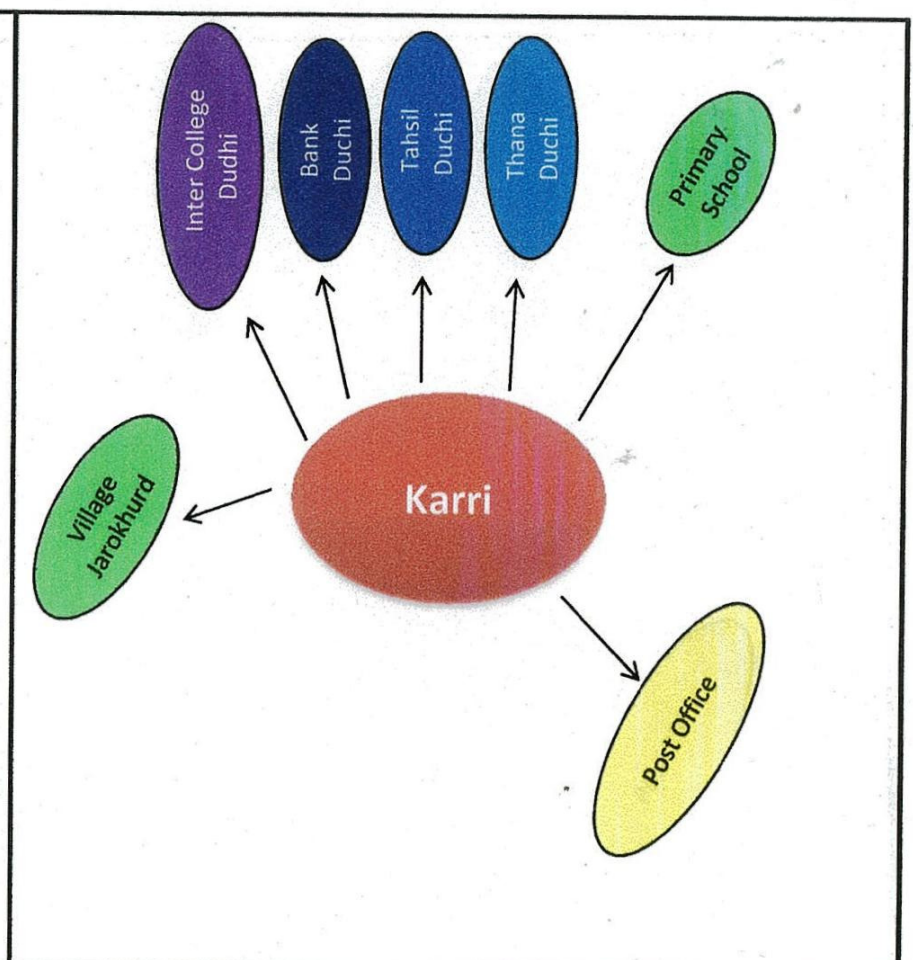
Venn diagram of Vill. Gaur Singha



Venn diagram of Vill. Jampani

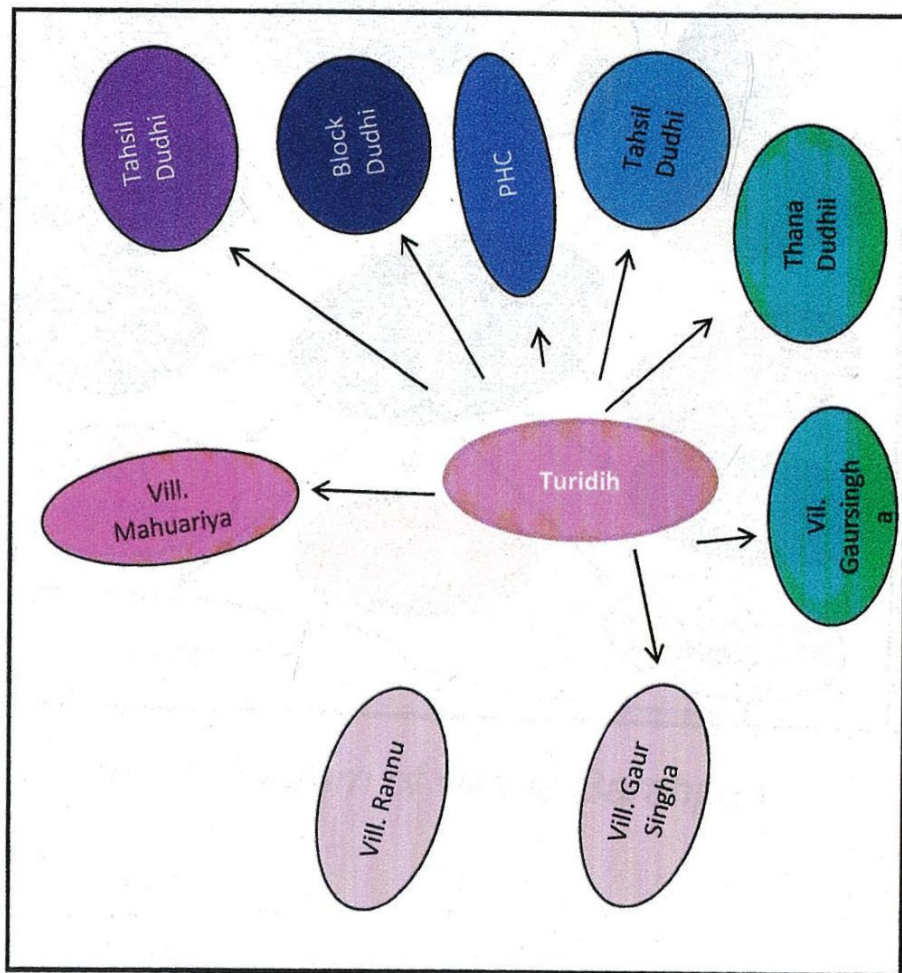


Venn diagram of Vill. Supachuwa

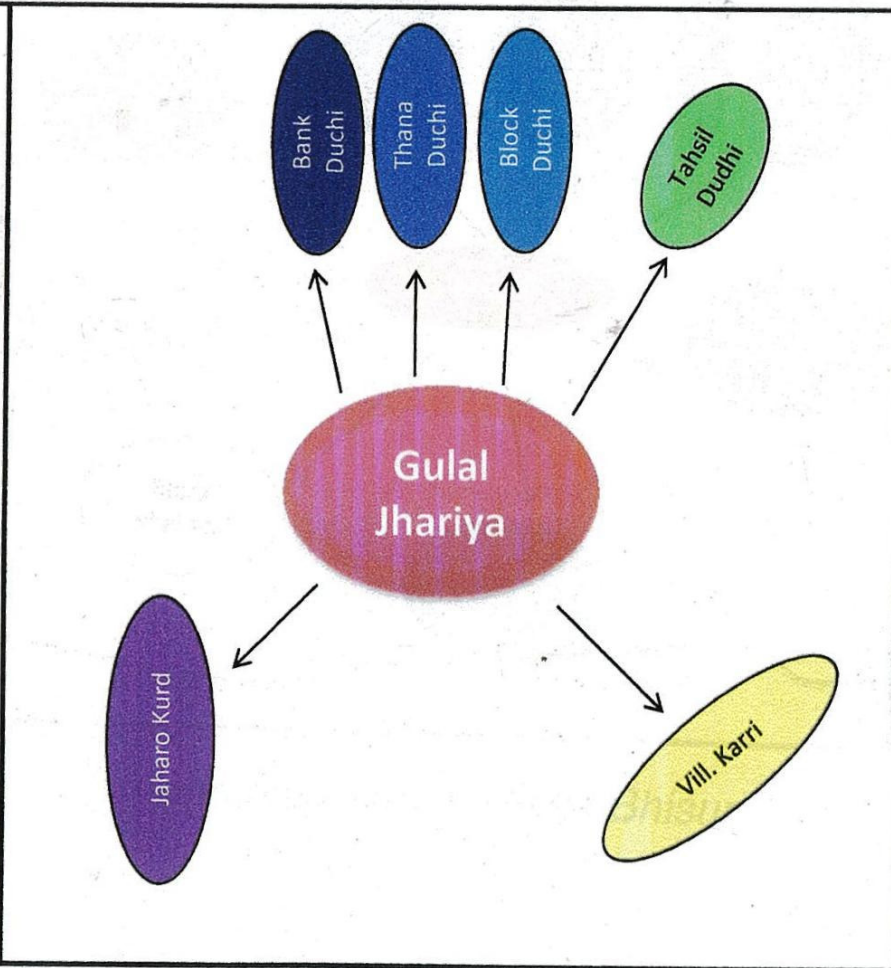


Venn diagram of Vill. Karri

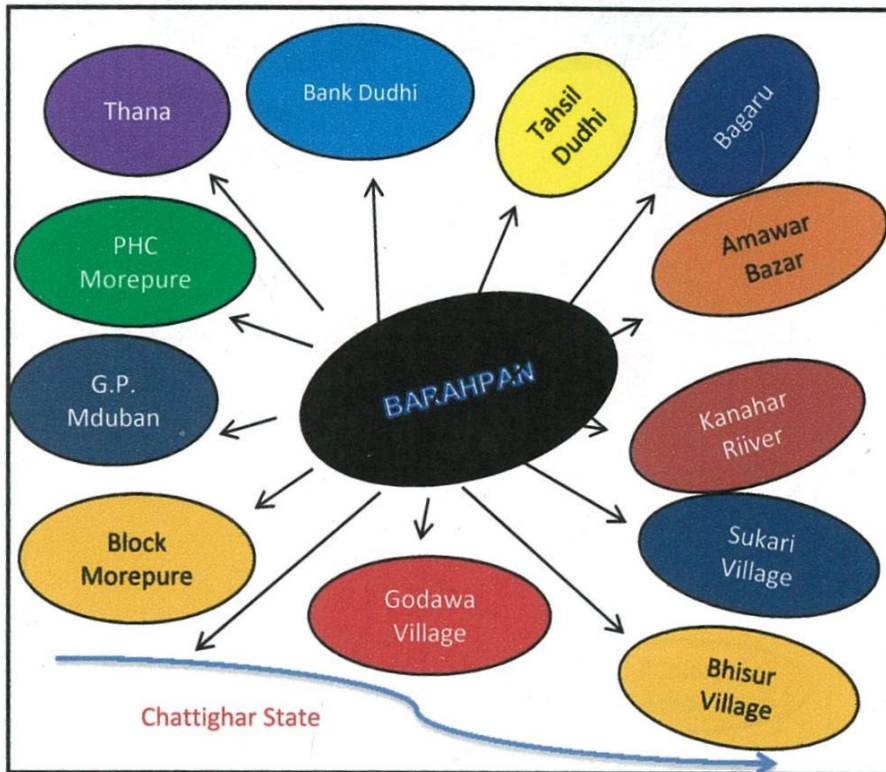




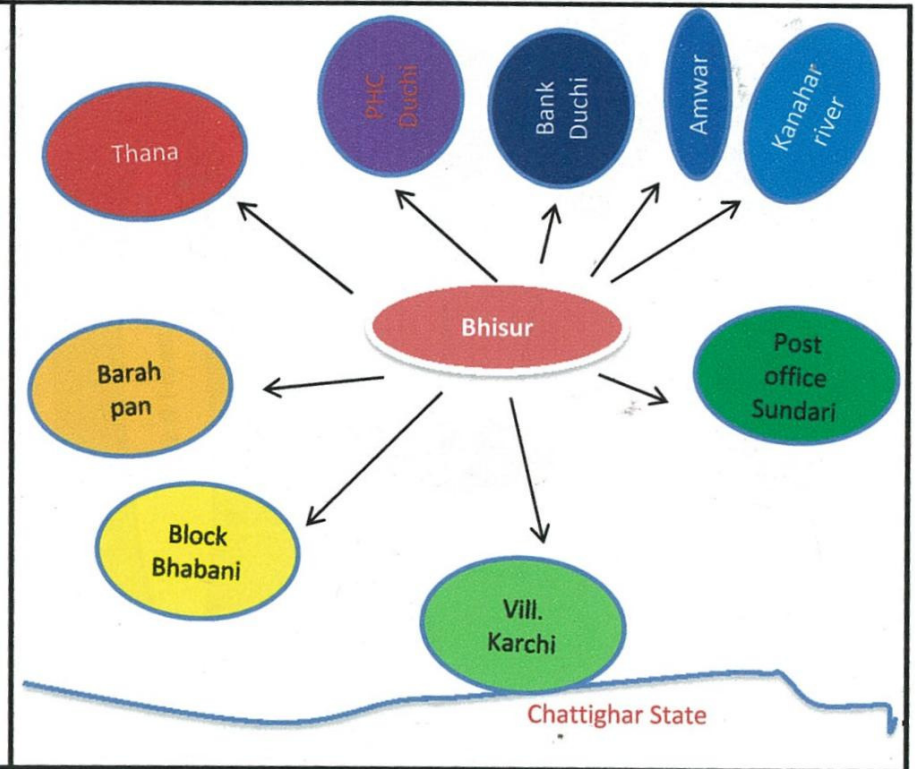
Venn diagram of Vill. Turidih



Venn diagram of Vill. Gulal Jahariya

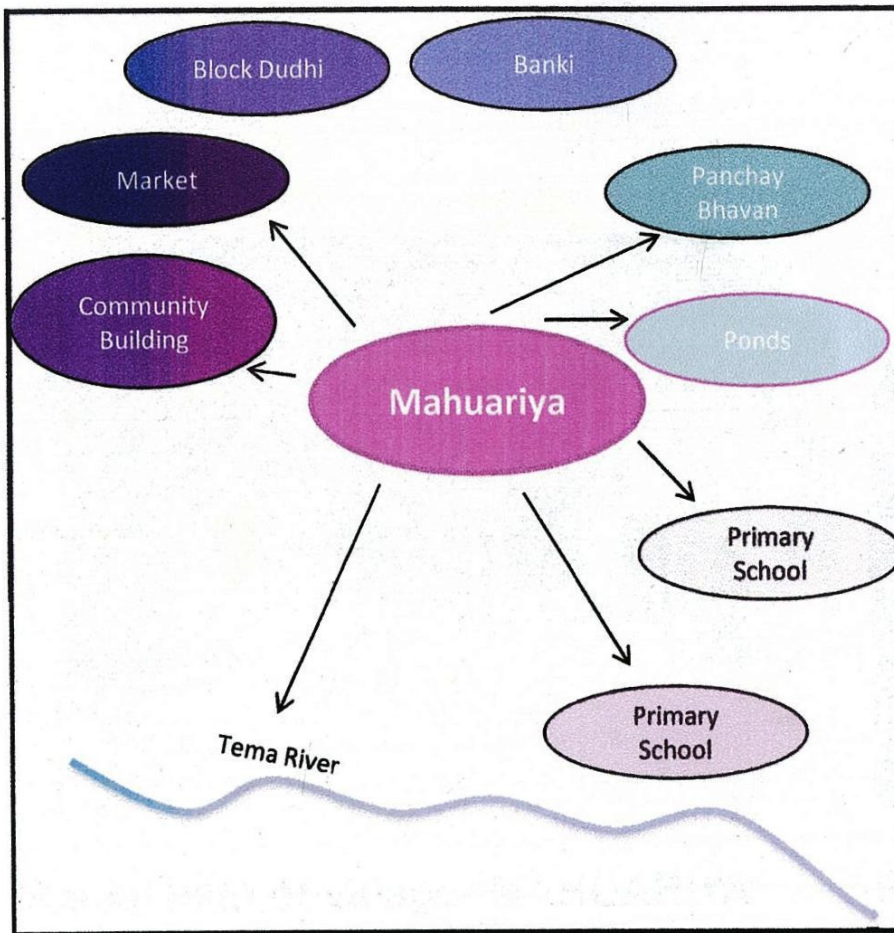


*Venn diagram of village Barahpan*

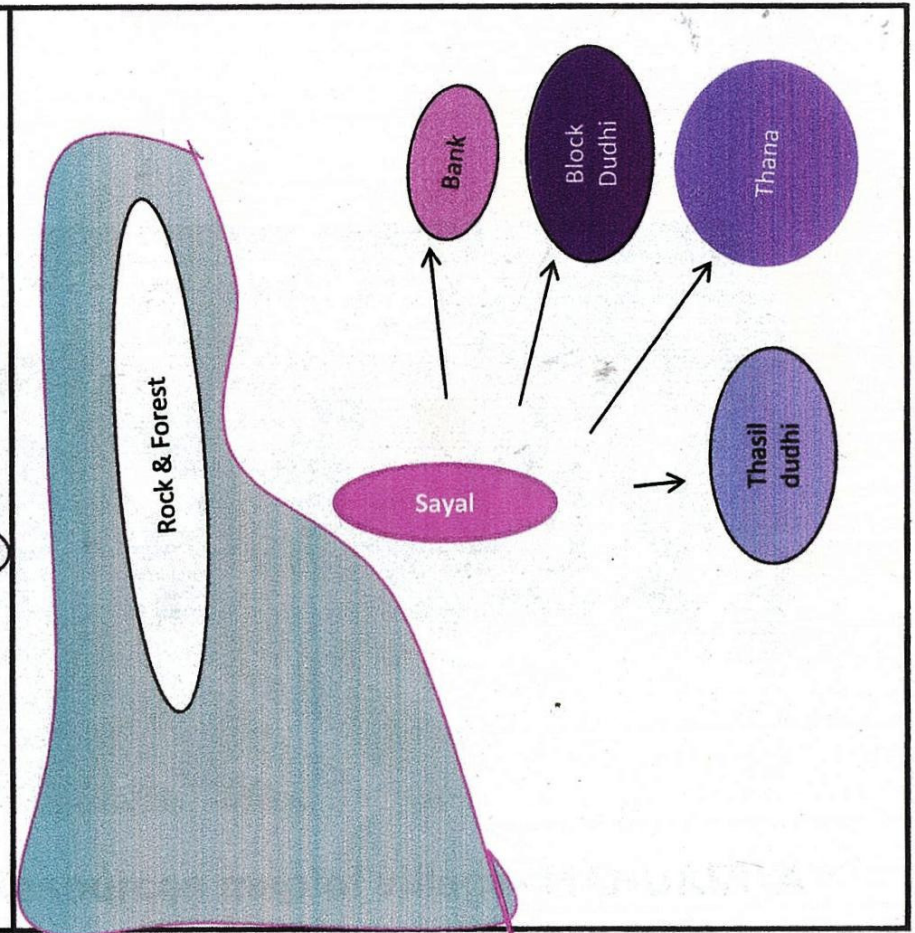


*Venn diagram of village Bhisur*



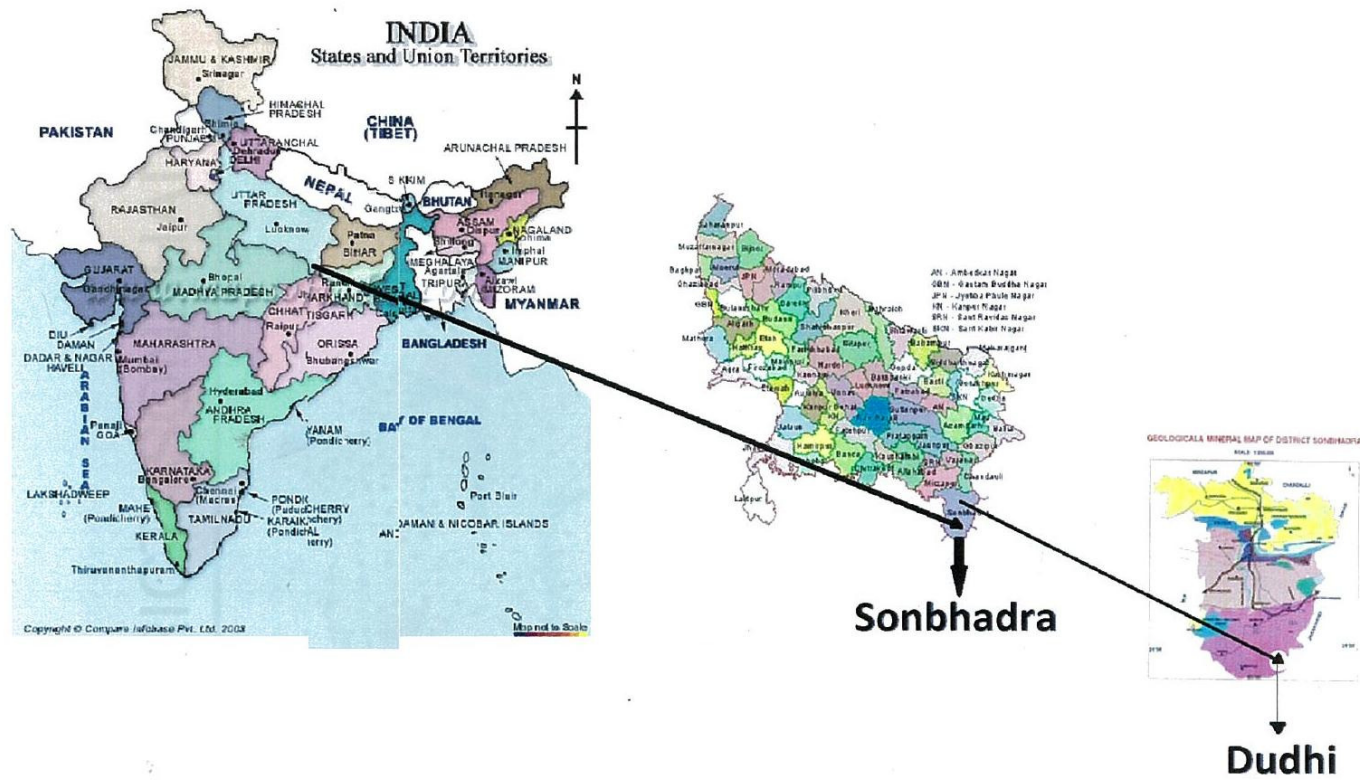


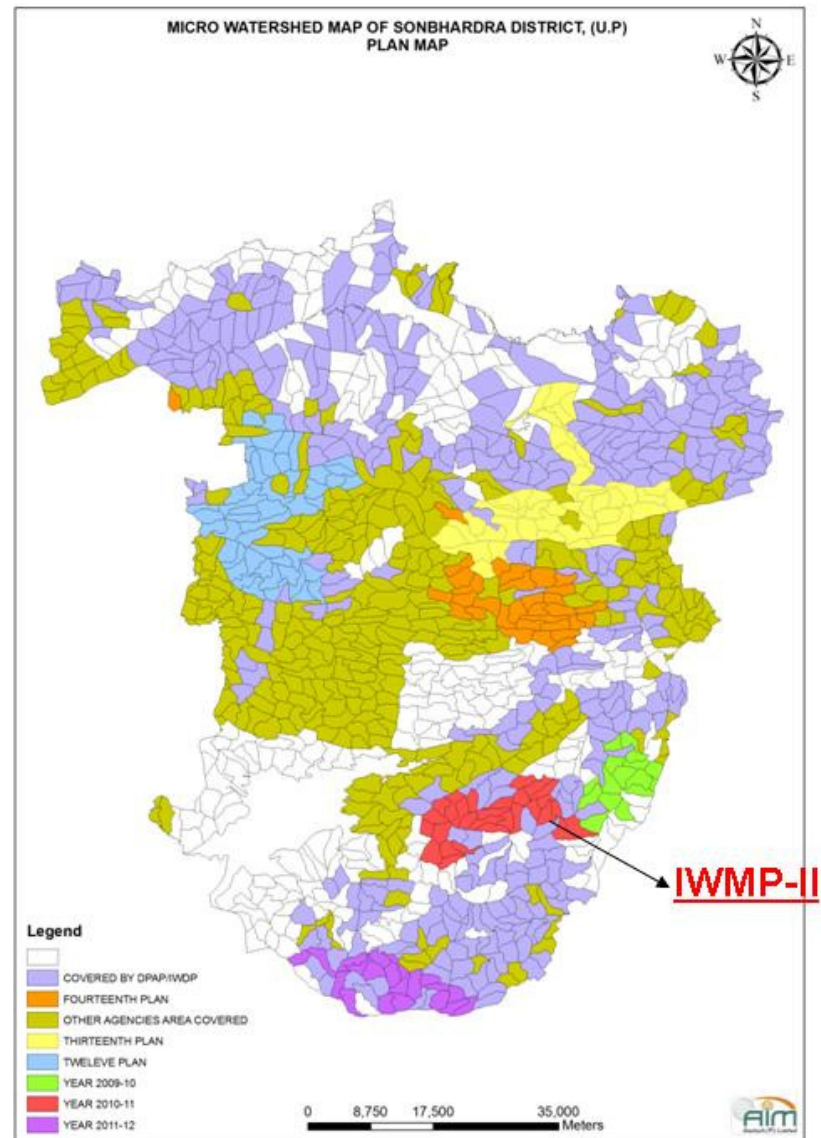
**Venn daigram of Vill. Mahuariya**



**Venn Diagram of Vill. Sayal**

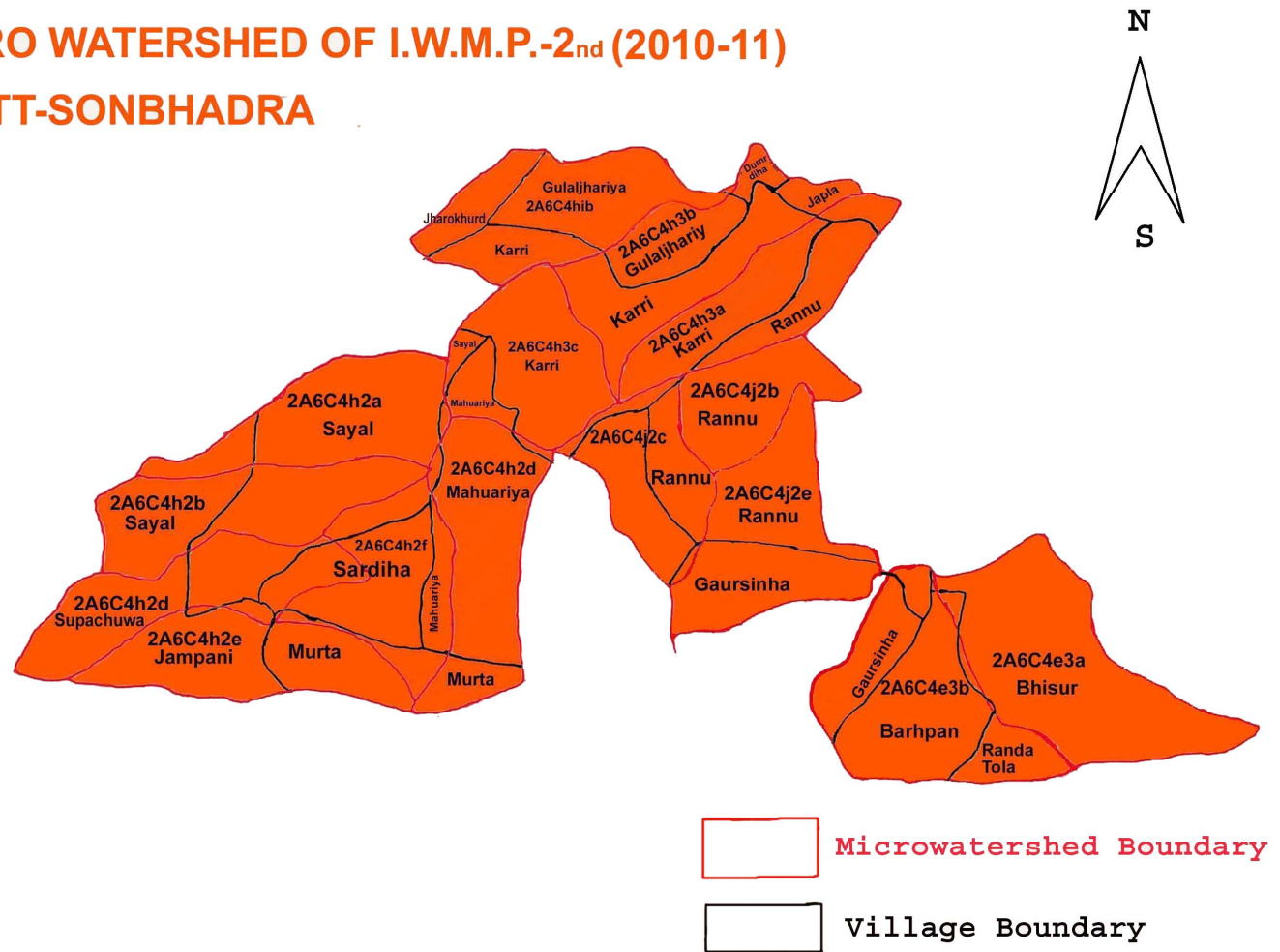
## Location Map Of The IWMP 2<sup>nd</sup> Project in Distt. Sonbhadra





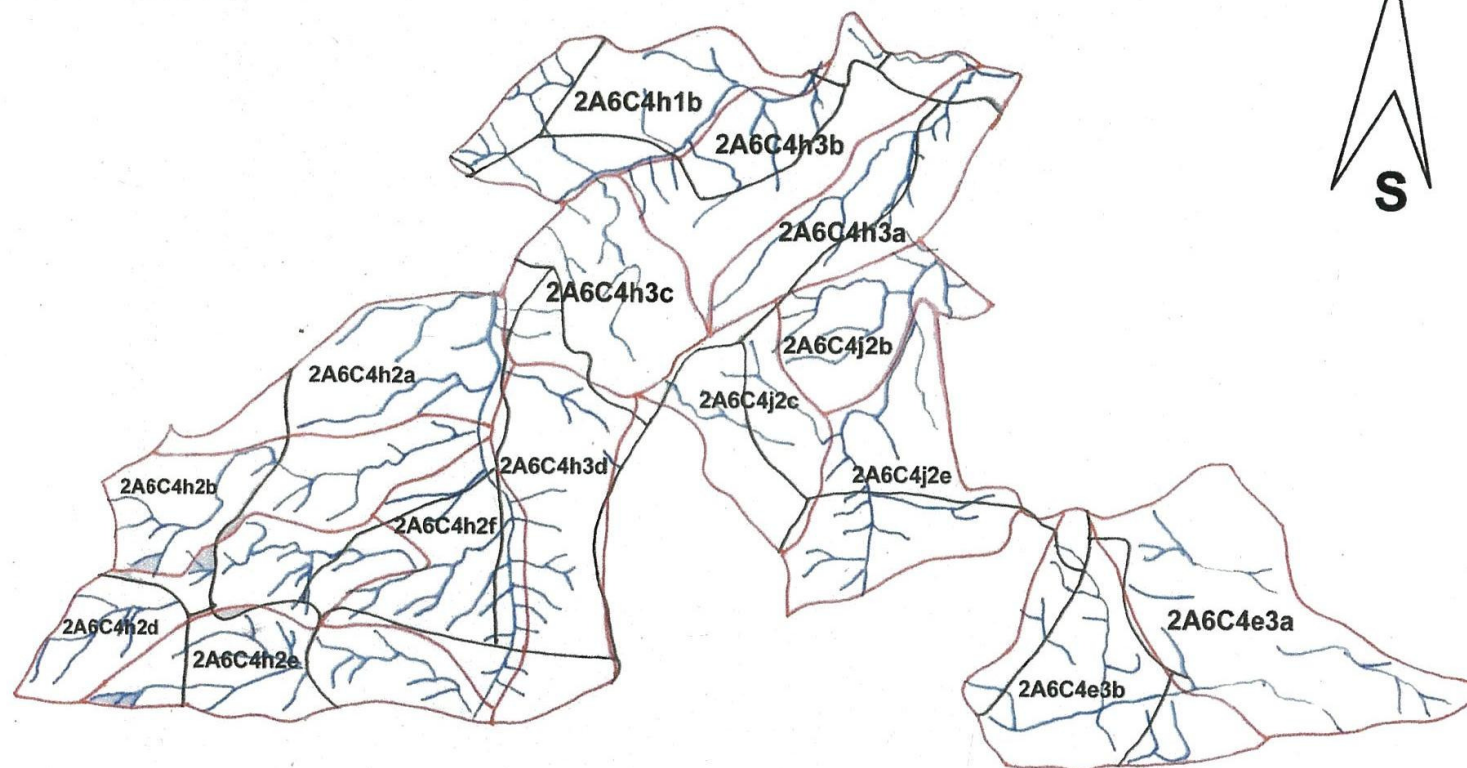



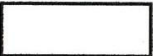

# **MICRO WATERSHED OF I.W.M.P.-2<sup>nd</sup> (2010-11)** **DISTT-SONBHADRA**





**DRAINAGE MAP OF MICROWATERSHED OF IWMP-2<sup>nd</sup>  
DISST-SONBHADRA**



-  **MICRO WATERSHED BOUNDARY**
-  **VILLAGE BOUNDARY**
-  **DRAINAGE**

**YEARWISE FINANCIAL BREAKUP OF EPA COMPONENT OF IWMP-II, DISTRICT-SONBHADRA**

**Amount in Lacs**

S. No.	Microwatershed	Project Area	Sanctioned Amount	EPA 4% of the Project Cost					
				2010-11	2011-12	2012-13	2013-14	2014-15	Total
1	Sayal I	286	34.32	1.37	-	-	-	-	1.37
2	Sayal II	303	36.36	1.45	-	-	-	-	1.45
3	Sardeeha	269	32.28	1.29	-	-	-	-	1.29
4	Mahuariya	327	39.24	1.57	-	-	-	-	1.57
5	Karri I	283	33.96	1.36	-	-	-	-	1.36
6	Karri II	280	33.60	1.34	-	-	-	-	1.34
7	Gulal Jhariya	345	41.40	1.66	-	-	-	-	1.66
8	Jharo Khurd	330	39.60	1.58	-	-	-	-	1.58
9	Jampani	289	34.68	1.39	-	-	-	-	1.39
10	Supachuha	298	35.76	1.43	-	-	-	-	1.43
11	Rannu	175	21.00	0.84	-	-	-	-	0.84
12	Terideeh	231	27.72	1.11	-	-	-	-	1.11
13	Gaursingha	341	40.92	1.64	-	-	-	-	1.64
14	Bhisur	458	54.96	2.20	-	-	-	-	2.20
15	Barhpan	395	47.40	1.90	-	-	-	-	1.90
	Total	4610	<b>553.20</b>	22.13	-	-	-	-	<b>22.13</b>

DETAILS OF EPA UNDER IWMP-II, DISTRICT-SONBHADRA

S. No.	Microwatershed	Project Area	Sanctioned Amount	Stake holder Interaction Programme		Sensitization of Village		Well Repair & Construction of jagat		Construction of village chabutra/Repair & Maint. Of Existing Water Structures		Total
				Unit/Nos.	Amount	Unit/Nos.	Amount	Unit/Nos.	Amount	Unit/Nos.	Amount	Amount
1	Sayal I	286	34.32	1	0.05	1	0.05	1	0.45	2	0.82	1.37
2	Sayal II	303	36.36	1	0.05	1	0.05	1	0.43	2	0.92	1.45
3	Sardeeha	269	32.28	1	0.05	1	0.05	1	0.41	2	0.78	1.29
4	Mahuariya	327	39.24	1	0.05	1	0.05	1	0.39	2	1.08	1.57
5	Karri I	283	33.96	1	0.05	1	0.05	1	0.52	2	0.74	1.36
6	Karri II	280	33.60	1	0.05	1	0.05	1	0.56	1	0.68	1.34
7	Gulal Jhariya	345	41.40	1	0.05	1	0.05	1	0.47	2	1.09	1.66
8	Jharo Khurd	330	39.60	1	0.05	1	0.05	1	0.44	2	1.04	1.58
9	Jampani	289	34.68	1	0.05	1	0.05	1	0.45	2	0.84	1.39
10	Supachuha	298	35.76	1	0.05	1	0.05	1	0.43	2	0.90	1.43
11	Rannu	175	21.00	1	0.05	1	0.05	1	0.52	1	0.22	0.84
12	Terideeh	231	27.72	1	0.05	1	0.05	1	0.56	1	0.45	1.11
13	Gaursingha	341	40.92	1	0.05	1	0.05	1	0.49	2	1.05	1.64
14	Bhisur	458	54.96	1	0.05	1	0.05	1	0.47	2	1.63	2.20
15	Barhpan	395	47.40	1	0.05	1	0.05	1	0.55	3	1.25	1.90
	<b>Total</b>	<b>4610</b>	<b>553.20</b>	<b>15</b>	<b>0.75</b>	<b>15</b>	<b>0.75</b>	<b>15</b>	<b>7.14</b>	<b>30</b>	<b>13.49</b>	<b>22.13</b>

### **Entry Point Activity (EPA)**

EPA activities will be taken up under the watershed project area to build a rapport with the village community at the beginning of the project. Generally certain important works which are in urgent demand of the local community is taken up. A group discussion was conducted with watershed Committee regarding the EPA Activity. The villagers discussed various activities which they felt is important. It was conveyed to them that only those activities can be taken, which revive the common natural resources. It was also taken into priority that there should be an instrument of convergence which will result in sustainability of activities.

### **Entry Point Activity (EPA)**

***An Amount of Rs. 22.13 Lakhs will be spent on Entry Point Activity under the present IWMP-II programme.***

**Details of Entry Point Activity (Physical and Financial Year-wise) are given in the next page :-**

## PROJECT IMPLEMENTING AGENCY (PIA)

U.P. Government, Land Development And Water Resources Department section-1 Lucknow has nominates as PIA of Bhoomi Sanrakshan Unit, Land development and water resources Department Sonbhadra-IIIrd for IWMP-II vide letter no- 667/54-1-10/1(9)/2008 Lucknow dt. 28.05.2010

### Details Staffing Pattern of PIA:

S.No.	Name	Designation	Qualification	Experience (Year)
1	Sri Keshav Prasad	I/c. Dy. Director	High School, Diploma in Ag. Engg.	01
2	Sri Keshav Prasad	BSA	High School, Diploma in Ag. Engg.	08
3	Sri J.A. Siddiqui	J.E.	Intermedia, Dip. in Ag. Engg.	30
4	Sri Indrapal	Accountant	B.Com	30
5	Sri Sanjeev Kumar Singh	Astt. Accountant	B.Com	7
6	Sri Rajendra Bhahadur Singh	Jr. Clerk	Intermediate	30
7	Sri Mohd Shakeel	Terser	High School	30
8	Sri Onkarnath Singh	ASCI	BSc Ag.	29
9	Sri Atma Prakesh Chaudhri	ASCI	BSc Ag.	29
10	Sri Ashok Kumar Sukala	Work Incharge	M.Com	22
11	Sri Ram Prasad Yadav	Work incharge	Intermediate	29
12	Sri Avadesh Bahadur Singh	Work incharge	Intermediate	22
13	Sri Jagdish Ram	Work incharge	B.A.	27

14	Sri Ram Khelava Yadav	Work incharge	HighSchool	28
15	Sri Lal jeet Chauhan	Work incharge	Intermediate	26
16	Sri Ram Ashare Yadav	Work incharge	High School	26
17	Sri Jai Prakesh Singh	Driver	Intermediate	33
18	Sri Ram Ji Singh	4 <sup>th</sup> Class	Jr. High School	30
19	Sri Krishan Kumar Verma	4 <sup>th</sup> Class	5 <sup>th</sup> class	30
20	Sri Prabhu Nath Singh	4 <sup>th</sup> Class	High School	30
21	Sri Raj Bahori	4 <sup>th</sup> Class	High School	2
22	Sri Pappu Nishad	4 <sup>th</sup> Class	8 <sup>th</sup> class	1

**YEARWISE FINANCIAL BREAK UP OF INST. & CAP. BULDG. PROGRAMME OF IWMP-II, DISTRICT-SONBHADRA**

**Amount in Lacs**

S. No.	Microwatershed	Project Area	Sanctioned Amount	Institutional & Capacity Building 5% of the Total Project Cost					
				2010-11	2011-12	2012-13	2013-14	2014-15	Total
1	Sayal I	286	1.72	-	1.03	0.26	0.26	0.17	1.72
2	Sayal II	303	1.82	-	1.09	0.27	0.27	0.18	1.82
3	Sardeeha	269	1.61	-	0.97	0.24	0.24	0.16	1.61
4	Mahuariya	327	1.96	-	1.18	0.29	0.29	0.20	1.96
5	Karri I	283	1.70	-	1.02	0.25	0.25	0.17	1.70
6	Karri II	280	1.68	-	1.01	0.25	0.25	0.17	1.68
7	Gulal Jhariya	345	2.07	-	1.24	0.31	0.31	0.21	2.07
8	Jharo Khurd	330	1.98	-	1.19	0.30	0.30	0.20	1.98
9	Jampani	289	1.73	-	1.04	0.26	0.26	0.17	1.73
10	Supachuha	298	1.79	-	1.07	0.27	0.27	0.18	1.79
11	Rannu	175	1.05	-	0.63	0.16	0.16	0.11	1.05
12	Terideeh	231	1.39	-	0.83	0.21	0.21	0.14	1.39
13	Gaursingha	341	2.05	-	1.23	0.31	0.31	0.20	2.05
14	Bhisur	458	2.75	-	1.65	0.41	0.41	0.27	2.75
15	Barhpan	395	2.37	-	1.42	0.36	0.36	0.24	2.37
	Total	4610	27.66	-	16.60	4.15	4.15	2.77	27.66

## **INSTITUTIONAL BUILDING**

### **Institutional Arrangement at Project level:**

#### **Project Implementing Agency (PIA)**

The SLNA would evolve appropriate mechanisms for selecting and approving the PIAs, who would be responsible for implementation of watershed projects in different. These PIAs may include relevant line departments. Autonomous organizations under State/Central Governments, Government Institutes/Research bodies, intermediate Panchayats, Voluntary Organizations (VOS).

However, the following criteria may be observed in the selection of these PIAs:

1. They should preferably have prior experience in watershed related aspects or management of watershed development project.
2. They should be prepared to constitute dedicated Watershed Development Teams.

Selected PIAs will sign a contract/MOU with the concerned DWSUs/District Level Committee as referred in para 29 that will spell out well-defined annual outcomes, against which the performance of each PIA will be monitored each year and evaluated on a regular basis by institutional evaluators from a panel approved by the SLNA/Departmental Nodal Agency at the central level.

Each PIA must put in position a dedicated watershed development team (WDT) with the approval of DWDU. the WDT will be hired on contract/deputation. Transfer etc for a term not exceeding the project period. The composition of the WDT will be indicated in the contract/MOU. No programme funds for DPR and watershed works under any circumstances should be released to either the PIA or Watershed Committee (WC) unless the composition of the WDT has been clearly indicated in the MOU/contract and the team members are fully in place.



### **Roles and Responsibilities of the PIA:**

The project implementing Agency (PIA) will provide necessary technical guidance to the Gram Panchayat for preparation of development plans for the watershed through Participatory Rural Appraisal (PRA) exercise; undertake community organization and training for the village communities, supervise watershed development activities, inspect and authenticate project accounts, encourage adoption of low cost technologies and build upon indigenous technical knowledge, monitor and review the overall project implementation and set up institutional arrangements for post-project operation and maintenance and further development of the assets created during the project period.

The PIA, after careful scrutiny, shall submit the action plan for watershed development project for approval of the DWDU/DRDA and other arrangements. The PIA shall submit the periodical progress report to DWDU. The PIA shall also arrange physical, financial and social audit of the work undertaken. It will facilitate the mobilization of additional financial resource from other government programmes, such as NREGA, BRGF, SGRY, National Horticulture Mission, Tribal, Welfare Schemes, Artificial Ground Water Recharging, Greening India, etc.

## **WATERSHED DEVELOPMENT TEAM:**

The WDT is an integral part of the PIA and will be set up by the PIA, Each WDT should have at least four members, broadly with knowledge and experience in agriculture, soil science, water management, social mobilization and institutional building. At least one of the WDT members should be a woman. The WDT members should preferably have a professional degree. However, the qualification can be relaxed by the DWDU with the approval of SNLA in deserving cases keeping in view the practical field experience of the candidate. The WDT should be located as close as possible to the watershed project. At the same time, it must be ensured that the WDT should function in close collaboration with the team of experts at the district and state level. The expenses towards the salaries of the WDT members shall be charged from the administrative support to the PIA. DWDU will facilitate the training of the WDT members.

### **Formation of Watershed Development Team**

S. No.	District	Name of PIA	Name of the Project	Sanction Year	Detail of WDT Member			
					Agriculture	Soil Science	Water Management	Sociology
1	2	3	4	5	6	7	8	9
	Sonebhadra	BSA IWMP Sonebhadra	IWMP-I I	2010-11	Sri Omkar Nath Singh BSc (Ag)	Sri Lal Jeet Singh BSc (Ag)	Sri J.A. Siddiqui Dip. In Engg.	Smt Ansu Agrawal BA (Sociology) MA (Political Science)

Note – The member of WDT can be changed by the PIA without assigning any reason.

### **Roles and Responsibilities of WDT:**

The WDT will guide the watershed committee (WC) in the formulation of the watershed action plan. An indicative list of the roles and responsibilities of the WDT would include among others, the following.

- a. Assist Gram Panchayat/Gram Sabha in constitution of the watershed committee and their functioning.
- b. Organizing and nurturing User Groups and Self-Help Groups.
- c. Mobilizing women to ensure that the perspectives and interests of women are adequately related in the watershed action plan.
- d. Conducting the participatory base-line surveys, training and capacity building.
- e. Preparing detailed resource development plans including water and soil conservation or redemption etc. to promote sustainable livelihood at household level.
- f. Common property resource management and equitable sharing.
- g. Preparing Detailed Project Report (DPR) for the consideration of Gram Sabha
- h. Undertaking engineering surveys prepare engineering drawing and cost estimates for any structure to be built.
- i. Monitoring, checking, accessing, and undertaking physical verification and measurement of work done.
- j. Facilitating the development of livelihood opportunities for the landless.
- k. Maintaining project accounts.
- l. Arranging physical, financial and social audit of work undertaken.
- m. Setting up suitable arrangements for post-project operation, maintenance and future development of the assets created during the project period.

**WATERSHED COMMITTEE (WC) :-** It is a committee that is constituted to implement the watershed project with the technical support of WDT in the village of project area. . the Gram sabha of the village selects the Chairman of the watershed committee with a secretary who will be a paid functionary in the watershed project area . A Watershed Committee has been formed in the project area. 15 watershed committee has been formed under IWMP-II project. Details is given below :-

S. No.	Name of Project	Date of Constitution	Name of President	Name of Secretary	Member of User Group	Member of SHG	Female Member	SC Member	Land Less Member	Work in Charge
1	Sayal I	07.01.2011	Phool Chand S/o Ram Bharose	Ram Dhani S/o Shankar	2	2	3	2	1	R.P. Yadav
2	Sayal II	17.01.2011	Sarju S/o Dongar	Manoj Kumar S/o Chandrika Prasad						R.P. Yadav
3	Sardeeha	03.01.2011	Ramjit S/o Ramvrish	Lorik S/o Dhanpat	2	2	1	2	1	A.K. Shukla
4	Jampani	22.01.2011	Jagpati S/o Shiv Nath	Rajesh Kumar S/o Rajdev	2	3	1	2	1	A.K. Shukla
5	Mahuariya	04.01.2011	Ramkeshwar S/o Haridwar	Santosh Kumar S/o Ram Sahai	3	2	1	1	1	A.K. Shukla
6	Supachuwa	16.01.2011	Shiv Saran S/o Ramrati	Hira Singh S/o Ram Kishun	2	2	2	2	1	O.N. Singh
7	Rannu	08.01.2011	Vasdev S/o Lalji	Sanjay Kumar S/o Jawahir	2	2	1	2	1	A.B. Singh
8	Terideeh	12.01.2011	Jawahir S/o Dev Shah	Mahadev S/o Ram Kishun	3	2	2	3	1	L.J. Chauhan
9	Bhisur	09.01.2011	Parmeshwar S/o Vikram	Vigan Ram S/o Triveni	3	3	2	2	1	R.K. Yadav
10	Barhpan	05.01.2011	Asrfi Singh S/o Ram Prasad	Dhan Raj Singh S/o Mewa	2	3	2	2	1	R.K. Yadav
11	Gaursingha	14.01.2011	Vidwant S/o Harivansh	Raj Kuamr S/o Lakshman	3	2	2	1	1	R.K. Yadav
12	Gulal Jhariya	15.01.2011	Ram Awadh Yadav S/o Baldev	Vijay Mangal S/o Ram Singh	3	2	2	2	1	Jagdish Ram
13	Jharo Khurd	11.01.2011	Hriday Narain S/o Ramchander	Lalkeshwar S/o Lakshman	2	2	1	2	1	Jagdish Ram
14	Karri I	13.01.2011	Hriday Narain S/o RamChander	Saroj Kumar S/o Ramvich	2	2	1	2	1	Jagdish Ram
15	Karri II	20.01.2011	Hriday Narain S/o RamChander	Vijay S/o Maya Shankar	3	2	2	2	1	Jagdish Ram

**USER GROUP : -** User Group will be formed in the watershed area to manage an activity or asset created under the programme on a long term basis. The user Group collect user charges from the members, oversees the works and manage the benefits. It was decided that user group would

formulate certain internal rules and have a sense of ownership with community spirit. 208 User Groups (U.G.) have been constituted of homogeneous groups of persons which are more affected by each work/related activity and has include those having land holdings within the watershed area.

**MICRO-WATERSHED-WISE USER GROUPS PROPOSED TO BE FORMED UNDER IWMP-II, DISTRICT-SONBHADRA**

S. No.	Name of Micro Watershed	Area of Micro Watershed Ha	Selected Area for Treatment	No. of User Group Constituted
1	2A6C4h2a	404.94	286.00	1
2	2A6C4h2b	429.65	303.00	12
3	2A6C4h2f	380.43	269.00	11
4	2A6C4h3d	462.3	327.00	12
5	2A6C4h3a	401.63	283.00	12
6	2A6C4h3c	396.61	280.00	12
7	2A6C4h3b	489.68	345.00	14
8	2A6C4h1b	468.05	330.00	13
9	2A6C4h2e	408.63	289.00	12
10	2A6C4h2d	421.91	298.00	12
11	2A6C4j2b	248.62	175.00	8
12	2A6C4j2c	327.86	231.00	9
13	2A6C4j2e	482.35	341.00	14
14	2A6C4e3a	643.77	458.00	16
15	2A6C4e3b	553.25	395.00	15
	<b>Total</b>	6519.68	4610.00	<b>197</b>

## **SELF HELP GROUPS**

Various Homogenous/ Heterogenous Self Help Groups have been formed, motivated and organized together through credit and theft activities in the watershed area. Self Help Group initiative will be undertaken especially for women empowerment to uplift their livelihood. Preference in Self Help Group will be given landless and poor women. Before formation of Self Help Group in the watershed area PRA exercise, Focus Group Discussion and Primary meetings were held with the women which came up with the following observation :-

- a) Lack of proper credit facilities due to low intervention of formal credit financial institution.
- b) Excessive exploitation of weaker section by money lenders.
- c) Lack of attitude for saving among poor people.
- d) Lack of Knowledge on credit and theft activities.
- e) Lack of training facilities for group activities.
- f) Lack of forward and backward linkages.
- g) Lack of marketing support.

**DETAILS OF OF SELF HELP GROUPS FORMED UNDER IWMP-II, DISTRICT-SONBHADRA  
IS GIVEN BELOW**

## **DETAILS OF OF SELF HELP GROUPS FORMED UNDER IWMP-II , DISTRICT-SONBHADRA**

S.No.	Name of Village	Block	President	Secretary	Name of SHG	Activity
1	Bhisur	Babhani	1. Vigan Ram S/o Triveni	Mangal Dev S/o Phagu Ram	Vikas Swayam Sahayata Samoooh	Goat Keeping
			2. Samraj S/o Dharam Shah	Ram Lal S/o Sohan	Jai Shiv Shankar Swayam Sahayata Samoooh	"
2	Barhpan	Myorpur	1. Suchmeta S/o Ram Swarath	Ayodhya Prasad S/o Vindeshwar	Jan Sewa Swayam Sahayata Samoooh	"
			2. Hiramaniya W/o Jansah	Sahodari W/o Balram	Barahpan Swayam Sahayata Samoooh	Dona Pattal
3	Gaursingha	Duddhi	1. Ramvricha S/o Sukhai	Gyan Shah S/o Dashrath	Raja Chandol Swayam Sahayata Samoooh	Goat Keeping
			2. Raj Kuamr S/o Lakshman	Ram Pyare S/o Nand Kishore	Margarani Swayam Sahayata Samoooh	"
4	Jharo Khurd	"	1. Moti Lal S/o Ram Dev	Ram Lakhan S/o Ram Chandra	Vikas Swayam Sahayata Samoooh	"
			2. Durga Devi W/o Hriday Narain	Manvas Devi W/o Lakhpat	Aadiwasi Mahila Swayam Sahayata Samoooh	"
5	Karri I	"	1. Anil S/o Santoshi Ram	Mahendra S/o Ekhan Ram	Nav Yuvak Swayam Sahayata Samoooh	"
			2. Lalita Devi W/o Anil	Meen Devi W/o Satyedra Ram	Maha Maya Swayam Sahayata Samoooh	"
6	Karri II	"	1. Vijay S/o Maya Shankar	Gyan Chandra S/o Ram Kumar	Jai Bajrang Swayam Sahayata Samoooh	Dairy
			2. Panpati W/o Tejbali	Vidyawati W/o Sukh Lal	Ambika Mahila Swayam Sahayata Samoooh	Goat Keeping
7	Gulal Jhariya	"	1. Bhagwan Singh S/o Ram Sunder	Ram Karan S/o Sukh Dev	Kisan Swayam Sahayata Samoooh	Goat Keeping
			2. Urmila Devi W/o Raja Ram	Mina devi Shiv Shankar	Sarswati Swayam Sahayata Samoooh	"
8	Rannu	"	1. Vindhychal S/o Buddhi Ram	Nagendra Prasad S/o Awadhesh Prasad	Jai Ambey Swayam Sahayata Samoooh	"
			2. Ram Sakay S/o Parsuram	Ramadhar S/o Mataru	Jagdeeshwar Swayam Sahayata Samoooh	"
9	Terideeh	"	1. Jawahir S/o Dev Shah	Vinod S/o Kapil	Jai Bhagwati Swayam Sahayata Samoooh	"
			2. Sateyndra S/o Maheshwar Ram	Ram Janam S/o Manrup	Bada Dev Swayam Sahayata Samoooh	"
10	Sayal I	Duddhi	Phool Chand S/o Ram Bharose	Suraj Dev S/o Somaru	Jai Ma Durgey Swayam Sahayata Samoooh	Goat Keeping
			Ramesh S/o Ghuman	Ramesh S/o Ghuman	Jai Mahabali Swayam Sahayata Samoooh	Dairy
11	Sardeeha	"	Rakesh Kumar S/o Gorakh	Suresh S/o Bhagat	Jai Shiv Shankar Swayam Sahayata Samoooh	Goat Keeping
			Rajeshwar S/o Visheshwar	Jagdish S/o Ram Sunder	Jai Man Kali Swayam Sahayata Samoooh	Dairy
12	Jampani	"	Ram Prasad S/o Lakshman	Dev Singh	Krish Sonanchal Swayam Sahayata Samoooh	Goat keeping
			Rameshwar Prasad	Rajesh Kumar	Vikas Sonanchal Swayam Sahayata Samoooh	Poultry
13	Mahuari	Myorpur	Shiv Shankar S/o Raghuveer	Bandhu S/o Lalman	Prajavati Swayam Sahayata Samoooh	Pottary
			Purushottam S/o Ram Lakhan	Vinay S/o Ram Nihor	Koteshwar Swayam Sahayata Samoooh	Dairy
			Amarjeet S/o Suddu	Naresh S/o Ram Awtar	Jai Ambey Swayam Sahayata Samoooh	Basket Making
14	Supachuwa	"	Purusottam S/o Rama	Ram Singh S/o Jeet Lal	Jai Durge Swayam Sahayata Samoooh	Poultry
			Ramvrich S/o Ram Lal	Rajpal S/o Bhumani	Jai Ambey Swayam Sahayata Samoooh	Goat Keeping
15	Sayal II	"	Shiv Prasad	Sharda Prasad	Ambedkar Swayam Sahayata Samoooh	Duck Keeping
			Jai Narain	Arjun Prasad	Swarn Jayanti Swayam Sahayata Samoooh	Goat Keeping

*An Amount of Rs27.66 Lakhs will be spent on Institutional and Capacity Building programme under the present IWMP-II programme.*

**Details of Institutional and Capacity Building is given below :-**

S.No.	Component	Unit	Quantity	Cost/Unit (Lakhs)	2010- 11	2011- 12	2012- 13	2013- 14	2014- 15	Total (Lakhs)
	<b>Institutional and Capacity Building</b>				-	16.60	4.15	4.15	2.76	27.66
	a. WDC	Nos.	4	L.S.	-	-	-	-	-	-
	b. PIA	Nos.	4	L.S.	-	-	-	-	-	-
	c. Training Programme of WDT members	Nos.	4	L.S.	-	-	-	-	-	-
	d. Training Programme of WC functionaries	Nos.	4	L.S.	-	-	-	-	-	-
	e. Training Programme WC members	Nos.	4	L.S.	-	-	-	-	-	-
	f. Training Programme of Sub WC functionaries	Nos.	4	L.S.	-	-	-	-	-	-
	g. Training Programme of User Group Functionaries	Nos.	4	L.S.	-	-	-	-	-	-
	i. Training Programme of User Group Members	Nos.	8	L.S.	-	-	-	-	-	-
	j. Training Programme SHGs Members	Nos.	8	L.S.	-	-	-	-	-	-
	k. Training Programme SHGs functionaries	Nos.	4	L.S.	-	-	-	-	-	-
	l. Training of GP/Community	Nos.	4	L.S.	-	-	-	-	-	-



**Training Methodology :-**

- i) Lecture-cum-discussion
- ii) Chart and Presentation
- iii) Brain storming session
- iv) Interactive session
- v) Group assignment and presentation
- vi) Use of audio-visual aids
- vii) Field Visits, if required

**(Training-wise estimate is available in the separate file of each micro-watershed)**

**YEARWISE FINANCIAL BREAK UP OF LIVELIHOOD ACTIVITIES IWMP-II, DISTRICT-SONBHADRA**

**Amount in Lacs**

S. No.	Microwatershed	Project Area	Sanctioned Amount	Livelihood Activities 7% of the Total project Cost					
				2010-11	2011-12	2012-13	2013-14	2014-15	TOTAL
1	Sayal I	286	2.40	-	0.34	1.03	0.69	0.34	2.40
2	Sayal II	303	2.55	-	0.36	1.09	0.73	0.36	2.55
3	Sardeeha	269	2.26	-	0.32	0.97	0.65	0.32	2.26
4	Mahuariya	327	2.75	-	0.39	1.18	0.78	0.39	2.75
5	Karri I	283	2.38	-	0.34	1.02	0.68	0.34	2.38
6	Karri II	280	2.35	-	0.34	1.01	0.67	0.34	2.35
7	Gulal Jhariya	345	2.90	-	0.41	1.24	0.83	0.41	2.90
8	Jharo Khurd	330	2.77	-	0.40	1.19	0.79	0.40	2.77
9	Jampani	289	2.43	-	0.35	1.04	0.69	0.35	2.43
10	Supachuha	298	2.50	-	0.36	1.07	0.72	0.36	2.50
11	Rannu	175	1.47	-	0.21	0.63	0.42	0.21	1.47
12	Terideeh	231	1.94	-	0.28	0.83	0.55	0.28	1.94
13	Gaursingha	341	2.86	-	0.41	1.23	0.82	0.41	2.86
14	Bhisur	458	3.85	-	0.55	1.65	1.10	0.55	3.85
15	Barhpan	395	3.32	-	0.47	1.42	0.95	0.47	3.32
	Total	4610	38.72	-	5.53	16.60	11.06	5.53	38.72

Physical and Financial Break up of Livelihood Programme at a Glance of IWMP-II, District- Sonbhadra

Amount in Lacs/Unit in Nos.

S. No.	Microwatershed	Project Area	Sanctioned Amount	2011-12									TOTAL AMOUNT
				G.M.S.		G.K		P		B		Livestock	
				Nos.	Amt.	Nos.	Amt.	Nos.	Amt.	Nos.	Amt.	Amt.	
1	Sayal I	286	0.34	1	0.18	3	0.09	2	0.020	0	0	0.053	<b>0.343</b>
2	Sayal II	303	0.36	0	0	4	0.12	4	0.040	1	0.15	0.054	<b>0.364</b>
3	Sardeeha	269	0.32	1	0.18	2	0.06	3	0.030	0	0	0.053	<b>0.323</b>
4	Mahuariya	327	0.39	1	0.18	4	0.12	4	0.040	0	0	0.052	<b>0.392</b>
5	Karri I	283	0.34	1	0.18	2	0.06	5	0.050	0	0	0.050	<b>0.340</b>
6	Karri II	280	0.34	0	0	3	0.09	4	0.040	1	0.15	0.056	<b>0.336</b>
7	Gulal Jhariya	345	0.41	1	0.18	4	0.12	6	0.060	0	0	0.054	<b>0.414</b>
8	Jharo Khurd	330	0.40	1	0.18	4	0.12	4	0.040	0	0	0.056	<b>0.396</b>
9	Jampani	289	0.35	0	0	4	0.12	2	0.020	1	0.15	0.057	<b>0.347</b>
10	Supachuha	298	0.36	0	0	4	0.12	3	0.030	1	0.15	0.058	<b>0.358</b>
11	Rannu	175	0.21	0	0	4	0.12	4	0.040	0	0	0.050	<b>0.210</b>
12	Terideeh	231	0.28	0	0	2	0.06	1	0.010	1	0.15	0.057	<b>0.277</b>
13	Gaursingha	341	0.41	1	0.18	5	0.15	2	0.020	0	0	0.059	<b>0.409</b>
14	Bhisur	458	0.55	1	0.18	4	0.12	5	0.050	1	0.15	0.050	<b>0.550</b>
15	Barhpan	395	0.47	1	0.18	2	0.06	3	0.030	1	0.15	0.054	<b>0.474</b>
	Total	4610	5.53	<b>9</b>	<b>1.62</b>	<b>51</b>	<b>1.53</b>	52	0.520	<b>7</b>	<b>1.05</b>	0.812	<b>5.532</b>

G.M.S.-General Merchant Shop @ Rs. 18000/- per shop.

G.K. - Goat Keeping @ Rs. 1500/- per Goat and 02 Goat will be given per beneficiary costin Rs. 3000/- per number

P-Poultry - 20 Chuja per beneficiary @ Rs. 15/- per chuja costing 300/- and 20 k.g. feed and other support item L.s. Rs. 700/- Total 1000/- per beneficiary

B-Bufallo @ Rs. 15000/- per Bufallo

Amount in Lacs/Unit in Nos.

Physical and Financial Break up of Livelihood Programme at a Glance of IWMP-II, District- Sonbhadra

S. No.	Microwatershed	Project Area	Sanctioned Amount	2012-13													
				G.M.S.		G.K		P		B		Basket Making		Dona Pattal		Livestock	TOTAL AMOUNT
				Nos.	Amt.	Nos.	Amt.	Nos.	Amt.	Nos.	Amt.	Nos.	Amt.	Nos.	Amt.	Amt.	
1	Sayal I	286.00	1.03	0	0	2	0.06	1	0.010	6	0.9	0	0	0	0	0.060	1.030
2	Sayal II	303.00	1.09	1	0.18	7	0.21	5	0.050	4	0.6	0	0	0	0	0.051	1.091
3	Sardeeha	269.00	0.97	0	0	5	0.15	1	0.010	5	0.75	0	0	0	0	0.058	0.968
4	Mahuariya	327.00	1.18	0	0	7	0.21	6	0.060	4	0.6	1	0.25	0	0	0.057	1.177
5	Karri I	283.00	1.02	1	0.18	5	0.15	3	0.030	4	0.6	0	0	0	0	0.059	1.019
6	Karri II	280.00	1.01	0	0	5	0.15	5	0.050	5	0.75	0	0	0	0	0.058	1.008
7	Gulal Jhariya	345.00	1.24	0	0	8	0.24	5	0.050	6	0.9	0	0	0	0	0.052	1.242
8	Jharo Khurd	330.00	1.19	1	0.18	5	0.15	5	0.050	5	0.75	0	0	0	0	0.058	1.188
9	Jampani	289.00	1.04	1	0.18	6	0.18	3	0.030	4	0.6	0	0	0	0	0.050	1.040
10	Supachuha	298.00	1.07	1	0.18	7	0.21	4	0.040	4	0.6	0	0	0	0	0.043	1.073
11	Rannu	175.00	0.63	1	0.18	2	0.06	2	0.020	2	0.3	0	0	0	0	0.070	0.630
12	Terideeh	231.00	0.83	0	0	5	0.15	3	0.030	4	0.6	0	0	0	0	0.052	0.832
13	Gaursingha	341.00	1.23	0	0	8	0.24	3	0.030	6	0.9	0	0	0	0	0.058	1.228
14	Bhisur	458.00	1.65	0	0	7	0.21	3	0.030	9	1.35	0	0	0	0	0.059	1.649
15	Barhpan	395.00	1.42	0	0	5	0.15	6	0.060	6	0.9	0	0	1	0.25	0.062	1.422
	Total	4610.00	16.60	6	1.08	84	2.52	55	0.550	74	11.1	1	0.25	1	0.25	0.846	16.596

G.M.S.-General Merchant Shop @ Rs. 18000/- per shop.

G.K. - Goat Keeping @ Rs. 1500/- per Goat and 02 Goat will be given per beneficiary costin Rs. 3000/- per number

P-Poultry - 20 Chuja per beneficiary @ Rs. 15/- per chuja costing 300/- and 20 k.g. feed and other support item L.s. Rs. 700/- Total 1000/- per beneficiary

B-Bufallo @ Rs. 15000/- per Bufallo, Basket Making @ Rs. 25000/- per group.,Dona Pattal @ Rs. 25000/- per group

**Physical and Financial Break up of Livelihood Programme at a Glance of IWMP-II, District- Sonbhadra**

**Amount in Lacs**

**Unit in Nos.**

S. No.	Microwatershed	Project Area	Sanctioned Amount	2013-14									
				G.M.S.		G.K		P		B		Livestock	TOTAL AMOUNT
				Nos.	Amt.	Nos.	Amt.	Nos.	Amt.	Nos.	Amt.	Amt.	
1	Sayal I	286	0.69	0	0	5	0.15	3	0.030	3	0.45	0.056	<b>0.686</b>
2	Sayal II	303	0.73	0	0	6	0.18	4	0.040	3	0.45	0.057	<b>0.727</b>
3	Sardeeha	269	0.65	0	0	4	0.12	2	0.020	3	0.45	0.056	<b>0.646</b>
4	Mahuariya	327	0.78	0	0	8	0.24	4	0.040	3	0.45	0.055	<b>0.785</b>
5	Karri I	283	0.68	0	0	4	0.12	5	0.050	3	0.45	0.059	<b>0.679</b>
6	Karri II	280	0.67	0	0	4	0.12	3	0.030	3	0.45	0.072	<b>0.672</b>
7	Gulal Jhariya	345	0.83	0	0	4	0.12	5	0.050	4	0.6	0.058	<b>0.828</b>
8	Jharo Khurd	330	0.79	0	0	3	0.09	5	0.050	4	0.6	0.052	<b>0.792</b>
9	Jampani	289	0.69	0	0	5	0.15	4	0.040	3	0.45	0.054	<b>0.694</b>
10	Supachuha	298	0.72	0	0	6	0.18	3	0.030	3	0.45	0.055	<b>0.715</b>
11	Rannu	175	0.42	0	0	2	0.06	1	0.010	2	0.3	0.050	<b>0.420</b>
12	Terideeh	231	0.55	0	0	1	0.03	2	0.020	3	0.45	0.054	<b>0.554</b>
13	Gaursingha	341	0.82	0	0	4	0.12	4	0.040	4	0.6	0.058	<b>0.818</b>
14	Bhisur	458	1.10	0	0	8	0.24	5	0.050	5	0.75	0.059	<b>1.099</b>
15	Barhpan	395	0.95	0	0	4	0.12	2	0.020	5	0.75	0.058	<b>0.948</b>
	Total	4610	11.06	<b>0</b>	<b>0</b>	<b>68</b>	<b>2.04</b>	52	0.520	<b>51</b>	<b>7.65</b>	0.854	<b>11.064</b>

G.M.S.-General Merchant Shop @ Rs. 18000/- per shop.

G.K. - Goat Keeping @ Rs. 1500/- per Goat and 02 Goat will be given per beneficiary costin Rs. 3000/- per number

P-Poultry - 20 Chuja per beneficiary @ Rs. 15/- per chuja costing 300/- and 20 k.g. feed and other support item L.s. Rs. 700/- Total 1000/- per beneficiary

B-Bufallo @ Rs. 15000/- per Bufallow

**Physical and Financial Break up of Livelihood Programme at a Glance of IWMP-II, District- Sonbhadra**

**Amount in Lacs**

**Unit in Nos.**

S. No.	Microwatershed	Project Area	Sanctioned Amount	2014-15									
				G.M.S.		G.K		P		B		Livestock	TOTAL AMOUNT
				Nos.	Amt.	Nos.	Amt.	Nos.	Amt.	Nos.	Amt.	Amt.	
1	Sayal I	286	0.34	0	0	4	0.12	2	0.020	1	0.15	0.053	<b>0.343</b>
2	Sayal II	303	0.36	0	0	4	0.12	4	0.040	1	0.15	0.054	<b>0.364</b>
3	Sardeeha	269	0.32	0	0	3	0.09	2	0.020	1	0.15	0.063	<b>0.323</b>
4	Mahuariya	327	0.39	0	0	5	0.15	4	0.040	1	0.15	0.052	<b>0.392</b>
5	Karri I	283	0.34	0	0	3	0.09	5	0.050	1	0.15	0.050	<b>0.340</b>
6	Karri II	280	0.34	0	0	3	0.09	4	0.040	1	0.15	0.056	<b>0.336</b>
7	Gulal Jhariya	345	0.41	0	0	6	0.18	3	0.030	1	0.15	0.054	<b>0.414</b>
8	Jharo Khurd	330	0.40	0	0	5	0.15	4	0.040	1	0.15	0.056	<b>0.396</b>
9	Jampani	289	0.35	0	0	3	0.09	2	0.020	1	0.15	0.087	<b>0.347</b>
10	Supachuha	298	0.36	0	0	4	0.12	3	0.030	1	0.15	0.058	<b>0.358</b>
11	Rannu	175	0.21	0	0	0	0	-	-	1	0.15	0.060	<b>0.210</b>
12	Terideeh	231	0.28	0	0	2	0.06	1	0.010	1	0.15	0.057	<b>0.277</b>
13	Gaursingha	341	0.41	0	0	1	0.03	2	0.020	2	0.3	0.059	<b>0.409</b>
14	Bhisur	458	0.55	0	0	5	0.15	4	0.040	2	0.3	0.060	<b>0.550</b>
15	Barhpan	395	0.47	0	0	3	0.09	1	0.010	2	0.3	0.074	<b>0.474</b>
	<b>Total</b>	<b>4610</b>	<b>5.53</b>	<b>0</b>	<b>0</b>	<b>51</b>	<b>1.53</b>	<b>41</b>	<b>0.410</b>	<b>18</b>	<b>2.7</b>	<b>0.892</b>	<b>5.532</b>

G.M.S.-General Merchant Shop @ Rs. 18000/- per shop.

G.K. - Goat Keeping @ Rs. 1500/- per Goat and 02 Goat will be given per beneficiary costin Rs. 3000/- per number

P-Poultry - 20 Chuja per beneficiary @ Rs. 15/- per chuja costing 300/- and 20 k.g. feed and other support item L.s. Rs. 700/- Total 1000/- per beneficiary

B-Bufallo @ Rs. 15000/- per Bufallow

## LIVELIHOOD PROGRAMME

*An Amount of Rs. 38.72 Lakhs will be spent on livelihood Programme under the present IWMP-II programme.*

**General Merchant Shops :-** It is proposed to give financial assistance to the members of SHGs to set up 15 nos. of General Merchant Shops under the Livelihood Component of present IWMP-II Programme and an amount of Rs. 2.70 Lacs will be spent on it. Cost to set up one General Merchant Shops is Rs. 0.18 Lacs.

Year-wise Financial and Physical break-up of General Merchant Shops to be set is given below :-

S. No.		2010-11		2011-12		2012-13		2013-14		2014-15		TOTAL	
		Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.
1.	<b>General Merchant Shop</b>	-	-	1.62	09	1.08	06	0	0	0	0	2.70	15

.

**Buffalow :-** It is proposed to give financial assistance to the members of SHGs to set up its own Dairy. One buffalow will be financed to the each member. Total 150 nos. Dairy will be finaced under the Livelihood Component of present IWMP-II Programme and an amount of Rs. 22.50 Lacs will be spent on it. Cost to set up one Dairy is Rs. 0.15 Lacs.

Year-wise Financial and Physical break-up of Financial assistance to Bufallow is given below :-

**Rs. : in Lacs**

**Phy. : in Nos.**

S. No.	Particulars	2010-11		2011-12		2012-13		2013-14		2014-15		TOTAL	
		Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.
1.	Buffalow	-	-	1.05	07	11.10	74	7.65	51	2.70	18	22.50	150

**Goat:-** It is proposed to give financial assistance to the members of SHGs to set up its own Goat Keeping. 02 goat will be financed to the each member. Total 254 unit of goat will be finaced under the Livelihood Component of present IWMP-II Programme and an amount of Rs. 7.62 Lacs will be spent on it. Cost to set up one Goat Unit (02 Goat) is Rs. 0.30 Lacs.

Year-wise Financial and Physical break-up of Financial assistance to Goat is given below :-

**Rs. : in Lacs**

**Phy. : in Nos.**

S. No.		2010-11		2011-12		2012-13		2013-14		2014-15		TOTAL	
		Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.
1.	Goat Keeping	-	-	1.53	51	2.52	84	2.04	68	1.53	51	7.62	254

**Poultry Farming :-** is proposed to give financial assistance to 200 SHGs members under the Livelihood Component of present IWMP-II Programme to start Poultry Farming and an amount of Rs. 2.00 Lacs will be spent on it.

Cost of one Poultry Farming is Rs. 0.01 Lac.

Year-wise Financial and Physical break-up of Financial assistance to Poultry Farming is given below :-

**Rs. : in Lacs**



**Phy. : in Nos.**

S. No.		2010-11		2011-12		2012-13		2013-14		2014-15		TOTAL	
		Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.
1.	Poultry Farming	-	-	0.52	52	0.55	55	0.52	0.52	0.41	41	2.00	200

**Basket and Tokari Making :- Fisheries :-** It is proposed to give financial assistance of Rs. 0.25 lacs in the third year i.e. 2012-13 of the project to start Basket and Tokari Making work under the Livelihood Component of present IWMP-II Programme. One SHG will be financed under the scheme and an amount of Rs. 0.25 Lac will be spent on it.

**Dona Pattal :-** It is proposed to give financial assistance of Rs. 0.25 lacs to one SHG in the third year i.e. 2012-13 of the project to start Dona Pattal Making work under the Livelihood Component of present IWMP-II Programme. Two SHGs will be financed under the scheme and an amount of Rs. 0.25 Lac will be spent on it.

**Livestock Development Activities :-**It is proposed to undertake various Livestock Development Activities under the Livelihood Component of present IWMP-II Programme and an amount of Rs. 3.404 Lacs will be spent on it. Following Livestock Development Activities will be undertaken under the scheme :-

- i) Artificial Insemination
- ii) Vaccination
- iii) Deworming
- iv) Mineral Mixture
- v) Fodder Development Programme.

Year-wise Financial break-up of amount to be spent on Livestock Development Activities is given below :-

**Rs. : in Lacs**  
**Phy. : in Nos.**

S. No.	Particulars	2010-11		2011-12		2012-13		2013-14		2014-15		TOTAL	
		Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.
1.	Livestock Activities	-	-	0.812	02	0.846	02	0.854	02	0.892	02	3.404	08

**YEARWISE FINANCIAL BREAK UP OF PRODUCTION & MICRO ENTERPRISES OF IWMP-II, DISTRICT-SONBHADRA**

**Amount in Lacs**

S. No.	Microwatershed	Project Area	Sanctioned Amount	Production System & Microenterprises 8% of the Total Project Cost					
				2010-11	2011-12	2012-13	2013-14	2014-15	Total
1	Sayal I	286	2.75	-	0.34	0.69	1.03	0.69	2.75
2	Sayal II	303	2.91	-	0.36	0.73	1.09	0.73	2.91
3	Sardeeha	269	2.58	-	0.32	0.65	0.97	0.65	2.58
4	Mahuariya	327	3.14	-	0.39	0.78	1.18	0.78	3.14
5	Karri I	283	2.72	-	0.34	0.68	1.02	0.68	2.72
6	Karri II	280	2.69	-	0.34	0.67	1.01	0.67	2.69
7	Gulal Jhariya	345	3.31	-	0.41	0.83	1.24	0.83	3.31
8	Jharo Khurd	330	3.17	-	0.40	0.79	1.19	0.79	3.17
9	Jampani	289	2.77	-	0.35	0.69	1.04	0.69	2.77
10	Supachuha	298	2.86	-	0.36	0.72	1.07	0.72	2.86
11	Rannu	175	1.68	-	0.21	0.42	0.63	0.42	1.68
12	Terideeh	231	2.22	-	0.28	0.55	0.83	0.55	2.22
13	Gaursingha	341	3.27	-	0.41	0.82	1.23	0.82	3.27
14	Bhisur	458	4.40	-	0.55	1.10	1.65	1.10	4.40
15	Barhpan	395	3.79	-	0.47	0.95	1.42	0.95	3.79
	Total	4610	44.26	-	5.53	11.06	16.60	11.06	44.26

**PHYSICAL AND FINANCIAL BREAK UP OF PRODUCTION AND MICRO ENTERPRISES AT A GJANCE IWMP-II, DISTRICT-SONBHADRA**

**Amount in Lacs/Phy. in ha.**

S. No.	Microwatershed	Project Area	Sanctioned Amount	2011-12												TOTAL
				W		G		A		M		P		FP		
				Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	
1	Sayal I	286	0.34	1	0.057	1	0.07	1	0.07	1	0.032	1	0.05	321	0.064	0.34
2	Sayal II	303	0.36	1	0.057	1	0.07	1	0.07	1	0.032	1	0.05	423	0.085	0.36
3	Sardeeha	269	0.32	1	0.057	1	0.07	1	0.07	1	0.032	1	0.05	219	0.044	0.32
4	Mahuariya	327	0.39	1	0.057	1	0.07	1	0.07	1	0.032	1	0.05	567	0.113	0.39
5	Karri I	283	0.34	1	0.057	1	0.07	1	0.07	1	0.032	1	0.05	303	0.061	0.34
6	Karri II	280	0.34	1	0.057	1	0.07	1	0.07	1	0.032	1	0.05	285	0.057	0.34
7	Gulal Jhariya	345	0.41	1	0.057	1	0.07	1	0.07	1	0.032	1	0.05	675	0.135	0.41
8	Jharo Khurd	330	0.40	1	0.057	1	0.07	1	0.07	1	0.032	1	0.05	585	0.117	0.40
9	Jampani	289	0.35	1	0.057	1	0.07	1	0.07	1	0.032	1	0.05	339	0.068	0.35
10	Supachuha	298	0.36	1	0.057	1	0.07	1	0.07	1	0.032	1	0.05	393	0.079	0.36
11	Rannu	175	0.21	1	0.057	0	0	1	0.07	0	0.000	1	0.05	165	0.033	0.21
12	Terideeh	231	0.28	1	0.057	0	0	1	0.07	1	0.032	1	0.05	341	0.068	0.28
13	Gaursingha	341	0.41	1	0.057	1	0.07	1	0.07	1	0.032	1	0.05	651	0.130	0.41
14	Bhisur	458	0.55	1	0.057	1	0.07	0.5	0.035	1	0.032	0.5	0.025	1653	0.331	0.55
15	Barhpan	395	0.47	1	0.057	1	0.07	1	0.07	1	0.032	1	0.05	975	0.195	0.47
	Total	4610	5.53	15	0.86	13	0.91	15	1.02	14	0.45	14.5	0.725	7895	1.579	5.53

W-Wheat/G-Gramm/A-Arhar/M-Maize/P-Paddy Demonstration. FP-Distribution of Fruit Plants, AE- Distribution of Agriculture Equipments.

AF/H-Agro Forestry/Horticulture.

**PHYSICAL AND FINANCIAL BREAK UP OF PRODUCTION AND MICRO ENTERPRISES AT A GJANCE IWMP-II, DISTRICT-SONBHADRA**

**Amount in Lacs/Phy. in ha.**

S. No.	Microwatershed	Project Area	Sanctioned Amount	2012-13																Mini Dal Machine				FP		TOTAL
				W		G		A		M		P		GM		AE		AF/H		Phy.	Fin.	Phy.	Fin.			
				Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.							
1	Sayal I	286	0.69	1	0.06	1	0.07	0	0	1	0.032	2	0.1	0	0	5	0.08		0	1	0.25	512	0.102	0.69		
2	Sayal II	303	0.73	1	0.06	0	0	0	0	1	0.032	2	0.1	5	0.13	10	0.15		0	1	0.25	1316	0.263	0.73		
3	Sardeeha	269	0.65	1	0.06	1	0.07	0	0	1	0.032	2	0.1	5	0.13	10	0.15		0	1	0.25	558	0.112	0.65		
4	Mahuariya	327	0.78	1	0.06	1	0.07	0	0	1	0.032	2	0.1	0.5	0.01	10	0.15		0	1	0.25	1816.5	0.363	0.78		
5	Karri I	283	0.68	1	0.06	1	0.07	0	0	1	0.032	2	0.1	5	0.13	10	0.15	0.5	0.1	1	0.25	226	0.045	0.68		
6	Karri II	280	0.67	1	0.06	0	0	0	0	1	0.032	2	0.1	5	0.13	10	0.15	0.5	0.1	1	0.25	540	0.108	0.67		
7	Gulal Jhariya	345	0.83	1	0.06	1	0.07	0	0	1	0.032	2	0.1	12	0.3	10	0.15		0	1	0.25	595	0.119	0.83		
8	Jharo Khurd	330	0.79	1	0.06	1	0.07	0	0	1	0.032	2	0.1	15	0.38	10	0.15		0	1	0.25	40	0.008	0.79		
9	Jampani	289	0.69	1	0.06	0	0	0	0	0	0.000	1	0.05	15	0.38	10	0.15		0	1	0.25	308	0.062	0.69		
10	Supachuha	298	0.72	1	0.06	0	0	0	0	0	0.000	2	0.1	15	0.38	10	0.15		0	1	0.25	166	0.033	0.72		
11	Rannu	175	0.42	1	0.06	0	0	0	0	0	0.000	2	0.1	0	0	0	0		0	1	0.25	1315	0.263	0.42		
12	Terideeh	231	0.55	1	0.06	1	0.07	0	0	1	0.032	2	0.1	0	0	10	0.15	0.5	0.1	1	0.25	227	0.045	0.55		
13	Gaursingha	341	0.82	1	0.06	1	0.07	0	0	1	0.032	2	0.1	10	0.25	10	0.15	0.5	0.1	1	0.25		0.059	0.82		
14	Bhisur	458	1.10	1	0.06	1	0.07	0	0	1	0.032	1	0.05	0	0	0	0		0	1	0.25	4451	0.890	1.10		
15	Barhpan	395	0.95	1	0.06	0	0	0	0	1	0.032	1	0.05	20	0.5	10	0.15	0.5	0.1	1	0.25	295	0.059	0.95		
	Total	4610	11.06	15	0.86	9	0.63	0	0.00	12	0.38	27	1.35	108	2.69	125	1.88	2.5	0.5	15	3.75	12366	2.533	11.06		

**PHYSICAL AND FINANCIAL BREAK UP OF PRODUCTION AND MICRO ENTERPRISES AT A GJANCE IWMP-II, DISTRICT-  
SONBHADRA**

**Amount in Lacs/Phy. in ha.**

**2013-14**

S. No.	Microwatershed	Project Area	Sanctioned Amount	2010-11																								TOTAL
				W		G		A		M		P		AE		AF/H		GM		Dalia Making Machine		Maze Sheller		FP				
				Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	
1	Sayal I	286	1.03	1	0.06	0	0	1	0.07	0	0.000	1	0.05	15	0.23		0	8	0.2	1	0.2	1	0.1		0.128	1.03		
2	Sayal II	303	1.09	1	0.06	0	0	1	0.07	1	0.032	2	0.1	15	0.23		0	5	0.13	1	0.2	1	0.1	909	0.182	1.09		
3	Sardeeha	269	0.97	1	0.06	0	0	1	0.07	2	0.064	2	0.1	15	0.23		0	6	0.15	1	0.2	1	0.1	12	0.002	0.97		
4	Mahuariya	327	1.18	1	0.06	0	0	1	0.07	2	0.064	2	0.1	15	0.23		0	8	0.2	1	0.2	1	0.1	806	0.161	1.18		
5	Karri I	283	1.02	1	0.06	0	0	0	0	0	0.000	1	0.05	15	0.23	0.5	0.1	5	0.13	1	0.2	1	0.1	809	0.162	1.02		
6	Karri II	280	1.01	1	0.06	0	0	1	0.07	1	0.032	1	0.05	10	0.15	0.5	0.1	6	0.15	1	0.2	1	0.1	495	0.099	1.01		
7	Gulal Jhariya	345	1.24	1	0.06	0	0	1	0.07	2	0.064	2	0.1	5	0.08		0	8	0.2	1	0.2	1	0.1	1880	0.376	1.24		
8	Jharo Khurd	330	1.19	1	0.06	0	0	1	0.07	2	0.064	2	0.1	15	0.23		0	9	0.23	1	0.2	1	0.1	735	0.147	1.19		
9	Jampani	289	1.04	1	0.06	0	0	1	0.07	2	0.064	2	0.1	5	0.08		0	10	0.25	1	0.2	1	0.1	622	0.124	1.04		
10	Supachuha	298	1.07	1	0.06	0	0	1	0.07	2	0.064	2	0.1	10	0.15		0	5	0.13	1	0.2	1	0.1	1034	0.207	1.07		
11	Rannu	175	0.63	0	0	0	0	1	0.07	0	0.000	0	0	5	0.08	0.5	0.1	0	0	1	0.2	1	0.1	425	0.085	0.63		
12	Terideeh	231	0.83	1	0.06	0	0	1	0.07	0	0.000	0	0	10	0.15	0.5	0.1	5	0.13	1	0.2	1	0.1	148	0.030	0.83		
13	Gaursingha	341	1.23	1	0.06	0	0	1	0.07	0	0.000	0	0	15	0.23	0.5	0.1	10	0.25	1	0.2	1	0.1	1128	0.226	1.23		
14	Bhisur	458	1.65	1	0.06	0	0	1	0.07	2	0.064	1	0.05	15	0.23		0	7	0.18	1	0.2	1	0.1	3539	0.708	1.65		
15	Barhpan	395	1.42	1	0.06	0	0	1	0.07	2	0.064	2	0.1	15	0.23	0.5	0.1	12	0.3	1	0.2	1	0.1	1030	0.206	1.42		
	Total	4610	16.60	14	0.80	0	0.00	14	0.98	18	0.58	20	1	180	2.7	3	0.6	104	2.6	15	3	15	1.5	14210	2.842	16.60		

**PHYSICAL AND FINANCIAL BREAK UP OF PRODUCTION AND MICRO ENTERPRISES AT A GJANCE IWMP-II, DISTRICT-SONBHADRA**

**Amount in Lacs/Phy. in ha.**

**2014-15**

S. No.	Microwatershed	Project Area	Sanctioned Amount	W		G		A		M		P		AE		AF/H		GM		FP		TOTAL
				Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	
1	Sayal I	286	0.69	1	0.057	1	0.07	1	0.07	1	0.032	1	0.05	10	0.15	0	0	8	0.2	287	0.0574	0.69
2	Sayal II	303	0.73	1	0.057	1	0.07	1	0.07	1	0.032	1	0.05	10	0.15	0	0	5	0.125	866	0.1732	0.73
3	Sardeeha	269	0.65	1	0.057	1	0.07	1	0.07	1	0.032	1	0.05	10	0.15	0	0	6	0.15	333	0.0666	0.65
4	Mahuariya	327	0.78	1	0.057	1	0.07	1	0.07	1	0.032	1	0.05	10	0.15	0	0	8	0.2	779	0.1558	0.78
5	Karri I	283	0.68	1	0.057	1	0.07	0	0	0	0.000	1	0.05	5	0.075	0.5	0.1	12	0.3	136	0.0272	0.68
6	Karri II	280	0.67	1	0.057	1	0.07	0	0	0	0.000	1	0.05	5	0.075	0.5	0.1	12	0.3	100	0.0200	0.67
7	Gulal Jhariya	345	0.83	1	0.057	1	0.07	2	0.14	1	0.032	2	0.1	10	0.15	0	0	8	0.2	395	0.0790	0.83
8	Jharo Khurd	330	0.79	1	0.057	1	0.07	2	0.14	1	0.032	1	0.05	10	0.15	0	0	9	0.225	340	0.0680	0.79
9	Jampani	289	0.69	1	0.057	1	0.07	0	0	1	0.032	2	0.1	10	0.15	0	0	10	0.25	173	0.0346	0.69
10	Supachuha	298	0.72	1	0.057	0	0	1	0.07	1	0.032	2	0.1	10	0.15	0	0	10	0.25	281	0.0562	0.72
11	Rannu	175	0.42	1	0.057	1	0.07	2	0.14	1	0.032	0	0	0	0	0.5	0.1	0	0	105	0.0210	0.42
12	Terideeh	231	0.55	1	0.057	1	0.07	2	0.14	1	0.032	2	0.1	0	0	0.5	0.1	0	0	277	0.0554	0.55
13	Gaursingha	341	0.82	1	0.057	0	0	1	0.07	1	0.032	2	0.1	10	0.15	0.5	0.1	10	0.25	297	0.0594	0.82
14	Bhisur	458	1.10	1	0.057	1	0.07	1	0.07	1	0.032	1	0.05	10	0.15		0	7	0.175	2476	0.4952	1.10
15	Barhpan	395	0.95	1	0.057	1	0.07	2	0.14	1	0.032	2	0.1	10	0.15	0.5	0.1	10	0.25	245	0.0490	0.95
	Total	<b>4610</b>	11.06	<b>15</b>	<b>0.86</b>	<b>13</b>	<b>0.91</b>	<b>17</b>	<b>1.19</b>	<b>13</b>	<b>0.42</b>	<b>20</b>	<b>1</b>	<b>120</b>	<b>1.8</b>	<b>3</b>	0.6	<b>115</b>	<b>2.875</b>	7090	1.4180	11.06

## PRODUCTION SYSTEM AND MICRO-ENTERPRISE

*An Amount of Rs. 44.26 Lakhs will be spent on Production System and Micro-Enterprise under the present IWMP-II programme.*

### DEMONSTRATION OF WHEAT

1. Variety recommended for District – Sonbhadra : Selection will be made as per the availability of seeds suitable to local climatic conditions.
2. Seed rate : 100-125 Kg/hectare
3. Requirement of fertilizers/ha : N-125 Kg, P-70-75 Kg, K-70-75 Kg

#### ESTIMATE OF DEMONSTRATION OF WHEAT IN WATERSHED (PER ha)

S.No.	Particulars	Quantity	Rate	Amount	Remark
1	Tillage operation or preparation of field for sowing	1.0 ha	1000.00/ha	1000.00	Since the project is to be operated in a participatory mode, contribution in form of the tillage, sowing, irrigation and harvesting done by farmer is not included in the estimates
2	Cost of seed	100.00 kg	18.00/kg	1800.00	
3	Sowing by seed drill	1.00 ha	1000.00/ha	1000.00	
4	D.A.P. 18:46	160.00 kg	573.00/50 kg	1833.60	
5	Urea	210 kg	270.00/50 kg	1134.00	
6	Potash (M.O.P.)	150 kg	300.00/50 kg	900.00	
7	Irrigation (three Irrigation	1.00 ha	650.00/ha	650.00	
8	Harvesting	1.00 ha	2000.00/ha	2000.00	
<b>Total</b>				<b>5667.60</b>	
<b>Say</b>				<b>5700.00</b>	

**Hence demonstration cost of wheat/ha is Rs. 5700.00**

Year-wise Financial-Physical break-up of Demonstration of Wheat and amount to be spent is given below :-

**Rs. : in Lacs**

**Phy. : in ha**

S. No.	Particulars	2010-11		2011-12		2012-13		2013-14		2014-15		TOTAL	
		Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.
1.	<b>Wheat Demonstration</b>	-	-	0.86	15	0.86	15	0.80	14	0.86	15	3.38	59

### DEMONSTRATION OF ARHAR IN WATERSHED AREA (per ha)



1. Variety recommended for District – Sonbhadra : Selection will be made as per the availability of seeds suitable to local climatic conditions.
2. Seed rate/ha : 50-55 kg
3. Fertilizer requirement/ha : N-25.00 kg, p-80 kg, k-30 kg

**ESTIMATE FOR DEMONSTRATION OF GRAM (PER ha)**

S.No.	Particulars	Quantity	Rate	Amount	Remark
1	Tillage operation in preparation of field and seed sowing	1.00 ha (twice)	1000.00/ha	2000.00	Since the project is to be operated in participatory Mode, contribution by the farmer in the form of village, sowing operation sowing and harvesting is not included in the estimates.
2	Coast of seed	55 kg	90/kg	4950.00	
3	D.A.P.	175 kg	573.00/50 kg	2005.50	
4	M.O.P.	65 kg	300.00/50 kg	390.00	
5	Medicine	1.00 ha	Lumpsum	1250.00	
6	Harvesting	1.00 ha	700.00/ha	700.00	
	<b>Total</b>			<b>8595.00</b>	
	<b>Say</b>			<b>Rs. 8600.00</b>	

**Hence per hectare of demonstration- Rs. 8600.00**

Year-wise Financial-Physical break-up of Demonstration Arhar and amount to be spent is given below :-

**Rs. : in Lacs**

**Phy. : in ha**

S. No.	Particulars	2010-11		2011-12		2012-13		2013-14		2014-15		TOTAL	
		Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.
1.	<b>Arhar Demonstration</b>	-	-	1.02	15.00	-	-	0.98	14.00	1.91	17.00	3.91	46.00

## **DEMONSTRATION OF GRAM IN WATERSHED AREA (PER ha)**

1. Variety Variety recommended for District – Sonbhadra : Selection will be made as per the availability of seeds suitable to local climatic conditions.
2. Seed Rate/ha : 30 kg
3. Requirement of fertilizers/ha : N-20 kg, P-50 kg, K-40 kg

### **ESTIMATE FOR DEMONSTRATION PF GRAM (PER ha)**

S.No.	Particulars	Quantity	Rate	Amount	Remark
1	Tillage operation in preparation of field and seed sowing	1.00 ha	1000.00/ha	1000.00	Since the project is to be operated in participatory Mode, contribution by the farmer in the form of village, sowing operation sowing and harvesting is not included in the estimates.
2	Cost of seed	30.00 kg	100.00/kg	3000.00	
3	Nitrogen N.P.K. 16:32:16	150.00 kg	470.00/50 kg	1410.00	
4	Urea	-	-	-	
5	M.O.P.	-	-	-	
6	Harvesting	1.00 ha	600.00/ha	600.00	
7	Medicine	1.00 ha	Lump sum	600.00	
	<b>Total</b>			<b>6610.00</b>	
	<b>Say</b>			<b>Rs. 6600.00</b>	

**Hence per hectare of demonstration- Rs. 6600.00**

Year-wise Financial-Physical break-up of Demonstration Gram and amount to be spent is given below :-

**Rs. : in Lacs**

**Phy. : in ha**

S. No.	Particulars	2010-11		2011-12		2012-13		2013-14		2014-15		TOTAL	
		Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.
1.	<b>Gram Demonstration</b>	-	-	0.91	13.00	0.63	9.00	-	-	0.91	13.00	2.45	26.00

## **DEMONSTRATION OF MAIZE IN WATERSHED AREA (per ha)**

1. Variety Variety recommended for District – Sonbhadra : Selection will be made as per the availability of seeds suitable to local climatic conditions.
2. Requirement of Seed/ha : 10 kg
3. Fertilizer requirement/ha : N-60.00 kg, P-40.00 kg, K-40.00 kg

**ESTIMATE FOR DEMONSTRATION OF MAIZE (PER ha) RAINFED**

S.No.	Particulars	Quantity	Rate	Amount	Remark
1	Tillage operation in preparation of field and for sowing	1.00 ha (twice)	1000.00/ha	2000.00	Since the project is to be operated in participatory Mode, contribution by the farmer in the form of village, sowing operation sowing and harvesting is not included in the estimates.
2	Coast of seed	10.00 kg	130.00/kg	1300.00	
3	Nitrogen N.P.K. 16:32:16	125.00 kg	470.00/50 kg	1175.50	
4	Urea	90.00 kg	270.00/50 kg	486.00	
5	M.O.P.	40.00 kg	300.00/50 kg	240.00	
6	Harvesting	1.00 ha	650.00/ha	600.00	
	<b>Total</b>			<b>3201.00</b>	
	<b>Say</b>			<b>Rs. 3200.00</b>	

**Hence per hectare of demonstration- Rs. 3200.00/ha**

Year-wise Financial-Physical break-up of Demonstration Maize and amount to be spent is given below :-

**Rs. : in Lacs**

**Phy. : in ha**

S. No.	Particulars	2010-11		2011-12		2012-13		2013-14		2014-15		TOTAL	
		Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.
1.	<b>Maze Demonstration</b>	-	-	0.45	14.00	0.38	12.00	0.58	18.00	0.42	13.00	1.83	57.00

### **DEMONSTRATION OF PADDY IN WATERSHED AREA (per ha)**

1. Variety Variety recommended for District – Sonbhadra : Selection will be made as per the availability of seeds suitable to local climatic conditions.
2. Requirement of Seed/ha : 50 kg
3. Fertilizer requirement/ha : N-60.00 kg, P-40.00 kg, K-40.00 kg

### **ESTIMATE FOR DEMONSTRATION OF PADDY (PER ha) RAINFED**

S.No.	Particulars	Quantity	Rate	Amount	Remark
1	Tillage operation in preparation of field and for sowing	1.00 ha	1000/ha	1000.00	Since the project is to be operated in participatory Mode, contribution by the farmer in the form of village, sowing operation sowing and harvesting is not included in the estimates.
2	Coast of seed	35.00 kg	50.00/kg	1750.00	
3	Nitrogen N.P.K. 16:32:16	100.00 kg	470.00/50 kg	940.00	
4	Urea	90.00 kg	270.00/50 kg	486.00	
5	M.O.P.	40.00 kg	300.00/50 kg	240.00	
6	Harvesting	1.00 ha	600.00/ha	600.00	
	<b>Total</b>			<b>5016.00</b>	
	<b>Say</b>			<b>Rs. 5000.00</b>	

**Hence per hectare of demonstration- Rs. 5000.00**

Year-wise Financial-Physical break-up of Demonstration Paddy and amount to be spent is given below :-

**Rs. : in Lacs**

**Phy. : in ha**

S. No.	Particulars	2010-11		2011-12		2012-13		2013-14		2014-15		TOTAL	
		Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.
1.	<b>Paddy Demonstration</b>	-	-	0.73	14.50	1.35	27.00	20	1.00	1.00	20.00	4.08	81.50

## **DEMONSTRATION OF GREEN MANURING**

*Green Manuring is very useful but due to sowing of Kharif season crop, lack of suitable type of seeds, and limitation of moisture, it is not widely practiced. Green Manuring brings immediate advantage because of its quick decomposition where as FYM and compost improves the soil physical condition in the long-run. Benefits of Green Manuring accrue from substitution of chemical fertilizers; enhance soil biological activities and erosion control due to vegetative cover.*

*Sesbania Species (Dhaincha) and Crotonia Juncea (Sunhemp Sanai) are most common green manure crops. They accumulate about 100 kg N/ha in their biomass and 64-88% of this is derived from atmosphere. Apart from direct benefit of green Manuring as a source of nutrients and organic matter, it has the capacity to mobilize soil phosphorus and other nutrients. It also helps in reclamation of problem of soil, e.g., Sesbania helps in removing exchangeable sodium and reclamation of salt affected soils.*

*In District Sonbhadra more fields are kept fallow and only single crop in Rabi is grown.*

*Therefore, this area is suitable for Green Manuring. Therefore, in I.W.M.P.II Project, efforts will be made to oblige the farmers for green Manuring.*

**A typical estimate is made for Green Manuring is given below:**

**ESTIMATE FOR GREEN MANURING IN THE WATERSHED (PER ha)**

S.No.	Particulars	Rate	Cost	Remark
1	Seed of Sesbania (Dhaincha) 25Kg/ha	25.00/kg	625	Since the project is to be operated in a participatory mode, contribution in the form of tillage will be done by farmers is not included in the estimate
2	Tillage operation before sowing and to plough the plants of Dhaincha after 40-45 days of sowing for green Manuring.	Rs.1900/ha Before and after Saring	Rs. 1900.00	
	<b>Total</b>		<b>Rs. 2525.00</b>	

**Say : Rs. 2500.00/ha**

**Therefore cost per hectare of Green Manuring is Rs. 2500.00/ha**

Year-wise Financial-Physical break-up of Demonstration Green Manuring and amount to be spent is given below :-

**Rs. : in Lacs**

**Phy. : in ha**

S. No.	Particulars	2010-11		2011-12		2012-13		2013-14		2014-15		TOTAL	
		Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.
1.	<b>Demonstration Green Mannuring</b>	-	-			2.69	108	2.60	104	2.87	115	8.16	327

**Distribution of Agriculture Equipments :-** Distribution of Agriculture Equipments will be given to the needy farmers to facilitate Agriculture Activities under the present IWMP-II programme. Total 425 farmers will be covered under Distribution of Agriculture Equipments and an amount of Rs. 6.38 Lacs will be spent on it subject to Rs. 1500/- per farmers.

Year-wise Financial-Physical break-up of Distribution of Agriculture Equipments and amount to be spent is given below :-

**Rs. : in Lacs**

**Phy. : in Nos.**

S. No.	Particulars	2010-11		2011-12		2012-13		2013-14		2014-15		TOTAL	
		Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.
1.	Distribution of Agriculture Equipments	-	-	-	-	1.88	125	2.7	180	1.80	120	6.38	425

**Distribution of Fruit Plants :-** To increase Fruit Production in the watershed area of IWMP-II extensive plantain of Fruit Plants will be undertaken. Distribution of Fruit Plants will be made available to the individual land owners. It is proposed to distribute 41561 nos of Fruit Plants to the various individual land owners. It is estimated that the cost of per Fruit Plant will be @ Rs. 20/- per plant. The cost include plant cost, loading and unloading of plants, transportation of plants from nursery to plantation site, land development, pit digging, planting, weeding, fertilizer, wages etc.) and maintenance over a period of 3 years (including casualty replacement). An amount of Rs. 8.37 Lacs will be spent on it.

Year-wise Financial-Physical break-up of Distribution of Fruit Plants and amount to be spent is given below :-

**Rs. : in Lacs**

**Phy. : in Nos.**

S. No.	Particulars	2010-11		2011-12		2012-13		2013-14		2014-15		TOTAL	
		Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.
1.	Distribution of Fruit Plants	-	-	1.58	7895	2.53	12366	2.84	14210	1.42	7090	8.37	41561

**Agro Forestry/Horticulture :-** It is proposed to undertake Agro Forestry/Horticulture Activities in the watershed area of present IWMP-II programme. An amount of Rs. 1.70 Lacs will be spent on it and an area of 8.50 ha will be covered under the Agro Forestry/Horticulture Activities.

Year-wise Financial-Physical break-up of Agro Forestry/Horticulture Activities and amount to be spent is given below :-

**Rs. : in Lacs**

**Phy. : in ha**

S. No.	Particulars	2010-11		2011-12		2012-13		2013-14		2014-15		TOTAL	
		Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.
1.	Agro-Forestry	-	-	-	-	0.50	2.5	0.6	3.0	0.6	3.0	1.70	8.50

## MICRO ENTERPRISES

**It is proposed to set up following micro enterprises in the IWMP-II project area :-**

**Mini Dal Machine :-**It is proposed to give 15 Mini Dal Machine in the third year i.e. 2012-13 of the IWMP-II Project under Micro Enterprises Programme. It is proposed to give one Mini Dal Machine in each of the Project Area as the production of Arhar/Gram/Massor is very high in the project area. But due to non availability of any further processing of arhar farmers of the area are unable to get fair price of their produce. After having this Mini Dal Machine they will be able to process their Arhar/Gram/Massor Crop which will directly increase their income due to value addition. If they are selling Arhar/Gram/Massor @ Rs. 22 to 25 per kg. they will be able to sell Arhar/Gram/Massor Dal @ Rs. 45 to 60 per kg resulting net income increase upto two times automatically. An amount of Rs. 3.75 Lacs will be spent on it. Cost of one Mini Dal Machine is 0.25 Lac Approx.

**Dalia Making Machine :-**It is proposed to give 15 Dalia Making Machine in the fourth year i.e. 2013-14 of the IWMP-II Project under Micro Enterprises Programme. It is proposed to give one Dalia Making Machine in each of the Project Area as being rainfed area the production of Wheat is



very common and popular crop in the project area. But due to non availability of any further processing of Wheat farmers of the area are unable to get fair price of their produce. After having this Dalia Making Machine they will be able to process their Wheat Crop which will directly increase their income due to value addition. If they are selling Wheat @ Rs. 08 to 10 per kg. they will be able to sell Dalia @ Rs. 16 to 20 per kg resulting net income increase upto two times automatically. An amount of Rs. 3.00 Lacs will be spent on it. Cost of one Mini Dal Machine is 0.20 Lac Approx.

**Maize Sheller :-** It is proposed to give 15 Maize Sheller Machine in the fourth year i.e. 2013-14 of the IWMP-II Project under Micro Enterprises Programme. It is proposed to give one Maize Sheller Machine in each of the Project Area as being rainfed area the production of Maize is very common and popular crop in the project area. This Maize Sheller Machine will facilitate the farmers to separate the grains of the produce in a better fashion in a less period of time. It will also increase the recovery of grain. Holder of the Maize Sheller Machine can do the job work in the nearby area of the project resulting increase in their income. An amount of Rs. 1.50 Lacs will be spent on it. Cost of one Maize Sheller Machine is 0.10 Lac Approx.

**YEARWISE FINANCIAL BREAKUP OF VARIOUS COMPONENT UNDER IWMP-II, DISTRICT-SONBHADRA**

S. No.	Installment	Year	Administrative 10 %	EPA 4 %	Institution and CB 5 %	DPR 1 %	Watershed development work 60 %	Livelihood for assetless 7 %	Production system and Microenterprises 8 %	Monitoring 1 %	Evaluation 1 %	Amount in Lacs	
												Consolidation 3 %	Total 100 %
1	Ist Phase	2010-11	0.5	4	0.5	1	-	-	-	-	-	-	6
		2011-12	1.5	-	2.5	-	7.5	1	1	0.2	0.3	-	14
2	II nd Phase	2012-13	2.7	-	0.75	-	16.5	3	2	0.2	0.175	-	25.325
		2013-14	2.7	-	0.75	-	15.85	2	3	0.2	0.175	-	24.675
3	II rd Phase	2014-15	2.6	-	0.5	-	20.15	1	2	0.4	0.35	3	30
	<b>TOTAL :</b>		<b>10</b>	<b>4</b>	<b>5</b>	<b>1</b>	<b>60</b>	<b>7</b>	<b>8</b>	<b>1</b>	<b>1</b>	<b>3</b>	<b>100</b>

# BUDGETING

The first step in budgeting is dividing the cost of the project into various components as detailed in the common guideline . It helps us in further indentifying activities under different components and allocation of funds. Release of funds will be made as per the guide lines of IWMP.

## Budget at a Glance

Budget Component	Cast requirement
<b>Net Project Cost</b>	<b>553.20</b>
-Administrative Costs	<b>55.32</b>
-Monitoring	<b>5.53</b>
-Evaluation	<b>5.53</b>
<b>Preparatory Phase:</b>	
-Entry point activities	<b>22.13</b>
-Institution and capacity building	<b>27.66</b>
-Detailed Project Report (DPR)	<b>5.53</b>
<b>Watershed works Phase:</b>	
-Watershed Development works	<b>331.92</b>
-Livelihood activities for the asset less persons,	<b>38.72</b>
-Production system and micro enterprises	<b>44.26</b>
<b>Consolidation Phase</b>	<b>16.60</b>
<b>Total</b>	<b>553.20</b>

**(2010-11 to 2014-15)**

**YEAR-WISE PHASING OF IWMP-II WORKS (COMPONENT-WISE)**

**Disrict : Sonbhadra**

**Starting Year : 2010-2011**

**Area : ha**

**Amount : In Lacs**

S.No.	Particular	2010-11		2011-12		2012-13		2013-14		2014-15		TOTAL	
		Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.
<b>1.</b>	Administrative Cost - 10%	5.53	-	5.53	-	14.94	-	14.94	-	14.38	-	55.32	-
<b>2.</b>	Monitoring -1%	-	-	1.1064	-	1.1064	-	1.1064	-	2.2128	-	5.53	-
<b>3.</b>	Evaluation - 1%	-	-	1.66	-	0.97	-	0.97	-	1.94	-	5.53	-
<b>4.</b>	Entry Point Activity - 4%	22.13	-	-	-	-	-	-	-	-	-	22.13	-
<b>5.</b>	Institution & Capacity Building - 5%	-	-	16.60	-	4.15	-	4.15	-	2.77	-	27.66	-
<b>6.</b>	DPR – 1%	5.53	-	-	-	-	-	-	-	-	-	5.53	-
<b>7.</b>	Watershed Development work - 60%	-	-	41.49	691.50	91.28	1244.70	87.68	1184.77	111.47	1489.03	331.92	4610.00
<b>8.</b>	Livelihood Activity – 7%	-	-	5.53	-	16.60	-	11.06	-	5.53	-	38.72	-
<b>9.</b>	Production System & Micro enterprises – 8%	-	-	5.53	-	11.06	-	16.60	-	11.06	-	44.26	-
<b>10.</b>	Consolidation - 3%	-	-	-	-	-	-	-	-	16.60	-	16.60	-
	<b>Total :</b>	33.19	-	77.4464	691.50	140.1064	1244.70	136.5064	1184.77	165.96	1489.03	553.20	4610.00

**PROJECTWISE/YEARWISE FINANCIAL BREAK UP OF WORK COMPONENT OF IWMP-II, DISTRICT-SONBHADRA**

**Amount in Lacs**

S. No.	Microwatershed	Project Area	Sanctioned Amount	Work Component 60% of the Total Project Cost					
				2010-11	2011-12	2012-13	2013-14	2014-15	Total
1	Sayal I	286	20.59	-	2.57	5.66	5.44	6.92	20.59
2	Sayal II	303	21.82	-	2.73	6.00	5.76	7.33	21.82
3	Sardeeha	269	19.37	-	2.42	5.33	5.12	6.50	19.37
4	Mahuariya	327	23.54	-	2.94	6.47	6.22	7.91	23.54
5	Karri I	283	20.38	-	2.55	5.60	5.38	6.84	20.38
6	Karri II	280	20.16	-	2.52	5.54	5.33	6.77	20.16
7	Gulal Jhariya	345	24.84	-	3.11	6.83	6.56	8.34	24.84
8	Jharo Khurd	330	23.76	-	2.97	6.53	6.28	7.98	23.76
9	Jampani	289	20.81	-	2.60	5.72	5.50	6.99	20.81
10	Supachuha	298	21.46	-	2.68	5.90	5.67	7.21	21.46
11	Rannu	175	12.60	-	1.58	3.47	3.33	4.23	12.60
12	Terideeh	231	16.63	-	2.08	4.57	4.39	5.59	16.63
13	Gaursingha	341	24.55	-	3.07	6.75	6.49	8.25	24.55
14	Bhisur	458	32.98	-	4.12	9.07	8.71	11.07	32.98
15	Barhpan	395	28.44	-	3.56	7.82	7.51	9.55	28.44
	Total	4610	331.92	-	41.49	91.28	87.68	111.47	<b>331.92</b>

**YEARWISE PHYSICAL AND FINANCIAL BREAK UP OF WORK COMPONENT OF IWMP-II, DISTRICT-SONBHADRA**

**Amount in Lacs**

**Physical in ha.**

S. No.	Year	Soil Conservation		Water Resources		Afforestation		TOTAL	
		Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.
1	2010-11	-		-		-			
2	2011-12	255.86	10.23	383.78	27.11	51.86	4.15	691.5	41.49
3	2012-13	452.24	18.09	678.36	64.06	114.1	9.13	1244.7	91.28
4	2013-14	430.07	17.2	645.1	61.71	109.6	8.77	1184.77	87.68
5	2014-15	539.88	21.6	809.82	78.73	139.33	11.14	1489.03	111.47
	<b>TOTAL :</b>	<b>1678.05</b>	<b>67.12</b>	<b>2517.06</b>	<b>231.61</b>	<b>414.89</b>	<b>33.19</b>	<b>4610</b>	<b>331.92</b>

# **WORKWISE/YEARWISE PHYSICAL AND FINANCIAL PHASING OF WORK UNDER IWMP-II, DISTRICT-SONBHADRA**

Amount in Lacs

Physical in ha.

S. No.	Year	Soil Conservation								Water Resources						Afforestation		TOTAL	
		FB		MB		PFB		TOTAL		CD		WHB		TOTAL		Phy.	Fin.	Phy.	Fin.
		Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.				
1	2010-11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2	2011-12	115.14	2.56	76.76	3.07	63.97	4.60	255.86	10.23	230.27	10.84	153.51	16.27	383.78	27.11	51.86	4.15	691.50	41.49
3	2012-13	203.51	4.52	135.67	5.43	113.06	8.14	452.24	18.09	407.02	25.62	271.34	38.44	678.36	64.06	114.10	9.13	1244.70	91.28
4	2013-14	193.53	4.30	129.02	5.16	107.52	7.74	430.07	17.20	387.06	24.68	258.04	37.03	645.10	61.71	109.60	8.77	1184.77	87.68
5	2014-15	242.95	5.40	161.96	6.48	134.97	9.72	539.88	21.60	485.89	31.49	323.93	47.24	809.82	78.73	139.33	11.14	1489.03	111.47
	<b>TOTAL</b>	<b>755.12</b>	<b>16.78</b>	<b>503.42</b>	<b>20.14</b>	<b>419.51</b>	<b>30.20</b>	<b>1678.05</b>	<b>67.12</b>	<b>1510.24</b>	<b>92.64</b>	<b>1006.82</b>	<b>138.97</b>	<b>2517.06</b>	<b>231.61</b>	<b>414.89</b>	<b>33.19</b>	<b>4610.00</b>	<b>331.92</b>

Amount in Lacs/Phy. in ha.

WORK COMPONENT FINANCIAL AND PHYSICAL

2011-12

S. No.	Microwatershed	Project Area	Sanctioned Amount	Soil Conservation		Water Resources		Soil Conservation + Water Resources		Afforestation		TOTAL	
				Phy.	Fin.	Phy.	Fin	Phy.	Fin	Phy.	Fin.	Phy.	Fin.
1	Sayal I	286	34.32	15.87	0.63	23.81	1.68	39.68	2.32	3.22	0.26	42.90	2.57
2	Sayal II	303	36.36	16.82	0.67	25.22	1.78	42.04	2.45	3.41	0.27	45.45	2.73
3	Sardeeha	269	32.28	14.93	0.60	22.39	1.58	37.32	2.18	3.03	0.24	40.35	2.42
4	Mahuariya	327	39.24	18.15	0.73	27.22	1.92	45.37	2.65	3.68	0.29	49.05	2.94
5	Karri I	283	33.96	15.71	0.63	23.56	1.66	39.27	2.29	3.18	0.25	42.45	2.55
6	Karri II	280	33.60	15.54	0.62	23.31	1.65	38.85	2.27	3.15	0.25	42.00	2.52
7	Gulal Jhariya	345	41.40	19.15	0.77	28.72	2.03	47.87	2.79	3.88	0.31	51.75	3.11
8	Jharo Khurd	330	39.60	18.32	0.73	27.47	1.94	45.79	2.67	3.71	0.30	49.50	2.97
9	Jampani	289	34.68	16.04	0.64	24.06	1.70	40.10	2.34	3.25	0.26	43.35	2.60
10	Supachuha	298	35.76	16.54	0.66	24.81	1.75	41.35	2.41	3.35	0.27	44.70	2.68
11	Rannu	175	21.00	9.71	0.39	14.57	1.03	24.28	1.42	1.97	0.16	26.25	1.58
12	Terideeh	231	27.72	12.82	0.51	19.23	1.36	32.05	1.87	2.60	0.21	34.65	2.08
13	Gaursingha	341	40.92	18.93	0.76	28.39	2.01	47.31	2.76	3.84	0.31	51.15	3.07
14	Bhisur	458	54.96	25.42	1.02	38.13	2.69	63.55	3.71	5.15	0.41	68.70	4.12
15	Barhpan	395	47.40	21.92	0.88	32.88	2.32	54.81	3.20	4.44	0.36	59.25	3.56
	<b>Total</b>	<b>4610</b>	<b>553.20</b>	<b>255.86</b>	<b>10.23</b>	<b>383.78</b>	<b>27.11</b>	<b>639.64</b>	<b>37.34</b>	51.86	4.15	<b>691.50</b>	<b>41.49</b>



Amount in Lacs/Phy. in ha.

WORK COMPONENT FINANCIAL AND PHYSICAL : 2012-13

S. No.	Microwatershed	Project Area	Sanctioned Amount	Soil Conservation		Water Resources		Soil Conservation + Water Resources		Afforestation		TOTAL	
				Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.
1	Sayal I	286	34.32	28.06	1.12	42.08	3.97	70.14	5.10	7.08	0.57	77.22	5.66
2	Sayal II	303	36.36	29.72	1.19	44.59	4.21	74.31	5.40	7.50	0.60	81.81	6.00
3	Sardeeha	269	32.28	26.39	1.06	39.58	3.74	65.97	4.79	6.66	0.53	72.63	5.33
4	Mahuariya	327	39.24	32.08	1.28	48.12	4.54	80.20	5.83	8.09	0.65	88.29	6.47
5	Karri I	283	33.96	27.76	1.11	41.64	3.93	69.41	5.04	7.00	0.56	76.41	5.60
6	Karri II	280	33.60	27.47	1.10	41.20	3.89	68.67	4.99	6.93	0.55	75.60	5.54
7	Gulal Jhariya	345	41.40	33.84	1.35	50.77	4.79	84.61	6.15	8.54	0.68	93.15	6.83
8	Jharo Khurd	330	39.60	32.37	1.29	48.56	4.59	80.93	5.88	8.17	0.65	89.10	6.53
9	Jampani	289	34.68	28.35	1.13	42.53	4.02	70.88	5.15	7.15	0.57	78.03	5.72
10	Supachuha	298	35.76	29.23	1.17	43.85	4.14	73.08	5.31	7.38	0.59	80.46	5.90
11	Rannu	175	21.00	17.17	0.69	25.75	2.43	42.92	3.12	4.33	0.35	47.25	3.47
12	Terideeh	231	27.72	22.66	0.91	33.99	3.21	56.65	4.12	5.72	0.46	62.37	4.57
13	Gaursingha	341	40.92	33.45	1.34	50.18	4.74	83.63	6.08	8.44	0.68	92.07	6.75
14	Bhisur	458	54.96	44.93	1.80	67.39	6.36	112.32	8.16	11.34	0.91	123.66	9.07
15	Barhpan	395	47.40	38.75	1.55	58.12	5.49	96.87	7.04	9.78	0.78	106.65	7.82
	<b>Total</b>	<b>4610</b>	553.20	<b>452.24</b>	<b>18.09</b>	<b>678.36</b>	<b>64.06</b>	<b>1130.60</b>	<b>82.15</b>	114.10	9.13	<b>1244.70</b>	<b>91.28</b>

Amount in Lacs/Phy. in ha.

WORK COMPONENT FINANCIAL AND PHYSICAL : 2013-14

S. No.	Microwatershed	Project Area	Sanctioned Amount	Soil Conservation		Water Resources		Soil Conservation + Water Resources		Afforestation		TOTAL	
				Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.
1	Sayal I	286	34.32	26.68	1.07	40.02	3.83	66.70	4.90	6.80	0.54	<b>73.50</b>	<b>5.44</b>
2	Sayal II	303	36.36	28.27	1.13	42.40	4.06	70.67	5.19	7.20	0.58	<b>77.87</b>	<b>5.76</b>
3	Sardeeha	269	32.28	25.10	1.00	37.64	3.60	62.74	4.60	6.40	0.51	<b>69.13</b>	<b>5.12</b>
4	Mahuariya	327	39.24	30.51	1.22	45.76	4.38	76.26	5.60	7.77	0.62	<b>84.04</b>	<b>6.22</b>
5	Karri I	283	33.96	26.40	1.06	39.60	3.79	66.00	4.84	6.73	0.54	<b>72.73</b>	<b>5.38</b>
6	Karri II	280	33.60	26.12	1.04	39.18	3.75	65.30	4.79	6.66	0.53	<b>71.96</b>	<b>5.33</b>
7	Gulal Jhariya	345	41.40	32.19	1.29	48.28	4.62	80.46	5.91	8.20	0.66	<b>88.67</b>	<b>6.56</b>
8	Jharo Khurd	330	39.60	30.79	1.23	46.18	4.42	76.96	5.65	7.85	0.63	<b>84.81</b>	<b>6.28</b>
9	Jampani	289	34.68	26.96	1.08	40.44	3.87	67.40	4.95	6.87	0.55	<b>74.27</b>	<b>5.50</b>
10	Supachuha	298	35.76	27.80	1.11	41.70	3.99	69.50	5.10	7.08	0.57	<b>76.59</b>	<b>5.67</b>
11	Rannu	175	21.00	16.33	0.65	24.49	2.34	40.81	3.00	4.16	0.33	<b>44.98</b>	<b>3.33</b>
12	Terideeh	231	27.72	21.55	0.86	32.32	3.09	53.87	3.95	5.49	0.44	<b>59.37</b>	<b>4.39</b>
13	Gaursingha	341	40.92	31.81	1.27	47.72	4.56	79.53	5.84	8.11	0.65	<b>87.64</b>	<b>6.49</b>
14	Bhisur	458	54.96	42.73	1.71	64.09	6.13	106.82	7.84	10.89	0.87	<b>117.71</b>	<b>8.71</b>
15	Barhpan	395	47.40	36.85	1.47	55.27	5.29	92.12	6.76	9.39	0.75	<b>101.52</b>	<b>7.51</b>
	<b>Total</b>	<b>4610</b>	553.20	<b>430.07</b>	<b>17.20</b>	<b>645.10</b>	<b>61.71</b>	<b>1075.17</b>	<b>78.91</b>	109.60	8.77	<b>1184.77</b>	<b>87.68</b>

Amount in Lacs/Phy. in ha.

WORK COMPONENT FINANCIAL AND PHYSICAL : 2014-15

S. No.	Microwatershed	Project Area	Sanctioned Amount	Soil Conservation		Water Resources		Soil Conservation + Water Resources		Afforestation		TOTAL	
				Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.
1	Sayal I	286	34.32	33.49	1.39	50.24	3.64	83.734	5.03	8.64	0.69	92.378	6.92
2	Sayal II	303	36.36	35.48	1.42	53.23	5.17	88.71	6.59	9.16	0.73	97.869	7.33
3	Sardecha	269	32.28	31.50	1.26	47.25	4.59	78.76	5.85	8.13	0.65	86.887	6.50
4	Mahuariya	327	39.24	38.29	1.53	57.44	5.58	95.74	7.12	9.88	0.79	105.621	7.91
5	Karri I	283	33.96	33.14	1.33	49.71	4.83	82.86	6.16	8.55	0.68	91.409	6.84
6	Karri II	280	33.60	32.79	1.31	49.19	4.78	81.98	6.09	8.46	0.68	90.44	6.77
7	Gulal Jhariya	345	41.40	40.40	1.62	60.60	5.89	101.01	7.51	10.43	0.83	111.435	8.34
8	Jharo Khurd	330	39.60	38.65	1.55	57.97	5.64	96.62	7.18	9.97	0.80	106.59	7.98
9	Jampani	289	34.68	33.84	1.35	50.77	4.94	84.61	6.29	8.74	0.70	93.347	6.99
10	Supachuha	298	35.76	34.90	1.40	52.35	5.09	87.25	6.49	9.01	0.72	96.254	7.21
11	Rannu	175	21.00	20.49	0.82	30.74	2.99	51.24	3.81	5.29	0.42	56.525	4.23
12	Terideeh	231	27.72	27.05	1.08	40.58	3.94	67.63	5.03	6.98	0.56	74.613	5.59
13	Gaursingha	341	40.92	39.93	1.60	59.90	5.82	99.84	7.42	10.31	0.82	110.143	8.25
14	Bhisur	458	54.96	53.64	2.15	80.45	7.82	134.09	9.97	13.84	1.11	147.934	11.07
15	Barhpan	395	47.40	46.26	1.85	69.39	6.75	115.66	8.60	11.93	0.96	127.585	9.55
	<b>Total</b>	<b>4610</b>	553.20	<b>539.88</b>	<b>21.60</b>	<b>809.82</b>	<b>78.73</b>	<b>1349.69</b>	<b>100.32</b>	139.34	11.15	<b>1489.03</b>	<b>111.47</b>

## WATERSHED DEVELOPMENT WORKS

Following Watershed Development Works will be undertaken under the IWMP-I programme :-

1. Soil Conservation Work : - Field Bund /Marginal bund/PFB will be constructed under the IWMP-II programme and an amount of Rs. 67.12 lacs will be spent on it. Total coverage area will be 1678.05 ha .Year-wise Financial and Physical Break-up is given below :-

**Area : ha**  
**Amount : In Lacs**

S. No.	Particulars	2010-11		2011-12		2012-13		2013-14		2014-15		TOTAL	
		Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.
1.	<b>Soil Conservation :- FB/MB/PFB</b>	-	-	10.23	255.86	18.09	452.24	17.20	430.07	21.60	539.88	67.12	1678.05

2. Water Conservation Work :- Earthen Check Dam (CD)/Water Harvesting Bund (W.H.B.) will be constructed under the IWMP-II programme and an amount of Rs. 231.61 lacs will be spent on it. Total coverage area will be 2517.06 ha .Year-wise Financial and Physical Break-up is given below :-

**Amount : In Lacs**  
**Area : ha**

S. No.	Particulars	2010-11		2011-12		2012-13		2013-14		2014-15		TOTAL	
		Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.
1.	<b>Water Resources :- CD/WHB</b>	-	-	27.11	383.78	64.06	678.36	61.71	645.10	78.73	809.82	231.61	2517.06

3. **Afforestation :-** An amount of Rs. 31.19 will be spent on Afforestation activities under the IWMP-II programme. Total coverage area will be

414.89 ha . Year-wise Financial and Physical Break-up is given below :-

**Area : ha**  
**Amount : In Lacs**

S. No.	Particulars	2010-11		2011-12		2012-13		2013-14		2014-15		TOTAL	
		Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.	Fin.	Phy.
1.	Afforestation	-	-	4.15	51.86	9.13	114.10	8.77	109.60	11.14	139.33	33.19	414.89

### **Afforestation Activities :**

Written consent of owners of land that they have no objection to nursery/ afforestation activities being taken up on their lands.

The activities under the Afforestation component of the present IWMP-I Programme would broadly be as under:

- Raising of seedlings;
- Planting;
- Soil and moisture conservation works;
- Awareness, training and extension;
- Grass and fodder development including silvi-pasture.

The land on which Afforestation activities are proposed has been properly and fully identified. Details of the land such as survey area, and names of owners is given location-wise in the separate file of the each micro-watershed.

### **Proportion of Species for Afforestation :-**

For planting/Afforestation, the type (species) of plants and their proportion should be carefully decided in consultation with the beneficiaries and local representatives or persons who have knowledge about the subject. The number of plants per hectare will depend on the growing space required for each type of plant and should be decided in consultation with persons who have technical knowledge of the subject.

Species covered under planting / afforestation should include

- fuelwood,
- fodder,
- small timber,
- fruit, and
- other species,

which provide food and income to the local people while also improving the status of the land. Microplan for Afforestation activities would be prepared for the project area in consultation with the local community/ beneficiaries as far as possible. Microplan should include:

- Site demarcation and management map preparation;
- The planting programme;
- Site Preparation;
- Choice of species and method of establishment; the techniques for raising seedlings and planting, maintenance etc.
- Harvesting of fodder, fuelwood etc;
- Protection, the village community should work out a mechanism best suited to the local conditions;
- Benefit sharing mechanism.

Projects for raising of seedlings and their distribution need to be accompanied by documents clearly identifying the land proposed for nursery activity and consent of the concerned landowner(s) for nursery activity. Amount under Afforestation activities will be borne on planting (including plant cost, loading and unloading of plants, transportation of plants from nursery to plantation site, land development, pit digging, planting,

weeding, fertilizer, wages etc.) and maintenance over a period of 3 years (including casualty replacement). Awareness raising activities will also be undertaken for Afforestation activities. Supplementary efforts to include soil and moisture conservation measures and/or watering would be promoted. For afforestation transportation and loading & un-loading assistance will also be given. Agro-forestry work for longitudinal planting along the boundaries of farms, road sides, canal sides, river sides etc. Activities like grass and fodder development can also be undertaken in combination with afforestation activities (Silvipasture).

*An amount of Rs. 33.19 Lacs will be spent on Afforestation Activities under the present IWMP-II Programme which is approx. 10% of the amount of work Execution compmnent.. Micro-watershed-wise details of amount to be spent on Afforestation and the total coverage area will be 414.89 ha.*

## **PASTURE MANAGEMENT**

**Itroduction** : The sound animal industry in any country centers around good quality feed and fodder. The livestock population in India is nearly 15% of the total livestock population of the world, though we have only 2% of the world's geographical area. The project on for green and dry fodder requirement in India has been estimated at 1061 and 590 million tons by 2010A-D, while the present feed and fodder resources in the country can meet only 4% of the requirement. The grazing intensity is very high i.e., 26 adult cattle unit (ACU)/ha as against 0.8 ACU in the developing countries.

The importance of grasses for protection and production, the and production, the two aspects of soil and water conservation is well know. Grass is unique in that it is the only resource utilized in situ by grazing. A “grassland” or more appropriately, a “range” is defined as “the areas which are predominantly covered with grasses or grass like plant and are primarily utilized as for age for grazing animals or used as hay,” The grasslands are the major sources of food to the animals.

**Pasture Management** : All grazing areas are referred to as pastures, but ore specifically the term is applied to cultivated grassland used for grazing. Thus pastures are artificial grasslands with or without non-grass vegetation (such as legumes) that are created with selected high forage-yielding grass and legume species and with inputs like fertilizers and irrigation and carefully managed to exclude all other vegetation. Pastures are usually fenced and used for grazing, for gay and silage making or for both.

**Intensive Fodder Production** : In areas where the major enterprise of the farmers centers around the milk production. Continuous supply of green fodder round the year is the basis for success of such as industry. Under the aegis of ICAR's all India coordinated Research Project on Forage Crops, several highly productive fodder cropping system have been tested and recommendations made for their general use. For central region important intensive crop rotations are presented as given below

<b>Zone wise crop rotations yield (t/ha)</b>	<b>Green Fodder</b>
Central region	
1. Hybrid napier + Cowpea-Berseem+Japanrape	286.3
2. Maize+Cowper-Jowar-Berseem+Japanrape	197.2



**Conservation on of Forages** : In order to sustain animal production, it is essential that the optimum feeding should be maintained round the year. In India, we have two seasons, rainy season and winter season, when surplus quantities of green fodder is available-country to this there are 2 to 3 months of lean periods (October-November and April to July) when the fodder availability to animals is at its low. In the summer months, it is difficult even to meet the maintenance requirements of the animals. Stage of maturity to feed the animals adequately during the lean period. The conservation of forages could be done in the form of silage from cultivated fodders (legumes and cereals) and also pasture grasses. Forages could also be conserved in the form of hay when dried to its nutrients. This feed stuff is quantitatively important from both maintenance and nutritional point of view.

**Agro-forestry system for fodder production** : A Number of fodder trees play an important role in human food security through their function as animal food sources, especially as drought services. Agro-forestry system consisting of such tress and animals and/or pasture are called Silvo-Pastoral system.

*Silvi-Pasture (or Silvo-Pastoral system) is the most promising alternate land use system which integrates multipurpose trees, shrubs, legumes and grasses mostly on non-arable, degraded and marginal lands for optimizing land productivity. It helps in conservation of vegetation, soil and nutrients and provides forage, timber and fuel wood on a sustainable basis.*

*Potentials of Semi-arid region for different forage production system.*

Region	Forge Production Systems
Semi arid	Integration of Agro-Silvi-Pasture, dry land agriculture on cultivated Lands. Forge-cum-Copying forming on the marginal and sub marginal lands with intercropping dry lands cereals and legumes

### **ROLE OF GRASSLAND IN SOIL CONSERVATION**

*The grass plant itself protects the soil form the forces of water erosion including the impact of rain drops and surface flow. Grass acts a spring cushion interception and broking up the falling rain drops in their way down. Conducting the water down the blades and stems of the plants and*

*finally allowing it to reach the ground as fine sprays without disturbing the surface. Clumps of grass plants, in a mechanical way, obstruct-flowing water of flow.*

*In fact to control soil erosion whatever technique is adopted, there are four approaches to deal with the problem:*

- 1. To condition the soil to make it resistant to detergent and transportation and create more absorptive surface layer.*
- 2. To cover the soil so that it is protected from the impact of wind and rain drops.*
- 3. To decrease the velocity of wind or runoff water.*
- 4. To provide safe disposal outlet for surplus run off.*

*Grass in the nature highly efficient device to protect the soil from destructive forces like rain, wind etc. Grass and legumes increase the aggregation of soil particles; improve soil structure and water holding capacity of the soil. Grasses gives quicker protection to eroded lands. To establish gully sides, water ways, gully head and check dam. Grass is perhaps the most effective and economical tool. It can put to various uses in soil conservation:*

- 1- Strip cropping, rotational cropping or lay farming.*
- 2- Stabilization of bunds and terraces.*
- 3- Stabilization of gullies, diversion or drainage channels.*
- 4- Stabilization of sand dunes.*
- 5- Meadows and pasture on steep slopes.*
- 6- Fertility builder for eroded soil.*

**Financial/Physical component is included under the head of Afforestation Activities i.e. approx. 10% of the work component.**

## EXPECTED OUTCOME OF THE PROJECT

Different Item/Variables-wise present status and expected outcome of the IWMP-II project is given in following tables :-

### DETAILS OF SEASONAL MIGRATION IN THE WATERSHED AREA :-

S. No.	Name of the Project	Number of Persons Migrating/Year		Number of days of Migration/Year	
		Pre-project	Expected Post-project	Pre-project	Expected Post-project
1.	IWMP-II	4115	2360	180	120

### GROUND WATER TABLE :-

S. No.	Name of the Project	Source	Pre-project Level	Expected Increase/Decrease Post-project
1.	IWMP-II	Open Well	20.00 m	19.50 m

### STATUS OF DRINKING WATER :-

S. No.	Name of the Project	Availability of Drinking Water (Number of Months in a Year)		Quality of Drinking Water	
		Pre-project	Expected Post-project	Pre-project	Expected Post-project
1.	IWMP-II	8	10	Very Poor	Good

**HORTICULTURE :- AREA UNDER HORTICULTURE**

S. No.	Name of the Project	Existing Area under Horticulture (ha)	Area under Horticulture (ha) Proposed to be Covered Under AWMP
1.	IWMP-II	0	42

**FOREST/VEGETATIVE COVER :-**

S. No.	Name of the Project	Existing Area under Vegetative Cover (ha)	Area under Vegetative Cover (ha) Proposed to be Covered Under AWMP
1.	IWMP-II	0	105

**AREA UNDER FUEL & FODDER :-**

S. No.	Name of the Project	Existing Area under Fuel & Fodder (ha)	Area under Fuel & Fodder (ha) Proposed to be Covered Under AWMP
1.	IWMP-II	0	45

**CHANGE IN CROPPING/LAND USE PATTERN :-**

S. No.	Name of the Project	Cropping/Land use Pattern	Pre-project (ha)	Expected Post-project
1.	IWMP-I	Area under single use	4059	4059
2.		Area under double use	2055	3280
3.		Area under multiple use	75	110
4.		Cropping Intensity	134%	161%



**DETAILS OF LIVESTOCK IN THE PROJECT AREA (FOR FLUIDS : FOR FLUIDS - LITERS; FOR  
SOLIDS – kg AND INCOME IN Rs.)**

S. No.	Name of the Project	Type of Animal	Pre-project				Expected Post-project			
			Nos.	Yield	Rate/Ltr. Or kg.	Income in Rs.	Nos.	Yield	Rate/Ltr. Or kg.	Income in Rs.
1	IWMP-II	Milch animals								
		i) Cow (per animal per day)	3914	3914	12/-	46968	4914	7371	16/-	117936
		ii) Buffalo (per animal per day)	2424	3636	12/-	43632	3674	7348	16/-	117568
2	IWMP-II	Animal for other purpose								
		i) Goat (Meat : Rs./kg.)	7299	19464	150	2919600	21897	58392	225/-	13138200
		ii) Poultry (Meat : Rs./kg.)	7115	7115	65/-	462475	14230	14230	110/-	1565300
TOTAL :			20752	34129	-	3472675	44715	87341	-	14939004

**EXPECTED/ESTIMATED OUTCOMES OF IWMP-II (2010-11 to 20114-15) District : SONBHADRA**

1	2	3	4	5
S. No.	Item	Unit	Pre-project status	Post-project status
1.	Status of water table	-	-	-
		Open Well	20.00 m	19.50 m
2.	Ground water structures repaired/ rejuvenated	Nos.	-	30
3.	Quality of drinking water	Quality	Bellow Standard	Good
4.	Availability of drinking water	No. of days	240	300
5.	Increase in irrigation area	Ha	150	310
<b>Change in cropping/land use pattern</b>				
6.	Area under agriculture crop	Ha		
	i. Area under single crop	Ha	4059	4059
	ii. Area under double crop	Ha	2055	3280
	iii. Area under multiple crop	Ha	75	110
	iv. Cropping intensity	%	122	134
7.	Increase in area under vegetation (tree cover)	Ha	0	105
8.	Increase in area under horticulture	Ha	0	42
9.	Area under fuel & fodder	Ha		
10.	Increase in milk production	Per capita Per-day/Ltr.		
11.	No. of SHGs	Nos.	12	45
12.	Increase in livelihood	Rs./Capita/Annum	Rs.9000/Capita/Annum	Rs.16500/Capita/Annum
13.	Migration	Nos.	4115	2360
14.	SHG federation formed	Nos	0	0
15.	Credit linkage with banks	Nos	0	33

### Cost Benefit Ration

S. No.	Particulars	Area in ha	Production Q/ha	Total Production	Market Rate/Q	Total Amount
						(Rs.)
Pre-project :-						
1	Khariff					
	a. Paddy	2475	9	22275	1000	22275000
	b. Maize	1530	6	9180	700	6426000
	c. Arhar	248	4	992	2200	2182400
	Sub Total :	<b>4059</b>	-	<b>32447</b>	-	<b>30883400</b>
2	Rabi					
	a. Wheat	1825	8	14600	1000	14600000
	b. Gram	45	5	225	2400	540000
	c. Mustard	55	2	110	1900	209000
	d. Masoor	105	4	420	2000	840000
	e. Ground Peanut (Moongfali)	25	4	100	1500	150000
	Sub Total :	<b>2055</b>	-	15455	-	<b>16339000</b>
3	Zaid Crops	<b>75</b>	N.A.	<b>300</b>	1000	<b>300000</b>
	Total :	<b>2130</b>				<b>47522400</b>
Post-project :-						
1	Khariff					
	a. Paddy	2994	10	29940	1100	32934000
	b. Maize	775	8	6200	800	4960000
	c. Arhar	290	5	1450	2350	3407500
	Sub Total :	<b>4059</b>	-		-	<b>41301500</b>
2	Rabi					



	a. Wheat	2865	10	28650	1100	31515000
	b. Gram	95	6	570	2550	1453500
	c. Mustard	90	3	270	2200	594000
	d. Masoor	60	5	300	2200	660000
	e. Ground Peanut (Moongfali)	40	5	200	1600	320000
	f. Others	30	8	240	700	168000
	Sub Total :	<b>3280</b>	-	<b>38260</b>		<b>34710500</b>
3	Zaid Crops	<b>110</b>	N.A.	<b>630</b>	<b>1150</b>	<b>724500</b>
	Total :					<b>76736500</b>
Cost Benefit ratio :		1.61 : 1				

Cost Benefit Ratio : 161 : 1

**YEARWISE FINANCIAL BREAK UP OF MONITORING COMPONENT OF IWMP-II, DISTRICT-SONBHADRA**

**Amount in Lacs**

S. No.	Microwatershed	Project Area	Sanctioned Amount	Monitoring					
				2010-11	2011-12	2012-13	2013-14	2014-15	TOTAL
1	Sayal I	286	34.32		0.0686	0.0686	0.0686	0.1373	<b>0.3432</b>
2	Sayal II	303	36.36		0.0727	0.0727	0.0727	0.1454	<b>0.3636</b>
3	Sardeeha	269	32.28		0.0646	0.0646	0.0646	0.1291	<b>0.3228</b>
4	Mahuariya	327	39.24		0.0785	0.0785	0.0785	0.1570	<b>0.3924</b>
5	Karri I	283	33.96		0.0679	0.0679	0.0679	0.1358	<b>0.3396</b>
6	Karri II	280	33.60		0.0672	0.0672	0.0672	0.1344	<b>0.3360</b>
7	Gulal Jhariya	345	41.40		0.0828	0.0828	0.0828	0.1656	<b>0.4140</b>
8	Jharo Khurd	330	39.60		0.0792	0.0792	0.0792	0.1584	<b>0.3960</b>
9	Jampani	289	34.68		0.0694	0.0694	0.0694	0.1387	<b>0.3468</b>
10	Supachuha	298	35.76		0.0715	0.0715	0.0715	0.1430	<b>0.3576</b>
11	Rannu	175	21.00		0.0420	0.0420	0.0420	0.0840	<b>0.2100</b>
12	Terideeh	231	27.72		0.0554	0.0554	0.0554	0.1109	<b>0.2772</b>
13	Gaursingha	341	40.92		0.0818	0.0818	0.0818	0.1637	<b>0.4092</b>
14	Bhisur	458	54.96		0.1099	0.1099	0.1099	0.2198	<b>0.5496</b>
15	Barhpan	395	47.40		0.0948	0.0948	0.0948	0.1896	<b>0.4740</b>
	<b>Total</b>	<b>4610</b>	553.20		1.1064	1.1064	1.1064	2.2128	<b>5.5320</b>

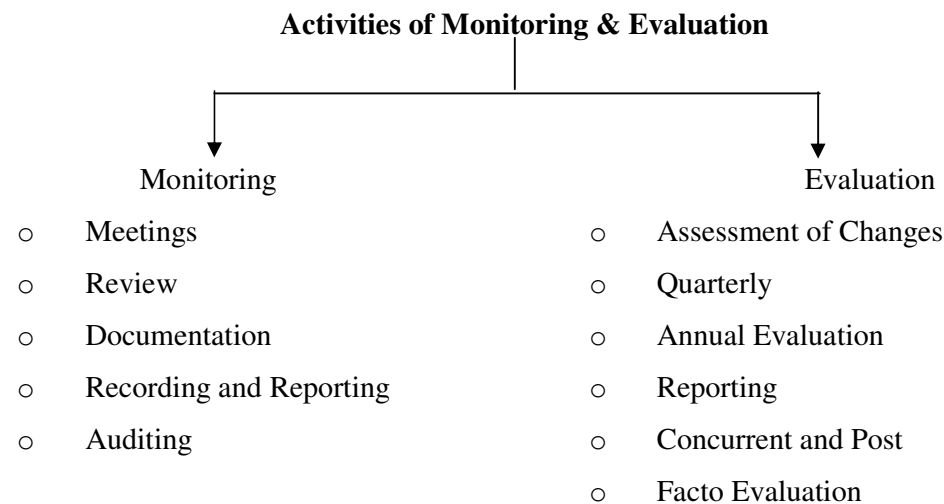
**YEARWISE FINANCIAL BREAK UP OF EVALUATION COMPONENT OF IWMP-II, DISTRICT-SONBHADRA**

**Amount in Lacs**

S. No.	Microwatershed	Project Area	Sanctioned Amount	Evaluation 1% of the Project Cost					
				2010-11	2011-12	2012-13	2013-14	2014-15	Total
1	Sayal I	286	0.34	-	0.10	0.06	0.06	0.12	0.34
2	Sayal II	303	0.36	-	0.11	0.06	0.06	0.13	0.36
3	Sardeeha	269	0.32	-	0.10	0.06	0.06	0.11	0.32
4	Mahuariya	327	0.39	-	0.12	0.07	0.07	0.14	0.39
5	Karri I	283	0.34	-	0.10	0.06	0.06	0.12	0.34
6	Karri II	280	0.34	-	0.10	0.06	0.06	0.12	0.34
7	Gulal Jhariya	345	0.41	-	0.12	0.07	0.07	0.14	0.41
8	Jharo Khurd	330	0.40	-	0.12	0.07	0.07	0.14	0.40
9	Jampani	289	0.35	-	0.10	0.06	0.06	0.12	0.35
10	Supachuha	298	0.36	-	0.11	0.06	0.06	0.13	0.36
11	Rannu	175	0.21	-	0.06	0.04	0.04	0.07	0.21
12	Terideeh	231	0.28	-	0.08	0.05	0.05	0.10	0.28
13	Gaursingha	341	0.41	-	0.12	0.07	0.07	0.14	0.41
14	Bhisur	458	0.55	-	0.16	0.10	0.10	0.19	0.55
15	Barhpan	395	0.47	-	0.14	0.08	0.08	0.17	0.47
	Total	4610	5.53	-	1.66	0.97	0.97	1.94	5.53

## MONITORING AND EVALUATION

Under the present IWMP-II Programme Monitoring at regular interval is essential for maintaining the pace of development and checking the shift. The funding and supervising agency and the supporting and facilitation agency (PIA) should follow the identified indicators for measuring physical and financial progress in respect of various activities and works of watershed and reporting mechanism. In addition WC will also State Nodal Agency/or the Government of India May appoint an Outside Agency from time to time to monitor the monitor the progress of programme implementation. The task of monitoring comprises observation, reporting and correction measures. The procedure for monitoring is detailed under and its various activities are presented in the following Chart :-



**Monitoring of Meetings :** - Motivating the SHGs, UGs and Watershed Committee to convene their meeting at least, once in a month on pre-decided day, time and place. Convening the Watershed Committee Meeting every quarter, at least twice in a year to review The project plan , progress of programme implementation, remittance of donations and contribution, utilisation of project funds. Approval of accounts. Performance of WC. Solution to the problem, and. Resolving conflicts.

**Review :** - Reviewing the implementation of programme (success, failure, problems and constraints). Deciding corrective measures.

**Documentation :** - Recording the observations, experiences, innovations, successes, failures, problems and constraints in implementing the programme. Suggestions and views of beneficiaries to overcome the constraints. Specifying the expected support of sectoral functionaries. Extent of convergence of other developmental programmes and its impact.

**Recording & Reporting :** - Maintaining records of physical and financial progress at Project and PIA level. Preparing and submitting monthly, physical and financial reports to DRDA/or State Nodal Agency through PIA.

**Auditing :-** Arranging annual Audit of accounts and records, maintained by PIA and WC. Taking action on audit report. Studying the audit report thoroughly. Noting down and attending the objections raised. Following the suggestions made in the audit report.

## EVALUATION

**Assessment of changes :** - Studying the changes taking place in the IWMP-II Watershed area, its impact on production, ecology and socio-economic status of village community. Visiting the Watershed area during the implementation and after the completion of works to assess the changes. Discussion with the beneficiaries about the implementation and impact of programme, their suggestions for improvement and to tackle the problems. Studying the performance and maintenance of assets and CPR on quarterly basis for annual assessment. Assessing every year qualitative impact on: working in group. Participation and cooperation. Taking responsibility. Changes in attitude/behavior and socio-economic status of Watershed. Community (stake-holders). Changes in working pattern of community and its groups.

**Quarterly Evaluation:** - Reviewing. Programme Implementation. Formation and functioning of UGs and SHGs. Participation of Village Community, Sectoral functionaries and CBOs in Watershed Development Programme .

**Annual Evaluation:** - Assessment of changes in. Socio-economic status of village community. Equity and social justice. Vegetative cover. Conservation of soil and moisture. Groundwater recharge . Cropped area and yield per unit. Cropping intensity. Cropping pattern. New crops introduced. Package of practices. Fertilizer application. Use of Pesticides. Use of improved seeds. Cultural practices adopted. Horticultural plantations. CPR management. Operation and maintenance of created assets and structures. Animal Husbandry and Dairy activity.

**Reporting:** - Preparing monthly, quarterly and annual reports and submitting to DRDA/State Nodal Agency in the prescribed format..

**Concurrent & Post-facto Evaluation:** - Getting concurrent and post-facto evaluation done by an outside agency. State Nodal Agency/or Government of India as the case may be will appoint an outside agency for concurrent and post-facto evaluation. Entrusting the concurrent and post-facto evaluation to agency. Conducting concurrent and post-facto evaluation. Entrusting the concurrent and post-facto evaluation to agency. Conducting concurrent and post-facto evaluation. Obtaining and reviewing the evaluation report. Submitting the evaluation report to the State Level Implementation and Review Committee and to the Central Government with their (DRDA/State Nodal Agency) comments.

Routine and regular Monitoring & Evaluation will be done by the PIA with the active help of WDT, WC and Users Group. Specific, Annual, Concurrent & Post-facto Evaluation will be done by the outside agency appointed by the State Nodal Agency/or the Government of India. Details of Yea-wise amount to be spent on Monitoring & Evaluation under the present IWMP-II programme is given below :-

S. No.	Component	2010-11	2011-12	2012-13	2013-14	2014-15	TOTAL
1.	Monitoring	-	1.1064	1.1064	1.1064	2.2128	5.53
2.	Evaluation	-	1.66	0.97	0.97	1.94	5.53

## YEARWISE FINANCIAL BREAK UP OF CONSOLIDATION COMPONENT OF IWMP-II, DISTRICT-SONBHADRA

Amount in Lacs

S. No.	Microwatershed	Project Area	Sanctioned Amount	Consolidation 3% of the Total Project Cost					
				2010-11	2011-12	2012-13	2013-14	2014-15	Total
1	Sayal I	286	1.03	-	-	-	-	1.03	1.03
2	Sayal II	303	1.09	-	-	-	-	1.09	1.09
3	Sardeeha	269	0.97	-	-	-	-	0.97	0.97
4	Mahuariya	327	1.18	-	-	-	-	1.18	1.18
5	Karri I	283	1.02	-	-	-	-	1.02	1.02
6	Karri II	280	1.01	-	-	-	-	1.01	1.01
7	Gulal Jhariya	345	1.24	-	-	-	-	1.24	1.24
8	Jharo Khurd	330	1.19	-	-	-	-	1.19	1.19
9	Jampani	289	1.04	-	-	-	-	1.04	1.04
10	Supachuha	298	1.07	-	-	-	-	1.07	1.07
11	Rannu	175	0.63	-	-	-	-	0.63	0.63
12	Terideeh	231	0.83	-	-	-	-	0.83	0.83
13	Gaursingha	341	1.23	-	-	-	-	1.23	1.23
14	Bhisur	458	1.65	-	-	-	-	1.65	1.65
15	Barhpan	395	1.42	-	-	-	-	1.42	1.42
	Total	4610	16.60	-	-	-	-	16.60	16.60

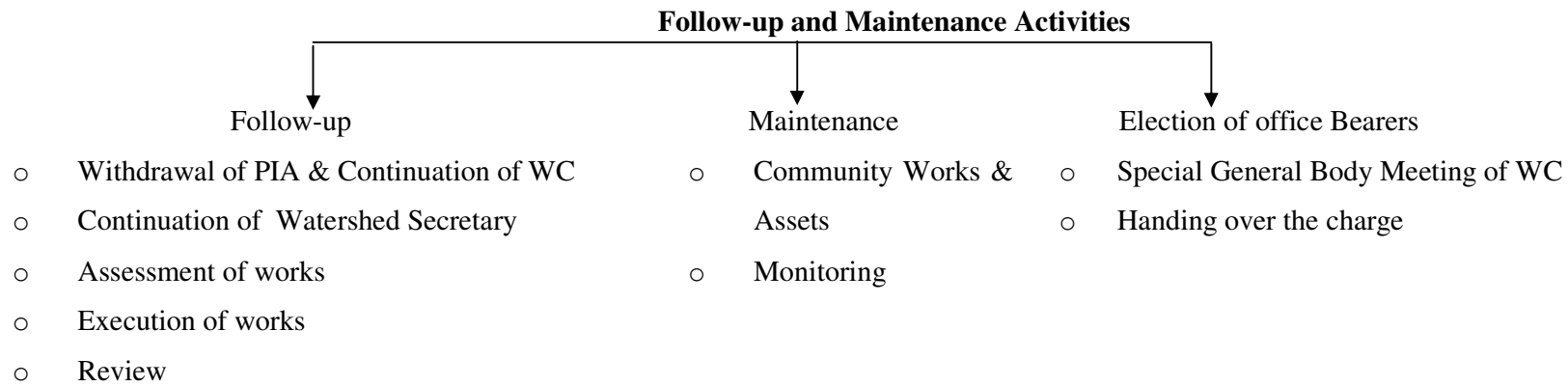
## CONSOLIDATION

### CONSOILDATION :-

Consolidation is a very important and last phase of activity under the present IWMP-II programme. It include Sum-up of programme, Follow-up, Withdrawal of PIA, Maintenance of Community works & Assets, Handing over the charge etc. Details of various activities under the consolidation phase aree given below :-

### FOLLOW-UP AND MAINTENANCE

A large number of projects and schemes have gone bad due to improper follow-up and maintenance. These projects in past were implemented by the external agency with involvement of stakeholder. The stakeholders, because of their ignorance on one hand and lack of post-project management arrangements on the other, could not associate themselves in the maintenance and management of the project. The process and mechanism under the various tasks and activities are given in the following Chart.





**Follow-up-Withdrawal of PIA and Continuation of WC :** - Calling the General Body Meeting of WC. Presenting the Project period report. Ensuring the continuance of WC after project period. Getting the resolution passed for the continuation of WC. Working out the procedures for the functioning of WC Announcing the withdrawal.

**Continuation of Watershed Secretary :** - Passing resolution for the continuation of service of Watershed Secretary. According sanction for the monthly honorarium to Watershed Secretary from WDF.

**Assessment of Works :** - Preparing the List of CPR and the Assets, created during the project period. Preparing the list of approved works/activities that are in progress and not initiated. Assessing the quantum of execution and maintenance of works with cost estimates. Ascertaining the availability of funds.

**Execution of Works :-** convening the meeting of WC for reviewing the spill over and left over works and maintenance of created assets and CPR. Finalising the ways and means for completing the spill-over and left over works, operation and maintenance of created assets and CPR. Fixing the responsibility for carrying out different works and activities. Completing the spill-over and left over works . Maintaining the assets and CPR.

**Review :** - WC, SHGs and UGs should organize the meetings regularly to: review the performance and progress of development works and activities taken up with WDF and other funds. Maintenance of community assets. Activities to be taken up for further development of village community and maintaining their interest in watershed development. Mobilising donations and contributions to WDF to meet financial requirements.

#### **FREQUENCY OF MEETING**

WC	:	Every month/or Quarterly
UG & SHG	:	Every month

**Maintenance-Community Works and Assets:** - Preparing the estimates for repairs and maintenance for different community works and structures. Approving and sanctioning estimates for repairs and maintenance of community works and assets. Taking up the maintenance of community works.

**Monitoring:** - Overseeing the progress of completion and maintenance of individual and community works and assets. Utilising of WDF for the execution and maintenance of community works. Loan to individuals for the repairs of works in their lands may be considered.

**Election of Office Bearers-Special General Body Meeting of WC :-** Notifying the and place for General Body Meeting of WC. Presenting the Project report and getting approval. Election of office bearers and President of WC (if required). Fixing date for election of office bearers and President of Association. Conducting Election. Announcing the names of elected office bearers and President. Making entry in the Proceeding Register about the election and names of elected members. Handing over and taking over of Management of WC.

**An Amount of Rs. 16.60 Lacs will be spent on various activities of consolidation under the present IWMP-II programme.**

## **MAINTENANCE OF RECORDS**

**Following records will be maintained under the IWMP-II implementation programme**

1. Maintaining record of group meetings, user group meetings, WC meetings.
2. Maintaining the UGs and SHGs Registers.
3. Maintaining the Physical and Financial Progress Component-wise.
4. Maintaining cash book with details of receipt and payments. For each cheque and cash transaction.
5. Making entry of every of receipt and payments in the cash book on the date of transaction.
6. Maintaining ledger (component-wise and item-wise), receipts and vouchers.
7. Maintaining Muster Roll, Pass Book and Cheque Book.
8. Maintaining Measurements Book.
9. Maintaining Stock Register.
10. Maintaining Work Register.
11. Record of beneficiaries contribution.
12. Maintaining Project fund account.
13. Maintaining record of asset and properties created under the programme.

## **BANK ACCOUNTS**

### **Bank Accounts :-**

Following Bank Accounts will be opened in the Bank and operated in the manner prescribed below :-

#### **1. P.I.A. Account :-**

- a. Joint S.B. Account in the name of PIA
- b. It will be opened in the Government Recognized Bank of District-Sonbhadra.
- c. It will be operated jointly by BSA & Accountant of P.I.A.

#### **2. Project Fund Account of WC :-**

- i) Joint S.B. Account in the name of Watershed Project for the Watershed Fund received from the PIA
- ii) It will be opened in the local Bank Branch
- iii) It will be operated jointly by

- |   |                  |   |        |
|---|------------------|---|--------|
| - | Chairman         | - | WC     |
| - | Secretary        | - | WC     |
| - | Nominated Member | - | WDT or |
- any other member of PIA nominated by the authorized person.

**Structure of Watershed Committee (WC) :-**

Category			Members
i)	Chairman	:	1
ii)	Secretary	:	1
iii)	Representing User Group	:	3-4
iv)	Representing Self Help Group	:	2-3
v)	Representing Women	:	1
vi)	Representing SC/ST	:	1
vii)	Representing Landless	:	1
viii)	Representing WDT	:	1
Total No. of Members			10-12

**Office Bearer of WC :-**

- i) Chairman
- ii) Secretary

**2. WDF Account****Opening of Watershed Development Fund Accounts :-**

Under the IWMP-II implementation programme a separate Watershed Development Fund Account will be opened and maintained as per the IWMP Guidelines. Following activities will be taken for mobilizing the beneficiaries contribution –

1. Briefing the beneficiaries about the purpose, utility and rate of contribution.

2. Informing the beneficiaries about the implications of non-payment of contribution.
3. Motivating beneficiaries for making contribution.
4. Collecting and depositing the contribution in the Watershed Development Fund.  
WDT, WC and Secretary of the WC will be responsible for obtaining the contribution.

**Utilization of WDF –**

1. Watershed Development Fund shall be in operation only after the project period.
3. It will be operated jointly by the President and Secretary of the Watershed Committee.
4. This fund should be utilised only with the approval of watershed committee for the maintenance and development of Community Assets, CPR and administrative cost if watershed secretary is continued after the project period with the approval of WC.
5. No money shall be withdrawn during the project period.
6. Watershed Project Fund should not be used for individual work.

**YEARWISE FINANCIAL BREAK UP OF EVALUATION COMPONENT OF IWMP-II, DISTRICT-SONBHADRA**

**Amount in Lacs**

S. No.	Microwatershed	Project Area	Sanctioned Amount	DPR 1% of the Total Project Cost					
				2010-11	2011-12	2012-13	2013-14	2014-15	Total
1	Sayal I	286	0.34	0.34	-	-	-	-	0.34
2	Sayal II	303	0.36	0.36	-	-	-	-	0.36
3	Sardeeha	269	0.32	0.32	-	-	-	-	0.32
4	Mahuariya	327	0.39	0.39	-	-	-	-	0.39
5	Karri I	283	0.34	0.34	-	-	-	-	0.34
6	Karri II	280	0.34	0.34	-	-	-	-	0.34
7	Gulal Jhariya	345	0.41	0.41	-	-	-	-	0.41
8	Jharo Khurd	330	0.40	0.40	-	-	-	-	0.40
9	Jampani	289	0.35	0.35	-	-	-	-	0.35
10	Supachuha	298	0.36	0.36	-	-	-	-	0.36
11	Rannu	175	0.21	0.21	-	-	-	-	0.21
12	Terideeh	231	0.28	0.28	-	-	-	-	0.28
13	Gaursingha	341	0.41	0.41	-	-	-	-	0.41
14	Bhisur	458	0.55	0.55	-	-	-	-	0.55
15	Barhpan	395	0.47	0.47	-	-	-	-	0.47
	Total	4610	5.53	5.53	-	-	-	-	5.53

**YEARWISE FINANCIAL BREAKUP OF VARIOUS COMPONENT UNDER IWMP-II, DISTRICT-SONBHADRA**

**Amount in  
Lacs**

<b>S. No.</b>	<b>Installment</b>	<b>Year</b>	<b>Administrative 10%</b>	<b>EPA 4%</b>	<b>Institution and CB 5%</b>	<b>DPR 1%</b>	<b>Watershed development work 60%</b>	<b>Livelihood for assetless 7%</b>	<b>Production system and Microenterprises 8%</b>	<b>Monitoring 1%</b>	<b>Evaluation 1%</b>	<b>Consolidation 3%</b>	<b>Total 100%</b>
1	Ist Phase	2010-11	0.5	4	0.5	1	-	-	-	-	-	-	<b>6</b>
		2011-12	1.5	-	2.5	-	7.5	1	1	0.2	0.3	-	<b>14</b>
2	II nd Phase	2012-13	2.7	-	0.75	-	16.5	3	2	0.2	0.175	-	<b>25.325</b>
		2013-14	2.7	-	0.75	-	15.85	2	3	0.2	0.175	-	<b>24.675</b>
3	II rd Phase	2014-15	2.6	-	0.5	-	20.15	1	2	0.4	0.35	3	<b>30</b>
	<b>TOTAL :</b>		<b>10</b>	<b>4</b>	<b>5</b>	<b>1</b>	<b>60</b>	<b>7</b>	<b>8</b>	<b>1</b>	<b>1</b>	<b>3</b>	<b>100</b>



## **DPR PREPARATION**

DPR has been prepared considering the demand/need of the stake holder of the watershed area after having detailed discussions, conducting PRA Exercise/Focus Grup Discussions, Conducting various surveys, Collection and Analysis of various primary and secondary data, Pre-project status of various variables and expected out come, Cropping Pattern in the watershed area, Soil Textures, Slopes and water retention capacity of the soil and level of soil erosion. DPR has been prepared by the PIA with the help of Mahila Chetna Samiti, Varanasi and their support staff. Budget Allocation for DPR Preparation is 1% of the total cost of the project i.e. Rs. 5.53 lacs.

### **Collection of Information for DPR Preparation :-**

2. Remote Sensing Data
3. Topo Sheet
4. Various Maps
5. Details of Agriculture, Rainfed and Irrigated Area
6. Water level Data
7. Village-wise population details
8. Village-wise animal population details
9. Village-wise Land Holding details
10. Existing Land use pattern
11. Land with average yield/ha

**DPR has been prepared as per the financial component of the IWMP guide lines which is given in the following two tables :-**

**TABLE NO. : 1 BUDGET AT A GLANCE FOR DPR PREPARATION**

<b>Budget Component</b>	<b>Cost (Rs. In Lacs)</b>
<b>Net Project Cost</b>	<b>553.20</b>
-Administrative Costs	<b>5532</b>
-Monitoring	<b>5.53</b>
-Evaluation	<b>5.53</b>
<b>Preparatory Phase:</b>	
-Entry point activities	<b>22.13</b>
-Institution and capacity building	<b>27.66</b>
-Detailed Project Report (DPR)	<b>5.53</b>
<b>Watershed works Phase:</b>	
-Watershed Development works	<b>331.92</b>
-Livelihood activities for the asset less persons,	<b>38.72</b>
-Production system and micro enterprises	<b>44.26</b>
<b>Consolidation Phase</b>	<b>16.60</b>
<b>Total</b>	<b>553.20</b>

**COST NORMS FOR the preparation of IWMP-II PROJECT : Rs. 12000/ - PER ha. As per the guide line of IWMP.**

## BUDGET COMPONENT OF IWMP-II, DISTRICT - SONBHADRA

S.No.	Budget Component	Total (Lakhs)
A	MANAGEMENT COSTS	66.38
B	PREPARATORY PHASES	55.32
C	WATERSHED WORKS	
a	WATERSHED DEVELOPMENT WORKS	331.92
b	LIVELIHOOD PROGRAMME (Community base)	38.72
c	PRODUCTION SYSTEM AND MICRO ENTERPRISES	44.26
d	CONSOLIDATION PHASE	16.60
	<b>GRAND TOTAL</b>	<b>553.20</b>

1. Watershed Area - 5125.00 ha
2. Treatable Area - 4610.00 ha
3. Total expenditure on project - Rs. 553.20 lacs

## **MISCELLANEOUS PROVISIONS**

1. Various equipments like Integrated Coupled Analyzer, Near Infrared Visible Spectroscopy, Medium Spectroscopy, Automatic Watre Level Recorder, etc. will also be purchased from the Administrative Cost of the project.
2. Help of VO/NGO/Training Institute will also be taken for various Data Collection, PRA Exercise, Preparation/Revision of DPR, Developing IEC material, Initiation of Village Community and Institutional Development & Capacity Building Programme.
3. Various Public – Private partnership agreement will be signed for the smooth and timely implementation of IWMP-II programme and to achieve the expected outcome.
4. Various Line Department will als be associated and actively involved to achieve better results. Details of such Officer/Department is given below :-
  - i) District Agriculture Officer
  - ii) District Horticulture Officer
  - iii) District Forest Officer
  - iv) District Vet-Doctor
  - v) District Horticulture Officer
  - vi) District Statistical Officer
  - vii) District Fisheries Officer
  - viii) District Programme Officer

- ix) Lead Bank Manager
  - x) Manager RRBs
  - xi) DIC
  - xii) Department of NEDA
  - xiii) Doctor-PHC, etc.
5. Financial Assistance/Loan under the component of Livelihood Programme will be available to the SHGs and its members only.
  6. Financial Assistance/Loan to the individual members of SHGs or SHGs as the case may be under the component of Livelihood Programme will be considered subject to fulfillment of the following conditions :-
    - i) SHG must be 3 to 6 months old
    - ii) Regular meetings of SHG is being conducted
    - iii) Monthly savings is being deposited on regular basis
    - iv) Internal lending and recovery of loan amount is being made properly
    - v) Proper up-keep of records and proceedings of the SHGs meetings
    - vi) Account has been opened in the bank
    - vii) Any other conditions laid down by the PIA/Watershed Committee
  7. Modalities for the disbursement of financial assistance/loan, grant amount, if any, mode of its recovery (in cash or kind) to the individual members of SHGs or SHGs as the case may be under the component of Livelihood Programme will be framed by the PIA with the

approval of WC as per the guide lines of IWMP. If recovery is made the recovered amount will be rotated amongst the other individual members of SHGs or SHGs of the present watershed area of IWMP-II.

8. Disbursement of financial assistance/loan, grant amount, if any, mode of its recovery (in cash or kind) will be made from the concerned individual members of SHGs or SHGs as per the MOU signed between PIA/WC and the individual members of SHGs or SHGs concerned.
9. SHGs will be involved and promoted in afforestation activities for Nursery raising if SHGs manages land of its own or on long lease basis (for the minimum period of 7 years) one time lump sum amount not exceeding of Rs. 5.00 lacs may be given on loan basis from the amount of afforestation activities subject to approval of WC which will be recovered as per the MOU signed between PIA/WC and the SHG concerned.
10. Various Autonomous Institution like DDM – NABARD, Agriculture University, Krishi Vigyan Kendra – Mirzapur, Mandi Parishad, etc. will also be involved for various research, development and marketing activities.
11. Various Bio-inputs like Bio-pesticide, Organic Manure, Vermi-compost and Bio-fertilizer will also be given to the farmers of the watershed of IWMP-II.
12. Various allied activities will also be undertaken for Income Generation Activities for employment generation and to check migration.
13. Various Energy Saving Devices and Energy Conservation Measures will be promoted under the watershed area of IWMP-II.
14. Various modalities/agreement for collection of user charges and sharing of benefits will also be framed as per the guide lines of IWMP with active consultation and approval of WC. :-
  - i) Resource use agreement with the users group

- ii) Right to collect user charges
  - iii) Right to fishing
  - iv) Right to collect fuel/Fire wood
  - v) Right to collect and sale various produce
  - vi) Right to use CPRs (Community Property Resources)
  - vii) Right to collect soil for nursery and plantation activities
  - viii) Right to collect timber for house construction
  - ix) Right to collect fodder
  - x) Right to collect water for drinking
  - xi) Right to use water for irrigation use.
  - xii) Agreement/undertaking to undertake afforestation activities on individual land.
  - xiii) Right to get financial assistance/loan for SHGs members for individual/group activities, etc.
  - xiv) Right to use Watershed Development Fund.
15. Practice of Social Audit will be promoted under the IWMP-II programme.
16. Cost of Plantation under Horticulture/Afforestation activities will include the following :-
- i) Plant cost
  - ii) Loading and unloading of plants

- iii) Transportation of plants from nursery to plantation site
  - iv) Land development
  - v) Pit digging
  - vi) Planting
  - vii) Weeding
  - viii) Fertilizer
  - ix) Wages etc.
  - x) and maintenance over a period of 3 years (including casualty replacement).
17. Mode of Participatory Development will be adopted to implement the IWMP-II programme.
  18. Efforts will be made to establish backward and forward linkages amongst various institutions and autonomous bodies.
  19. Efforts will be made for the convergence of various other government schemes as per the guide lines of IWMP.
  20. Various design and estimate are available in each project file of IWMP-II.
  21. DPR is subject to revision considering the practical difficulties and valuable suggestions/instructions issued by the of the government in future.
  22. Unspent amount left under the any component will be spent only under the head of Watershed Development Work after the approval of SNLA.
  23. If any amount transferred to the any other government or non government organization on the direction of state government or the officials of parent department financial accountability of such transferred amount will shift to the said department.
  24. If labour rate is increased during the project period physical progress will not be met out without increasing the cost norms.



25. If any change/correction are made in the DPR the same will be intimated to the Department at State Level to correct the ONLINE DPR accordingly.
26. Cost norms of IWMP-II project under the head of work component is approx. 0.06 lac per ha. Which is very less as compared to the other parallel scheme run by the government department. So the PIA will try to fill the gap through convergence of other government programme being run for the execution of same type of programme. Otherwise physical progress will not be met out.
27. Projectwise/Yearwise details of Construction of FB, MB and PFB under Soil Conservation and construction of CD, WHB under Water Resources in terms of Length, Number its coverage area is available in each project file.

**YEARWISE FINANCIAL BREAK UP OF ADMINISTRATIVE COMPONENT OF IWMP-II, DISTRICT-SONBHADRA**

**Amount in Lacs**

S. No.	Microwatershed	Project Area	Sanctioned Amount	Administrative 10% of the Project Cost					
				2010-11	2011-12	2012-13	2013-14	2014-15	Total
1	Sayal I	286	3.43	0.34	0.34	0.93	0.93	0.89	3.43
2	Sayal II	303	3.64	0.36	0.36	0.98	0.98	0.95	3.64
3	Sardeeha	269	3.23	0.32	0.32	0.87	0.87	0.84	3.23
4	Mahuariya	327	3.92	0.39	0.39	1.06	1.06	1.02	3.92
5	Karri I	283	3.40	0.34	0.34	0.92	0.92	0.88	3.40
6	Karri II	280	3.36	0.34	0.34	0.91	0.91	0.87	3.36
7	Gulal Jhariya	345	4.14	0.41	0.41	1.12	1.12	1.08	4.14
8	Jharo Khurd	330	3.96	0.40	0.40	1.07	1.07	1.03	3.96
9	Jampani	289	3.47	0.35	0.35	0.94	0.94	0.90	3.47
10	Supachuha	298	3.58	0.36	0.36	0.97	0.97	0.93	3.58
11	Rannu	175	2.10	0.21	0.21	0.57	0.57	0.55	2.10
12	Terideeh	231	2.77	0.28	0.28	0.75	0.75	0.72	2.77
13	Gaursingha	341	4.09	0.41	0.41	1.10	1.10	1.06	4.09
14	Bhisur	458	5.50	0.55	0.55	1.48	1.48	1.43	5.50
15	Barhpan	395	4.74	0.47	0.47	1.28	1.28	1.23	4.74
	Total	4610	55.32	5.53	5.53	<b>14.94</b>	<b>14.94</b>	<b>14.38</b>	55.32