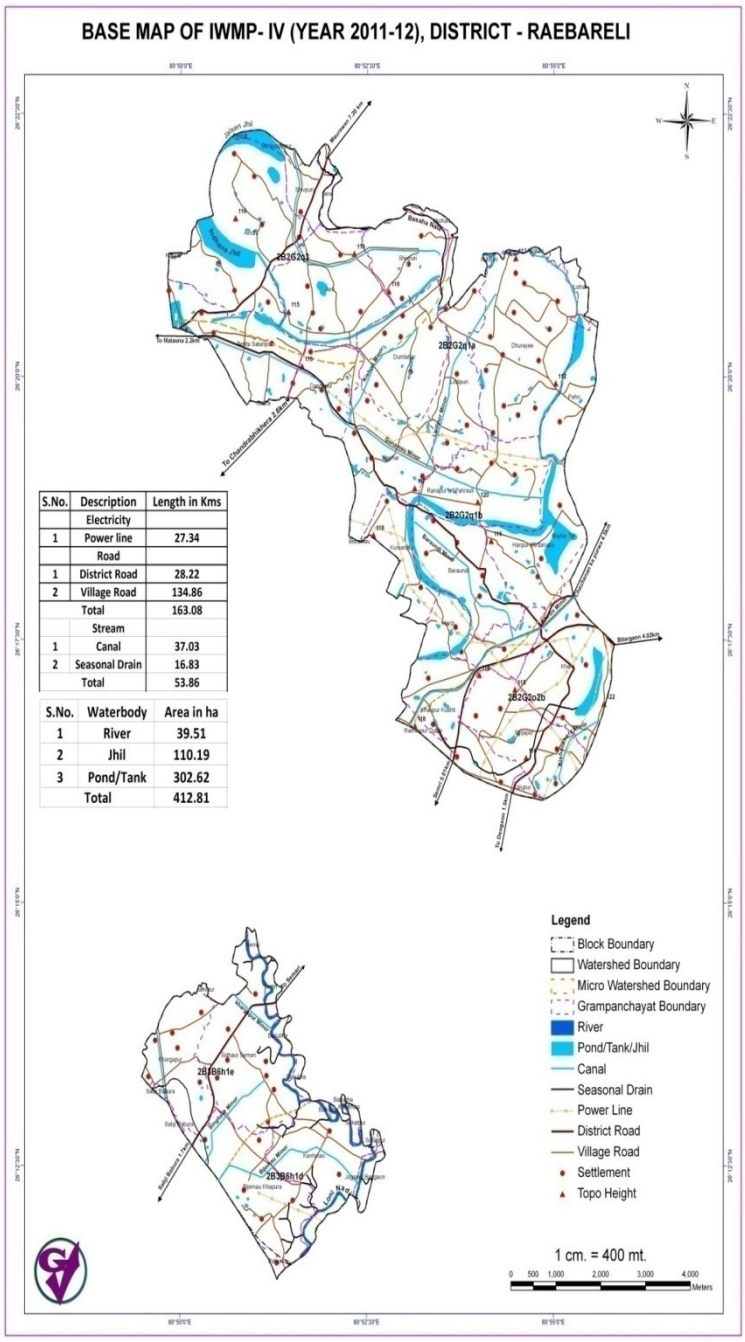
DPR OF KHIRON WATERSHED (IWMP-IV), DISTRICT RAEBARELI



S.No.	Description	Length in Kms
	Electricity	
1	Power line	27.34
	Road	
1	District Road	28.22
2	Village Road	134.86
	Total	163.08
	Stream	
1	Canal	37.03
2	Seasonal Drain	16.83
	Total	53.86

S.No.	Waterbody	Area in ha
1	River	39.51
2	Jhil	110.19
3	Pond/Tank	302.62
	Total	412.81

Prepared by:

State Institute of Rural Development (SIRD), Lucknow, U.P.

2011-2012

Detailed Project Report DPR of Khiron Watershed, Raebareli District, Uttar Pradesh

INDEX

FOREWORD

The declining per capita land and fresh water availability coupled with soil erosion and land degradation in India are posing serious threat to environmental, food, social and economic security. Land and water go together and their development cannot be considered independent of each other for sustainability of rainfed areas. Conservation and management of rainwater holds key for sustainable agriculture in rainfed areas. It has also been amply demonstrated in India and elsewhere that it is impossible to envisage or implement sustainable solutions for land and water resource development and management without active and full participation of local community. Development of land and water together with sustainable production system when confined to small natural drainage unit such as watershed leads to sustainable development. Watershed Management (WSM) has, therefore, emerged as a new paradigm for planning, development and management of land, water and biomass resources with a focus on social and institutional aspects apart from bio-physical aspects fol1owing a participatory "bottom-up" approach. A large number of projects for productivity enhancement are being implemented on the watershed approach.

Soil and water conservation including micro-scale water resource development is the foundation of any watershed development programme supported by number of other protection, production and livelihood support interventions. This is so, because water is the most crucial input and acts as a catalyst to bring in ecological, social and economical revolution. Sustainable production depends considerably upon proper development, conservation, management and use of watershed resources at micro-level. Watershed management becomes increasingly important as a system approach to improve livelihood of people while conserving and regenerating their natural resources. The role and Importance of community participation in ensuring the success and satiability of watershed management is now widely accepted.

Two-thirds of the country's agriculture is rainfed. Only one-third of the 142 m ha of cultivated in India is irrigated. The green revolution in the irrigated areas, induced by modern agricultural technologies, by-and large by-passed the rainfed regions. Agriculture in these regions is characterized by low levels of productivity and low input usage; food grain yields in rainfed areas are half those in irrigated regions. Dependence of rainfall makes crop production considerably instable in rainfed areas, which are home to the bulk of the rural poor. The Government of India has accorded highest priority to the holistic and sustainable developed of rainfed areas through the integrated watershed development approach. The key attributes of the watershed approach are conservation of the rain water and optimization of soil and water resources in a sustainable and cost effective mode. Improved moisture management increases the productivity of improved seeds and fertilizers, so conservation and productivity enhancing measures become complementary. Under rainfed conditions choice of technologies are going to vary from location to location due to high degree of complexity and diversity in situations. This applies to the technologies for development of natural resources as well as for enhancement of productivity of different commodities in agriculture and allied sectors. While carrying out participatory planning exercises, the watershed development team (WDT) may orient community members about different scientific and indigenous technological options available with them through IEC and training courses etc. and leave the final choice to them. Keeping these things in mind, the DPR of Raibarely IWMP- IV watershed has been prepared.

MESSAGE

Deen Dayal Upadhaya, State Institute of Rural Development, Uttar Pradesh has been commissioned by State Level Nodal Agency, IWMP to prepare proposed DPRs for 55 identified watershed in the State. Integrated Watershed Management Programme (IWMP); a centrally sponsored programme is aimed towards sustainable regeneration of ecological balance and suitable agricultural and allied production interventions by properly managing and harvesting rain water and thereby increasing production and productivity, providing equitable opportunities and economic upliftment to all section of society in project area. The cost of project is estimated at Rs. 12000.00 per ha. The project will be implemented on watershed basis having an area of about 5000 ha in duration of 5-7 years. There are various components of the project to achieve the set objectives. It is pertinent that a detailed project report (DPR) has been prepared with all the details of plan, design, cost, execution and arrangement for management and evaluation.

Deen Dayal Upadhaya, State Institute of Rural Development, Uttar Pradesh has prepared this DPR after comprehensive grand study and survey and using available scientific data. I am sure the DPR, if implemented as per the designed interventions, will not only restore ecological balance but will be of immense help for the farmers and agricultural sector to improve their quality of life.

I wish all success to all concern specially those who earn the livelihood from agriculture and allied activities.

Sri. N. S. Ravi (IAS)

Director General

ACKNOWLEDGEMENT

We would first like to extend our thanks to the Chief Executive Officer (CEO) of State Level Nodal Agency (SLNA), IWMP for awarding the assignment of preparation of detailed project report (DPR) of 55 watersheds to DDU SIRD, Lucknow. We extend our heartiest gratitude to Sri N.S. Ravi, I.A.S., Director General, DDU SIRD, Lucknow for assigning the assignment to us and providing all necessary logistic support. We are thankful Sri K. P. Tripathi, former Principal Scientist, Soil & Water Conservation Engg., ICAR-IISWC (formerly known as CSWCRTC), Dehradun for their valuable suggestions and guidance during the process of DPR preparation.

We are very grateful to Dr. Ashok Kumar, Assistant Director, Soil Conservation and Water Management; Sri S. G. Sahoo and Sri R K Srivastav Senior Instructor Agricultural Engineering for helping in the process of DPR preparation. We are thankful to all the farmers of the watershed who cooperated during the PRA/data collection and gave their valuable suggestions.

Dr. Vardani

Additional Director

Executive summary

Executive Summary of DPR of Khiron Watershed, Raebareli District, Uttar Pradesh

The Khiron watershed having an area of 7092.59, ha. is situated in the district of Raebreli (UP). It has been designated as IWMP-IV watershed which has six micro watersheds (code: 2B2G2o2b, 2B2G2q1a, 2B2G2q1b, 2B2G2q3, 2B3B6h1d, 2B3B6h1e. It includes 43 villages of 30 village panchayats. The total geographical area of Khiron watershed is 7092.59 ha. About 97% area of the watershed is under cultivation. Community land is about 3% area of the watershed. The topography of the watershed, as a whole, is fairly compact tract of gently undulating land. The elevation varies from about 112 meter (min.) amsl to 120 meter (max.) amsl in the extreme south east, on the banks of the Ganga. The district comprises a flat gently undulating tract and is characterized by six physiographic tracts namely Ganga Khadars, Ganga Recent Alluviums, Ganga Flats, Sai uplands Sai low lands and Sai flats. The soils are light in texture. Light brown sandy loam to sandy, generally, poor in water holding capacity and organic matter, moderately alkaline. Soils of the watershed are deficient in organic matter and soil nutrients.Total area of Microwatershed is covered with loamy soil. The climate of Raebareli district is almost dry. Khiron watershed has a warm-humid sub-tropical climate with cool, dry winters from December to February and dry, hot summers from April to June. Annual rainfall is about 647.50 m.m. which is mainly during the period of July to September. Paddy is the main Kharif crop and Wheat is the main Rabi crop in the district. Sugarcane and potato are the main cash crops of the district. The watershed has average water table of 7.50 m. There are about 20 defunct wells, which are no longer functioning in the Khiron watershed. Excessive ground water abstraction in some areas has resulted in alarming depletion of ground water level which results in defunct wells. There are also 42 tube wells. There are also few lakes. There are about 128 tube-wells with an average depth of 12 m. there are some open dug up ponds with an area of about 0.25 ha. Sai River is the major drainage system of the watershed.

About 62% people in the watershed are literate. 71% male and 52% female are literate. In comparison, females are less educated in number than males. Mass education should be spread by establishing more primary and secondary schools. It must be made both compulsory and free for the females and the males as well, so to improve the economic condition of the watershed. The economic condition of the people is not very encouraging as about 20% families of the watershed are landless, hence their livelihood depends upon the occasional employment they get in agriculture sector or they migrate to the nearby city for day to day labour work, agriculture should be modernized, to get more benefit and profit in the agricultural sector. Females of the watershed are mostly engaged in flower gardening (nursery) and kitchen gardening, as there is a high growth of and vegetables, flowers like different varieties of rose, gladiolus, marigold etc, and vegetables like red and green chilly cultivation and spices, Aonla and Ber orchards in sodic lands, inter-cropping of turmeric as

well as ginger and there are also established mango and other orchards. About 31% of people are schedule cast and only few (less than 0.10%) belong to schedule tribe. About 10% families are below poverty line. More than 60% family still use fire wood for cooking the meal and only less than 6% use LPG. About 58% families of the watershed are land less and about 7% families are below poverty line. There are 213 craftsman, 227 tailors and 143 artisans in the watershed. People of the watershed migrate to the city and other areas for search of work mostly as unskilled/semi-skilled and skilled work. On an average people migrate for 6 months a year. Cutting and tailoring are having vast potentialities for rural people of the watershed. It appears that people are most skilled in dairy farming and live stock. Milk production and the procurement of milk and its processing also provide substantial employment to the people of the watershed. Poultry farming is also practiced in the watershed. There are 358 tractors, 195 ploughs, 61 levelers, 454 sprayer, 104 harrow and 6 seed drill in the watershed..

The crop productivity is low due to low organic matter in the soil. Chemical fertilizers are given to the crop without soil analysis thus, creating imbalance in the soil nutrients. FYM and organic fertilizer are not in practice due to absence of sufficient raw material as the soil is light to medium in texture. There are four major farming systems in the watershed based on nature of soil and degree of assured irrigation. (a) Pure cropping (b) Mixed farming (iii) Agri-horti and (iv) Agri-Silvi. The major crops of this district are paddy, wheat, sorghum, pigeon pea, gram, pea and mustard.

Total cost of the project works out to be Rs. 11.92 crores. Out of this Rs. 3.48 crores is proposed to be met from convergence under MGNREGA and Rs. 12.27 lakhs from Horticulture Dept. (NHM) etc. The amount of Rs. 6.90 crores will be met out from IWMP. The benefit: cost ratio is estimated at 1.40:1 with 23% of internal rate of return. About Rs 12.27 lakhs is expected to be collected from farmers as their contribution towards NHM and Rs. 1.3 crores towards the installation of PVC underground pipeline system of irrigation as a part of watershed development fund.

Chapter 1: Introduction and background

1.1 Background of IWMP

National Rainfed Area Authority (NRAA) framed common guidelines (2008) for watershed programmes to all ministries/departments. The provisions in the common guidelines and the observations of the Parthasarthy committee have necessitated modifications in the watershed schemes of the Department of Land Resources. Accordingly, Drought Prone Areas Programme (DPAP), Desert Development Programme (DDP) and Integrated Wastelands Development Programme (IWDP) of the Department of Land Resources have been integrated and consolidated into a single modified programme called Integrated Watershed Management Programme (IWMP). This guideline was further amended in 2011. This consolidation is for optimum use of natural resources, sustainable outcomes and integrated planning.

1.2 Vision

The watershed management programe in the country has been conceptuatized as rainwater management program in the rain fed areas of the country, which constitutes roughly 60% of the total net cultivated land of about 144 mha of the country. It is observed that though the rainfed land is about 60% of the total cultivated land of the country but its contribution to the total food production of the country is less than 40%. As the monsoon in India is unpredictable and drought and floods are observed at peoriodical interval hence, rainwater management is considered as focal point to the solution of the problem of uncertainity of rainfall under rainfed condition. The Indo-Gangetic plain of the country has numerous perennial rivers but still rainfall is the main source of irrigation and domestic need of the people. Presently exploitation of groundwater has been at faster rate than its recharge. Therefore rainwater management does not only aims to create surface irrigation potential but also aims to augment groundwater. Under such vision the IWMP has been designed.

1.3 State of Uttar Pradesh

Uttar Pradesh is situated in northern part of India. Its geographical area is about 243290 sq km. It accounts for 6.88 percent of total geographical area of the country. The population of the state is about 200 million as per census of 2011, which accountes for 16.49 percent of the total population of India. The highest density of population is also found in this region. On account of highest density of population, the per capita availability of land is very low in comparison to other states. The state is divided into 4 divisions, namely Western (30 districts), Eastern (28 districts), Central (10 districts) and Bundelkhand (7 districts). At present state have 75 districts, 327 tehsils, 822 blocks and 107452 revenue villages. The state is also dividend into 9 agro climatic zones, 1. Tarai Region; 2. Western Plain Region; 3. Central Western Region; 4. South Western Region; 5. Central Plain Region; 6. Bundelkhand Region; 7. North Eastern Plain Region; 8. Eastern Plain Region and 9. Vindhyachal Region. The flood and drought are common phenomena of this region.

The state has more than 32 large and small rivers, of them the Ganges, Yamuna, Sarayu, Betwa and Ghaghara are larger rivers of the state. Lucknow is the capital of Uttar Pradesh. Agricultural and services industries are most important activities of the state economy. About 68.54 percent land of the total geographical area of the state is under cultivation (2012-13). The percentage of net area sown in Uttar Pradesh has been decreasing continuously due to fast expansion of industrialization and urbanization in the state.

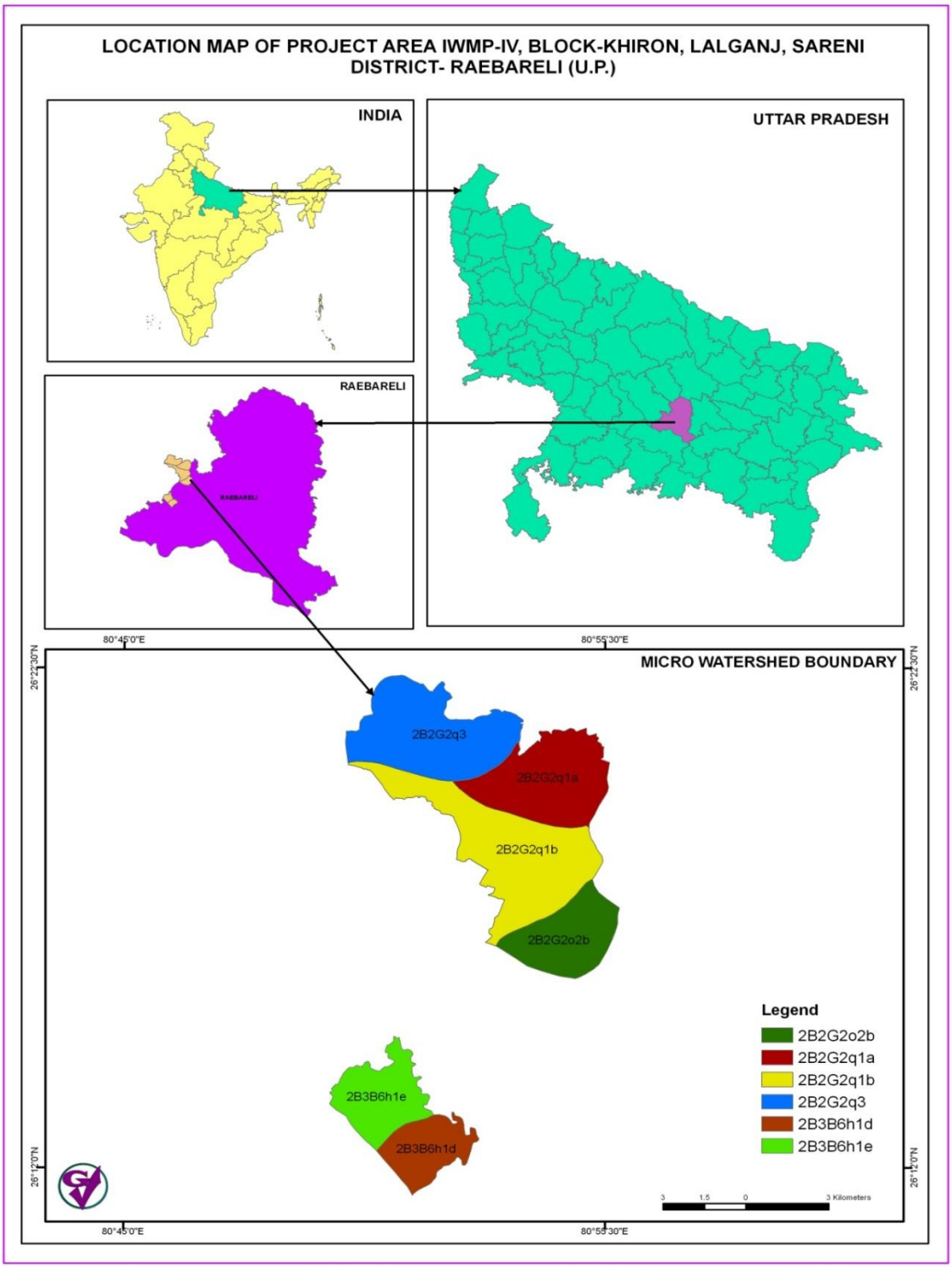
1.4 Raebareli District

The district of Raebareli, which was created by the British in 1858, is named after its headquarters town. Tradition has it that the town was founded by the Bhars and was known as Bharauli or Barauli which in course of time got corrupted into Bareli. The prefix, Rae, is said to be a corruption of Rahi, a village 5 km. west of the town. It is also said that the prefix, Rae, represents Rae, the common title of the Kayasths who were masters of the town for a considerable period of time. The area covered by the district of Raebareli has been known as Avadh or Subhah of Avadh. In the north it streched as far as the foothills of the Himalayas and in the south as far as the Ganga beyond which lay the Vatsa region. There is no doubt that the district has been civilised and settled life since very early times. Raebareli is a city and a municipal board in the Indian state of Uttar Pradesh. The town is situated at the bank of the Sai River, 82 km southeast of Lucknow. The soils are light in texture. Light brown sandy loam to sandy, generally structure less, poor in water holding capacity and organic matter,soil nutrition moderately alkaline. Seventy five percent of the area has loamy soil and 25% has silty soil.

1.5 Khiron watershed

The Khiron watershed having in area of 7092.59 ha is situated in the district of Raebarelli (UP). It has been designated as IWMP-IV watershed which has six micro watersheds (code: 2B2G2o2b, 2B2G2q1a, 2B2G2q1b, 2B2G2q3, 2B3B6h1d, and 2B3B6h1e). It includes 43 villages of 30 village Panchayats. The location of the watershed is depicted in Fig 1.

Fig.1. Location map of Khiron, Raebareli watershed



Chapter 2: Objectives and Project Implementing Agency (PIA)

2.1 Objectives

Sl. No.	Objectives
1	The main objective of the IWMP are to restore the ecological balance by harnessing, conserving and developing degraded natural resources such as soil, vegetation and water.
2	Prevention of soil, run-off; rain water harvesting and recharging of the ground water.
3	Introduction of multi-cropping system and diverse agro-based activities, which helps to provide sustainable livelihood to the people of watershed area.
4	Promote cost effective and proven technologies to support watershed development and management

2.2 Project Implementing Agency (PIA)

Name of the PIA organization	Office of Bhoomi Sanrakshan Adhikari, U.P. Irrigation and Water Resource, Raibareli.	
Postal address of the PIA organization	Kothi Veerpal Singh opposite RDA Complex Raibareli 2-29001	
Name of the head of the PIA organization	M.A. Khan, Bhoomi Sanrakshan Adhikari	
Name of the Principal Investigator (PI) i.e. Leader of the IWMP project identified by the PIA	M.A. Khan	
Designation of PI	B.S.A.	
Mobile no of the PI	+91-9670205310	
Names of the Watershed Development Team (WDT) with their educational qualification and mobile number	Sl. No.	Name, qualification and mobile number
	1	Ramakant Shukla, PG(Economics)with Agriculture
	2	Jitandra Pratap Singh, B.Sc. Agriculture
	3	Anil Kumar Mishra, B.Sc Agriculture
	4	Arun Kumar Panday, B.Sc Agriculture
	5	Mukesh Kumar Yadav, Ag. Diploma
	6	Smt. Sweta Singh, B.A. Social Science
	7	Smt. Shushma Devi, M.A. Social Science
Names and designation of members of Watershed Cell cum Data Centre (WCDC)	1	Ashok Kumar , T.E.
	2	Shashank Shahu, D.E.O.
	3	Anil Kumar Shukla, J.E.
	4	Teju Singh Yadav, J.E.
Year of commencement of the project	2012-2013	
Year of completion of the project	2017-2018	
Budget of the project	Rs. 690.00 lakhs	

Chapter 3: Present scenario of the watershed

3.1 General Profile of the watershed

Sl. No.	Parameter	Information/ value
1	Name of State	U.P.
2	Name of District	Raebareli
3	Name of the Tahsil	Lalganj
4	Name of Block	Khiron
5	Name of post office with pincode	Khiron- 226102
6	Watershed details	IWMP-IV
i	Name of Micro Watersheds	Mirjapur , Dhurayee , Atarhar , Jeri ,Kanhamau , Bhitari
ii	Code of Micro Watershed	2B2G2o2b , 2B2G2q1a , 2B2G2q1b , 2B2G2q3 , 2B3B6h1d , 2B3B6h1e
iii	Location of watershed	Khiron Block
iv	Agro Ecological Region	Central Plain Zone (ICAR) Hot (hyperthermic) moist, semi-arid, Ganga-Yamuna Doab, Avadh plain with LGP 120-150 days
v	Agro Climatic Zone	1. Upper Gangetic Plain Region (Planning Commission) 2. UP-4 Central Plain Zone (NARP)
vi	Area of the watershed (ha)	7092.59
7	Major drainage system	Ganga River
8	Stream order of the watershed	IIIrd
9	Highest elevation (m)	120 m (toposheet)
10	Lowest elevation (m)	112 m (toposheet)
11	Elevation difference (m)	8 m
12	Length-Width ratio of the watershed	4:3
a	Latitude	80°51'4.75"E 80°51'18.007"E
b	Longitude	26°22'20.686"N 26°11'25.295"N
13	No. of Villages in the Project area.	43
14	No of Village Panchayats in the Project area.	30
15	Area	
i	Total geographical area of the watershed (ha)	7092.59
ii	Treatable land (ha)	5750.00
iii	Arable land (ha)	6874.00
a	Single cropped area (ha)	3532.28
b	Double cropped area (ha)	2723.00
iv	Gras land/Pasture land/open scrub (ha)	201.11
v	Social forest/Community forest (ha)	218.59
vi	Area under fruit trees (ha)	199.02
vi	Area under miscellaneous use (ha)	0
16	Infrastructure/amenities	
i	Distance of metalled road from village/watershed (km)	2
ii	Distance of nearest railway station (km)	4
iii	Distance of nearest market (km)	1
iv	Distance of Taluk/Tahsil/block (km)	18
v	Distance of district headquarter (km)	45-50
vi	Distance of nearest school (km)	1.5
a	Primary (km)	0 – 1
b	Senior (km)	2 – 3
c	College (km)	4 – 7

vii	Distance of nearest P.H.C. (km)	3
viii	Distance of nearest Veterinary Hospital (km)	2
ix	Distance of nearest post office (km)	1-2
x	Distance of nearest bank (km)	1-2
xi	Distance of nearest ration shop (km)	1 – 1.5
xii	Distance of nearest police station (km)	1-2
xiii	Distance of nearest panchayat bhawan (km)	1 – 1.5
xiv	Distance of nearest Community/ recreation centre (km)	-
xv	Is any cooperative activity functioning in the villageIf so, please specify	No
xvi	Electricity	Yes
xvii	Source of domestic water supply	
a	Treated water through tap	No
b	Untreated water through tap	No
c	Shallow dug up well	Yes
d	Hand pump	Yes
e	Any other (please specify)	-
xxiii	Source of irrigation	
a	Canal	Yes
b	Tube well	Yes
c	Open well	Yes
d	Open dug up ponds	Yes
e	Any other (please specify)	-
xix	Types of cattle	
a	Buffalo	Yes
b	Bullock	Yes
c	Cows	Yes
d	Goats	Yes
e	Sheep	NA
f	Pig	Yes
g	Horse	Yes
h	Poultry	Yes
i	Others (Please specify)	-
xx	Source of water for cattle	
a	Hand pump through manger (naad)	Yes
b	Open well through manger (naad)	Yes
c	Open dug up pond	Yes
d	Trough	Yes

3.2 Village wise landuse of the watershed

Sl. No.	Villages			Micro-Watershed				
	Name of Village	Area (ha)	Name of Gram Panchayat	Name of Micro-Watershed	Code of Micro-Watershed	Area of the Micro-Watershed (ha)	Arable land (ha)	Forest Land (ha)
1	2	3	4	5	6	7	8	9
1	Hardi	3.25	Hardi	Mirjapur	2B2G2o2b	935.18	3.25	0
2	Haripur Mirdahapa	2.54	Haripur Mirdahapa				2.54	0
3	Husenabad	34.39	Hardi				34.39	0
4	Khanpur Khunti	64.09	Khanpur Khunti				64.09	0
5	Majhigawan	19.08	Kalupur				19.08	0
6	Mirjapur	123.15	Mirjapur				119.46	3.69
7	Paraspur	6.25	Khiron				6.25	0
8	Ramwapur Dubai	25.89	Ramwapur Dubai				25.89	0
9	Sarai Mahmood	62.74	Mirjapur				62.74	0
10	Udvatpur	106.96	Khanpur Kushti				103.78	3.18
11	Khiron	361.53	Khiron				350.7	10.83
12	Kishun kheda	125.31	Mirjapur				121.56	3.75
	Total	**935.18**					**913.73**	**21.45**
13	Atarhar	13.04	Atarhar	Dhurayee	2B2G2q1a	1168.16	13.04	0
14	Dumarher	226.28	Dumarher				219.5	6.78
15	Khajuha	2.26	Haripur Mirdahapa				2.26	0
16	Lodipuri	147.45	Lodipuri				143.04	4.41
17	Mohanpur	2.75	Lodipuri				2.75	0
18	Nandehari	107.35	Lodipuri				104.14	3.21
19	Ranapur Urf Pahrauli	57.3	Ranapur urf Pahrauli				57.3	0
20	Tarwa Barwa	10.38	Dandepur				10.38	0
21	Dhurayee	601.35	Dhurayee				578.82	22.53
	Total	**1168.16**					**1131.23**	**36.93**
22	Atarhar	348.15	Atarhar	Atarhar	2B2G2q1b	2077.03	335.71	12.44
23	Baraundi	202.3	Baraundi				194.24	8.06
24	Hardi	167.78	Hardi				162.77	5.01
25	Husenabad	25.87	Hardi				25.87	0
26	Khanpur Khunti	121.19	Khanpur Khunti				117.56	3.63
27	Kursandi	109.77	Kursandi				106.5	3.27
28	Lalpur	24.8	Bakuliha				24.8	0
29	Mirjapur	0.35	Mirjapur				0.35	0
30	Ramwapur Dubai	17.82	Ramwapur Dubai				17.82	0
31	Sadullapur	92.91	Kursandi				90.19	2.72
32	Tarwa Barwa	40.58	Dandepur				40.58	0
33	Haripur Mirdahapa	200.38	Haripur Mirdahapa				192.35	8.03

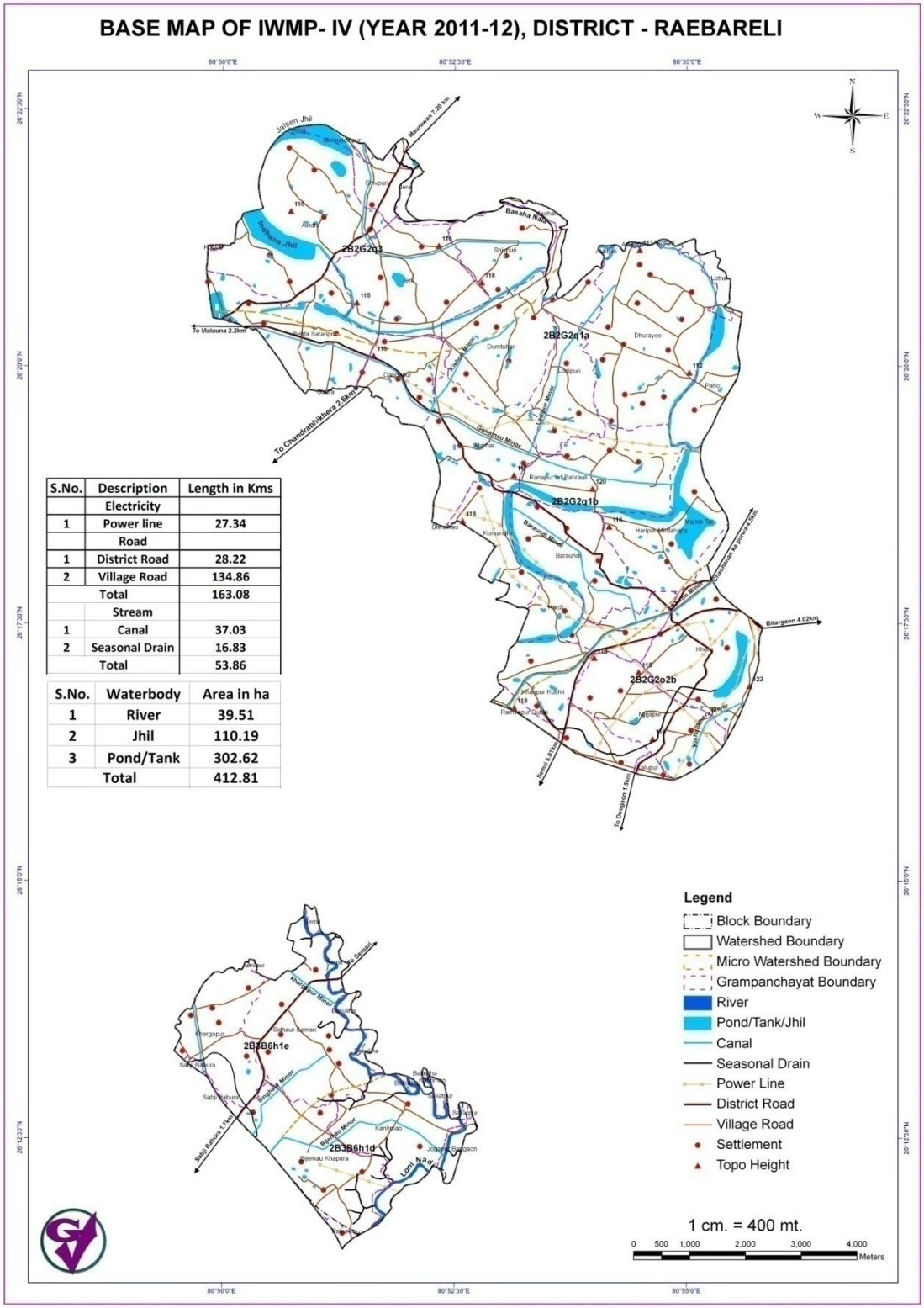
34	Khajuha	92.63	Haripur Mirdahapa				89.87	2.76
35	Ranapur Urf Pahrauli	291.49	Ranapur urf Pahrauli				282.76	8.73
36	Behta Satanpur	177.57	Kutubpur				171.26	6.31
37	Dandepur	121.77	Dandepur				116.14	5.63
38	Dumarher	3.62	Dumarher				3.62	0
39	Lodipuri	0.85	Lodipuri				0.85	0
40	Mohanpur	24.78	Lodipuri				24.78	0
41	Khiron	12.42	Khiron				12.42	0
	Total	**2077.03**					**2010.44**	**66.59**
42	Aindhi	390.62	Aindhi	**Jeri**	**2B2G2q3**	**1521.48**	376.92	13.7
43	Behta Satanpur	55.1	Kutubpur				55.1	0
44	Chandauli	238.8	Aindhi				231.66	7.14
45	Dandanpur	88.25	Shivpuri				85.53	2.72
46	Jeri	389.92	Jeri				377.25	12.67
47	Dumarher	101.78	Dumarher				98.75	3.03
48	Shivpuri	223.34	Shivpuri				216.65	6.69
49	Tarwa barwa	33.67	Dandepur				33.67	0
	Total	**1521.48**					**1475.53**	**45.95**
50	Bijemau Khapura	127.71	Bijemau Khapura	**Kanhamau**	**2B3B6h1d**	**576.38**	123.9	3.81
51	Jogapur Barigaon	11.17	Jogapur Barigaon				11.17	0
52	Kanha Mau	275.85	Kanha Mau				265.6	10.25
53	Malpur	134	Bijemau Khapura				129.98	4.02
54	Pahuri	12.31	Pahuri				12.31	0
55	Sidhaur Semari	15.34	Sidhaur Semari				15.34	0
	Total	**576.38**					**558.3**	**18.08**
56	Bijemau Khapura	87.35	Bijemau Khapura	**Bhitari**	**2B3B6h1e**	**814.36**	84.7	2.65
57	Chandpur	7.79	Sabji Babura				7.79	0
58	Kanha Mau	2.31	Kanha Mau				2.31	0
59	Khargapur	168.09	Khargapur				161.05	7.04
60	Semri	5.92	Semri				5.92	0
61	Sidhaur Semari	118.79	Sidhaur Semari				114.25	4.54
62	Afsari	100.85	Khargapur				97.84	3.01
63	Bhitari	323.26	Bhitari				310.91	12.35
Total		**814.36**					**784.77**	**29.59**
Grand Total		**7092.59**					**6874.00**	**218.59**

3.3 Watershed maps

Various watershed maps viz. base map, slope map, drainage map, land capability class map, land use map etc required for planning of suitable soil and water conservation measures are given below:

3.3.1 Base Map

The Base map of Khiron watershed is given below:

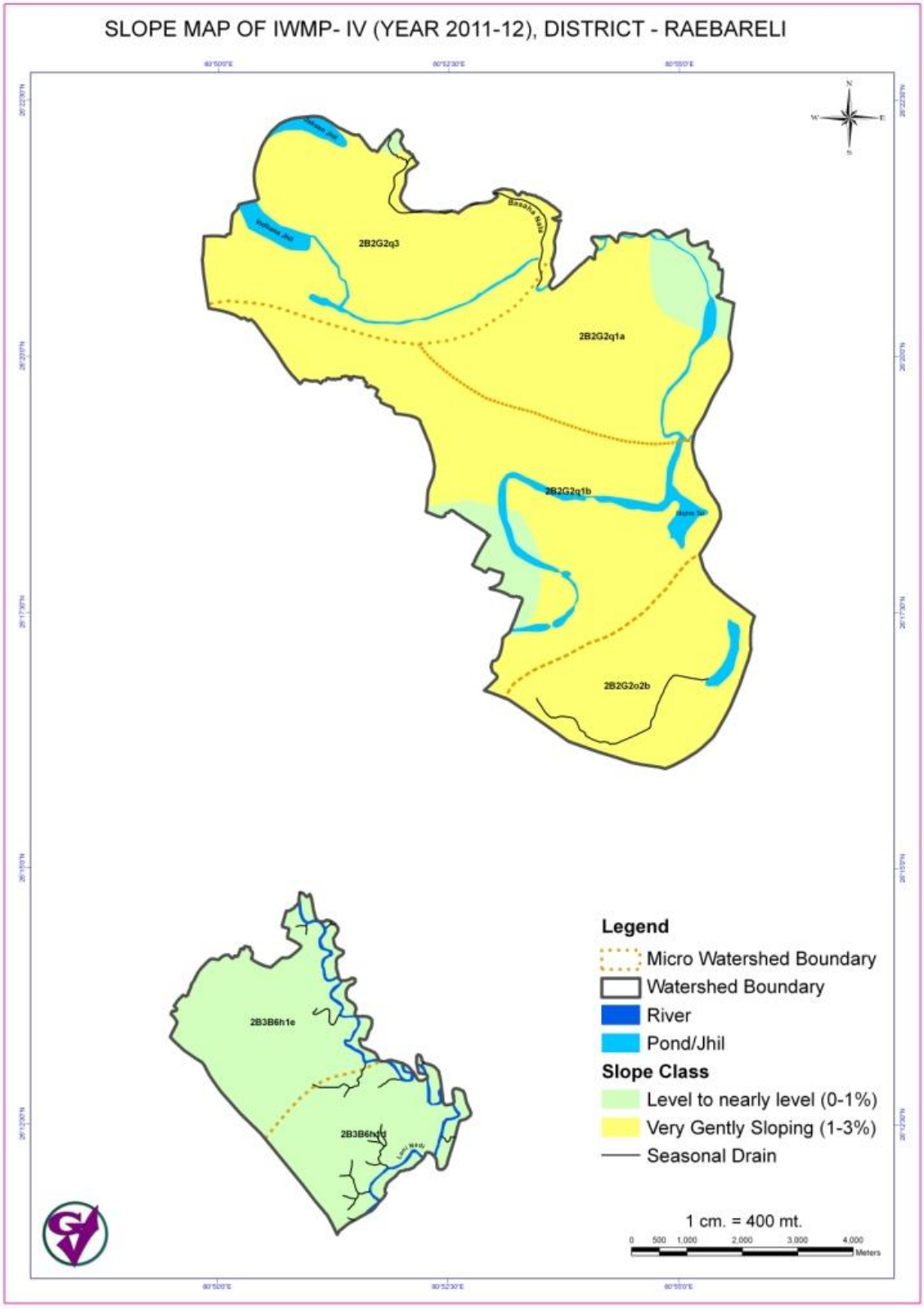


S.No.	Description	Length in Kms
	Electricity	
1	Power line	27.34
	Road	
1	District Road	28.22
2	Village Road	134.86
	Total	163.08
	Stream	
1	Canal	37.03
2	Seasonal Drain	16.83
	Total	53.86

S.No.	Waterbody	Area in ha
1	River	39.51
2	Jhil	110.19
3	Pond/Tank	302.62
	Total	412.81

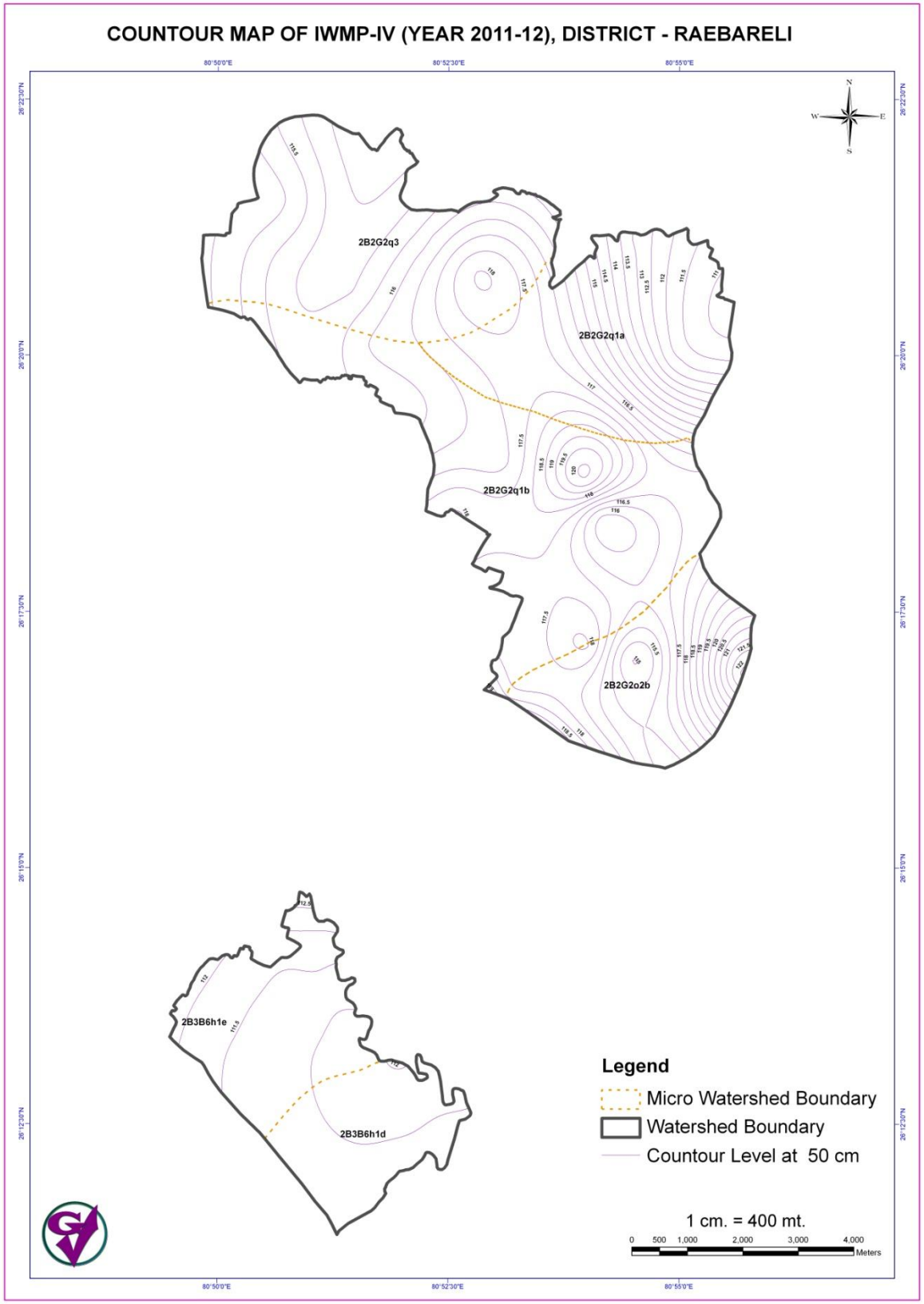
3.3.2 Slope Map

The slope map of the watershed is given below. It is observed that general land slope of the watershed is less than 3%.



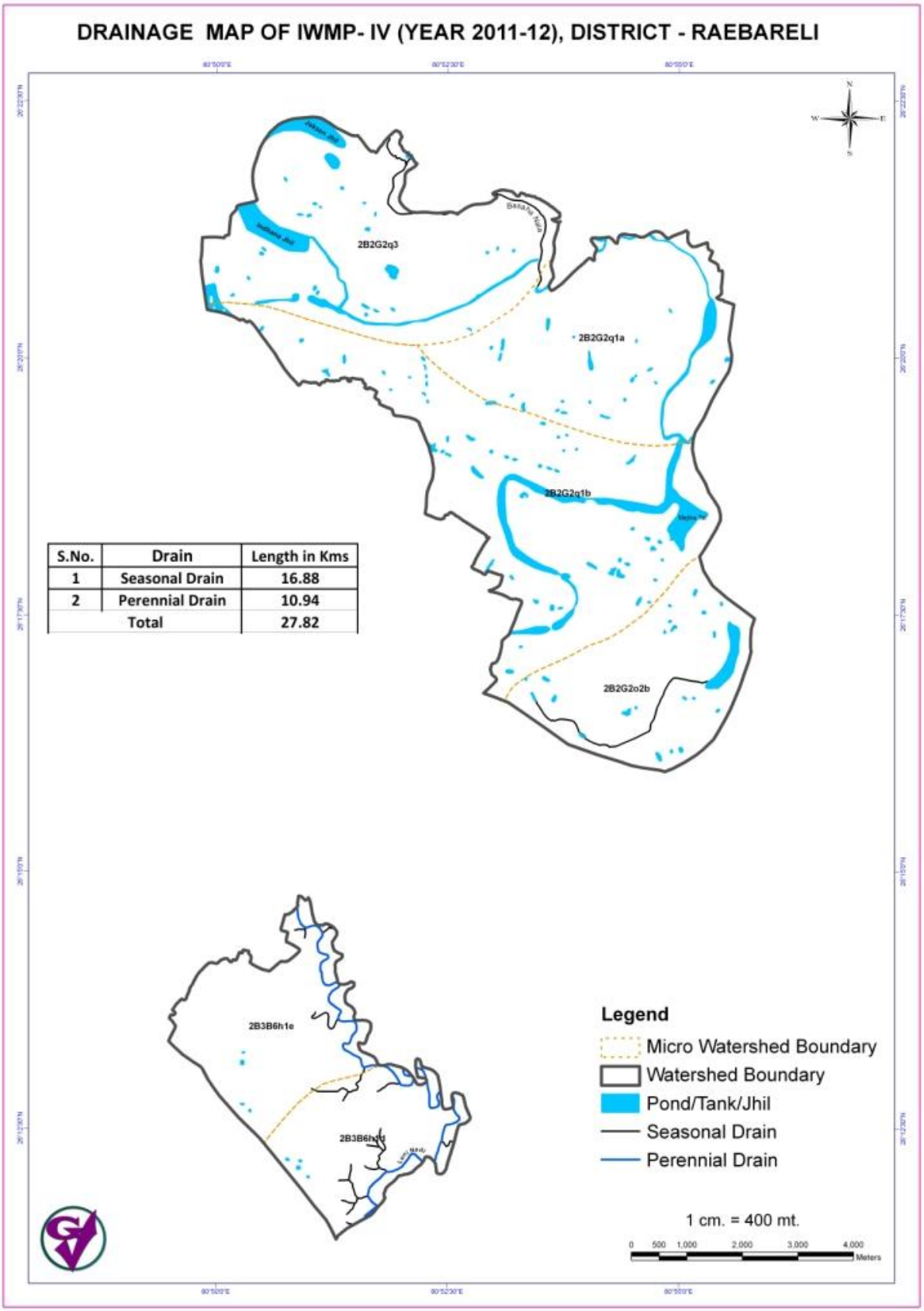
3.3.3 Contour Map

The lowest elevation of the watershed is 112 m amsl and the highest elevation is 120 m amsl. Thus the elevation difference is only 8 m.



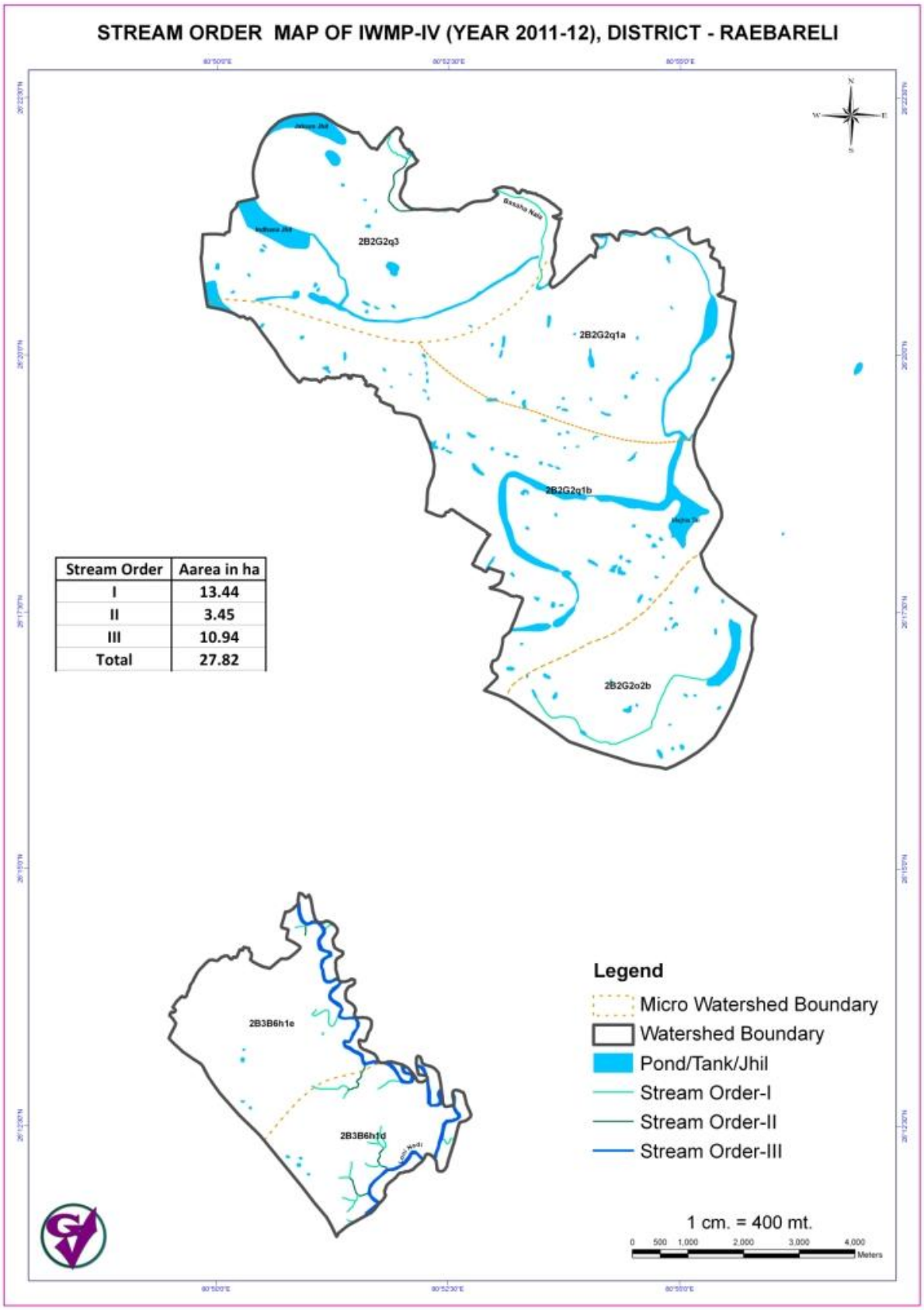
3.3.4 Drainage Map

The Khiron watershed is III[rd] order watershed. The total length of seasonal stream is 16.83 km and of perennial stream is 10.94 km.



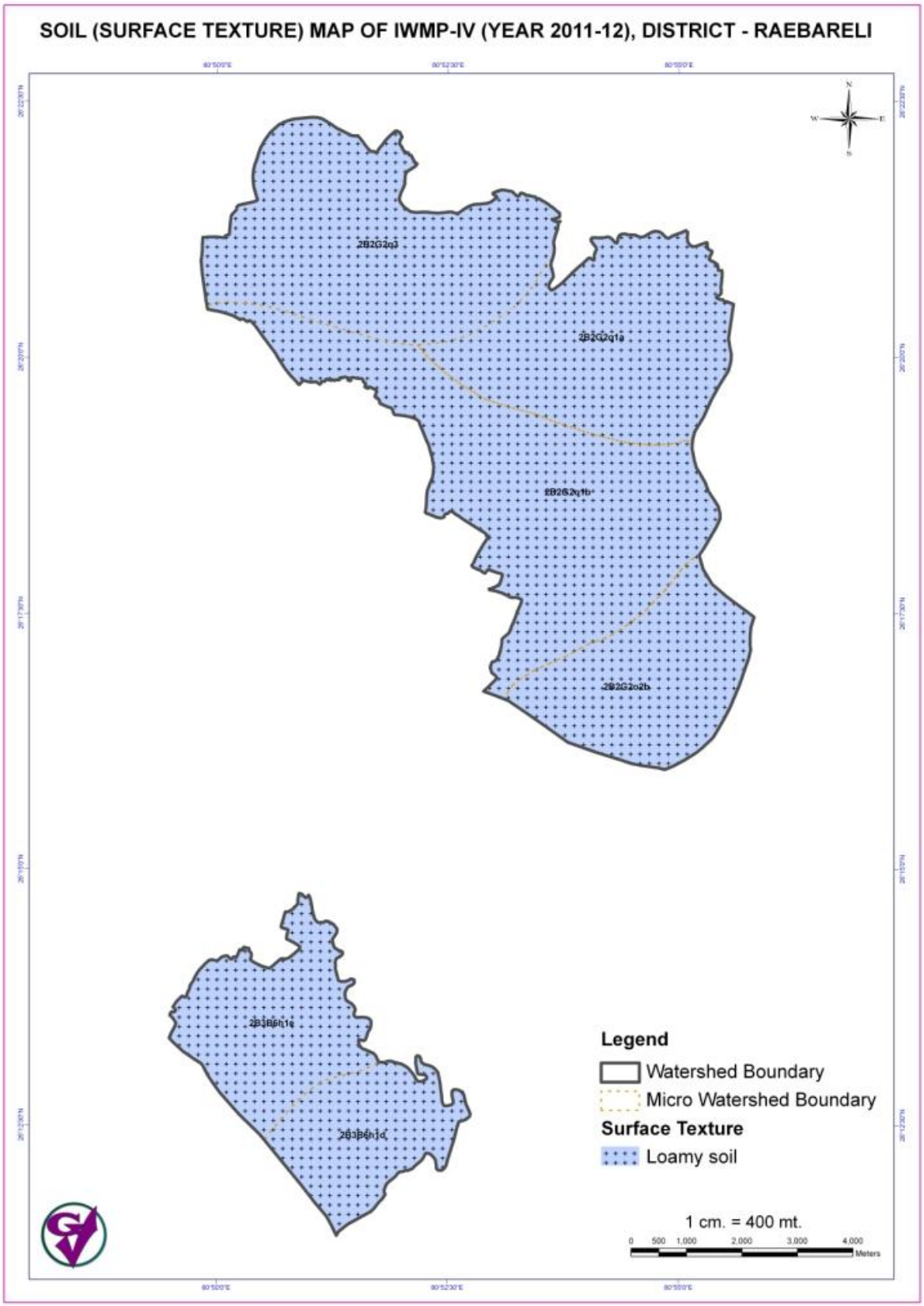
3.3.5 Stream order map

The Khiron watershed is III[rd] order stream watershed. The drainage density is 0.39 Km /Km^2. The stream order map of the watershed is given below:



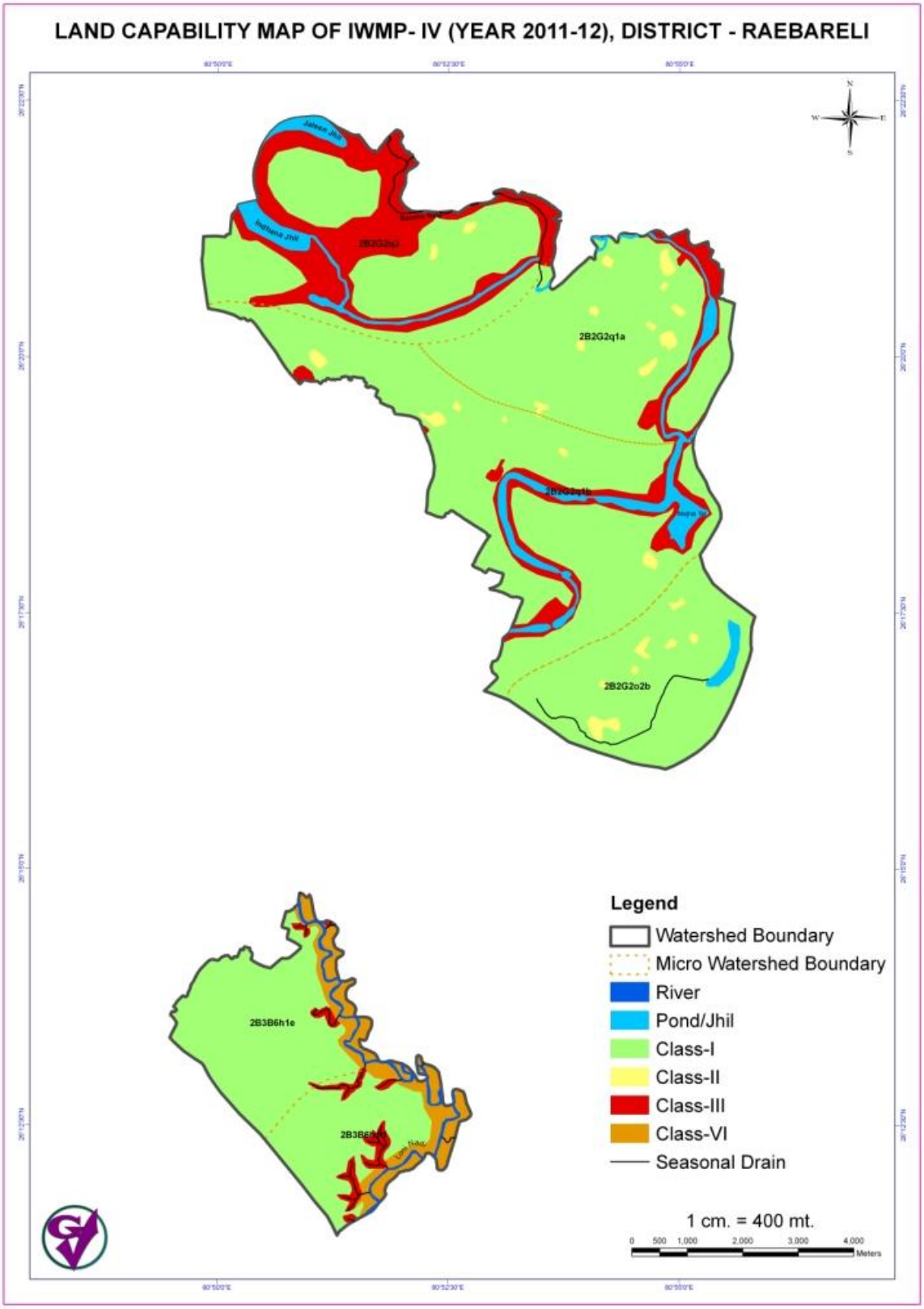
3.3.6 Soil map

The soil map is given below. The soils are light to medium in texture. Soil of the watershed is loamy soil.



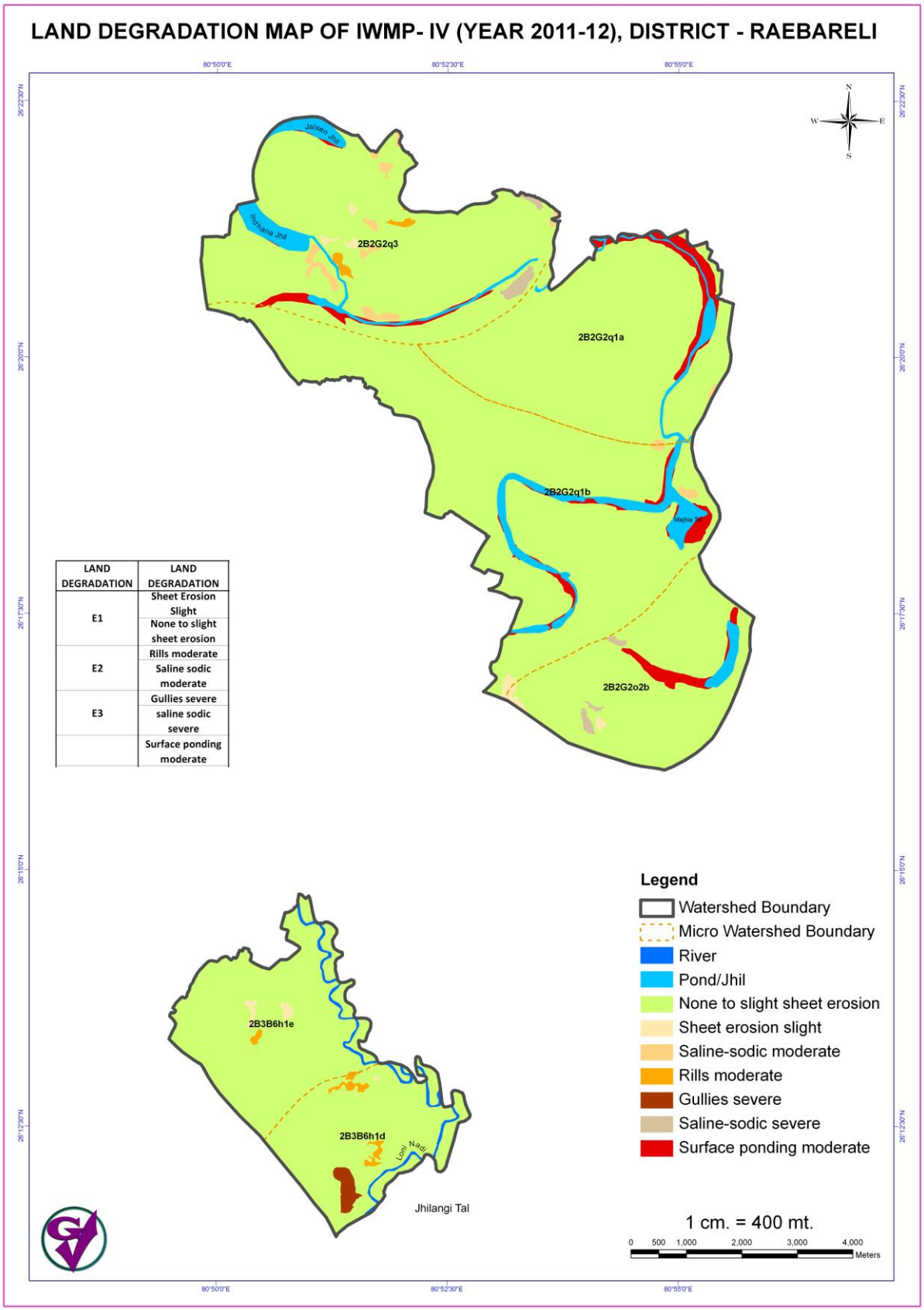
3.3.7 Land Capability Class

The class I land occupies about 91% ha of watershed area followed by 1% under class II land, 2% under class III and 4% under class IV and rest 2% is under class VI. The land capability class map and gram Panchayat wise land under various classes is given below:



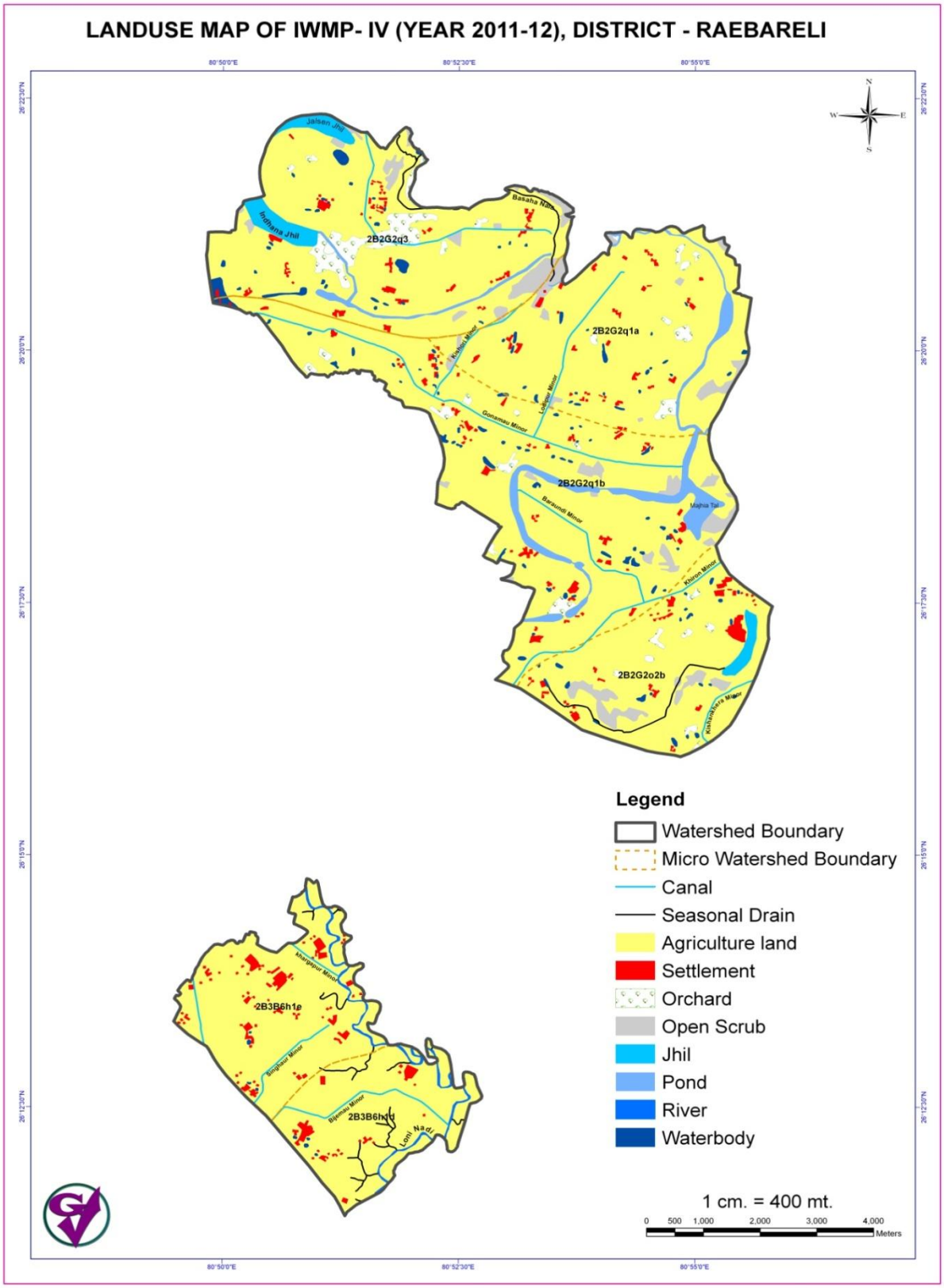
3.3.8 Land degradation

The soil erosion in the cultivated land is not a serious problem in the watershed as about 96% area is subjected to E_1 erosion. The E_4 erosion is observed in about 391.79 ha area which is along the streams. The soil degradation map is given below:



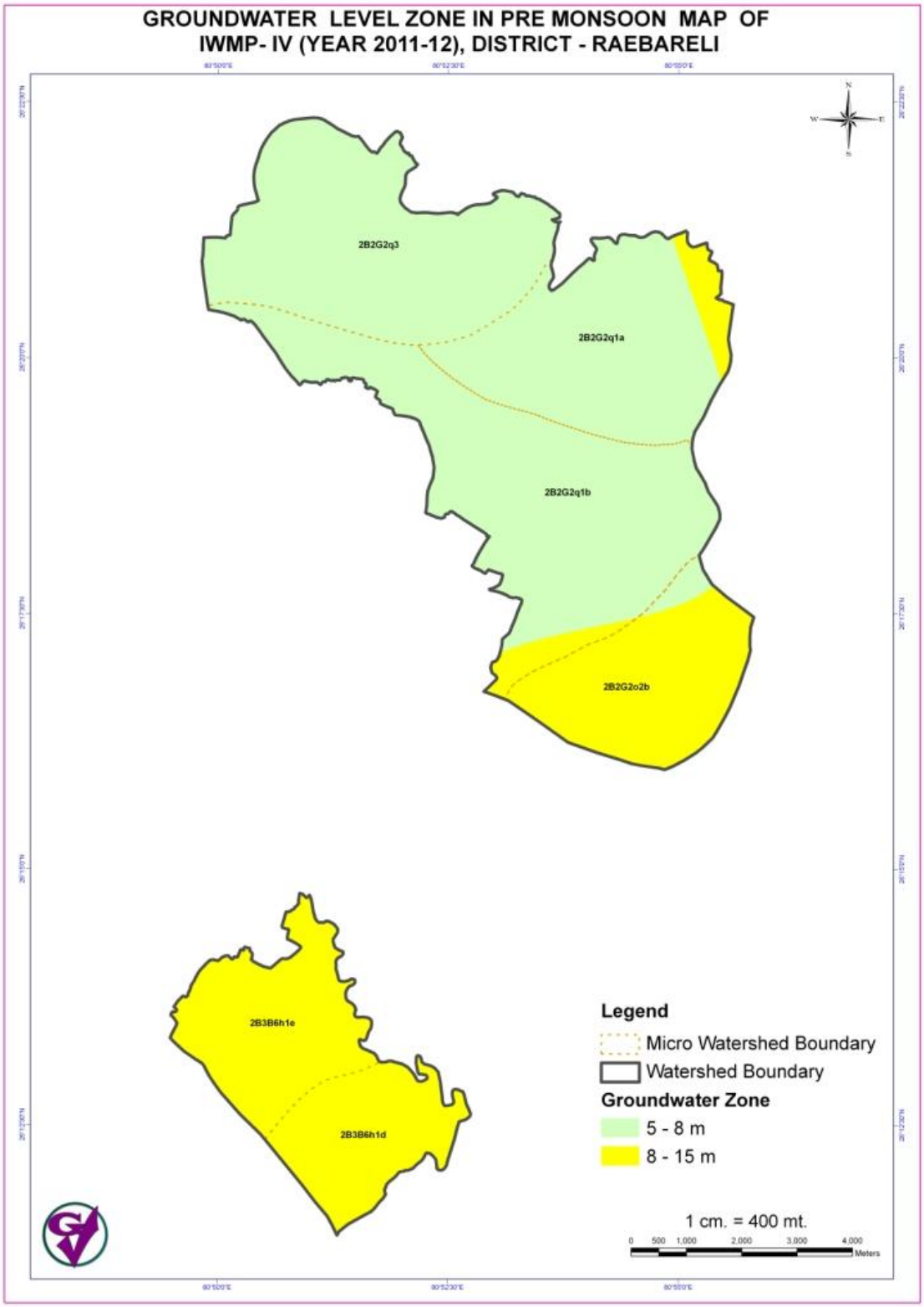
3.3.9 Landuse

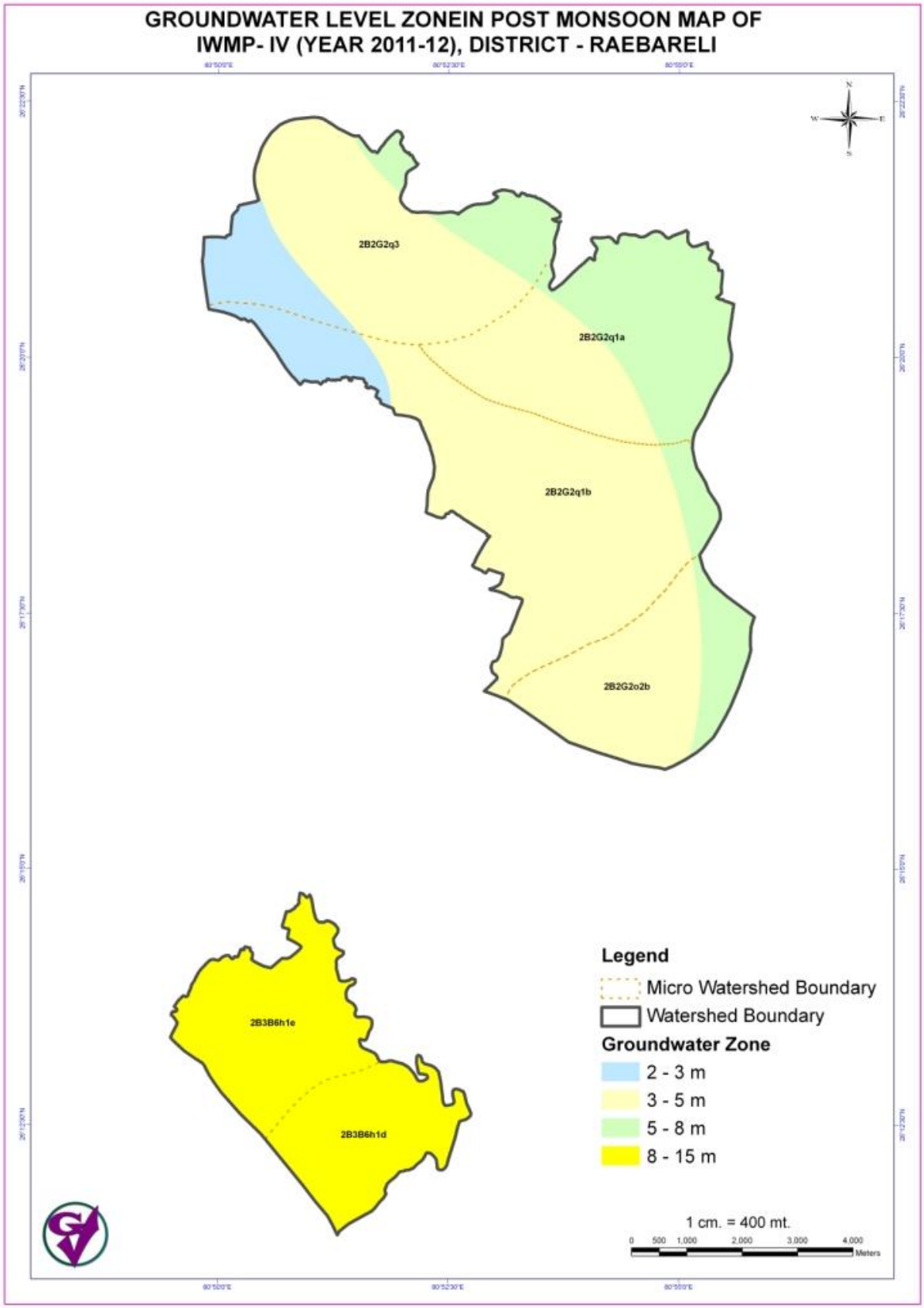
The total area of Khiron watershed is 7092.59 ha. About 97% area of the land is under cultivation. Orchard land is about 3%. The land use map is given below:



3.3.10 Ground water level map

About 4840.45 ha area of the watershed has a ground water depth of about 5-8 m and 2583.24 ha have a depth of about 8 to 15 m. This is pre-monsoon status. During post monsoon season about 45840.45 ha area has ground water table of 5 to 8 m. The pre and post monsoon ground water maps are given below:




GROUNDWATER LEVEL ZONEIN POST MONSOON MAP OF
IWMP- IV (YEAR 2011-12), DISTRICT - RAEBARELI
2B2G2q3
2B2G2q1a
2B2G2q1b
2B2G2o2b
2B3B6h1e
2B3B6h1d
Legend
Micro Watershed Boundary
Watershed Boundary
Groundwater Zone
2 - 3 m
3 - 5 m
5 - 8 m
8 - 15 m
1 cm. = 400 mt.
0 500 1,000 2,000 3,000 4,000
Meters

3.4 Climate

Climate of the watershed is warm subtropical with very cold and dry winters from December to mid February and dry, hot summers from April to mid June. The rainy season is from mid-June to mid-September when it gets an average rainfall of 647.50 mm mostly from the south-west monsoon. During extreme winter, the maximum temperature is around 12°C and the minimum is between 3 - 4°C. Fog is quite common from late December to late January. Summers can be quite hot with temperatures rising to the 24.00 to 37.00°C.

Month	Rainfall (mm)	Temperature (0c)		Humidity (%)	Sunshine hrs	Wind speed (Km/hr)	Open Pan Evaporation (mm/day)
		Max	Min				
Jul	230.2	40	33	83	13	7.9	-
Aug	230.4	37	30	83	13	7.2	-
Sep	144.6	33	30	80	12	5.4	-
Oct	0	27	24	70	11	3.2	-
Nov	0	25	17	70	10	3.2	-
Dec	0	21.5	5.5	70	10	4.6	-
Jan	4.42	22	5.5	75	10	7.2	-
Feb	7.28	25	18	66	11	7.2	-
Mar	0	31	22	50	12	8.6	-
Apr	0	38	30	44	13	9.3	-
May	0	45	37	52	14	9.3	-
Jun	30.6	45	37	70	14	9.3	-
Total/ Average	647.5	-	-	-	-	-	
Distance of nearest meteorological station / observation points (km)							80
Longitude of meteorological station / observation points							80°53´5.15´´
Latitude of meteorological station / observation points							26°45´44.49´´
Altitude of meteorological station / observation points							125 m
Average annual rainfall of at least 10 years (mm)							865.20
Highest one day rainfall during the past 10 years (mm)							190 mm
Highest rainfall intensity of one hour duration in the last 10 years (mm/hr)							160 mm
Highest annual rainfall during the last 10 years (mm)							-
Lowest annual rainfall during the last 10 years (mm)							-

3.5 Natural calamities

Natural calamities of the watershed for the past 10 years are given below:

Name of Micro Watershed	Code of Micro Watershed	Type of calamities	Very severe/ Severe/mild	Years in which affected	Farm family affected	% of crop area affected
Mirjapur	2B2G2o2b	Flood	40%	2013	30%	45
Dhurayee	2B2G2q1a	Flood	15%	2013	07%	10
Atarhar	2B2G2q1b	Flood	25%	2013	12%	8
Jeri	2B2G2q3	Flood	30%	2013	20%	15
Kanhamau	2B3B6h1d	Flood	35%	2013	22%	-
Bhitari	2B3B6h1e	Flood	20%	2013	13%	25

3.6 Physiography, Geomorphology and Soils

3.6.1 Physiography of the watershed

The physiography of the watershed, as a whole, is fairly compact tract of gently flat land. The elevation varies from about 112 meter (min.) amsl to 120 meter (max.) amsl in the extreme south east, on the banks of the Ganga.

3.6.2 Geomorphology

The Terrain of the watershed is a part of Ganga Plain. Geomorphologically it is differentiated into lowland and upland. Watershed has mostly silty to loamy soil, and had relict fluvial features, such as *tals* (ponds) and paleochannels. On both the sides of the Sai River it is topped by sand. The lowland is separated by the 5-10 m high bluffs from upland. Two levels of Terraces are present along Ganga River. The lower one is the depositional type, and the higher terrace is erosional or non-depositional type. Along Sai river only erosional terrace are developed.

3.6.3 Soils

Alluvium is the geotechnical province of Raebareli. It has cumulative high permeability, low bearing capacity and 1-2 kg/cm² compressive strength and shows foundation characteristics suitable for construction of engineering structures of low unit load. The soils are light in texture. Light brown sandy loam to sandy, poor in water holding capacity and organic matter, moderately alkaline. Soils of the watershed are deficient in organic matter and soil nutrients. Seventy nfive percent of the area has loamy soil and 25% has silty soil. Waterlogging (during monsoon) in low lying areas, rill and gully erosion in sandy areas long Sai nadi and soil erosion are major natural hazards affecting upland.

Micro watershed wise soil details								
Sl. No	**Name and Code of Microwatershed**	**Area (ha)**	**Soil depth**	**Alkaline (yes/no)**	**Fertility (yers/no)**	**Flood (yes/no)**	**Status of macro nutrients**	**Status of micro nutrients**
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
1	Mirjapur (2B2G2o2b)	919.717	>90 cm	Yes	Low	Nill	Organic Carbon and Nitrogen Deficient	Zn Deficient
2	Dhurayee (2B2G2q1a)	1363.462	>90 cm	No	Medium	Nill		
3	Atarhar (2B2G2q1b)	2012.879	>90 cm	Yes	Low	Nill	Organic Carbon and Nitrogen Deficient	Zn Deficient
4	Jeri (2B2G2q3)	1643.623	>90 cm	No	Medium	Nill		
5	Kanhamau (2B3B6h1d)	646.412	>90 cm	Yes	Low	Nill	Organic Carbon and Nitrogen Deficient	Zn Deficient
6	Bhitari (2B3B6h1e)	840.591	>90 cm	No	Medium	Nill		
Total		***7426.684***						

3.7 Hydrology

Sai Nadi, *Tals* and Canals (Sharda canal System) constitute the surface water resource in the district. The watershed has average water table of 7.50 m. There are about 26 defunct wells, which are no longer functioning in the Khiron watershed. Excessive ground water abstraction in some areas has resulted in alarming depletion of ground water level which results in defunct wells. There are also few lakes. There are about 116 tube-wells with an average depth of 120 m. there are some open dug up ponds with an area of about 0.25 ha. Sai River is the major drainage system of the watershed.

Sl. No.	Name of water source	Capacity/number	Remarks
1	**Canal**		
a	Type	Lined/unlined	Unlined
b	Discharge (cubic meter per second)		
c	Flow months	3Months	
d	Maintenance	Cleaned/silted/full of vegetation	Cleaned
2	**Open dug up well**		
a	Average water table (m)	7.5	
b	Total number	18	
c	Number of functioning wells	Null	
d	Number of defunct wells	20	
e	Diameter of the well (give range), m	9	
f	Number of lined wells	12	
g	Number of unlined wells	Nill	
h	Whether well has parapet wall	Yes/no/some have	Yes
i	Whether used for ground water recharge	Yes/no/some have	No
j	Main purpose		
i	Drinking water	√	Abandoned
ii	Irrigation	√	Abandoned
iii	For cattle	√	Abandoned
3	**Tube well**		
i	Number of tube wells installed	116	Private
ii	Number of functional tube wells	58	
iii	Number of defunct tube wells	26	
iv	Average depth (give range), m	12	
v	Diameter (give range), cm		
vi	Average discharge (cubic meter per second)		
vii	Average working hours per year (hrs)	400 hrs	Depends on Rainfall and Electricity
4	**Open dug up ponds**		
I	Number of open dug up ponds	20	
ii	Number of ponds used for irrigation	12	
iii	Average depth of open dug up ponds (give range also), m	2-2.5	
iv	Average size (give range), ha	0.25	

3.8 Human population

Total population of the watershed is 79742. Out of these about 69% belong to general category and 31% are schedule caste. Village wise population is given below:

S.N.	Name of Villages	Name of Gram Panchayat	Male			Female			Total			Total Population
			SC	ST	General	SC	ST	General	SC	ST	General	
1	Afasari	Khargapur	113	1	267	110	0	240	223	1	507	731
2	Aindhi	Aindhi	381	0	751	422	0	763	803	0	1514	2317
3	Atarhar	Atarhar	200	0	1497	190	0	1409	390	0	2906	3296
4	Baraundi	Baraundi	311	0	501	265	0	479	576	0	980	1556
5	Behta Satanpur	Kutubpur	366	0	370	348	0	324	714	0	694	1408
6	Bhitari	Bhitari	397	0	1235	418	0	1171	815	0	2406	3221
7	Bijemau Khapura	Bijemau Khapura	165	0	1321	151	0	1162	316	0	2483	2799
8	Chandauli	Aindhi	80	0	278	94	0	291	174	0	569	743
9	Chandapur	Sabji Babura	396	0	829	351	0	766	747	0	1595	2342
10	Dandanpur	Shivpuri	124	0	156	122	0	135	246	0	291	537
11	Dhurayee	Dhurayee	573	0	1722	590	0	1596	1163	0	3318	4481
12	Dondepur	Dandepur	171	0	474	145	0	461	316	0	935	1251
13	Dumarher	Dumarher	776	0	464	885	0	452	1661	0	916	2577
14	Hardi	Hardi	416	0	465	370	0	424	786	0	889	1675
15	Haripur	Haripur Mirdahapa	257	0	557	212	0	501	469	0	1058	1527
16	Husenabad	Hardi	63	0	393	67	0	339	130	0	732	862
17	Jeri	Jeri	403	0	668	379	0	658	782	0	1326	2108
18	Jogapur Barigaon	Jogapur Barigaon	393	0	1692	394	0	1602	787	0	3294	4081
19	Kanha Mau	Kanha Mau	73	0	365	86	0	362	159	0	727	886
20	Khajuha	Haripur Mirdahapa	369	0	296	348	0	247	717	0	543	1260
21	Khanpur Khunti	Khanpur Khunti	179	0	735	166	0	643	345	0	1378	1723
22	Khargapur	Khargapur	235	0	933	221	0	857	456	0	1790	2246
23	Khiron	Khiron	1620	0	3516	1480	0	3339	3100	0	6855	9955
24	Kishun Khera	Mirjapur	337	0	285	332	0	251	669	0	536	1205
25	Kursandi	Kursandi	47	0	559	44	1	515	91	1	1074	1166
26	Lalapur	Bakuliha	504	0	148	461	0	131	965	0	279	1244
27	Lodipuri	Lodipuri	205	0	235	183	0	211	388	0	446	834

S.N.	Name of Villages	Name of Gram Panchayat	Male			Female			Total			Total Population
			SC	ST	General	SC	ST	General	SC	ST	General	
28	Majhigawan	Kalupur	400	0	502	374	0	506	774	0	1008	1782
29	Malpur	Bijemau Khapura	548	0	699	529	0	643	1077	0	1342	2419
30	Mirjapur	Mirjapur	85	0	263	64	0	236	149	0	499	648
31	Mohanpur	Lodipuri	59	0	155	64	0	147	123	0	302	425
32	Nandehari	Lodipuri	181	0	206	154	0	164	335	0	370	705
33	Pahuri	Pahuri	476	0	1632	536	0	1546	1012	0	3178	4190
34	Paraspur	Khiron	13	0	8	12	0	4	25	0	12	37
35	Ramwapur Dubai	Ramwapur Dubai	440	0	926	382	0	789	822	0	1715	2537
36	Ranapur Urf Pahrauli	Ranapur Urf Pahrauli	269	3	821	257	6	802	526	9	1623	2158
37	Sadullapur	Kursandi	150	0	274	128	0	244	278	0	518	796
38	Sarai Mahmood	Mirjapur	34	0	218	26	0	182	60	0	400	460
39	Semri Jhakrasi	Semri	239	0	570	253	0	524	492	0	1094	1586
40	Shiv Puri	Shivpuri	340	0	318	345	0	351	685	0	669	1354
41	Sidhaur Semari	Sidhaur Semari	93	0	531	90	0	455	183	0	986	1169
42	Tarwa Barwa	Dandepur	153	0	143	172	0	130	325	0	273	598
43	Udwatpur	Khanpur Kushti	96	0	335	93	0	323	189	0	658	847
	Total		**12730**	**4**	**28313**	**12313**	**7**	**26375**	**25043**	**11**	**54688**	**79742**

3.9 Educational classification

About 62% people in the watershed are literate and among them 71% male and 52% female are literate. Village wise literacy is provided in the following table.

S.N.	Name of Village	Name of Gram Panchayat	Male		Female		Total		Total Population
			Literate	Illiterate	Literate	Illiterate	Literate	Illiterate	
1	Afasari	Khargapur	306	75	222	128	528	203	731
2	Aindhi	Aindhi	772	360	635	550	1407	910	2317
3	Atarhar	Atarhar	1170	527	807	792	1977	1319	3296
4	Baraundi	Baraundi	619	193	445	299	1064	492	1556
5	Behta Satanpur	Kutubpur	429	307	282	390	711	697	1408
6	Bhitari	Bhitari	1155	477	902	687	2057	1164	3221
7	Bijemau Khapura	Bijemau Khapura	1120	366	713	600	1833	966	2799
8	Chandauli	Aindhi	301	57	253	132	554	189	743
9	Chandapur	Sabji Babura	774	451	484	633	1258	1084	2342
10	Dandanpur	Shivpuri	220	60	126	131	346	191	537
11	Dhurayee	Dhurayee	1599	696	1011	1175	2610	1871	4481
12	Dondepur	Dandepur	465	180	334	272	799	452	1251
13	Dumarher	Dumarher	824	416	655	682	1479	1098	2577
14	Hardi	Hardi	652	229	420	374	1072	603	1675
15	Haripur	Haripur Mirdahapa	683	131	482	231	1165	362	1527
16	Husenabad	Hardi	325	131	228	178	553	309	862
17	Jeri	Jeri	701	370	485	552	1186	922	2108
18	Jogapur Barigaon	Jogapur Barigaon	1633	452	1215	781	2848	1233	4081
19	Kanha Mau	Kanha Mau	336	102	258	190	594	292	886
20	Khajuha	Haripur Mirdahapa	448	217	290	305	738	522	1260
21	Khanpur Khunti	Khanpur Khunti	732	182	457	352	1189	534	1723
22	Khargapur	Khargapur	850	318	557	521	1407	839	2246
23	Khiron	Khiron	3631	1505	2600	2219	6231	3724	9955
24	Kishun Khera	Mirjapur	348	274	203	380	551	654	1205
25	Kursandi	Kursandi	505	101	369	191	874	292	1166
26	Lalapur	Bakuliha	249	403	134	458	383	861	1244
27	Lodipuri	Lodipuri	317	123	205	189	522	312	834
28	Majhigawan	Kalupur	559	343	405	475	964	818	1782
29	Malpur	Bijemau Khapura	714	533	455	717	1169	1250	2419
30	Mirjapur	Mirjapur	298	50	178	122	476	172	648
31	Mohanpur	Lodipuri	135	79	83	128	218	207	425
32	Nandehari	Lodipuri	238	149	141	177	379	326	705
33	Pahuri	Pahuri	1495	613	1019	1063	2514	1676	4190
34	Paraspur	Khiron	12	9	7	9	19	18	37
35	Ramwapur Dubai	Ramwapur Dubai	1100	266	682	489	1782	755	2537
36	Ranapur Urf	Ranapur Urf	773	320	563	502	1336	822	2158

S.N.	Name of Village	Name of Gram Panchayat	Male		Female		Total		Total Population
			Literate	Illiterate	Literate	Illiterate	Literate	Illiterate	
	Pahrauli	Pahrauli							
37	Sadullapur	Kursandi	327	97	217	155	544	252	796
38	Sarai Mahmood	Mirjapur	195	57	118	90	313	147	460
39	Semri Jhakrasi	Semri	456	353	290	487	746	840	1586
40	Shiv Puri	Shivpuri	461	197	376	320	837	517	1354
41	Sidhaur Semari	Sidhaur Semari	508	116	367	178	875	294	1169
42	Tarwa Barwa	Dandepur	225	71	166	136	391	207	598
43	Udwatpur	Khanpur Kushti	368	63	245	171	613	234	847
	Total		**29028**	**12019**	**20084**	**18611**	**49112**	**30630**	**79742**

3.10 Socio-economic aspects

The Socio-economic condition of the people is not very encouraging as about 25% family of the watershed is landless, hence their livelihood depends upon the occasional employment they get in agriculture sector or they migrate to the nearby city for day to day labour work. Agriculture should be modernized, to get more benefit and profit in the agricultural sector. Females of the watershed are mostly engaged in flower gardening (nursery) and kitchen gardening, as there is a high growth of vegetables and flowers like rose, gladiolus, marigold etc among flower and red and green chilly among spices. Aonla and ber orchards in sodic lands, inter-cropping of turmeric as well as ginger is common and there are also established mango and other orchards.

About 31% of people are schedule cast and only few (less than 0.10%) belong to schedule tribe. About 7% families are below poverty line. More than 60% family still use fire wood for cooking the meal and only less than 6% use LPG. About 58% families of the watershed are land less.

3.11 Details of farming community, land less families and families below poverty line

About 20% families of the watershed are land less and about 10% families are below poverty line. Gram Panchayat wise details are given below:

S.N	Name of Village	Name of Gram Panchayat	Number of Landless families	Number of families of farmers with land	Total Families	Number of BPL Families
1	Afasari	Khargapur	35	69	104	9
2	Aindhi	Aindhi	167	325	492	44
3	Atarhar	Atarhar	213	413	626	56
4	Baraundi	Baraundi	92	178	270	24
5	Behta Satanpur	Kutubpur	83	160	243	22
6	Bhitari	Bhitari	188	366	554	50
7	Bijemau Khapura	Bijemau Khapura	167	325	492	44
8	Chandauli	Aindhi	55	107	162	15
9	Chandapur	Sabji Babura	145	280	425	38
10	Dandanpur	Shivpuri	37	72	109	10
11	Dhurayee	Dhurayee	295	572	867	78
12	Dondepur	Dandepur	86	167	253	23
13	Dumarher	Dumarher	184	356	540	49
14	Hardi	Hardi	103	201	304	27
15	Haripur	Haripur Mirdahapa	92	178	270	24
16	Husenabad	Hardi	54	104	158	14
17	Jeri	Jeri	133	259	392	35
18	Jogapur Barigaon	Jogapur Barigaon	252	489	741	67
19	Kanha Mau	Kanha Mau	60	116	176	16
20	Khajuha	Haripur Mirdahapa	81	156	237	21
21	Khanpur Khunti	Khanpur Khunti	107	208	315	28
22	Khargapur	Khargapur	135	262	397	36
23	Khiron	Khiron	583	1131	1714	154
24	Kishun Khera	Mirjapur	83	160	243	22
25	Kursandi	Kursandi	71	138	209	19
26	Lalapur	Bakuliha	84	162	246	22
27	Lodipuri	Lodipuri	53	103	156	14
28	Majhigawan	Kalupur	115	223	338	30
29	Malpur	Bijemau Khapura	161	313	474	43
30	Mirjapur	Mirjapur	34	65	99	9
31	Mohanpur	Lodipuri	27	51	78	7
32	Nandehari	Lodipuri	42	81	123	11
33	Pahuri	Pahuri	274	533	807	73
34	Paraspur	Khiron	3	5	8	1
35	Ramwapur Dubai	Ramwapur Dubai	145	280	425	38
36	Ranapur Urf Pahrauli	Ranapur Urf Pahrauli	135	261	396	36
37	Sadullapur	Kursandi	58	114	172	15
38	Sarai Mahmood	Mirjapur	24	48	72	6
39	Semri Jhakrasi	Semri	100	194	294	26
40	Shiv Puri	Shivpuri	88	171	259	23

S.N	Name of Village	Name of Gram Panchayat	Number of Landless families	Number of families of farmers with land	Total Families	Number of BPL Families
41	Sidhaur Semari	Sidhaur Semari	66	128	194	17
42	Tarwa Barwa	Dandepur	40	77	117	11
43	Udwatpur	Khanpur Kushti	46	90	136	12
	Total		**4996**	**9691**	**14687**	**1319**

3.12 Details about social categories of families

About 32% families are scheduled cast and 68% are general category families. Village wise details about social categories of farmers are given below:

S.N	Name of Villages	Name of Gram Panchayat	Number of Scheduled Cast Families	Number of Scheduled Tribe Families	Number of General category Families	Total families
1	Afasari	Khargapur	32	0	72	104
2	Aindhi	Aindhi	171	0	321	492
3	Atarhar	Atarhar	74	0	552	626
4	Baraundi	Baraundi	100	0	170	270
5	Behta Satanpur	Kutubpur	123	0	120	243
6	Bhitari	Bhitari	140	0	414	554
7	Bijemau Khapura	Bijemau Khapura	56	0	436	492
8	Chandauli	Aindhi	38	0	124	162
9	Chandapur	Sabji Babura	136	0	289	425
10	Dandanpur	Shivpuri	50	0	59	109
11	Dhurayee	Dhurayee	225	0	642	867
12	Dondepur	Dandepur	64	0	189	253
13	Dumarher	Dumarher	348	0	192	540
14	Hardi	Hardi	143	0	161	304
15	Haripur	Haripur Mirdahapa	83	0	187	270
16	Husenabad	Hardi	24	0	134	158
17	Jeri	Jeri	145	0	247	392
18	Jogapur Barigaon	Jogapur Barigaon	143	0	598	741
19	Kanha Mau	Kanha Mau	32	0	144	176
20	Khajuha	Haripur Mirdahapa	135	0	102	237
21	Khanpur Khunti	Khanpur Khunti	63	0	252	315
22	Khargapur	Khargapur	81	0	316	397
23	Khiron	Khiron	534	0	1180	1714
24	Kishun Khera	Mirjapur	135	0	108	243
25	Kursandi	Kursandi	16	0	193	209
26	Lalapur	Bakuliha	191	0	55	246
27	Lodipuri	Lodipuri	73	0	83	156
28	Majhigawan	Kalupur	147	0	191	338
29	Malpur	Bijemau Khapura	211	0	263	474
30	Mirjapur	Mirjapur	23	0	76	99
31	Mohanpur	Lodipuri	23	0	55	78
32	Nandehari	Lodipuri	58	0	65	123
33	Pahuri	Pahuri	195	0	612	807
34	Paraspur	Khiron	5	0	3	8
35	Ramwapur Dubai	Ramwapur Dubai	138	0	287	425
36	Ranapur Urf Pahrauli	Ranapur Urf Pahrauli	97	0	299	396
37	Sadullapur	Kursandi	60	0	112	172
38	Sarai Mahmood	Mirjapur	9	0	63	72
39	Semri Jhakrasi	Semri	91	0	203	294
40	Shiv Puri	Shivpuri	131	0	128	259
41	Sidhaur Semari	Sidhaur Semari	30	0	164	194
42	Tarwa Barwa	Dandepur	64	0	53	117
43	Udwatpur	Khanpur Kushti	30	0	106	136
	Total		**4667**	**0**	**10020**	**14687**

3.13 Details about social categories of farmers based on gender

About 22% farmers of scheduled cast are women headed whereas about 24% farmers under general category are women headed. Village wise details are given in the following table:

S.N.	Name of Villages	Name of Gram Panchayat	Number of Scheduled Cast Families		Number of Scheduled Tribe Families		Number of General category Families		Total families		Total families
			Man headed	Women headed	Man headed	Women headed	Man headed	Women headed	Man headed	Women headed	
1	Afasari	Khargapur	27	5	0	0	59	13	86	18	104
2	Aindhi	Aindhi	144	27	0	0	263	58	407	85	492
3	Atarhar	Atarhar	62	12	0	0	453	99	515	111	626
4	Baraundi	Baraundi	84	16	0	0	139	31	223	47	270
5	Behta Satanpur	Kutubpur	103	20	0	0	98	22	201	42	243
6	Bhitari	Bhitari	118	22	0	0	339	75	457	97	554
7	Bijemau Khapura	Bijemau Khapura	47	9	0	0	358	78	405	87	492
8	Chandauli	Aindhi	32	6	0	0	102	22	134	28	162
9	Chandapur	Sabji Babura	114	22	0	0	237	52	351	74	425
10	Dandanpur	Shivpuri	42	8	0	0	48	11	90	19	109
11	Dhurayee	Dhurayee	189	36	0	0	526	116	715	152	867
12	Dondepur	Dandepur	54	10	0	0	155	34	209	44	253
13	Dumarher	Dumarher	292	56	0	0	157	35	449	91	540
14	Hardi	Hardi	120	23	0	0	132	29	252	52	304
15	Haripur	Haripur Mirdahapa	70	13	0	0	153	34	223	47	270
16	Husenabad	Hardi	20	4	0	0	110	24	130	28	158
17	Jeri	Jeri	122	23	0	0	203	44	325	67	392
18	Jogapur Barigaon	Jogapur Barigaon	120	23	0	0	490	108	610	131	741
19	Kanha Mau	Kanha Mau	27	5	0	0	118	26	145	31	176
20	Khajuha	Haripur Mirdahapa	113	22	0	0	84	18	197	40	237
21	Khanpur Khunti	Khanpur Khunti	53	10	0	0	207	45	260	55	315
22	Khargapur	Khargapur	68	13	0	0	259	57	327	70	397
23	Khiron	Khiron	449	85	0	0	968	212	1417	297	1714
24	Kishun Khera	Mirjapur	113	22	0	0	89	19	202	41	243
25	Kursandi	Kursandi	13	3	0	0	158	35	171	38	209

S.N.	Name of Villages	Name of Gram Panchayat	Number of Scheduled Cast Families		Number of Scheduled Tribe Families		Number of General category Families		Total families		Total families
			Man headed	Women headed	Man headed	Women headed	Man headed	Women headed	Man headed	Women headed	
26	Lalapur	Bakuliha	160	31	0	0	45	10	205	41	246
27	Lodipuri	Lodipuri	61	12	0	0	68	15	129	27	156
28	Majhigawan	Kalupur	123	24	0	0	157	34	280	58	338
29	Malpur	Bijemau Khapura	177	34	0	0	216	47	393	81	474
30	Mirjapur	Mirjapur	19	4	0	0	62	14	81	18	99
31	Mohanpur	Lodipuri	19	4	0	0	45	10	64	14	78
32	Nandehari	Lodipuri	49	9	0	0	53	12	102	21	123
33	Pahuri	Pahuri	164	31	0	0	502	110	666	141	807
34	Paraspur	Khiron	4	1	0	0	2	1	6	2	8
35	Ramwapur Dubai	Ramwapur Dubai	116	22	0	0	235	52	351	74	425
36	Ranapur Urf Pahrauli	Ranapur Urf Pahrauli	81	16	0	0	245	54	326	70	396
37	Sadullapur	Kursandi	50	10	0	0	92	20	142	30	172
38	Sarai Mahmood	Mirjapur	8	1	0	0	52	11	60	12	72
39	Semri Jhakrasi	Semri	76	15	0	0	166	37	242	52	294
40	Shiv Puri	Shivpuri	110	21	0	0	105	23	215	44	259
41	Sidhaur Semari	Sidhaur Semari	25	5	0	0	134	30	159	35	194
42	Tarwa Barwa	Dandepur	54	10	0	0	43	10	97	20	117
43	Udwatpur	Khanpur Kushti	25	5	0	0	87	19	112	24	136
	Total		**3917**	**750**	**0**	**0**	**8214**	**1806**	**12131**	**2556**	**14687**

3.14 Details about occupation

There are about 12760 salaried persons and 1038 self employed people in the watershed which is good source of income. Agricultural labour are 5438 and non agricultural labour are 3957. There are only 1527 cultivators in the watershed.

S.N.	Name of Village	Name of Gram Panchayat	Total work force						Total population
			Cultivator	AgriLabour	Non AgriLabour	Salaried	Self Employed	Total Workforce	
1	Afasari	Khargapur	14	50	36	117	10	227	731
2	Aindhi	Aindhi	45	158	115	371	29	718	2317
3	Atarhar	Atarhar	63	225	164	527	43	1022	3296
4	Baraundi	Baraundi	30	106	77	249	20	482	1556
5	Behta Satanpur	Kutubpur	27	96	70	225	18	436	1408
6	Bhitari	Bhitari	62	220	160	515	42	999	3221
7	Bijemau Khapura	Bijemau Khapura	54	191	139	448	36	868	2799
8	Chandauli	Aindhi	14	51	37	119	9	230	743
9	Chandapur	Sabji Babura	45	160	116	375	30	726	2342
10	Dandanpur	Shivpuri	10	37	27	86	6	166	537
11	Dhurayee	Dhurayee	86	306	222	717	58	1389	4481
12	Dondepur	Dandepur	24	85	62	200	17	388	1251
13	Dumarher	Dumarher	49	176	128	412	34	799	2577
14	Hardi	Hardi	32	114	83	268	22	519	1675
15	Haripur	Haripur Mirdahapa	29	104	76	244	20	473	1527
16	Husenabad	Hardi	17	59	43	138	10	267	862
17	Jeri	Jeri	40	144	104	337	28	653	2108
18	Jogapur Barigaon	Jogapur Barigaon	78	278	202	653	54	1265	4081
19	Kanha Mau	Kanha Mau	17	61	44	142	11	275	886
20	Khajuha	Haripur Mirdahapa	24	86	63	202	16	391	1260
21	Khanpur Khunti	Khanpur Khunti	33	117	85	276	23	534	1723
22	Khargapur	Khargapur	43	153	111	359	30	696	2246
23	Khiron	Khiron	191	679	494	1593	129	3086	9955
24	Kishun Khera	Mirjapur	23	82	60	193	16	374	1205
25	Kursandi	Kursandi	22	79	58	187	15	361	1166
26	Lalapur	Bakuliha	24	85	62	199	16	386	1244

S.N.	Name of Village	Name of Gram Panchayat	Total work force						Total population
			Cultivator	AgriLabour	Non	Salaried	Self	Total	
27	Lodipuri	Lodipuri	16	57	41	133	12	259	834
28	Majhigawan	Kalupur	34	121	88	285	24	552	1782
29	Malpur	Bijemau Khapura	46	165	120	387	32	750	2419
30	Mirjapur	Mirjapur	12	44	32	104	9	201	648
31	Mohanpur	Lodipuri	8	29	21	68	6	132	425
32	Nandehari	Lodipuri	14	48	35	113	9	219	705
33	Pahuri	Pahuri	80	286	208	670	55	1299	4190
34	Paraspur	Khiron	1	2	2	6	0	11	37
35	Ramwapur Dubai	Ramwapur Dubai	49	173	126	406	32	786	2537
36	Ranapur Urf Pahrauli	Ranapur Urf Pahrauli	41	147	107	345	29	669	2158
37	Sadullapur	Kursandi	15	54	40	127	11	247	796
38	Sarai Mahmood	Mirjapur	9	31	23	74	6	143	460
39	Semri Jhakrasi	Semri	30	108	79	254	21	492	1586
40	Shiv Puri	Shivpuri	26	92	67	217	18	420	1354
41	Sidhaur Semari	Sidhaur Semari	22	80	58	187	15	362	1169
42	Tarwa Barwa	Dandepur	12	41	30	96	6	185	598
43	Udwatpur	Khanpur Kushti	16	58	42	136	11	263	847
	Total		**1527**	**5438**	**3957**	**12760**	**1038**	**24720**	**79742**

3.15 Details about land

About 89% farmers of watershed have landholding less then 1ha and about 2% farmers have land holding above 2 ha.

S.N	Name of Villages	Name of Gram Panchayat	Farmers with < 1 ha land	Farmers with >1 ha<2 ha land	Farmers with > 2 ha land	Total farmers
1	Afasari	Khargapur	61	6	2	69
2	Aindhi	Aindhi	289	29	7	325
3	Atarhar	Atarhar	368	37	8	413
4	Baraundi	Baraundi	158	16	4	178
5	Behta Satanpur	Kutubpur	142	14	4	160
6	Bhitari	Bhitari	326	33	7	366
7	Bijemau Khapura	Bijemau Khapura	289	29	7	325
8	Chandauli	Aindhi	95	10	2	107
9	Chandapur	Sabji Babura	249	25	6	280
10	Dandanpur	Shivpuri	64	6	2	72
11	Dhurayee	Dhurayee	509	51	12	572
12	Dondepur	Dandepur	149	15	3	167
13	Dumarher	Dumarher	317	32	7	356
14	Hardi	Hardi	179	18	4	201
15	Haripur	Haripur Mirdahapa	158	16	4	178
16	Husenabad	Hardi	93	9	2	104
17	Jeri	Jeri	231	23	5	259
18	Jogapur Barigaon	Jogapur Barigaon	435	44	10	489
19	Kanha Mau	Kanha Mau	103	10	3	116
20	Khajuha	Haripur Mirdahapa	139	14	3	156
21	Khanpur Khunti	Khanpur Khunti	185	19	4	208
22	Khargapur	Khargapur	233	24	5	262
23	Khiron	Khiron	1007	102	22	1131
24	Kishun Khera	Mirjapur	142	14	4	160
25	Kursandi	Kursandi	123	12	3	138
26	Lalapur	Bakuliha	144	15	3	162
27	Lodipuri	Lodipuri	92	9	2	103
28	Majhigawan	Kalupur	198	20	5	223
29	Malpur	Bijemau Khapura	279	28	6	313
30	Mirjapur	Mirjapur	58	6	1	65
31	Mohanpur	Lodipuri	45	5	1	51
32	Nandehari	Lodipuri	72	7	2	81
33	Pahuri	Pahuri	474	48	11	533
34	Paraspur	Khiron	4	0	1	5
35	Ramwapur Dubai	Ramwapur Dubai	249	25	6	280
36	Ranapur Urf Pahrauli	Ranapur Urf Pahrauli	232	23	6	261
37	Sadullapur	Kursandi	101	10	3	114
38	Sarai Mahmood	Mirjapur	43	4	1	48
39	Semri Jhakrasi	Semri	173	17	4	194
40	Shiv Puri	Shivpuri	152	15	4	171
41	Sidhaur Semari	Sidhaur Semari	114	12	2	128

S.N	Name of Villages	Name of Gram Panchayat	Farmers with < 1 ha land	Farmers with >1 ha<2 ha land	Farmers with > 2 ha land	Total farmers
42	Tarwa Barwa	Dandepur	69	7	1	77
43	Udwatpur	Khanpur Kushti	80	8	2	90
	Total		**8623**	**867**	**201**	**9691**

3.16 Details about livelihood activities

There are 282 craftsman, 334 Artisansand 422 other self employed people in the watershed.

S.N.	Name of Village	Name of Gram Panchayat	Occupation			
			Craftsman	Artisans	Others	Total
1	Afasari	Khargapur	3	3	4	10
2	Aindhi	Aindhi	8	9	12	29
3	Atarhar	Atarhar	12	14	17	43
4	Baraundi	Baraundi	5	6	9	20
5	Behta Satanpur	Kutubpur	5	6	7	18
6	Bhitari	Bhitari	11	13	18	42
7	Bijemau Khapura	Bijemau Khapura	10	12	14	36
8	Chandauli	Aindhi	2	3	4	9
9	Chandapur	Sabji Babura	8	10	12	30
10	Dandanpur	Shivpuri	2	2	2	6
11	Dhurayee	Dhurayee	16	19	23	58
12	Dondepur	Dandepur	5	5	7	17
13	Dumarher	Dumarher	9	11	14	34
14	Hardi	Hardi	6	7	9	22
15	Haripur	Haripur Mirdahapa	5	6	9	20
16	Husenabad	Hardi	3	3	4	10
17	Jeri	Jeri	8	9	11	28
18	Jogapur Barigaon	Jogapur Barigaon	15	17	22	54
19	Kanha Mau	Kanha Mau	3	4	4	11
20	Khajuha	Haripur Mirdahapa	4	5	7	16
21	Khanpur Khunti	Khanpur Khunti	6	7	10	23
22	Khargapur	Khargapur	8	10	12	30
23	Khiron	Khiron	35	41	53	129
24	Kishun Khera	Mirjapur	4	5	7	16
25	Kursandi	Kursandi	4	5	6	15
26	Lalapur	Bakuliha	4	5	7	16
27	Lodipuri	Lodipuri	3	4	5	12
28	Majhigawan	Kalupur	6	8	10	24
29	Malpur	Bijemau Khapura	9	10	13	32
30	Mirjapur	Mirjapur	2	3	4	9
31	Mohanpur	Lodipuri	2	2	2	6
32	Nandehari	Lodipuri	2	3	4	9
33	Pahuri	Pahuri	15	18	22	55
34	Paraspur	Khiron	0	0	0	0

S.N.	Name of Village	Name of Gram Panchayat	Occupation			
			Craftsman	Artisans	Others	Total
35	Ramwapur Dubai	Ramwapur Dubai	9	10	13	32
36	Ranapur Urf Pahrauli	Ranapur Urf Pahrauli	8	9	12	29
37	Sadullapur	Kursandi	3	4	4	11
38	Sarai Mahmood	Mirjapur	2	2	2	6
39	Semri Jhakrasi	Semri	6	7	8	21
40	Shiv Puri	Shivpuri	5	6	7	18
41	Sidhaur Semari	Sidhaur Semari	4	5	6	15
42	Tarwa Barwa	Dandepur	2	2	2	6
43	Udwatpur	Khanpur Kushti	3	4	4	11
	Total		**282**	**334**	**422**	**1038**

3.17 Details about fuel used for cooking meal

Majority of the farmers (more then 60%) still use fire wood for cooking their meal. Only less than 6% has LPG. About 20% people use kerosene oil as fuel for cooking their meal. Gram Panchayat wise fuel used for cooking meal is given in the following table.

S.N.	Name of Village	Name of Gram Panchayat	Cooking gas (% of families)	Fire wood (% of families)	Cow dung Cake (% of families)	Kerosene (% of families)
1	Afasari	Khargapur	6%	62%	27%	5%
2	Aindhi	Aindhi	5%	72%	19%	4%
3	Atarhar	Atarhar	6%	78%	10%	6%
4	Baraundi	Baraundi	6%	78%	10%	6%
5	Behta Satanpur	Kutubpur	5%	69%	21%	5%
6	Bhitari	Bhitari	4%	75%	18%	3%
7	Bijemau Khapura	Bijemau Khapura	7%	75%	11%	7%
8	Chandauli	Aindhi	5%	69%	20%	6%
9	Chandapur	Sabji Babura	6%	78%	10%	6%
10	Dandanpur	Shivpuri	5%	55%	36%	4%
11	Dhurayee	Dhurayee	4%	60%	34%	2%
12	Dondepur	Dandepur	4%	65%	25%	6%
13	Dumarher	Dumarher	6%	62%	27%	5%
14	Hardi	Hardi	7%	77%	10%	6%
15	Haripur	Haripur Mirdahapa	6%	81%	5%	8%
16	Husenabad	Hardi	7%	78%	6%	9%
17	Jeri	Jeri	5%	66%	19%	10%
18	Jogapur Barigaon	Jogapur Barigaon	7%	78%	6%	9%
19	Kanha Mau	Kanha Mau	5%	66%	19%	10%
20	Khajuha	Haripur Mirdahapa	9%	80%	9%	2%
21	Khanpur Khunti	Khanpur Khunti	6%	72%	12%	10%
22	Khargapur	Khargapur	4%	60%	34%	2%
23	Khiron	Khiron	4%	65%	25%	6%
24	Kishun Khera	Mirjapur	5%	72%	19%	4%
25	Kursandi	Kursandi	4%	65%	25%	6%
26	Lalapur	Bakuliha	6%	62%	27%	5%

S.N.	Name of Village	Name of Gram Panchayat	Cooking gas (% of families)	Fire wood (% of families)	Cow dung Cake (% of families)	Kerosene (% of families)
27	Lodipuri	Lodipuri	5%	72%	19%	4%
28	Majhigawan	Kalupur	7%	67%	18%	8%
29	Malpur	Bijemau Khapura	4%	79%	13%	4%
30	Mirjapur	Mirjapur	10%	70%	15%	5%
31	Mohanpur	Lodipuri	8%	54%	31%	7%
32	Nandehari	Lodipuri	9%	65%	18%	8%
33	Pahuri	Pahuri	6%	75%	13%	6%
34	Paraspur	Khiron	7%	78%	8%	7%
35	Ramwapur Dubai	Ramwapur Dubai	9%	80%	10%	1%
36	Ranapur Urf Pahrauli	Ranapur Urf Pahrauli	8%	75%	12%	5%
37	Sadullapur	Kursandi	10%	70%	15%	5%
38	Sarai Mahmood	Mirjapur	8%	54%	31%	7%
39	Semri Jhakrasi	Semri	4%	60%	34%	2%
40	Shiv Puri	Shivpuri	4%	60%	34%	2%
41	Sidhaur Semari	Sidhaur Semari	4%	60%	34%	2%
42	Tarwa Barwa	Dandepur	7%	78%	8%	7%
43	Udwatpur	Khanpur Kushti	9%	80%	10%	1%

3.18 Details of migration

People of the watershed migrate to the city and other areas for search of work mostly as unskilled/semi-skilled and skilled. On an average people migrate for 6 months of a year. Village wise migration of people is given in the following table:

	Details of migration (Excluding Gainful Migration)			
S.N.	Name of Villages	Name of Gram Panchayat	Out migration	
			Number (about 3 to 9 months)	for which work
1	Afasari	Khargapur	11, 6 month	Labour, Mason
2	Aindhi	Aindhi	8, 6 month	Labour, Mason
3	Atarhar	Atarhar	42, 6 month	Labour, Mason
4	Baraundi	Baraundi	28, 6 month	Labour, Mason
5	Behta Satanpur	Kutubpur	12, 6 month	Labour, Mason
6	Bhitari	Bhitari	22, 6 month	Labour, Mason
7	Bijemau Khapura	Bijemau Khapura	44, 6 month	Labour, Mason
8	Chandauli	Aindhi	60, 6 month	Labour, Mason
9	Chandapur	Sabji Babura	17, 6 month	Labour, Mason
10	Dandanpur	Shivpuri	18, 6 month	Labour, Mason
11	Dhurayee	Dhurayee	17, 6 month	Labour, Mason
12	Dondepur	Dandepur	11, 6 month	Labour, Mason
13	Dumarher	Dumarher	15, 6 month	Labour, Mason
14	Hardi	Hardi	10, 6 month	Labour, Mason
15	Haripur	Haripur Mirdahapa	11, 6 month	Labour, Mason
16	Husenabad	Hardi	14, 6 month	Labour, Mason
17	Jeri	Jeri	23, 6 month	Labour, Mason
18	Jogapur Barigaon	Jogapur Barigaon	18, 6 month	Labour, Mason
19	Kanha Mau	Kanha Mau	18, 6 month	Labour, Mason
20	Khajuha	Haripur Mirdahapa	10, 6 month	Labour, Mason
21	Khanpur Khunti	Khanpur Khunti	23, 6 month	Labour, Mason
22	Khargapur	Khargapur	33, 6 month	Labour, Mason
23	Khiron	Khiron	17, 6 month	Labour, Mason
24	Kishun Khera	Mirjapur	8, 6 month	Labour, Mason
25	Kursandi	Kursandi	19, 6 month	Labour, Mason
26	Lalapur	Bakuliha	11, 6 month	Labour, Mason
27	Lodipur	Lodipuri	10, 6 month	Labour, Mason
28	Majhigawan	Kalupur	14, 6 month	Labour, Mason
29	Malpur	Bijemau Khapura	14, 6 month	Labour, Mason
30	Mirjapur	Mirjapur	10, 6 month	Labour, Mason
31	Mohanpur	Lodipuri	84, 6 month	Labour, Mason
32	Nandehari	Lodipuri	16, 6 month	Labour, Mason
33	Pahuri	Pahuri	3, 6 month	Labour, Mason
34	Paraspur	Khiron	74, 6 month	Labour, Mason
35	Ramwapur Dubai	Ramwapur Dubai	15, 6 month	Labour, Mason
36	Ranapur Urf Pahrauli	Ranapur Urf Pahrauli	4, 6 month	Labour, Mason
37	Sadullapur	Kursandi	34, 6 month	Labour, Mason
38	Sarai Mahmood	Mirjapur	15, 6 month	Labour, Mason
39	Semri Jhakrasi	Semri	32, 6 month	Labour, Mason

	Details of migration (Excluding Gainful Migration)			
S.N.	Name of Villages	Name of Gram Panchayat	Out migration	
			Number (about 3 to 9 months)	for which work
40	Shiv Puri	Shivpuri	15, 6 month	Labour, Mason
41	Sidhaur Semari	Sidhaur Semari	32, 6 month	Labour, Mason
42	Tarwa Barwa	Dandepur	50, 6 month	Labour, Mason
43	Udwatpur	Khanpur Kushti	18, 6 month	Labour, Mason

3.19 PRA (Participatory Rural Appraisal)

Participatory rural appraisal (PRA) is an approach used by people to gather information on various aspects from the community in an organized manner without the use of any structured questionnaire. The approach aims to incorporate the knowledge and opinions of rural people in the planning and management of development of projects and programmes. The details of PRA conducted in the watershed along with few photographs are given below:

Details of village wise PRA					
Name of Villages	Date of PRA	Male present	Female present	Total participants	Name of the PRA team
Hardi	5Apr.2015	24	**8**	**32**	WDT
Haripur Mirdaha	8Apr. 2015	25	12	37	WDT
Kalupur	9Apr.2015	18	11	29	WDT
Mirzapur	10 Apr.2015	29	10	39	WDT
Khiron	10Apr2015	20	8	28	WDT
Atarhar	12Apr.2015	32	10	42	WDT
Dumather	17Apr.2015	10	5	15	WDT
Lodipur	17Apr.2015	15	7	22	WDT
Ranapur Urf Pahrauli	19Sep2015	20	7	27	WDT
Dondepur	18Apr.2015	18	10	28	WDT
Barundi	18Apr.2015	10	5	15	WDT
Kursandi	18Apr.2015	14	7	21	WDT
Behta Satanpur	19 Apr.2015	20	8	28	WDT
Aindhi	19 Apr.2015	10	5	15	WDT
Jeri	20 Apr.2015	10	2	12	WDT
Bijemau Khapura	21 Apr.2015	20	12	32	WDT
Jogapur Barigaon	21 Apr.2015	25	8	33	WDT
Khargapur	26 Apr.2015	20	12	32	WDT
Semari	28 Apr.2015	10	5	25	WDT
Bhitari	28 Apr.2015	15	7	22	WDT


सातनपुर

3.20 List of agencies/projects/schemes presently working in the watershed

The information is given in following table. There are about 4 agencies undertaking welfare activity in watershed.

Agencies/projects/schemes presently working in the watershed			
Sl. No.	**Name of the agencies/projects/ schemes**	**Sponsoring Agency**	**Main activity**
1	MGNREGA	MORD	Rojgar Scheme
2	ATMA(agriculture)	MOA(agriculture)	Crop Production, Tool Implement Distribution
3	Horticulture Mission	MOA(agriculture)	Floriculture ,Vegetable and Plantation
4	NRLM	MoRD	Self Employment

3.21 People institution

The village wise details of various people institutions formed in the watershed are given in following table. These SHG are mostly in the sector of live stock or handicraft. There are 57 SHGs and 98 UGs in the watershed.

S.N.	Name of the village	SHGs	UGs	Farmers club	Village council	NGOs	Youth club
1.	Afsari	3	-	-	-	-	-
2.	Aindhi	-	-	-	-	-	-
3.	Atarhar	-	12	-	-	-	-
4.	Baraundi	-	-	-	-	-	-
5.	Behta Satanpur	-	-	-	-	-	-
6.	Bhitari	11	-	-	-	-	-
7.	Bijemau Khapura	3	-	-	-	-	-
8.	Chandauli	-	-	-	-	-	-
9.	Chandapur	0	-	-	-	-	-
10.	Dandanpur	-	-	-	-	-	-
11.	Dhurayee	-	14				
12.	Dondepur		-				
13.	Dumarher	-	-	-	-	-	-
14.	Hardi	0	2	-	-	-	-
15.	Haripur	0	3	-	-	-	-
16.	Husenabad	1	5	-	-	-	-
17.	Jeri	-	-	-	-	-	-
18.	Jogapur Barigaon	0	-	-	-	-	-
19.	Kanha Mau	9	-	-	-	-	-
20.	Khajuha	-	3	-	-	-	-
21.	Khanpur Khunti	-	-	-	-	-	-
22.	Khargapur	5	-	-	-	-	-
23.	Khiron	12	8	-	-	-	-
24.	Kishun Khera	4	4	-	-	-	-
25.	Kursandi		-	-	-	-	-
26.	Lalapur		-	-	-	-	-
27.	Lodipur	-	5	-	-	-	-
28.	Majhigawan		-	-	-	-	-
29.	Malpur	4	-	-	-	-	-
30.	Mirjapur		-	-	-	-	-

S.N.	Name of the village	SHGs	UGs	Farmers club	Village council	NGOs	Youth club
31.	Mohanpur	-	2	-	-	-	-
32.	Nandehari	-	5	-	-	-	-
33.	Pahuri		-	-	-	-	-
34.	Paraspur	0	-	-	-	-	-
35.	Ramwapur Dubai	-	-	-	-	-	-
36.	Ranapur Urf Pahrauli	-	9	-	-	-	-
37.	Sadullapur	-	-	-	-	-	-
38.	Sarai Mahmood	2	3	-	-	-	-
39.	Semri Jhakrasi		-	-	-	-	-
40.	Shiv Puri	-	-	-	-	-	-
41.	Sidhaur Semari	0	-	-	-	-	-
42.	Tarwa Barwa	-	4	-	-	-	-
43.	Udwatpur	3	3	-	-	-	-
Total		57	98	-	-	-	-

3.22 List of members of the Watershed Committee (WC)

The details of member of watershed committee are given below.

Name of Villages	Name of the member	Fathers/Husband's name	Category	Mobile number
Hardi	Amita Yadav	W/o Manoj Yadav	Chairman	8738072408
	Rambabu	Nanhu Yadav	Secretary	
	Ramsajevan	Devan Rawat	SF	
	Sheela Devi	W/o Ramkumar	SHG	
	Ramkumari	W/o Rajaram	SHG	
	Bachu	Ramprashad	LL	
	Manjesh Kumar	Devatadeen	LL	
	Madhuri	W/o Ramchandar	SHG	
	Ramnandan	Rajbahadur	SF	
	Rammohan	Nanhu Yadav	SF	
Haripur Mirdaha	Nushrat Begum	W/o Jamal	Chairman	9451989189
	Gulam Rasul	Abdul Rahman	Secretary	
	Amin Khan	Rajjak	SF	
	Nijam Khan	Abdul Rauff	SF	
	Kamal Ahmad	Sattar Ahmad	LL	
	Dhunnar devi	W/o Sundar Pasi	SHG	
	Banshilal	Kalideen	SF	
	Mo. Anwar	Sattar Ahmad	SF	
	Abdul Rauff	Wahid ali	SF	
	Shri ram	Bhagirath	SF	
Khanpur Khusti	Shivsaran	Girjashankar	Chairman	9198896626
	Kamlesh Kumar	Ramkumar	Secretary	8869987170
	Raghunath	Ramadhen	Smal	
	Dayaram	Pouran	Margenal	
	Goverdhan	Raghunath	Landles	
	Parmeswar	Mangal	SHG	
	Reshma	W/O Vinodh Kumar	SHG	
	Shiya Dulari	W/O girjashanker	UG	

Name of Villages	Name of the member	Fathers/Husband's name	Category	Mobile number
	Ramashre	Gajodhar	UG	
	Mahesh	Dayaram	UG	
Kalupur (Majhgaon)	Chhedana	W/o Chhotelal	Chairman	8171972166
	Balgovind	Bhekhari	Secretary	8738073710
	Jagdev	Seetal	MF	
	Ramsagevan	Rambaran	UG	
	Rampratap	Ramkishun	SF	
	Rambhadur	Kalideen	SHG	
	Jiyalala	Babulal	SHG	
	Vidyawati	W/o Mayaram	LL	
	Harikesh	Ranjeet Singh	WDT	
Mirjapur(Kishun Kheda)	Arvind Kumar	Ramdash	Chairman	9984526758
	Rajendar Bahadur	Laxminaryan	Secretary	9451868853
	Lajjawati	W/o rajbhadur	Smal	
	Rajesh	Ramratan	MF	
	Gajodhar	Laxman	UG	
	Pramodh Kumar	Suresh Kumar	L. F.	
	Karvendar	Senesh	UG	
	Dharmendr	Rajkishor	SHG	
	Chhedilal	Ramshankar	SHG	
	Seven Kumar	Mahadev	UG	
Ramwapur Dubai	Mukesh Tiwari	Omprakesh Tiwari	Chairman	9956748806
	Ajay Kumar	Ayodhyaprashad	Secretary	8874874339
	Rajkishor	Gaya Prashad	LF	
	Ramprakesh	Shalikram	MF	
	Gangaprashad	Bindaprashad	S.F.	
	Ayodhya Prashad	Binda Prashad	SHG	
	Sunil Kumar	Visnuprashad	UG	
	Dhunnilal	Jagarnath	SHG	
	Manoj Kumar	Shyam Manohar	UG	
	Kamlesh	Manohar	SHG	
Khiron	Sunita Devi	**W/o Santosh**	Chairman	
	Ravind Kumar	Udaybhan	Secretary	8736848570
	Savitri devi	W/o Kamlesh Kumar	**SHG**	
	Vijaykanti	W/o Puttilal	**SHG**	
	Manju devi	W/o Rajesh Kumar	SHG	
	Kushma devi	W/o Chhotelal	SHG	
	Gudde devi	W/o Ashok kumar	SHG	
	Rajkumar	Dayashankar	UG	
	Vijay Bhadur	Buddhu	UG	
	Ramsuchit Yadav	Shivram Yadav	Work	
Atarhar	Nanhki Devi	W/O Lodha	Chairman	
	Suryaprakash	Budhilal	Secretary	7388557309
	Ganga Dulari	W/O Udaypratap	SHG	
	Rambabu	Chandrika Prashad	SF	
	Ramkishun	Ramnaryan	SF	
	Ramdayal	Kallu	SF	
	Laxmishankar	Chhedilal	SF	
	Nandkishor	Shyamlal	LL	
	Dayati	W/o Santosh Kumar	SHG	

Name of Villages	Name of the member	Fathers/Husband's name	Category	Mobile number
	Birendrpratap Singh	Narendr Bahadur Singh	MF	
Dumather	Sheyadulari	D/o Seetal Prashad	Chairman	9415741909
	Ashok Yadav	Bhaguti Yadav	Secretary	7236007521
	Ramsaran	Rambharose Panday	LF	
	Guru Prashad	Lala Yadav	MF	
	Ayodhya Prashad	Dwarika Prashad	SF	
	Rambaran	Medaelal	LL	
	Rajwati	W/o Rajesh	SHG	
	Nirmala	W/o Maeku	SHG	
	Rambaran	Sarju	SHG	
	Sriprakash	Babulal	SHG	
Lodipur	Krishnapal Yadav	Badri Yadav	Chairman	9792290242
	Umashankar	Gayadeen	Secretary	
	Shivbhadur	Rampeyare	UG	
	Riyajuddeen	Jamaluddeen	MF	
	Badri	Sankatha	SF	
	Santu	Nankhu	LL	
	Ramadevi	W/o Raja Ram	SHG	
	Chandpal	Kalicharan	SHG	
	Ashok Kumar	Badri	SHG	
	Ramdev	Santu	UG	
Ranapur Urf Pahrauli	Ramprakash	Ramchandra	Chairman	
	Parmanand	Krishnanand	Secretary	
	Ganga Sagar	Chhanga	SF	
	Rambaran	Kedar	SF	
	Chandrika	Mahaveer	SF	
	Aashu shukla	Krishna Shankar	MF	
	Vidya Sagar	Bhagauti Prashad	MF	
	Chedi Lal	Dulare	LL	
	Manju Devi	Ramkrishna	SHG	
	Jayanti Devi	Karuna Shankar	SHG	
Dhurayee	Rakesh	Vishram	Chairman	9695285929
	Mukesh Kumar	Radheshyam	Secretary	
	Jagdev	Devatadeen	S.F.	
	Rajendr	Ramswaroop	M.F.	
	Horilal	Ramlal	UG	
	Dinesh Kumar	Vishram	LL	
	Chandani Devi	W/o Panchilal	SHG	
	Shyama devi	W/o Ramsahay	SHG	
	Ganga ram	Matau	UG	
Baraundi	Ramnaresh	Shukhnandan	Chairman	9792816673
	Suryaprakash	Budhilal	Secretary	7388557309
	Ratipal	Ramshankar	SF	
	Bacchanlal	Ram Avtar	SF	
	Chhotelal	Ramdeen	SF	
	Rajeshwari	W/o. Chhotelal	SHG	
	Nanhai Devi	W/o Maharanideen	SHG	
	Ramkishun	Sidhnath	SF	
	Ramsanehi	Sukhnandan	LL	
	Jagdish	Manohar	SF	

Name of Villages	Name of the member	Fathers/Husband's name	Category	Mobile number
Kursandi	Ashok Kumar Trivedi	Shivkran Trivedi	Chairman	9451987945
	Anil Dixit	Vishwnath	Secretary	
	Rajkumar Tiwari	Sadashiv	LF	
	Ravishankar Tiwari	Prabhudayal	LF	
	Sadnuprashad Gupta	Chhedilal Gupta	LL	
	Rajoleprashad	Bhagutiprashad	MF	
	Ramshevak	Gangaram	SF	
	Babun	W/o Jageshwar	SHG	
	Santosh Prashad	Jangaliprashad	LL	
	Shudha	W/o shivvishal	SHG	
Behta Satanpur	Anita devi	W/o Dayashankar	Chairman	8127997582
	Ram Vilash	Ramnath	Secretary	
	Shivkaran	Ramlal	SF	
	Ramesh	Heralal	SF	
	Sri Kanti	W/o Suresh Kumar	SHG	
	Rambalak	Ramnath	LL	
	Bhulana	W/o ramashre	SHG	
	Devichran	Panchi	LL	
	Sandeep	Sumer	SF	
	Rajnu	Bamni	SF	
Dondepur	Abdul Samad	Jabbar Ali	Chairman	8726264188
	Ramshankar	Budhai	Secretary	
	Brindavan	Nathu	SF	
	Deviprashad	Dulare	SF	
	Munnilal	Nageshwar	SF	
	Sundara devi	W/o sriram	SHG	
	Peermohmad	Mohmad Rajjak	LL	
	Shivprakash	Chhotelal	SF	
	Jan Mohmad	Noor Mohmad	SF	
	Jagdish	Ramsewak	SF	
Aindhi	Shaktideen	Babadeen	Chairman	
	Rambaran	Ramcharan	Secretary	
	Atul Singh	Shiv Bahadur Singh	LF	
	Mahaveer Singh	Satya Narayan Singh	LF	
	Pancham Lal	Kalika	MF	
	Buddhi lal	Parag	SF	
	Shiv Darshan	Kallu	LL	
	Kanti Devi	Harishankar	SHG	
	Kushuma Devi	Gyan Prakash	SHG	
	Hariram	Mangal	SF	
Chandauli	Chandravati	Sajjan Lal	Chairman	95599332040
	Dayashankar	Dayaram	Secretary	
	Sajjan Lal	Siddheswar	MF	
	Ramkumar	Purvi	SF	
	Satya dev	Sahabdeen	SHG	
	Guddi Devi	Dhunni lal	SHG	
	Basant	Ramjiyawan	SF	
	Satya Narayan	Shree Nath	LL	
	Vinod kumar	Ramjiyawan	MF	
	Umashankar	Gajodhar	SF	
Shivpuri	Sunil Kumar	Shankar	Chairman	

Name of Villages	Name of the member	Fathers/Husband's name	Category	Mobile number
	Ravendr	Rajbhadur	Secretary	
	Surybax Singh	Girjabox Singh	LF	
	Mahendar Kumar	Mahaveer	MF	
	Ragvendar singh	Hanuman Singh	Sf	
	Kashi Prashad	Jagarnath	LL	
	Shukhdeen	Kallu	SHG	
	Buddhu Yadav	Kallu Yadav	SHG	
	Premhansh	Ramlal	SHG	
	Suman Devi	Ramnaresh	SHG	
Bijemau Khapura	Rajeswari	W/o Polla	Chairman	
	Suresh Kumar	Ramautar	Secretary	
	Brijlal	Dayaram	UG	
	Shivbhadur	Maeku	UG	
	Radheyshyam	Seetal	UG	
	Chandrika	Kailash	UG	
	Rajesh Kumar	Shambhu	LL	
	Munni devi	W/o Surybali	SHG	
	Salma devi	Harikesh	SHG	
	Rajesh Kumar	ASCI	WDT	
Kanha Mau	Vindesh Kumar	Surajdeen	Chairman	
	Rameswar Singh	Rambhadur Singh	Secretary	
	Ramgulam	Mangal	UG	
	Ramkumar	Mangal	UG	
	Vijaybhadur	Ramadhar	UG	
	Chhudu Singh	Arjun Singh	UG	
	Rakesh Sharma	Surajdeen	LL	
	Gayanwati	W/o Sundar	SHG	
	Ashok kumar	Shivdulare	SHG	
	Dul chand Yadav		WDT	
Khargapur	Rambhadur	Ramautar	Chairman	
	Neraj Kumar	Shyamsundar	Secretary	
	Bachanni	Eswardeen	UG	
	Munnu	Sakthu	UG	
	Raj Kumar	Surybali	UG	
	Amit Tiwari	Rajjan Tiwari	UG	
	Mannu	Bachau	LL	
	Rannu	Jagnnath	SHG	
	Savitri	W/o Rakesh	SHG	
	Rajesh Kumar	ASCI	WDT	
Semri	Namreta Singh	W/o Samendr Singh	Chairman	9984038544
	Sarvesh	Girjashankar	Secretary	
	Ramsevak	Pancham	S.F.	
	Satyanaryan	Badlu	M.F.	
	Goverdhan	Devi	UG	
	Samsher Badhur	Ram Badhur	LLF	
	Bhola	Maeku	SHG	
	Durga	Bachu	SHG	
	Endrpari	W/o Taramani	SHG	
Bhitari	Sarmawati	W/o Ramshankar		
	Neraj kumar	Shyamsundar		
	Ramautar	Bacchulal	UG	

Name of Villages	Name of the member	Fathers/Husband's name	Category	Mobile number
	Rambahadur	Rambharose	UG	
	Ramnaresh	Kedar	UG	
	Ramshankar	Jherri	LL	
	Mangalawati	W/o Chandrpal	SHG	
	Ranna devi	W/o Ramcharit	SHG	
	Rajee devi	Mahadev	SHG	
	Bhawar Bhadur Singh		WDT	

3.23Gram Panchayat wise area (ha) under different crops

The cropping intensity is 155 percent.

Sl. No.	Name of Gram panchayat	Total area	Paddy	Pulses	Kharif	Wheat	Pulses	Oilseed	Maiz	Rabi	Zaid pulse	Zaid oilseed	Zaid vegetable	Zaid	Total sown area	Net sown Area
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	Aindhi	629.42	109.54	73.03	182.57	121.72	91.29	73.03	79.12	365.15	24.34	30.43	6.09	60.86	608.58	393
2	Atarhar	361.19	62.78	41.85	104.63	69.75	52.31	41.85	45.34	209.25	13.95	17.44	3.49	34.88	348.75	225
3	Bakuliha	24.8	4.46	2.98	7.44	4.96	3.72	2.98	3.22	14.88	0.99	1.24	0.25	2.48	24.8	16
4	Baraundi	202.3	34.96	23.31	58.27	38.85	29.14	23.31	25.25	116.54	7.77	9.71	1.94	19.42	194.24	125
5	Bhitari	323.26	55.96	37.31	93.27	62.18	46.64	37.31	40.42	186.55	12.44	15.55	3.11	31.09	310.91	201
6	Bijemau Khapura	349.06	60.94	40.63	101.57	67.72	50.79	40.63	44.02	203.15	13.54	16.93	3.39	33.86	338.58	218
7	Dandepur	206.4	36.14	24.1	60.23	40.16	30.11	24.1	26.1	120.46	8.04	10.04	2.01	20.07	200.77	130
8	Dhurayee	601.35	104.19	69.46	173.65	115.76	86.82	69.46	75.25	347.29	23.15	28.94	5.79	57.88	578.82	373
9	Dumarher	3.62	0.65	0.43	1.09	0.72	0.54	0.43	0.47	2.17	0.14	0.18	0.04	0.36	3.62	2
10	Hardi	231.29	40.73	27.15	67.88	45.26	33.94	27.15	29.42	135.77	9.05	11.31	2.26	22.63	226.28	146
11	Haripur Mirdahapa	297.81	51.67	34.44	86.1	57.41	43.05	34.44	37.31	172.21	11.48	14.35	2.87	28.7	287.02	185
12	Jeri	389.92	67.91	45.27	113.18	75.45	56.59	45.27	49.04	226.35	15.09	18.86	3.77	37.73	377.25	243
13	Jogapur Barigaon	11.17	2.01	1.34	3.35	2.23	1.68	1.34	1.45	6.7	0.45	0.56	0.11	1.12	11.17	7
14	Kalupur	19.08	3.43	2.29	5.72	3.82	2.86	2.29	2.48	11.45	0.76	0.95	0.19	1.91	19.08	12
15	Kanha Mau	278.16	48.22	32.15	80.37	53.58	40.19	32.15	34.83	160.75	10.72	13.4	2.68	26.79	267.91	173
16	Khanpur Khunti	185.28	32.7	21.8	54.5	36.33	27.25	21.8	23.61	108.99	7.27	9.08	1.82	18.17	181.65	117
17	Khanpur Kushti	106.96	18.68	12.45	31.13	20.76	15.57	12.45	13.49	62.27	4.15	5.19	1.04	10.38	103.78	67
18	Khargapur	268.94	46.6	31.07	77.67	51.78	38.83	31.07	33.66	155.33	10.36	12.94	2.59	25.89	258.89	167
19	Khiron	380.2	66.49	44.32	110.81	73.87	55.41	44.32	48.02	221.62	14.77	18.47	3.69	36.94	369.37	238
20	Kursandi	202.68	35.4	23.6	59.01	39.34	29.5	23.6	25.57	118.01	7.87	9.83	1.97	19.67	196.69	127
21	Kutubpur	232.67	40.74	27.16	67.91	45.27	33.95	27.16	29.43	135.82	9.05	11.32	2.26	22.64	226.36	146
22	Lodipuri	283.18	49.6	33.07	82.67	55.11	41.34	33.07	35.82	165.34	11.02	13.78	2.76	27.56	275.56	178
23	Mirjapur	311.55	54.74	36.49	91.23	60.82	45.62	36.49	39.53	182.47	12.16	15.21	3.04	30.41	304.11	196

Sl. No.	Name of Gram panchayat	Total area	Paddy	Pulses	Kharif	Wheat	Pulses	Oilseed	Maiz	Rabi	Zaid pulse	Zaid oilseed	Zaid vegetable	Zaid	Total sown area	Net sown Area
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**
24	Pahuri	12.31	2.22	1.48	3.69	2.46	1.85	1.48	1.6	7.39	0.49	0.62	0.12	1.23	12.31	8
25	Ramwapur Dubai	43.71	7.87	5.25	13.11	8.74	6.56	5.25	5.68	26.23	1.75	2.19	0.44	4.37	43.71	28
26	Ranapur urf Pahrauli	348.79	61.21	40.81	102.02	68.01	51.01	40.81	44.21	204.04	13.6	17	3.4	34.01	340.06	219
27	Sabji Babura	7.79	1.4	0.93	2.34	1.56	1.17	0.93	1.01	4.67	0.31	0.39	0.08	0.78	7.79	5
28	Semri	5.92	1.07	0.71	1.78	1.18	0.89	0.71	0.77	3.55	0.24	0.3	0.06	0.59	5.92	4
29	Shivpuri	311.59	54.39	36.26	90.65	60.44	45.33	36.26	39.28	181.31	12.09	15.11	3.02	30.22	302.18	195
30	Sidhaur Semari	134.13	23.33	15.55	38.88	25.92	19.44	15.55	16.85	77.75	5.18	6.48	1.3	12.96	129.59	84
Total		**6764.53**	**1180.03**	**786.69**	**1966.72**	**1311.16**	**983.39**	**786.69**	**852.25**	**3933.46**	**262.22**	**327.8**	**65.58**	**655.6**	**6555.75**	**4228**

3.24 Existing Engineering Works: Not available.

3.25Details of Common Property Resources (CPR)

Details of common property are provided below. These are mostly used for fuel wood and fodder. There is no management followed in these areas.

Name of Gram Panchyat	Type of CPR	Area (ha)	Under the possession of	Existing use	Existing condition
Hardi	Vegetative Cover √ /Ponds/Pasture	0.19	Gram Panchayat	Fuelwood, fodder	no management
Haripur Mirdaha	Vegitative Cover/ Ponds √ /Pasture	8.59	Gram Panchayat	Domestic water	no management
Khanpur khunti	Vegitative Cover/Ponds/ Pasture √	7.84	Gram Panchayat	Fuelwood, fodder	no management
Kalupur	Vegetative Cover √ /Ponds/Pasture	0.2	Gram Panchayat	Fuelwood, fodder	no management
Mirzapur	Vegitative Cover/ Ponds √ /Pasture	10.18	Gram Panchayat	Domestic water	no management
Khiron	Vegitative Cover/Ponds/ Pasture √	8.34	Gram Panchayat	Fuelwood, fodder	no management
Ramwapur dubai	Vegetative Cover √ /Ponds/Pasture	20.85	Gram Panchayat	Fuelwood, fodder	no management
Atarhar	Vegitative Cover/ Ponds √ /Pasture	13.17	Gram Panchayat	Domestic water	no management
Dumather	Vegitative Cover/Ponds/ Pasture √	0.07	Gram Panchayat	Fuelwood, fodder	no management
Lodipur	Vegetative Cover √ /Ponds/Pasture	15.14	Gram Panchayat	Fuelwood, fodder	no management
Ranapur Urf Pahrauli	Vegitative Cover/ Ponds √ /Pasture	2.74	Gram Panchayat	Domestic water	no management
Dondepur	Vegitative Cover/Ponds/ Pasture √	14.33	Gram Panchayat	Fuelwood, fodder	no management
Barundi	Vegetative Cover √ /Ponds/Pasture	56.7	Gram Panchayat	Fuelwood, fodder	no management
Kursandi	Vegitative Cover/ Ponds √ /Pasture	22.45	Gram Panchayat	Domestic water	no management
Behta Satanpur	Vegitative Cover/Ponds/ Pasture √	0.83	Gram Panchayat	Fuelwood, fodder	no management
Aindhi	Vegetative Cover √ /Ponds/Pasture	1.18	Gram Panchayat	Fuelwood, fodder	no management
Shiv Puri	Vegitative Cover/ Ponds √ /Pasture	7.16	Gram Panchayat	Domestic water	no management
Jeri	Vegitative Cover/Ponds/ Pasture √	0.57	Gram Panchayat	Fuelwood, fodder	no management
Bijemau Khapura	Vegetative Cover √ /Ponds/Pasture	21.78	Gram Panchayat	Fuelwood, fodder	no management
Jogapur Barigaon	Vegitative Cover/ Ponds √ /Pasture	10.8	Gram Panchayat	Domestic water	no management
Kanhamau	Vegitative Cover/Ponds/ Pasture √	7.58	Gram Panchayat	Fuelwood, fodder	no management
Pahuri	Vegetative Cover √ /Ponds/Pasture	0.12	Gram Panchayat	Fuelwood, fodder	no management
Sidhaur Semari	Vegitative Cover/ Ponds √ /Pasture	0.03	Gram Panchayat	Domestic water	no management
Khargapur	Vegitative Cover/Ponds/ Pasture √	24.42	Gram Panchayat	Fuelwood, fodder	no management
Semari	Vegetative Cover √ /Ponds/Pasture	1.72	Gram Panchayat	Fuelwood, fodder	no management
Bhitari	Vegitative Cover/ Ponds √ /Pasture	1.52	Gram Panchayat	Domestic water	no management
TOTAL		**258.5**			

3.26Existing package of practices of crops

Existing package of practices of crops is given in the following table:

Crop	Variety	Seed rate (Kg/ha)	Line sowing/ broadcasting	NPK Rate (Kg/ha)	FYM (Kg/ha)	Plant protection		Yield (Kg/ha)	
						Chemical	Biological	Grain	By product
Paddy	Sarju-52, Saket, Shakkar cheeni, Lalmati	50	Transplantation	100:30:0	Nil	√	Nil	2500	1500
Maize	Tarun	35	broadcasting	80:30:0	Nil	Nil	Nil	3000	1000
Bajara	Varsa	5	broadcasting	40:20:0	Nil	Nil	Nil	800	2500
Black gram	Pantu-30, T-9	20	broadcasting	20:20:0	Nil	Nil	Nil	500	500
Green gram	PDM-54, PDM-11	20	broadcasting	20:20:0	Nil	Nil	Nil	400	500
Pigeon pea	Local	20	broadcasting	20:20:0	Nil	Nil	Nil	1000	4000
Wheat	PBW-343, Lok-1, Malvia-234	150	broadcasting	100:30:0	Nil	Nil	Nil	2500	2500
Lintel	T-36	20	broadcasting	15:20:0	Nil	Nil	Nil	700	700
Mustard	Kranti, Vardan	5	broadcasting	40:20:0	Nil	√	Nil	700	1000
Pea	Arkle, P-3	75	broadcasting	30:20:0	Nil	√	Nil	1200	1500
Potato	Chipsona, Kufari Bahar, Kufari Badshah	2500	Line sowing	100:40:0	5000 Kg	√	Nil	10000	Nil
Onion	Local	5	Line sowing	100:40:0	Nil	√	Nil	5000	Nil

3.27 Existing crop rotation

Village	Existing crop rotation
Hardi, Haripur Mirdaha, Husenabad, Khanpur Khunti, Majhigawan, Mirjapur, Paraspur, Ramwapur Dubai, Sarai Mahmood, Udvatpur, Khiron, Kishun kheda	1. Rice-Wheat/ Urd/Moong/Maize/Bajra/Sorghum/ Toria/ Muatard 2. Rice-Vegetable 3. Vegetable- Wheat/ Urd/Moong/Maize/Bajra/Sorghum/ Toria/ Mustard
Atarhar, Dumarher, Khajuha, Lodipur, Mohanpur, Nandehari, Ranapur Urf Pahrauli, Tarwa Barwa, Dhurayee	
Atarhar, Baraundi, Hardi, Husenabad, Khanpur Khunti, Kursandi, Lalpur, Mirjapur, Ramwapur Dubai, Sadullapur, Haripur Mirdaha, Khajuha, Ranapur Urf Pahrauli, Behta Satanpur, Dondepur, Lodipur, Mohanpur, Khiron	
Aindhi, Behta Satanpur, Chandauli, Dandanpur, Shivpuri, Tarwa barwa	
Bijemau Khapura, Jogapur Barigaon, Kanha Mau, Malpur, Pahuri, Sidhaur Semari	
Bijemau Khapura, Chandpur, Kanha Mau, Khargapur, Semri, Sidhaur Semari, Afsari, Bhitari	

3.28 Existing package of practices of orchard

Package of practices of existing orchard is provided in following table:

Crop	Species	Plants per ha	Spacing (m*m)	NPK (gm./plant)	FYM (Kg/plant)	Plant protection		Yield	
						Chemical	Biological	(Kg/ plant)	(Kg/ha)
Mango	Dusehari, Chausa, , Langra, Husanara, Malika, Amarpali, Bombay Green(Malda), Jauhari	100	10*10	500-600(N), 200-250(P), 200-250 (K)	10-20	Spray gramaxone @6 ml/l, Spray glyphoset@ 10 ml/l	Weeding and hoeing	50	5000
Guava	Lucknow -49(Sardar), Lalit, Allahabad Safeda, Red Fleshed, Seedless,	196	7*7	400-500(N), 150-200(P), 100-200(K)	10-20	Spray gramaxone @6 ml/l, Spray glyphoset@ 10 ml/l	Weeding and hoeing	40	7840

3.29 Livestock population

There are about 2210 cows, 5312 buffalos, 562 bullocks, and 682 goats in the watershed. It appears that the people are most skilled in dairy and live stock. Poultry is also practiced in the watershed. There are about 2498 birds in the watershed.

Details of village wise livestock population (number)					
Name of Gram Panchayat	**Buffalo**	**Cow**	**Bullock**	**Goat**	**Poultry**
Aindhi	55	48	10	15	78
Atarhar	60	50	15	12	54
Bakuliha	90	42	10	20	62
Baraundi	97	39	13	10	50
Bhitari	104	42	14	12	209
Bijemau Khapura	311	125	28	45	0
Dandepur	103	41	12	16	0
Dhurayee	183	73	15	32	367
Dumarher	98	39	20	21	0
Hardi	98	39	16	11	15
Haripur Mirdahapa	162	65	18	8	155
Jeri	132	53	15	17	0
Jogapur Barigaon	299	119	50	41	160
Kalupur	401	160	30	54	112
Kanha Mau	411	164	35	32	150
Khanpur Khunti	271	108	20	28	0
Khanpur Kushti	131	52	14	14	0
Khargapur	104	42	9	23	138
Khiron	168	67	18	10	55
Kursandi	560	224	20	58	78
Kutubpur	34	14	4	8	0
Lodipuri	206	82	20	16	95
Mirjapur	80	32	11	12	0
Pahuri	280	112	24	42	111
Ramwapur Dubai	326	130	30	25	200
Ranapur Urf Pahrauli	110	44	12	18	112
Sabji Babura	80	38	18	20	92
Semri	95	52	15	22	78
Shivpuri	111	50	22	15	85
Sidhaur Semari	152	64	24	25	42
Total	**5312**	**2210**	**562**	**682**	**2498**

3.30 Average productivity of field crop

Crop	Present Yield (Kg/ha)	
	Grain	By product
Paddy	2500	2500
Maize	3000	2000
Bajra	800	2500
Black gram	500	500
Green gram	400	500
Pigeon pea	1000	4000
Wheat	2500	2500
Lintel	700	700
Mustard	700	1000
Pea	1200	1500
Potato	10000	Nil
Onion	5000	Nil
Fodder	-	80000

3.31Animal productivity

Animal productivity is given in the following table.

Animal	Breed	Average weight (kg)	Milk yield (Litre/day)	Meat (Kg/ animal)	Egg per year	Fodder/Concentrate		
						Stall feeding / open grazing	Source of fresh fodder	Concentrate
Buffalo	210	300-350	2.50	-	-	3.5 kg dry fodder, 8kg Barseem, 4.6kg saeleg, 1.5kg jowar grain, 2kg khali	Farmer Field	-
Cow	180	200-250	1.50	-	-	2.5 kg dry fodder, 6 kg Barseem, 3.5 kg saeleg, 1 kg jowar, 1 kg khali, 0.05 kg bonemeal, 0.05 kg salt	Farmer Field	-
Bullock	-	250-350	-	-	-	3.5 kg fodder, 8kg Barseem, 4.6kg saeleg, 1.5kg jowar, 2kg khali, 5kg bone, 5kg salt	Farmer Field	-
Goat	-	10-15	-	7 – 10	-	0.5 kg whole grain, 3 kg green fodder	Farmer Field -	-
Pig	-	30-35	-	25 – 30	-	-	Farmer Field -	-
Poultry	-	2-3		2 – 3	250	-	Farmer Field -	-

3.32 Existing Avenue trees in the gram panchayat

The exiting trees under various gram panchayat (per 500 rm) are provided in following table.

S.N.	Name of Gram Panchayat	Along with river side	Along with perennial stream	Along with seasonal stream	Along with canal	Along road side	Total
1	Aindhi	4	4	5	12	12	37
2	Atarhar	5	1	4	11	11	32
3	Bakuliha	0	5	3	6	10	24
4	Baraundi	6	2	2	5	8	23
5	Bhitari	0	0	2	8	28	38
6	Bijemau Khapura	0	0	8	10	18	36
7	Dandepur	6	4	6	4	21	41
8	Dhurayee	0	0	8	6	7	21
9	Dumarher	4	2	2	0	25	33
10	Hardi	0	0	0	10	10	20
11	Haripur Mirdahapa	6	5	4	8	12	35
12	Jeri	0	0	0	0	25	25
13	Jogapur Barigaon	0	0	6	6	21	33
14	Kalupur	4	4	4	4	10	26
15	Kanha Mau	3	2	2	6	10	23
16	Khanpur Khunti	4	1	2	10	12	29
17	Khanpur Kushti	3	1	4	6	11	25
18	Khargapur	4	0	2	8	6	20
19	Khiron	2	2	3	10	8	25
20	Kursandi	5	2	0	5	6	18
21	Kutubpur	2	2	0	3	4	11
22	Lodipuri	2	1	0	2	5	10
23	Mirjapur	2	2	1	3	5	13
24	Pahuri	4	0	4	15	35	58
25	Ramwapur Dubai	0	2	0	4	8	14
26	Ranapur Urf Pahrauli	2	0	6	4	10	22
27	Sabji Babura	0	0	0	0	15	15
28	Semri	6	4	0	5	36	51
29	Shivpuri	0	5	4	4	8	21
30	Sidhaur Semari	4	0	2	4	6	16
Total		**78**	**51**	**84**	**179**	**403**	**795**

3.33 Existing grasses in the gram panchayat

Grasses exiting in the gram panchayat is given Below.					
Grass/herbs	**Purpose**	**Location**	**Used for open grazing**	**Cut and carry**	**Yield**
					(Kg per year per ha)
Doob	Animal Feed	All fields	Yes	Yes	1000
Tithali	Animal Feed	Pond side	no	Yes	500
Bhat kataiya	-	Bank of River	no	Yes	500
Motha	Animal Feed	All fields	no	Yes	800
Muraina	Animal Feed	Bank of River	no	Yes	1000
Gung	Animal Feed	Bank of River	no	Yes	1000
Bhadbhand	-	Bank of River	no	Yes	1000

3.34Status of existing farm machinery and equipments

There are 358 tractor, 195 plough, 104 harrow, 386 cultivator, 61 leveller, 454sprayer, 6 seed drills and 172 thrashers in the watershed.

Sl.No.	**Name of Gram Panchayat**	**Number of Farm machinery/equipments**							
		Tractor	**Plough**	**Harrow**	**Culti vator**	**Leveler**	**Sprayer**	**Seed drill**	**Thrasher**
		358	**195**	**104**	**386**	**61**	**454**	**6**	**172**
1	Aindhi	8	6	2	8	1	9	-	4
2	Atarhar	6	7	2	6	1	14	-	3
3	Bakuliha	14	6	4	14	2	11	-	6
4	Baraundi	23	9	7	23	3	28	-	10
5	Bhitari	28	10	8	28	4	32	1	13
6	Bijemau Khapura	21	12	6	21	3	37	1	9
7	Dandepur	18	8	5	18	3	21	-	8
8	Dhurayee	11	7	4	15	4	10	-	6
9	Dumarher	10	8	2	16	3	12	1	7
10	Hardi	12	5	2	20	2	15	-	4
11	Haripur Mirdahapa	9	5	2	11	2	14	2	5
12	Jeri	10	3	1	10	1	13	-	5
13	Jogapur Barigaon	7	2	1	8	2	7	-	3
14	Kalupur	8	4	2	8	1	6	-	4
15	Kanha Mau	20	10	6	20	3	27	-	9
16	Khanpur Khunti	4	4	1	4	1	6	-	2
17	Khanpur Kushti	5	5	0	3	2	5	-	4
18	Khargapur	21	12	6	21	3	37	1	9
19	Khiron	18	8	5	18	3	21	-	8
20	Kursandi	20	5	6	20	3	13	-	9
21	Kutubpur	10	7	5	18	3	24	-	8

Sl.No.	Name of Gram Panchayat	Number of Farm machinery/equipments							
		Tractor	**Plough**	**Harrow**	**Culti vator**	**Leveler**	**Sprayer**	**Seed drill**	**Thrasher**
		358	**195**	**104**	**386**	**61**	**454**	**6**	**172**
22	Lodipuri	8	8	4	8	1	7	-	4
23	Mirjapur	6	10	3	9	1	12	-	4
24	Pahuri	7	5	3	4	1	7	-	2
25	Ramwapur Dubai	11	9	4	8	1	7	-	4
26	Ranapur Urf Pahrauli	10	3	5	18	3	24	-	8
27	Sabji Babura	8	2	2	8	1	7	-	4
28	Semri	7	5	3	9	1	12	-	4
29	Shivpuri	10	5	1	4	1	7	-	2
30	Sidhaur Semari	8	5	2	8	1	9	-	4
Total		**358**	**195**	**104**	**386**	**61**	**454**	**6**	**172**

3.35 Bench marking of project area

The information on soil health, water resources, land and agriculture etc is given in the following table.

Sl.No	INDICATOR/SUB IN DICATOR	Mirjapur 2B2G2o2b		Dhurayee 2B2G2q1a		Atarhar 2B2G2q1b		Jeri 2B2G2q3		Kanhamau 2B3B6h1d		Bhitari 2B3B6h1e	
		Existing	Proposed	Existing	Proposed	Existing	Proposed	Existing	Proposed	Existing	Proposed	Existing	Proposed
A	**Soil health**												
1	Soil organic carbon	0.14	0.154	0.15	0.55	0.12	0.13	0.11	0.12	0.1	0.12	0.13	0.135
2	Available N kg/ha	240	264	250	255	234	240	243	245	245	250	250	255
3	Available P kg/ha	4.1	4.51	5	5.2	6.2	6.3	4.5	5	5.2	5.24	4.6	4.65
4	Available K kg/ha	130.9	140	138		134		140.3		143		150	
5	Soil Erosion (Silt Load G/1000ml runoff)	1.8	1.6	1.5.0	1.4	NA		NA		2.9	2.5	3.87	2.9
B	**Runoff/water status**												
1	Stream Flow at 0.8 d , cum / sec (current meter)	0.3	0.28	0.35	0.32	NA		NA		0.38	0.035	0.35	0.32
2	Ground water level M before rainy season	12m	10m	10m	8m	9m	7m	8m	6m	14m	12m	12m	10m
3	Ground water level M after rainy season	14m	12m	11m	9m	10m	7m	7m	5m	15m	13m	13m	11m
4	Status of water body												
4.1	Spread area in ha	8.608	9	-		-		-		3.745	4.5	0.114	0.5
C	Water availability												
1	Drinking water availabity	Sufficient	Sufficient	Sufficient	Sufficient	Sufficient	Sufficient	Sufficient	Sufficient	Sufficient	Sufficient	Sufficient	Sufficient
2	Soil moisture content												
D	**Vegetation**												
1	Tree cover%	25	30	23	30	20	30	20	30	21	30	20	30
2	Survival of number of plant	50	60	50	60	45	55	48	60	45	55	40	60
3	% family cultivating Ago forestry/Horticulture	20	25	20	25	18	23	18	23	15	20	15	20
4	Species richness(diversity)	Mango	Mango +Bel	Mango	Mango +Bel	Mango	Mango +Bel	Mango	Mango +Bel	Mango	Mango +Bel	Mango	Mango +Bel

Sl.No	INDICATOR/SUB IN DICATOR	Mirjapur 2B2G2o2b		Dhurayee 2B2G2q1a		Atarhar 2B2G2q1b		Jeri 2B2G2q3		Kanhamau 2B3B6h1d		Bhitari 2B3B6h1e	
		Existing	Proposed	Existing	Proposed	Existing	Proposed	Existing	Proposed	Existing	Proposed	Existing	Proposed
E	**Land and agriculture**												
1	Fallow/waste land	27.33 ha		96.96 ha		98.04 ha		48.83 ha		37.39 ha		22.77 ha	
2	crop Diversification index	0.7	0.9	0.75	0.9	0.7	0.9	0.6	0.9	0.56	0.9	0.65	0.8
3	Area coverage under HYV (%)	7	10	6	10	6	10	6	10	6	10	6	10
4	Irrigation (%)	416.44		221.75		516		362.93		322.92		131.64	
5	Area covered under micro irrigation	0	8	0	10	0	12	0	10	0	15	0	15
6	Demonstration of new technology(ha)	0.5	10	1	10	0.5	10	0.75	10	1.5	10	0	10
7	Adoption of INM/IPM/IDM	0.5		0.5		0		0.5		1		0	
F	Crop productivity(grain kg/ha)												
1	Paddy	2500	3000	2500	3000	2500	3000	2500	3000	2500	3000	2500	3000
2	Maiz	3000	3600	3000	3600	3000	3600	3000	3600	3000	3600	3000	3600
3	Bajara	800	960	800	960	800	960	800	960	800	960	800	960
4	Black gram	500	600	500	600	500	600	500	600	500	600	500	600
5	Green gram	400	480	400	480	400	480	400	480	400	480	400	480
6		1000	1200	1000	1200	1000	1200	1000	1200	1000	1200	1000	1200
7	Pigeon pea	2500	3000	2500	3000	2500	3000	2500	3000	2500	3000	2500	3000
8	Wheat		0		0		0		0		0		0
9	Lintel	700	840	700	840	700	840	700	840	700	840	700	840
10	Mustard	700	840	700	840	700	840	700	840	700	840	700	840
11	Pea	1200	1440	1200	1440	1200	1440	1200	1440	1200	1440	1200	1440
12	Potato	10000	12000	10000	12000	10000	12000	10000	12000	10000	12000	10000	12000
13	Onion	5000	6000	5000	6000	5000	6000	5000	6000	5000	6000	5000	6000
14	fodder green	80000	10000	80000	10000	80000	10000	80000	10000	80000	10000	80000	10000
15	buffalow milk /Lactation	1200	1440	1200	1440	1200	1440	1200	1440	1200	1440	1200	1440
16	Cow milk/ Lactation	1350	1620	1350	1620	1350	1620	1350	1620	1350	1620	1350	1620
17	Goat milk/ Lactation	150	180	150	180	150	180	150	180	150	180	150	180

Chapter 4: The problems and need of the area

4.1 Crop productivity/soil and land degradation, soil and water conservation problems

At present, the condition of the life of the people living in villages is not very good. The problems of the villagers are many and varied. Low productivity of main crops in most areas of the watershed, lack of diversification in crops, inadequate and inefficient infrastructure for development in rural areas and lesser employment generation in the other more remunerative sectors of the economy. Unless the development process in the state addresses these basic reasons in a satisfactory manner, the growth in agriculture and for that matter, in the economy as a whole will not pick up to the desirable level nor will the burden of population on agriculture for its livelihood will reduce. There are several other factors, which require immediate consideration such as the consistent increases in the number and area of uneconomic and non-viable agricultural operational holdings, inadequate and inefficient irrigation network, inadequate development of rural infrastructure, more particularly of roads and lack of proper and adequate marketing and storage facilities with little contribution from agro-processing units.

About 62% people in the watershed are literate. 71% male and 52% female are literate. In comparison, females are less educated in number than males. Mass education should be spread by establishing more primary and secondary schools. It must be made both compulsory and free for the females and the males as well, so to improve the economic condition of the watershed. The economic condition of the people is not very encouraging as about 20% families of the watershed are landless, hence their livelihood depends upon the occasional employment they get in agriculture sector or they migrate to the nearby city for day-to-day labour work. Agriculture should be modernized, to get more benefit and profit in the agricultural sector. Vegetable and fruits preservation techniques need to be taught for the future use. Villagers should be educated regarding elementary hygiene and scientific method of cultivation, so as to get healthy results of crop.

The family size in the villages ranged from six to eight with at least four children in most of the households. This holds true for all castes and religions. The high population growth rate has translated into a high rate of unemployment. The family planning programmes implemented through the public health centers (PHCs) and serviced by the ANMs are reported to be working well. However, these services need to be improved

Females of the watershed are mostly engaged in flower gardening (nursery) and kitchen gardening, as there is a high growth of vegetables and flowers like rose, gladiolus, marigold etc, and red and green chilly cultivation among spices, Aonla and ber orchards in sodic lands, inter-cropping of turmeric as well as ginger is observed in the watershed and there are also established mango and other orchards. The status of women in general is appalling in the watershed. They are the largest labour force inside and outside the family. The macro-level figures of literacy levels among the men and women show disparity. Mass education should be spread by establishing more primary and secondary schools. It must be made both compulsory and free for the females and the males as well, so to improve the economic condition of the watershed.

The watershed has average water table of 7.50 m. There are about 20 defunct wells, which are no longer functioning in the Bachrawan watershed. Excessive ground water abstraction in some areas has resulted in alarming depletion of ground water level which results in defunct wells. It is the major problem of the watershed. With a view to improve the ground water potential it is necessary to artificially recharge the ground water aquifers. The tube wells that have become defunct, their restoration is very viable. Such defunct tube wells can be very easily be used for replenishment of ground water storage through artificial recharge. This technique is easy and also sustainable in the long term and can be adopted with locally available materials. This technique depends on various hydro geological conditions, which proves to be fruitful for the watershed.

Every Watershed should have a hospital or a primary health centre for providing medical aids to the villagers. Rural banking should be set up for financial assistance to the village people. A good network of roads is the first and foremost requirement for development. It not only makes it easier to transport goods and services but also saves on time as well as costs. Moreover, it facilitates the flow of information and knowledge. The construction of rural roads and programmes of village connectivity have received considerable attention in the past few years in the state.

4.2 Socio-economical problems and gaps

Income generation, economic growth and environmental security were identified as the major issues to be addressed in the watershed area. People in the village depend mostly on agriculture and it is a big gamble because weather plays a crucial role here. After months of hard work, when the crop is ready to be harvested, untimely rains just damage the yield which leads to huge losses. Agriculture being a labour intensive job, people spends so much of time in the fields yet it ends up giving negligible returns at times. The village needs to have co-operative societies and government assistance to regulate buying and selling of agricultural produce. Most of the farmers go to the nearby town to sell their products at throw away prices and later small shops from this village buy it from those traders, who sell it at much higher prices. So ironically people in the village end up paying more for their own produce. So it is becoming very important to find an alternate and steady income. The females of the watershed are good at flower and kitchen gardening, and there is a good market for such products, in nearby urbanized areas of the watershed like Lucknow and Allahabad. The products like pickle which are not readily available in the market in very good quality, laso has good potential.

Watershed should have a hospital or a primary health centre for providing medical aids to the villagers. About 25% people of watershed are landless and have a good skill for dairy and livestock production. It is observed that dairy and live stock production can be expected from the landless people. Bank loan needs to be arranged to these people for developing dairy and livestock production like goat rearing and poultry farming. A good network of roads is the first and foremost requirement for development. It not only makes it easier to transport goods and services but also saves on time as well as costs. Moreover, it facilitates the flow of information and knowledge. The construction of rural roads and programmes of village connectivity have received considerable attention in the past few years in the state. Rural banking should be set up for financial assistance to the village people. Drinking water to the SC people is also a problem therefore; hand pump needs to be installed in the area through other state/central govt. programmes under convergence. All the drains in the watershed need de-silting and cleaning so as to drain the run-off water efficiently to the Sai River. Few troughs also need to be constructed near a water source to provide fresh water to the animals.

4.2.1 Details of SWOT Analysis

Details of Strength, Weakness, Opportunities and Threats (SWOT) are given below.

Parameter	Strengths	Weaknesses	Opportunities	Threats
Community	1. Women's active involvement in farm related activities, Flower gardening and kitchen gardening. 2. Household is significant feature and women are involved in most of the operation in agriculture including subsidiary enterprises like dairy and poultry etc. 3. Most of the women farmers irrespective of their category are hard working in the farm activities and have excellent knowledge of agriculture.	1. Lack exposure of knowledge of banking and credit cooperatives. 2. Women do not have much say on policy issues of the activities. 3. Limitation of technically trained female extension workers. 4. Female workers do not impart knowledge on household activities, child care, nutrition etc. 5. Unequal wages between male and female workers. 6. Role of women in the watershed programme is not specified.	1. Making of self help groups with small savings and provision of loans by revolving fund on small enterprises related to the agriculture. 2. Awareness among the women to improve their skill and knowledge of micro-watershed based development programme. 3. Watershed development team has technical women to train women of watershed and availability of some voluntary organizations for the purpose. 4. More and more women are coming forward to carry out development work in micro- watershed. 5. Women's potential and capabilities have not been exploited due to lack of specific growth opportunities	1. Change in social functioning and relationship. 2. Male farmers may not provide opportunities to farm women for more rights.
Physical infrastructure	1. Good network of road 2. Electrified village 3. Primary and Secondary School building	1. Lack of sufficient road side plantation. 2. Insufficient electricity supply.	1. Plants are available in nearby nurseries.	1. Unauthorized forest dwelling.
Facility	1. Availability of school, Angan Wadi Centres (AWC), hospital and drinking water. 2. Fair educational status of the villagers	1. Poor animal health facilities.	1. Market opportunity due to neariness of urban areas.	1. Quality control and adulteration.

Parameter	Strengths	Weaknesses	Opportunities	Threats
Technology	1. Farmers know the concept of cash crops 2. Villagers know the importance of natural resource 3. Project area has number of institutions under Central/ State Govt. viz. ICAR, CSIR, SIRD, SAU's Agriculture college, and Technical university etc to backup the development programmes.	1. No significant efforts have been made to generate women specific and women friendly farm technologies. 2. Technical knowhow is low. 3. Communication gap. 4. Lack of technical personnel at block /grass root level.	1. Great desire for the use of modern techniques in agriculture. 2. Scope of new cropping pattern and irrigation methods/ soil improvement /development of cash crops and horticulture. 3. Conservation and utilization of natural resources (with particular reference to water and forest). 4. Compact areas having cheap, hardworking and labour force. 5. Adequate availability of raw material for processing industries. 6. The activity will encourage the export of fruits, vegetables which will provide better returns to the farmers as well as foreign exchange. 7. The approach will also be helpful in minimizing the post harvest losses during the handling of produce.	1. Reduced productivity in the absence of improved technology. 2. Inadequate infrastructure for quality management and quarantine. 3. Degradation of environmental issues with respect to safe/organic produce for consumers.
Livelihood	1. Market are available for skilled and unskilled labor 2. Most of the farmers are small and marginal. 3. Some households have livestock.	1. Lack of awareness regarding pre and post harvest management practices. 2. Lack of proper marketing infrastructure and strong marketing system having forward and backward linkages. 3. Prevelence of traditional cropping systems, substantial increase in area, production and productivity in major crops since last plan period.	1. Vast opportunity to attract youth towards farming sector. 2. Great opportunities in dairy, farming practices, horticulture, poultry, fruit preservation and other sectors. 3. If provided with livelihood options the income level of the households can be increased livelihood status and Quality of life.	1. Reduced productivity in the absence of improved technology. 2. Less interest in agriculture.

Parameter	Strengths	Weaknesses	Opportunities	Threats
Micro-Enterprises and production systems	1. People have the basic skills. 2. Organized microenterprise activities exists in the area 3. Natural resources for enhancing microenterprises and production are available in the watershed.	1. Lack of management skills. 2. Lack of technical support. 3. Lack of organized marketing facilities. 4. Lack of producer federation.	1. If provided good technical support and motivation, they can run the units in an organized way and income level will increase.	1. Farmers may loose interest in agriculture.
Natural Resources	1. Productive land and flora and fauna.	1. Prevalence of soil erosion. 2. No maintenance of water storage bodies.	1. If used advanced techniques like field bunding and use of organic manure, productivity may be increase. 2. Construction of water storage tank for irrigation. 3. Enhancing micro-irrigation	1. Ground water may go down
Soil	1. Availability of good agricultural lands.	1. Susceptible to erosion	1. Large tract of alluvial soil in the basin of River Gomati.	1. Development of soil sickness due over use of chemicals.
Flow of water	1. Good rain fall and perennial river is available.	1. Local catchment inflow is disturbed by the road.	1. Streams can be rejuvenated.	1. More competition for water.
Agriculture	1. Provides income and employment. 2. Has potential to increase productivity. 3. Availability of natural/ man-made resources	1. Lack of irrigation facilities. 2. Lack of organic farming practices. 3. Lack of awareness regarding innovative technique of crop production.	1. If provided with proper irrigation, considerable increase in agriculture production. 2. Increasing demand for organic products.	1. Dairy and live stock may be reduced.
Horticulture	1. Favorable climate for horticultural activities. 2. Good market facility is available for horticultural produce.	1. Unavailability of new varieties. 2. Lack of export facilities. 3. Lack of storage facilities. 4. Slow promotion of processing of horticultural produce, value addition and less availability of processing industries in the sector.	1. Availability of good land. 2. Interest of the villagers to Expand horticulture activities. 3. Increasing price level.	1. Rapid climate change
Animal	1. Favorable environment for	1. Lack of fodder availability.	1. Providing more advanced cattle	1. Animal diseases.

Parameter	Strengths	Weaknesses	Opportunities	Threats
husbandry	rearing cow and goats. 2. Many households are engaged in dairy and live stock. 3. Provides income and employment	2. Lack of advanced cattle bread. 3. Low level of milk production 4. Lack of Knowledge base regarding scientific cattle management. 5. Lack of efficient technology in the area specific and technical knowledge at various levels.	breeds can increase the milk production and enhance their subsidiary livelihood option. 2. Promotion of nursery raising and pasture development will address the lack of fodder availability. 3. Pasture development.	2. Excessive grazing on degraded and small community lands.

4.2.2 Details of gap analysis

The gap analysis is given below.

S.N	Gaps	Strategies to overcome the gap
A Paddy		
1	Delayed transplanting.	Adapt SRI
2	Inadequate plant population in traditional cultivation methods.	1. Adapt 20x15 or 20x10 cm for traditional method and 30x30 or 25x25 cm for SRI method.
3	Lack SRI method	Promote SRI
4	Heavy yield losses due to delayed weeding.	1. Promoting use of butachlore/ pendime thaline/ bangiocarp one weak after transplanting. 2. Weeding with cona weeder 15-20 days after transplanting
5	Attack of insects-stem borer, plant hoppers, gandhi bug etc.	1. Timely transplanting. 2. Use of pesticide in proper time.
6	Disease incidence-Khaira disease, blast, leaf bright, false smut, brown spot.	1. Use of zinc. 2. Use of fungicide.
7	Labour crises for weeding, transplanting and harvesting.	1. Use paddy transplanter. 2. Promote mechanization.

S.N	Gaps	Strategies to overcome the gap
8	No use of cona weeder.	Promote conaweeder
9	Crop damages due to flooding, water-logging and drought (erratic rainfall).	1. First irrigation 2 days after transplantation 2. Keeping moist soil condition.
10	Widespread deficiency of Zn, and Fe.	Use Zn, and Fe.
11	Imbalance crop nutrition.	Judicious use of organic matter and chemical fertilizer
12	Low percentage of seed replacement.	Promote seed replacement.
B. Wheat		
1	Considerable area under late sowing.	Timely sowing
2	Disease incidence-leaf blight, smut, ear cockle, karnal bunt, rusts.	Use of fungicide
3	Weed menace-Phalaris minor, wild oat and other weeds.	Use of isoproturone or other weedicide
4	Mostly flood irrigation.	Use of basin irrigation method
5	Lack of suitable varieties for rainfed and late sown conditions.	Sowing of late sown variety like -DBW-14, HUW-234,Triveni (K-8020,Narendra wheat—1014 and K-9423
6	Imbalance fertilizer use.	Judicious use of organic matter and chemical fertilizer
7	Mostly cereal based cropping system followed (Rice-wheat or Maize-Wheat)	Leguminous crop must be included in crop rotation
8	Less use of organic manures.	Judicious use of organic matter and chemical fertilizer.
9	Inadequate power supply for irrigation and threshing.	Use alternate resources
10	Labour shortage during harvesting	Use harvesting equipment.

Chapter 5: Recommended management programme

5.1 Arable land (rainfed/irrigated)

5.1.1 Agronomic practices

i. High yielding variety
ii. Major crops proposed/rotations/cultural operations/recommended conservation practices/proposed manures and fertilizers, green manuring
iii. Use of improved implements
iv. Plant protection measures
v. Yield and cost of cultivation of major crops
vi. Irrigation

5.1.2 Engineering measures in arable land (Class wise *i.e.* I, II. III and IV)

i. Proposed measure and its justification
ii. Specification of individual measures with plan and design calculation
iii. Drawing with plan, section, elevation may be give
iv. Estimate of the work

Note: Engineering design o f each work will include hydrological design, hydraulic design and structural design

5.2 Non Aarble land

5.2.1 Agronomic practices of Orchard and plantation

i. Type of orchard/plant with spacing, pit size, soil working and planting
ii. Fencing type
iii. Management practice
iv. Cost of raising orchard/plantation
v. Yield.

5.2.2 Engineering measures in non arable land (Class wise i.e.V, VI, VII, and VIII)

i. Proposed measure and its justification
ii. Specification of individual measures with plan and design calculation
iii. Drawing with plan, section, elevation may be give
iv. Estimate

Note: Engineering design o f each work will include hydrological design, hydraulic design and structural design

5.2.3 Diversion drain/interceptor drain/grossed waterway

i. Alignment of each drain to be shown on map
ii. Design (cross section of each)
iii. Estimate

Note: Engineering design o f each work will include hydrological design, hydraulic design and structural design

Chapter 6: Proposed interventions

6.1 Soil management and landuse

Deteriorating soil health is a serious problem in project area. Not only the organic matter is low but also imbalance of major nutrients NPK and micronutrients have telling effect on crop yields. The large part of cow dung is being used as fuel and not for farmyard manure.To improve upon the soil health and nutrient imbalances, two components are proposed:

- Improving soil health through green manuring.
- Demonstrating nutrient management through Integrated Nutrient Management (INM) system.

Above two components are proposed to be run as given below:

(i) Enrichment of organic carbon content using green manuring

- Green manuring can be an important intervention to cope up with the problem.
- Green manure crops such as daincha, sunhemp, and cowpea etc not only fix nitrogen but also add organic carbon.It is proposed to provide seeds of green manure crops to selected farmers.

(ii) Establishment of Integrated Nutrient Management (INM) system

Balanced use of plant nutrients is essential for sustainable intensification of agriculture. The goal of INM is to promote balanced use of plant nutrients, so as to increase crop productivity in an efficient manner. Few demonstrations of 0.40 ha will be conducted in every gram panchayat.

(iii) Vegetative measures to reduce soil erosion problem, to increase the organic matter, and plantation in scrub and denuded forest area which can supplement the other livelihood practices has to be promoted. The block has forest area but which is highly degraded and hence plantation has to be promoted with firewood, timber and fodder species.

6.2 Efficient use of water resources and management

The area is flood prone. Hence the proper drainage system has to be developed to drain out the excess water from the farm fields during rainy season. The systemic chain of spill-ways has to be designed to take out excess water from the fields. This will also reduce the salinity problem.

Second major problem is the increasing salininy in soil due to flood irrigation from canals. At present mostly farmers are using flood system of surface irrigation. It consumes more water and in this system hardly irrigation efficiency is 50%. Mostly the water is wasted in conveyance and faulty use of water application. Farmers should be educated with improved irrigation practices through demonstrations. The underground pipeline distribution system, though comparatively more expensive initially than open canal network but it has got numerous advantages. Moreover in the saline area, the use of open canal and flood irrigation should be avoided. Under ground irrigation channel will be constructed for two purposes – first, expanding tertiary canal network for the farmers who do not get access to canal water and second by supplementing tubewell owners with such a system. As per the guideline of

central scheme, 50% subsidy or maximum of Rs.60, 000 per acr for one beneficiary can be provided. In that case only big farmers can be able to take advantage of this scheme. Hence it is proposed to provide the 25% subsidy to BPL/small/marginal farmers and 50% to APL/big farmers. This will facilitate to set up more demonstrations for farmers. For tubewell owners, the cost turns out to be Rs. 50000, i.e. upto Rs. 25000 subsidies can be provided to tubewell owners.

Even though the availability of water is not a major issue but the supply is the major constraint in the project area. Hence above measures should be promoted. Also even though the area is flood prone, but the groundwater maps show that groundwater in confined aquifer is declining due to high run-off, high extraction for agriculture and less infiltration. Hence vegetative measures like live vegetative barriers, counter bunding, field bunding etc. is necessary but it has to be supported by water draining systems like spillways, peripheral bunds. To utilize water efficiently, and to improve the technical know-hows, the following measures should be promoted for on-farm water management and enhanced productivity:

Even though most of the water bodies in the Raibareli district are not suitable for fishery, but one-or-two demonstrations can be set up by converting suitable water body (Taal, Jhil, Tank) to fishery pond.

(i) Adoption and promotion of precision farming techniques through micro irrigation

Micro irrigation system enhances irrigation and water use efficiency. It also helps in increasing the fertilizer use efficiency. Being one of the main components of precision farming, it can be of great help for small and marginal farmers. Under capacity building module this component will be addressed.

(ii) Demonstration cum training of ridge and furrow system and SRI of paddy cultivation for increasing water use efficiency and eco-friendly cultivation

Paddy is generally cultivated in puddle fields and is transplanted in standing water. Recently a new technique "transplanting of paddy seedlings on both sides of ridges under non puddled conditions" has been reported to have given good yield with only 50 percent quantity of water use along with efficient utilization of added plant nutrients and better micro-climate which reduces the incidence of pests and diseases. Also, this method improves the soil texture and soil health, with lesser pollution of ground water. The weed problem under this technique can effectively be controlled with the use of new herbicide (s) and with no residual effects on succeeding crops. In this method, bed planter is used for preparing ridges on well-prepared field. Three to four weeks old seedlings of paddy are transplanted on both sides of ridges, keeping a distance of fifteen centimeters between the seedlings, ten centimeter above the bottom of the furrow. Thus 33 seedlings per square meter will be maintained as in case of conventional transplanting. It is proposed to conduct demonstrations of this technology to convince the farmers that water can be saved in paddy cultivation without compromising with the yield. Similarly SRI will be useful to save water and fertilizer without compromising crop yield. Each gram panchayat will be provided a bed planter for conducting demonstrations and a total sum of Rs. 30,000.00 shall be spent on each of such trainings.

6.3 Seed and planting material

Seed is the most crucial agriculture input for improving the production and productivity of crops. Better seed replacement ratio coupled with proper seed treatment can largely contribute to improve the yield of crops per unit area. Similarly availability of high quality planting material for horticulture crops can improve their productivity. The following interventions are proposed to be taken up under this programme:

(i) Establishment of seed treatment and demonstrations units at gram panchayats level for early and high germination rate to increase crop yield

The concept of seed treatment is the use and application of biological and chemical agents that control or contain primary soil and seed borne infestation of insects and diseases which pose devastating consequences to crop production. Seed treatment ensures crop safety, leading to establishment of healthy and vigorous plants resulting in better yields. The benefits of seed treatment are as follows:

1. Increased germination
2. Ensures uniform seedling emergence.
3. Protect seeds or seedlings from early season diseases and insect pest thereby improving crop emergence and its growth.
4. Improved plant population and thus higher productivity.

Presently, 70% requirement of seed is met from the farmer's own stock which goes for sowing without seed treatment. The demonstrations and training on seed treatment will be conducted at gram panchayat level. The demonstrations will be conducted in o.25 ha area and the farmers will be trained simultaneously on the techniques of seed treatment. Component of seed demonstration unit are:

Item	Area/Number	Cost in Rs
Fungicides	0.4 ha	50
Seed treating Drums	One	1150
Operational Charges/ demonstration (Rs. 2000 /demonstration)	0.4ha	2000
Total	**-**	**3200**

(ii)Production and supply of quality seeds and planting material for improvement of seed replacement rate (SRR)

The major field and horticultural crops of the project area are wheat, potato, pulses, rice and vegetables, where replacement of seed and planting material can boost the production and productivity. This programme is required to be takenup in a project mode. Except for hybrids maize, rice and vegetable crops, the farmers can produce the certified seed/ foundation seed stage-2. It is proposed that the farmer may get his crop inspected, so that instead of certified seed, he is able to produce foundation seed stage-2 so as to meet the desired seed replacement requirement. The government may provide foundation seed to one

fifth of the farmer every year. The seed produced by these farmers will be supplied to the next group of farmers during subsequent years.

To support nutritional kitchen garden as well as production of high value crops by small and marginal farmers, special emphasis is required to be given to provide high quality vegetable seeds to the farmers.

(iii) Seed replacement

Seed is the single most critical input in production. High quality seed is likely to increase production by 10 -15 % with following additional benefits:

- Quality seed and planting material will become available to the small and marginal farmers particularly of high value crops to boost their profitability.
- The seed borne diseases and insects can be controlled at a minimum cost by seed treatment and it is expected that farmers of all strata will be benefited and their income shall be raised by 10 - 30 %.
- Proper management of insect pest and diseases by seed treatment will reduce environmental pollution.
- High quality planting material will result in better quality of horticultural and agricultural produce, thus higher returns to the farmers.

6.4 Technology dissemination

The present agriculture extension system is not designed to meet out the integrated requirement of the farmers. It is required that for reaching out every farm unit a new programme *i.e*. based on information and communication technology (ICT) be adopted. The outline of the programme is given here under:

(i) Publication and mass campaign for resource development of agri and allied sector using ICT

The publication, training and mass campaign system has a vital role in the overall development of agriculture and allied sector. According to the multidimensional needs of the farmers, the publication, awareness and mass campaign with the full support by training will provide extra and latest information to the farmers in their respective fields as and when required. Therefore, to make timely available and proper use of printing materials and electronic media related to every modern technology can be passed on very quickly up to the grass root level (learning by doing and seeing by doing) and to cover every village of the entire project area.

(ii)Farmers study tour within and outside the state for exposure and motivation towards commercialized agriculture

In order to induce competitive instinct in the minds of farmers of lesser developed areas, it is essential to expose them to well developed pockets of U.P. in first stage. These visits will strengthen the confidence of farmers in new technologies and see the practical adoption of new technologies. Personal interaction and listening to success stories from horses mouth will change the mind set and to adjust the changes in their own package of

practices. In district the progressive farmers will be included in the proposed study tour. Various agriculture segments for improvement will be selected like: fish culture by visiting East U.P; higher production of potato from success story of Kannauj/Farrukhabad/Agra, etc; better mechanization of farms of West U.P. Additionally farmers could also visit other states like: Maharashtra & Valsad (Gujarat) to see the organized mango cultivation, Nasik for grapes and onion, Stara for ginger cultivation, and Haryana/ Punjab/ Gujarat for dairy etc.

(iii) Training and demonstrations of weed management in major crop to reduce the yield loss

The association of weed with the crops is well known because weeds compete with the crops for various growth factors like light, space, nutrients, moisture etc. The competition of weeds reduces the crop yield from 15 to 25 percent depending upon the type of weed flora, its intensity and duration of competition. The introduction of dwarf genotypes with the high inputs use like fertilizers and irrigation requirements has further aggravated the weed problems. The project will consist of training and demonstrations on chemical weed control in major crops of the region.

(iv) Farmers training for seed production at *Krishi Vigyan Kendra*

KVK/ KGKs/RIRD are very prestigious units/Institution in the district, which provides latest production technology to the farmers by different ways. To provide latest information and training to the farmers, it is necessary that KVK/ KGK/RIRD are kept up to date, so that, farmers can utilize their services and advise and adopt latest techniques on their own farms.

6.5 Farm mechanization

Farm mechanization plays very vital role in timely and precision performance of different farm operations. In areas of intensive agriculture i.e. where two or more than two crops are taken in a year, use of machinery can greatly enhance the productivity by timely performance of various agricultural operations and thereby improving the input use efficiency. But, this is the most capital-intensive agricultural input. The various interventions proposed are as follows:

Interaction with village panchayats in the project area revealed that there is need to make available farm machinery to small and marginal farmers. However, they cannot afford to purchase costly farm machinery as it will not be economical for their smallholdings. Further lack of farm machinery at small farm brings drudgery on farm women. To meet the requirement, village level cooperative societies or farmers clubs, or entrepreneur will be encouraged to purchase the machinery and made will be made available to the farmers on custom hiring basis.

The 4% of cultivation area is under the potato, onion and other vegetables. But the overall productivity is very low. Hence it is important to enhance the farming practices of vegetable cultivation. As potato is one of the major vegetable crop in the area, the intercropping of potato with oil seed and other crops should be demonstrated. Also the potato digger and planter will be provided in the above mentioned custom-hiring resource center to improve the farming practices of potato cultivation.

6.6 Horticulture and vegetable cultivation

(i) Promotion of protected cultivation of vegetable crops under low tunnels for early production of vegetables

Majority of farmers in project area are small and marginal and their holdings are uneconomical. If provided with capital support and know how, they can compliment production of cucurbits out of main season in protected structure like low tunnels. The cost of material for erection of low tunnels including plastic for one hectare is Rs. 50,000. Small and marginal farmers have very small holding and it is expected that not more than 500 sq mt areas shall be put under plastic tunnel at one time. The cost for 500 sq mt. per farm unit works uot to be Rs. 2500.00.

Objectives:

To start early crop of vegetables when the season is still cool will help off-season production of vegetables for higher profits. The productivity of vegetables is very high in the reagio which will increase cash flow to farm women. Insect – pest and disease management can be done more efficiently. Vegetable being high value crops, a better protection from weather conditions ensures crop safety and safeguards against crop failures. Higher vegetable production leads to better nutritional security. Use of low tunnels for raising nurseries of winter vegetables under protection ensures production of quality planting materials and safeguard for expensive composite seed.

(ii) Demonstration and supply of healthy nursery raising in vegetable crops

Vegetable crops including onion, cole crops, capsicum, chillies, tomato and brinjal are raised through nursery. All these crops are high value and highly productive. They suit to small and marginal farmers and especially it is the women who take care of vegetable production. Healthy nursery of these vegetables ensures the success of vegetables production venture. It is therefore proposed to train the farmers on the practices of raising healthy nursery.

Objectives

- To raise healthy nursery of the high value crops through high quality seed to ensure crop success.
- To provide quality-planting material and costly seeds i.e. hybrids.
- To boost the income of small and marginal farmers.
- To increase cash flow to farm-women through raising quality nursery of vegetables crop for own use and for sale to other farmers.

Technology

Small raised beds of 3 meter x 1 meter x 10 cm are prepared. Well rotten FYM or vermi-compost is added to each bed. The beds are drenched with formalin solution (1 part formalin and 7 part water). After doing so the beds are covered with polythene sheets and left as such for one week, so that, formalin fumes get deep in to the soil and it is sterilized properly. The covering with polythene also ensures solar sterilization of soil. After one week the polythene is removed and the soil is raked number of times for at least one week, so that, formalin fumes are completely driven out. As a check, a handful of soil is taken out from the

bed and smelled to feel if there are any fumes of formalin smell left in the soil. Just in case, if the soil still smells of formalin it should be left for another two- three days and further raking of soil may be done. Normally, it takes 2-3 weeks time to prepare the nursery bed and sterilized them for sowing of seeds. Therefore, bed preparation programme should be started at least three weeks in advance of actually planting the seeds in nursery beds. Since the vegetable seeds particularly hybrids are very costly, healthy nursery is very important. Further, it should be kept in mind that the seeds are sown in line and it should not be congested. If required low plastic tunnels can be prepared to protect valuable nursery seedlings.

The cost of raising ten nursery beds each of 1m x 3m diameter is given here under:

Hybrid/OP seeds, formalin, FYM, vermicompost, fertilizers, polythene sheets, polytunnels	Rs. 5000
Fifty man days for preparation of beds and nursery-raising for one month	Rs. 5000.
Total	**Rs. 10,000**

(iii) Development of nutritional kitchen garden/back yard garden for balanced nutrition at village level and involvement of women in horticulture.

Rural people particularly women and children suffer from lack of vitamins and minerals. Nutrition garden can play an important role to solve this problem, besides this, nutritional garden also ensure economical and nutritional security. On an average eight member family shall require 2.4 kg vegetables and 800 g fruits per day. This production can be obtained from 500 sq mt. area. Five villages from each block of the district will be selected and one kitchen garden will be laid out in each village each year. They will be provided with input and training to raise the kitchen garden. Besides seed kits of summer and winters vegetables, three fruit trees (amrapali, papaya, citrus and guava) shall also be distributed to each.

(iv) Mentha and Gladiolus: To improve the economic condition of small, marginal and women farmers and save their crops form climate hazards, programme like protective cultivation of high value crops, distribution of vegetable seed kits planting material of Mentha, Lemon grass and Gladiolus etc should be promoted. Protective cultivation kit i.e. seed kits of Rs. 200 will be provided for each unit/ farmer at 100% subsidy.

Claimatic condition of Raebareli provides an opportunity to the possibility of going flower, medicine grasses etc. There is possibility to setup industries to process medicinal plants. Lemon grass, mentha, gladiolus etc. are suitable for many blocks in the Raebareli. Mentha grass is becoming popular among the farmers and there is need to provide proper facilities processing so that farmer may get better price of the produce.

6.7 Commercial fruits

(i). Promotion of rejuvenation of senile, old and unproductive orchards of mango and guava

PRA survey reveals that quite a good percentage, about 20-35% of orchards are unproductive in the project area. Due to this, the productivity of these fruit crops in the region is quite low (6.2 tons/ha). Therefore, rejuvenation of such orchards is required on priority to increase productivity, ensure export competitiveness and to take advantage of global opportunities. The technology of rejuvenation of both mango and guava is given below:

(a) Mango: Rejuvenation of mango gives a new productive life of 20-30 years. Like other fruit crops, mango trees also witnesses decline in productivity after certain age and orchards become unviable. The technology of rejuvenation has been worked out and demonstrated by CISH, Lucknow. The technology aims at pruning of undesired branches for inducing development of umbrella like open canopy of healthy shoots which ensures better light penetration and improves flowering and fruiting potential. Pruned trees attain canopy of healthy shoots in two years time and after three years onward they start bearing fruits. The technology involves pruning of undesired branches from a height of 4-5 meters from ground during month of December. Four to medium sized branches with outward growth are retained for basic framework of tree for the development of canopy. Other criss-cross, intermingling, dried and diseased branches are marked for complete removal, which is also done in month of December. Branches for canopy development are pruned at a distance of about 75 cm at their base.

Immediately after pruning, fungicidal paste should be applied on cut surfaces to check microbial growth. It is observed that alternate row pruning is much more acceptable to growers as there is less economic loss and the availability of better light to un-pruned adjacent rows which greatly increases their fruiting potential. Apart from this, pruned trees are to be provided intensive care of nutrition, irrigation and management of insect, pests and diseases. Five to six months after pruning, outwardly growing 8-10 healthy shoots need to be retained per branch. This operation is done during June to August. If the orchard is of inferior variety, then the branches (new shoots) can be grafted with improved variety, which is called as “top working”. Total cost involved for rejuvenation per tree is Rs. 133 to 160. Pruned trees have been found to have 2-3 times higher average yield than the control plot in which pruning is not done.

(b) Guava: The unproductive old orchards which produce low-grade fruits need to be rejuvenated through heavy and systematic pruning followed by proper nutrition, irrigation and plant protection measures. Heading back of unproductive guava orchards is done in the month of May followed by judicious thinning and pruning of newly sprouted shoots in the month of October. The newly emerged shoots after October pruning are found to be very conducive for flowering and fruiting in the following season.

Assistance under National Horticulture Mission (NHM)

This activity has been adopted by NHM and assistance norms are 50% of the estimated cost of Rs. 30,000/ha subject to a maximum of Rs. 15,000/ha limited to 2 hectares per beneficiary.

(ii). Promotion of high density planting of guava fruit crops

Although India is the largest producer of guava, however yields are very poor varying from 6.2 tons/ha in mango and 11.0 ton/ha in guava. The main reason for low yields are wide spacing, low penetration of improved varieties and poor management practices. Even countries like Brazil, Mexico and Egypt harvest yields up to 9.2 tons/ha to 16.0 tons/ha in mango. It is a common practice to plant guava at a spacing of 8m × 8m between rows and between plants within rows. With the wider spacing it takes 7-10 years to fill the space between plants. Thus there is tremendous scope for increasing orchard productivity by increasing planting density. Along with high planting density, early height control and canopy management are essential to control vegetative growth and to achieve desired results. Researchers conducted at Central Institute for Subtropical Horticulture at Lucknow has revealed that a spacing of 6.0m × 3.0m is most favourable. In this case also, yields of the order of 15-16 tons/ha can be easily obtained with Allahabad Safeda variety.

6.8 Proposed intervention for livestock

The livestock sector is an important sector of agricultural economy of the state and accounts for about one fourth of the net state domestic product. The opportunities in improving the performance of this sector are much more as compared to crop sector as the farmers are already practicing dairy and backyard poultry to supplement their income.

To increase the productivity in animal sector the major contribution rests on the genetic up-gradation of livestock. So far as dairy development is concerned, induction of additional milch animals and transforming the backyard dairy units into commercial dairy farms with minimum ten animals is required. Farmers training for better herd and milk management need to be done through latest techniques and farm practices.

(i) For year round production of green fodder to

It has been realized that seed is the most limiting factor in fodder production. The fodder crops being very shy seed setters, sufficient quality of good seed is not available. In the present situation, the berseem seed costs approximately Rs. 100 /kg and 20 kg seed is needed for one hectare. Accordingly following norms for fodder seed production and seed acquisition by the government for further distribution will be followed. Barseem seed will be distributed to registered farmers having mixed farming system @ 4 kg / farmer costing Rs 400.

(ii) Cattle shelter, Poultry shelter, and goat shelter: Shelter will be provided under MGNREGA fund.

(iii) Promotion of Goat Rearing and poultry:

The goat and chicken rearing is common in all the blocks of Raebareli district. Hence there is a potential to develop this as profitable livelihood avenue by strengthening markting, health services and breeding systems for poultry and goatry. Goat is used both for milk and

meat purpose by the people. During last five years 90% of meat consumption in the district comes from goat. There is a need for promoting goat rearing. To promot goat rearing goat shelter will be provided. The small backyard poultry is to be promoted to supplement income for small and marginal farmers. The market-potential is high, as there is already increasing demand within district which cannot be fulfilled in-house. Hence poultry potential is higher.

(iv) Dairy Training Workshop for Women

The first step will be to sell the idea of dairy farming aggressively in the target area. This will be done by holding dairy training workshops extensively in the district, so as to cover the entire area repeatedly. These will be high tech camps wherein the requisite message will be passed across the audience in a very cordial, conducive and friendly environment. Dairy training workshop will be conducted to encourage and equip with knowledge to prospective dairy farmers and 50 percent target beneficiary should be women.

6.9 Production system

6.9.1 Proposed Gram Panchayat wise area under demonstration (ha)

Sl. No.	Name of Grampanchayat	Treatable area (ha)	Wheat SWI	Seed Treatment Demonstrations	Oil seed+ potato intercrop	Early vegetable	Paddy SRI	Arhar transplated	Maiz + transplated Legume	Millets	Green manur (Dhaincha)	Zaid oilseed	Off season zaid vegetable	Total area
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Aindhi	510.3	24.1	7	13	4.7	18	8	8	5.2	5	3.7	2.6	99.3
2	Atarhar	292.8	13.8	4	8	2.7	11	5	5	3	3	2.1	1.5	59
3	Bakuliha	20.1	1.1	0	1	0.2	1	0	0	0.2	0	0.1	0.1	4
4	Baraundi	164	8	2	4	1.5	6	3	3	1.7	2	1.2	0.8	33
5	Bhitari	262.1	12.6	4	7	2.4	9	4	4	2.7	2	1.9	1.3	51
6	Bijemau Khapura	283	13.7	4	7	2.6	10	5	4	2.9	3	2	1.5	56
7	Dandepur	167.3	8	2	4	1.5	6	3	3	1.7	2	1.2	0.9	33
8	Dhurayee	487.5	23	7	13	4.5	18	8	8	5	5	3.5	2.5	98
9	Dumarher	268.9	12.7	4	7	2.5	10	4	4	2.8	2	1.9	1.4	52
10	Hardi	187.5	9.2	3	5	1.7	7	3	3	1.9	2	1.3	1	38
11	Haripur Mirdahapa	241.4	11.5	3	6	2.2	9	4	4	2.5	2	1.7	1.2	47
12	Jeri	316.1	14.9	5	8	2.9	11	5	5	3.2	3	2.3	1.6	62
13	Jogapur Barigaon	9.1	0.1	0	0	0.1	0	0	0	0.1	0	0.1	0	0
14	Kalupur	15.5	1.1	0	0	0.1	1	0	0	0.2	0	0.1	0.1	3
15	Kanha Mau	225.5	10.4	3	6	2.1	8	4	3	2.3	2	1.6	1.2	44
16	Khanpur Khunti	150.2	6.9	2	4	1.4	5	2	2	1.5	1	1.1	0.8	28
17	Khanpur Kushti	86.7	4.5	1	2	0.8	3	1	1	0.9	1	0.6	0.4	16
18	Khargapur	218	10.3	3	6	2	8	4	3	2.2	2	1.6	1.1	43
19	Khiron	308.2	14.9	4	8	2.9	11	5	5	3.2	3	2.2	1.6	61
20	Kursandi	164.3	8	2	4	1.5	6	3	3	1.7	2	1.2	0.8	33
21	Kutubpur	188.6	9.2	3	5	1.7	7	3	3	1.9	2	1.4	1	38
22	Lodipuri	229.6	10.4	3	6	2.1	8	4	4	2.4	2	1.7	1.2	45
23	Mirjapur	252.6	11.6	4	6	2.3	9	4	4	2.6	2	1.8	1.3	49
24	Pahuri	10	0.1	0	0	0.1	0	0	0	0.1	0	0.1	0.1	1
25	Ramwapur Dubai	35.4	1.2	1	1	0.3	1	1	1	0.4	0	0.3	0.2	7
26	Ranapur urf Pahrauli	282.8	13.7	4	7	2.6	10	5	4	2.9	3	2	1.5	56
27	Sabji Babura	6.3	0	0	0	0.1	0	0	0	0.1	0	0	0	0

Sl. No.	Name of Grampanchayat	Treatable area (ha)	Wheat SWI	Seed Treatment Demonstrations	Oil seed+ potato intercrop	Early vegetable	Paddy SRI	Arhar transplated	Maiz + transplated Legume	Millets	Green manur (Dhaincha)	Zaid oilseed	Off season zaid vegetable	Total area
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
28	Semri	4.9	0	0	0	0	0	0	0	0.1	0	0	0	0
29	Shivpuri	252.6	11.6	4	6	2.3	9	4	4	2.6	2	1.8	1.3	49
30	Sidhaur Semari	108.7	4.7	2	3	1	4	2	2	1.1	1	0.8	0.6	22
Total		**5750**	**271.3**	**81**	**147**	**52.8**	**206**	**94**	**90**	**59.1**	**54**	**41.3**	**29.6**	**1126.1**

6.9.2 Cost of Crop production system intervention

Crop demonstration under production system														
Sl. No.	Name of Grampanchayat	Treatable area (ha)	Wheat SWI @ Rs 4000	Seed treatment demonstrations@ Rs 6400	Oilseed+ potato intercrop @ Rs 4000	Early vegetable @ Rs 1000	Paddy SRI@ Rs 2500	Arhar transplated @ Rs 2000	Maiz + transplated Legume @ Rs 2000	Millets @ Rs 1500	Green manur (Dhaincha) @ Rs 2000	Zaid oilseed @ Rs 1000	Off season zaid vegetable @ Rs 4000	Total in Rs
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Aindhi	510.3	96400	44800	52000	4700	45000	16000	16000	7800	10000	3700	10400	306800
2	Atarhar	292.8	55200	25600	32000	2700	27500	10000	10000	4500	6000	2100	6000	181600
3	Bakuliha	20.1	4400	0	4000	200	2500	0	0	300	0	100	400	11900
4	Baraundi	164	32000	12800	16000	1500	15000	6000	6000	2550	4000	1200	3200	100250
5	Bhitari	262.1	50400	25600	28000	2400	22500	8000	8000	4050	4000	1900	5200	160050
6	Bijemau Khapura	283	54800	25600	28000	2600	25000	10000	8000	4350	6000	2000	6000	172350
7	Dandepur	167.3	32000	12800	16000	1500	15000	6000	6000	2550	4000	1200	3600	100650
8	Dhurayee	487.5	92000	44800	52000	4500	45000	16000	16000	7500	10000	3500	10000	301300
9	Dumarher	268.9	50800	25600	28000	2500	25000	8000	8000	4200	4000	1900	5600	163600
10	Hardi	187.5	36800	19200	20000	1700	17500	6000	6000	2850	4000	1300	4000	119350
11	Haripur Mirdahapa	241.4	46000	19200	24000	2200	22500	8000	8000	3750	4000	1700	4800	144150
12	Jeri	316.1	59600	32000	32000	2900	27500	10000	10000	4800	6000	2300	6400	193500
13	Jogapur Barigaon	9.1	400	0	0	100	0	0	0	150	0	100	0	750
14	Kalupur	15.5	4400	0	0	100	2500	0	0	300	0	100	400	7800
15	Kanha Mau	225.5	41600	19200	24000	2100	20000	8000	6000	3450	4000	1600	4800	134750
16	Khanpur Khunti	150.2	27600	12800	16000	1400	12500	4000	4000	2250	2000	1100	3200	86850

Crop demonstration under production system														
Sl. No.	**Name of Grampanchayat**	**Treatable area (ha)**	**Wheat SWI @ Rs 4000**	**Seed treatment demonstrations@ Rs 6400**	**Oilseed+ potato intercrop @ Rs 4000**	**Early vegetable @ Rs 1000**	**Paddy SRI@ Rs 2500**	**Arhar transplated @ Rs 2000**	**Maiz + transplated Legume @ Rs 2000**	**Millets @ Rs 1500**	**Green manur (Dhaincha) @ Rs 2000**	**Zaid oilseed @ Rs 1000**	**Off season zaid vegetable @ Rs 4000**	**Total in Rs**
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**
17	Khanpur Kushti	86.7	18000	6400	8000	800	7500	2000	2000	1350	2000	600	1600	50250
18	Khargapur	218	41200	19200	24000	2000	20000	8000	6000	3300	4000	1600	4400	133700
19	Khiron	308.2	59600	25600	32000	2900	27500	10000	10000	4800	6000	2200	6400	187000
20	Kursandi	164.3	32000	12800	16000	1500	15000	6000	6000	2550	4000	1200	3200	100250
21	Kutubpur	188.6	36800	19200	20000	1700	17500	6000	6000	2850	4000	1400	4000	119450
22	Lodipuri	229.6	41600	19200	24000	2100	20000	8000	8000	3600	4000	1700	4800	137000
23	Mirjapur	252.6	46400	25600	24000	2300	22500	8000	8000	3900	4000	1800	5200	151700
24	Pahuri	10	400	0	0	100	0	0	0	150	0	100	400	1150
25	Ramwapur Dubai	35.4	4800	6400	4000	300	2500	2000	2000	600	0	300	800	23700
26	Ranapur urf Pahrauli	282.8	54800	25600	28000	2600	25000	10000	8000	4350	6000	2000	6000	172350
27	Sabji Babura	6.3	0	0	0	100	0	0	0	150	0	0	0	250
28	Semri	4.9	0	0	0	0	0	0	0	150	0	0	0	150
29	Shivpuri	252.6	46400	25600	24000	2300	22500	8000	8000	3900	4000	1800	5200	151700
30	Sidhaur Semari	108.7	18800	12800	12000	1000	10000	4000	4000	1650	2000	800	2400	69450
Total		**5750**	**1085200**	**518400**	**588000**	**52800**	**515000**	**188000**	**180000**	**88650**	**108000**	**41300**	**118400**	**34,83,750**

6.9.3 Area under horticulture system

S. N.	Name of Grampanchayat	Treatable area (ha)	Fallow land	Area of Orchid (ha)	Mango rejuvenation		Guava high density		Bel/Ber/Citrus		Present Area under horticulture in ha	proposed area for intervention in ha.
					Present total Area in ha	proposed area forrejuvenation in ha	Present Area in ha	proposed high density Area in ha	Present Area in ha	proposedArea in ha		
1	2	3	4	5	6	7	8	9	10	11	12	13
1	Aindhi	510.3	304.3	38.61	25.10	5.02	10.81	1.62	2.70	0.27	38.61	6.91
2	Atarhar	292.8	174.4	15.98	10.38	2.08	4.48	0.67	1.12	0.11	15.98	2.86
3	Bakuliha	20.1	12.4		0.00	0.12	0	0.06	0.00	0.06	0.00	0.24
4	Baraundi	164	97.1		0.00	0.97	0	0.49	0.00	0.49	0.00	1.95
5	Bhitari	262.1	155.5		0.00	1.55	0	0.78	0.00	0.78	0.00	3.11
6	Bijemau Khapura	283	169.3		0.00	1.69	0	0.85	0.00	0.85	0.00	3.39
7	Dandepur	167.3	100.4	0.00	0.00	1	0	0.5	0.00	0.5	0.00	2
8	Dhurayee	487.5	289.4	23.92	15.55	3.11	6.7	1.01	1.67	0.17	23.92	4.29
9	Dumarher	268.9	160.9		0.00	1.61	0	0.8	0.00	0.8	0.00	3.21
10	Hardi	187.5	113.1	9.88	6.42	1.28	2.77	0.42	0.69	0.07	9.88	1.77
11	Haripur Mirdahapa	241.4	143.5		0.00	1.44	0	0.72	0.00	0.72	0.00	2.88
12	Jeri	316.1	188.6	62.67	40.73	8.15	17.55	2.63	4.39	0.44	62.67	11.22
13	Jogapur Barigaon	9.1	5.6		0.00	0.06	0	0.03	0.00	0.03	0.00	0.12
14	Kalupur	15.5	9.5		0.00	0.1	0	0.05	0.00	0.05	0.00	0.2
15	Kanha Mau	225.5	134.0		0.00	1.34	0	0.67	0.00	0.67	0.00	2.68
16	Khanpur Khunti	150.2	90.8		0.00	0.91	0	0.45	0.00	0.45	0.00	1.81
17	Khanpur Kushti	86.7	51.9	0.02	0.01	0	0.01	0	0.00	0.26	0.02	0.26
18	Khargapur	218	129.4		0.00	1.29	0	0.65	0.00	0.65	0.00	2.59
19	Khiron	308.2	184.7	11.92	7.75	1.55	3.34	0.5	0.83	0.08	11.92	2.13
20	Kursandi	164.3	98.3	3.67	2.38	0.48	1.03	0.15	0.26	0.03	3.67	0.66
21	Kutubpur	188.6	113.2	6.80	4.42	0.88	1.9	0.29	0.48	0.05	6.80	1.22
22	Lodipuri	229.6	137.8	1.45	0.94	0.19	0.41	0.06	0.10	0.01	1.45	0.26
23	Mirjapur	252.6	152.1	7.78	5.05	1.01	2.18	0.33	0.55	0.06	7.78	1.4
24	Pahuri	10	6.2		0.00	0.06	0	0.03	0.00	0.03	0.00	0.12
25	Ramwapur Dubai	35.4	21.9		0.00	0.22	0	0.11	0.00	0.11	0.00	0.44
26	Ranapur urf Pahrauli	282.8	170.0		0.00	1.7	0	0.85	0.00	0.85	0.00	3.4
27	Sabji Babura	6.3	3.9	7.08	4.60	0.92	1.98	0.3	0.50	0.05	7.08	1.27
28	Semri	4.9	3.0		0.00	0.03	0	0.01	0.00	0.01	0.00	0.05
29	Shivpuri	252.6	151.1		0.00	1.51	0	0.76	0.00	0.76	0.00	3.03
30	Sidhaur Semari	108.7	64.8	9.25	6.01	1.2	2.59	0.39	0.65	0.07	9.25	1.66
Total		**5750.00**	**3437.00**	**199.02**	**129.34**	**41.47**	**55.75**	**16.18**	**13.94**	**9.48**	**199.03**	**67.13**

6.9.4 Farm mechanization

Sl. No.	Name of Grampanchayat	Treatable area (ha)	No. of farm family	Cona weeder for paddy@2000		Dry weeder for wheat, maize etc. @2000		Multi-crop seed drills, one per panchayat @5000		Ridge and Furrow maker (Rs. 6000)		Tractor driven three ferrow Potato digger and planter @25,000/-		Manual Knapsack/foot operated sprayer.1300		Powered Knapsack sprayer/Power OperatedTaiwan sprayer (capacity 8 - 12 lts):7000		Pusa Zero energy cool chamber (100 kg)4500		Mango harvesting device 300		Total in Rs
				No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	Aindhi	510.30	654	7	14000	7	14000	2	10000	6	36000	2	50000	5	6500	1	7000	2	9000	10	3000	149500
2	Atarhar	292.80	626	7	14000	7	14000	1	5000	6	36000	1	25000	7	9100	2	14000	2	9000	9	2700	128800
3	Bakuliha	20.10	246	2	4000	2	4000	1	5000	2	12000	1	25000	3	3900	1	7000	1	4500	4	1200	66600
4	Baraundi	164.00	270	3	6000	3	6000	1	5000	3	18000	1	25000	3	3900	1	7000	1	4500	4	1200	76600
5	Bhitari	262.10	554	6	12000	6	12000	1	5000	5	30000	1	25000	6	7800	2	14000	2	9000	8	2400	117200
6	Bijemau Khapura	283.00	966	11	22000	11	22000	2	10000	9	54000	2	50000	10	13000	3	21000	3	13500	14	4200	209700
7	Dandepur	167.30	370	4	8000	4	8000	2	10000	3	18000	1	25000	4	5200	1	7000	1	4500	6	1800	87500
8	Dhurayee	487.50	867	10	20000	10	20000	1	5000	8	48000	1	25000	9	11700	3	21000	2	9000	13	3900	163600
9	Dumarher	268.90	540	6	12000	6	12000	1	5000	5	30000	1	25000	6	7800	2	14000	2	9000	8	2400	117200
10	Hardi	187.50	462	5	10000	5	10000	2	10000	4	24000	2	50000	5	6500	2	14000	1	4500	7	2100	131100
11	Haripur Mirdahapa	241.40	507	6	12000	6	12000	2	10000	5	30000	2	50000	5	6500	2	14000	1	4500	8	2400	141400
12	Jeri	316.10	392	4	8000	4	8000	1	5000	4	24000	1	25000	4	5200	1	7000	1	4500	6	1800	88500
13	Jogapur Barigaon	9.10	741	8	16000	8	16000	1	5000	7	42000	1	25000	8	10400	3	21000	2	9000	11	3300	147700
14	Kalupur	15.50	338	4	8000	4	8000	1	5000	3	18000	1	25000	4	5200	1	7000	1	4500	5	1500	82200
15	Kanha Mau	225.50	176	2	4000	2	4000	1	5000	2	12000	1	25000	2	2600	1	7000	0	0	3	900	60500
16	Khanpur Khunti	150.20	315	3	6000	3	6000	1	5000	3	18000	1	25000	3	3900	1	7000	1	4500	5	1500	76900
17	Khanpur Kushti	86.70	136	1	2000	1	2000	1	5000	1	6000	1	25000	1	1300	0	0	0	0	2	600	41900
18	Khargapur	218.00	501	5	10000	5	10000	2	10000	5	30000	1	25000	5	6500	2	14000	1	4500	7	2100	112100
19	Khiron	308.20	1722	20	40000	20	40000	2	10000	16	96000	1	25000	18	23400	6	42000	5	22500	26	7800	306700
20	Kursandi	164.30	381	4	8000	4	8000	2	10000	4	24000	1	25000	4	5200	1	7000	1	4500	6	1800	93500
21	Kutubpur	188.60	243	2	4000	2	4000	1	5000	2	12000	1	25000	3	3900	1	7000	1	4500	4	1200	66600
22	Lodipuri	229.60	357	4	8000	4	8000	3	15000	3	18000	2	50000	4	5200	1	7000	1	4500	5	1500	117200
23	Mirjapur	252.60	414	4	8000	4	8000	3	15000	4	24000	2	50000	4	5200	1	7000	1	4500	6	1800	123500
24	Pahuri	10.00	807	9	18000	9	18000	1	5000	8	48000	1	25000	9	11700	3	21000	2	9000	12	3600	159300
25	Ramwapur Dubai	35.40	425	5	10000	5	10000	1	5000	4	24000	1	25000	5	6500	2	14000	1	4500	6	1800	100800
26	Ranapur urf Pahrauli	282.80	396	4	8000	4	8000	1	5000	4	24000	1	25000	4	5200	1	7000	1	4500	6	1800	88500

Sl. No.	Name of Grampanchayat	Treatable area (ha)	No. of farm family	Cona weeder for paddy@2000		Dry weeder for wheat, maize etc. @2000		Multi-crop seed drills, one per panchayat @5000		Ridge and Furrow maker (Rs. 6000)		Tractor driven three ferrow Potato digger and planter @25,000/-		Manual Knapsack/foot operated sprayer.1300		Power ed Knapsack sprayer/Power OperatedTaiwan sprayer (capacity 8 - 12 lts):7000		Pusa Zero energy cool chamber (100 kg)4500		Mango harvesting device 300		Total in Rs
				No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount	No.	Amount	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
27	Sabji Babura	6.30	425	5	10000	5	10000	1	5000	4	24000	1	25000	5	6500	2	14000	1	4500	6	1800	100800
28	Semri	4.90	294	3	6000	3	6000	1	5000	3	18000	1	25000	3	3900	1	7000	1	4500	4	1200	76600
29	Shivpuri	252.60	368	4	8000	4	8000	2	10000	3	18000	2	50000	4	5200	1	7000	1	4500	5	1500	112200
30	Sidhaur Semari	108.70	194	2	4000	2	4000	1	5000	2	12000	1	25000	2	2600	1	7000	1	4500	3	900	65000
Total		**5750**	**1468 7**	**160**	**320000**	**160**	**320000**	**43**	**215000**	**138**	**828000**	**37**	**92500 0**	**155**	**201500**	**50**	**350000**	**41**	**184500**	**219**	**65700**	**34,09,700**

6.9.5 Proposed cropping intensity

Sl. No.	Name of Gram Panchayat	Total area (ha)	Agriculture area (ha)	Kharif, ha	Rabi, ha	Zaid, ha	Total sown area, ha	Proposed Total sown area,ha	Total Net sown area (ha)	Proposed crop equivalent area, ha (Net sown)	Existing cropping intensity	Proposed cropping inensity
1	2	3	4	5	6	7	8	9	10	11	12	13
1	Aindhi	629.42	608.58	182.57	365.15	60.86	608.58	699.86	535.55	615.88	158	181.7
2	Atarhar	361.19	348.75	104.63	209.25	34.88	348.76	408.04	306.91	359.08	158	184.86
3	Bakuliha	24.8	24.8	7.44	14.88	2.48	24.8	28.02	21.824	24.66	158	178.54
4	Baraundi	202.3	194.24	58.27	116.54	19.42	194.23	221.42	170.922	194.85	158	180.12
5	Bhitari	323.26	310.91	93.27	186.55	31.09	310.91	363.76	273.6	320.11	158	184.86
6	Bijemau Khapura	349.06	338.58	101.57	203.15	33.86	338.58	392.75	297.95	345.62	158	183.28
7	Dandepur	206.4	200.77	60.23	120.46	20.07	200.76	236.89	176.668	208.46	158	186.44
8	Dhurayee	601.35	578.82	173.65	347.29	57.88	578.82	671.43	509.362	590.85	158	183.28
9	Dumarher	331.68	321.87	1.09	2.17	0.36	3.62	4.16	3.186	3.66	158	181.7
10	Hardi	231.29	226.28	67.88	135.77	22.63	226.28	262.48	199.126	230.98	158	183.28
11	Haripur Mirdahapa	297.81	287.02	86.1	172.21	28.7	287.01	332.93	252.568	292.97	158	183.28
12	Jeri	389.92	377.25	113.18	226.35	37.73	377.26	426.3	331.99	375.14	158	178.54
13	Jogapur Barigaon	11.17	11.17	3.35	6.7	1.12	11.17	12.95	9.83	11.4	158	183.28
14	Kalupur	19.08	19.08	5.72	11.45	1.91	19.08	22.13	16.79	19.47	158	183.28
15	Kanha Mau	278.16	267.91	80.37	160.75	26.79	267.91	310.77	235.76	273.48	158	183.28
16	Khanpur Khunti	185.28	181.65	54.5	108.99	18.17	181.66	210.72	159.862	185.43	158	183.28
17	Khanpur Kushti	106.96	103.78	31.13	62.27	10.38	103.78	120.38	91.326	105.93	158	183.28
18	Khargapur	268.94	258.89	77.67	155.33	25.89	258.89	295.13	227.824	259.71	158	180.12
19	Khiron	380.2	369.37	110.81	221.62	36.94	369.37	432.16	325.046	380.3	158	184.86
20	Kursandi	202.68	196.69	59.01	118.01	19.67	196.69	228.16	173.088	200.78	158	183.28
21	Kutubpur	232.67	226.36	67.91	135.82	22.64	226.37	262.58	199.206	231.07	158	183.28
22	Lodipuri	283.18	275.56	82.67	165.34	27.56	275.57	314.14	242.502	276.45	158	180.12
23	Mirjapur	311.55	304.11	91.23	182.47	30.41	304.11	352.76	267.616	310.43	158	183.28
24	Pahuri	12.31	12.31	3.69	7.39	1.23	12.31	13.91	10.832	12.24	158	178.54
25	Ramwapur Dubai	43.71	43.71	13.11	26.23	4.37	43.71	50.7	38.464	44.61	158	183.28
26	Ranapur urf Pahrauli	348.79	340.06	102.02	204.04	34.01	340.07	394.48	299.262	347.14	158	183.28
27	Sabji Babura	7.79	7.79	2.34	4.67	0.78	7.79	9.03	6.856	7.95	158	183.28
28	Semri	5.92	5.92	1.78	3.55	0.59	5.92	6.86	5.21	6.04	158	183.28
29	Shivpuri	311.59	302.18	90.65	181.31	30.22	302.18	344.48	265.918	303.14	158	180.12
30	Sidhaur Semari	134.13	129.59	38.88	77.75	12.96	129.59	150.32	114.04	132.28	158	183.28
Total/average		**7092.6**	**6874.0**	**1966.7**	**3933.5**	**655.6**	**6555.8**	**7579.7**	**5769.1**	**6670.1**	**158**	**182.54**

6.9.6 Grampanchayat wise proposed EPA activities

Sl. No.	Name of Grampanchayat	No of Total families	BPL families	No. of villages	Vegetable seed packet for backyard garden		Protective cultivation - Mentha, Gladiolus etc. Kit		Abandoned well rain water harvesting		EPA Fodder on field bund of BPL families		Total amout (Rs.)
					No.s	Amount	No.s	Amount	No.s	Amount	No.s	Amount	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Aindhi	654	65	2	262	3930	65	13000	2	44510	51	63750	125190
2	Atarhar	626	63	1	251	3765	63	12600	1	22255	50	62500	101120
3	Bakuliha	246	25	1	99	1485	25	5000	1	22255	20	25000	53740
4	Baraundi	270	27	1	108	1620	27	5400	1	22255	21	26250	55525
5	Bhitari	554	55	1	222	3330	55	11000	1	22255	44	55000	91585
6	Bijemau Khapura	966	96	2	387	5805	97	19400	2	44510	73	91250	160965
7	Dandepur	370	37	2	148	2220	37	7400	2	44510	29	36250	90380
8	Dhurayee	867	87	1	347	5205	87	17400	1	22255	67	83750	128610
9	Dumarher	540	54	1	216	3240	54	10800	1	22255	43	53750	90045
10	Hardi	462	46	2	185	2775	46	9200	2	44510	36	45000	101485
11	Haripur Mirdahapa	507	51	2	203	3045	51	10200	2	44510	40	50000	107755
12	Jeri	392	39	1	157	2355	39	7800	1	22255	31	38750	71160
13	Jogapur Barigaon	741	74	1	297	4455	74	14800	1	22255	57	71250	112760
14	Kalupur	338	34	1	136	2040	34	6800	1	22255	27	33750	64845
15	Kanha Mau	176	18	1	71	1065	18	3600	1	22255	14	17500	44420
16	Khanpur Khunti	315	32	1	126	1890	32	6400	1	22255	25	31250	61795
17	Khanpur Kushti	136	14	1	55	825	14	2800	1	22255	11	13750	39630
18	Khargapur	501	50	2	201	3015	50	10000	2	44510	40	50000	107525
19	Khiron	1722	172	2	689	10335	172	34400	2	44510	125	156250	245495
20	Kursandi	381	38	2	153	2295	38	7600	2	44510	30	37500	91905
21	Kutubpur	243	24	1	98	1470	24	4800	1	22255	19	23750	52275
22	Lodipuri	357	36	3	143	2145	36	7200	2	44510	29	36250	90105
23	Mirjapur	414	41	3	166	2490	41	8200	3	66765	32	40000	117455
24	Pahuri	807	81	1	323	4845	81	16200	1	22255	63	78750	122050
25	Ramwapur Dubai	425	43	1	170	2550	43	8600	1	22255	33	41250	74655
26	Ranapur urf Pahrauli	396	40	1	159	2385	40	8000	1	22255	32	40000	72640
27	Sabji Babura	425	43	1	170	2550	43	8600	1	22255	34	42500	75905
28	Semri	294	29	1	118	1770	29	5800	1	22255	23	28750	58575
29	Shivpuri	368	37	2	148	2220	37	7400	2	44510	28	35000	89130
30	Sidhaur Semari	194	19	1	78	1170	19	3800	1	22255	15	18750	45975
Total		**14687**	**1470**	**43**	**5886**	**88290**	**1471**	**294200**	**42**	**934,710**	**1,142**	**1,427,500**	**27,44,700**

6.9.7 Work for animal production system

Work for animal production system (construction) in lakhs															
Sl. No.	Name of Grampanchayat	No. of villages	NADEP @4/village		Vermi pit@3/village		Fodder trough for cattle @3/village		Cow/Buffalo shelter@ 2/village		Goat shelter @1/village		Poultry shelter @ 1/village		Total amount (Rs)
			No.s	Amount	No.s	Amount	No.s	Amount	No.s	Amount	No.s	Amount	No.s	Amount	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	Aindhi	2	8	72000	6	60000	6	240000	4	180000	2	80000	2	80000	712000
2	Atarhar	1	4	36000	3	30000	3	120000	2	90000	1	40000	1	40000	356000
3	Bakuliha	1	4	36000	3	30000	3	120000	2	90000	1	40000	1	40000	356000
4	Baraundi	1	4	36000	3	30000	3	120000	2	90000	1	40000	1	40000	356000
5	Bhitari	1	4	36000	3	30000	3	120000	2	90000	1	40000	1	40000	356000
6	Bijemau Khapura	2	8	72000	6	60000	6	240000	4	180000	2	80000	2	80000	712000
7	Dandepur	2	8	72000	6	60000	6	240000	4	180000	2	80000	2	80000	712000
8	Dhurayee	1	4	36000	3	30000	3	120000	2	90000	1	40000	1	40000	356000
9	Dumarher	1	4	36000	3	30000	3	120000	2	90000	1	40000	1	40000	356000
10	Hardi	2	8	72000	6	60000	6	240000	4	180000	2	80000	2	80000	712000
11	Haripur Mirdahapa	2	8	72000	6	60000	6	240000	4	180000	2	80000	2	80000	712000
12	Jeri	1	4	36000	3	30000	3	120000	2	90000	1	40000	1	40000	356000
13	Jogapur Barigaon	1	4	36000	3	30000	3	120000	2	90000	1	40000	1	40000	356000
14	Kalupur	1	4	36000	3	30000	3	120000	2	90000	1	40000	1	40000	356000
15	Kanha Mau	1	4	36000	3	30000	3	120000	2	90000	1	40000	1	40000	356000
16	Khanpur Khunti	1	4	36000	3	30000	3	120000	2	90000	1	40000	1	40000	356000
17	Khanpur Kushti	1	4	36000	3	30000	3	120000	2	90000	1	40000	1	40000	356000
18	Khargapur	2	8	72000	6	60000	6	240000	4	180000	2	80000	2	80000	712000
19	Khiron	2	8	72000	6	60000	6	240000	4	180000	2	80000	2	80000	712000
20	Kursandi	2	8	72000	6	60000	6	240000	4	180000	2	80000	2	80000	712000
21	Kutubpur	1	4	36000	3	30000	3	120000	2	90000	1	40000	1	40000	356000
22	Lodipuri	3	12	108000	9	90000	9	360000	6	270000	3	120000	3	120000	1068000
23	Mirjapur	3	12	108000	9	90000	9	360000	6	270000	3	120000	3	120000	1068000
24	Pahuri	1	4	36000	3	30000	3	120000	2	90000	1	40000	1	40000	356000
25	Ramwapur Dubai	1	4	36000	3	30000	3	120000	2	90000	1	40000	1	40000	356000
26	Ranapur urf Pahrauli	1	4	36000	3	30000	3	120000	2	90000	1	40000	1	40000	356000
27	Sabji Babura	1	4	36000	3	30000	3	120000	2	90000	1	40000	1	40000	356000
28	Semri	1	4	36000	3	30000	3	120000	2	90000	1	40000	1	40000	356000

Work for animal production system (construction) in lakhs															
Sl. No.	Name of Grampanchayat	No. of villages	NADEP @4/village		Vermi pit@3/village		Fodder trough for cattle @3/village		Cow/Buffalo shelter@ 2/village		Goat shelter @1/village		Poultry shelter @ 1/village		Total amount (Rs)
			No.s	Amount	No.s	Amount	No.s	Amount	No.s	Amount	No.s	Amount	No.s	Amount	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
29	Shivpuri	2	8	72000	6	60000	6	240000	4	180000	2	80000	2	80000	712000
30	Sidhaur Semari	1	4	36000	3	30000	3	120000	2	90000	1	40000	1	40000	356000
Total		**43**	**172**	**1548000**	**129**	**1290000**	**129**	**5160000**	**86**	**3870000**	**43**	**1720000**	**43**	**1720000**	**153,08,000**

6.10 Livelihood activities

6.10.1– Non-farm based livelihood activities

Sl. No.	Name of G.P.	Treatable area (ha)	Number of BPL families	Non-farm based activities									
				Dairy establishment 2 per block @500,000	Poultry - Hatchery one per block @300,000	Cold storage for fruits and vegetables 2 per block @500,000	Solar based pump system @200,000	Pumpset repairing (20000)	Electrician (20000)	Plumbering (18000)	Shuttering work (18000)	Hand pump mechanic (20000)	Total cost, Rs
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Aindhi	510.3	65				200,000					20000	220,000
2	Atarhar	292.8	63		300,000						18000		318,000
3	Bakuliha	20.1	25										0
4	Baraundi	164	27					20000					20,000
5	Bhitari	262.1	55										0
6	Bijemau Khapura	283	96				200,000						200,000
7	Dandepur	167.3	37						20000				20,000
8	Dhurayee	487.5	87				200000						200,000
9	Dumarher	268.9	54			500,000					18000		518,000
10	Hardi	187.5	46							18000			18,000
11	Haripur Mirdahapa	241.4	51					20000					20,000
12	Jeri	316.1	39			500,000							500,000
13	Jogapur Barigaon	9.1	74							18000			18,000
14	Kalupur	15.5	34										0
15	Kanha Mau	225.5	18										0
16	Khanpur Khunti	150.2	32										0
17	Khanpur Kushti	86.7	14					20000					20,000
18	Khargapur	218	50				200,000				18000		218,000

Sl. No.	Name of G.P.	Treatable area (ha)	Number of BPL families	Non-farm based activities									
				Dairy establishment 2 per block @500,000	Poultry - Hatchery one per block @300,000	Cold storage for fruits and vegetables 2 per block @500,000	Solar based pump system @200,000	Pumpset repairing (20000)	Electrician (20000)	Plumbering (18000)	Shuttering work (18000)	Hand pump mechanic (20000)	Total cost, Rs
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**
19	Khiron	308.2	172	500,000									500,000
20	Kursandi	164.3	38										0
21	Kutubpur	188.6	24									20000	20,000
22	Lodipuri	229.6	36						20000				20,000
23	Mirjapur	252.6	41		300,000								300,000
24	Pahuri	10	81										0
25	Ramwapur Dubai	35.4	43								18000		18,000
26	Ranapur urf Pahrauli	282.8	40							18000			18,000
27	Sabji Babura	6.3	43					20000					20,000
28	Semri	4.9	29										0
29	Shivpuri	252.6	37					20,000					20,000
30	Sidhaur Semari	108.7	19										0
	Total	**5750**	**1470**	**500000**	**600000**	**1000000**	**800000**	**100000**	**40000**	**54000**	**72000**	**40000**	**32,06,000**

6.10.2 Livelihood activities – On-farm based livelihood activities

Cost on livelyhood actvities																	
Sl. No.	**Name of G.P.**	**Treatable area (ha)**	**No. of BPL families**	**No. of Landless families**	**Low plastic tunnels Nursery @10000**		**Vegetable preservation unit @10000**		**Goat rearing (2 goat /unit) @6000**		**Poultry @20,000**		**Backyard poultry @3500**		**seed replacement (SRR) @4000**		**Total Rs**
					No.s	**Amount**	**No.s**	**Amount**	**No.s**	**Amount**	**No.s**	**Amount**	**No.s**	**Amount**	**No.s**	**Amount**	
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**
1	Aindhi	510.3	65	137	6	60000	3	30000	1	6000	0	0	1	3500	7	28000	127500
2	Atarhar	292.8	63	239	6	60000	2	20000	2	12000	1	20000	2	7000	7	28000	147000
3	Bakuliha	20.1	25	29	2	20000	0	0	1	6000	0	0	1	3500	3	12000	41500
4	Baraundi	164	27	12	3	30000	1	10000	1	6000	0	0	0	0	3	12000	58000
5	Bhitari	262.1	55	222	5	50000	1	10000	2	12000	1	20000	2	7000	6	24000	123000
6	Bijemau Khapura	283	96	140	9	90000	1	10000	1	6000	1	20000	1	3500	10	40000	169500
7	Dandepur	167.3	37	49	3	30000	1	10000	1	6000	0	0	0	0	4	16000	62000
8	Dhurayee	487.5	87	169	8	80000	3	30000	2	12000	1	20000	2	7000	9	36000	185000
9	Dumarher	268.9	54	6	5	50000	1	10000	0	0	0	0	1	3500	6	24000	87500
10	Hardi	187.5	46	135	4	40000	1	10000	1	6000	0	0	1	3500	5	20000	79500
11	Haripur Mirdahapa	241.4	51	22	5	50000	1	10000	1	6000	0	0	0	0	5	20000	86000
12	Jeri	316.1	39	9	4	40000	2	20000	0	0	1	20000	1	3500	4	16000	99500
13	Jogapur Barigaon	9.1	74	79	7	70000	0	0	4	24000	0	0	4	14000	8	32000	140000
14	Kalupur	15.5	34	161	3	30000	0	0	8	48000	0	0	8	28000	4	16000	122000
15	Kanha Mau	225.5	18	78	2	20000	1	10000	1	6000	0	0	1	3500	2	8000	47500
16	Khanpur Khunti	150.2	32	59	3	30000	1	10000	1	6000	0	0	1	3500	3	12000	61500
17	Khanpur Kushti	86.7	14	9	1	10000	0	0	1	6000	0	0	0	0	2	8000	24000
18	Khargapur	218	50	203	5	50000	1	10000	2	12000	1	20000	2	7000	5	20000	119000
19	Khiron	308.2	172	490	16	160000	2	20000	5	30000	2	40000	5	17500	18	72000	339500
20	Kursandi	164.3	38	64	4	40000	1	10000	1	6000	0	0	1	3500	4	16000	75500
21	Kutubpur	188.6	24	92	2	20000	1	10000	1	6000	0	0	1	3500	3	12000	51500
22	Lodipuri	229.6	36	73	3	30000	1	10000	1	6000	0	0	1	3500	4	16000	65500
23	Mirjapur	252.6	41	77	4	40000	1	10000	1	6000	0	0	1	3500	4	16000	75500
24	Pahuri	10	81	37	8	80000	0	0	2	12000	0	0	2	7000	9	36000	135000
25	Ramwapur Dubai	35.4	43	16	4	40000	0	0	1	6000	0	0	1	3500	5	20000	69500
26	Ranapur urf Pahrauli	282.8	40	175	4	40000	1	10000	2	12000	1	20000	2	7000	4	16000	105000
27	Sabji Babura	6.3	43	158	4	40000	0	0	8	48000	0	0	7	24500	5	20000	132500
28	Semri	4.9	29	10	3	30000	0	0	1	6000	0	0	1	3500	3	12000	51500
29	Shivpuri	252.6	37	5	3	30000	1	10000	0	0	1	20000	1	3500	4	16000	79500
30	Sidhaur Semari	108.7	19	8	2	20000	1	10000	1	6000	0	0	0	0	2	8000	44000
	Total	**5750**	**1470**	**2963**	**138**	**1380000**	**29**	**290000**	**54**	**324000**	**10**	**200000**	**51**	**178500**	**158**	**632000**	**30,04,500**

6.11 Soil and water conservation work under NRM

Sl. No.	Name of Grampanchayat	Treatable area	No. Fodder on field bund	Rmt Fodder on field bund @250m	PVC UGPL - Canal - Small/marginal farmers @100,000 (60% IWMP)	PVC UGPL - Canal - Big farmers (50% IWMP)	PVC UGPL - Tubewell - Small /marginal farmers @50,000 (75% IWMP)	PVC UGPL - Tubewell - Big farmers @50,000 (50% IWMP)	Convert Jheel/Taal into Fishery pond	CB length in m @100 m /ha	CB length *@0.81 m^2	Spillway from contour bund area	PB length in Meter @100 m	PB length @ 1.35 m^2	Renovation of FB in meter @200mtr per farmer (MGNREGA)	Spillway from farm field (IWMP)	Silvi Pasture (IWMP)	Afforestation (IWMP)	Renovation of FB 25% by farmers
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	Aindhi	510.3	129	32250	1	7	1	7	1	1100	891	1	600	810	20	7	2.30	5.21	5
2	Atarhar	292.8	97	24250	1	5	1	5	0	600	486	1	300	405	15	6	1.30	3.11	4
3	Bakuliha	20.1	54	13500	0	3	0	3	0	0	0	0	0	0	8	3	0.00	0.00	2
4	Baraundi	164	65	16250	0	3	0	3	0	300	243	0	200	270	10	4	0.90	2.02	3
5	Bhitari	262.1	83	20750	1	4	1	4	0	500	405	1	300	405	13	5	0.00	3.09	3
6	Bijemau Khapura	283	207	51750	2	11	2	11	0	600	486	1	300	405	32	12	0.00	2.62	8
7	Dandepur	167.3	80	20000	1	4	1	4	0	300	243	0	200	270	12	4	0.40	1.41	3
8	Dhurayee	487.5	175	43750	1	9	1	9	0	1000	810	1	500	675	27	10	0.60	5.63	7
9	Dumarher	268.9	134	33500	1	7	1	7	0	600	486	1	300	405	21	8	15.90	2.45	5
10	Hardi	187.5	82	20500	1	4	1	4	0	400	324	0	200	270	13	5	0.10	1.25	3
11	Haripur Mirdahapa	241.4	121	30250	1	6	1	6	0	500	405	1	300	405	19	7	9.50	2.70	5
12	Jeri	316.1	96	24000	1	5	1	5	0	700	567	1	300	405	15	6	1.40	3.17	4
13	Jogapur Barigaon	9.1	166	41500	1	8	1	8	0	0	0	0	0	0	25	9	0.00	0.00	6
14	Kalupur	15.5	44	11000	1	2	1	2	0	0	0	0	0	0	7	3	0.00	0.00	2
15	Kanha Mau	225.5	25	6250	0	1	0	1	0	500	405	0	200	270	4	1	0.00	2.56	1
16	Khanpur Khunti	150.2	64	16000	1	3	1	3	0	300	243	0	200	270	10	4	0.00	0.91	3
17	Khanpur Kushti	86.7	32	8000	0	2	0	2	0	200	162	0	100	135	5	2	8.40	0.80	1
18	Khargapur	218	75	18750	1	4	1	4	0	500	405	0	200	270	11	4	0.00	2.51	3

Sl. No.	Name of Grampanchayat	Treatable area	No. Fodder on field bund	Rmt Fodder on field bund @250m	PVC UGPL - Canal - Small/marginal farmers @100,000 (60% IWMP)	PVC UGPL - Canal - Big farmers (50% IWMP)	PVC UGPL - Tubewell - Small /marginal farmers @50,000 (75% IWMP)	PVC UGPL - Tubewell - Big farmers @50,000 (50% IWMP)	Convert Jheel/Taal into Fishery pond	CB length in m @100 m /ha	CB length *@0.81 m^2	Spillway from contour bund area	PB length in Meter @100 m	PB length @ 1.35 m^2	Renovation of FB in meter @200mtr per farmer (MGNREGA)	Spillway from farm field (IWMP)	Silvi Pasture (IWMP)	Afforestation (IWMP)	Renovation of FB 25% by farmers
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**
19	Khiron	308.2	308	77000	3	16	3	16	1	600	486	1	300	405	47	16	6.40	2.71	12
20	Kursandi	164.3	79	19750	1	4	1	4	0	300	243	0	200	270	12	4	0.30	1.50	3
21	Kutubpur	188.6	38	9500	0	2	0	2	1	400	324	1	200	270	6	2	0.00	1.58	2
22	Lodipuri	229.6	71	17750	1	4	1	4	0	500	405	1	200	270	11	4	1.80	1.91	3
23	Mirjapur	252.6	84	21000	1	4	1	4	0	500	405	1	300	405	13	5	5.60	1.86	3
24	Pahuri	10	193	48250	1	10	1	10	0	0	0	0	0	0	30	11	0.00	0.00	8
25	Ramwapur Dubai	35.4	102	25500	1	5	1	5	0	100	81	0	0	0	16	6	0.00	0.00	4
26	Ranapur urf Pahrauli	282.8	55	13750	1	3	1	3	1	600	486	1	300	405	9	3	0.00	2.18	2
27	Sabji Babura	6.3	67	16750	1	3	1	3	0	0	0	0	0	0	10	4	6.20	0.00	3
28	Semri	4.9	71	17750	0	4	0	4	0	0	0	0	0	0	11	4	0.00	0.00	3
29	Shivpuri	252.6	91	22750	1	5	1	5	0	500	405	1	300	405	14	5	0.00	2.35	4
30	Sidhaur Semari	108.7	47	11750	0	2	0	2	0	200	162	0	100	135	7	3	6.00	1.14	2
Total		**5750**	**2935**	**733750**	**26**	**150**	**26**	**150**	**4**	**11800**	**9558**	**14**	**6100**	**8235**	**453**	**167**	**67.10**	**54.67**	**117**

6.11 .1 Cost of Soil and water conservation works under NRM

Sl. No.	Name of Grampanchayat	Cost of Live vegetative barrier @Rs 3004 per 100mt	Cost BWCD @Rs. 17000 per 150 m	Cost of Fodder development @ Rs.5/ mtr	PVC UGPL - Canal - Small/marginal farmers @100,000 (60% IWMP)	PVC UGPL -Canal - Big farmers (50% IWMP)	PVC UGPL - Tube well - Small /marginal farmers @50,000 (75% IWMP)	PVC UGPL - Tube well - Big farmers @50,000 (50% IWMP)	Convert Jheel/Taal into Fishery pond	Cost CB @ 67 m^3	Spillway from contour bund area @1 per 10 ha	Cost PB @ 67/m^3	Renovation of FB in meter @200mtr per farmer (MGNREGA)	Spillway from farm field (IWMP)	Silvi Pasture (IWMP)	Afforestation (IWMP)	Grand total Rs	Cost from MGNREGA	IWMP	Renovation of FB (25% by farmers	PVC UGPL - farmers' share
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
1	Aindhi	21028	153000	161250	60000	350000	37500	175000	300000	537273	200000	54270	217080	875000	46000	104200	3291601	1294101	1997500	13570	577500
2	Atarhar	12016	85000	121250	60000	250000	37500	125000	0	293058	200000	27135	162810	750000	26000	62200	2211969	789469	1422500	10856	427500
3	Bakuliha	0	0	67500	0	150000	0	75000	0	0	0	0	86832	375000	0	0	754332	154332	600000	5428	225000
4	Baraundi	6008	51000	81250	0	150000	0	75000	0	146529	0	18090	108540	500000	18000	40400	1194817	469817	725000	8142	225000
5	Bhitari	12016	85000	103750	60000	200000	37500	100000	0	244215	200000	27135	141102	625000	0	61800	1897518	675018	1222500	8142	352500
6	Bijemau Khapura	12016	85000	258750	120000	550000	75000	275000	0	293058	200000	27135	347328	1500000	0	52400	3795687	1075687	2720000	21712	930000
7	Dandepur	6008	51000	100000	60000	200000	37500	100000	0	146529	0	18090	130248	500000	8000	28200	1385575	488075	897500	8142	352500
8	Dhurayee	21028	153000	218750	60000	450000	37500	225000	0	488430	200000	45225	293058	1250000	12000	112600	3566591	1344091	2222500	18998	727500
9	Dumarher	12016	85000	167500	60000	350000	37500	175000	0	293058	200000	27135	227934	1000000	318000	49000	3002143	1179643	1822500	13570	577500
10	Hardi	9012	51000	102500	60000	200000	37500	100000	0	195372	0	18090	141102	625000	2000	25000	1566576	544076	1022500	8142	352500
11	Haripur Mirdahapa	9012	68000	151250	60000	300000	37500	150000	0	244215	200000	27135	206226	875000	190000	54000	2572338	949838	1622500	13570	502500
12	Jeri	12016	102000	120000	60000	250000	37500	125000	0	341901	200000	27135	162810	750000	28000	63400	2279762	857262	1422500	10856	427500
13	Jogapur Barigaon	0	0	207500	60000	400000	37500	200000	0	0	0	0	271350	1125000	0	0	2301350	478850	1822500	16284	652500
14	Kalupur	0	0	55000	60000	100000	37500	50000	0	0	0	0	75978	375000	0	0	753478	130978	622500	5428	202500
15	Kanha Mau	9012	68000	31250	0	50000	0	25000	0	244215	0	18090	43416	125000	0	51200	665183	465183	200000	2714	75000
16	Khanpur Khunti	6008	51000	80000	60000	150000	37500	75000	0	146529	0	18090	108540	500000	0	18200	1250867	428367	822500	8142	277500
17	Khanpur Kushti	3004	34000	40000	0	100000	0	50000	0	97686	0	9045	54270	250000	168000	16000	822005	422005	400000	2714	150000
18	Khargapur	9012	68000	93750	60000	200000	37500	100000	0	244215	0	18090	119394	500000	0	50200	1500161	602661	897500	8142	352500

Sl. No.	Name of Grampanchayat	Cost of Live vegetative barrier @Rs 3004 per 100mt	Cost BWCD @Rs. 17000 per 150 m	Cost of Fodder development @ Rs.5/ mtr	PVC UGPL - Canal - Small/marginal farmers @100,000 (60% IWMP)	PVC UGPL -Canal - Big farmers (50% IWMP)	PVC UGPL - Tube well - Small /marginal farmers @50,000 (75% IWMP)	PVC UGPL - Tube well - Big farmers @50,000 (50% IWMP)	Convert Jheel/Taal into Fishery pond	Cost CB @ 67 m^3	Spillway from contour bund area @1 per 10 ha	Cost PB @ 67/m^3	Renovation of FB in meter @200mtr per farmer (MGNREGA)	Spillway from farm field (IWMP)	Silvi Pasture (IWMP)	Afforestation (IWMP)	Grand total Rs	Cost from MGNREGA	IWMP	Renovation of FB (25% by farmers	PVC UGPL - farmers' share
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
19	Khiron	12016	102000	385000	180000	800000	112500	400000	300000	293058	200000	27135	510138	2000000	128000	54200	5504047	1511547	3992500	32568	1357500
20	Kursandi	6008	51000	98750	60000	200000	37500	100000	0	146529	0	18090	130248	500000	6000	30000	1384125	486625	897500	8142	352500
21	Kutubpur	9012	51000	47500	0	100000	0	50000	300000	195372	200000	18090	65124	250000	0	31600	1317698	417698	900000	5428	150000
22	Lodipuri	9012	68000	88750	60000	200000	37500	100000	0	244215	200000	18090	119394	500000	36000	38200	1719161	621661	1097500	8142	352500
23	Mirjapur	9012	85000	105000	60000	200000	37500	100000	0	244215	200000	27135	141102	625000	112000	37200	1983164	760664	1222500	8142	352500
24	Pahuri	0	0	241250	60000	500000	37500	250000	0	0	0	0	325620	1375000	0	0	2789370	566870	2222500	21712	802500
25	Ramwapur Dubai	0	17000	127500	60000	250000	37500	125000	0	48843	0	0	173664	750000	0	0	1589507	367007	1222500	10856	427500
26	Ranapur urf Pahrauli	12016	85000	68750	60000	150000	37500	75000	300000	293058	200000	27135	97686	375000	0	43600	1824745	627245	1197500	5428	277500
27	Sabji Babura	0	0	83750	60000	150000	37500	75000	0	0	0	0	108540	500000	124000	0	1138790	316290	822500	8142	277500
28	Semri	0	0	88750	0	200000	0	100000	0	0	0	0	119394	500000	0	0	1008144	208144	800000	8142	300000
29	Shivpuri	9012	85000	113750	60000	250000	37500	125000	0	244215	200000	27135	151956	625000	0	47000	1975568	678068	1297500	10856	427500
30	Sidhaur Semari	3004	34000	58750	0	100000	0	50000	0	97686	0	9045	75978	375000	120000	22800	946263	421263	525000	5428	150000
Total		**228304**	**1768000**	**3,668,750**	**1560000**	**7500000**	**975000**	**3750000**	**1200000**	**5763474**	**2,800,000**	**551745**	**4916862**	**20875000**	**1342000**	**1093400**	**5799253 5**	**19332535**	**3866000**	**317538**	**126,15,000**

6.12 Gram Panchayat wise cost of project under IWMP

Sl. No.	Name of Grampanchayat	Total, ha	Treatable area, ha	Administrative (10%)	EPA (4%)	TRG (5%)	DPR (1%)	Work (56%) NRM	Livelihood (9%)		Production system (10%)		ME (2%)	Consolidation (3%)	Total cost in Rs.
									Off-farm	On-farm	Farm machinary	Crop imrovement			
1	2	3	4	5	6	7	8	9	11	12	13	14	15	16	17
1	Aindhi	629.42	510.30	612360	125190	155000	61236	1997500	220000	127500	149500	306800	122472	183708	4061266
2	Atarhar	361.19	292.80	351360	101120	96000	35136	1422500	318000	147000	128800	181600	70272	105408	2957196
3	Bakuliha	24.8	20.10	24120	53740	81000	2412	600000	0	41500	66600	11900	4824	7236	893332
4	Baraundi	202.3	164.00	196800	55525	81000	19680	725000	20000	58000	76600	100250	39360	59040	1431255
5	Bhitari	323.26	262.10	314520	91585	93000	31452	1222500	0	123000	117200	160050	62904	94356	2310567
6	Bijemau Khapura	349.06	283.00	339600	160965	167000	33960	2720000	200000	169500	209700	172350	67920	101880	4342875
7	Dandepur	206.4	167.30	200760	90380	143000	20076	897500	20000	62000	87500	100650	40152	60228	1722246
8	Dhurayee	601.35	487.50	585000	128610	108000	58500	2222500	200000	185000	163600	301300	117000	175500	4245010
9	Dumarher	331.68	268.90	322680	90045	93000	32268	1822500	518000	87500	117200	163600	64536	96804	3408133
10	Hardi	231.29	187.50	225000	101485	146000	22500	1022500	18000	79500	131100	119350	45000	67500	1977935
11	Haripur Mirdahapa	297.81	241.40	289680	107755	149000	28968	1622500	20000	86000	141400	144150	57936	86904	2734293
12	Jeri	389.92	316.10	379320	71160	87000	37932	1422500	500000	99500	88500	193500	75864	113796	3069072
13	Jogapur Barigaon	11.17	9.10	10920	112760	102000	1092	1822500	18000	140000	147700	750	2184	3276	2361182
14	Kalupur	19.08	15.50	18600	64845	84000	1860	622500	0	122000	82200	7800	3720	5580	1013105
15	Kanha Mau	278.16	225.50	270600	44420	78000	27060	200000	0	47500	60500	134750	54120	81180	998130
16	Khanpur Khunti	185.28	150.20	180240	61795	84000	18024	822500	0	61500	76900	86850	36048	54072	1481929
17	Khanpur Kushti	106.96	86.70	104040	39630	75000	10404	400000	20000	24000	41900	50250	20808	31212	817244
18	Khargapur	268.94	218.00	261600	107525	149000	26160	897500	218000	119000	112100	133700	52320	78480	2155385
19	Khiron	380.2	308.20	369840	245495	203000	36984	3992500	500000	339500	306700	187000	73968	110952	6365939
20	Kursandi	202.68	164.30	197160	91905	143000	19716	897500	0	75500	93500	100250	39432	59148	1717111
21	Kutubpur	232.67	188.60	226320	52275	81000	22632	900000	20000	51500	66600	119450	45264	67896	1652937
22	Lodipuri	283.18	229.60	275520	90105	189500	27552	1097500	20000	65500	117200	137000	55104	82656	2157637
23	Mirjapur	311.55	252.60	303120	117455	192500	30312	1222500	300000	75500	123500	151700	60624	90936	2668147
24	Pahuri	12.31	10.00	12000	122050	105000	1200	2222500	0	135000	159300	1150	2400	3600	2764200
25	Ramwapur Dubai	43.71	35.40	42480	74655	87000	4248	1222500	18000	69500	100800	23700	8496	12744	1664123
26	Ranapur urf Pahrauli	348.79	282.80	339360	72640	87000	33936	1197500	18000	105000	88500	172350	67872	101808	2283966
27	Sabji Babura	7.79	6.30	7560	75905	87000	756	822500	20000	132500	100800	250	1512	2268	1251051
28	Semri	5.92	4.90	5880	58575	81000	588	800000	0	51500	76600	150	1176	1764	1077233
29	Shivpuri	311.59	252.60	303120	89130	143000	30312	1297500	20000	79500	112200	151700	60624	90936	2378022
30	Sidhaur Semari	134.13	108.70	130440	45975	78000	13044	525000	0	44000	65000	69450	26088	39132	1036129
Total	**Total**	**7092.59**	**5750.0**	**6900000**	**2744700**	**3448000**	**690000**	**38660000**	**3206000**	**3004500**	**3409700**	**3483750**	**1380000**	**2070000**	**68996650**

Chapter: 7 Benefit and cost

7.1 Net benefit

7.1.1 Present and proposed benefits from cropping system

Sl. No.	Name of Gram Panchayat	Present value, Rs			Proposed value, Rs			Total Value of produce, Rs		Production cost, Rs		Presernt profit, Rs	Proposed profit, Rs	Net profit, Rs
		Kharif	Rabi	Zaid	Kharif	Rabi	Zaid	Present	Proposed	Present	Proposed			
1	2	3	4	5	6	7	8	9	10	11	12	14	15	16
1	Aindhi	998658	1837435	235346	1716943	3402011	435743	3071439	5554697	2478746	3663043	592693	1891654	1298961
2	Atarhar	572326	1052946	134881	1018494	2017929	258494	1760153	3294917	1420499	2099186	339654	1195731	856077
3	Bakuliha	40697	74876	9590	67556	133853	17144	125163	218553	101010	149271	24153	69282	45129
4	Baraundi	318737	586429	75097	538500	1066972	136634	980263	1742106	791099	1169070	189164	573036	383872
5	Bhitari	510187	938720	120225	907913	1799019	230406	1569132	2937338	1266336	1871367	302796	1065971	763175
6	Bijemau Khapura	555588	1022251	130937	971879	1925757	246664	1708776	3144300	1379036	2037913	329740	1106387	776647
7	Dandepur	329458	606155	77611	596359	1181614	151292	1013224	1929265	817695	1208374	195529	720891	525362
8	Dhurayee	949866	1747563	223822	1661582	3292129	421645	2921251	5375356	2357534	3483918	563717	1891438	1327721
9	Dumarher	5962	10919	1392	10250	20217	2577	18273	33044	14744	21789	3529	11255	7726
10	Hardi	371304	683195	87510	649515	1287030	164855	1142009	2101400	921638	1361979	220371	739421	519050
11	Haripur Mirdahapa	470967	866561	110983	823853	1632462	209074	1448511	2665389	1168992	1727513	279519	937876	658357
12	Jeri	619095	1138993	145902	1027679	2036132	260823	1903990	3324634	1536580	2270728	367410	1053906	686496
13	Jogapur Barigaon	18325	33714	4331	32056	63512	8159	56370	103727	45495	67232	10875	36495	25620
14	Kalupur	31288	57616	7386	54731	108539	13914	96290	177184	77713	114843	18577	62341	43764
15	Kanha Mau	439624	808894	103597	769025	1523827	195160	1352115	2488012	1091197	1612550	260918	875462	614544
16	Khanpur Khunti	298115	548438	70263	521487	1033169	132364	916816	1687020	739901	1093412	176915	593608	416693
17	Khanpur Kushti	170281	313343	40139	297869	590288	75615	523763	963772	422696	624652	101067	339120	238053
18	Khargapur	424855	781621	100117	717784	1422113	182157	1306593	2322054	1054459	1558259	252134	763795	511661
19	Khiron	606131	1115192	142847	1078653	2137221	273761	1864170	3489635	1504444	2223238	359726	1266397	906671
20	Kursandi	322785	593826	76064	564641	1118673	143292	992675	1826606	801118	1183877	191557	642729	451172
21	Kutubpur	371468	683446	87549	649802	1287503	164928	1142463	2102233	922005	1362521	220458	739712	519254
22	Lodipuri	452205	831991	106575	763991	1513758	193907	1390771	2471656	1122397	1658656	268374	813000	544626
23	Mirjapur	499028	918189	117595	872940	1729721	221530	1534812	2824191	1238640	1830438	296172	993753	697581
24	Pahuri	20184	37186	4756	33505	66476	8502	62126	108483	50139	74094	11987	34389	22402
25	Ramwapur Dubai	71712	131989	16899	125444	248646	31835	220600	405925	178031	263090	42569	142835	100266
26	Ranapur urf Pahrauli	558049	1026729	131517	976184	1934193	247757	1716295	3158134	1385105	2046881	331190	1111253	780063
27	Sabji Babura	12800	23499	3016	22391	44268	5682	39315	72341	31729	46888	7586	25453	17867
28	Semri	9737	17864	2282	17033	33653	4299	29883	54985	24112	35632	5771	19353	13582
29	Shivpuri	495856	912352	116861	837739	1659970	212622	1525069	2710331	1230779	1818821	294290	891510	597220
30	Sidhaur Semari	212674	391238	50116	372026	737030	94411	654028	1203467	527820	780002	126208	423465	297257
Total		**10757962**	**19793170**	**2535206**	**18697824**	**37047685**	**4745246**	**33086338**	**60490755**	**26701689**	**39459237**	**6384649**	**21031518**	**14646869**

7.1.2 Prersent and proposed production and value of horticulture system

7.1.2 Prersent and proposed production and value of horticulture system (Cost for proposed intervetion of horticulture system)																							
S. N.	Name of Grampanchayat	Mango rejuvenation						Guava high density						Bel/Citrus/Ber						Horti-system innovation cost in Rs	profit		
		Proposed cost @ Rs 30000/ha	Present production @ 6t/ha	Additional proposed production@ 10 t/ha	Total proposed production in, t	Present value @ Rs 15000/t	Proposed value in Rs	Proposed cost @ Rs 63000/ha	Present production@ 9t/ha	Additional proposed production @ 30t/ha	Total proposed production in, t	Present value @ Rs 10000/t	Proposed value in Rs	proposed cost @20000/ha	present production @8t/ha	additional production future @ 15 t/ha	Total production infuture T	present value @20000/T	Proposed value in Rs		Present value in Rs	Proposed value in Rs	Propfit in Rs
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	Aindhi	150600	150.6	50.2	200.8	2259000	3012000	102060	97.29	48.6	145.89	972900	1458900	5400	21.6	4.05	25.65	432000	513000	**258060**	3663900	4983900	1320000
2	Atarhar	62400	62.28	20.8	83.08	934200	1246200	42210	40.32	20.1	60.42	403200	604200	2200	8.96	1.65	10.61	179200	212200	**106810**	1516600	2062600	546000
3	Bakuliha	3600	0	1.2	1.2	0	18000	3780	0	1.8	1.8	0	18000	1200	0	0.9	0.9	0	18000	**8580**	0	54000	54000
4	Baraundi	29100	0	9.7	9.7	0	145500	30870	0	14.7	14.7	0	147000	9800	0	7.35	7.35	0	147000	**69770**	0	439500	439500
5	Bhitari	46500	0	15.5	15.5	0	232500	49140	0	23.4	23.4	0	234000	15600	0	11.7	11.7	0	234000	**111240**	0	700500	700500
6	Bijemau Khapura	50700	0	16.9	16.9	0	253500	53550	0	25.5	25.5	0	255000	17000	0	12.75	12.75	0	255000	**121250**	0	763500	763500
7	Dandepur	30000	0	10	10	0	150000	31500	0	15	15	0	150000	10000	0	7.5	7.5	0	150000	**71500**	0	450000	450000
8	Dhurayee	93300	93.3	31.1	124.4	1399500	1866000	63630	60.3	30.3	90.6	603000	906000	3400	13.36	2.55	15.91	267200	318200	**160330**	2269700	3090200	820500
9	Dumarher	48300	0	16.1	16.1	0	241500	50400	0	24	24	0	240000	16000	0	12	12	0	240000	**114700**	0	721500	721500
10	Hardi	38400	38.52	12.8	51.32	577800	769800	26460	24.93	12.6	37.53	249300	375300	1400	5.52	1.05	6.57	110400	131400	**66260**	937500	1276500	339000
11	Haripur Mirdahapa	43200	0	14.4	14.4	0	216000	45360	0	21.6	21.6	0	216000	14400	0	10.8	10.8	0	216000	**102960**	0	648000	648000
12	Jeri	244500	244.38	81.5	325.88	3665700	4888200	165690	157.95	78.9	236.85	1579500	2368500	8800	35.12	6.6	41.72	702400	834400	**418990**	5947600	8091100	2143500
13	Jogapur Barigaon	1800	0	0.6	0.6	0	9000	1890	0	0.9	0.9	0	9000	600	0	0.45	0.45	0	9000	**4290**	0	27000	27000
14	Kalupur	3000	0	1	1	0	15000	3150	0	1.5	1.5	0	15000	1000	0	0.75	0.75	0	15000	**7150**	0	45000	45000
15	Kanha Mau	40200	0	13.4	13.4	0	201000	42210	0	20.1	20.1	0	201000	13400	0	10.05	10.05	0	201000	**95810**	0	603000	603000
16	Khanpur Khunti	27300	0	9.1	9.1	0	136500	28350	0	13.5	13.5	0	135000	9000	0	6.75	6.75	0	135000	**64650**	0	406500	406500
17	Khanpur Kushti	0	0.06	0	0.06	900	900	0	0.09	0	0.09	900	900	5200	0	3.9	3.9	0	78000	**5200**	1800	79800	78000
18	Khargapur	38700	0	12.9	12.9	0	193500	40950	0	19.5	19.5	0	195000	13000	0	9.75	9.75	0	195000	**92650**	0	583500	583500

19	Khiron	46500	46.5	15.5	62	697500	930000	31500	30.06	15	45.06	300600	450600	1600	6.64	1.2	7.84	132800	156800	**79600**	1130900	1537400	406500
20	Kursandi	14400	14.28	4.8	19.08	214200	286200	9450	9.27	4.5	13.77	92700	137700	600	2.08	0.45	2.53	41600	50600	**24450**	348500	474500	126000
21	Kutubpur	26400	26.52	8.8	35.32	397800	529800	18270	17.1	8.7	25.8	171000	258000	1000	3.84	0.75	4.59	76800	91800	**45670**	645600	879600	234000
22	Lodipuri	5700	5.64	1.9	7.54	84600	113100	3780	3.69	1.8	5.49	36900	54900	200	0.8	0.15	0.95	16000	19000	**9680**	137500	187000	49500
23	Mirjapur	30300	30.3	10.1	40.4	454500	606000	20790	19.62	9.9	29.52	196200	295200	1200	4.4	0.9	5.3	88000	106000	**52290**	738700	1007200	268500
24	Pahuri	1800	0	0.6	0.6	0	9000	1890	0	0.9	0.9	0	9000	600	0	0.45	0.45	0	9000	**4290**	0	27000	27000
25	Ramwapur Dubai	6600	0	2.2	2.2	0	33000	6930	0	3.3	3.3	0	33000	2200	0	1.65	1.65	0	33000	**15730**	0	99000	99000
26	Ranapur urf Pahrauli	51000	0	17	17	0	255000	53550	0	25.5	25.5	0	255000	17000	0	12.75	12.75	0	255000	**121550**	0	765000	765000
27	Sabji Babura	27600	27.6	9.2	36.8	414000	552000	18900	17.82	9	26.82	178200	268200	1000	4	0.75	4.75	80000	95000	**47500**	672200	915200	243000
28	Semri	900	0	0.3	0.3	0	4500	630	0	0.3	0.3	0	3000	200	0	0.15	0.15	0	3000	**1730**	0	10500	10500
29	Shivpuri	45300	0	15.1	15.1	0	226500	47880	0	22.8	22.8	0	228000	15200	0	11.4	11.4	0	228000	**108380**	0	682500	682500
30	Sidhaur Semari	36000	36.06	12	48.06	540900	720900	24570	23.31	11.7	35.01	233100	350100	1400	5.2	1.05	6.25	104000	125000	**61970**	878000	1196000	318000
Total		**1,244,100**	**776.04**	**414.7**	**1190.74**	**11,640,600**	**17,861,100**	**1,019,340**	**501.75**	**485.4**	**987.15**	**5017500**	**9871500**	**189,600**	**111.52**	**142.2**	**253.72**	**2230400**	**5074400**	**2,453,040**	**18888500**	**32807000**	**13,918,500**

7.1.3 Area, production and value of horticulture system

Sl. No.	Name of Gram Panchayat	Area under horti culture, ha	Mango			Guava			Bel/Ber/ Citrus			Total value, Rs
			Area, ha	proposed production@ 10 t/ha	Value @ Rs 15000 /t	Area, ha	Additional proposed production @ 30t/ha	Value @ Rs 10000/t	Area, ha	Additional proposed production @ 15t/ha	Value @ Rs 20000/t	
1	2	3	4	5	6	7	8	9	10	11	12	13
1	Aindhi	6.91	5.02	50.2	753000	1.62	48.6	486000	0.27	4.05	81000	1320000
2	Atarhar	2.86	2.08	20.8	312000	0.67	20.1	201000	0.11	1.65	33000	546000
3	Bakuliha	0.24	0.12	1.2	18000	0.06	1.8	18000	0.06	0.9	18000	54000
4	Baraundi	1.95	0.97	9.7	145500	0.49	14.7	147000	0.49	7.35	147000	439500
5	Bhitari	3.11	1.55	15.5	232500	0.78	23.4	234000	0.78	11.7	234000	700500
6	Bijemau Khapura	3.39	1.69	16.9	253500	0.85	25.5	255000	0.85	12.75	255000	763500
7	Dandepur	2	1	10	150000	0.5	15	150000	0.5	7.5	150000	450000
8	Dhurayee	4.29	3.11	31.1	466500	1.01	30.3	303000	0.17	2.55	51000	820500
9	Dumarher	3.21	1.61	16.1	241500	0.8	24	240000	0.8	12	240000	721500
10	Hardi	1.77	1.28	12.8	192000	0.42	12.6	126000	0.07	1.05	21000	339000
11	Haripur Mirdahapa	2.88	1.44	14.4	216000	0.72	21.6	216000	0.72	10.8	216000	648000
12	Jeri	11.22	8.15	81.5	1222500	2.63	78.9	789000	0.44	6.6	132000	2143500
13	Jogapur Barigaon	0.12	0.06	0.6	9000	0.03	0.9	9000	0.03	0.45	9000	27000
14	Kalupur	0.2	0.1	1	15000	0.05	1.5	15000	0.05	0.75	15000	45000
15	Kanha Mau	2.68	1.34	13.4	201000	0.67	20.1	201000	0.67	10.05	201000	603000
16	Khanpur Khunti	1.81	0.91	9.1	136500	0.45	13.5	135000	0.45	6.75	135000	406500
17	Khanpur Kushti	0.26	0	0	0	0	0	0	0.26	3.9	78000	78000
18	Khargapur	2.59	1.29	12.9	193500	0.65	19.5	195000	0.65	9.75	195000	583500
19	Khiron	2.13	1.55	15.5	232500	0.5	15	150000	0.08	1.2	24000	406500
20	Kursandi	0.66	0.48	4.8	72000	0.15	4.5	45000	0.03	0.45	9000	126000
21	Kutubpur	1.22	0.88	8.8	132000	0.29	8.7	87000	0.05	0.75	15000	234000
22	Lodipuri	0.26	0.19	1.9	28500	0.06	1.8	18000	0.01	0.15	3000	49500
23	Mirjapur	1.4	1.01	10.1	151500	0.33	9.9	99000	0.06	0.9	18000	268500
24	Pahuri	0.12	0.06	0.6	9000	0.03	0.9	9000	0.03	0.45	9000	27000
25	Ramwapur Dubai	0.44	0.22	2.2	33000	0.11	3.3	33000	0.11	1.65	33000	99000
26	Ranapur urf Pahrauli	3.4	1.7	17	255000	0.85	25.5	255000	0.85	12.75	255000	765000
27	Sabji Babura	1.27	0.92	9.2	138000	0.3	9	90000	0.05	0.75	15000	243000
28	Semri	0.05	0.03	0.3	4500	0.01	0.3	3000	0.01	0.15	3000	10500
29	Shivpuri	3.03	1.51	15.1	226500	0.76	22.8	228000	0.76	11.4	228000	682500
30	Sidhaur Semari	1.66	1.2	12	180000	0.39	11.7	117000	0.07	1.05	21000	318000
Total		**67.13**	**41.47**	**414.7**	**6220500**	**16.18**	**485.4**	**4854000**	**9.48**	**142.2**	**2844000**	**13,918,500**

7.1.4 Production and Profit from major animal / livestock

S.N	Name of G.P.	Cow	Buffalo	Goat	Poultry	Production value in Rs				Present		Proposed		Profit in Rs		Net Benefits, Rs
						Cows	Buffalo	Goat	Poultry	Total prduction value of product	Total prduction cost, Rs	Total production value of product	Total prduction cost, Rs	Present production value, Rs	Proposed prodution value, Rs	
1	2	3	4	6	7	8	9	10	11	12	13	14	15	16	17	18
1	Aindhi	48	55	15	78	480000	660000	13500	23400	1176900	823830	1412280	988596	353070	423684	70614
2	Atarhar	50	60	12	54	500000	720000	10800	16200	1247000	872900	1496400	1047480	374100	448920	74820
3	Bakuliha	42	90	20	62	420000	1080000	18000	18600	1536600	1075620	1843920	1290744	460980	553176	92196
4	Baraundi	39	97	10	50	390000	1164000	9000	15000	1578000	1104600	1893600	1325520	473400	568080	94680
5	Bhitari	42	104	12	209	420000	1248000	10800	62700	1741500	1219050	2089800	1462860	522450	626940	104490
6	Bijemau Khapura	125	311	45	0	1250000	3732000	40500	0	5022500	3515750	6027000	4218900	1506750	1808100	301350
7	Dandepur	41	103	16	0	410000	1236000	14400	0	1660400	1162280	1992480	1394736	498120	597744	99624
8	Dhurayee	73	183	32	367	730000	2196000	28800	110100	3064900	2145430	3677880	2574516	919470	1103364	183894
9	Dumarher	39	98	21	0	390000	1176000	18900	0	1584900	1109430	1901880	1331316	475470	570564	95094
10	Hardi	39	98	11	15	390000	1176000	9900	4500	1580400	1106280	1896480	1327536	474120	568944	94824
11	Haripur Mirdahapa	65	162	8	155	650000	1944000	7200	46500	2647700	1853390	3177240	2224068	794310	953172	158862
12	Jeri	53	132	17	0	530000	1584000	15300	0	2129300	1490510	2555160	1788612	638790	766548	127758
13	Jogapur Barigaon	119	299	41	160	1190000	3588000	36900	48000	4862900	3404030	5835480	4084836	1458870	1750644	291774
14	Kalupur	160	401	54	112	1600000	4812000	48600	33600	6494200	4545940	7793040	5455128	1948260	2337912	389652
15	Kanha Mau	164	411	32	150	1640000	4932000	28800	45000	6645800	4652060	7974960	5582472	1993740	2392488	398748
16	Khanpur Khunti	108	271	28	0	1080000	3252000	25200	0	4357200	3050040	5228640	3660048	1307160	1568592	261432
17	Khanpur Kushti	52	131	14	0	520000	1572000	12600	0	2104600	1473220	2525520	1767864	631380	757656	126276
18	Khargapur	42	104	23	138	420000	1248000	20700	41400	1730100	1211070	2076120	1453284	519030	622836	103806
19	Khiron	67	168	10	55	670000	2016000	9000	16500	2711500	1898050	3253800	2277660	813450	976140	162690
20	Kursandi	224	560	58	78	2240000	6720000	52200	23400	9035600	6324920	10842720	7589904	2710680	3252816	542136
21	Kutubpur	14	34	8	0	140000	408000	7200	0	555200	388640	666240	466368	166560	199872	33312
22	Lodipuri	82	206	16	95	820000	2472000	14400	28500	3334900	2334430	4001880	2801316	1000470	1200564	200094
23	Mirjapur	32	80	12	0	320000	960000	10800	0	1290800	903560	1548960	1084272	387240	464688	77448
24	Pahuri	112	280	42	111	1120000	3360000	37800	33300	4551100	3185770	5461320	3822924	1365330	1638396	273066
25	Ramwapur Dubai	130	326	25	200	1300000	3912000	22500	60000	5294500	3706150	6353400	4447380	1588350	1906020	317670
26	Ranapur urf Pahrauli	44	110	18	112	440000	1320000	16200	33600	1809800	1266860	2171760	1520232	542940	651528	108588
27	Sabji Babura	38	80	20	92	380000	960000	18000	27600	1385600	969920	1662720	1163904	415680	498816	83136
28	Semri	52	95	22	78	520000	1140000	19800	23400	1703200	1192240	2043840	1430688	510960	613152	102192
29	Shivpuri	50	111	15	85	500000	1332000	13500	25500	1871000	1309700	2245200	1571640	561300	673560	112260
30	Sidhaur Semari	64	152	25	42	640000	1824000	22500	12600	2499100	1749370	2998920	2099244	749730	899676	149946
Total		**2210**	**5312**	**682**	**2498**	**22100000**	**63744000**	**613800**	**749400**	**87207200**	**61045040**	**104648640**	**73254048**	**26162160**	**31394592**	**5,232,432**

7.1.5 Net profit of the system through various interventions

Total Net profit of the system by intervention											
Sl. No.	Name of G.P.	Net Profit (Rs.)				yearly system profit					
		Cropping system	Horticulture	Animal Husbandry	Lively hood activities Net profit (Rs.)	I	II	III	IV	V	Total profit in Rs
1	2	3	4	5	6	7	8	9	10	11	12
1	Aindhi	1298961	1320000	70614	530500	1369575	2037033	2444439	2933327	4605326	13389699
2	Atarhar	856077	546000	74820	714600	930897	1738587	2086304	2503565	3349993	10609345
3	Bakuliha	45129	54000	92196	58100	137325	209158	250989	301187	391329	1289988
4	Baraundi	383872	439500	94680	113200	478552	639607	767529	921034	1471058	4277781
5	Bhitari	763175	700500	104490	172200	867665	1126632	1351958	1622349	2517531	7486135
6	Bijemau Khapura	776647	763500	301350	557300	1077997	1743097	2091716	2510059	3574766	10997635
7	Dandepur	525362	450000	99624	118800	624986	806285	967542	1161050	1750376	5310238
8	Dhurayee	1327721	820500	183894	579000	1511615	2241777	2690132	3228158	4436037	14107719
9	Dumarher	7726	721500	95094	951300	102820	1064402	1277282	1532739	2438168	6415411
10	Hardi	519050	339000	94824	140100	613874	815361	978434	1174120	1654015	5235804
11	Haripur Mirdahapa	658357	648000	158862	152400	817219	1051341	1261609	1513931	2343603	6987702
12	Jeri	686496	2143500	127758	939300	814254	1834979	2201975	2642370	5102955	12596534
13	Jogapur Barigaon	25620	27000	291774	224800	317394	573933	688720	826464	952640	3359151
14	Kalupur	43764	45000	389652	170800	433416	647558	777069	932483	1089381	3879907
15	Kanha Mau	614544	603000	398748	66500	1013292	1181121	1417345	1700815	2507912	7820485
16	Khanpur Khunti	416693	406500	261432	86100	678125	832038	998445	1198134	1748410	5455152
17	Khanpur Kushti	238053	78000	126276	65600	364329	466362	559634	671561	830148	2892035
18	Khargapur	511661	583500	103806	515400	615467	1192414	1430896	1717076	2506625	7462478
19	Khiron	906671	406500	162690	1275300	1069361	2451597	2941917	3530300	4360436	14353610
20	Kursandi	451172	126000	542136	105700	993308	1198339	1438007	1725608	2058681	7413942
21	Kutubpur	519254	234000	33312	104100	552566	711923	854307	1025169	1382189	4526153
22	Lodipuri	544626	49500	200094	123700	744720	942892	1131470	1357764	1570196	5747043
23	Mirjapur	697581	268500	77448	585700	775029	1438232	1725878	2071054	2588080	8598274
24	Pahuri	22402	27000	273066	189000	295468	514015	616818	740181	856003	3022485
25	Ramwapur Dubai	100266	99000	317670	126100	417936	585830	702996	843595	1043826	3594182
26	Ranapur urf Pahrauli	780063	765000	108588	175800	888651	1153316	1383979	1660775	2625068	7711790
27	Sabji Babura	17867	243000	83136	217500	101003	328603	394324	473189	772971	2070090
28	Semri	13582	10500	102192	72100	115774	199451	239342	287210	332175	1173952

Total Net profit of the system by intervention											
Sl. No.	Name of G.P.	Net Profit (Rs.)				yearly system profit					
		Cropping system	Horticulture	Animal Husbandry	Lively hood activities Net profit (Rs.)	I	II	III	IV	V	Total profit in Rs
1	2	3	4	5	6	7	8	9	10	11	12
29	Shivpuri	597220	682500	112260	143300	709480	923728	1108474	1330168	2172289	6244138
30	Sidhaur Semari	297257	318000	149946	61600	447203	553523	664228	797074	1210722	3672750
Total		**14,646,869**	**13,918,500**	**5,232,432**	**9,335,900**	**19,879,301**	**31,203,131**	**37,443,757**	**44,932,509**	**64,242,910**	**197,701,608**

7.2 Funds received under Watershed Developemnt Fund (WDF)

Funds received for people participation to WDF		
S.N.	**Name of work**	**Rs in lakhs**
A	NRM work category	
1	Contribution from NRM work on general category	5.52
2	Contribution from NRM work on SC/ST/Small / Marginal farmers category	0.69
3	SubTotal (A) (1+2)	6.21
B	Production system	
4	Contribution from general category	11.04
5	Contribution from SC/ST/Small/Marginal farmers category	1.38
6	Sub Total (B) (4+5)	12.42
Total (A+B)		**18.63**

7.3 Cost: Benefit Analysis (NPV, BC Ratio and IRR)

Year	Cost	Discounted value of cost	Benefits	Discounted value of Benefits	IRR
0	11,592,890	11,592,890			(11,592,890)
1	42,469,441	38,608,583	19,879,301	18,072,092	(20,536,491)
2	40,829,371	33,743,282	31,203,131	25,787,712	(7,955,570)
3	15,290,077	11,487,661	37,443,757	28,132,049	16,644,388
4	9,039,992	6,174,436	44,932,509	30,689,508	24,515,072
5		-	64,242,910	39,889,793	39,889,793
Total	119,221,771	101,606,852	197,701,608	142,571,153	23%

B:C Ratio	1.40
NPV	40,964,301
IRR	23%

Chapter 8: Convergence

8.1 Gram Panchayat wise proposed convergence cost

Gram panchayat wise proposed Total cost of project Rs											
Sl. No.	Name of G.P.	IWMP	NHM	MGNREGA				By Farmers			Total cost
		Total cost from IWMP	Cost of horti-system	Cost for animal production support	Cost of rodeside ree plantation	Cost of NRM works (MGNREGA part)	Total cost from MGNREGA	Contribution for hortisystem	Contribution towards PVC UGPL	Cost for rennovation of FB	
Source											
1	2	3	4	5	6	7	8	9	10	11	12
1	Asharna	4061266	129030	712000	450800	642497	1805297	129030	577500	13570	6,715,693
2	Bamreda	2957196	53405	356000	443800	431957	1231757	53405	427500	10856	4,734,119
3	Barwalia	893332	4290	356000	12000	154332	522332	4290	225000	5428	1,654,672
4	Basalatpur	1431255	34885	356000	281600	282561	920161	34885	225000	8142	2,654,328
5	Bhadaiyan	2310567	55620	356000	162000	360922	878922	55620	352500	8142	3,661,371
6	Bhairampur	4342875	60625	712000	284400	718175	1714575	60625	930000	21712	7,130,412
7	Chataura	1722246	35750	712000	220600	300819	1233419	35750	352500	8142	3,387,807
8	Chauri	4245010	80165	356000	511000	735903	1602903	80165	727500	18998	6,754,741
9	Debi Tilmaha	3408133	57350	356000	255400	822131	1433531	57350	577500	13570	5,547,434
10	Dhurahi	1977935	33130	712000	388000	310400	1410400	33130	352500	8142	3,815,237
11	Gaddaupur	2734293	51480	712000	229600	655746	1597346	51480	502500	13570	4,950,669
12	Ganadahi	3069072	209495	356000	395800	439334	1191134	209495	427500	10856	5,117,552
13	Gonvan	2361182	2145	356000	26600	478850	861450	2145	652500	16284	3,895,706
14	Gourawa Khurd	1013105	3575	356000	51600	130978	538578	3575	202500	5428	1,766,761
15	Haldhar Mau	998130	47905	356000	205200	171091	732291	47905	75000	2714	1,903,945
16	Kadipur	1481929	32325	356000	0	241111	597111	32325	277500	8142	2,429,332
17	Kalwari	817244	2600	356000	406200	298169	1060369	2600	150000	2714	

Gram panchayat wise proposed Total cost of project Rs											
Sl. No.	Name of G.P.	IWMP	NHM	MGNREGA				By Farmers			Total cost
		Total cost from IWMP	Cost of horti-system	Cost for animal production support	Cost of rodeside ree plantation	Cost of NRM works (MGNREGA part)	Total cost from MGNREGA	Contribution for hortisystem	Contribution towards PVC UGPL	Cost for rennovation of FB	
Source											
1	2	3	4	5	6	7	8	9	10	11	12
											2,035,527
18	Kamalpur	2155385	46325	712000	181200	308569	1201769	46325	352500	8142	3,810,446
19	Kapoorpur	6365939	39800	712000	704400	1137035	2553435	39800	1357500	32568	10,389,042
20	Kauraha Jagdishpur	1717111	12225	712000	260000	299369	1271369	12225	352500	8142	3,373,572
21	Khinduri	1652937	22835	356000	392800	184022	932822	22835	150000	5428	2,786,857
22	Koncha Kasimpur	2157637	4840	1068000	274600	327569	1670169	4840	352500	8142	4,198,128
23	Lalpur	2668147	26145	1068000	473800	449572	1991372	26145	352500	8142	5,072,451
24	Maijapur	2764200	2145	356000	0	566870	922870	2145	802500	21712	4,515,572
25	Mangurahii	1664123	7865	356000	60400	306591	722991	7865	427500	10856	2,841,200
26	Mankapur	2283966	60775	356000	282000	269733	907733	60775	277500	5428	3,596,177
27	Meenapur	1251051	23750	356000	7000	316290	679290	23750	277500	8142	2,263,483
28	Nahwa Parsaura	1077233	865	356000	3600	208144	567744	865	300000	8142	1,954,849
29	Nakha	2378022	54190	712000	286400	366976	1365376	54190	427500	10856	4,290,134
30	Nakha Basant	1036129	30985	356000	67600	297427	721027	30985	150000	5428	1,974,554
Total		**68,996,650**	**1,226,520**	**15,308,000**	**7,318,400**	**12,213,143**	**34,839,543**	**1,226,520**	**12,615,000**	**317,538**	**119,221,771**

Chapter 9: Phasing of the works

9.1 Physical phasing

Sl. No.	Works/Activity/Year	I	II	III	IV	V	Total
A	**EPA activities**						
1	Vegetable seed packat distribution for backyard garden	5886	0	0	0	0	5886
2	Protective cultivation - Menthos, Gladiolus etc.	736	735	0	0	0	1471
3	Abandon well rain water harvesting	0	42	0	0	0	42
4	Fodder on field bund BPL families	0	1142	0	0	0	
	Sub total	**6622**	**1919**	**0**	**0**	**0**	8541
B	**NRM Work**						0
1	Fodder on field bund IV @250m per farmer (No.s)	0	1174	1174	440	147	2935
2	PVC UGPL - Canal expansion - small and marginal farmers (60% IWMP)	0	10	10	4	2	26
3	PVC UGPL - Canal expansion - Big farmers (50% IWMP)	0	60	60	23	7	150
4	PVC UGPL - Tubewell - small and marginal farmers (75% IWMP)	0	10	10	4	2	26
5	PVC UGPL - Tubewell - Big farmers (50% IWMP)	0	60	60	23	7	150
6	Jheel/Taal to fishery pond	0	2	2	0	0	4
7	Contour bunding m^3	0	3823	3823	1434	478	9558
8	Spill-way from contour bund @1/10ha	0	6	6	2	0	14
9	Peripheral Bund m^3	0	3294	3294	1235	412	8235
10	Renovation of FB in meter @200mtr per farmer (m3) (MGNREGA)	0	181	181	68	23	453
11	Spill-way from farm fields	0	67	67	25	8	167
12	Silvi Pasture (ha)	0	27	27	10	3.1	67.1
13	Afforestation (ha)	0	22	22	8	2.67	54.67
14	Renovation of FB in meter @200mtr per farmer (m3) (25% by farmers)	0	47	47	18	5	117
15	PVC UGPL - Canal expansion - small and marginal farmers (40% farmers)	0	10	10	4	2	26
16	PVC UGPL - Canal expansion - Big farmers (50% farmers)	0	60	60	23	7	150
17	PVC UGPL - Tubewell - small and marginal farmers (25% farmers)	0	10	10	4	2	26
18	PVC UGPL - Tubewell - Big farmers (50% farmers)	0	60	60	23	7	150
	Sub total	**0.0**	**8923.0**	**8923.0**	**3348.0**	**1114.8**	**22308.8**
C	**Production System**						
a	**Production System for crop innovation**						
1	Wheat SWI	54	81	109	27.3	0	271.3
3	Seed Treatment Demonstrations	16	24	32	9	0	81
4	Oil seed+ potato intercrop	29	44	59	15	0	147
5	Early vegetable	11	16	21	4.8	0	52.8

Sl. No.	Works/Activity/Year	I	II	III	IV	V	Total
6	Paddy SRI	41	62	82	21	0	206
7	Arhar transplanted	19	28	38	9	0	94
8	Maiz + transplated Legume	18	27	36	9	0	90
9	Millets	12	18	24	5.1	0	59.1
10	Green manur (Dhaincha)	11	16	22	5	0	54
11	Zaid oilseed	8	12	17	4.3	0	41.3
12	Off season zaid vegetable	6	9	12	2.6	0	29.6
	Sub total	**225**	**337**	**452**	**112.1**	**0**	1126.1
b	**Production system for Farm machinary**						
1	Cona weeder	32	48	48	16	16	160
2	Dry weeder for wheat, maize etc.	32	48	48	16	16	160
3	Multi-crop seed drills, one per panchayat	9	13	13	4	4	43
4	Ridge and Furrow maker	28	41	41	14	14	138
5	Tractor driven three ferrow Potato digger and planter	7	11	11	4	4	37
6	Manual Knapsack/foot operated sprayer	31	47	47	16	14	155
7	Power ed Knapsack sprayer/Power Operated Taiwan sprayer (capacity 8 - 12 lts)	10	15	15	5	5	50
8	Pusa Zero energy cool chamber (100 kg)	8	12	12	4	5	41
9	Mango harvesting device	44	66	66	22	21	219
	Sub total	**201**	**301**	**301**	**101**	**99**	**1003**
c	**Work for Production Support**						
1	NADEP	34	52	52	17	17	172
2	Vermi pit	26	39	39	13	12	129
3	Fodder trough for cattle	26	39	39	13	12	129
4	Cow shelter	17	26	26	9	8	86
5	Goat shelter	9	13	13	4	4	43
6	Poultry shelter	9	13	13	4	4	43
	Sub total	**121**	**182**	**182**	**60**	**57**	**602**
D	**Livelihhood Activities**						
a	**Farm based activities**						
1	Low plastic tunnel nursery	28	41	41	14	14	138
2	Vegetable preservation unit	6	9	9	3	2	29
3	Goat rearing (2 goats/unit)	11	16	16	5	6	54
4	Poultry	2	3	3	1	1	10
5	Backyard poultry	10	15	15	5	6	51

Sl. No.	Works/Activity/Year	I	II	III	IV	V	Total
6	Seed replacement	32	47	47	16	16	158
	Sub total	**89**	**131**	**131**	**44**	**45**	**440**
b	**Non-farm based activities**						
1	Dairy establishment 2 per block	1	0	0	0	0	1
2	Poultry - Hatchery one per block	1	1	0	0	0	2
3	Cold storage for fruits and vegetables	1	1	0	0	0	2
4	Solar based mobile pump set	0	1	1	1	1	4
5	Pump set repairing	1	1	1	1	1	5
6	Electrician	0	0	1	1	0	2
7	Plumber	0	1	1	1	0	3
8	Shuttering work	0	1	1	1	1	4
9	Handpump mechanics	0	0	0	1	1	2
	Sub total	**4**	**6**	**5**	**6**	**4**	**25**
E	**Agr- horticultutre and Plantation**						
1	Mango rejuvenation ha	8	12	17	4.47	0	41.47
2	Guava high density ha	3	5	6	2.18	0	16.18
3	Bel/Ber/Citrus	2	3	4	0.48	0	9.48
4	Rodeside plantation (no.s)	7318	10978	14637	3659	0	36592
	Sub total						
F	**Training**						
1	SLNA and line department	4	6	8	2	0	20
2	Watershed cum data cell	5	8	10	2	0	25
3	PIA	4	6	8	2	0	20
4	WDT	9	13	17	4	0	43
5	User Group	17	26	34	9	0	86
6	Potato + Vegetable Growers	44	66	88	23	0	221
7	SHG	18	27	36	9	0	90
8	Watershed committee	6	9	12	3	0	30
9	Other volunteers	4	6	8	2	0	20
10	Watershed community and farmers	8	12	16	5	0	41
	Sub total	**119**	**179**	**237**	**61**	**0**	**596**
G	DPR	1	0	0	0	0	1
H	ME	1	1	1	1	1	5
I	Administrative	1	1	1	1	1	5

Sl. No.	Works/Activity/Year	I	II	III	IV	V	Total
J	Consolidation (3%)	-	-	-	-	1	1

9.2 Financial phasing

Financial phasing of the project							
Sl. No.	Works/Activity/Year	**I**	**II**	**III**	**IV**	**V**	**Total**
A	EPA activities						
1	Vegetable seed packat distribution for backyard garden	88290	0	0	0	0	**88,290**
2	Protective cultivation - Menthos, Gladiolus etc.	147200	147000	0	0	0	**294,200**
3	Abandon well rain water harvesting	0	934710	0	0	0	**934,710**
4	Fodder on field bund BPL families	0	1427500	0	0	0	**1,427,500**
	sub total	**235490**	**2509210**	**0**	**0**	**0**	**2,744,700**
B	NRM Work						**-**
1	Fodder on field bund IV @250m per farmer (No.s)	0	1467500	1467500	550000	183750	**3,668,750**
2	PVC UGPL - Canal expansion - small and marginal farmers (60% IWMP)	0	600000	600000	240000	120000	**1,560,000**
3	PVC UGPL - Canal expansion - Big farmers (50% IWMP)	0	3000000	3000000	1150000	350000	**7,500,000**
4	PVC UGPL - Tubewell - small and marginal farmers (75% IWMP)	0	375000	375000	150000	75000	**975,000**
5	PVC UGPL - Tubewell - Big farmers (50% IWMP)	0	1500000	1500000	575000	175000	**3,750,000**
6	Jheel/Taal to fishery pond	0	600000	600000	0	0	**1,200,000**
7	Contour bunding m^3	0	256141	256141	96078	32026	**640,386**
8	Spill-way from contour bund @1/10ha	0	1200000	1200000	400000	0	**2,800,000**
9	Peripheral Bund m^3	0	220698	220698	82745	27604	**551,745**
10	Renovation of FB in meter @200mtr per farmer (m3) (MGNREGA)	0	1964574	1964574	738072	249642	**4,916,862**
11	Spill-way from farm fields	0	8375000	8375000	3125000	1000000	**20,875,000**
12	Silvi Pasture (ha)	0	540000	540000	200000	62000	**1,342,000**
13	Afforestation (ha)	0	440000	440000	160000	53400	**1,093,400**
14	Renovation of FB in meter @200mtr per farmer (m3) (25% by farmers)	0	127558	127558	48852	13570	**317,538**
15	PVC UGPL - Canal expansion - small and marginal farmers (40% farmers)	0	400000	400000	160000	80000	**1,040,000**
16	PVC UGPL - Canal expansion - Big farmers (50% farmers)	0	3000000	3000000	1150000	350000	**7,500,000**
17	PVC UGPL - Tubewell - small and marginal farmers (25% farmers)	0	125000	125000	50000	25000	**325,000**
18	PVC UGPL - Tubewell - Big farmers (50% farmers)	0	1500000	1500000	575000	175000	**3,750,000**
	Sub total of above	**0**	**25691471**	**25691471**	**9450747**	**2971992**	**63805681**
C	**Production System**						
a	**Production System for crop innovation**						
1	Wheat SWI	216000	324000	436000	109200	0	**1,085,200**
3	Seed Treatment Demonstrations	102400	153600	204800	57600	0	**518,400**
4	Oil seed+ potato intercrop	116000	176000	236000	60000	0	**588,000**
5	Early vegetable	11000	16000	21000	4800	0	**52,800**

Financial phasing of the project							
Sl. No.	Works/Activity/Year	**I**	**II**	**III**	**IV**	**V**	**Total**
6	Paddy SRI	102500	155000	205000	52500	0	**515,000**
7	Arhar Transplanted	38000	56000	76000	18000	0	**188,000**
8	Maiz + transplated Legume	36000	54000	72000	18000	0	**180,000**
9	Millets	18000	27000	36000	7650	0	**88,650**
10	Green manur (Dhaincha)	22000	32000	44000	10000	0	**108,000**
11	Zaid oilseed	8000	12000	17000	4300	0	**41,300**
12	Off season zaid vegetable	24000	36000	48000	10400	0	**118,400**
	Sub total	**693900**	**1041600**	**1395800**	**352450**	**0**	**3,483,750**
b	**Production system for Farm machinary**						
1	Cona weeder	64000	96000	96000	32000	32000	**320,000**
2	Dry weeder for wheat, maize etc.	64000	96000	96000	32000	32000	**320,000**
3	Multi-crop seed drills, one per panchayat	45000	65000	65000	20000	20000	**215,000**
4	Ridge and Furrow maker	168000	246000	246000	84000	84000	**828,000**
5	Tractor driven three ferrow Potato digger and planter	175000	275000	275000	100000	100000	**925,000**
6	Manual Knapsack/foot operated sprayer	40300	61100	61100	20800	18200	**201,500**
7	Power ed Knapsack sprayer/Power Operated Taiwan sprayer (capacity 8 - 12 lts)	70000	105000	105000	35000	35000	**350,000**
8	Pusa Zero energy cool chamber (100 kg)	36000	54000	54000	18000	22500	**184,500**
9	Mango harvesting device	13200	19800	19800	6600	6300	**65,700**
	Sub total	**675500**	**1017900**	**1017900**	**348400**	**350000**	**3,409,700**
c	**Work for Production Support**						
1	NADEP	306000	468000	468000	153000	153000	**1,548,000**
2	Vermi pit	260000	390000	390000	130000	120000	**1,290,000**
3	Fodder trough for cattle	1040000	1560000	1560000	520000	480000	**5,160,000**
4	Cow shelter	765000	1170000	1170000	405000	360000	**3,870,000**
5	Goat shelter	360000	520000	520000	160000	160000	**1,720,000**
6	Poultry shelter	360000	520000	520000	160000	160000	**1,720,000**
6	**sub total**	**3091000**	**4628000**	**4628000**	**1528000**	**1433000**	**15,308,000**
D	**Livelihood Activities**						
a	**Farm based activities**						
1	Low plastic tunnel nursery	280000	410000	410000	140000	140000	**1,380,000**
2	Vegetable preservation unit	60000	90000	90000	30000	20000	**290,000**
3	Goat rearing (2 goats/unit)	66000	96000	96000	30000	36000	**324,000**
4	Poultry	40000	60000	60000	20000	20000	**200,000**

Financial phasing of the project							
Sl. No.	Works/Activity/Year	**I**	**II**	**III**	**IV**	**V**	**Total**
5	Backyard poultry	35000	52500	52500	17500	21000	**178,500**
6	Seed replacement	128000	188000	188000	64000	64000	**632,000**
	Sub total	**609000**	**896500**	**896500**	**301500**	**301000**	**3004500**
b	**Non-farm based activities**						
1	Dairy establishment 2 per block	500000	0	0	0	0	**500,000**
2	Poultry - Hatchery one per block	300000	300000	0	0	0	**600,000**
3	Cold storage for fruits and vegetables	500000	500000	0	0	0	**1,000,000**
4	Solar based mobile pump set	0	200000	200000	200000	200000	**800,000**
5	Pump set repairing	20000	20000	20000	20000	20000	**100,000**
6	Electrician	0	0	20000	20000	0	**40,000**
7	Plumber	0	18000	18000	18000	0	**54,000**
8	Shuttering work	0	18000	18000	18000	18000	**72,000**
9	Handpump mechanics	0	0	0	20000	20000	**40,000**
	sub total	**1320000**	**1056000**	**276000**	**296000**	**258000**	**3,206,000**
E	**Agro- horticultutre and Plantation**						
1	Mango rejuvenation	240000	360000	510000	134100	0	**1,244,100**
2	Guava high density	189000	315000	378000	137340	0	**1,019,340**
3	Bel/Ber/Citrus	40000	60000	80000	9600	0	**189,600**
4	Rode side plantation	1463600	2195600	2927400	731800	0	**7,318,400**
	Total of above	**1932600**	**2930600**	**3895400**	**1012840**	**0**	**9,771,440**
F	**Training**						
1	SLNA and line department	25800	38700	51600	12900	0	**129,000**
2	Watershed cum data cell	73100	116960	146200	29240	0	**365,500**
3	PIA	17200	25800	34400	8600	0	**86,000**
4	WDT	58500	84500	110500	26000	0	**279,500**
5	User Group	136000	208000	272000	72000	0	**688,000**
6	Potato + Vegetable Growers	132000	198000	264000	69000	0	
7	SHG	116100	174150	232200	58050	0	**580,500**
8	Watershed committee	78000	117000	156000	39000	0	**390,000**
9	Other volunteers	28700	43050	57400	14350	0	**143,500**
10	Watershed community and farmers	24000	36000	48000	15000	0	**123,000**
	sub total	**689400**	**1042160**	**1372300**	**344140**	**0**	**3,448,000**
G	DPR	690000	0	0	0	0	**690,000**

Financial phasing of the project							
Sl. No.	Works/Activity/Year	**I**	**II**	**III**	**IV**	**V**	**Total**
H	ME	276000	276000	276000	276000	276000	**1,380,000**
I	Administrative	1380000	1380000	1380000	1380000	1380000	**6,900,000**
J	Consolidation (3%)	0	0	0	0	2070000	**2,070,000**
	Grand Total of A+B+C+D+E+F+G+H+I+J	**11,592,890**	**42,469,441**	**40,829,371**	**15,290,077**	**9,039,992**	**119,221,771**

Chapter 10: Consolidation and post-project management

Watershed development projects can render sustainable production through the execution of rain water management programme with appropriate combination of environmental balance, community participation and institutionalization of process. The strategic planning for the post project management is elaborated as under:

10.1 Activity of consolidation and post project management phase

SL. No.	Activity
1	Preparation of project completion report
2	Preparation of GPS based inventory of developed infrastructure
3	Documentation of success stories
4	Preparation of feed back and suggestion note for watershed commitee
5	Documentation of procedure for management and utilization of infrastructure developed under the project
6	Documentation of procedure for mainetnance of infrastructure developed under the project
7	Documemtation of utilization of of watershed development fund (WDF)
8	Documentation of quality and sustainability issues

10.2 Adoption of eco-friendly conservation measures

The conservation measures taken up in the watershed should be long lasting with sustainability. Along with engineering measures, efforts would also be made to reinforce the vegetative cover around the earthen structures, on the slopes, on bunds, and on barren lands through protection of the process of natural regeneration and by planting appropriate vegetation with combination of grass/shrubs and trees.The stream banks would also be vegetated and stabilized to create a buffer zone between land and water body. Such vegetation and physical measures helps in stabilizing streams banks, augmenting ground water recharge and improving the riparian habitat.

The diversity of watershed development measures is the key to sustainability. Combination of drainage line management, agro-horticulture and forestry measures including plantation of shallow and deep-rooted plants, fast and slow growing plants, productive and medical plants and herbs will be encouraged. The watershed development measures will ultimately help recharge the rainwater to the ground water, improve soil moisture optimally and provide tangible and intangible benefits to the community and environment as a whole.

Land use pattern will go hand in hand with carrying capacity of the watershed. Optimum use of water and increased use of organic fertilizers is the key to conserve the precious land sources. Excessive fertilization and over irrigation leads to permanent damage of soil, land and groundwater. It is important to maintain soil quality through crop management. Crop diversity, intercropping, and crop rotation help in improving the micro flora and fauna present in the soil and maintaining the healthy symbiotic subsystem relationship. Extensive use of measures like Integrated Pest Management (IPM) and Interated Pest and Nutrient Managemnt (IPNM) would be practiced.

10.3 Participation of local community in development and management

During the planning phase the local peoples' participation will be ensured and it is planned that the involvement during implementation and post project maintenance will be maintained. However, participation without empowerment does not help in achieving sustainable development. Community will be made aware of different concepts and options for their livelihood and natural resource management. Local wisdom is important in understanding rural dynamics that includes the interface between human behaviour and its economic/ecological implications. The interest among the community will be created and maintained by adopting the measures in such a manner that they provide immediate, medium and long term benefits to the community.

10.4 Institutionalization for post project management

A dynamic institutional arrangement is necessary for project management, facilitation of benefit sharing and maintenance of the resources. This is usually achieved through formation of user groups for different resources/assets created as well as through other village level organizations. In-built system and mechanism will be developed for qualitative growth and dynamism of the organizations. The community organizations will be linked to other Government and Non Government institutes of interest. Therefore potential people's organizations would be formed in the project area viz watershed level organization and users groups.

10.4.1 Watershed level committee

Watershed level organization viz; water and watershed management committees will be established right from the beginning of the project. The overall planning, co ordination, management and maintenance are possible through this representative body. This clearly implies representation from different sections of the community – landholders and landless, men and women, thus bringing people from all section of the society, gram panchayat and other existing political or non political organizations.

10.4.2 User Groups (UGs) and Self Help Groups (SHGs)

Few other categories of institutions are formed of various groups with common areas of interest in the project area. These include, depending upon necessity, SHGs of women and men, UGs for common assets, etc. The capacities of different groups will be developed from time to time for effective functioning of the groups. A mechanism will be developed to ensure continuity, both in learning, functioning and actions that form responsibilities of such groups during the implementation project activities.