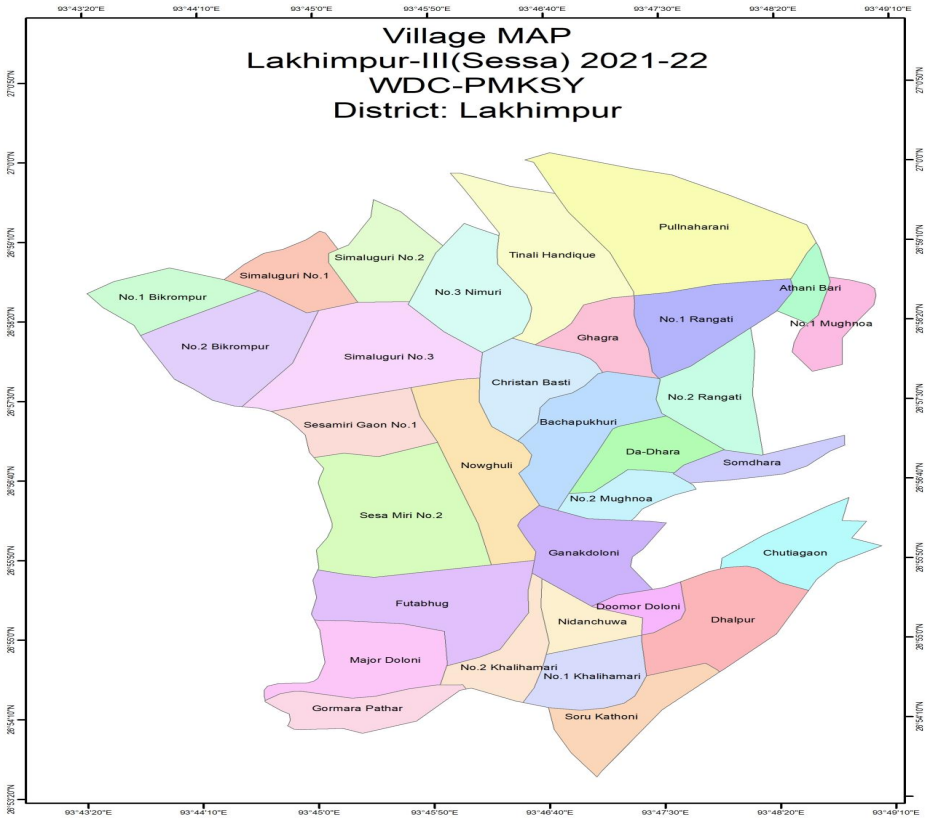
DETAILED PROJECT REPORT

LAKHIMPUR-I/2021-22 (SESSA)

WDC-PMKSY 2.0



Prepared by

Project Manager
WCDC, WDC-PMKSY 2.0, Lakhimpur
&
Divisional Officer
Lakhimpur Soil Conservation Division
North Lakhimpur

PREFACE

The detailed project report for Lakhimpur-I/2021-22 (Sessa) WDC-PMKSY 2.0 has been prepared with an objective to optimally harness the natural resources available in order to achieve sustainable development in the region.

Emphasis has been laid on environmental management practices (EMPs) an potential tools for successful watershed management keeping in view of the vulnerability of the natural elements subjected to major changes. Traditional natural resources management practices amalgamated with the understanding of soil science and hydro-meteorology have been applied in order to achieve the objectives of integrated watershed management programme.

The planning process has been participatory in nature. The active participation of the rural inhabitants within the project area and proper guidance of the PIA has been reflected in the DPRs.

The staff of our soil conservation department with their profound experience in executing development projects of similar nature has been the guiding force in the entire process of DPR preparation.

The Project Manager, WCDC, WDC-PMKSY 2.0, Lakhimpur acknowledges the effort to the WDT Leader cum i/c Range Officer Harmutty, WDT Leader Cum J.E. Staff of Lakhimpur Soil Conservation Division, Accountant, & DEO under WCDC, WDC-PMKSY 2.0, Lakhimpur for their support and hardwork. They have provided for successful completion of the Detailed Project Report.

Project Manager
WCDC, WDC-PMKSY 2.0, Lakhimpur
&
Divisional Officer
Lakhimpur Soil Conservation Division,
North Lakhimpur

DETAILED PROJECT REPORT
OF WDC-PMKSY 2.0

Lakhimpur-I/2021-22 (Sessa) WDC-PMKSY 2.0

Micro Watershed	Dhalpur MWS	Sessa Miri MWS	Rangati MWS	Nimuri MWS
Micro Watershed Code No	**3A3D5g1**	**3A3D5f2**	**3A3D5g2**	**3A3D5g5**
WDC-PMKSY 2.0 project	**Lakhimpur-I/2021-22 (Sessa) WDC-PMKSY 2.0**			
Block	**Narayanpur**			
District	**Lakhimpur**			
Name of the PIA	Divisional Officer, Lakhimpur Soil Conservation Division North Lakhimpur			

Contents

Annexure 1: Five Year Budget Details as approved by CEO SLNA – JSWM and Rural Development Secretary, Assam.

Annexure 2: Convergence of IWMP and MNREGA guideline of DoLR, GoI

Annexure 3: Action Plan as recommended by CEO SLNA-ASSAM.

CERTIFICATE

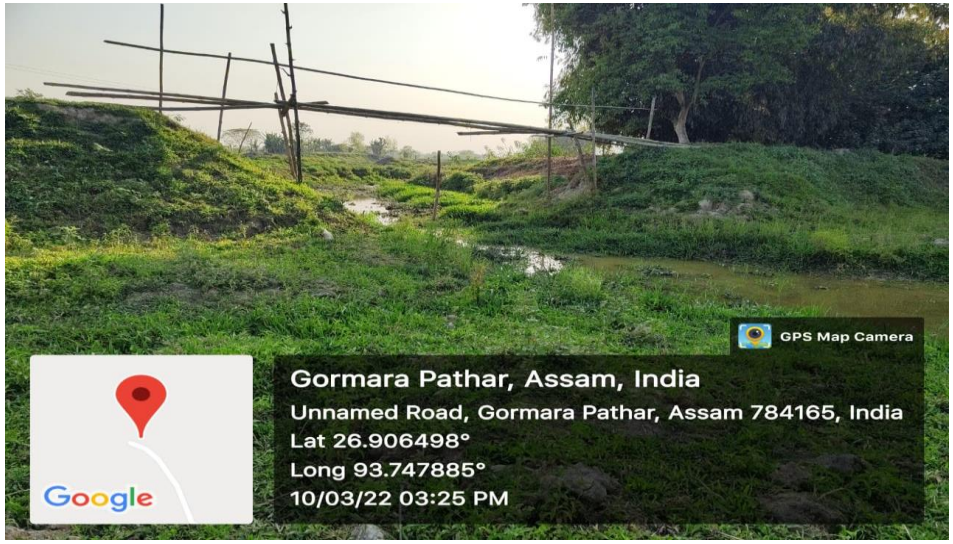
This is to certify that this Detailed Project Report (DPR) pertaining to Lakhimpur-I/2021-22 (Sessa) WDC-PMKSY, 2.0 (2021 – 2022) has been prepared with the vital substances, database and statistics required for implementing the project.

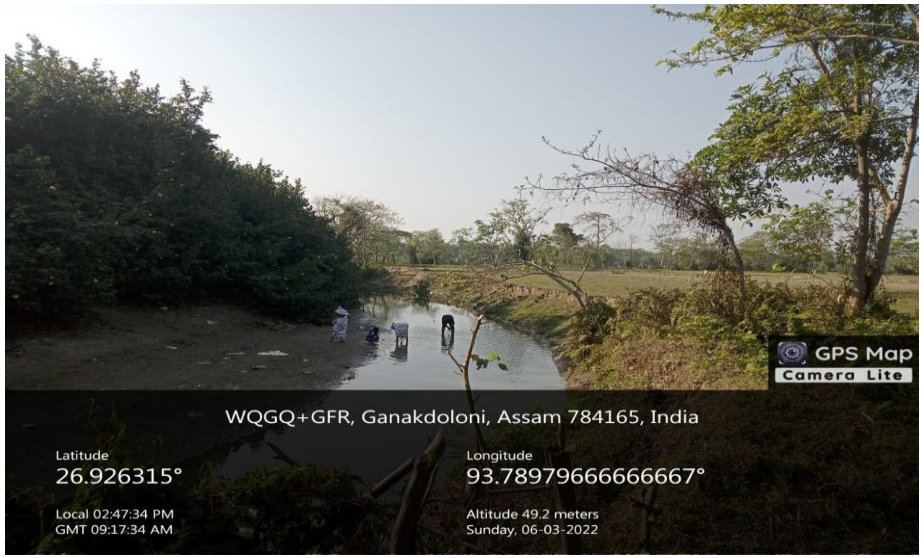
Signed by

Project Manager, WCDC, Lakhimpur

DPR Lakhimpur-I/2021-22 (Sessa) WDC-PMKSY 2.0, Lakhimpur, Assam

Overall view of the Project area




GPS Map
Camera Lite
WQGQ+GFR, Ganakdoloni, Assam 784165, India
Latitude
26.926315°
Longitude
93.78979666666667°
Local 02:47:34 PM
GMT 09:17:34 AM
Altitude 49.2 meters
Sunday, 06-03-2022


Latitude: 26.912753
Longitude: 93.760173
Elevation: 91.31±7 m
Accuracy: 114.3 m
Time: 07-03-2022 11:34
Note: boulder bund/ loose boulder:(khalihamari)
Powered by NoteCam


Unnamed Road, Simaluguri No.3, Assam 784165, India
Latitude 26.966143° Longitude 93.764072°
LOCAL 17:23:51 GMT 11:53:51 MONDAY 03.07.2022 ALTITUDE 66 METER

EXECUTIVE SUMMERY

Introduction-

The WDC-PMKSY 2.0 has been designed to address two main issues namely- sustainable rural economy and preservation of environmental assets through development and sustainable extraction of their benefits ,in a comprehensive and holistic manner. The endeavor ends at proactive people's participation through productive activities generating rural employment and agricultural productivity which ultimately leads to food security and all round improvement of rural livelihood. The other issue of extreme relevance is the emerging threats of depleting fresh water resources, depleting ground water resources and global climate change which are aimed to be addressed through implementation of the Integrated Watershed Management Projects.

Briefly about the Project area:-

The project area is located partly in Sessa, Narayanpur & Bihpuria Dev. Block, Lakhimpur District of Assam. The total geographical area of the watershed is about 5433 Ha, of which 3911 Ha has been proposed to be treated under Integrated Watershed Management Programme (WDC-PMKSY 2.0) starting from the year 2021-22. The watershed includes 32 Villages named No.1 Bikrompur(287422), No.2 Bikrompur(287425),Sesamiri Gaon No.1 (287484),Sesa Miri No.2(287485) Bachapukhuri (287482),Christan Basti (287481), Nowghuli (287483), Simaluguri No.3 (287426), Da-Dhara (287492), Tinali Handique (287429), Pullnaharani (287430), Athani Bari (287478) No.1 Rangati (287479), No.1 Mughnoa (287495), No.2 Mughnoa (287494), No.2 Rangati (287493) Ghagra (287480), Somdhara (287490), No.2 Khalihamari (287508), Dhalpur (287504), Soru Kathoni (287513), Futabhug (287486), Major Doloni (287510), Gormara Pathar (287511), No.1 Khalihamari (287509), Doomor Doloni (287507), Chutiagaon (287503), Ganakdoloni (287505), Nidanchuwa (287506) Simaluguri No.2 (287427), No.3 Nimuri (287428), Simaluguri No.1(287424). The livelihood of these people is primarily based on rainfed agriculture, animal husbandry, wage labour and pisciculture. The Sessa Project area faces frequent occurrence of flood and seasonal water logging that frequently inundate vicinity of the watershed area. This has resulted in low Productivity of Agriculture Land in comparison to other villages of nearby block. The Sessa watershed is end owed with high intensity rainfall, the average rainfall of the five preceding years being 2407.06 mm. It causes severe flood during rainy season because of heavy rainfall in the catchments, sudden change in gradient from steeper slope to the flat slope, deforestation, higher river bed, inadequate carrying capacity of stream and breach of embankments in the lower portion causing heavy soil erosion and siltation. Moreover the major streams of the watershed area namely Dhalpur , Sessa Miri, Rangati, Nimuri , etc. drains into the Sessa river that flows along the watershed. Besides, during rainy season the Sessa Nadi along with Sessa adds to the havoc of heavy flood in this particular watershed. The Channel capacity of the streams has been adversely affected by the vigorous silting cause by the sediment laden run off from the agricultural fields. The agricultural productivity of the area has been adversely affected by the flood and the seasonal waterlog. The

inhabitants who are mostly dependent on agriculture watershed development works subjected to the mitigation of flood, measures for productivity enhancements and generation of alternative livelihoods will alleviate the poverty that exists in the villages in the Watershed area.

Institutional arrangements:-

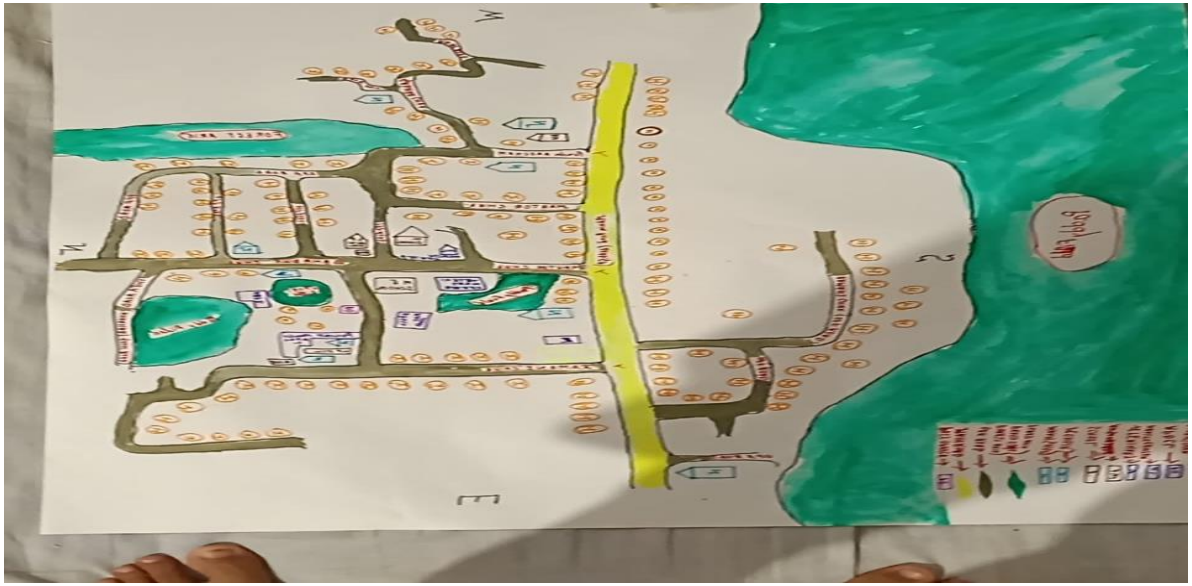
The Department of Soil Conservation, Government of Assam is the Nodal Department for implementing the Integrated Watershed Development Programmer in the State of Assam. State Level - At state level there is the State level Nodal Agency (SLNA) ,a society registered under the Societies Act 1860, constituted as per guidelines and directives prescribed by the Government of India, with the Additional Chief Secretary to the Government of Assam in the Soil Conservation Department as Chairman. The Governing Council is the Apex body. The Additional Secretary of the Department of Soil Conservation is the Chief Executive Officer (CEO) of the SLNA. The SLNA is helped by a multi disciplinary team of professional experts in the field of Administration, Finance, Technical such as Agricultural, Watershed arrangement, GIS, Information Technology, as well as Data entry operator and other office staff. District Level - At District Level the District Watershed Development Unit (DWDU)/ Watershed Cell cum Data Center (WCDC) is constituted with the Deputy Commissioner while the Divisional Soil Conservation Officer, Lakhimpur Soil Conservation Division, is the Project Manager of the WLDC and all the District heads of different Development Departments are members of the WCDC.

Project Level - At Project Level the Divisional Soil Conservation Officer, Lakhimpur Soil Conservation Division, Lakhimpur has been nominated as the Project Implementing Agency (PIA) to implement the Sessa WDC-PMKSY 2.0. The PIA is assisted by the Watershed Development Team (WDT) constituted as per guidelines prescribed by the Government of India.

Village Level/Micro watershed Level - At micro watershed level Watershed Committees are formed as per guidelines prescribed by the Government of India comprising members from the representatives of Users Groups, Self Help Groups, Panchayati Raj Institutions(PRI) of the project area, land less and women communities.

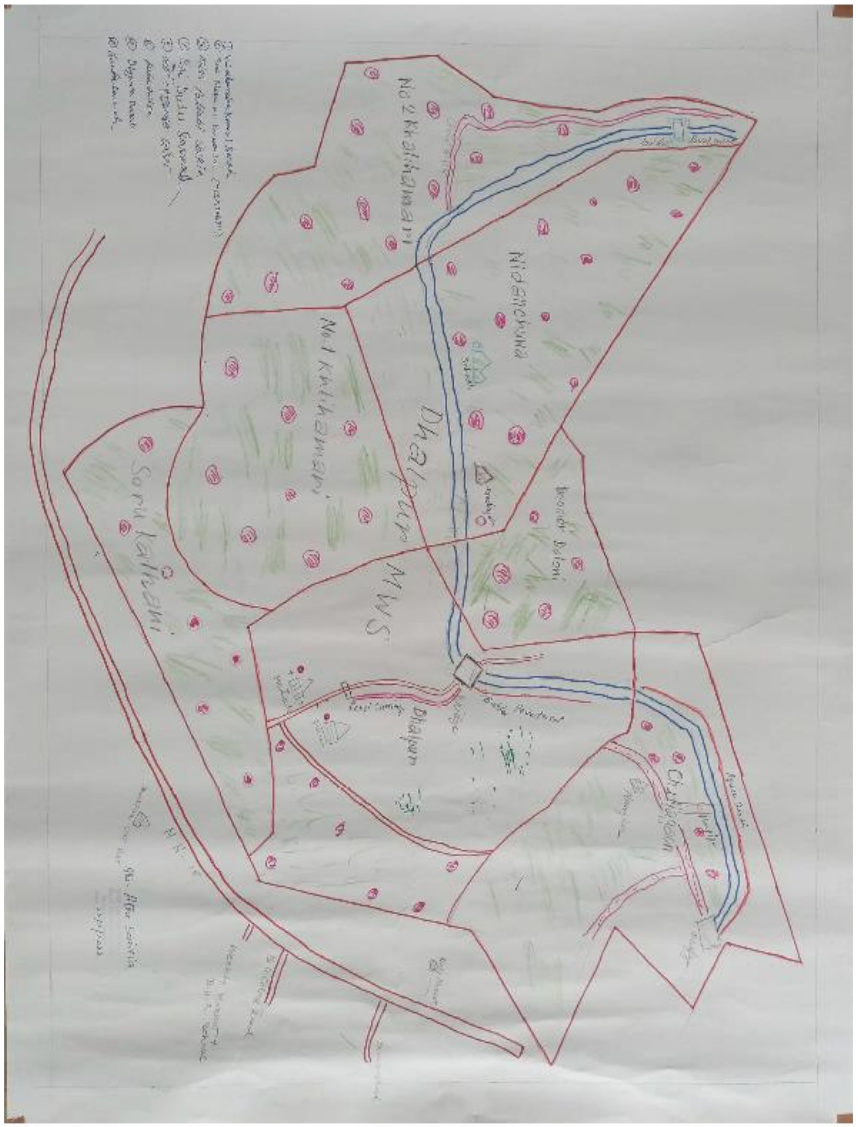
Photographs of PRA Exercises (Dhalpur MWS)

Photographs of PRA Exercises (Sessa Miri MWS)

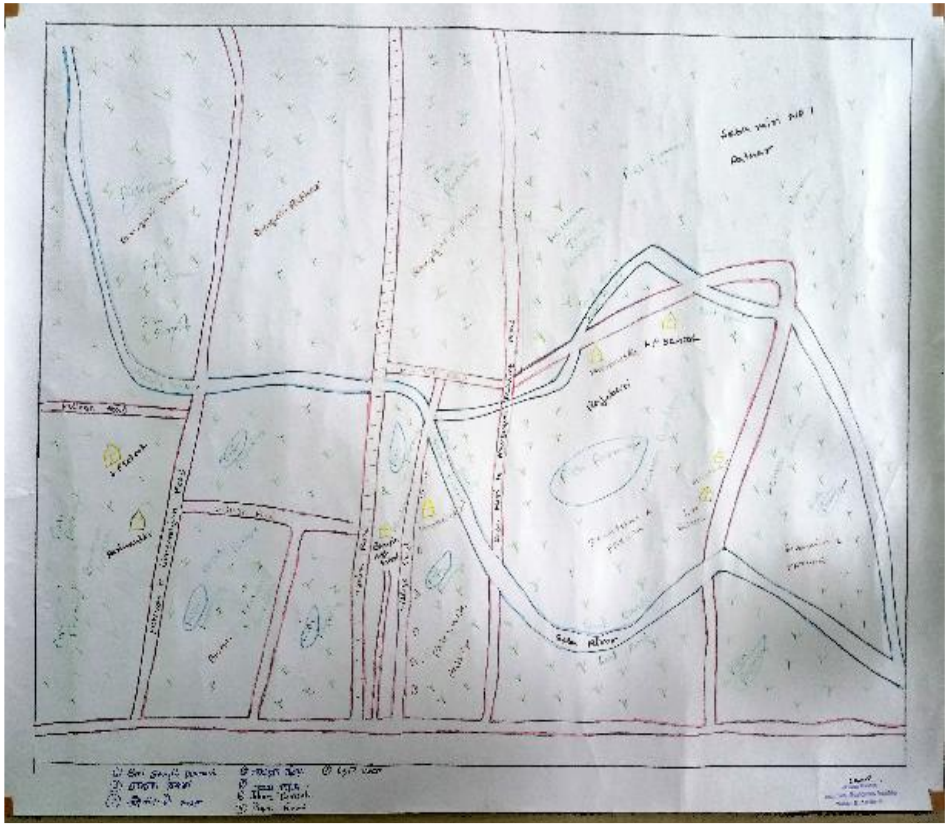


Photographs of PRA Exercises (Rangati MWS)

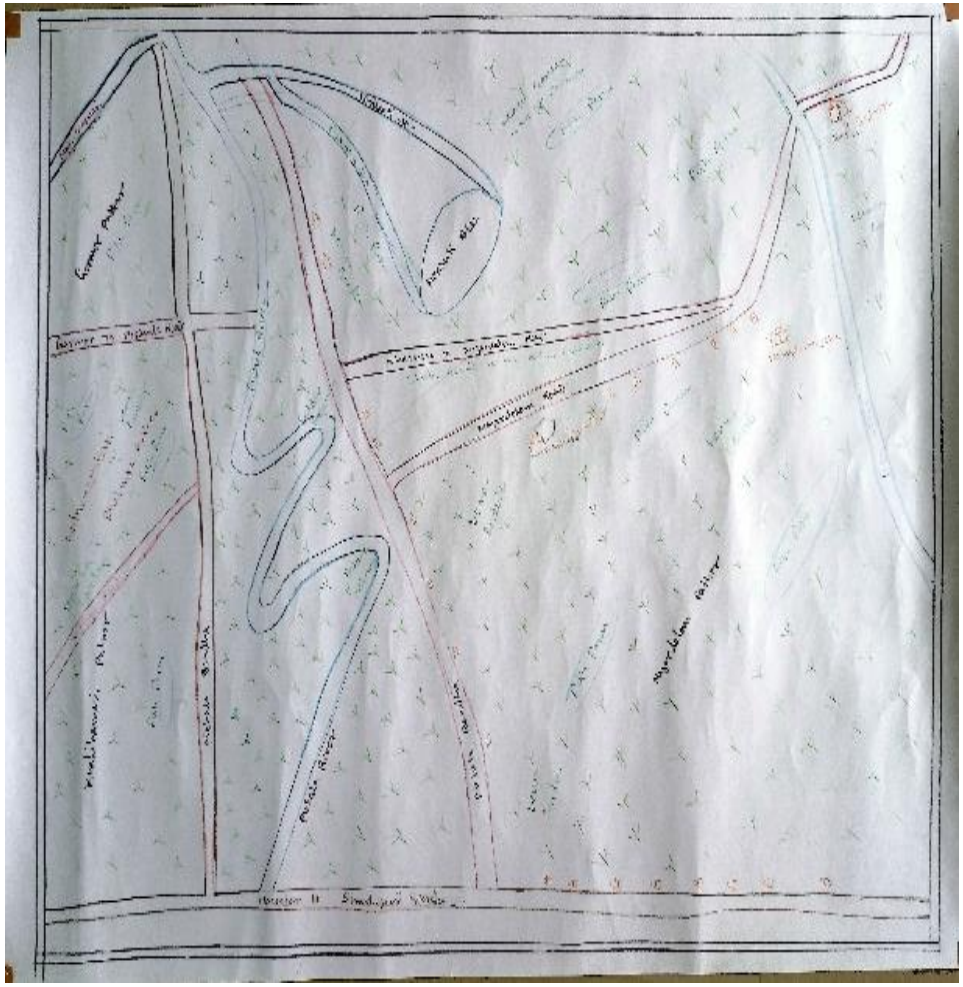
Maps of village drawn by villagers during PRA Exercises

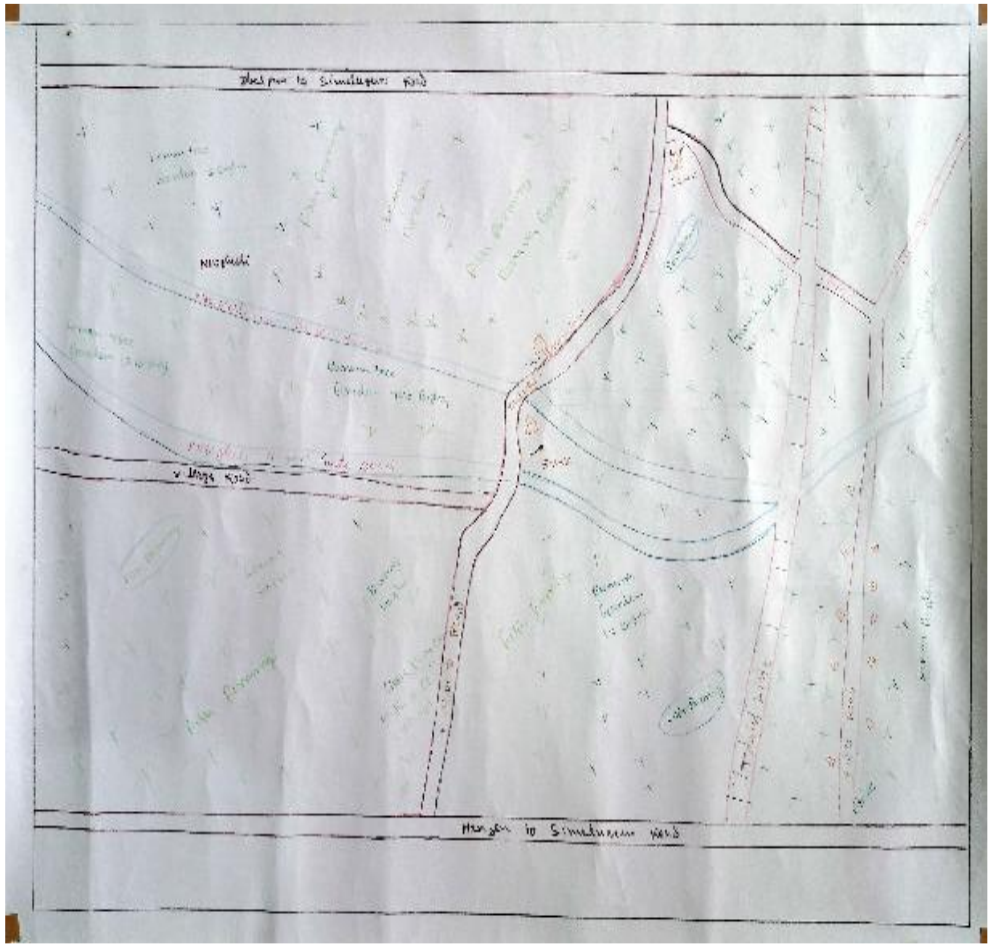


Maps of village drawn by villagers during PRA Exercises



Maps of village drawn by villagers during PRA Exercises





Salient Project activities

Agricultural growth continues to be viewed as a key to poverty alleviation. The aims and objectives of the interventions proposed in the detailed Project Report are on improving livelihoods of all communities living in the Project area with special focus on the poor people that is small, marginal and land less including women. Both social and technological interventions are proposed to be carried out with full participation of the people.

A. Entry Point Activities –

The activities under EPA are identified as per common guidelines in the PRA activities and approved in the gram sabhas. Activities relating to soil and water conservation are given preference. Infrastructure related activities are also included in the need basis of the project area as far as practicable DPR for Lakhimpur-I/2021-22 (Sessa) WDC-PMKSY 2.0, Lakhimpur, Assam. The Action Plan of Entry Point Activities (EPA) have been already prepared and mentioned as following below:

Sl. No	Name of Work	MWS	Location	GPS POINT	Target		Remarks
					Physical (in No./Ha.)	Financial (Rs. in Lakh)	
1	2	3	4	5	6	7	8
1	Construction of Waiting shed at Chutia Gaon	Dhalpur	Vill : Chutia gaon G.P. : Dhalpur Block : Narayanpur	N- 26.931171 E- 93.799957	1 No.	3.00840	
2	Renovation of Community Pond With Boundary Fencing and beautification at Dhalpur	Dhalpur	Vill : Dhalpur G.P. : Dhalpur Block : Narayanpur	N- 26.913837 E- 93.789916	1 No.	5.00	
3	Construction of Waiting shed at Futabhug	Sessa Miri	Vill : Futabhug G.P. : Ganakdoloni Block : Narayanpur	N- 26.920799 E- 93.770794	1 No.	3.20	
4	Construction of Waiting shed at Rangati	Rangati	Vill : Rangati G.P. : Rangati Block : Narayanpur	N- 26.977276 E- 93.78336	1 No.	3.00	
5	Construction of Waiting shed at Simaluguri	Nimuri	Vill : Simaluguri G.P. : Simaluguri Block : Narayanpur	N- 26.968725 E- 93.729931	1 No.	3.00	
Total =					**5 Nos.**	**17.20840**	

B. Work Phase –

i) The salient project activities proposed as identified during PRA exercise and approved by Gram Sabha and as desired by the village communities in the project area arei) The interventions proposed in the project area are to restore the health of the catchment area by reducing the volume and velocity of surface runoff, including creation of vegetative cover in common land like afforestation and Horticulture plantation, other plantation crops, field bunds, ring bunds etc.

ii) Drainage line treatment with a combination of vegetative and Engineering Structures like Boulder Check dams, R.C.C. Drop Spill ways etc

iii) Development of Water harvesting structures such as, Farm ponds, Community tanks, Dug Wells water harvesting structure etc.

iv) Land development including soil and moisture conservation and drainage management measures like Check dams, Spillways, field bund, ring bund ,drainage channel, water distribution channel ,including plantation in these bunds as well as in the banks of the Farm ponds.

v) Nursery raising for fodder, fuel, timber and horticultural species. As far as possible local species are given priority.

vi) Crop demonstration for popularizing new crops /verities, water saving technologies and innovative management practices.

vii) Measures for improving moisture regime including supplementary irrigation from the surface storage tanks, dams etc through arrangements of pump sets etc.

viii)Pasture development, bee keeping, back yard poultry, Goatary, Piggery, Duckery, etc

ix) Micro enterprises like Cane & Bamboo craft, Horticulture, Handloom and weaving, Fruit processing, etc.

x) Fisheries development in community ponds as well as in private ponds/tanks, farm ponds etc.

xi) Veterinary services like livestock improvement measures including Veterinary camps ,artificial insemination etc.

2. Livelihood Activities for Asset less poor :

Livelihood comprises the capabilities, asset and activities required for means of living and educated stock and flow of food & cash. To need the basic needs. In order to strengthen the income generating sources for the asset less persons, both women & men, the following activities are proposed. Moreover, appropretiate technologist which are relevant to the local agro-eco system, technology transfer, skill building, credit access and assured forward linkage with the market are all mendatory for the sustainability of an enterprise which are proposed for asset less persons. Considering agro-ecological condition of the watershed the following activies are identified through Participatory Rural Apprisal and survey conducted in the villages in the watershed.

i. Sewing Machine
ii. Handloom & Weaving
iii. Duckery
iv. Poultry
v. Goattery

3. Production System & Micro-Enterprises :

Considering the agro-ecological as well as socio-economic conditions of the watershed, the following activities are proposed through the absorvations made and recorded during the field visits as well as by PRA survey. In view of the physical as well as socio-ecomonic settings, the production techniques and technologies, the products, quality of raw material and market availability. The following activies are identified for allied and livelihood activities for farmers by conducting PRA in the village of the watershed.

i. Piggery
ii. Horticulture Plantation
iii. Fisheries
iv. Goattery

4. Natural Resources Management and Governance Plans

These plans will have three parts as discussed below:

a) Maintenance of natural resources related assets

Natural resources related physical works need maintenance, and the bio-works such as plantation require strong protection measures and care. The watershed committee responsible for undertaking treatment works and asset creation should maintain a Watershed Assets Register, and the list of completed works recorded and updated continuously. The completed assets should be transferred to the Gram Panchayat for their continued maintenance at the end of each year of implementation. A system of annual audit of natural resource assets should be taken up by the GP to assess their status and maintenance needs. These can be integrated into the MGNREGS by a resolution of the Gram Panchayats. The WDT should ensure that these processes are institutionalized into the functioning of Gram Panchayat and followed regularly from 2nd year onwards. The activities planned to achieve this should be submitted as a part of the overall Project development plan.

b) Water Budgeting, Management/Regulatory Norms and Governance

It is crucial for the community to establish reference sites of wells/ bore wells, and regularly monitor groundwater along with local rainfall, so as to arrive at 49 regulatory norms on water extraction, type of crops to be grown and area coverage. The groundwater monitoring exercise may be taken up twice a year (April-May & September-October / before the crop season), and results be placed after analysis, before the Gram Sabha. The purpose should be to build a common understanding and consensus in the project community for sustainable use of groundwater. The community should be brought to agree on potential restrictions on new extraction structures, reducing area under water intensive crops and other such norms that economise on water use. These exercises are to be taken up twice a year and activities proposed should be part of the watershed development plan. A suitable arrangement for carrying out this exercise should be made by PIA in consultation with Watershed Committee and also provide requisite training for the same.

5. Monitoring & Review, Evaluation, Learning and Documentation Monitoring & Review

Regular monitoring of project status may be undertaken at all levels – WC, PIA, WCDC, SLNA and NLNA. The national and State Level Nodal Departments may also take up reviews from time to time. Online monitoring must become a feature of the MIS. This will enable monitoring at all levels on same set of real time data. An IT enabled dashboard with access to all responsible for the monitoring may be developed for this purpose. Monitoring should include process, performance and outcomes. The PIA shall upload progress reports countersigned by the WC Chairman on real time basis to enable monitoring at

various levels. The WC and PIA should adopt an internal system of review and monitoring, for which the PIA may design its own MIS format. Review meetings at fixed intervals are also necessary – monthly meetings with all the PIAs in the district by the WCDC; and quarterly reviews by the SLNA; six monthly reviews by the NLNA. The National and State Nodal Departments may also undertake reviews at their levels at suitable intervals. To facilitate a qualitative monitoring & review system, NLNA and SLNA may design and develop suitable MIS.

6. Evaluation

In order to support timely evaluation of projects, both National level and State level Panel of Agencies shall be maintained by NLNA and SLNA respectively. A minimum percentage of evaluations and impact studies will be carried out by national level agencies which may help in deriving strategic lessons for course correction, if any, in the approach and designs of the project and its implementation, and assess whether vision of economy, equity and ecology is being realized at ground level. The SLNA, by utilizing the services ofState panel of evaluators, may also take up evaluation studies with focus on State/UT-specific issues. The findings should help effecting necessary changes in implementation strategy and reorienting focus on different components of the project development plans, if required. The project-wise evaluation may be undertaken by the WCDC by deploying the State empanelled evaluators.The purpose of project-wise evaluation would be to identify process gaps and assess performance and quality of outcomes. The evaluation will be on physical, technical and financial aspects of the project. Each project will be subject to two evaluations, namely,"mid-term" and"end-of-term". While mid-term evaluation shall be taken up at the end of 2nd year, the end- of- term evaluation shall be taken up at the end of the project completion. A separate set of Guidelines on evaluation may be evolved for this purpose by NLNA in consultation with States / UTs.

Assessment co-benefits :

In addition to direct benefits from watershed/springshed development projects, there accrue a number of co-benefits over the project period which support the ecosystems and benefit the societyat large. Hence, they are valuable data points for reporting the national achievements vis-à-vis its international commitments, on United Nations Framework Convention on Climate Change (UNFCCC),United Nations Convention to Combat Desertification (UNCCD), Sustainable Development Goals (SDGs), NDCs platform etc. An appropriate methodology and template may be developed to collect data points on definite periodicity and on a defined metrix so as to assess the progress on co-benefits accrued to the communities. DoLR with the help of a specialist group of experts and in consultation with States /UTs, may facilitate development of the framework and modalities of such an assessment. These methodologies will be incorporated into the regular monitoring mechanism of the watershed projects.

7. Consolidation:

The consolidation of the project implementation is envisaged to be attained within five years from the date of investment when the result of the input efforts are expected to be bear returns in economic terms. Although initially the output is expected to be economically sustainable within the next two years of time which is likely to increase nonlinearly upto optimum productivity. The activities for timber-based aforestation however has far longer gestation period. Such activities are therefore primarily aimed for preservation of sustainable environment. It is therefore expected that the beneficiaries/stakeholders shall also attain the competence to attain self reliance by the end of seven years when complete withdrawal is to be achieved. Any investment thereafter is expected to be met by the beneficiaries/ stakeholders individually or collectively. Nevertheless, the environmental sustainability (including biodiversity) must be observed and monitored by the regulatory bodies (Government) all the time even after withdrawal. Needless to state that the consolidation and withdrawal must be made gradually while imparting not awareness and training but also in creating the infrastructure for technical services such as monitoring of water quality, soil quality, processing and warehousing facilities, for value addition of the rural product, marketing etc. the investment in consolidation an withdrawal shall be made soley for common benefits which shall be shared by all beneficiaries of the watershed areas.

CHAPTER 1

INTRODUCTION AND BACKGROUND

INTRODUCTION

Name of the State: ASSAM

Name of the District: LAKHIMPUR

Names of the Blocks: Bihpuria Dev. Block

Name of the project: Lakhimpur –I/2021-22 (Sessa) WDC-PMKSY, 2.0

Financial Year of sanction : 2021-22

Project duration: From 2021-2022 to 2025-26

Background Note of the District of Lakhimpur

The Lakhimpur District in which the 1 Lakhimpur –I/2021-22 (Sessa) WDC-PMKSY, 2.0 falls in the North-eastern corner of the state on the northern bank of the river Brahmaputra under jurisdiction of the Lakhimpur district. The district is in a strategic location where steep slope of Eastern Himalayas abruptly drop forminga narrow valley, which widens towards the western side. Numerous drainage systems originating from the hills ofArunachal Pradesh flow through this narrow valley ending at the mighty river Brahmaputra.

Climate and Soil –

The area experiences sub-tropical climate with experience of mild winters and warm and humid summers. The weather conditions are framed by the influences of both the North–East and South–West Monsoon. There are marked variation of weather situation in different months, on the basis of which it is classified in to Winter Season (December to February), Pre-Monsoon Season (March to May), Monsoon (June to September) and Post Monsoon (October and November). As the major part of the area is located near the foothills of Arunachal Pradesh, it exhibits difference in temperature, rainfall, fog, wind etc. The climate of the area is Per-humid characterized by high rainfall, mild summer and winter and falls under cool to warm per-humid thermic-agroecological sub zone. The annual rainfall of the district ranges from 4758 mm to 5149.6 mm. Rainfall generally begins from April and continues till the

DPR for Lakhimpur –I/2021-22 (Sessa) WDC-PMKSY, 2.0, Lakhimpur, Assam end of September. The rainfall generally increases from south east to northeast. July is the rainiest month. On an average there are about 200 days of rain in a year with 3.5 mm or more. The relative humidity varies from 90 to 73 per cent. The general and average soil character of cultivable land in the watershed area is mainly alluvial and composed of mixture of sand (coarse to fine) and clay in varying proportions. The general geochemical characteristic of the soil is highly acidic. However, new alluvial soils formed due to inundation of land by river at intervals contain more percentages of fine sand and fine silt and are less acidic. Such soils are often neutral and even alkaline. Large expanse of low-lying land characterized by heavy clayish soil with a high percentage of nitrogen which is good for rice cultivation is found in the area.

Agricultural scenario:-

Agriculture is the main occupation in the district and contributes a major parts of district economy which however is a subsistence type. Sali (winter) paddy is the main crop in the district under rainfed condition Jute, banana, potato, vegetables, pineapple, turmeric, ginger etc. are also important crops. The district is surplus in production of oilseeds, fruits and spices while it is measurably deficit in pulses, milk, meat, egg and fish production. There are tremendous scope for horticultural crops, plantation crops, animal husbandry and sericulture in the district.

Soil-

As per soil survey map delineated by the National Bureau of soil survey and land use planning, Jorhat Regional Centre in association with the Department of Agriculture, Assam the soil of the district is moistly deep well drained, coarse loamy skeletal soils occurring on very gently sloping piedmont plain having loamy surface with moderate to severe erosion & slightly flooding associated with moderately deep well drained coarse loamy soils with moderate erosion & slight stoniness. The most typical characteristic of the soil of the district is its acidity. The major part of the soils of Lakhimpur district is acidic in nature. The organic matter content of soil is medium to high. The available N is medium and available P and K is low to medium.

Climate -

The district has a sub-tropical humid type of climate, with the relative humidity varying from 93% to 95% during the morning hours and from 53% to 75 % during the afternoons. The climate of the place can be divided into three main seasons Lakhimpur –I/2021-22 (Sessa) WDC-PMKSY, 2.0, Lakhimpur, Assam Summer & Monsoon. The summer and monsoon seasons in Lakhimpur are usually hot and humid, starting

from the month of March and extending till October. The average annual temperature during the summer season varies from 29 to 36 degrees C, with the maximum temperature recorded at 40 degree C during the month of June. Around 60 to 65% of the average precipitation during the entire year is received during south-west monsoons, lasting from June to September. Out of this, the maximum precipitation is seen in the months of June and July, with the total average annual rainfall being 1300 mm. There is a definite pattern of rainfall in the district, which varies from south to north, with the increase in the intensity of the rainfall. Winter In Lakhimpur, winter starts from the month of November and the typical characteristics of this season is scanty rainfall and foggy mornings and afternoons. The minimum temperature recorded during this season is 15oC, in the month of December, with the average annual temperature being 12 degrees C to 14 degrees .

Physical Target And Financial Outlays :

Major Head	Sub Heads	Total %	1st year		2nd year		3rd year		4th year		5th year		Total
			%	Fin (Rs.)	%	Fin (Rs.)	%	Fin (Rs.)	%	Fin (Rs.)	%	Fin (Rs.)	
Administrative	Management Cost	10	2	17.2084	2	17.2084	2	17.2084	2	17.2084	2	17.2084	86.04200
	Monitoring & Evaluation	2	-	-	0.5	4.30210	0.5	4.30210	0.5	4.30210	0.5	4.30210	17.20840
Preparatory Phase	Entry Point Activity	2	2	17.2084	-	-	-	-	-	-	-	-	17.2084
	DPR Preparation	1	1	8.60420	-	-	-	-	-	-	-	-	8.60420
	Institution &Capacity Building	3	1.5	12.90630	0.5	4.30210	0.5	4.30210	0.25	2.15105	0.25	2.15105	25.81260
Works Phase	Natural Resource Management	47	16	137.66720	16	137.6672	9.5	81.7399	3	25.8126	2.5	21.5105	404.3974
	Production System	15	1	8.6042	3	25.8126	6	51.6252	4.25	36.56785	0.75	6.45315	129.063
	Natural Resource Management & Governance	2	0.5	4.3021	0.5	4.3021	0.5	4.3021	0.5	4.3021	-	-	17.2084
	Livelihood Activities for the asset less persons, Micro Enterprises & Business Development	15	1	8.60420	2.5	21.5105	6	51.6252	4.5	38.7189	1	8.6042	129.063
Consolidation & Withdrawal Phase		3	-	-	-	-	-	-	-	-	3	25.8126	25.8126
Total		**100**	**25**	**215.105**	**25**	**215.105**	**25**	**215.105**	**15**	**129.063**	**10**	**86.042**	**860.420**

CHAPTER 1

Introduction and Background

INTRODUCTION

- Name of the State : Assam
- Name of the District : Lakhimpur
- Names of the Blocks : Narayanpur
- Name of the project : Lakhimpur- I/2021-22(Sessa) WDC PMKSY 2.O
- Financial Year of sanction : 2021-22
- Project duration : From 2021-22 to 2025-26
- Map of the project area showing village boundaries, contours and drainage.

II). PROFILE OF THE WATERSHED PROJECT:

Table No.1.1 Project at a Glance

1	Name of the State	Assam
2	Name of the project	Lakhimpur- I/2021-22(Sessa) WDC PMKSY 2.O
3	Name of the District	Lakhimpur
4	Names of the Blocks	Narayanpur
5	Names of Gram Panchayats	Dhalpur, Ganakdoloni, Rangati, Simoluguri

6	Names & Census Code of Villages covered	No.1 Bikrompur (287422), No.2 Bikrompur (287425), Sesamiri Gaon No.1 (287484), Sesa Miri No.2 (287485) Bachapukhuri (287482), Christan Basti (287481),Nowghuli (287483), Simaluguri No.3 (287426), Da-Dhara (287492), Tinali Handique (287429), Pullnaharani (287430), Athani Bari(287478) No.1 Rangati (287479), No.1 Mughnoa (287495), No.2 Mughnoa (287494), No.2 Rangati (287493) Ghagra (287480), Somdhara (287490), No.2 Khalihamari (287508), Dhalpur (287504), Soru Kathoni (287513), Futabhug (287486), Major Doloni (287510), Gormara Pathar (287511) ,No.1 Khalihamari (287509), Doomor Doloni (287507), Chutiagaon (287503), Ganakdoloni (287505), Nidanchuwa (287506) Simaluguri No.2 (287427), No.3 Nimuri (287428), Simaluguri No.1 (287424)
7	Four major reasons for selection of watershed	(1) Poverty (2) Unemployment (3) Rainfed agriculture and (4) Degradation of land. As people/villagers have to depend on rainfed agriculture, due to non-scientific cultivation, production becomes less. Hence, economically not benefitted, therefore, poverty sustains and land is degraded day by day. Unemployment problem is noticed in the proposed project area.
8	Name, Address , Phone No and Reg. No.. of the PIA(s)	Divisional Officer, Lakhimpur Soil Conservation Division, North Lakhimpur, Phone No. 7002201139
9	Date of approval of Watershed Development Plan by the DPC	
10	Area of the Project (ha.)	**5433.00 Ha.**
11	Area proposed to be treated (ha.)	**3911.00 Ha.**
12	Financial Year of sanction	**2021-22**
13	Project duration	**From 2021-22 to 2026**
14	Project Cost (Rs. in Lakhs)	**860.42 Lacs**
15	Date of Sanction by State authority	**04-01-2022**

16	Date of Release of 1st Installment of Central	**22-02-2022**
17	Any other, please specify	

Table No. 1.2 Need and Scope for Watershed Development

A write up elaborating the weightage table for selection of the watershed. (Weightage for selection of Watershed (as per DoLR's instructions already issued)

Project Name	Project Type		Weightage											
		i	ii	Iii	iv	v	vi	vii	vii	ix	x	xi	xii	xiii
Lakhimpur- I/2020-21 (Sessa) WDC PMKSY 2.O	Others Plains	10	3	5	10	2	0	15	7.5	15	10	10	10	-

*As per PPR

Slno.	Criteria	Max Score	Ranges and Scores			
i	Poverty index(%of poor to population)	10	Above 80% (10)	80 to 50 % (7.5)	50 to 20 % (5)	Below 20% (2.5)
ii	% of SC/ST population	10	More than 40% (10)	20 to 40 % (5)	Less than 20% (3)	
iii	Actual wages	5	Actual wages are significantly lower than minimum wages (5)	Actual wages are equal to or higher than minimum wages (0)		
iv	% of small and marginal farmers	10	More than 80% (10)	50 to 80% (5)	Less than 50 (3)	
v	Ground water status	15	Over exploited (15)	Critical (10)	Sub critical (5)	Safe (0)
vi	Moisture index/ DPAP/DDP Block	10	-66.7 & below (10) DDP Block	-33.3 to -66.6 (5) DPAP Block	0 to -33.2 (0) Non DPAP/DDP Block	
vii	Area under assured irrigation	15	Less than 10% (15)	10 to 20% (10)	20 to 30% (5)	Above 30% (Reject)
viii	Drinking water	10	No source (10)	Problematic village (7.5)	Partially covered (5)	Fully covered (0)

ix	Degraded land	15	High – above 20% (15)	Medium – 10 to 20 % (10)	Low – less than 10 % of TGA (5)	
x	Productivity potential of the land	10	Lands with low production & where productivity can be significantly enhanced with reasonable efforts (10)	Land with moderate production & where productivity can be enhanced with reasonable efforts (5)	Lands with high production & where productivity can be marginally enhanced with reasonable efforts (0)	
xi	Contiguity to another watershed that has already been developed/treated	10	Contiguous to previously treated watershed & contiguity within the micro watersheds in the project (10)	Contiguity with in the micro watersheds in the project but non contiguous to previously treated watershed (5)	Neither contiguous to previously treated watershed nor contiguity within the micro watersheds in the project (0)	
xii	Cluster approach in the plains (more than one contiguous micro-watersheds in the project)	15	Above 6 micro-watersheds in cluster (15)	4 to 6 micro watersheds in cluster (10)	2 to 4 micro watersheds in cluster (5)	
xiii	Cluster approach in the hills (More than one contiguous micro-watersheds in the project)	15	Above 5 micro-watersheds in cluster (15)	3 to 5 micro watersheds in cluster (10)	2 to 3 micro watersheds in cluster (5)	
	Total	**150**	**150**	**90**	**41**	**2.5**

Table no.1.3: Watershed information

Sl no	Name of Project	Watershed Code	Villages to be Treated	Geographical Area(Ha)	Treatable Area(Ha)	Approval Year
1	Lakhimpur-I/2021-212(Sessa) WDC PMKSY 2.O	Dhalpur MWS 3A3D5g1	Dhalpur	259	179	2021-22
2			Chutia Gaon	168	158	
3			Doomor Doloni	18	15	
4			Nidanchuwa	183	142	
5			2 No. Khalihamari	109	83	
6			1 No. Khalihamari	61	52	
7			Saru Kathani	151	138	
8		Sessa Miri MWS 3A3D5f2	Sessa Miri No. 1	121	111	
9			Nowghuli	286	135	
10			Sessa Miri No.2	88	69	
11			Ganakdoloni	290	250	
12			Futabhug	298	247	
13			Majordoloni	159	117	
14			Gharmara Pathar	73	52	
15		Rangati MWS 3A3D5g2	No.2 Mughnoa	26	18	
16			No.2 Rangati	225	128	
17			Ghagra	149	107	

Sl no	Name of Project	Watershed Code	Villages to be Treated	Geographical Area(Ha)	Treatable Area(Ha)	Approval Year
18	Lakhimpur-I/2021-22(Sessa) WDC PMKSY 2.O		Da-dhara	88	73	2021-22
19			Sumdhra	189	123	
20			Bechapukhuri	172	119	
21			Christian Basti	218	121	
22			No. 1 Rangati	119	111	
23			Athanibari	194	142	
24			No.1 Mughnoa	64	57	
25		Nimuri MWS 3A3D5g5	1 No. Bikrampur	189	107	
26			2 No. Bikrampur	182	97	
27			Tiniali Handique	219	176	
28			Pulinaharani	527	301	
29			Simaluguri No. 3	176	129	
30			Simaluguri No.2	184	135	
31			No.3 Nimuri	141	125	
32			Simaluguri No.1	107	94	
				5433	3911	
Data source : GIS Data, Field Survey						

Table No.1.4: Status of other development project in the area

Sl. no	Name of the programme/scheme	Sponsoring agency	Objectives of the programme/scheme	Year of commencement	Villages covered	Estimated number of beneficiaries
1	Westland Development of Sankardev Sissu Niketan Dhalpur	MGNREGA	Increasing biotic pressure, livelihood Development	2021-22	Dhalpur	212
2	Westland Development at Aniruddha Dev Janmasthan Campus	MGNREGA	Increasing biotic pressure, livelihood Development	2021-22	Dakua, Dhalpur	198
3	Earthen Field Bund from Bhitor Doloni to Rupeswar Hazarika Chuburi	MGNREGA	Increasing of productivity by land Development	2021-22	Ganakdoloni	458
4	Earthen Peripheral Bund at Rangati	MGNREGA	Increasing of productivity by land Development	2021-22	Rangati	352
5	Construction of Earthen Peripheral Bund at Athanibari	MGNREGA	Increasing of productivity by land Development	2021-22	Athanibari	225

Source : Zilla Parishad, Lakhimpur

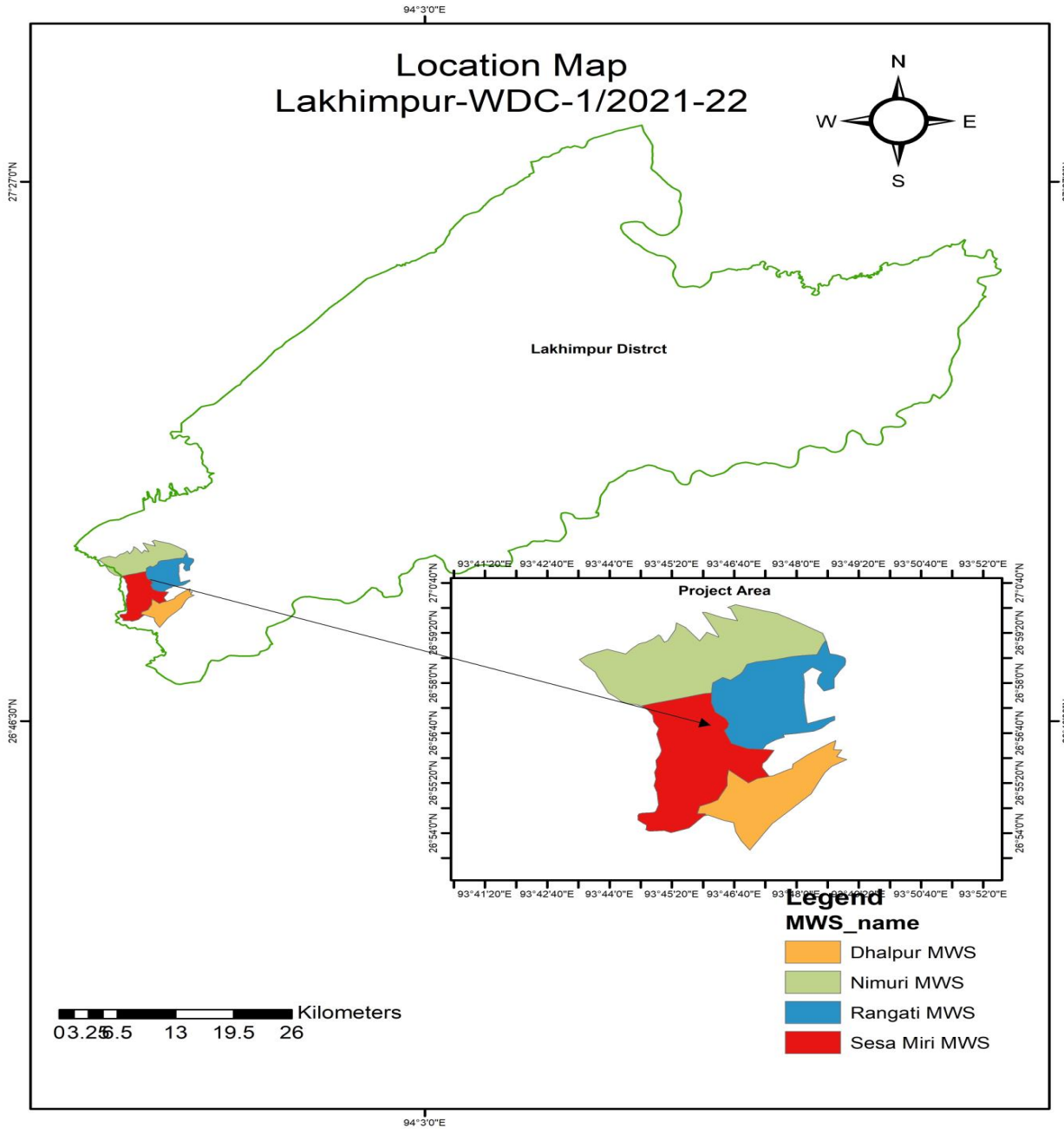
Table No. 1.5: Status of previous watershed programme-

1	2	3		4						5	
S. No.	Names of Districts	Total micro-watersheds in the District		Micro-watersheds covered so far						Net watersheds to be covered	
				Dept. of Land Resources		Other Ministries/ Depts.		Total watersheds covered			
				Pre-IWMP projects (DPAP +DDP +IWDP+IWMP)		Any other watershed project					
		No.	Area (ha.)	No.	Area (ha.)	No.	Area (ha.)	No.	Area (ha.)	No.	Area (ha.)
1	Lakhimpur	189	158100 Ha	55 Nos.	93858	10	6313	Pre-IWMP : 65 2009-10 : 8 2010-11 : 21 2011-12 : 18 2012-13 : 13 **Total : 125**	41700 9951 19810 17699 10998 **100158**	64	50805
Total =		**189**	**158100**	**55**	**93858**	**10**	**6313**	**125**	**100158**	**64**	**50805**

CHAPTER 2
General Description of Project Area

Table 2.1: Location

Longitude	$93^0$48’11.16”
Latitude	$26^0$54’25.2”
State	Assam
District	Lakhimpur
Sub-division	Lakhimpur
Block	Narayanpur
Panchayat	Dhalpur, Ganakdoloni, Rangati, Simoluguri
Villages	As per list detailed in Table 1.3
Approach Road	Connected to District Head Quarter


Location Map
Lakhimpur-WDC-1/2021-22
N
W
E
S
94°3'0"E
27°27'0"N
26°46'30"N
Lakhimpur Distrct
Project Area
93°41'20"E
93°42'40"E
93°44'0"E
93°45'20"E
93°46'40"E
93°48'0"E
93°49'20"E
93°50'40"E
93°52'0"E
27°0'40"N
26°59'20"N
26°58'0"N
26°56'40"N
26°55'20"N
26°54'0"N
Legend
MWS_name
Dhalpur MWS
Nimuri MWS
Rangati MWS
Sesa Miri MWS
Kilometers
0 3.25 6.5 13 19.5 26

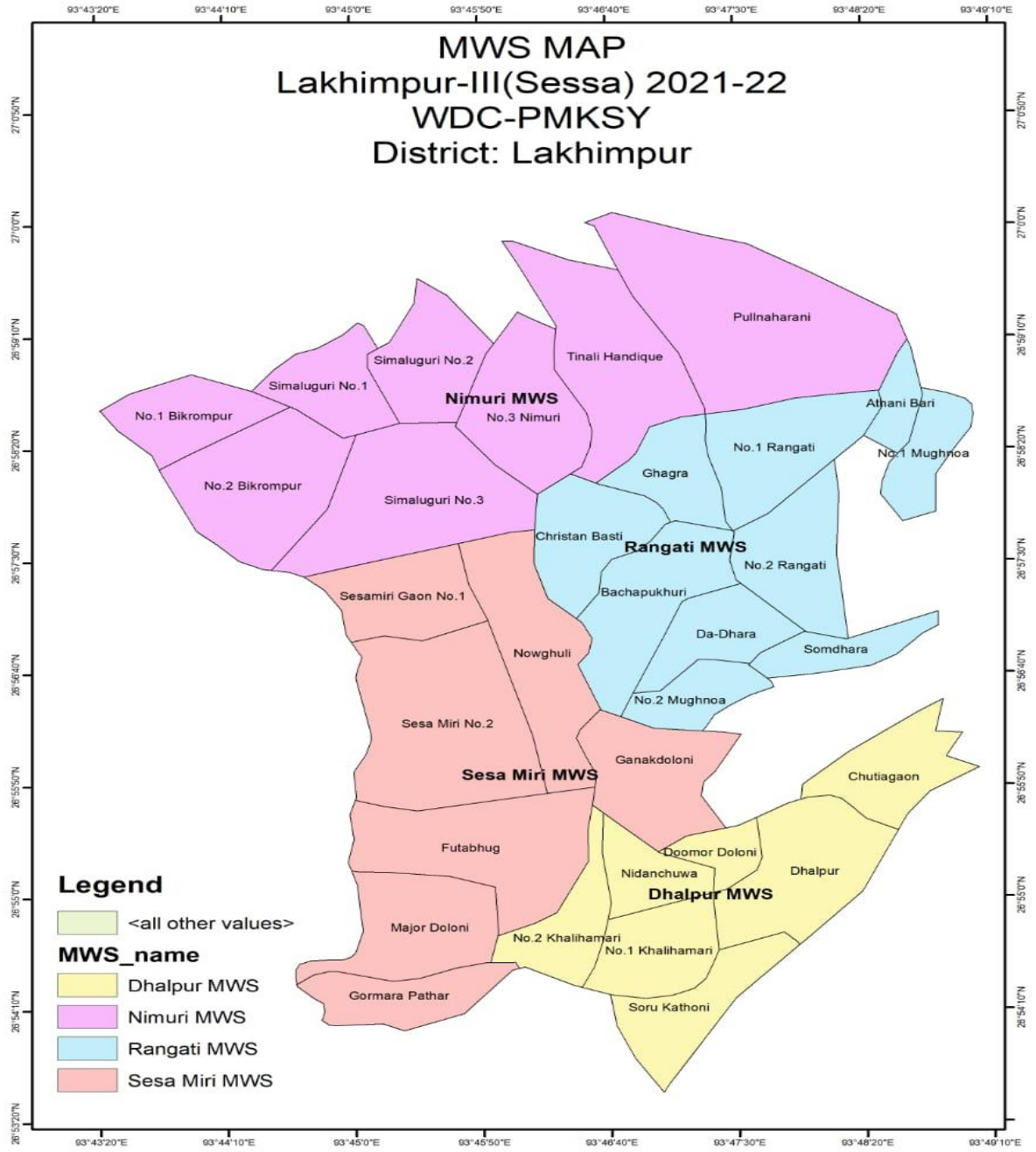

MWS MAP
Lakhimpur-III(Sessa) 2021-22
WDC-PMKSY
District: Lakhimpur
93°43'20"E
93°44'10"E
93°45'0"E
93°45'50"E
93°46'40"E
93°47'30"E
93°48'20"E
93°49'10"E
27°0'50"N
27°0'0"N
26°59'10"N
26°58'20"N
26°57'30"N
26°56'40"N
26°55'50"N
26°55'0"N
26°54'10"N
26°53'20"N
Pullnaharani
Tinali Handique
Simaluguri No.2
Simaluguri No.1
Nimuri MWS
No.3 Nimuri
No.1 Bikrompur
No.2 Bikrompur
Simaluguri No.3
Athani Bari
No.1 Mughnoa
No.1 Rangati
Ghagra
Christan Basti
Rangati MWS
No.2 Rangati
Bachapukhuri
Da-Dhara
Somdhara
No.2 Mughnoa
Sesamiri Gaon No.1
Nowghuli
Sesa Miri No.2
Sesa Miri MWS
Ganakdoloni
Chutiagaon
Futabhug
Doomor Doloni
Nidanchuwa
Dhalpur
Dhalpur MWS
Major Doloni
No.2 Khalihamari
No.1 Khalihamari
Gormara Pathar
Soru Kathoni
Legend
<all other values>
MWS_name
Dhalpur MWS
Nimuri MWS
Rangati MWS
Sesa Miri MWS

Table no: 2.2 Land Details

S. No.	Names of villages	Geographical Area of the village (ha)	Forest Area (ha)	Land under agricultural use (ha)	Rain-fed area (ha)	Irrigated Area	Permanent pastures (ha)	Wasteland	
								Cultivable (ha)	Non-cultivable (ha)
1	No.1 Bikrompur	189	-	175	158	0	4	5	8
2	No.2 Bikrompur	182	-	169	115	69	3	4	5
3	Sesamiri Gaon No.1	121	13	115	95	90	1	4	5
4	Sesa Miri No.2	88	23	85	45	0	3	4	2
5	Bachapukhuri	172	-	156	91	0	-	3	3
6	Christan Basti	218	4	198	110	161	2	3	4
7	Nowghuli	286	-	272	187	0	3	4	3
8	Simaluguri No.3	176	55	165	120	79	2	4	3
9	Da-Dhara	88	-	78	62	26	3	3	4
10	Tinali Handique	219	-	208	161	158	2	5	2
11	Pullnaharani	527	-	495	325	331	4	4	3
12	Athani Bari	194	-	178	132	0	-	4	4
13	No.1 Rangati	119	3	108	102	20	-	3	2

14	No.1 Mughnoa	64	5	53	49	0	-	4	4

15	No.2 Mughnoa	26	25	26	10	0	4	2	3
16	No.2 Rangati	225	2	213	118	11	-	5	4
17	Ghagra	149	-	134	98	0	-	3	2
18	Somdhara	189	-	174	115	0	3	4	2
19	No.2 Khalihamari	109	5	98	69	0	-	3	3
20	Dhalpur	259	17	225	156	3	-	4	2
21	Soru Kathoni	151	7	134	119	0	-	4	2
22	Futabhug	298	-	262	228	0.10	2	5	4
23	Major Doloni	159	2	127	105	0	2	3	3
24	Gormara Pathar	73	-	58	34	0	-	4	2
25	No.1 Khalihamari	61	2	57	37	0	2	5	4
26	Doomor Doloni	18	-	12	5	0	-	5	4
27	Chutiagaon	168	-	155	142	0	2	5	3
28	Ganakdoloni	290	6	275	228	109	-	5	2
29	Nidanchuwa	183	-	158	118	0	-	4	3
30	Simaluguri No.2	184	-	152	130	93	2	3	2
31	No.3 Nimuri	141	9	141	118	0	2	4	3
32	Simaluguri No.1	107	12	105	72	0	2	5	3
Total =		**5433**	**190**	**4961**	**3784**	**1150.1**	**48**	**127**	**107**

Data source : From Field Survey Data, Census Data 2011, Handbook

Table No. 2.3: Details of the types of areas covered under the project

1	2	3				
S. No.	Name of village	No. of beneficiaries covered				
		MF	SF	LF	Landless	Total
1	No.1 Bikrompur	26	83	1	34	144
2	No.2 Bikrompur	96	103	2	24	225
3	Sesamiri Gaon No.1	115	104	2	0	221
4	Sesa Miri No.2	59	66	2	10	137
5	Bachapukhuri	18	44	1	1	64
6	Christan Basti	65	175	3	31	274
7	Nowghuli	52	96	0	26	174
8	Simaluguri No.3	18	89	2	43	152
9	Da-Dhara	1	66	1	3	71
10	Tinali Handique	7	59	1	8	75
11	Pullnaharani	7	102	1	0	110
12	Athani Bari	2	128	2	41	173
13	No.1 Rangati	18	153	2	2	175
14	No.1 Mughnoa	4	8	1	2	15
15	No.2 Mughnoa	4	9	1	2	16
16	No.2 Rangati	0	94	0	2	96
17	Ghagra	30	48	1	5	84
18	Somdhara	28	36	0	0	64
19	No.2 Khalihamari	20	40	0	0	60

20	Dhalpur	38	102	1	0	141
21	Soru Kathoni	43	66	0	0	109
22	Futabhug	7	59	1	8	75
23	Major Doloni	7	102	1	0	110
24	Gormara Pathar	2	128	2	41	173
25	No.1 Khalihamari	18	153	2	2	175
26	Doomor Doloni	4	8	1	2	15
27	Chutiagaon	20	40	0	0	60
28	Ganakdoloni	38	87	1	0	141
29	Nidanchuwa	43	64	0	0	107
30	Simaluguri No.2	7	59	1	8	75
31	No.3 Nimuri	4	93	1	0	98
32	Simaluguri No.1	6	76	0	8	90
		807	2540	34	303	3699

Data source : From field survey

Table No. 2.4: Details of Agro-climatic condition

1	2	3	4	5	6		7	
Sl. No.	Name of the Project	Name of the Agro-climatic zone covers project area	Area in ha	Names of the villages	Major soil types		Major crops	
					a)Type	b) Area in ha	a) Name	b) Area in ha
1	Lakhimpur-I/2021-22(Sessa) WDC PMKSY 2.O	Upper Northern Brahmaputra Valley Zone	5433.00 Ha	No.1 Bikrompur	Sandy to Sandy Loam	3911 Ha	Paddy Mustard Rabi	3220 230 461
2				No.2 Bikrompur				
3				Sesamiri Gaon No.1				
4				Sesa Miri No.2				
5				Bachapukhuri				
6				Christan Basti				
7				Nowghuli				
8				Simaluguri No.3				
9				Da-Dhara				
10				Tinali Handique				
11				Pullnaharani				
12				Athani Bari				
13				No.1 Rangati				
14				No.1 Mughnoa				
15				No.2 Mughnoa				
16				No.2 Rangati				
17				Ghagra				

18				Somdhara				
19				No.2 Khalihamari				
20				Dhalpur				
21				Soru Kathoni				
22				Futabhug				
23				Major Doloni				
24				Gormara Pathar				
25				No.1 Khalihamari				
26				Doomor Doloni				
27				Chutiagaon				
28				Ganakdoloni				
29				Nidanchuwa				
30				Simaluguri No.2				
31				No.3 Nimuri				
32				Simaluguri No.1				

Data source : From field survey

Table No. 2.5 Details of flood and drought in the project area

1	2	3	4		5
Sl. No.	Particulars	Villages	Periodicity		Not affected
			Annual	Any other (please specify)	
1	Flood	No. of villages	11 Nos.	-	Not Affected
		Name(s) of villages	No.1 Khalihamari, Doomor Doloni.Chutiagaon Ganakdoloni,Nidanchuwa,Simaluguri No.2 No.3 Nimuri,Simaluguri No.1	-	-
2	Drought	No. of villages	Nil	-	Not affected
		Name(s) of villages	Nil	-	-

Data source : From field survey

Table No. 2.6: Details of soil erosion in the project area

1	2	3	4	5
Cause	Type of erosion	Area affected (ha)	Run off (mm/ year)	Average soil loss (Tonnes/ ha/ year)
Water erosion				
A	Sheet	2643	A	Sheet
B	Rill	1035	B	Rill
C	Gully	781	C	Gully
Sub- Total			4459	Sub- Total
Wind erosion			Nil	Wind erosion
Total			**4459**	**Total**

Table No. 2.7 Details of the Soil pH

Name of the Villages	Sample no	Soil Ph	Soil Type
No.1 Bikrompur	SLT8	pH 5.0 – pH 6.0	Coarse loamy, Skeletal, udorthents
No.2 Bikrompur	SLT9	pH 5.0 – pH 6.0	Coarse loamy, Skeletal, udorthents
Sesamiri Gaon No.1	SLT8	pH 5.0 – pH 6.0	Coarse loamy, Skeletal, udorthents
Sesa Miri No.2	SLT4	pH 5.0 – pH 6.0	Coarse loamy, Skeletal, udorthents
Bachapukhuri	SLT6	pH 5.0 – pH 6.0	Coarse loamy, Skeletal, udorthents
Christan Basti	SLT7	pH 3.5 – pH 4.0	Coarse loamy, Skeletal, Fluvaquents
Nowghuli	SLT5	pH 3.5 – pH 4.0	Coarse loamy, Skeletal, Fluvaquents
Simaluguri No.3	STN1	pH 3.5 – pH 4.0	Coarse loamy, Skeletal, Fluvaquents
Da-Dhara	STN1	pH 3.5 – pH 4.0	Coarse loamy, Skeletal, Fluvaquents
Tinali Handique	STN3	pH 3.5 – pH 4.0	Coarse loamy, Skeletal, udorthents
Pullnaharani	-	-	-
Athani Bari	-	-	-
No.1 Rangati	-	-	-
No.1 Mughnoa	-	-	-
No.2 Mughnoa	SLT5	pH 3.5 – pH 4.0	Coarse loamy, Skeletal, Fluvaquents

No.2 Rangati	STN1	pH 5.0 – pH 6.0	Coarse loamy, Skeletal, Fluvaquents
Ghagra	STN1	pH 5.0 – pH 6.0	Coarse loamy, Skeletal, Fluvaquents
Somdhara	STN3	pH 3.5 – pH 4.0	Coarse loamy, Skeletal, udorthents
No.2 Khalihamari	SLT8	pH 5.0 – pH 6.0	Coarse loamy, Skeletal, udorthents
Dhalpur	SLT9	pH 5.0 – pH 6.0	Coarse loamy, Skeletal, udorthents
Soru Kathoni	SLT8	pH 5.0 – pH 6.0	Coarse loamy, Skeletal, udorthents
Futabhug	SLT4	pH 3.5 – pH 4.0	Coarse loamy, Skeletal, udorthents
Major Doloni	-	-	-
Gormara Pathar	-	-	-
No.1 Khalihamari	-	-	-
Doomor Doloni	SLT5	pH 3.5 – pH 4.0	Coarse loamy, Skeletal, Fluvaquents
Chutiagaon	STN1	pH 5.0 – pH 6.0	Coarse loamy, Skeletal, Fluvaquents
Ganakdoloni	-	-	-
Nidanchuwa	-	-	-
Simaluguri No.2	SLT5	pH 5.0 – pH 6.0	Coarse loamy, Skeletal, Fluvaquents
No.3 Nimuri	STN1	pH 5.0 – pH 6.0	Coarse loamy, Skeletal, Fluvaquents
Simaluguri No.1	STN1	pH 5.0 – pH 6.0	Coarse loamy, Skeletal, Fluvaquents

Table No.2.7.1 Climatic Condition

Sl No	Year	Average Monthly Rain fall (in mm)			Average Annual Rainfall (in mm) preceding 5 years	Temp (^{0}C)		Wind Velocity	Open pan evaporation (mm per day)	Relative Humidity (RH)	Average Annual run off (mm/year)
						Max	Min	N/A	N/A		
		Jan/Dec	Dec /Apr	Sep/ Oct							
1	2016-17	29	407.68	67.80	5147.46	35	14	N/A	NA	73-88	1020.00
2	2017-18	39.6	406.10	66.45		36.5	15.5	N/A	NA	54-88	
3	2018-19	6.1	594.92	84.28		37	16	N/A	NA	63-89	
4	2019-20	16.7	482.93	45.85		38.5	15	N/A	NA	56-90	
5	2020-21	28.25	463.10	79.98		40.0	14.5	N/A	NA	58-86	

Table No.-2.8 Physiographic Features

Elevation(MSL)	Slope Range(%)	Order of Watershed	Major Stream	Top sequence (Soil series)	Average annual soil loss(Ton / hectare/year)
90-105	0-3	2nd	Sessa River	Coarse loamy, Aeric Fluvaquents Fine silty, Udipsamments	3.59

Data source : From field survey

Table No. 2.9 Watershed characteristics

Shape index of the watershed	Length of main stream	Drainage density	Average slope	Watershed relief	Perimeter of the watershed
Polygon	30 KM	0.001236	0 – 3 %	30 – 40 M	5123000 M

Data source : From field survey

Part A : Water Demand Assessment								
S No	**Particulars**	**Qty**	**Unit**	**WR/day**	**Unit**	**WR/year**	**Unit**	**Year**
1	**Domestic Water Requirement**							
1.1	Present Human Population	38,294	persons	1,531,760	Litres	55.91	ham	2011
	Present Livestock Population	16,517	heads	495,522	Litres	18.09	ham	2011
	Total			**2,027,282**	**Litres**	**74.00**	**ham**	
1.2	Projected Human Population	51,059	persons	2,042,347	Litres	74.55	ham	2026
	Projected Livestock Population	22,023	heads	660,696	Litres	24.12	ham	2026
			Total	**2,703,042**	Litres	**98.66**	**ham**	
2	**Total Agricultural Water Requirement**							
	Paddy	4,937.0	ha			2,468.50	ham	
	Mustard	25.0	ha			2.50	ham	
	Vegetables	21.0	ha			10.50	ham	
	Gram & Lentil	33.0	ha			39.60	ham	
	Jute	31.0	ha			37.20		
	Total	5,047.0	ha			**2,521.10**	**ham**	
	Present use (GW draft)	357	3hp pump	32	5hp pump	**166.19**	**ham**	
					Total water requirement	**2,619.76**	**ham**	
1.1	Average annual rainfall	1,809	mm	VB Area	60%	of village area		
1.2	Area of the watershed	5,652	ha	CB Area	40%	of village area		
2.1	Total precipitation available	10,224	ham					
2.2	Evaporation losses	4,090	ham					
2.3	Infiltration into ground	1,125	ham					
2.4	Conservation	1.25	ham	Storage of RWHS		0.5	ham	
2.5	Total runoff	5,009	ham					
	Water avaialble	**1,126**	**ham**					
	Projected Deficit (Surplus)	**1,494**						
1	Harvestable runoff	1,252.18	ham					
	Less : Already harvested	0.50	ham					
	RWH Potential	**1,251.68**	**ham**					

CHAPTER – 3

BASE LINE INFORMATION OF WATERSHED

Table No. 3.1: Demographic features:

1	2	3	4	5
Sl.No	Feature	Male	Female	Total
1	Population	13348	12152	25500
	SC	1766	1629	3395
	ST	822	789	1611
	BC			
	Others	10657	9837	20494
2	Children(0-14 years)	2513	2319	4832
3	Sex Ratio	1000	940	1000:940
4	Literacy			72.37%
	Literates	613	409	1022
	Illiterates	2411	1608	4019
5	Work Force	4928	2132	7060
	Agriculture	4321	1945	6266
	Industrial/Business	212	107	319
	Service	360	214	574
6	Birth Rate	-	-	N/A
7	Death Rate	-	-	N/A
Data source : From Field Survey, Census Data 2011, District Handbook				

Table No. 3.2: Livestock details:

1	2	3
S.No	**Feature**	**No./ quantity)**
1	**Milch Animals**	
	Cows	249
	Buffaloes	12
	Goat, sheep	1540
2	**Draft Animals**	
	Ox	
	He Buffalo	
3	**Others**	
	Poultry	8456
	Piggery	1130
4	**Total Milk production** from milch animals (ltrs/day)	98
5	**Fodder Availability**	
	Dry (Abundant/Sufficient/ Scarce)	Sufficient
	Green (Abundant/Sufficient/ Scarce)	Sufficient
6	**Fuel wood Availability** (Abundant/Sufficient/Scarce)	Sufficient
Data source : From field survey		

Table No.3.3:Socio- economic status:

1	2	3	4	5						6			
S. No	Type	Total HHs	No. of BPL HHs	Land Holding (Ha)						Annual Gross Income (Rs.)			
				Rain fed			Irrigated			SC	ST	Others	Total
				SC	ST	Others	SC	ST	Others				
1	Marginal	2543	1532	432	403	1124	3	5	8				Average Rs. 40,000
2	Small Farmers	564	0	`434	407	1146	4	4	7				
3	Big farmers	87	0	109	114	358	2	3	5				
4	Landless	987	987	98	118	221	2	3	6				
	Total	4181	2519	207	1042	2849	11	15	26				Rs. 40,000

Data source : From field survey

Table No. 3.4: Migration Details:

1	2			3	4	5	6	7
Sl. No.	No. of persons migrating			No. of days per year of migration	Major reason(s) for migrating	Distance of destination of migration from the village (km)	Occupation during migration	Income from such occupation (Rs.)
	M	F	Total					
1			208	160	Mostly agricultural activities are seasonal and hence people without any other activity go f rearing livelihood during this period	10-12 km	Daily wages	14000-15000

Data source : From field survey

Table No. 3.5: Details of Community Based Organizations existing in the watershed village:

1	2	3				4				5			6			7			8			9	
Sl. No.	Type of Group	Total no. of CBOs				No. of members				No. of ST in each category			No. of SC in each category			No. of Others in each category			No. of BPL in each category			Bank linkage	
		With only Men	With only Women	With both	Total		M	F	Total	M	F	Total	M	F	Total	M	F	Total	M	F	Total	No. of SHGs	Bank Loan Amount (Rs.)
1	SHG	8	35	-	43	(i) Landless	31	111	142	3	16	19	7	19	26	21	76	97	31	111	142		
						(ii) MF	28	104	132	2	12	14	11	25	36	15	67	82	28	104	132		
						(iii) SF	11	69	80	0	0	0	2	9	11	9	60	69	0	0	0		
						(iv) LF	3	9	12	0	0	0	0	0	0	3	9	12	0	0	0		
	Total						**73**	**293**	**366**	**5**	**28**	**33**	**20**	**53**	**73**	**48**	**212**	**260**	**59**	**215**	**274**		
2	UGs					(i) Landless	31	111	142	3	16	19	7	19	26	21	76	97	31	111	142		
						(ii) MF	28	104	132	2	12	14	11	25	36	15	67	82	28	104	132		
						(iii) SF	11	69	80	0	0	0	2	9	11	9	60	69	0	0	0		
						(iv) LF	3	9	12	0	0	0	0	0	0	3	9	12	0	0	0		
	Total						**73**	**293**	**366**	**5**	**28**	**33**	**20**	**53**	**73**	**48**	**212**	**260**	**59**	**215**	**274**		

VSS : Van Suraksha Samiti, FG: Farmer's Group/ Farmer's Club, WUA: Water User Association, F-SHG: Federation of SHGs (C: at Cluster, B: at Block), PG: Producer's Group PC: Producer's Cooperative.

Table No. 3.6: Infrastructure Facilities:

1	2	3	4	5
S.No	Infrastructure type	No./Quantity	Distance (km)	Status (description)
1	Educational Institutions			
	Anganwadi	25	Within the Village	
	Primary School	19	Within the Village	
	Secondary school	12	5 km.	
	Govt. College	1	8 km	
	Vocational Institutions	Nil		
2	Service Institutions			
	Bank	2	7 km.	
	Post office	4	1 Km	
	Primary Health Care Center	6	1 km	
	Veterinary Center	2	1 km	
	Markets/ Village Haat	3	3 km	
3	No. of bore wells/pump sets (Functional)	155		

4	No. of Milk collection centers (Union/ Society/ Pvt. Agency/Others)	Nil		
	Total Quantity of surplus milk	Nil		
5	Road Connectivity (to main road by an all-weather road) (Yes/No)	Yes		
6	Bus facility (Yes/No)	yes		
7	No. of HHs provided electricity	3850		
8	No. of HHs with access to drinking water	2567		
9	Access to Agro Industries (Yes/No)	No		
10	Any other facilities (specify----------)			

Data source : From field survey

Table No.3.7 Land use pattern (in Hectares)

1	2	3	4	5	6	7	8	9		10		11	12	13*
S. No	Village	Geographical Area#	Forest Area	Community Land	Land under Non Agriculture Use	Permanent Pastures	Land Under miscellaneous use	Uncultivated Private land		Cultivated area		Net Sown Area	Net Area sown more than once	Gross Cropped Area
								Temporary fallow	Permanent Fallow	Cultivated Rainfed	Cultivated Irrigated			
	No.1 Bikrompur	189	-	0	102	4	0	1	3	98	0	98	0	98
	No.2 Bikrompur	182	-	0	93	3	0	2	3	85	29	114	29	143
	Sesamiri Gaon No.1	121	13	0	107	1	0	1	2	55	42	97	42	139
	Sesa Miri No.2	88	23	0	65	3	0	3	1	45	12	57	12	69
	Bachapukhuri	172	-	0	116	-	0	4	2	91	25	116	25	141
	Christan Basti	218	4	0	118	2	0	3	4	110	40	150	40	190
	Nowghuli	286	-	0	131	3	0	5	3	177	45	222	45	267
	Simalu	176	55	0	125	2	0	3	1	110	16	126	16	142

	guri No.3													
	Da-Dhara	88	-	0	70	3	0	2	2	62	16	70	16	86
	Tinali Handique	219	-	0	171	2	0	1	0	135	25	160	25	185
	Pullnaharani	527	-	0	297	4	0	5	3	345	70	415	70	485
	Athani Bari	194	-	0	138	-	0	0	2	142	12	154	12	166
	No.1 Rangati	119	3	0	108	-	0	0	1	102	3	105	3	108
	No.1 Mughnoa	64	5	0	53	-	0	4	5	49	0	49	0	49
	No.2 Mughnoa	26	25	0	16	4	0	0	0	15	2	17	2	19
	No.2 Rangati	225	2	0	123	-	0	2	3	138	20	158	20	178
	Ghagra	149	-	0	104	-	0	0	1	109	12	121	12	134
	Somdhara	189	-	0	119	3	0	1	3	115	25	140	25	165
	No.2 Khalihamari	109	5	0	80	-	0	0	2	69	9	78	9	87
	Dhalpur	259	17	0	175	-	0	0	1	196	18	214	18	232
	Soru Kathoni	151	7	0	134	-	0	2	4	119	12	131	12	143
	Futabhug	298	-	0	242	2	0	0	0	228	22	250	22	272

	Major Doloni	159	2	0	114	2	0	0	2	105	16	121	16	137
	Gormara Pathar	73	-	0	48	-	0	1	3	44	5	49	5	54
	No.1 Khalihamari	61	2	0	47	2	0	3	2	37	6	43	6	49
	Doomor Doloni	18	-	0	10	-	0	4	5	9	2	11	2	12
	Chutiagaon	168	-	0	153	2	0	2	6	132	14	146	14	160
	Ganakdoloni	290	6	0	245	-	0	0	2	218	25	243	25	268
	Nidanchuwa	183	-	0	138	-	0	0	1	124	11	135	11	146
	Simaluguri No.2	184	-	0	132	2	0	1	3	120	22	142	22	164
	No.3 Nimuri	141	9	0	121	2	0	3	6	108	8	116	8	124
	Simaluguri No.1	107	12	0	89	2	0	5	4	72	9	81	9	90
		5433	**190**	0	**3784**	**48**	0	**58**	**80**	**3564**	**573**	**4129**	**573**	**4702**

Data Source : Field survey and Census Data 2011

* Coloumn 13 is the summation of coloumn 11 & 12.

Table No. 3.8: Details of Common Property Resources:

1	2	3				4			
S.No	CPR Particulars	Total Area (ha) Area owned/ In possession of				Area available for treatment (ha)			
		Pvt. persons	Govt. (specify dept.)	PRI	Any other (Pl. Specify)	Pvt. persons	Govt. (specify deptt.)	PRI	Any other (Pl. Specify)
	Wasteland/ degraded land	1279	-	-	-	1299	-	-	-
	Pastures	25	-	-	-	-	25	-	-
	Orchards	-	-	-	-	-	-	-	-
	Village Forest	379	-	-	-	378	-	-	-
	Forest	2385	-	-	-	-	-	-	-
	Village Ponds/ Tanks	35	-	-	-	-	-	-	-
	Community Buildings	11	-	-	-	-	-	-	-
	Weekly Markets	15	-	-	-	-	-	-	-
	Permanent markets	2	-	-	-	-	-	-	-
	Temples/ Places of worship	14	-	-	-	-	-	-	-
	Others (Pl. specify)	1288	-	-	-	-	-	-	-
Total		**5433**	-	-		-	-	-	-

Table No. 3.9: Agriculture implements:

1	2	3
S. No	**Implements**	**Nos.**
1	Tractor	23
2	Sprayers-manual/ power	312
3	Cultivators/Harrows	10
4	Seed drill	Nil

Table No. 3.10: Crop Classification

1	2	3
S. No	**Crop classification**	**Area (Ac)**
1	Single crop	3600
2	Double crop	256
3	Multiple crop	Nil

Table No. 3.11: Crops & Cropping pattern:

1	2	3	4				5				6			
S. No	Season	Crop sown	Rain fed				Irrigated				Total			
			Area (ha)	Production (Ton/yr)	Productivity (Kgs/ha)	Cost of cultivation (Rs. /ha)	Area (ha)	Production(Ton/yr)	Productivity (Kgs/ha)	Cost of cultivation (Rs. /ha)	Area (ha)	Production (Ton/yr)	Productivity (Kgs/ha)	Cost of cultivation (Rs. /ha)
1	Kharif	**Rice**	**850**	**523.97**	**2400/ha**	**6,000/ ha**					**850**	**523.97**	**2400/ha**	**6,000/ ha**
2	Rabi	**Oil Seed**	**165**	**441.63**	**1200/ha**	**4,000/ ha**					**165**	**441.63**	**1200/ha**	**4,000/ ha**
3	Summer	**Rice**	**1050**	**94.608**	**1200/**	**4,000/ ha**					**1050**	**94.608**	**1200/**	**4,000/ ha**
	Total		**2065**	**1060.208**							**2065**	**1060.208**		

Data Source : From Field survey

Table No. 3.12: Land capability Classification

1	2	3		4					5				6				Land class
S.No	Land type	Total Area (ha)	Soil Texture*	Based on Depth (cms)- (mention area in ha)					Based on Slope (%) (mention area in ha)				Erosion (mention area in ha)				
				V. Shallow (0.75)	Shallow (7.5-22.5)	Moderate deep (22.5-45.00)	Deep (45.0-90.0)	Very. Deep (>90)	Nearly Level (0-2)	Moderate slope (2-6)	Strong slope (6-15)	Steep (>15)	Water			Wind	
													Sheet	Rill	Gully		
1	Agricultural (including fallow & Cultivable Waste Land)	5433	Coarse-loamy, AericFluvaquents	254	740	985	2460	1947	398	3145	1545	1298	4761	606	455	NA	
			Coarse-loamy, TypicFluvaquents														
			Coarse-loamy, TypicDystrochrepts														

* Soil texture (sandy-clay, clayey, loamy-clay, gravel)

Table No.3.13: Irrigation facilities:

1	2	3	4
S.No	**Type of the Source**	**Nos.**	**Command area (in ha)**
1	Ponds		
2	Open wells	532	
3	Bore wells		
4	Canal irrigation		
5	Natural spring head		

Table No. 3.14: Status of water table:

1	2	3	4	5	6	7	8
S.No	**Source (open well)****	**Plot No of the source**	**Name of the Owner***	**Date of recording**	**Depth of water table from ground level (in mts)**	**Source located at (ridge/middle/valley)**	**Remarks**
1	Open Well at Dhalpur		**Mohan Bora**	**Jan/2022**	**9.50**	**Ridge**	
2	Open Well at Ganakdoloni		**Raja Duwara**	**Jan/2022**	**10.12**	**Ridge**	
3	Open Well at Rangati		**Abul Handiqui**	**Jan/2022**	**8.75**	**Middle**	
4	Open Well at Simuluguri		**Pafula Bora**	**Jan/2022**	**7.50**	**Middle**	
5	Open Well at Da-Dhara		**Pradip Saikia**	**Jan/2022**	**8.25**	**Middle**	
6	Open Well at Futabhug		**Hiteswar Bora**	**Jan/2022**	**9.00**	**Ridge**	

**** Identify at least five representative open wells in the ridge/middle/valley portion. Collect the data at the time of DPR and maintain a register every Quarter**

Table No. 3.15: Assessment of drinking water facility:*

1	2	3	4	5
S.No	**Item**	**Units**	**Quantity**	**Source**
1	Drinking water requirement	Ltrs/day	5,5 lakh	
2	Present availability of drinking water	Ltrs/day	3.5 lakh	
3	No. of drinking water sources available	Nos	Open well-532	
a)	Functional	Nos	428	
b)	Need Repairing	Nos	90	
c)	Defunct	Nos	14	
4	Short fall if any	Ltrs/day	2 lakh	
5	No. of families getting drinking water from out side the Micro watershed area	Nos	nil	
6	**Requirement of new drinking water sources (if any)**	**Nos.**	Open-30 Tube well-25 Pond-25	

* based on the observation from the field

Table No. 3.16: Surface water resources

1	2	3	4	5
S.No	**Type of water resource**	**Nos**	**Area irrigated (Ha)**	**Storage capacity (Cu.m)**
1	Tank			
2	Pond	**56**		
3	Lake			
4	Check dam			
5	Percolation tank			
6	Channel/Canal			
7	Any others (specify----------)			

Data Source : From Field survey

Table No. 3.17 Ground Water Structures to be repaired.

S.No	Type of structure	No. available			
		No. to be Repaired	**No. to be rejuvenated**	**No. with no interventions required**	**Total**
	Pond	22	Pond 20		42
	Open well	15	8		23
	Tank	2	1		3
Total		**39**	**28**		**68**

Data Source : From Field survey

Table No. 3.18: Existing Water Saving Practices:

Name of the Major Crop	Area (Ha)				
	Under water saving devices[$]	Under water conserving agronomic practices#	Any other (Pl. Specify)	Total	Current water Saving status as against flood irrigation. (Cu.m)
Kharif					
Rice (Sali paddy)	Not in practice	Not in practice	Under rain fed condition		NA
Jute			Under rain fed condition		NA
Ravi					

Rape & Mustard		Organic farming	Under rain fed condition		
Gram			Under rain fed condition		
Potato			Under rain fed condition		
Zaid/ other crops					
Brinjal		Organic farming	Rainfed with Supplementary irrigation		NA
Maize			Rainfed		NA
Chilly		Organic farming	Rainfed		
Turmeric			Rainfed		NA

$: Sprinklers, Drip, PVC Pipe, etc.,

#: Vermi compost, organic manuring, check basin, alternate furrow, Ridges and furrow & specific practices

Table No. 3.19: Details of existing livelihoods

1	2	3					4
S. No.	Name of activity	**No. of beneficiaries**					Pre-project average income per HH (Rs.)
		SC	ST	Others	Total	Women	
1	Cultivation of Agriculture crops	1719	1700	5179	8598	4092	6859
2	Service						
3	Fish Production	89	23	12	124		2400
4	House hold industry	11	19	69	99		12000
5	Livestock rearing	100	116	300	516		5000
6	Wage earner under MGNREGA	510	511	1535	2556		11000

Data Source : From Field survey

Table No. 3.20: Existing functional assets (Works already completed under different schemes including works undertaken by farmers independently)

1	2	3	4	5	6
S.lNo	**Name of the work**	**Plot No.**	**Quantity (No./RMTs)**	**Amount spent (Rs.)**	**Programme**
		No significant works Undertaken			

Table No.3.21 PROBLEM TYPOLOGY OF THE WATERSHED

1	2	3	4
S.No	**Problem area**	**Problem analysis**	**Proposed interventions to overcome problems**
1	**Soil Conservation** (slope, erosion, soil loss, rainfall, productivity, etc)	1. Soil Erosion, Siltation & high soil loss in upland area. 2. Sheet erosion is combatively high in many places. 3. Eratic Rainfall	1. Construction of graded bund, field bund andcontour bund to protect the soil erosion and siltation problems.

2	**Water conservation** (Water budget, Ground water norms, productivity)	1. Degradation of Natural Resource like congestion of natural drainage, 2. Lack of water storage facility cause scarcity of water during winter. 3. Run-off originated from seasonal rain attains high velocity due to medium to steep prevailed in the watershed and thereby causes all types of soil erosion hazards. 4. Lack of Irrigation Facilities resulting mono cropping	1. Restoration of drainage channel by excavation and reclamation. 2. Reclamation of natural water bodies (beels) by excavating and constructing periphery bund etc. Increase water storage capacity. 3. Construction of Farm Pond for water harvesting/storage. Along with water distribution channel for irrigation. 4. Construction of RCC Check Dam for water harvesting and distributed through earthen channel, brick canal etc. 5. Construction of Nullabund to check the water stagnant/waterlogging problem.
3	**Crop coverage** – {80% of w/s area should be with canopy}	1. Rabi crop area is very low because of lack of irrigation facilities. 2. Mono cropping 3. Inundation problem during summer (kharif) 4. Low vegetative cover	1. Agro-forestry, fuel wood plantation 2. Turmeric & Banana Plantation
4	**Agriculture productivity** (crop wise compare with dist. average)	1. Low agricultural productivity due to high flood during summer, lack of irrigation facility, erratic and uncertain rainfall, low cropping intensity, lack of location-specific technologies to match the high ecological diversity of rainfed area etc.	1. Brick canal and water storage farm pond for irrigation for both Rabi &Kharif crop.

5	**Livestock productivity** (Milk Yield, Meat yield, Eggs, Wool Yield, Kidding etc.)	1. Scarcity of fodder during flood period. 2. Lack of secure shelter during flood period 3. Inadequate nutrition due to lack of grazing land. 4. Diseases which reduce the production potential of livestock.	1. Promotion of Marketing facilities through SHG 2. Promotion of Piggery, goatery, Duckery and Poultry farming activities.
6	**Existing Livelihood activities for Asset less persons**	1. Less income generating activities. 2. Their present occupation is Daily Labour, Rikswa Pullers etc.	1. Promotion of Piggery, goaery, Duckery and Poultry farming activities. 2. Promotion of weaving activities for asset less woman.
7	**Community Based Organizations & Social capital base**	1. Most of the SHG are not functional.	1. Formation of SHG, User groups for promotion of various income generating activities
8	**Capacity Building** (participation, training,awareness of watershed community	1. In many villages it is observed that the Participation in Gram Sabha is very low due to lack of awareness towards watershed development activities.	1. Conducting Awareness programmes among the villagers. 2. Providing training in respect to each activities proposed for watershed development as well as livelihood generation. 3. Exposer visit of farmers and other PIA official and conducting exhibition, seminer etc.
9	**Others (specify)**	1. Lack of Marketing Facilities	1. Providing Market Promotion Centres along with Low Cost go-down for storage of various products.

CHAPTER – 4

INSTITUTIONAL BUILDING AND PROJECT MANAGEMENT

As per the Common Guidelines of WDC-PMKSY 2.0, the major thrust will be to develop the rainfed area with the help of suitable soil & water conservation measures, recharge the ground water table, restore the degraded ecosystem, to increase the vegetative cover immediately. Secondly, it is proposed to provide alternative and self-sustaining occupation to the people for both asset-less poor and the farmers keeping in view to the low technology and traditional occupation. An integrated approach of watershed management with due emphasis on afforestation, pasture development, scientific agriculture through various soil conservation measures, horticulture, pisciculture, sericulture, etc. will obviously be most suited to the area. Agriculture

Suggested Land Use Management:

The following suggestions which will serve as general guidelines for cropping and other management practices to be followed in different situations.

1. Deep to very deep clayey soil of nearly level to very gentle slopping

Land: This type of soil is characterized by high water holding capacity is the best soil within the project area. If conservation measures like bunding and strip cropping are undertaken, both summer and winter paddy can be successfully grown. Considering the characteristics, qualities and behavior of soil under different management level, soils of this type is highly suitable for paddy, cowpea, mustard, etc.

2. Deep to Very Deep Sil Clay Laom Soil:

This type of soil has got low water holding capacity and it is generally found by the riversides and are very fertile. The soils are medium in organic carbon content. Soil conservation measures like graded bunding, contour tillage and leveling are required to be undertaken for better cultivation. If irrigated, crops like cowpea, green gram, mustard and other vegetables can be grown successfully. DPR for Lakhimpur –I/2021-22 (Sessa) WDC-PMKSY, 2.0, Lakhimpur, Assam

3. Deep to Very Deep Clayey Soils with Gently Slope and Excess Water:

Water holding capacity of this type of soil is very high. Presently soils are cultivated with low-lying paddy crops. The very low water-logged area can be used for Bodo paddy cultivation or for fishery. Piggery and Poultry farming can be done on embankment of fishery ponds. Pisciculture has got potential in this soil. Planting of coconut tree along the banks can be done.

4. Deep to very Deep Clayey Soils with Gently Slope, Undulated and Rolling Land:

Water holding capacity of this type of soil is moderately high. Presently, this type of soil is under tea plantation in scattered. Soil conservation measures proposed such as contour bunding and strip cropping to check run-off is suggested. Afforestation and other horticultural and cash crop plantation work can also be taken up here. In addition to above, other engineering structures and land development works could be undertaken in accordance with the site specific requirements throughout the project area.

Protective Afforestation & Afforestation Programme

A good part of the project area is earmarked for Afforestation programme. Areas under community land, homesteads, roadsides, river-banks, etc. are to be covered by this programme. If the programme is implemented in full within the project period, it will give a very high percentage of vegetative cover. The protective Afforestation of private land and Afforestation of community and institutional wasteland will be raised and maintained by the department of soil conservation for the project period and thereafter its usufruct rights would be defined in the project consolidation phase. Apart from these, it is proposed to take up tree plantation on road sides, river banks, etc. all the plantations require protective measures from cattle and other animals in early stage and should have strong protective social fencing.

4.4. Capacity Building:

Capacity Building is the process of assisting the group or individuals to identify and address issues and gain the insights, knowledge and experience needed to solve problems and implement change. There is a realization in the development sector that there is a need to appraise the success of development interventions by going beyond the conventional development targets and measures of success (e.g. in the form of commodities, goods and services) to take into account improvements to human potential. Capacity building of stakeholders is also increasingly viewed as an important factor in developmental projects that involve participation of stakeholders at all levels for effective implementation of projects.

SCOPE OF CAPACITY BUILDING AT DISSOISUTI WDC-PMKSY 2.0, 2021-22

I. Livelihood Generation

• Handloom & Weaving, Goattery, Duckery, Poultry, Sewing Machine

II.Production System & Micro enterprise

• Horticulture, Piggery, Fishery, Goattery.

CHAPTER – 4

Institutional Building and Project Management

Table No. 4.1 Details of SHGs & UGs newly formed under IWMP:

1	2	3				4				5			6			7			8			9	
Sl. No.	Type of Group	Total no. of CBOs				No. of members				No. of ST in each category			No. of SC in each category			No. of Others in each category			No. of BPL in each category			Bank linkage	
		With only Men	With only Women	With both	Total		M	F	Total	M	F	Total	M	F	Total	M	F	Total	M	F	Total	No. of SHGs	Amount (Rs)
						(i) Landless	450	650	1100	36	50	86	44	90	134	370	510	880	450	650	1100		
						(ii) MF	170	380	550	4	25	29	16	28	44	150	327	477	86	75	161		
						(iii) SF	80	110	190	0	14	14	10	20	30	70	76	146	0	0	0		
	SHG	150	220	20	390	(iv) LF	8	20	28	2	6	8	0	0	0	6	14	20	0	0	0		
1	**Total**						**708**	**1160**	**1868**	**42**	**95**	**137**	**70**	**138**	**208**	**596**	**927**	**1523**	**536**	**725**	**1261**		
						(i) Landless	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
						(ii) MF	1135	65	1200	142	4	146	98	12	110	895	49	944	0	0	0		
						(iii) SF	475	22	497	7	2	9	27	5	32	441	15	456	0	0	0		
2	UGs	80	-	35	115	(iv) LF	28	0	28	0	0	0	0	0	0	28	0	28	0	0	0		
	Total						**1638**	**87**	**1725**	**149**	**6**	**155**	**125**	**17**	**142**	**1364**	**64**	**1428**	**0**	**0**	**0**		

4.2: Details of Watershed Committees (WC)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Name of WCs	Date of Registration as a Society (dd/mm/ yyyy)	No. of members in WC	Designation	Name	M/F	SC	ST	SF	MF	LF	Land-less	UG	SHG	GP	Any other	Educl qualifi-cation	Function/s assigned#
						Write **"Yes"** if applicable											
Dhalpur MWS	Under Process	10 Nos	Chairperson	Dulu Sharmah	M											B.A	
			Secretary	Chanda Borah	M											B.A	
			Co-Chairperson	Pallavi Saikia	F								Yes			B.A	
			Member	Chanda Kamal Bora	M											B.A	
			Member	Jayanta Sarma	M											B.A	
			Member	Tangkeswar Neog	M											B.A	
			Member	Arup Hazarika	M	Yes										B.A	
			Member	Rebat Saikia	M											B.A	
			Member	Luice Bonia	M	Yes										B.Com	

			Member	Lekhan Baruah	M											B.A	

4.2: Details of Watershed Committees (WC)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Name of WCs	Date of Registration as a Society (dd/mm/ yyyy)	No. of members in WC	Designation	Name	M/F	SC	ST	SF	MF	LF	Land-less	UG	SHG	GP	Any other	Educl qualifi-cation	Function/s assigned#
						Write **"Yes"** if applicable											
Sessa Miri MWS	Under Process	10 Nos	Chairperson	Sanjib Duwara	M											B.A	
			Secretary	Jibon Boruah	M											B.A	
			Co-Chairperson	Jonti Saikia	F								Yes			B.A	
			Member	Bivisan Pegu	F		Yes									B.A	
			Member	Madhu Baruah	M											B.A	
			Member	Simanta Bora	M											B.A	
			Member	Rubul Das	M	Yes										B.A	
			Member	Ghansiyam Baruah	M											B.A	
			Member	Kirti Kanta Das	M	Yes										B.A	
			Member		M											B.A	

4.2: Details of Watershed Committees (WC)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Name of WCs	Date of Registration as a Society (dd/mm/ yyyy)	No. of members in WC	Designation	Name	M/F	SC	ST	SF	MF	LF	Land-less	UG	SHG	GP	Any other	Educl qualifi-cation	Function/s assigned#
						Write **"Yes"** if applicable											
Rangati MWS	Under Process	10 Nos	Chairperson	Girish Changmai	M											B.A	
			Secretary	Ananda Handique	M											B.A	
			Vice Chairperson	Babita Changmai	F		Yes						Yes			B.A	
			Member	Sunil Prasad	M	Yes										B.A	
			Member	Prabitra Gogoi	M											B.A	
			Member	Tiluson Konwar	M											B.A	
			Member	Mridul Dihingia	M											B.A	
			Member	Baba Borah	M											B.A	

			Member	Jayanta Goswami	M											B.A	
			Member	Puneswar Phukan	M											B.A	

4.2: Details of Watershed Committees (WC)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Name of WCs	Date of Registration as a Society (dd/mm/ yyyy)	No. of members in WC	Designation	Name	M/F	SC	ST	SF	MF	LF	Land-less	UG	SHG	GP	Any other	Educl qualifi-cation	Function/s assigned#
						Write **"Yes"** if applicable											
Nimuri MWS	Under Process	10 Nos	Chairperson	Purandar Baruah	M											B.A	
			Secretary	Kinaram Konwar	M											B.A	
			Vice Chairperson	Anjali Basumotary	F		Yes						Yes			B.A	
			Member	Bitupan Phukan	M											B.A	
			Member	Jadav Ch. Dowarah	M											B.A	
			Member	Dipak Saikia	M											B.A	
			Member	Biswajit Hazarika	M											B.A	
			Member	Dilip Gogoi	M											B.A	
			Member	Gobin Gogoi	M											B.A	

			Member	Manika Nazari	F		Yes						Yes			B.A	

(NOTE- Member wise details of SHGs, UGs & Watershed Committee has to be enclosed as annexures. The details includes the Name, Husband name and Caste)

In column 18 only the letter assigned, as below, needs to be typed, except for `J', where the type may be specifically mentioned.

A. PNP and PRA
B. Planning
C. Maintenance of Accounts
D. Signing of cheques and making payments
E. Supervision of construction activities
F. Cost Estimation
G. Verification & Measurement
H. Record of labour employed
I. Social Audit
J. Any other (please specify).

Table No 4.3: WDT Particulars:

1	2	3	4	5	6	7
S.No	Names of WDT members	M/F#	Age	Qualification / Experience	Description of professional training	Role/ Function*
1	Sri Kiran Kr. Singha	M	37	Diploma in Civil Engg.	3 Years Diploma	ACDEFGH
2	Sri Jamini Mohan Das	M	36	Diploma in Textile Engg.	3 Years Diploma	ACDEFGH
3	Sri Deba Moni Hazarika	M	42	M.Sc. (Agri)	Training on Watershed Management.	B & E

*In column 7 only the letter assigned, as below, needs to be typed, except for `J', where the type may be specifically mentioned.

A. PNP and PRA
B. Planning

C.	Maintenance of Accounts	D.	Signing of cheques and making payments
E.	Supervision of construction activities	F.	Cost Estimation
G.	Verification & Measurement	H.	Record of labour employed
I.	Social Audit	J.	Any other (please specify).

Table No. 4.4: PIA particulars

1	2	3
S.No	**Particulars**	**Details of PIA**
1.	Type of organization#	Nodal Department, Department of Soil Conservation, Govt. of Assam
2.	Name of organization	Department of Soil Conservation, Assam
3.	Designation & Address	Divisional Soil Conservation Officer, Lakhimpur Soil Conservation Division, Lakhimpur, Assam
4.	Telephone	7002201139
5.	Fax	NA
6.	E-mail	soil.lakhimpur@gmail.com

In column no. 8.1.6 (1), only the letter assigned to each type, as given below, needs to be typed.

A Line Dept. B Autonomous organization

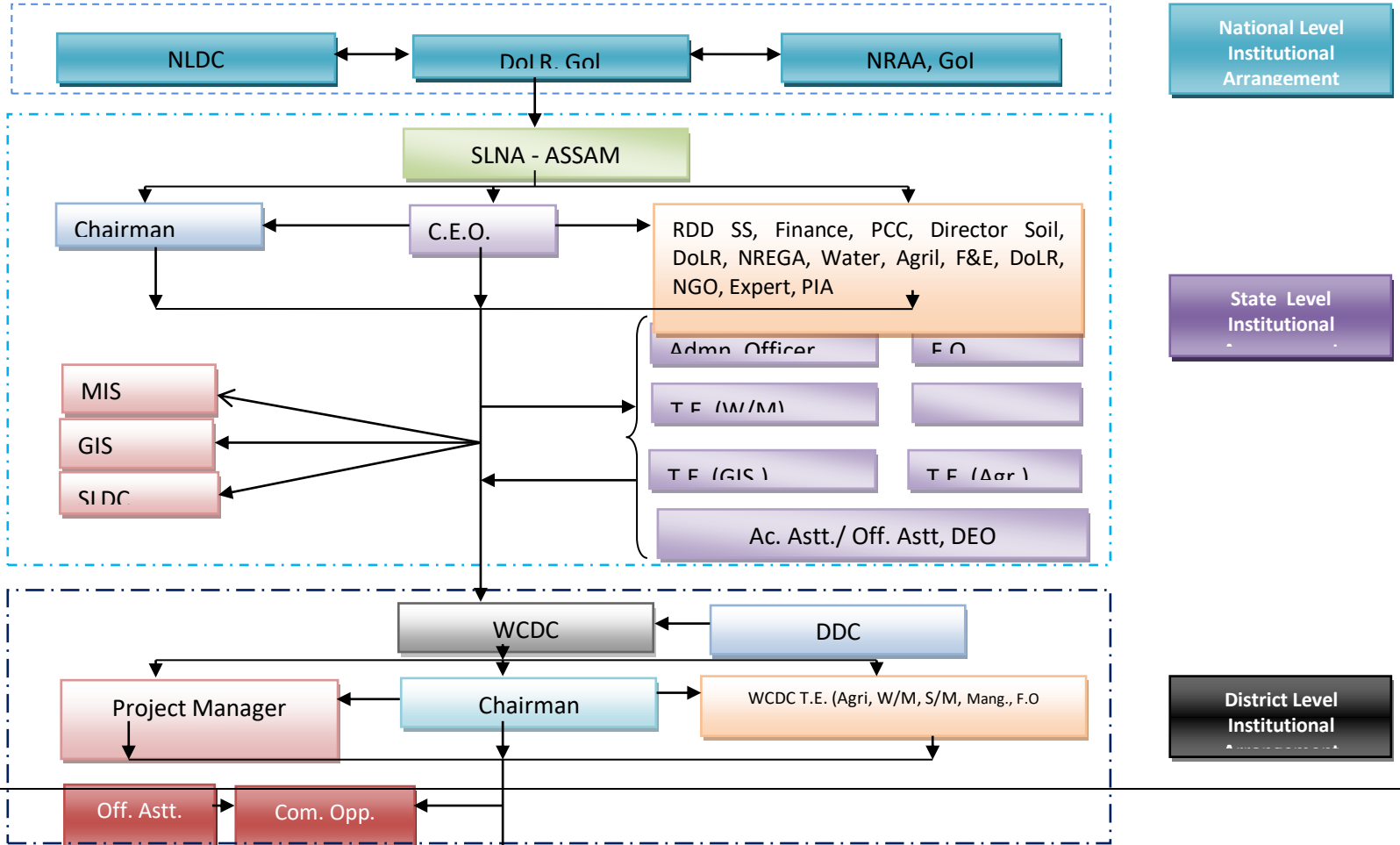
C	Govt. Institute	D	Research Bodies
E	Zila Parishad	F	Intermediate Panchayat
G	Voluntary Organisations	H	Any other (please specify).

Table No. 4.5 Bank Account Details

Name of WC/PIA	Name of the Bank/Place	Account No.	Name of the Signatory	Address
PIA Lakhimpur-WDC-1/2021-22	SBI Bazar Branch, Lakhimpur	40754231089	Divisional Officer, Lakhimpur Soil Conservation Division, Lakhimpur	Office of the Divisional Officer, Lakhimpur Soil Conservation Division, Japisajia, North Lakhimpur
LAK-1_Dhalpur MWC	SBI Angerkhowa Branch, Lakhimpur	40969360044	Kiran Kr. Singha, JE Dulu Sharma, Chairperson of MWC	
LAK-1_Sessa Miri MWC		40969360077	Kiran Kr. Singha, JE Sanjib Dowarah, Chairperson of MWC	
LAK-1_Rangati MWC		40969360099	Jamini Mohan Das, i/C Range Officer Girish Chanmai, Chairperson of MWC	
LAK-1_Nimuri MWC		40969360113	Jamini Mohan Das i/C Range Officer Purandar Borah, Chairperson of MWC	

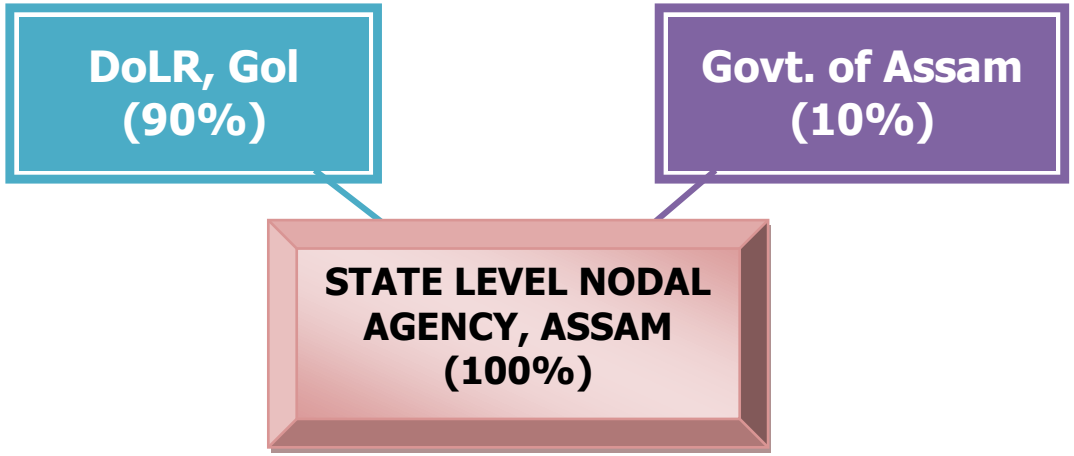
**** Institutional Mechanisms:***

Fig. 11 Flow Chart of Institutional Arrangement from District to watershed level



NLDC	National Level Data Centre	**DoLR**	Department of Land Resource
NRAA	National Rainfed Area Authority	**SLNA**	State Level Nodal Agency
C.E.O	Chief Executive Officer	**MIS**	Management Information System
GIS	Geographical Information System	**SLDC**	State Level Data Cell
F.O.	Financial Officer	**T.E.**	Technical Expert
DEO	Data Entry Operator	**DWDU**	District Water Development Unit
DDC	District Data Cell	**WC**	Watershed Committee
PIA	Project Implementation Agency	**PIU**	Project Implementation Unit
WDT	Watershed Development Team	**SHG**	Self Help Group
WDTM	Watershed Development Team Member	**UG**	User Group

4.6.2 Fund Flow mechanisms – flow chart,



4.6.3 List of Watershed Records to be maintained

A) AT WATERSHED COMMITTEE LEVEL

- Registration Certificate
- Bylaws
- Detail Project Report
- Annual Action Plan
- Cash Book
- Project Fund Passbook
- Watershed Development Fund Pass book
- Ledger Book
- Asset Register
- Vouchers
- Land Details
- Measurement Book

- Audit Report/ Social Audit Report
- Photo Documents
- Project Completion Report
- Common Guidelines
- MoU between Watershed Committee and Project Implementing Agency
- Revenue Records.

B) AT PROJECT IMPLEMENTING AGENCY LEVEL

- Cash Book
- Computerized Accounting System
- Vouchers

4.7 Documents of Agreements:

4.7.1) Watershed Committee Registration certificate - (under Process)

4.7.2 MoU – PIA – WCDC, PIA – WC - (under Process)

4.7.3 Resolution of Gram Sabha ,AamSabha, WC approving action plan#

#the resolution should be done village wise and needs to be approved in Gram/AamSabha

Institutional Mechanisms: (Enclose the following documents)

4.6.1 Flow Chart of Institutional Arrangement from District to watershed level

4.6.2 Fund Flow mechanisms – flow chart,

4.6.3 List of Watershed Records to be maintained

Documents of Agreements:

4.7.1) Watershed Committee Registration certificate

4.7.4 MoU – PIA – WCDC, PIA – WC

4.7.5 Resolution of Gram Sabha ,Aam Sabha, WC approving action plan#

#the resolution should be done village wise and needs to be approved in Gram/Aam Sabha

4.8 Project Implementation

Project Implementation Strategy including coordination and monitoring of implementation process, DWDU and other coordination mechanism. (Describe in detail).

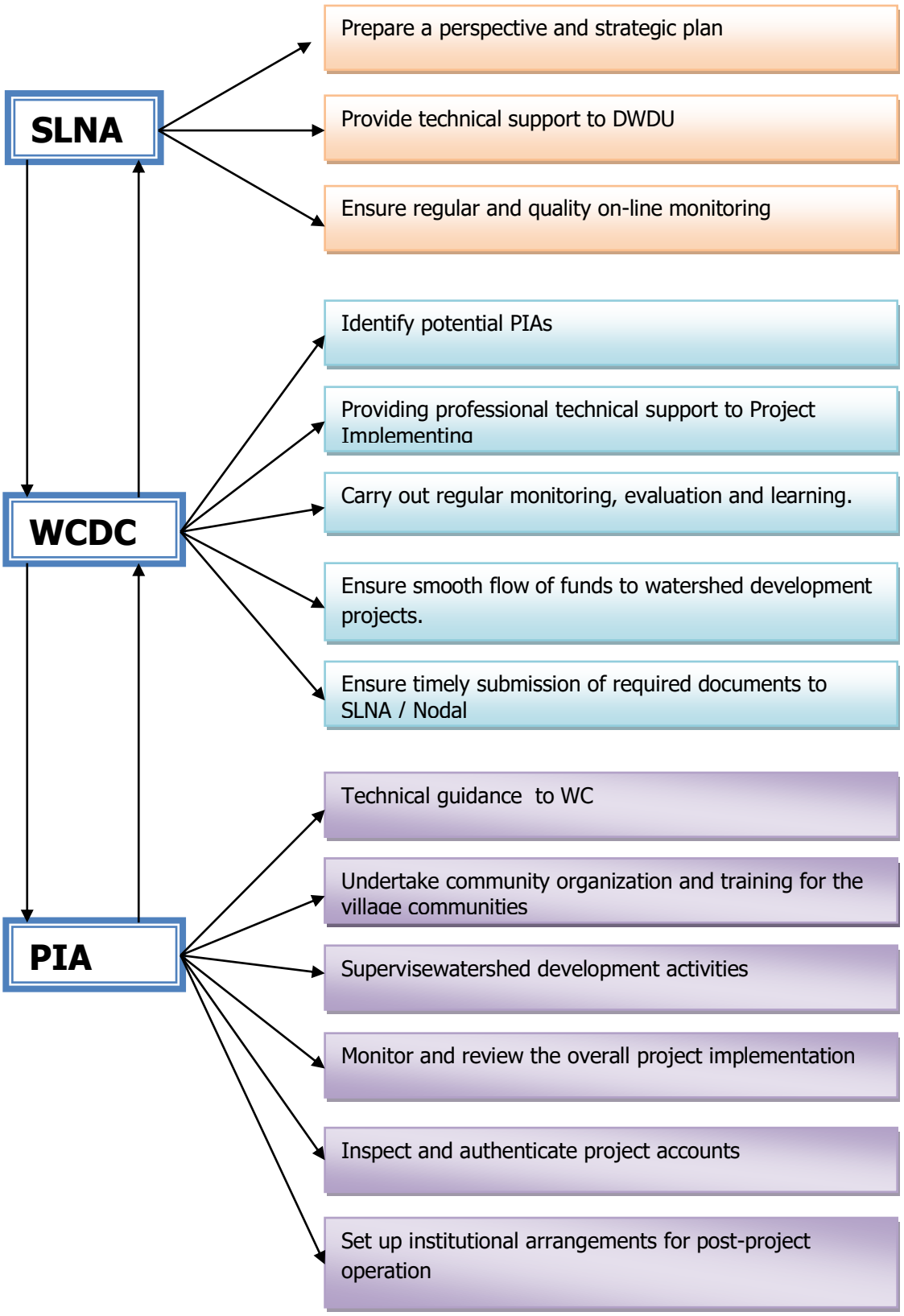
Table No. 4.8 Convergence plan with IWMP:

1	2	3	4	5	6	7
S. No.	Names of Departments with Schemes converging with IWMP	Name of activity/task/structure proposed under convergence (a) Structures (b) livelihoods (c) Capacity Building (d) Any other (pl. specify)	Period of Support (Years)	Reference no. of activity/ task/ structure in DPR	Estimated Fund Proposed Under Convergence (in Rs.)	Level of decision taken for convergence Block/district
1	DRDA	Land Development by Contour Bund	2nd ,3rd, 4thand 5th Years	Dhalpur MWS, Sessa Miri MWS, Rangati MWS and Nimuri MWS		Divisional Officer S.C. Division
2		Boulder Gabion				
3		R.C.C Water Harvesting Structure				
4		Contour Bund				
5		Farm Pond				
6		Water Distribution Channel				
9		Horticulture Plantation				

Source :Baseline survey, Ref. Yr 2022,

PIS	Tasks	Responsibility
Project Co-ordination	Immediate corrective action for problem encountered	WCDC, Project Manager, WDT Member
	Create Relationship among staff and Institution	Project Manager
	Team Building & Capacity Building	WCDC/PIA/Project Manager
	Co-operation and Network Development	WCDC/PIA/Project Manager
Project Management & Controlling	Progress of Project	Project Manager
	Report generating to account project activities and financial statement	PIA/ Project Manager
	Performance monitoring	PIA/ Project Manager/WCDC
Monitoring	1st Level Monitoring Staff Performance Work Performance Target achievement	WCDC/Project Manager/PIA
	2nd Level Monitoring Work Quality Deviation Report Financial statement	WCDC/ Third Party

Role & Responsibility of different Institution during Project Implementation



CHAPTER – 5

Management/Action Plan

CHAPTER – 5

Management/Action Plan

Description on methodology of plan adopted

a) Awareness generation interventions :

i. Awareness campaign through Gram Sabha in each villages of watershed area. Awareness generation programme will be conducted for all project stakeholders at watershed level with the basic purpose of educating them and creating more interest regarding various aspects of the WDC-PMKSY 2.0 project.

ii. Awareness campaign through distribution of pamphlet and brochures describing about the WDC-PMKSY 2.0 project.

b) **Initial Orientation program:** For successful completion of the project, orientation of both project personnel and watershed communities according to the changing perspective is imperative and it will enhance skills and competence of project staff to work with the villagers. Various training, awareness programme and seminar shall be conducted to build necessary skills and competence among the project officials, PRIs, especially GPs and other Communities Based Organizations (CBOs) about planning, implementation and management of various project activities.

c) **Formation process UGs & Watershed Committee:** The User Group and Watershed Committee are formed through Gram Sabha and awareness programme.

d) DPR preparation process:

In consideration of the objective & terms of reference of the programme, the Methodology adopted for preparing the DPR are-

A. Survey :

1. Socio-Economic Survey:

a) Collection of data to find out the strength, weakness, opportunity and threat of the project area and assessment of local resources. It also includes collection of water sample, soil sample and testing shall be done in laboratory to find out its problem & prospects.

b) Total household enumeration – includes collection of household data related to social as well economic status of the member. It also includes Land use, Agriculture including area, productivity, cropping intensity, Horticulture, Livestock and Fisheries, Forests and Grass land, Livelihood Status, Hydrology and Water Resources, Soil and Moisture Conservation and Efficient use of Water.

2. Physiographic Survey:

a. A Physical survey has conducted using GPS/Total Station in the study area to identify the location, distribution and availability of the local resources and to identify the location, morphology and other physiographic conditions that proposed for any intervention.

b. Collection of satellite imagery, toposheets, weather data, data related to natural calamities like damage by flood, earthquake etc.

B. PRA:

After collection of baseline data of the study areas PRA has conducted among the villagers in village level to find out the intervention which are proposed for implementation. The PRA The process is expected to enhance identification of the felt needs of the people, bringing forth consensus, the empowerment of local disadvantaged groups, integration of local knowledge systems into project design, two-way learning process between the project and local people, political commitment and support, accountability in local governance. The PRA methodology utilizes different tools to seek its goal of a participatory approach for addressing any issue. The following tools were used by the research team in the exercise under consideration:

a. **Resource mapping:** Resource Mapping has done to identify valuable resource, and to ensure that everyone has access to the resources they need, avoid duplication of services and resource, enhance service, Identify flexible funding strategies, use data to make informed decision and cultivate new partnerships and relationship.

b. **Social mapping:** Social mapping is used to present information on village layout, social infrastructure, demography, language-religion-culture groups, health, wealth, other, etc. This provides an overview of the socio-economic aspects.

c. **Focus Group Discussion:** A focus group discussion (FGD) is a group discussion of approximately 6 - 12 persons guided by a facilitator, during which group members talk freely and spontaneously about a certain topic. A FGD is a qualitative method and its purpose is to obtain in-depth information on concepts, perceptions and ideas of a group. A FGD aims to be more than a question-answer interaction. The idea is that group members discuss the topic among themselves, with guidance from the facilitator. A FGD also helps to bring out the perceptions of the weaker stake-holders in an issue, which otherwise will not come up.

d. **Transect Walk:** A transect walk is a walk taken by participants and facilitator through the area of interest, observing, asking, listening, looking, identifying different zones, seeking problems and possible solutions. The finding are documented and they can be mapped on to a transect diagram or map. Transects are an ideal point of departure for a research/planning process in a village, because we consider the villagers as the experts on living condition of that area.

e. **Seasonality:** Seasonality analysis has done to identify seasonal resources. Water availability in different sources at different times, cropping pattern is clearly recognized through seasonality tool.

f. **Trend line:** In Trend-line, graphs are created for long-term changes over time based on the local people's accounts of the past, of how things close to them have changed - ecological histories, land use and cropping patterns, customs and practices, trends in fuel use, etc. Although secondary data may be available on these, a local perspective facilitates the design of development initiatives.

g. **Time line:** Time line has helped us in identifying important past events. With this information the team is better informed about the area, community, progress and the problems. The team conducted semi-structured interviews to obtain oral histories of past events. These oral histories can provide details on local events, how the community perceived them, and the eventual impact of these events on the local area and the community.

C. Analysis: Considering the objective of the study analysis has been done -

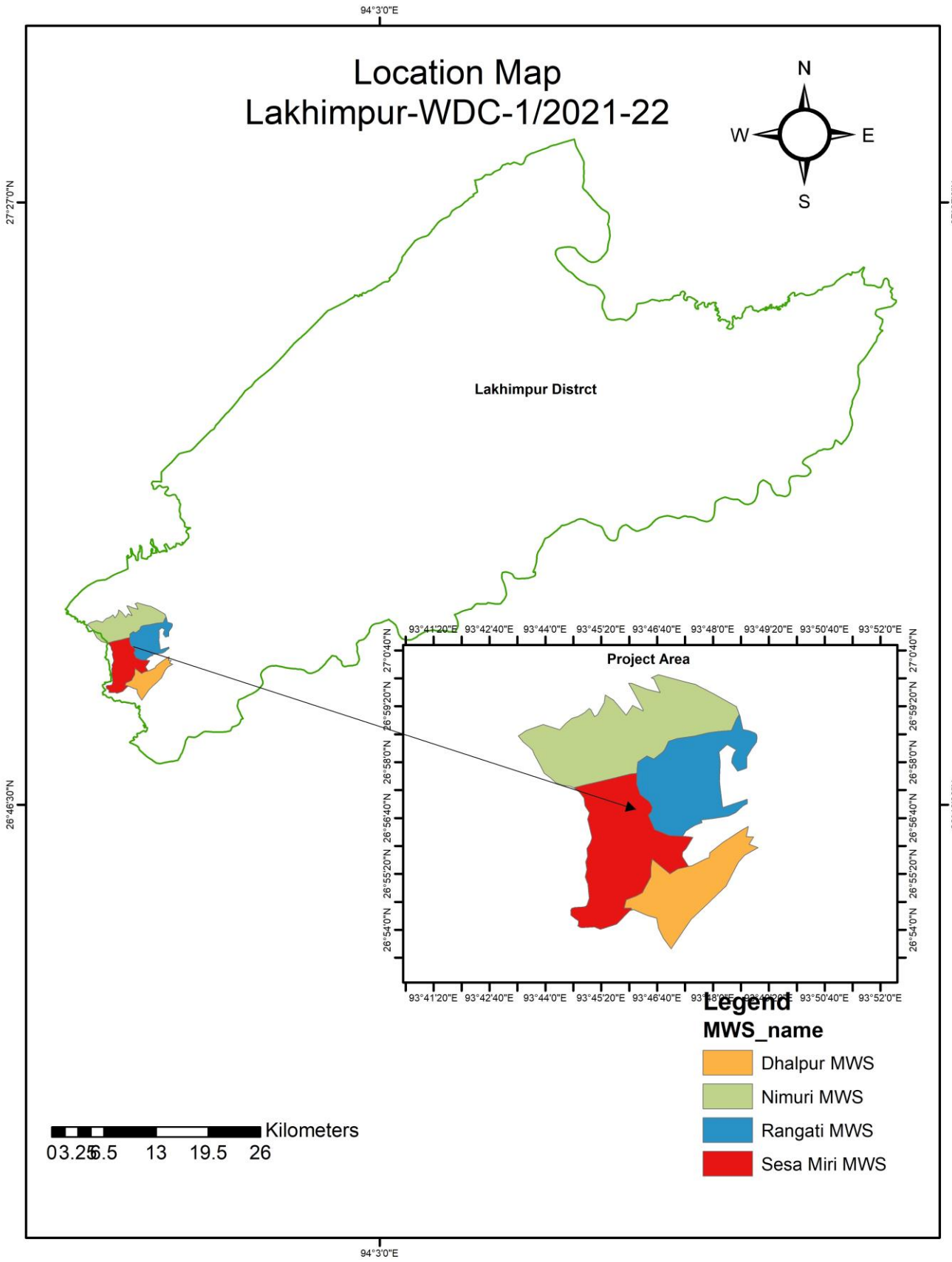
i. Analysis of Household data (Which shall include socio-economic data)

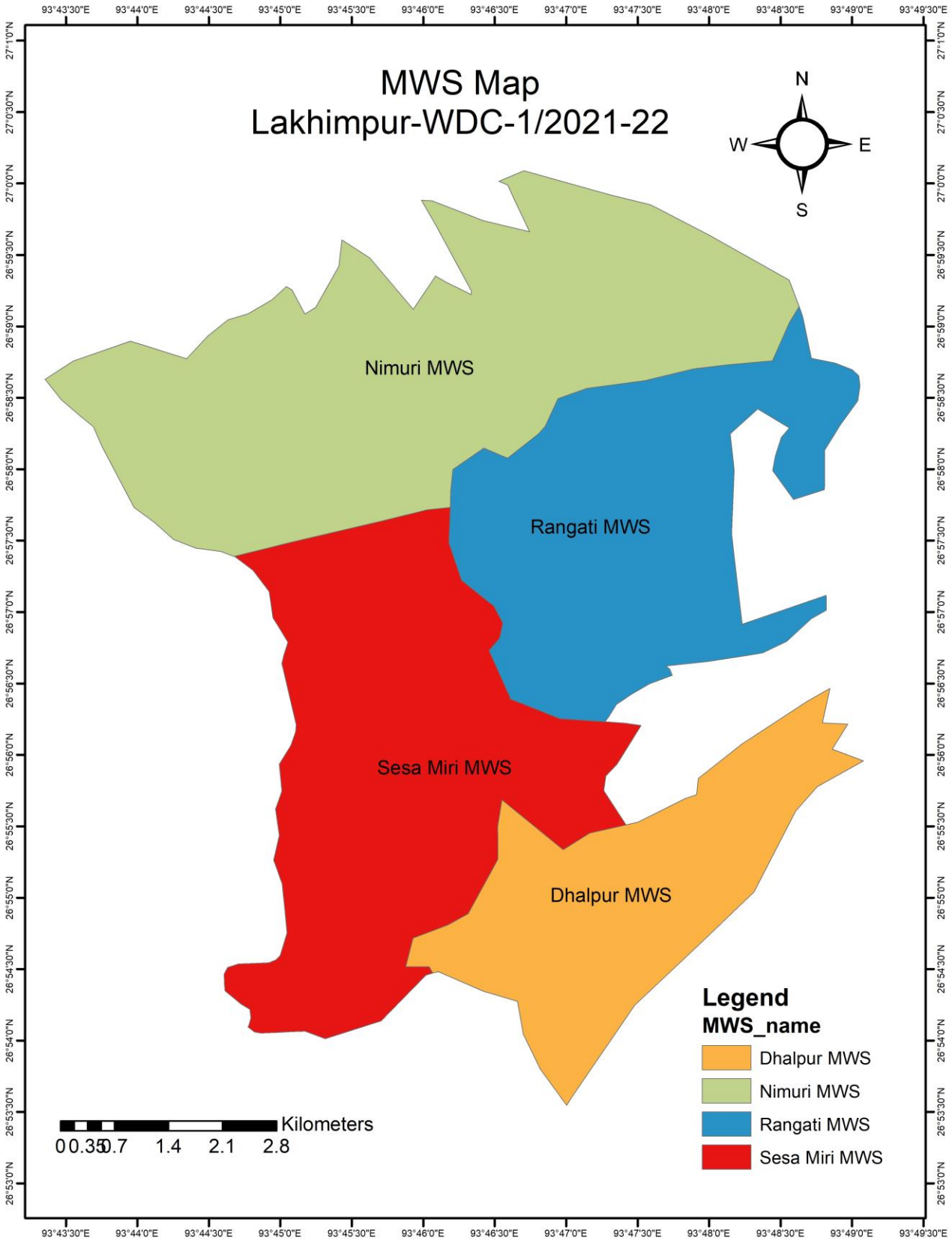
ii. Analysis of physical data (Weather Data, Soil, water quality, flood etc.)

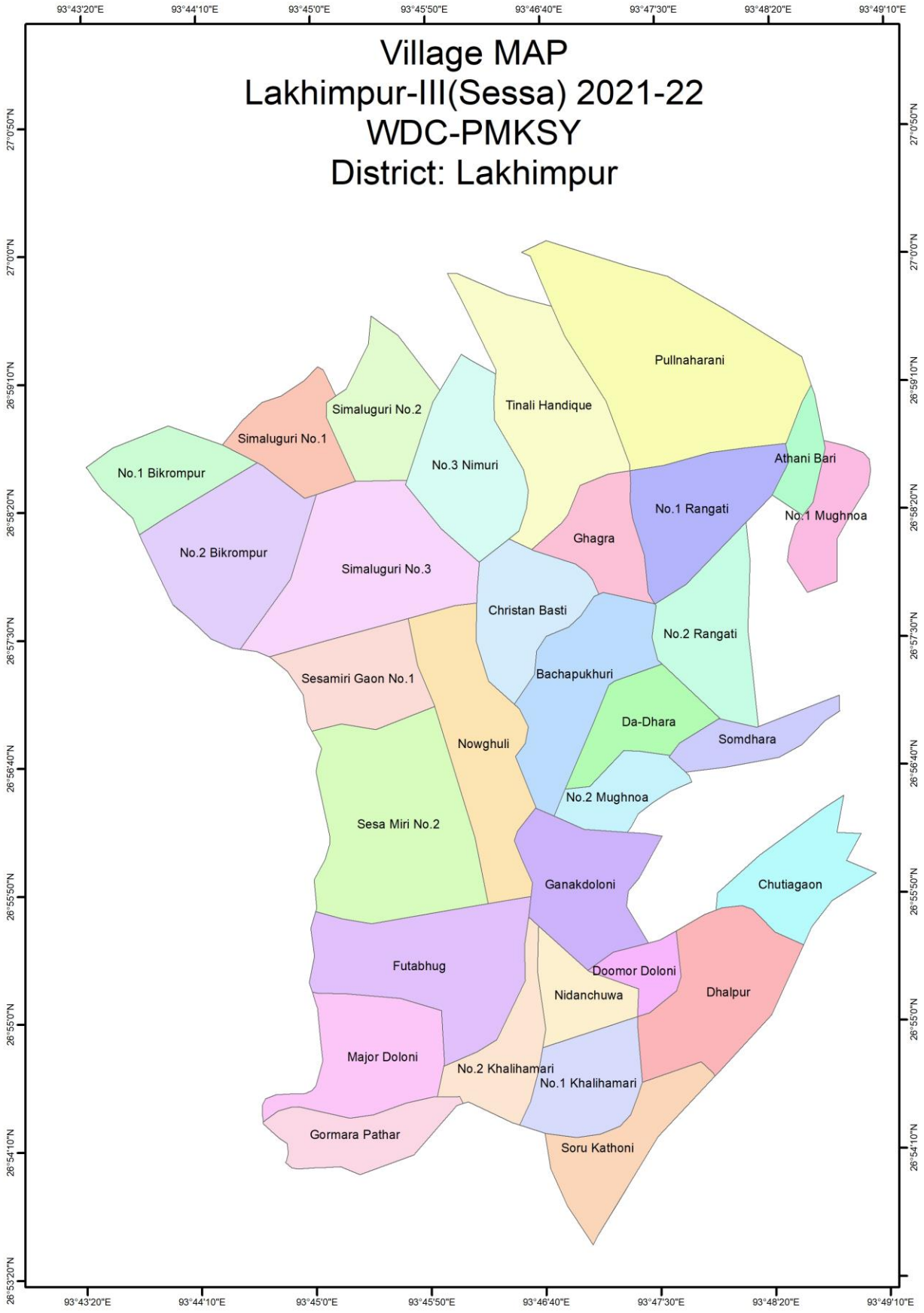
iii. Analysis of data collected for proposed Intervention and its outcome etc.

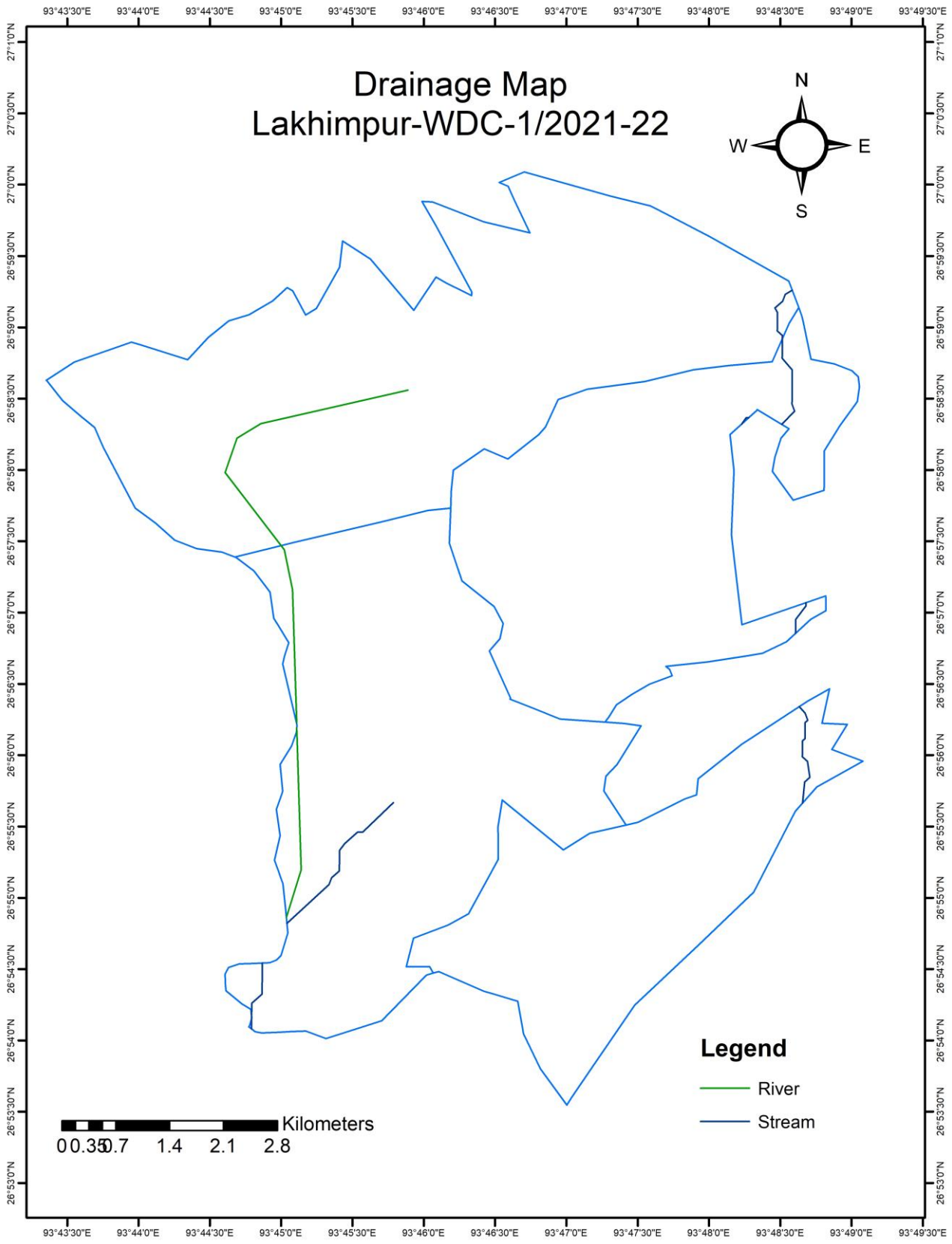
D. Mapping: Mapping and analysis have done in GIS Platform using ARC GIS and the Satellite Image interpretation shall be done by ERDAS Software. The data that collected for any intervention has analyzed in GIS Platform using satellite imagery and Google Earth. The following Maps for the study shall be prepared using GIS-

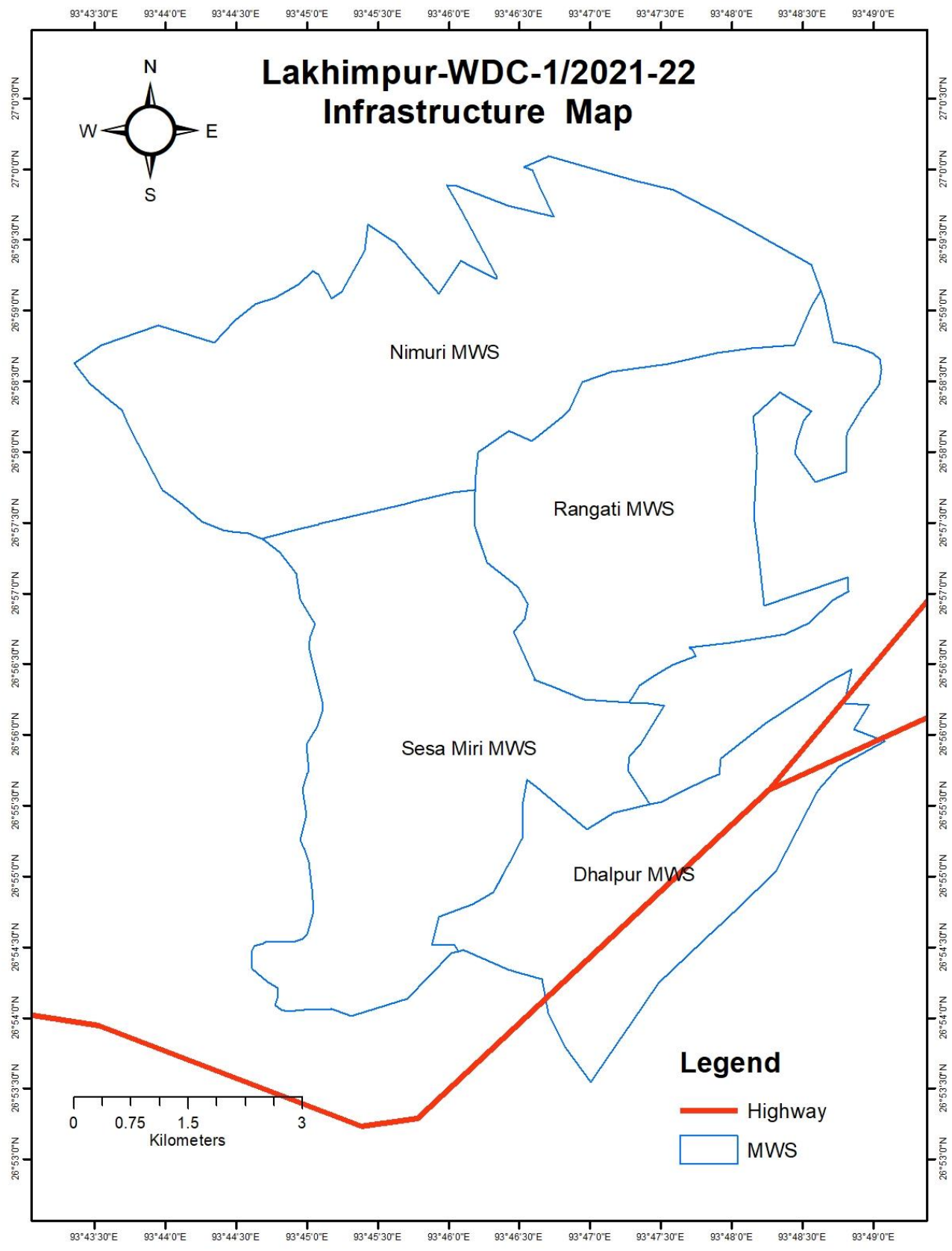
a. Location Map
b. Watershed Map
c. Village Map
d. Drainage Map
e. Infrastructure Map
f. Contour Map
g. Flow Accumulation Map
h. Flow Direction Map
i. Land Use Land Cover Map
j. Slope Map
k. Soil Map
l. Map showing Proposed Intervention in Different phase
m. DEM Map
n. Satellite Map

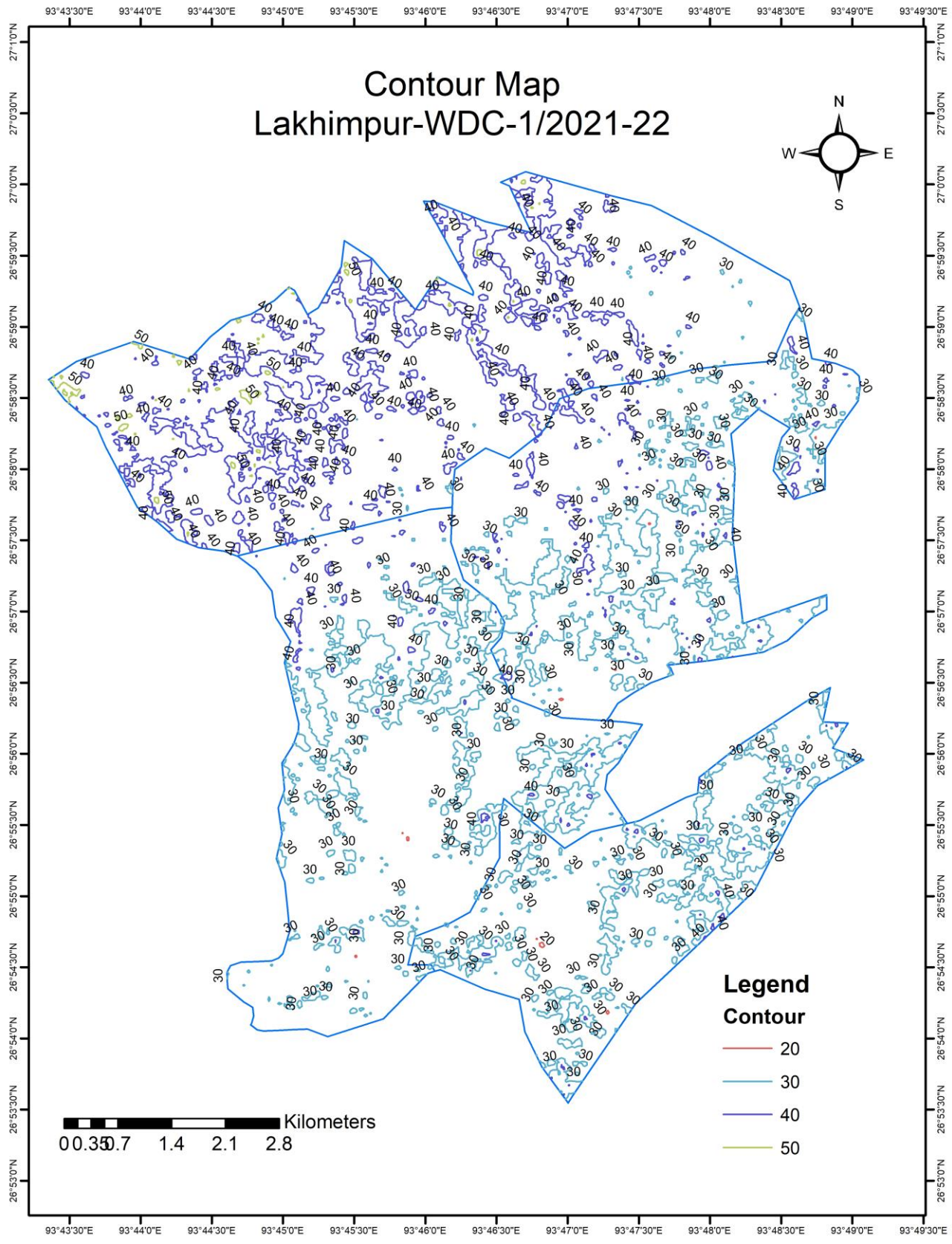

Location Map
Lakhimpur-WDC-1/2021-22
N
W
E
S
94°3'0"E
27°27'0"N
26°46'30"N
Lakhimpur Distrct
Project Area
93°41'20"E
93°42'40"E
93°44'0"E
93°45'20"E
93°46'40"E
93°48'0"E
93°49'20"E
93°50'40"E
93°52'0"E
27°0'40"N
26°59'20"N
26°58'0"N
26°56'40"N
26°55'20"N
26°54'0"N
Legend
MWS_name
Dhalpur MWS
Nimuri MWS
Rangati MWS
Sesa Miri MWS
Kilometers
0 3.25 6.5 13 19.5 26

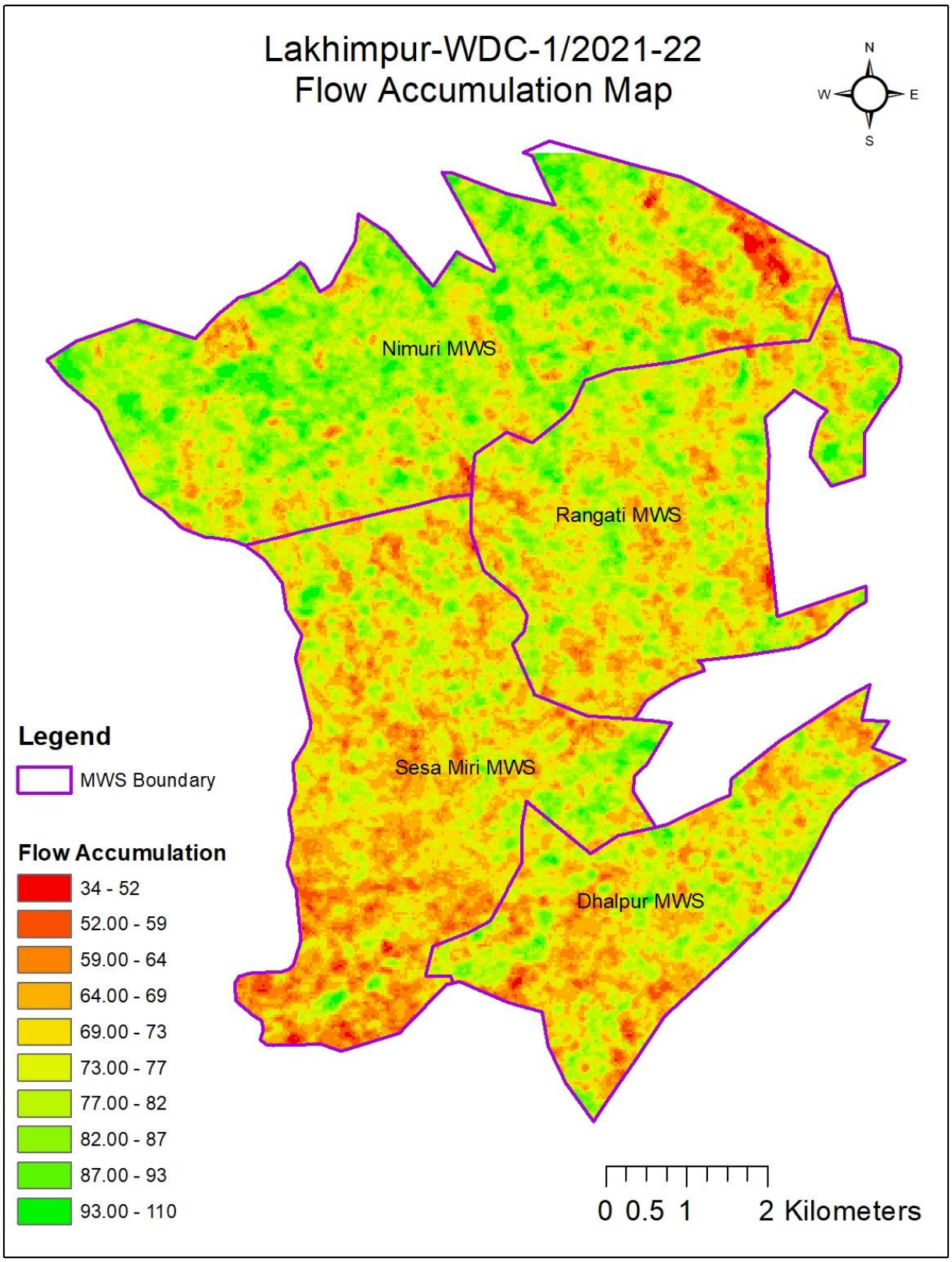

MWS Map
Lakhimpur-WDC-1/2021-22
N
W
E
S
Nimuri MWS
Rangati MWS
Sesa Miri MWS
Dhalpur MWS
Legend
MWS_name
Dhalpur MWS
Nimuri MWS
Rangati MWS
Sesa Miri MWS
Kilometers
0 0.35 0.7 1.4 2.1 2.8
93°43'30"E
93°44'0"E
93°44'30"E
93°45'0"E
93°45'30"E
93°46'0"E
93°46'30"E
93°47'0"E
93°47'30"E
93°48'0"E
93°48'30"E
93°49'0"E
93°49'30"E
27°1'0"N
27°0'30"N
27°0'0"N
26°59'30"N
26°59'0"N
26°58'30"N
26°58'0"N
26°57'30"N
26°57'0"N
26°56'30"N
26°56'0"N
26°55'30"N
26°55'0"N
26°54'30"N
26°54'0"N
26°53'30"N
26°53'0"N

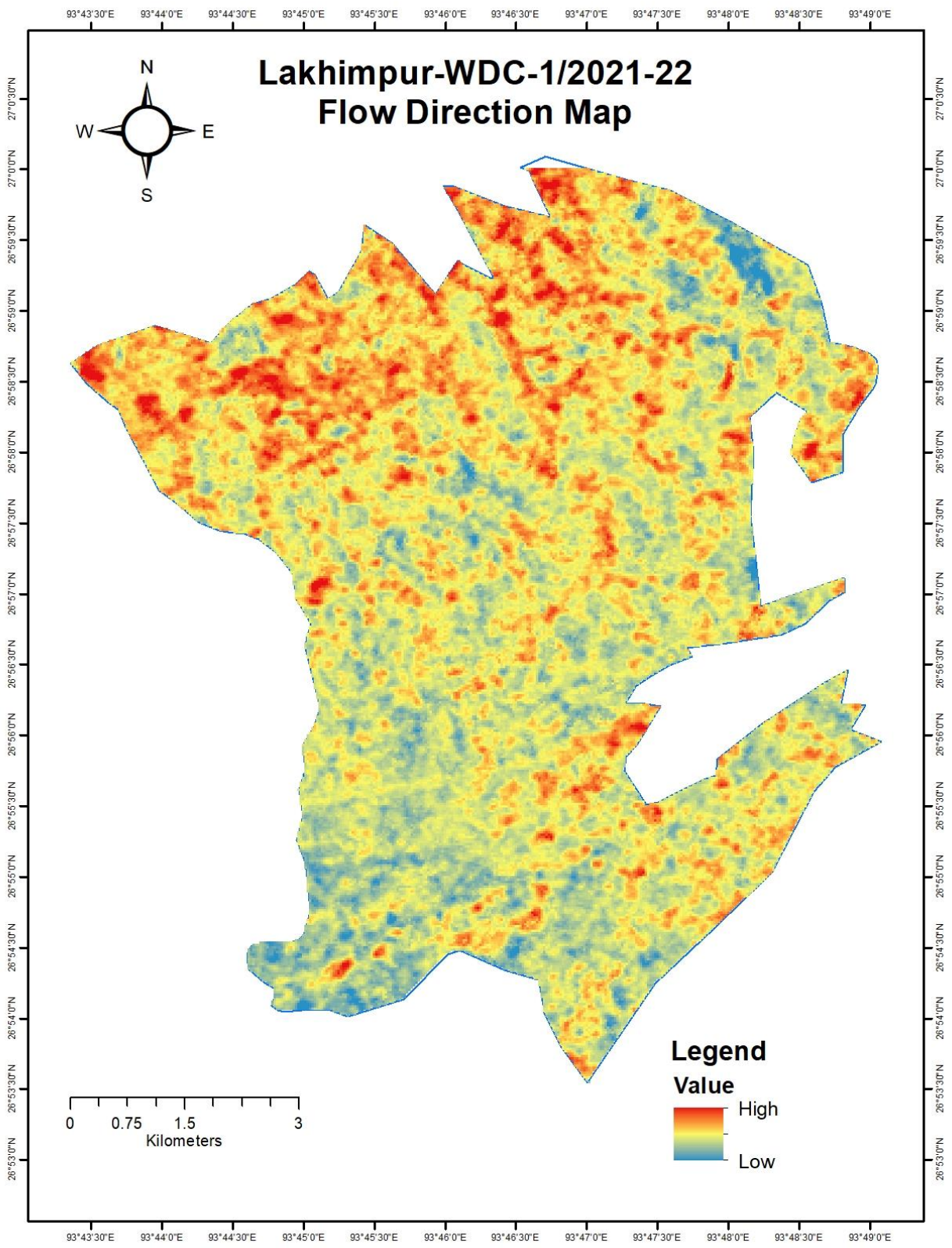

Village MAP
Lakhimpur-III(Sessa) 2021-22
WDC-PMKSY
District: Lakhimpur
93°43'20"E
93°44'10"E
93°45'0"E
93°45'50"E
93°46'40"E
93°47'30"E
93°48'20"E
93°49'10"E
27°0'50"N
27°0'0"N
26°59'10"N
26°58'20"N
26°57'30"N
26°56'40"N
26°55'50"N
26°55'0"N
26°54'10"N
26°53'20"N
Pullnaharani
Tinali Handique
Simaluguri No.2
Simaluguri No.1
No.1 Bikrompur
No.3 Nimuri
Athani Bari
No.1 Rangati
No.1 Mughnoa
Ghagra
No.2 Bikrompur
Simaluguri No.3
Christan Basti
No.2 Rangati
Bachapukhuri
Sesamiri Gaon No.1
Da-Dhara
Somdhara
Nowghuli
No.2 Mughnoa
Sesa Miri No.2
Ganakdoloni
Chutiagaon
Futabhug
Doomor Doloni
Dhalpur
Nidanchuwa
Major Doloni
No.2 Khalihamari
No.1 Khalihamari
Gormara Pathar
Soru Kathoni

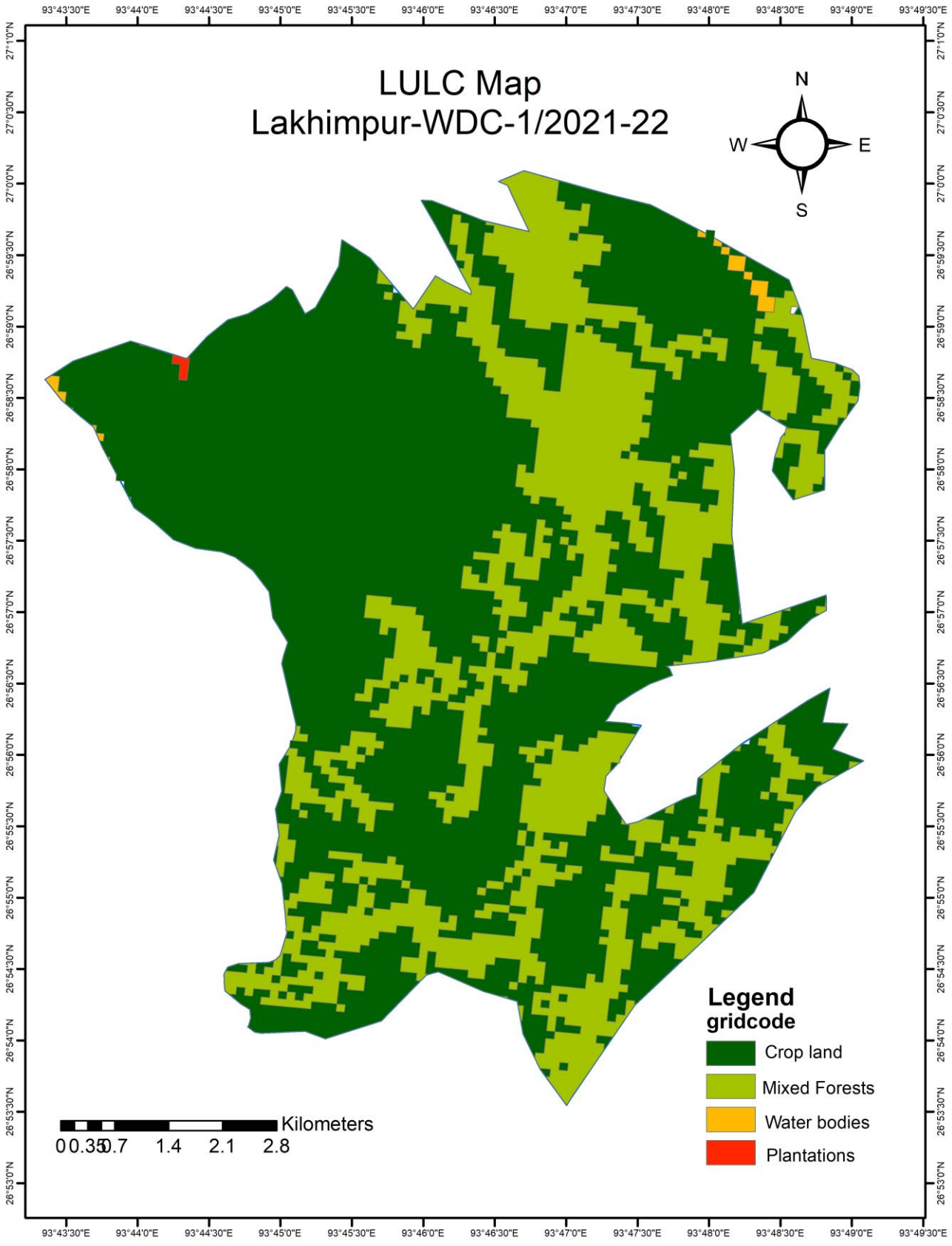

Drainage Map
Lakhimpur-WDC-1/2021-22
N
W
E
S
93°43'30"E
93°44'0"E
93°44'30"E
93°45'0"E
93°45'30"E
93°46'0"E
93°46'30"E
93°47'0"E
93°47'30"E
93°48'0"E
93°48'30"E
93°49'0"E
93°49'30"E
27°1'0"N
27°0'30"N
27°0'0"N
26°59'30"N
26°59'0"N
26°58'30"N
26°58'0"N
26°57'30"N
26°57'0"N
26°56'30"N
26°56'0"N
26°55'30"N
26°55'0"N
26°54'30"N
26°54'0"N
26°53'30"N
26°53'0"N
Legend
River
Stream
Kilometers
0 0.35 0.7 1.4 2.1 2.8

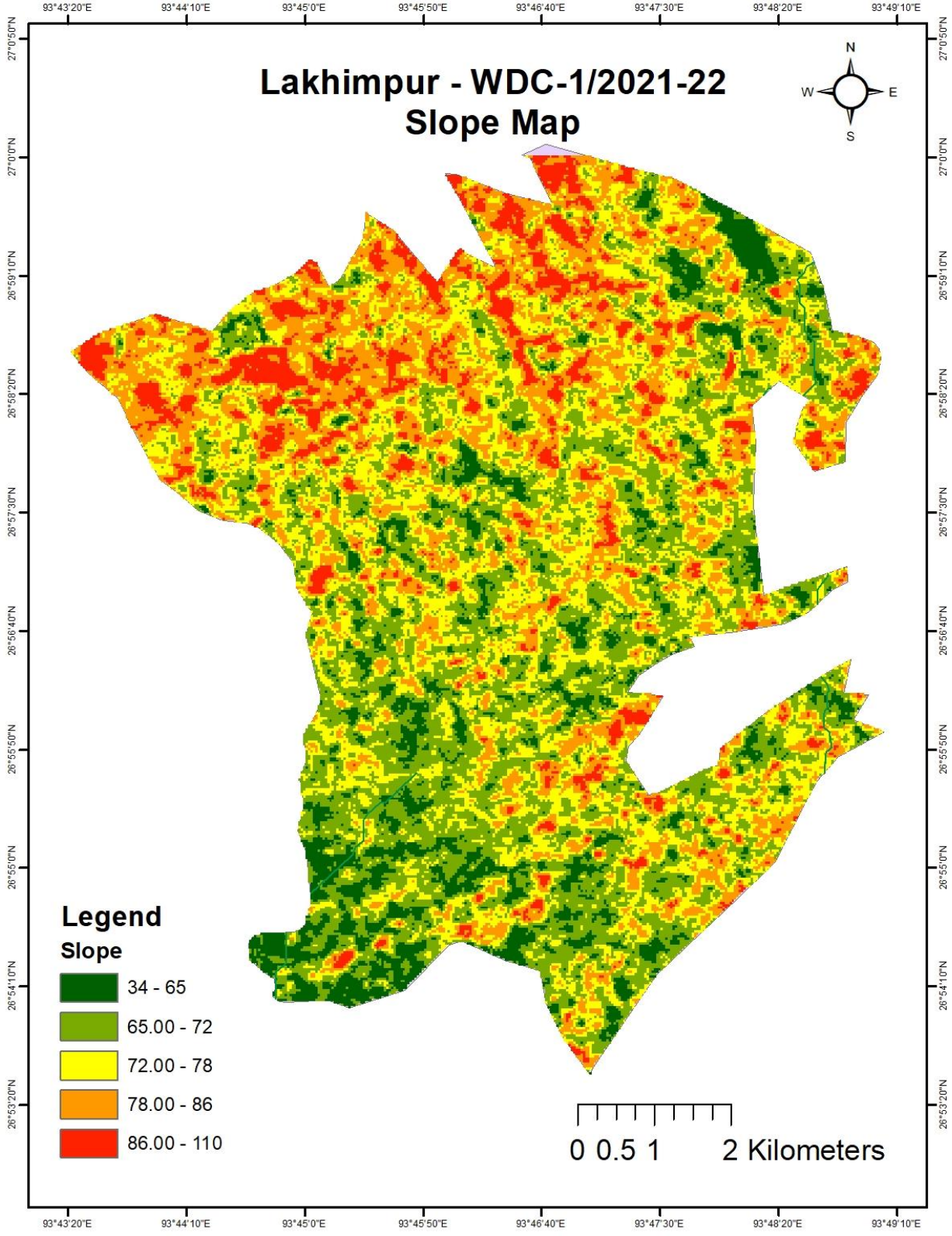

Lakhimpur-WDC-1/2021-22
Infrastructure Map
N
W
E
S
93°43'30"E
93°44'0"E
93°44'30"E
93°45'0"E
93°45'30"E
93°46'0"E
93°46'30"E
93°47'0"E
93°47'30"E
93°48'0"E
93°48'30"E
93°49'0"E
27°0'30"N
27°0'0"N
26°59'30"N
26°59'0"N
26°58'30"N
26°58'0"N
26°57'30"N
26°57'0"N
26°56'30"N
26°56'0"N
26°55'30"N
26°55'0"N
26°54'30"N
26°54'0"N
26°53'30"N
26°53'0"N
Nimuri MWS
Rangati MWS
Sesa Miri MWS
Dhalpur MWS
0
0.75
1.5
3
Kilometers
Legend
Highway
MWS

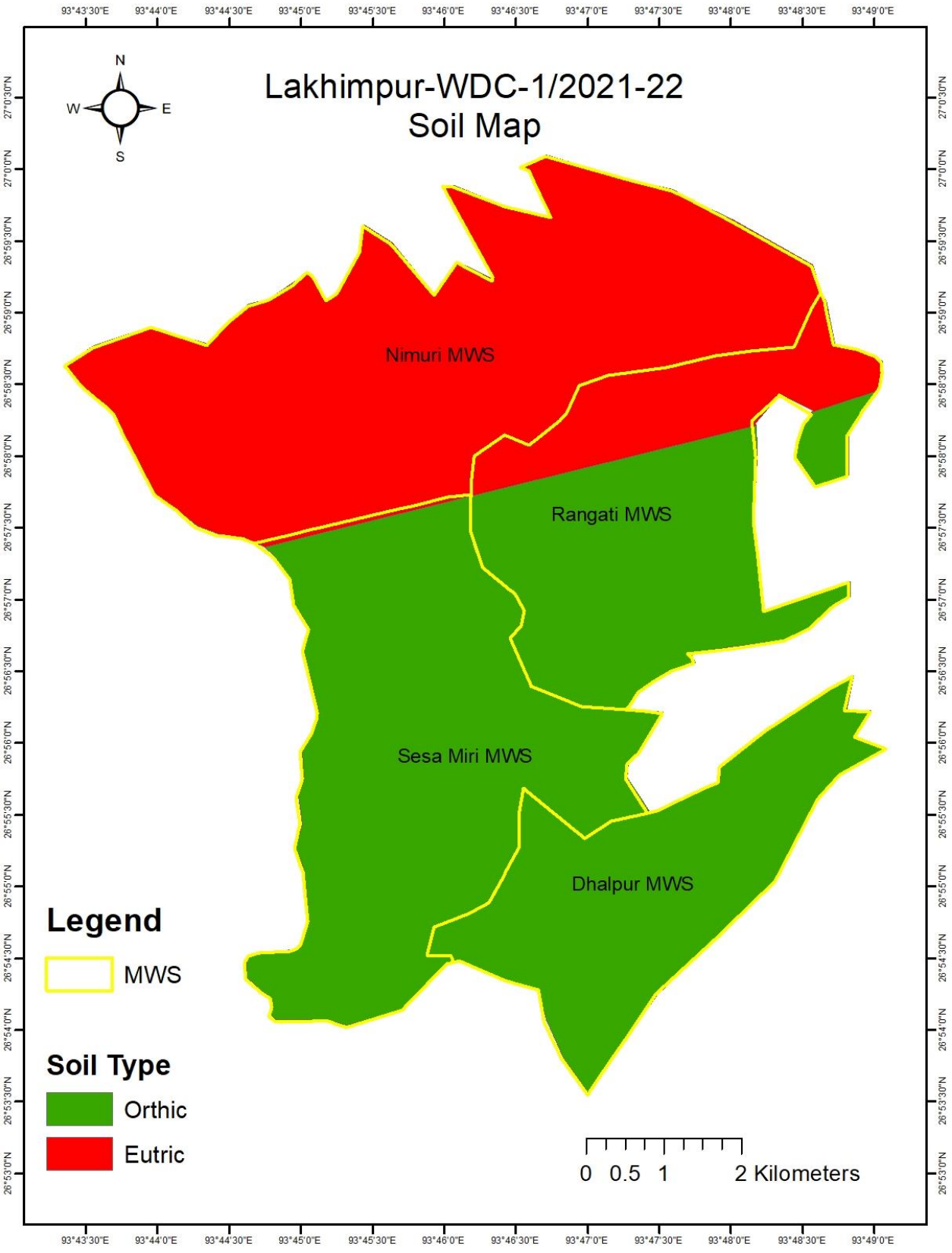

Contour Map
Lakhimpur-WDC-1/2021-22
N
W
E
S
93°43'30"E
93°44'0"E
93°44'30"E
93°45'0"E
93°45'30"E
93°46'0"E
93°46'30"E
93°47'0"E
93°47'30"E
93°48'0"E
93°48'30"E
93°49'0"E
93°49'30"E
27°1'0"N
27°0'30"N
27°0'0"N
26°59'30"N
26°59'0"N
26°58'30"N
26°58'0"N
26°57'30"N
26°57'0"N
26°56'30"N
26°56'0"N
26°55'30"N
26°55'0"N
26°54'30"N
26°54'0"N
26°53'30"N
26°53'0"N
Legend
Contour
20
30
40
50
Kilometers
0 0.35 0.7 1.4 2.1 2.8

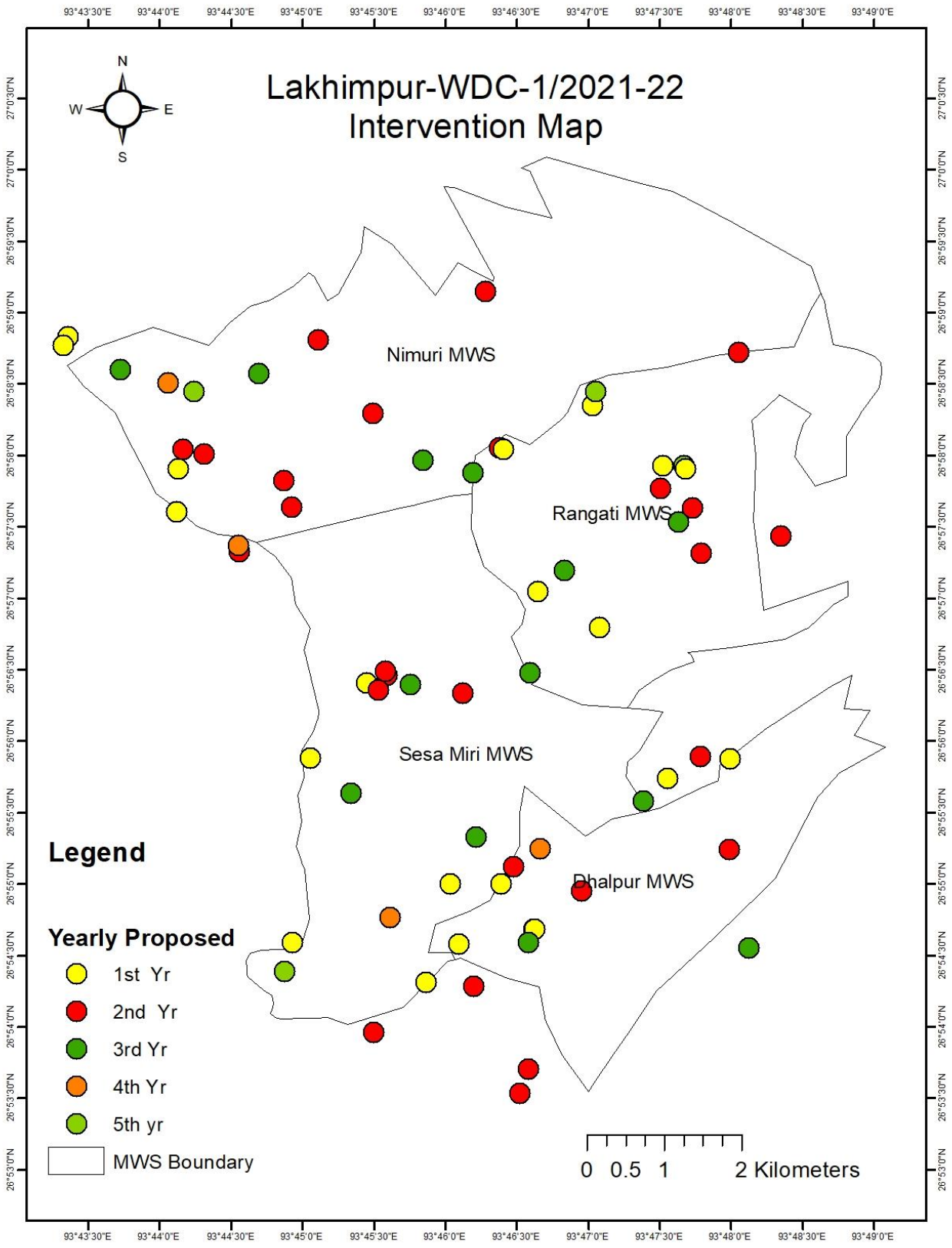

Lakhimpur-WDC-1/2021-22
Flow Accumulation Map
N
W
E
S
Nimuri MWS
Rangati MWS
Sesa Miri MWS
Dhalpur MWS
Legend
MWS Boundary
Flow Accumulation
34 - 52
52.00 - 59
59.00 - 64
64.00 - 69
69.00 - 73
73.00 - 77
77.00 - 82
82.00 - 87
87.00 - 93
93.00 - 110
0 0.5 1 2 Kilometers

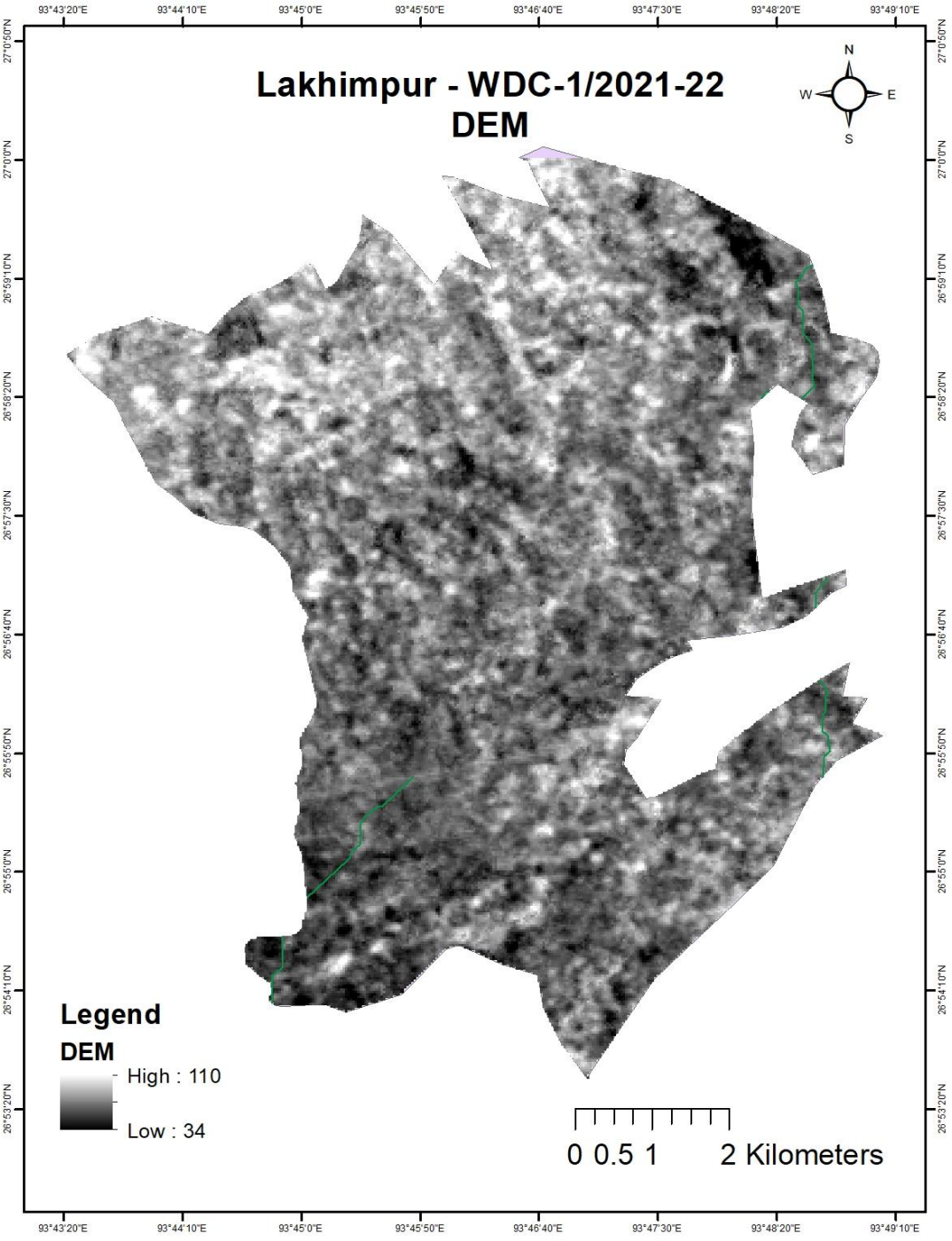

Lakhimpur-WDC-1/2021-22
Flow Direction Map
N
W
E
S
93°43'30"E
93°44'0"E
93°44'30"E
93°45'0"E
93°45'30"E
93°46'0"E
93°46'30"E
93°47'0"E
93°47'30"E
93°48'0"E
93°48'30"E
93°49'0"E
27°0'30"N
27°0'0"N
26°59'30"N
26°59'0"N
26°58'30"N
26°58'0"N
26°57'30"N
26°57'0"N
26°56'30"N
26°56'0"N
26°55'30"N
26°55'0"N
26°54'30"N
26°54'0"N
26°53'30"N
26°53'0"N
0
0.75
1.5
3
Kilometers
Legend
Value
High
Low

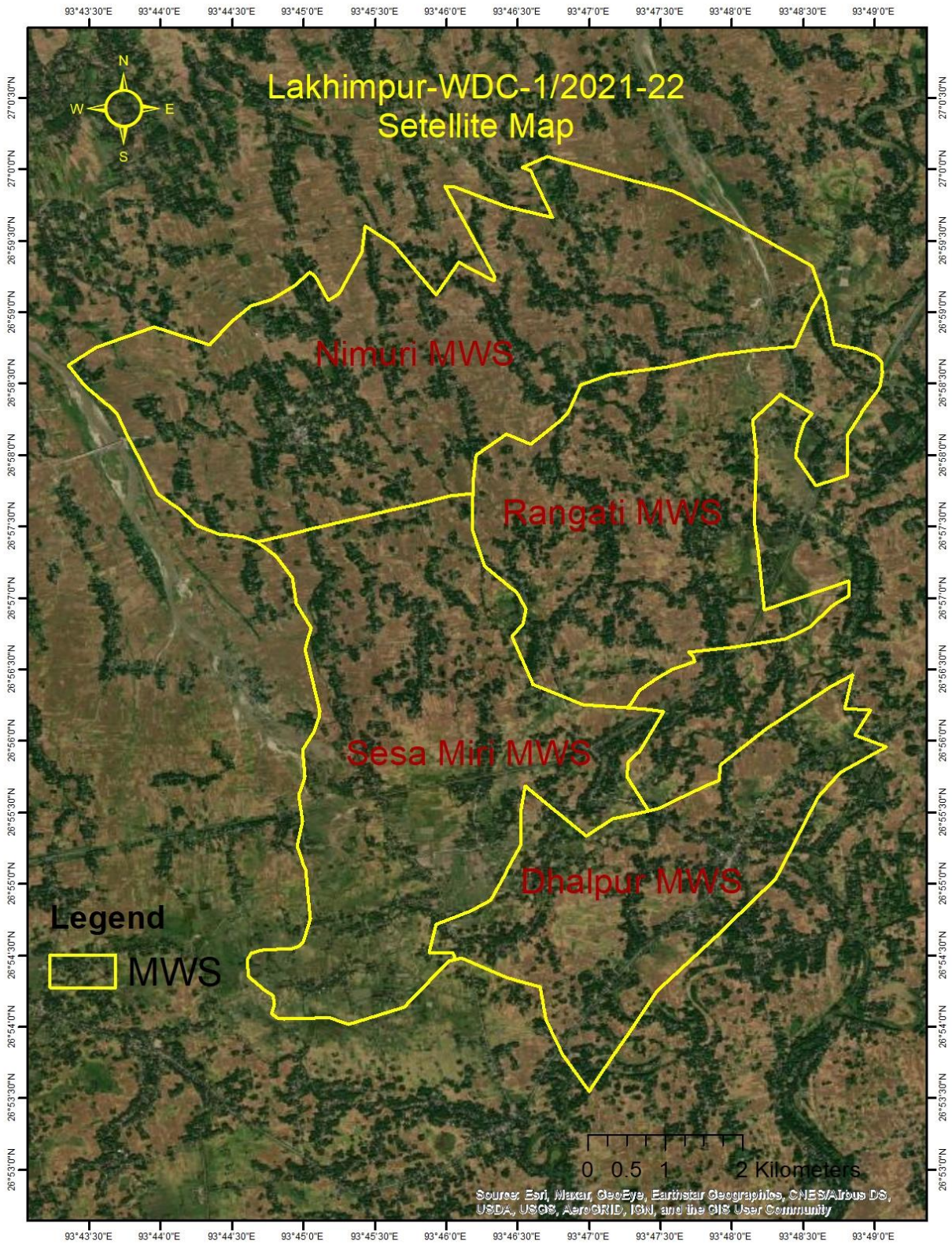

LULC Map
Lakhimpur-WDC-1/2021-22
N
W
E
S
93°43'30"E
93°44'0"E
93°44'30"E
93°45'0"E
93°45'30"E
93°46'0"E
93°46'30"E
93°47'0"E
93°47'30"E
93°48'0"E
93°48'30"E
93°49'0"E
93°49'30"E
27°1'0"N
27°0'30"N
27°0'0"N
26°59'30"N
26°59'0"N
26°58'30"N
26°58'0"N
26°57'30"N
26°57'0"N
26°56'30"N
26°56'0"N
26°55'30"N
26°55'0"N
26°54'30"N
26°54'0"N
26°53'30"N
26°53'0"N
Legend
gridcode
Crop land
Mixed Forests
Water bodies
Plantations
Kilometers
0 0.35 0.7 1.4 2.1 2.8


Lakhimpur - WDC-1/2021-22
Slope Map
N
W
E
S
93°43'20"E
93°44'10"E
93°45'0"E
93°45'50"E
93°46'40"E
93°47'30"E
93°48'20"E
93°49'10"E
27°0'50"N
27°0'0"N
26°59'10"N
26°58'20"N
26°57'30"N
26°56'40"N
26°55'50"N
26°55'0"N
26°54'10"N
26°53'20"N
Legend
Slope
34 - 65
65.00 - 72
72.00 - 78
78.00 - 86
86.00 - 110
0 0.5 1 2 Kilometers


Lakhimpur-WDC-1/2021-22
Soil Map
N
W
E
S
93°43'30"E
93°44'0"E
93°44'30"E
93°45'0"E
93°45'30"E
93°46'0"E
93°46'30"E
93°47'0"E
93°47'30"E
93°48'0"E
93°48'30"E
93°49'0"E
27°0'30"N
27°0'0"N
26°59'30"N
26°59'0"N
26°58'30"N
26°58'0"N
26°57'30"N
26°57'0"N
26°56'30"N
26°56'0"N
26°55'30"N
26°55'0"N
26°54'30"N
26°54'0"N
26°53'30"N
26°53'0"N
Nimuri MWS
Rangati MWS
Sesa Miri MWS
Dhalpur MWS
Legend
MWS
Soil Type
Orthic
Eutric
0 0.5 1 2 Kilometers


Lakhimpur-WDC-1/2021-22
Intervention Map
N
W
E
S
93°43'30"E
93°44'0"E
93°44'30"E
93°45'0"E
93°45'30"E
93°46'0"E
93°46'30"E
93°47'0"E
93°47'30"E
93°48'0"E
93°48'30"E
93°49'0"E
27°0'30"N
27°0'0"N
26°59'30"N
26°59'0"N
26°58'30"N
26°58'0"N
26°57'30"N
26°57'0"N
26°56'30"N
26°56'0"N
26°55'30"N
26°55'0"N
26°54'30"N
26°54'0"N
26°53'30"N
26°53'0"N
Nimuri MWS
Rangati MWS
Sesa Miri MWS
Dhalpur MWS
Legend
Yearly Proposed
1st Yr
2nd Yr
3rd Yr
4th Yr
5th yr
MWS Boundary
0 0.5 1 2 Kilometers


Lakhimpur - WDC-1/2021-22
DEM
N
W
E
S
93°43'20"E
93°44'10"E
93°45'0"E
93°45'50"E
93°46'40"E
93°47'30"E
93°48'20"E
93°49'10"E
27°0'50"N
27°0'0"N
26°59'10"N
26°58'20"N
26°57'30"N
26°56'40"N
26°55'50"N
26°55'0"N
26°54'10"N
26°53'20"N
Legend
DEM
High : 110
Low : 34
0 0.5 1
2 Kilometers


Lakhimpur-WDC-1/2021-22
Setellite Map
N
W
E
S
Nimuri MWS
Rangati MWS
Sesa Miri MWS
Dhalpur MWS
Legend
MWS
0 0.5 1 2 Kilometers
Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
93°43'30"E
93°44'0"E
93°44'30"E
93°45'0"E
93°45'30"E
93°46'0"E
93°46'30"E
93°47'0"E
93°47'30"E
93°48'0"E
93°48'30"E
93°49'0"E
27°0'30"N
27°0'0"N
26°59'30"N
26°59'0"N
26°58'30"N
26°58'0"N
26°57'30"N
26°57'0"N
26°56'30"N
26°56'0"N
26°55'30"N
26°55'0"N
26°54'30"N
26°54'0"N
26°53'30"N
26°53'0"N

TableNo.5.2.1SoilandMoistureConservationstructures

1	2	3	4	5	6	7	8	9	10	11	
Sl. No.	**Nameofthe Activities(Structures)**	**MWS**	**NameoftheHamlet/Village**	**Area(inHa)/Dimension(inM/Sq.M/Cum)**	**UnitCost(inRs.)**	**TotalCost(RsinLakh)**	**Contribution(RsinLakh)**	**TotalGrantAmount (RsinLakh)**	**YearofImplementation**	**GPSPoints**	
										Long	**Lat**
1	Drainage Channel Cutting	Dhalpur MWS	No.2Khalihamari	847Rm	590/-	5.00	0.25	4.75	2nd Yr	26.91136°	93.776955°
2			Nidanchowa	847Rm	"	5.00	0.25	4.75	1st Yr	26.91910°	93.78165°
3			No.1Khalihamari	847Rm	"	5.00	0.25	4.75	2nd Yr	26.90476°	93.769946°
4			Dhalpur	847Rm	"	5.00	0.25	4.75	3rd Yr	26.909158°	93.802036°
			Sub-Total	**3388Rm**		**20.00**	**1**	**19**			
5		Sessa MiriMWS	Ganakdoloni	847Rm	"	5.00	0.25	4.75	1st Yr	26.916666°	93.773106°
6			SessaMiri	847Rm	"	5.00	0.25	4.75	2nd Yr	26.941038°	93.759864°
			Sub-Total	**1694Rm**		**10.00**	**0.5**	**9.5**			
7		Rangati MWS	Athanibari	847 Rm	590/-	5.00	0.25	4.75	2nd Yr	26.978701°	93.800858°
8			No.1Rangati	847 Rm	"	5.00	0.25	4.75	1st Yr	26.965486°	93.79206°
			Sub-Total	**1694 Rm**	"	**10.00**	**0.5**	**9.5**			
9		Nimuri MWS	Simaluguri	847 Rm	"	5.00	0.25	4.75	2nd Yr	26.963723°	93.747789°
10			Bikrampur	847 Rm	"	5.00	0.25	4.75	1st Yr	26.980568°	93.722588°
11			1noSimaluguri	847 Rm	"	5.00	0.25	4.75	2nd Yr	26.980153°	93.751775°
12			No.2Simalu Guri	847 Rm	"	5.00	0.25	4.75	3rd Yr	26.976261°	93.744880°
13			No.3Simaluguri	847 Rm	"	5.00	0.25	4.75	2nd Yr	26.960653°	93.748689°
14			No.3Simaluguri	847 Rm	"	5.00	0.25	4.75	2nd Yr	26.955484°	93.742571°
15			PulliNaharani	847 Rm	"	5.00	0.25	4.75	1st Yr	27.007131°	93.778356°
16			No.3Simaluguri	847 Rm	"	5.00	0.25	4.75	4th Yr	26.956134°	93.742511°
			Sub-Total	847 Rm	"	**40.00**	**2.00**	**38.00**			
			Total	**6776 Rm**	"	**80.00**	**4.00**	**76.00**			

TableNo.5.2.1SoilandMoistureConservationstructures

1	2	3	4	5	6	7	8	9	10	11	
Sl.No	**NameoftheActivities(Structures**	**MWS**	**NameoftheHamlet/Village**	**Area(inHa)/Dimension(inM/Sq.M/Cum)**	**UnitCost(inRs)**	**TotalCost(inRs.)(RsinLakh)**	**Contribution(RsinLakh)**	**TotalGrantAmount(RsinLakh)**	**YearofImplementation**	**GPSPoints**	
										Long	**Lat**
17	Earthen Guide Bund	DhalpurMWS	ChutiaGaon	7812 Cum	128/-	10.00	0.50	9.50	1st Yr	26.9289683°	93.7926216°
			Sub-Total	**7812 Cum**		**10.00**	**0.50**	**9.50**			
18		Rangati MW	Da-Dhara	3906 Cum	128/-	5.00	0.25	4.75	1st Yr	26.946609°	93.784682°
19			No.1Rangati	4218.75Cum	"	5.40	0.27	5.13	5th Yr	26.965488°	93.794515°
			Sub-Total	**8124.75Cum**		**10.40**	**0.52**	**9.88**			
20		Sessa MiriMWS	Futabhug	4687.5Cum	128/-	6.00	0.30	5.70	1st Yr	26.931354°	93.750884°
			Sub-Total	**4687.50 Cum**	"	**6.00**	**0.30**	**5.70**			
21		Nimuri MWS	Nimuri	4296.8Cum	"	5.50	0.275	5.225	2nd Yr	26.967537°	93.772990°
22			Rajghar	4687.5Cum	128/-	6.00	0.30	5.70	3rd Yr	26.976686°	93.728742°
23			No.2Bikarmpur	4218.75Cum	"	5.40	0.27	5.13	1st Yr	26.960089°	93.735288°
			Sub-Total	**13203.12Cu**		**16.90**	**0.845**	**16.055**			
			Total	**33827.37Cum**		**43.30**	**2.165**	**41.135**			

TableNo.5.2.2WaterHarvestingStructes

1	2	3	4	5	6	7	8	9	10	11	
Sl.No	**NameoftheActivities(Structures)**	**MWS)**	**NameoftheHamlet/Village**	**Area(inHa)/Dimension(inM/Sq.M/Cum)**	**UnitCost(inRs)**	**TotalCost(RsinLakh)**	**Contribution(RsinLakh)**	**TotalGrantAmount(RsinLakh)**	**YearofImplementation**	**GPSPoints**	
										Long	**Lat**
24	Water Harvesting Pond	DhalpurMWS	No.2Khalihamari	2631.579Cum	190/-	5.00	0.25	4.75	1st Yr	26.905196°	93.764395°
25			Nidanchuwa	2894.737Cum	"	5.50	0.275	5.225	1st Yr	26.9167°	93.7672583°
26			SaruKathani	3052.632Cum	"	5.80	0.29	5.51	2nd Yr	26.892213°	93.77533°
27			Nidanchuwa	3421.053Cum	"	6.50	0.325	6.175	2nd Yr	26.918716°	93.7746083°
28			ChutiaGaon	2472.316Cum	"	4.6974	0.23487	4.463	1st Yr	26.9312316°	93.7998916°
			SubTotal	**14472.32Cu**		**27.497**	**1.3748**	**26.12253**			
29		RangatiMWS	Ghagra	2631.579Cum	"	5.00	0.25	4.75	1st Yr	26.972464°	93.783864°
30			Da-Dhara	2500.00Cum	"	4.75	0.2375	4.513	3rd Yr	26.941308°	93.776481°
31			BasaPukhari	2736.842Cum	"	5.20	0.26	4.94	1st Yr	26.953285°	93.780531°
32			BesaPukhuri	2473.684Cum	"	4.70	0.235	4.465	1st Yr	26.950796°	93.777423°
33			No.1Rangati	2631.579Cum	"	5.00	0.25	4.75	2nd Yr	26.962806°	93.791776°
			SubTotal	**12973.68Cu**		**24.65**	**1.2325**	**23.4175**			
34		SessaMiriMWS	Futabhug	3105.263Cum	"	5.90	0.295	5.605	1st Yr	26.909813°	93.74878°
35			Nowghuli	2631.579Cum	"	5.00	0.25	4.75	3rd Yr	26.93993°	93.762602°
36			MajarDoloni	2894.737Cum	"	5.50	0.275	5.225	2nd Yr	26.899314°	93.758321°
37			SessaMiriNo.2	2368.421Cum	"	4.50	0.225	4.275	1st Yr	26.940107°	93.757448°
38			SessaMiriNo.1	2631.579um	"	5.00	0.25	4.75	2nd Yr	26.939306°	93.75885°
			SubTotal	**13631.58Cu**		**25.90**	**1.295**	**24.605**			
39		NimuriMWS	No.1Bikarampur	2631.579Cum	"	5.00	0.25	4.75	1st Yr	26.979553°	93.722061°
40			No.2Bikrampur	2894.737Cum	"	5.50	0.275	5.225	1st Yr	26.965125°	93.735490°
41			PulliNaharani	2631.579Cum	"	5.00	0.25	4.75	2nd Yr	27.002416°	93.779160°
42			TinialiHandique	2368.421Cum	"	4.50	0.225	4.275	2nd Yr	26.985781°	93.771330°
43			No.3Nimuri	2894.737Cum	"	5.50	0.275	5.225	1st Yr	26.967385°	93.773403°
			SubTotal	**13421.05Cu**		**25.50**	**1.275**	**24.225**			
			GrandTotal	**54498.6316Cu**		**103.547**	**5.1773**	**98.37003**			

TableNo.5.2.2WaterHarvestingStructures

1	2	3	4	5	6	7	8	9	10	11	
Sl.No	**Nameofthe Activities(Structures)**	**MWS**	**NameoftheHamlet/Village**	**Area(inHa)/Dimension(inM/Sq.M/Cum)**	**UnitCost (inRs)**	**TotalCost(RsinLakh)**	**Contribution(RsinLakh)**	**TotalGrant Amount (RsinLakh)**	**YearofImplementation**	**GPSPoints**	
										Long	**Lat**
44	Gully Control Project/RCC Check Dam	DhapurMWS	No.1 Khalihamari	19.531Sqm	51,200/-	10.00	0.50	9.50	1st Yr	26.908993°	93.781471°
			Sub-Total	**19.531 Sqm**	"	**10.00**	**0.50**	**9.50**			
45		RangatiMWS	Chirtanbasti	21.484Sqm	"	11.00	0.55	10.45	3rdYr	26.964664°	93.769828°
46			No.1Rangati	20.507Sqm	"	10.50	0.525	9.975	1stYr	26.965119°	93.794664°
			Sub-Total	**41.992 Sqm**	"	**21.50**	**1.075**	**20.425**			
47		SessaMiriMWS	Nowghuli	20.507Sqm	"	10.50	0.525	9.975	3rdYr	26.941488°	93.759661°
48			Ganakdoloni	18.105Sqm	"	9.2698	0.46349	8.80631	1st Yr	26.916666°	93.773106°
49			Mithunpathar	21.933Sqm	"	11.2302	0.56151	10.66869	5thYr	26.906498°	93.747885°
			Sub-Total	**60.546 Sqm**	"	**31.00**	**1.55**	**29.45**			
50		NimuriMWS	No.1Simaluguri	19.531Sqm	"	10.00	0.50	9.50	2ndYr	26.966799°	93.738514°
51			No.2Simaluguri	20.507Sqm	"	10.50	0.525	9.975	4thYr	26.975167°	93.734267°
			SubTotal	**40.039 Sqm**		**20.50**	**1.525**	**28.975**			
			GrandTotal	**162.109Sqm**		**83.00**	**4.15**	**78.85**			

TableNo.5.2.3VegetativeCovers

1	2	3	4	5	6	7	8	9	10	11	
Sl. No.	**Name of the Activities**	**MWS**	**Name oftheVillage**	**Area(inHa)**	**UnitCost(inRs)**	**TotalCost (RsinLakh)**	**Contribution(RsinLakh)**	**Total GrantAmount(RsinLakh)**	**YearofImplementation**	**GPSPoints**	
										Long	**Lat**
52	Horticulture Block Plantation	Dhalpur MWS	Dhalpur	0.72Ha	278000/	2.00	0.10	1.90	2nd Yr	26.9207083°	93.799816°
53			Nidanchuwa	0.47Ha	"	1.3126	0.066	1.24697	4th Yr	26.9207850°	93.777736°
54			2 No.Khalihamari	0.54Ha	"	1.50	0.075	1.425	3rd Yr	26.90980°	93.77636°
55			ChutiaGaon	0.65Ha	"	1.80	0.09	1.71	2nd Yr	26.9315283°	93.796410°
			Sub-Total	**2.52 Ha**		**6.6126**	**0.331**	**6.28197**			
56		Sessa Miri MWS	Futabhug	0.72Ha	"	2.00	0.10	1.90	2nd Yr	26.89504°	93.77637°
57			Ganakdoloni	0.68Ha	"	1.90	0.095	1.805	3rd Yr	26.922126°	93.770267°
58			Nowghuli	0.67Ha	"	1.85	0.0925	1.7575	2nd Yr	26.941452°	93.759634°
			Sub-Total	**2.07 Ha**		**5.75**	**0.2875**	**5.4625**			
59		Rangati MWS	No.1Rangati	0.72Ha	"	2.00	0.10	1.90	2nd Yr	26.960533°	93.79549°
60			No.2Rangati	0.87Ha	"	2.4101	0.120505	2.289595	5th Yr	26.974138°	93.784196°
61			Da-Dhara	0.72Ha	"	2.00	0.10	1.90	3rd Yr	26.953285°	93.780531°
62			Somdhara	0.44Ha	"	1.0899	0.054495	1.035405	3rd Yr	26.958882°	93.793839°
			Sub-Total	**2.70 Ha**		**7.50**	**0.375**	**7.125**			
63		Nimuri MWS	No.2Bikrampur	0.72Ha	"	1.2172	0.06086	1.15634	2nd Yr	26.967368°	93.736008°
64			SimaluguriNo.3	0.54Ha	"	2.00	0.10	1.90	2nd yr	26.963773°	93.751095°
65			SimaluguriNo.2	0.65Ha	"	2.4702	0.12351	2.24669	5th yr	26.974119°	93.737335°
			Sub-Total	**1.91 Ha**		**5.6874**	**0.2843**	**5.30303**			
			G.Total	**9.19 Ha**		**25.55**	**1.2775**	**24.2725**			

TableNo.5.2.4 Vegetative and Engineering Structures

1	2	3	4	5	6	7	8	9	10	11	
Sl .No	**Nameofthe Activities(Structures)**	**MWS**	**NameoftheHamlet /Village**	**Area(inHa)/Dimension (in M/Sq.M/Cum)**	**UnitCost (inRs)**	**TotalCost(RsinLakh)**	**Contribution(RsinLakh)**	**TotalGrantAmount(RsinLakh)**	**YearofImplementation**	**GPSPoints**	
										Long	**Lat**
66	Boulder Bund/ Loose Boulder	DhalpurMWS	Doomordoloni	540.258m^3	2961/-	16.00	0.80	15.20	2nd Yr	26.91587°	93.782560°
67			Dhalpur	335m^3	"	10.00	0.50	9.50	3rd Yr	26.926315°	93.789796°
			Sub-Total	**875.358m^3**	"	**26.00**	**1.30**	**24.70**			
68		Sessa Miri MWS	Sessa Miri	287m^3	"	8.50	0.425	8.075	3rdYr	26.927267°	93.755617°
69			Khalihamari	303m^3	"	9.00	0.45	8.55	4thYr	26.912753°	93.760173°
			Sub-Total	**590**m^3	"	**17.50**	**0.875**	**16.625**			
70		RangatiMW	Sumdhara	540.258m^3	,,	16.00	0.80	15.20	2nd Yr	26.955213°	93.796526°
			Sub-Total	**540.258m**		**16.00**	**0.80**	**15.20**			
71		NimuriMWS	No.3Nimuri	320m^3	"	9.50	0.475	9.025	3rdYr	26.966143°	93.764072°
			Sub-Total	**320**m^3	"	**9.50**	**0.475**	**9.025**			
			TOTAL	**2325.61**m^3	"	**69.00**	**3.45**	**65.55**			

Table No. 5.2.4 Livelihood Activities Management

1	2	3	4	5	6	7	8	9	10
Sl. No.	**Name of the Activities**	**MWS**	**Name of the Village**	**No. of Unit**	**Unit Cost (in Rs.)**	**Total Cost (Rs. In Lakh)**	**Contribution (Rs in Lakh)**	**Total Grant Amount (Rs in Lakh)**	**Year of Implement ation**
1	Sewing Machine	Dhalpur MWS	No.1 Khalihamari	3	25,000/-	0.75	-	0.75	4th Year
			Saru Kathani	2	"	0.50	-	0.50	4th Year
			Nidanchuwa	3		0.75	-	0.75	3rd Year
			Doomor Doloni	2		0.50	-	0.50	3rd Year
			Dhalpur	2		0.50	-	0.50	3rd Year
			Sub-Total	**12**	"	**3.00**	**-**	**3.00**	
		Sessa Miri MWS	Major Doloni	3	"	0.75	-	0.75	4th Year
			Sessa Miri No.2	4	"	1.00	-	1.00	3rd Year
			Nowghuli	3		0.75	-	0.75	3rd Year
			Futabhug	3		0.75	-	0.75	3rd Year
			Sub-Total	**13**	"	**3.25**	**-**	**3.25**	
		Rangati MWS	Ghagra	4	"	1.00	-	1.00	4th year
			Athani Bari	4		1.00	-	1.00	3rd Year
			Chirstan Basti	3		0.75	-	0.75	3rd Year
			Da-Dhara	3		0.75	-	0.75	3rd Year
			Sub-Total	**14**		**3.50**	-	3.50	
		Nimuri MWS	Pulli Naharani	4		1.00	-	1.00	4th Year
			Tiniali Handique	3		0.75	-	0.75	4th Year
			No.1 Bikrampur	4		1.00	-	1.00	5th year
			No.2 Bikrampur	3		0.75	-	0.75	3rd Year

			Simaluguri No.2	2		0.50	-	0.50	3rd Year
			Chirstan Basti	3	"	0.75	-	0.75	3rd Year
			Sub-Total	**19**	**"**	**4.75**	**-**	**4.75**	
			Total	**58**	**"**	**14.50**		**14.50**	

Table No. 5.2.4 Livelihood Activities Management

1	2	3	4	5	6	7	8	9	10
Sl. No.	**Name of the Activities**	**MWS**	**Name of the Village**	**No. of Unit**	**Unit Cost (in Rs.)**	**Total Cost (Rs. In Lakh)**	**Contribution (Rs. In Lakh)**	**Total Grant Amount (Rs. In Lakh)**	**Year of Implement ation**
2	Goatery	MWS-1	Chutia Gaon	4	25,000/-	1.00	-	1.00	2nd Year
			No.2 Khalihamari	4	"	1.00	-	1.00	3rd Year
			Nidanchuwa	5	"	1.25	-	1.25	3rd Year
			1 No. Khalihamari	4	"	1.00	-	1.00	3rd Year
			Doomor Doloni	4	"	1.00	-	1.00	4th year
			Saru Kathani	5	"	1.25	-	1.25	4th Year
			Dhalpur	6	"	1.50	-	1.50	4th Year
			Sub-Total	**32**	"	**8.00**	-	**8.00**	
		MWS-2	Sessa Miri No.1	4	"	1.00	-	1.00	2nd Year
			Gormara Pathar	5	"	1.25	-	1.25	3rd Year
			Ganakdoloni	5	"	1.25	-	1.25	3rd Year
			Sessa Miri No. 2	4	"	1.00	-	1.00	3rd Year
			Futabhug	4	"	1.00	-	1.00	3rd Year
			Major Doloni	6	"	1.50	-	1.50	4th Year
			Nowghuli	4	"	1.00	-	1.00	4th Year
			Sub-Total	**32**	"	**8.00**	-	**8.00**	
		MWS-3	No.2 Rangati	5	"	1.25	-	1.25	4th Year
			Bachapukhuri	4	"	1.00	-	1.00	2nd Year
			No.1 Rangati	6		1.50	-	1.50	3rd Year

			Christianbasti	4	"	1.00	-	1.00	3rd Year
			No. 2 Mughnoa	5	"	1.25	-	1.25	3rd Year
			Somdhara	5	"	1.25	-	1.25	4th Year
			Ghagra	4	"	1.00	-	1.00	3rd Year
			No. 1 Mughnoa	4	"	1.0412	-	1.0412	4th year
			No. 1 Mughnoa	1	"	0.3336		0.3336	5th year
			Athanibari	3	"	0.87520	-	0.8752	3rd Year
			Da-dhara	5	"	1.25	-	1.25	4th year
			Sub-Total	**44**	"	**11.75**	-	**11.75**	
		Nimuri MWS	Simaluguri No.1	5	"	1.25	-	1.25	4th Year
			No.3 Nimuri	3	"	0.6353	-	0.6353	4th year
			No.3 Nimuri	4	"	0.8647		0.8647	2nd Year
			Pulli Naharani	4	"	1.00	-	1.00	3rd Year
			Simaluguri No.3	4	"	1.00	-	1.00	3rd Year
			No. 1 Bikrampur	4	"	1.00	-	1.00	3rd Year
			No. 2 Bikrampur	5	"	1.25	-	1.25	4th Year
			Simaluguri No. 2	4	"	1.00	-	1.00	4th Year
			Tiniali Handique	5	"	1.25	-	1.25	4th year
			Sub-Total	**38**	`	**9.25**	-	**9.25**	
			Total	**146**		**37.00**	-	**37.00**	

Table No. 5.2.4 Livelihood Activities Management

1	2	3	4	5	6	7	8	9	10
Sl. No.	**Name of the Activities**	**MWS**	**Name of the Village**	**No. of Unit**	**Unit Cost (in Rs.)**	**Total Cost (Rs. In Lakh)**	**Contribution (Rs. In Lakh)**	**Total Grant Amount (Rs. In Lakh)**	**Year of Implement ation**
3	Handloom & Weaving	MWS-1	Chutia Gaon	4	25,000/-	1.00	-	1.00	2nd Year
			No.2 Khalihamari	4	"	1.00	-	1.00	2nd Year
			Nidanchuwa	5	"	1.25	-	1.25	4th Year
			1 No. Khalihamari	4	"	1.00	-	1.00	4th Year
			Doomor Doloni	4	"	1.00	-	1.00	3rd Year
			Saru Kathani	5	"	1.25	-	1.25	3rd Year
			Dhalpur	6	"	1.50	-	1.50	3rd Year
			Sub-Total	**32**		**8.00**	-	**8.00**	
		MWS-2	Sessa Miri No.1	4	"	1.00	-	1.00	2nd Year
			Gormara Pathar	5	"	1.25	-	1.25	2nd Year
			Ganakdoloni	5	"	1.25	-	1.25	3rd Year
			Sessa Miri No. 2	4	"	1.00	-	1.00	3rd Year
			Futabhug	4	"	1.00	-	1.00	3rd Year
			Major Doloni	6	"	1.50	-	1.50	4th Year
			Nowghuli	4	"	1.00	-	1.00	4th Year
			Sub-Total	**32**		**8.00**	-	**8.00**	
		MWS-3	No.2 Rangati	5	"	1.25	-	1.25	2nd Year
			Bachapukhuri	4	"	1.00	-	1.00	2nd Year

			No.1 Rangati	6	"	1.50	-	1.50	5th year
			Christianbasti	4	"	1.00	-	1.00	5th year
			No. 2 Mughnoa	5	"	1.25	-	1.25	4th Year
			Somdhara	5	"	1.25	-	1.25	4th Year
			Ghagra	4	"	1.00	-	1.00	5th year
			No. 1 Mughnoa	5	"	1.25	-	1.25	3rd Year
			Athanibari	4	"	1.00	-	1.00	3rd Year
			Da-dhara	5	"	1.25	-	1.25	3rd Year
			Sub-Total	**47**		**11.75**	-	**11.75**	
		Nimuri MWS	Simaluguri No.1	5	"	1.25	-	1.25	2nd Year
			No.3 Nimuri	6	"	1.50	-	1.50	2nd Year
			Pulli Naharani	4	"	1.00	-	1.00	5th year
			Simaluguri No.3	4	"	1.00	-	1.00	4th Year
			No. 1 Bikrampur	4	"	1.00	-	1.00	4th Year
			No. 2 Bikrampur	5	"	1.25	-	1.25	3rd Year
			Simaluguri No. 2	4	"	1.00	-	1.00	3rd Year
			Tiniali Handique	5	"	1.25	-	1.25	3rd Year
			Sub-Total	**37**		**9.25**	-	**9.25**	
			Total	**148**		**37.00**	-	**37.00**	

Table No. 5.2.4 Livelihood Activities Management

1	2	3	4	5	6	7	8	9	10
Sl. No.	**Name of the Activities**	**MWS**	**Name of the Village**	**No. of Unit**	**Unit Cost (in Rs.)**	**Total Cost (Rs. In Lakh)**	**Contribution (Rs. In Lakh)**	**Total Grant Amount (Rs. In Lakh)**	**Year of Implement ation**
4	Duckery	Dhalpur MWS	Chutia Gaon	2	15,000/-	0.30	-	0.30	1st year
			No.2 Khalihamari	2	"	0.30	-	0.30	2nd year
			Nidanchuwa	2	"	0.30	-	0.30	1st year
			1 No. Khalihamari	2	"	0.30	-	0.30	1st year
			Doomor Doloni	2	"	0.30	-	0.30	1st year
			Saru Kathani	2	"	0.30	-	0.30	1st year
			Dhalpur	2	"	0.30	-	0.30	1st year
			Sub-Total	**14**		**2.10**		**2.10**	
		Sessa Miri MWS	Sessa Miri No.1	2	"	0.30	-	0.30	1st year
			Gormara Pathar	2	"	0.30	-	0.30	1st year
			Ganakdoloni	2	"	0.30	-	0.30	1st year
			Sessa Miri No. 2	2	"	0.30	-	0.30	1st year
			Futabhug	2	"	0.30	-	0.30	1st year
			Major Doloni	2	"	0.30	-	0.30	1st year
			Nowghuli	2	"	0.30	-	0.30	1st year
			Sub-Total	**14**		**2.10**		**2.10**	
		Rangati MWS	No.2 Rangati	1	"	0.15	-	0.15	1st year
			Bachapukhuri	2	"	0.30	-	0.30	1st year

			No.1 Rangati	2	"	0.30	-	0.30	1st year
			Christianbasti	2	"	0.30	-	0.30	1st year
			No. 2 Mughnoa	2	"	0.30	-	0.30	1st year
			Somdhara	2	"	0.30	-	0.30	1st year
			Ghagra	1	"	0.15	-	0.15	1st year
			No. 1 Mughnoa	2	"	0.30	-	0.30	1st year
			Athanibari	2	"	0.30	-	0.30	1st year
			Da-dhara	2	"	0.30	-	0.30	1st year
			Sub-Total	**18**		**2.70**		**2.70**	
		Nimuri MWS	Simaluguri No.1	2	"	0.30	-	0.30	1st year
			No.3 Nimuri	2	"	0.30	-	0.30	1st year
			Pulli Naharani	2	"	0.30	-	0.30	1st year
			Simaluguri No.3	1	"	0.15	-	0.15	1st year
			No. 1 Bikrampur	2	"	0.30	-	0.30	1st year
			No. 2 Bikrampur	2	"	0.30	-	0.30	1st year
			Simaluguri No. 2	1	"	0.2042	-	0.2042	1st year
			Simaluguri No. 2	1		0.0958		0.0958	2nd year
			Tiniali Handique	1	"	0.15	-	0.15	1st year
			Sub-Total	**14**		**2.10**		**2.10**	
			Total	**60**		**9.00**		**9.00**	

Table No. 5.2.4 Livelihood Activities Management

1	2	3	4	5	6	7	8	9	10
Sl. No.	**Name of the Activities**	**MWS**	**Name of the Village**	**No. of Unit**	**Unit Cost (in Rs.)**	**Total Cost (Rs. In Lakh)**	**Contribution (Rs. In Lakh)**	**Total Grant Amount (Rs. In Lakh)**	**Year of Implement ation**
5	Poultry	Dhalpur MWS	Chutia Gaon	4	25,000/-	1.00	-	1.00	2nd Year
			No.2 Khalihamari	4	"	1.00	-	1.00	2nd Year
			Nidanchuwa	5	"	1.25	-	1.25	3rd Year
			1 No. Khalihamari	4	"	1.00	-	1.00	3rd Year
			Doomor Doloni	4	"	1.00	-	1.00	3rd Year
			Saru Kathani	5	"	1.25	-	1.25	4th Year
			Dhalpur	6	"	1.50	-	1.50	4th Year
			Sub-Total	**32**		**8.00**	-	**8.00**	
		Sessa Miri MWS	Sessa Miri No.1	4	"	1.00	-	1.00	2nd Year
			Gormara Pathar	5	"	1.25	-	1.25	2nd Year
			Ganakdoloni	5	"	1.25	-	1.25	3rd Year
			Sessa Miri No. 2	4	"	1.00	-	1.00	3rd Year
			Futabhug	4	"	1.00	-	1.00	3rd Year
			Major Doloni	6	"	1.50	-	1.50	4th Year
			Nowghuli	4	"	1.00	-	1.00	4th Year
			Sub-Total	**32**		**8.00**	-	**8.00**	
		Rangati	No.2 Rangati	4	"	1.00	-	1.00	2nd Year

		MWS	Bachapukhuri	3	"	0.75	-	0.75	2nd Year
			No.1 Rangati	4	"	1.00	-	1.00	3rd Year
			Christianbasti	3	"	0.75	-	0.75	3rd Year
			No. 2 Mughnoa	3	"	0.75	-	0.75	3rd Year
			Somdhara	4	"	1.00	-	1.00	3rd Year
			Ghagra	3	"	0.75	-	0.75	3rd Year
			No. 1 Mughnoa	4	"	1.00	-	1.00	5th year
			Athanibari	3	"	0.75	-	0.75	4th Year
			Da-dhara	3	"	0.75	-	0.75	4th Year
			Sub-Total	**34**		**8.50**	-	**8.50**	
		Nimuri MWS	Simaluguri No.1	4	"	1.00	-	1.00	2nd Year
			No.3 Nimuri	4	"	1.00	-	1.00	2nd Year
			Pulli Naharani	3	"	0.75	-	0.75	3rd Year
			Simaluguri No.3	3	"	0.75	-	0.75	3rd Year
			No. 1 Bikrampur	1	"	0.25	-	0.25	3rd Year
			No. 1 Bikrampur	2		0.50		0.50	5th Year
			No. 2 Bikrampur	4	"	1.00	-	1.00	4th Year
			Simaluguri No. 2	3	"	0.81175	-	0.81175	5th year
			Tiniali Handique	2	"	0.45885	-	0.45885	5th Year
			Tiniali Handique	2		0.5424		0.5424	4th Year
			Sub-Total	**28**		**7.06175**	-	**7.06175**	
			Total	**126**		**31.563**	-	**31.563**	

5.2.5 Production Enhancement Activities in Sessa Watershed

1	2	3	4	5	6	7	8	9	10
Sl. No.	**Name of the Activities**	**MWS**	**Name of the Village**	**No. of Unit**	**Unit Cost (in Rs.)**	**Total Cost (Rs. In Lakh)**	**Contribution (Rs. In Lakh)**	**Total Grant Amount (Rs. In Lakh)**	**Year of Implement ation**
1	Goatary	Dhalpur MWS	Chutia Gaon	3	25,000/-	0.75	-	0.75	4th Year
			No.2 Khalihamari	9	"	2.25	-	2.25	2nd Year
			Nidanchuwa	6	"	1.50	-	1.50	3rd Year
			1 No. Khalihamari	3	"	0.75	-	0.75	3rd Year
			Doomor Doloni	3	"	0.75	-	0.75	4th Year
			Saru Kathani	3	"	0.75	-	0.75	3rd Year
			Dhalpur	9	"	2.25	-	2.25	1st Year
			Sub-Total	**36**		**9.00**		**9.00**	
		Sessa Miri MWS	Sessa Miri No.1	3	"	0.75	-	0.75	1st Year
			Gormara Pathar	6	"	1.50	-	1.50	3rd Year
			Ganakdoloni	3	"	0.75	-	0.75	3rd Year
			Sessa Miri No. 2	3	"	0.75	-	0.75	3rd Year
			Futabhug	6	"	1.50	-	1.50	4th Year
			Major Doloni	3	"	0.75	-	0.75	4th Year
			Nowghuli	6	"	1.50	-	1.50	2nd Year
			Sub-Total	**30**		**7.50**		**7.50**	
		Rangati MWS	No.2 Rangati	3	"	0.75	-	0.75	1st Year
			Bachapukhuri	3	"	0.75	-	0.75	3rd Year
			No.1 Rangati	3	"	0.75	-	0.75	3rd Year
			Christianbasti	3	"	0.75	-	0.75	3rd Year

			No. 2 Mughnoa	3	"	0.75	-	0.75	4th Year
			Somdhara	6	"	1.50	-	1.50	3rd Year
			Ghagra	3	"	0.75	-	0.75	4th Year
			No. 1 Mughnoa	3	"	0.75	-	0.75	5th Year
			Athanibari	6	"	1.50	-	1.50	2nd Year
			Da-dhara	3	"	0.75	-	0.75	4th Year
			Sub-Total	**36**		**9.00**		**9.00**	
		Nimuri MWS	Simaluguri No.1	4	"	0.8542	-	0.8542	1st Year
			No.3 Nimuri	6	"	1.50	-	1.50	3rd Year
			Pulli Naharani	3	"	0.6458	-	0.6458	5th Year
			Simaluguri No.3	3	"	0.75	-	0.75	3rd Year
			No. 1 Bikrampur	3	"	0.75	-	0.75	3rd Year
			No. 2 Bikrampur	6	"	1.50	-	1.50	4th Year
			Simaluguri No. 2	3	"	0.75	-	0.75	3rd Year
			Tiniali Handique	3	"	0.75	-	0.75	2nd Year
			Sub-Total	**31**		**7.5**		**7.5**	
			Total	**133**		**33.00**		**33.00**	

5.2.5 Production Enhancement Activities in Sessa Watershed

1	2	3	4	5	6	7	8	9	10
Sl. No.	**Name of the Activities**	**MWS**	**Name of the Village**	**No. of Unit**	**Unit Cost (in Rs.)**	**Total Cost (Rs. In Lakh)**	**Contribution (Rs. In Lakh)**	**Total Grant Amount (Rs. In Lakh)**	**Year of Implement ation**
2	Piggery	Dhalpur MWS	Chutia Gaon	4	25000/-	1.00	-	1.00	1st Year
			No.2 Khalihamari	4	"	1.00	-	1.00	3rd Year
			Nidanchuwa	4	"	1.00	-	1.00	3rd Year
			1 No. Khalihamari	4	"	1.00	-	1.00	4th Year
			Doomor Doloni	4	"	1.00	-	1.00	4th Year
			Saru Kathani	4	"	1.00	-	1.00	3rd Year
			Dhalpur	4	"	1.00	-	1.00	2nd Year
			Sub-Total	**28**		**7.00**		**7.00**	
		Sessa Miri MWS	Sessa Miri No.1	4	"	1.00	-	1.00	5th Year
			Gormara Pathar	4	"	1.00	-	1.00	1st Year
			Ganakdoloni	4	"	1.00	-	1.00	3rd Year
			Sessa Miri No. 2	4	"	1.00	-	1.00	3rd Year
			Futabhug	4	"	1.00	-	1.00	4th Year
			Major Doloni	4	"	1.00	-	1.00	4th Year
			Nowghuli	4	"	1.00	-	1.00	2nd Year
			Sub-Total	**28**		**7.00**		**7.00**	
		Rangati MWS	No.2 Rangati	4	"	1.00	-	1.00	1st Year
			Bachapukhuri	4	"	1.00	-	1.00	3rd Year

			No.1 Rangati	4	"	1.00	-	1.00	3rd Year
			Christianbasti	4	"	1.00	-	1.00	3rd Year
			No. 2 Mughnoa	4	"	1.00	-	1.00	5th Year
			Somdhara	4	"	1.00	-	1.00	4th Year
			Ghagra	4	"	1.00	-	1.00	4th Year
			No. 1 Mughnoa	4	"	1.00	-	1.00	3rd Year
			Athanibari	4	"	1.00	-	1.00	2nd Year
			Sub-Total	**36**		**9.00**		**9.00**	
		Nimuri MWS	Simaluguri No.1	4	"	1.00	-	1.00	1st Year
			No.3 Nimuri	4	"	1.00	-	1.00	4th Year
			Pulli Naharani	4	"	1.00	-	1.00	3rd Year
			Simaluguri No.3	4	"	1.00	-	1.00	3rd Year
			No. 1 Bikrampur	4	"	1.00	-	1.00	3rd Year
			No. 2 Bikrampur	4	"	1.00	-	1.00	4th Year
			Simaluguri No. 2	4	"	1.00	-	1.00	4th Year
			Tiniali Handique	4	"	1.00	-	1.00	2nd Year
			Sub-Total	**32**		**8.00**		**8.00**	
			Total	**124**		**31.00**		**31.00**	

5.2.5 Production Enhancement Activities in Sessa Watershed

1	2	3	4	5	6	7	8	9	10
Sl. No.	**Name of the Activities**	**MWS**	**Name of the Village**	**No. of Unit**	**Unit Cost (in Rs.)**	**Total Cost (Rs. In Lakh)**	**Contribution (Rs. In Lakh)**	**Total Grant Amount (Rs. In Lakh)**	**Year of Implement ation**
3	Pisciculture	Dhalpur MWS	Chutia Gaon	3	25,000/-	0.75	-	0.75	3rd Year
			No.2 Khalihamari	3	"	0.75	-	0.75	3rd Year
			Nidanchuwa	3	"	0.75	-	0.75	3rd Year
			1 No. Khalihamari	3	"	0.75	-	0.75	4th Year
			Doomor Doloni	3	"	0.75	-	0.75	4th Year
			Saru Kathani	3	"	0.75	-	0.75	3rd Year
			Dhalpur	3	"	0.75	-	0.75	2nd Year
			Sub-Total	**21**	"	**5.25**	-	**5.25**	
		Sessa Miri MWS	Sessa Miri No.1	3	"	0.75	-	0.75	3rd Year
			Gormara Pathar	3	"	0.75	-	0.75	3rd Year
			Ganakdoloni	3	"	0.75	-	0.75	3rd Year
					"				
			Sessa Miri No. 2	3	"	0.75	-	0.75	4th Year
			Futabhug	3	"	0.75	-	0.75	4th Year
			Major Doloni	3	"	0.75	-	0.75	3rd Year
			Nowghuli	3	"	0.75	-	0.75	2nd Year
			Sub-Total	**21**	"	**5.25**	-	**5.25**	
		Rangoti MWS	No.2 Rangati	3	"	0.75	-	0.75	3rd Year
			Bachapukhuri	2	"	0.50	-	0.50	3rd Year

			No.1 Rangati	3	"	0.75	-	0.75	3rd Year
			Christianbasti	3	"	0.75	-	0.75	3rd Year
			No. 2 Mughnoa	2	"	0.50	-	0.50	3rd Year
			Somdhara	3	"	0.75	-	0.75	4th Year
			Ghagra	2	"	0.50	-	0.50	4th Year
			No. 1 Mughnoa	3	"	0.75	-	0.75	4th Year
			Athanibari	2	"	0.50	-	0.50	4th Year
			Da-dhara	3	"	0.75	-	0.75	2nd Year
			Sub-Total	**26**	"	**6.5**	-	**6.5**	
		Nimuri MWS	Simaluguri No.1	3	"	0.75	-	0.75	3rd Year
			No.3 Nimuri	3	"	0.75	-	0.75	3rd Year
			Pulli Naharani	3	"	0.75	-	0.75	3rd Year
			Simaluguri No.3	3	"	0.75	-	0.75	3rd Year
			No. 1 Bikrampur	3	"	0.75	-	0.75	4th Year
			No. 2 Bikrampur	2	"	0.44265	-	0.44265	4th Year
			Simaluguri No. 2	4	"	1.05735	-	1.05735	5th Year
			Tiniali Handique	3	"	0.75	-	0.75	2nd Year
			Sub-Total	**24**		**6.00**		**6.00**	
			Total	**92**		**23.00**		**23.00**	

5.2.5 Production Enhancement Activities in Sessa Watershed

1	2	3	4	5	6	7	8	9	10
Sl. No.	**Name of the Activities**	**MWS**	**Name of the Village**	**No. of Unit**	**Unit Cost (in Rs.)**	**Total Cost (Rs. In Lakh)**	**Contribution (Rs. In Lakh)**	**Total Grant Amount (Rs. In Lakh)**	**Year of Implement ation**
4	Horticulture	Dhalpur MWS	Chutia Gaon	4 Ha.	44,000/-	2.00	-	2.00	2nd Year
			No.2 Khalihamari	4 Ha.	"	2.00	-	2.00	2nd Year
			Nidanchuwa	3 Ha.	"	1.50	-	1.50	3rd Year
			1 No. Khalihamari	2 Ha.	"	1.00	-	1.00	5th Year
			Doomor Doloni	2 Ha.	"	1.00	-	1.00	4th Year
			Saru Kathani	3 Ha.	"	1.50	-	1.50	3rd Year
			Dhalpur	3 Ha.	"	1.50	-	1.50	3rd Year
			Sub-Total	**21 Ha**		**10.50**		**10.50**	
		Sessa Miri MWS	Sessa Miri No.1	4 Ha.	"	2.00	-	2.00	2nd Year
			Gormara Pathar	3 Ha.	"	1.50	-	1.50	2nd Year
			Ganakdoloni	2 Ha.	"	1.00	-	1.00	5th Year
			Sessa Miri No. 2	3 Ha.	"	1.50	-	1.50	4th Year
			Futabhug	4 Ha.	"	2.00	-	2.00	4th Year
			Major Doloni	3 Ha.	"	1.50	-	1.50	3rd Year
			Nowghuli	2 Ha.	"	1.00	-	1.00	3rd Year
			Sub-Total	**21 Ha**		**10.50**		**10.50**	
		Rangati MWS	No.2 Rangati	2 Ha.	"	1.00	-	1.00	2nd Year
			Bachapukhuri	2 Ha.	"	1.00	-	1.00	2nd Year

			No.1 Rangati	2 Ha.	"	1.00	-	1.00	4th Year
			Christianbasti	2 Ha.	"	1.00	-	1.00	4th Year
			No. 2 Mughnoa	2 Ha.	"	1.00	-	1.00	4th Year
			Somdhara	2.75 Ha.	"	1.3752	-	1.3752	3rd Year
			Ghagra	2.25 Ha.	"	1.1248	-	1.1248	4th Year
			No. 1 Mughnoa	2 Ha.	"	1.00	-	1.00	4th Year
			Athanibari	2 Ha.	"	1.00	-	1.00	3rd Year
			Da-dhara	2 Ha.	"	1.00	-	1.00	3rd Year
			Sub-Total	**21 Ha**		**10.50**		**10.50**	
		Nimuri MWS	Simaluguri No.1	2 Ha.	"	1.00	-	1.00	2nd Year
			No.3 Nimuri	2 Ha.	"	1.00	-	1.00	2nd Year
			Pulli Naharani	3 Ha.	"	1.50	-	1.50	4th Year
			Simaluguri No.3	2.63 Ha.	"	1.3126	-	1.3126	2nd Year
			No. 1 Bikrampur	2.37 Ha.	"	1.1874	-	1.1874	4th Year
			No. 2 Bikrampur	3 Ha.	"	1.50	-	1.50	3rd Year
			Simaluguri No. 2	4 Ha.	"	2.00	-	2.00	3rd Year
			Tiniali Handique	2.126 Ha.	"	1.063	-	1.063	4th Year
			Sub-Total	**21.126 Ha**		**10.563**		**10.563**	
			Total	**84.126 Ha**		**42.063**		**42.063**	

5 .3: Structure or Activity Wise Details of Engineering Structure and Vegetative Measures

Table No.5.3.1: Engineering structures for Soil Conservation Measures (SMC)

1	2	3	4	5		6					7
S. No.	Name of structures	Area (ha)	Farmers (No.)	Total units (No./ cum./ r.mt)	UNIT COST (Rs)	Proposed plan					
						Estimated cost* (Rs. in lakh)				Farmers contribution	Grant Portion (Rs. in lakh)
						M	W	O	T		
A	PRIVATE LAND										
1	Earthen Guide Bund	272.36 Ha	115	43203.125cum	128/-		42.001	1.299	43.30	2.165	41.135
3	Channel Cutting	374.64 Ha	176	6776 Rm	590/-		77.600	2.400	80.00	4.00	76.00
	Sub-Total (A)	**647 Ha**	**291**				**119.601**	**3.699**	**123.30**	**6.165**	**117.135**
B	COMMON LAND										
1	Boulder Bund/Loose Boulders	265.15 Ha	108	2325.61 Cum	2961/-	48.30	17.25	3.45	69.00	3.45	65.55
	Sub- total (B)	**265.15 Ha**	**108**			**48.30**	**17.25**	**3.45**	**69.00**	**3.45**	**65.55**
	Grand total (A+B)	**912.15 Ha**	**399**			**48.30**	**136.851**	**7.149**	**192.30**	**9.615**	**182.685**

(M – Materials, W- wages, O- others, T – Total)

5.3.2: Details of engineering structures for Water Harvesting Structure (WHS)

1	2	3	4	5		6					7
S. No.	Name of structures	Area (ha)	Farmers (No.)	Total units (No./ cum./ r.mt)	UNIT COST (Rs)	Proposed plan					
						Estimated cost* (Rs. in lakh)				Farmers contribution	Grant Portion (Rs. in lakh)
						M	W	O	T		
A	PRIVATE LAND										
4	Water Harvesting Pond	485.67 Ha	140	54498.63156 cum	190/-		98.37003	5.17737	103.5474	5.17737	98.37003
5	Gully Control Project/ RCC Check Dam	389.27 Ha	128	162.109 Sqm	51200/-	58.100	20.7500	4.1500	83.0000	4.15	78.85
	Sub-Total (A)	**874.94 Ha**	**268**			**58.10**	**119.12003**	**9.32737**	**186.5474**	**9.32737**	**177.22003**
B	COMMON LAND										
	Sub- total (B)										
	Grand total (A+B)	**874.94 Ha**	**268**			**58.10**	**119.12003**	**9.32737**	**186.5474**	**9.32737**	**177.22003**

Table No. 5.3.3: Details of activities connected with vegetative cover in watershed works*

1	2	3		4			
				Proposed plan			
S. No.	Name of structure/ work	Area (ha)	No. of plants	Unit Cost (Rs)	Estimated cost (Rs. in lakh)	Farmer Contribution (Rs. in lakh)	Grant (Rs. in lakh)
1	Horticulture Block Plantation	9.19 Ha	10109	278000/-	25.55	1.2775	24.2725
	Total	**9.19 Ha**	**10109**	**278000/-**	**25.55**	**1.2775**	**24.2725**

Table No. 5.3.3: Details of activities connected with Livelihood Activities cover in Sessa watershed

1	2	3	4	5		6
S. No.	Name of structure/ work	Area (ha)/No./Unit	Unit Cost (Rs)	Proposed plan		
				Estimated cost (Rs. in lakh)	Farmer Contribution (Rs. in lakh)	Grant (Rs. in lakh)
1	Sewing Machine	58	25000/-	14.50	-	14.50
2	Goatery	148	25000/-	37.00	-	37.00
3	Handloom & Weaving	148	25000/-	37.00	-	37.00
4	Duckery	60	15000/-	9.00	-	9.00
5	Poutry	126.247	25000/-	31.563	-	31.563
	Total			**129.063**	**-**	**129.063**

Table No. 5.3.3: Details of activities connected with Production enhancement in Sessa watershed.

1	2	3		4			5
S. No.	Name of structure/ work	Proposed plan					
		Area (ha)/No./Unit	No. of plants	Unit Cost (Rs)	Estimated cost (Rs. in lakh)	Farmer Contribution (Rs. in lakh)	Grant (Rs. in lakh)
1	Piggery	124	-	25,000/-	31.00	-	31.00
2	Goattery	132	-	25,000/-	33.00	-	33.00
3	Pisciculture	92	-	25,000/-	23.00	-	23.00
4	Horticultural	84.13 Ha	92,543 Nos	44,000/-	42.063	-	42.063
	Total				**129.063**		**129.063**

Chapter 6
Capacity Building Action Plan

Table no. 6.1 details of Capacity Building

1	2	3	4	5	6	7	8	9	10	11
Sl. No.	Name of the Training, Event & Exposure (Knowledge, Skill, etc. at both *Being and Doing* level)	Number of events	Number of Participants in an event	Total Number of days per event	Total Traineedays/ Eventdays (= 3 x 4 x 5)	Cost per Traineeday/ Eventdays (in Rs)	Total Cost required for the programme (= 6 x7 ; in Rs.)	Total Grant Amount (in Rs)	Year of Implementation (1st/2nd/3rd/4th/5th)	Monitoring Indicators
SHG/ UG / WC / PIA/WDT/WCDC related										
1	Training for SHGs	14	50	1	700	500.00	350000.00	350000.00	1st 2nd, 3rd year	
2	Training for UGs	5	40	1	200	500.00	100000.00	100000.00	1st 2nd, 3rd & 4th year	
3	Training for WCs	1	40	1	40	500.00	20000.00	20000.00	1st 2nd, 3rd & 4th year	
4	Training for PIA/WDT	1	10	1	10	600.00	6000.00	6000.00	1st , 2nd & 3rd year	
5	Training for WCDC	1	25	1	25	1000.00	25000.00	25000.00	1st year	
Subtotal		**22**	**-**	**-**	**975**	**-**	**501000.00**	**501000.00**	**-**	
NRM related										
1	Training on NRM for WDT	1	10	1	10	600.00	6000.00	6000.00	1st , 2nd & 3rd year	
2	Training on NRM for WC	3	40	1	120	500.00	60000.00	60000.00	1st , 2nd, 3rd & 4th	
3	Training on NRM for UG	5	51	2	510	500.00	255000.00	255000.00	1st , 2nd, 3rd, 4th & 5th	
Subtotal		**9**	**-**	**-**	**640**	**-**	**321000.00**	**321000.00**	**-**	
Production Enhancement related										
1	Training on Production Enhancement for WDT	1	10	1	10	600.00	6000.00	6000.00	2nd & 3rd year	
2	Training on Production Enhancement for WC	2	40	1	80	500.00	40000.00	40000.00	2nd, 3rd & 4th year	
3	Training on Production Enhancement for SHG & BPL beneficiary .	5	50	1	250	500.00	125000.00	125000.00	2nd, 3rd, 4th & 5th	
Subtotal		**8**	**-**	**-**	**340**	**-**	**171000.00**	**171000.00**	**-**	
Livelihoods / Micro-enterprises related										

1	Training on Livelihoods/ Micro-enterprises for WDT	1	10	1	10	600.00	6000.00	6000.00	2nd & 3rd year	
2	Training on Livelihoods/ Micro-enterprises for WC	1	40	1	40	500.00	20000.00	20000.00	2nd, 3rd & 4th year	
3	Training on Livelihoods/ Micro-enterprises for SHG & BPL beneficiary.	10	47	1	470	500.00	235000.00	235000.00	2nd, 3rd, 4th & 5th year	
Subtotal		**12**	**-**	**-**	**520**	**-**	**261000.00**	**261000.00**	**-**	
Awareness Generation (events) to be conducted										
1	Pamphlets distribution	2026				10.00	20260.00	20260.00	1st year	
2	Wall posters	100				400.00	40000.00	40000.00	1st year	
3	Small Group meetings	30	50	1	1500	25.00	37500.00	37500.00	2nd , 3rd & 4th year	
4	Mass meeting in Project level	1	540	1	540	50.00	27000.00	27000.00	1st year	
5	Mass meeting in MWS level	10	200	1	2000	25.00	50000.00	50000.00	1st , 2nd & 3rd year	
6	Mass meeting in Village level	20	200	1	4000	25.00	100000.00	100000.00	1st & 2nd year	
Subtotal							**274760.00**	**274760.00**		
Regular Meetings to be conducted										
1	WC Meeting	60	15	1	900	25.00	22500.00	22500.00	1st, 2nd , 3rd, 4th & 5th year	
2	UGs/LGs Meeting	50	40	1	4000	25.00	100000.00	100000.00	2nd , 3rd & 4th year	
3	VO/SHGs Meeting	80	50	1	4000	25.00	100000.00	100000.00	2nd , 3rd & 4th year	
4	Self Monitoring events	20	10	1	200	500.00	10000.00	10000.00	1st, 2nd, 3rd, 4th & 5th year	
5	Social Audit events	10	5	1	50	500.00	25000.00	25000.00	2nd, 3rd, 4th & 5th year	
6	Participation in Exhibition	2	150	2	600	100.00	60000.00	60000.00	3rd , 4th & 5th year	
7	Seminar & Workshop	2	250	2	1000	100.00	100000.00	100000.00	3rd & 4th year	
8	Exposure visit	2	50	2	200	2000.00	400000.00	400000.00	2nd & 3rd year	
Subtotal							**817500.00**	**817500.00**		
Institutional Building										
1	Formation of UGs	80	10	1	800	25.00	20000.00	20000.00	1st , 2nd , 3rd & 4th year	
2	Formation of SHGs	500	11	1	5500	20.00	110000.00	110000.00	1st , 2nd , 3rd year	
3	Formation of WC	3	250	1	750	100.00	75000.00	75000.00	1St year	
4	Registration of WC	3	-	-	-	10000.00	30000.00	30000.00	2nd year	
Subtotal							**235000.00**	**235000.00**		
GRAND TOTAL							**2581260.00**	**2581260.00**	**-**	

CHAPTER 7
HASING OF PROGRAMME AND BUDGETING

Table No. 7.1: Phasing of the action plan

1	2	3	4	5	6		7		8		9		10		11	
Sl. No	Component	Activities	Unit	Unit Cost (Rs.)	1 year Phy (No)	1 year Fin (Rs.)	2nd year Phy (No)	2nd year Fin (Rs.)	3rd year Phy (No)	3rd year Fin (Rs.)	4th year Phy (No)	4th year Fin (Rs.)	5th year Phy (No)	5th year Fin (Rs.)	Total Phy (No)	Total Fin (Rs.)
1	**Entry Point Activities (2%)**															
		Sub Total of Entry Point Activity			**5**	**17.20840**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**17.208400**
2	**Institution & Capacity Building (3%)**															
	i)	Poor HHs in Watersheds to be covered under SHGs														
		SC	No.	-	0	-	33	-	66	-	66	-	66	-	231	-
		ST	No.	-	0	-	11	-	11	-	11	-	11	-	44	-
		BC	No.	-	0	-	88	-	132	-	132	-	132	-	484	-
		OC	No.	-	0	-	88	-	132	-	132	-	132	-	484	-
	ii)	Awareness Generation (events) to be conducted														
		Pamphlets distribution	No.	1.25	9000	0.1125	35000	0.4375	0	0	0	0	0	0	44000	0.5500
		Wall posters	No.	1.5	8165	0.12248	35500	0.5325	0	0	0	0	0	0	43665	0.65498
		Wall writings/Flex Postering	No.	2500	11	0.2750	22	0.5500	0	0	0	0	0	0	33	0.8250
		Mass meetings	No.	11471	4	0.45884	0	0	4	0.45884	2	0.22942	0	0	14	1.1471
	iii)	Orientation programmes to GP, WC,UG, SHG,VO, VSS, WUA, Societies, Elected reps.	No.													
	iv)	Formation of UGs	No.		0	0	0	0.0800	0	0.060	0	0.050	0	0.020	0	0.210
		No. of women	No.	-	-	-	-	-	-	-	-	-	-	-	-	-
		No. of men	No.	-	-	-	150	-	420	-	210	-	340	-	-	1120
	vi)	Formation of Watershed Committee	No.		0	0.15	0	0.30	0	0	0	0	0	0	0	0.45

1	2	3	4	5	6		7		8		9		10		11	
Sl. No	Component	Activities	Unit	Unit Cost (Rs.)	1 year Phy (No)	1 year Fin (Rs.)	2nd year Phy (No)	2nd year Fin (Rs.)	3rd year Phy (No)	3rd year Fin (Rs.)	4th year Phy (No)	4th year Fin (Rs.)	5th year Phy (No)	5th year Fin (Rs.)	Total Phy (No)	Total Fin (Rs.)
		No. of women	No.	-	12	-	-	-	-	-	-	-	-	-	-	
		No. of men	No.		60	-	-	-	-	-	-	-	-	-	-	
	vii)	Regular Meetings to be conducted														
		Watershed Committee	No.		0	0.15	0	0.30	0	0	0	0	0	0	0	0.45
		UGs/LGs	No.		12	-	-	-	-	-	-	-	-	-	-	
		VO/SHGs	No.		60	-	-	-	-	-	-	-	-	-	-	
		Gram Panchayat	No.													
	viii)	No. of Planning events	No.													
	ix)	Registration of WC	No.													
	x)	Self Monitoring events (planning, review of activities through tool)	No.													
	xi)	Convergence meetings with LDs/other institutions	No.													
	xii)	Social Audit events	No.													
	xiii)	**Trainings & Exposures**														
	a)	DWDU Level	No.Trgs	2	1	0	1	0	0	0	0	0	0	0	2	-
		Women	No.	-	10	-	10	-	-	-	-	-	-	-	20	-
		Men	No.		50		50	-	-	-	-	-	-		100	-
	b)	On PIA Level	No. trgs	7	1	-	2	-	2	-	2	-	-	-	7	-
		Women	No.	-	5	-	10	-	10	-	-	-	-	-	25	-
		Men	No.	-	15	-	30	-	30	-	-	-	-	-	75	-
	c)	On WC Level	No. trgs	10	0	-	5	-	5	-	-	-	-	-	10	-
		Women	No.	-	0	-	25	-	25	-	-	-	-	-	50	-
		Men	No.	-	0	-	30	-	30	-	-	-	-	-	60	-
	c)	On Natural Resource Management	No. trgs	12	0	-	4	-	4	-	2	-	2	-	8	-
		Women	No.	-	-	-	-	-	-	-	-	-	-	-	-	-

1	2	3	4	5	6		7		8		9		10		11	
Sl. No	Component	Activities	Unit	Unit Cost (Rs.)	1 year Phy (No)	1 year Fin (Rs.)	2nd year Phy (No)	2nd year Fin (Rs.)	3rd year Phy (No)	3rd year Fin (Rs.)	4th year Phy (No)	4th year Fin (Rs.)	5th year Phy (No)	5th year Fin (Rs.)	Total Phy (No)	Total Fin (Rs.)
		Men	No.	240	-	-	80	-	80	-	40	-	40	-	240	-
	d)	On Enterprise Promotion	No. trgs	6	-	-	2	-	2	-	1	-	1	-	6	-
		Women	No.	100	-	-	30	-	30	-	15	-	15	-	90	-
		Men	No.	20	-	-	10	-	10	-	5	-	5	-	30	-
	e)	On Productivity Enhancement	No. trgs	6	-	-	2	-	2	-	1	-	1	-	6	-
		Women	No.	100	-	-	30	-	30	-	15	-	15	-	90	-
		Men	No.	20	-	-	10	-	10	-	5	-	5	-	30	-
	f)	Exposure Visits	Nos	8	-	-	3	-	1	-	2	-	2	-	8	-
		Women	No.	40	-	-	15	-	5	-	10	-	10	-	40	-
		Men	No.	80	-	-	30	-	10	-	20	-	20	-	80	-
	Sub Total IB & CB {Do not sum Men & Women under CB events (a to f)}[1]				**0**	**12.9063**	**0**	**4.3021**	**0**	**4.3021**	**0**	**2.15105**	**0**	**2.15105**	**0**	**25.81260**
3	**Productivity Enhancement (15%)**															
	i)	Goattery	No.	0.25	9	2.25	21	5.25	54	13.50	39	9.75	9	2.25	132	33.00
	ii)	Piggery	No.	0.25	8	2.00	20	5.00	48	12.00	40	10.00	8	2.00	124	31.00
	iii)	Fishery	No.	0.25	6	1.50	18	4.50	36	9.00	26	6.50	6	1.50	92	23.00
	iv)	Horticulture	Ha	0.44	5.71	2.8542	13.52	6.7605	34.25	17.1253	24.94	12.4689	5.71	2.8542	84.13	42.0630
	Sub-Total EP				**28.71**	**8.60420**	**72.52**	**21.5105**	**172.25**	**51.6252**	**129.94**	**38.7189**	**28.71**	**8.60420**	**432.13**	**129.0630**
4	**Livelihood for Assetless (15%)**															
	i)	Handloom & Weaving	No.	0.25	10	2.50	30	7.50	60	15.00	40	10.00	8	2.00	148	37.00

1	2	3	4	5	6		7		8		9		10		11	
Sl. No	Component	Activities	Unit	Unit Cost (Rs.)	1 year Phy (No)	1 year Fin (Rs.)	2nd year Phy (No)	2nd year Fin (Rs.)	3rd year Phy (No)	3rd year Fin (Rs.)	4th year Phy (No)	4th year Fin (Rs.)	5th year Phy (No)	5th year Fin (Rs.)	Total Phy (No)	Total Fin (Rs.)
	ii)	Goatery	No.	0.25	10	2.50	30	7.50	60	15.00	40	10.00	8	2.00	148	37.00
	iii)	Sewing Machine	No.	0.25	4	1.00	12	3.00	24	6.00	16	4.00	2	0.50	58	14.50
	iv)	Duchery	No.	0.15	4	0.60	12	1.80	24	3.60	16	2.40	4	0.60	60	9.00
	v)	Poultry	No	0.25	8.017	2.0042	24.05	6.0126	48.10	12.0252	40.67	10.16785	5.41	1.35315	126.247	31.563
	Sub-Total PE				**36.017**	**8.60420**	**108.05**	**25.8126**	**216.1**	**51.6252**	**152.67**	**36.56785**	**27.41**	**6.45315**	**540.247**	**129.063**
5	**Natural Resource Management (47%)**															
	I	**WHS (MI Works)**														
	a	Gully Control Project/ RCC Check Dams	Sqm	51200/-	58.14	29.7698	19.53	10.00	41.99	21.50	20.50	10.50	21.93	11.2302	162.109	83.00
	b	Water Harvesting Pond	Cum	190/	29735.47	56.4974	19631.58	37.30	5131.58	9.75	-	-	-	-	54498.64	103.5474
	II	**Soil Moisture Conservation (SMC)**														
	a	Earthen Guide Bund	Cum	128/-	20625	26.40	13671.88	17.50	4687.50	6.00	-	-	4218.75	5.40	42203.125	55.30
	b	Drainage Channel Cutting	Rm	590/-	4237.29	25.00	6779.66	40.00	1694.92	10.00	847.46	5.00	-	-	6776	80.00
	c	Loose Boulders	Cum	2961/	-	-	675.45	20.00	945.63	28.00	303.95	9.00	-	-	2250	57.00
	III	**Vegetative Covers**														
	a	Horticulture Block Plantation	Ha	278000/-	-	-	4.63	12.8672	2.33	6.4899	0.472	1.3126	1.76	4.8803	9.19	25.55

1	2	3	4	5	6		7		8		9		10		11	
Sl. No	Component	Activities	Unit	Unit Cost (Rs.)	1 year Phy (No)	1 year Fin (Rs.)	2nd year Phy (No)	2nd year Fin (Rs.)	3rd year Phy (No)	3rd year Fin (Rs.)	4th year Phy (No)	4th year Fin (Rs.)	5th year Phy (No)	5th year Fin (Rs.)	Total Phy (No)	Total Fin (Rs.)
	Sub Total NRM:		**No.**		23	**137.6672**	**28**	**137.6672**	**14**	**81.7399**	**4**	**25.8126**	**4**	**21.5105**	**73**	**404.3974**
6.a.	**WDF Collected**		**Lac.**	Nos	23	6.883	28	6.883	14	4.09	4	1.29	4	1.08	73	20.22672
	I	**Maintenance of Natural Resources Related Assets**														
	a	Meeting with the members of Gram Panchayat alongwith PRI members	No.	0.05	6	0.30	6	0.30	6	0.30	6	0.30			24	1.20
	b	Preparation of over all Project Development Plan	No.	0.05	2	0.10	2	0.10	2	0.10	2	0.10			8	0.40
	c	Meeting for Annual Audit under Budgeting with GP and PRI members	No.	0.05			6	0.30	6	0.30	6	0.30			18	0.90
	II	**# Water Budgeting, Management/ Regulatory Norms and Governance**														
	a	Ground Water Monitoring (twice a year)	No.	0.10	15	1.4521	14	1.2521	15	1.4521	16	1.5521			60	5.7084
	b	Training for the Monitoring Exercises	No.	0.20	3	0.60	3	0.60	3	0.60	3	0.60			12	2.40
	III	**Protection and Regulation/ Regeneration of Common Lands (For the protection of the upper reaches of the watershed slopes)**														
	a	Meeting with Departmental Officers & staff of Forest, Agriculture, Veterinary etc. for protection & regeneration/ regulation in upper reaches of the watershed slope.	No.	0.05	12	0.60	12	0.60	12	0.60	12	0.60			48	2.40

1	2	3	4	5	6		7		8		9		10		11	
Sl. No	Component	Activities	Unit	Unit Cost (Rs.)	1 year Phy (No)	1 year Fin (Rs.)	2nd year Phy (No)	2nd year Fin (Rs.)	3rd year Phy (No)	3rd year Fin (Rs.)	4th year Phy (No)	4th year Fin (Rs.)	5th year Phy (No)	5th year Fin (Rs.)	Total Phy (No)	Total Fin (Rs.)
	b	Formation of User's Group & Mobility	No.	0.02	40	0.80	35	0.70	25	0.50	20	0.40			120	2.40
	c	Formation of Vouluntary Organization & Mobility	No.	0.03	15	0.45	15	0.45	15	0.45	15	0.45			60	1.80
						4.3021		4.3021		4.3021		4.3021			350	17.2084

1	2	3	4	5		6		7		8		9		10	
c	Activities	Unit	Unit Cost	1 year		2nd year		3rd year		4th year		5th year		Total	
			(Rs.)	Phy (No)	Fin (Rs.)	Phy (No)	Fin (Rs.)	Phy (No)	Fin (Rs.)	Phy (No)	Fin (Rs.)	Phy (No)	Fin (Rs.)	Phy (No)	Fin (Rs.)
Administration															
a	WCDC Level	Rs.			0.42		0.42		0.42		0.42		0.42		2.10
b	PIA / WDT Level.														
	1)Honorarium/Specialist/wages to temporary PIA staff	Rs.	0.15		2.80		2.80		2.80		2.80		2.80		14.00
	2) T.A/D.A.	Rs.			2.00		2.00		2.00		2.00		2.00		10.00
	3) Office contingencies.	Rs.			2.3484		2.3484		2.3484		2.3484		2.3484		11.742
	4) Pol	Rs.			5.00		5.00		5.00		5.00		5.00		25.00
c	WC / Village Level														
	1) Honorarium to village level Workers	Rs.	0.10		1.20		1.20		1.20		1.20		1.20		6.00

	2) Honorarium/Salary to Secy.	Rs.			1.44		1.44		1.44		1.44		1.44		7.20
	3) Office contingencies.	Rs.			1.00		1.00		1.00		1.00		1.00		5.00
	4) T.A/D.A.	Rs.			1.00		1.00		1.00		1.00		1.00		5.00
	Total	Lac			17.2084		17.2084		17.2084		17.2084		17.2084		86.042

1	2	3	4	5	6		7		8		9		10		11	
S. No	Component	Activities	Unit	Unit Cost (Rs.)	1 year		2nd year		3rd year		4th year		5th year		Total	
					Phy (No)	Fin (Rs. in L)	Phy (No)	Fin (Rs. in L)	Phy (No)	Fin (Rs. in L)	Phy (No)	Fin (Rs. in L)	Phy (No)	Fin (Rs. in L)	Phy (No)	Fin (Rs. in L)
8	**Monitoring Cost (1%)**															
	a	Monitoring	Rs.					2.15105		2.15105		2.15105		2.15105		**8.6042**
		Sub Total of Monitoring						2.15105		2.15105		2.15105		2.15105		**8.6042**
9	**Evaluation (1%)**															
	A	Evaluation	Rs.					2.15105		2.15105		2.15105		2.15105		**8.6042**
		Sub Total of Evaluation						2.15105		2.15105		2.15105		2.15105		**8.6042**
10	**DPR (1%)**															
	a	DPR Preparation	Rs.			**8.6042**										**8.6042**
		Sub Total of DPR				**8.6042**										**8.6042**

11	**Consolidation (3%)**															
	a	Consolidation	Rs.											**25.8126**		**25.8126**
		Sub Total of Consolidation														
		Grand Total (sum of all sub-totals 1 to 11)				**215.105**		**215.105**		**215.105**		**129.063**		**86.042**		**860.42**

Table No. 7.2 Estimated Benefit Cost Ratio

S.No.	Name of the activity	Total Cost (Rs.)	Total Benefit expected * (Rs.)	BCR	Remarks
1	EPA	17.20840	30.97512	1:08:01	Land development and increase in land values.
2	NRM	404.39740	647.03584	1:06:01	By way of enhanced productivity and production Extensification of Crop area and Irrigation facility.
3	PE	129.0630	232.3134	1:08:01	By the enhanced income of members of the Self Help Groups
4	Livelihood for Asset less	129.0630	232.3134	1:.8:1	By the enhanced income of members of the Self Help Groups
5	Institution and Capacity building	25.81260	46.46268	1:08:01	Through skill development and income generating activities.
6	Overall	860.42	1204.588	1:04:01	Including all non productive expenditures in administration, monitoring, Evaluation, DPR preparation etc

Chapter – 8

MONITORING AND EVALUATION

8.1 Monitoring-

Regular Monitoring of the project have to be carried out at each stage.

1. On line monitoring as per format prescribed by the Government of India in the Department of Land Resources is to be done continuously. Monitoring must include process and outcome monitoring.

2. The Project Implementing Agency (PIA) will compulsorily submit Quarterly Progress Reports countersigned by the Watershed Development Team President to the Watershed cell Cum Data Centre (WCDC) vis-à-vis Watershed cell Cum Data Centre (WCDC).

3. The WCDCwill have one member exclusively for monitoring.

4. The WCDC will ensure uploading of monitoring data complete in all aspects to SLNA and DOLR as per Format.

8.1.1. Budget provision for Monitoring-

8.1.1.1 Project Fund-There is fund provision amounting to Rs. 8.60420 lakh in the DPR. The year wise breakup of the allotted amount is also prescribed in table-7.2

8.1.1.2. Institutional fund- Institutional fund is also provided by the Government of India for setting up of District watershed cum Data Cell including the salary of the Accountant, Data Entry Operator etc engaged in the WCDC.

8.1.2. Streams of Monitoring-

Different Streams of monitoring as prescribed by the Department of Land Resources, Government of India are to be followed invariably.

1. Internal monitoring by Project Team. The PIA and the WCDC must arrange adequate arrangement for internal monitoring of the Project.

2. Progress of the Quarter must be reported in time without delay and must be monitored so that the time schedule as per approved DPR is strictly followed. If there is any deviation on progress from the approved DPR/AAP the reasons there of must

be recorded and intimated to the WCDC/SLNA/CLNA. DPR for Lakhimpur –I/2021-22 (Sessa) WDC-PMKSY, 2.0, Lakhimpur, Assam

3. GIS Web based On-line monitoring must be done as per laid down directives as well as instructions from Government of India from time to time.

4. Self Monitoring by Communities is to be done from time to time.

5. Sustainability of the outputs due to interventions in the project area should be monitored.

6. Arrangements for Independent and external monitoring as well as social auditing should be appropriately made.

7. Time to time monitoring of anticipated outcomes such as Soil Loss, Ground Water Recharge, amelioration of environment al parameters, Production enhancement, Income generation, Employment generation must be recorded and reported to WCDC/SLNA.

8.1 Evaluation-

1. Evaluation will include physical, financial and social audit of the work done.

2. Panel of evaluating agencies-

(a) At Central Level there is a panel of evaluating agencies. A minimum percentage of evaluation sand impact studies will be carried out by National Level agencies.

(b) There is a SLNA level panel of evaluators approved by the Departmental Nodal Agency at Central Level. This panel includes only institutions not individuals.

(c) The panel to be entrusted for evaluation of the project will not belong to the project area.

(d) Evaluators will evaluate the project work as per specific instructions of the Government of India as well as of the SLNA.

(e) The Fund release by Government of India on a favourable report from the evaluators.

(f) An amount of Rs 8.60420 lakh is provided in the DPR for evaluation of the project.

Chapter 8
Consolidation and completion of various works

Table No. 8.1: Consolidation of Action Plan

Sl No	Component	Phase – I Preparatory		Phase – II Implementation						Phase - III Consolidation		Total
		1st year		2nd year		3rd year		4th year		5th year		
		Phy (No)	Fin (Rs.in L)	Phy (No)	Fin (Rs.)	Phy (No)	Fin (Rs.)	Phy (No)	Fin (Rs.)	Phy (No)	Fin (Rs.)	Fin (Rs.)
1	Entry Point Activities (2%)	2%	17.2084	-	-	-	-	-	-	-	-	17.2084
2	DPR Preparation by PIA(1%)	1%	8.6042	-	-	-	-	-	-	-	-	8.6042
3	Institution & Capacity Building (3%)	1.5%	12.9063	0.5%	4.3021	0.5%	4.3021	0.25%	2.15105	0.25%	2.15105	25.8126
4	Productivity Enhancement (15%)	1%	8.6042	3%	25.8126	6%	51.6252	4.25%	36.56785	0.75%	6.45315	129.063
5	Livelihoods for Asset less (15%)	1%	8.6042	2.5%	21.5105	6%	51.6252	4.5%	38.7189	1%	8.6042	129.063
6	Natural Resource Management (47 %)	16%	137.6672	16%	137.6672	9.5%	81.7399	3%	25.8126	2.5%	21.5105	404.3974
7	Natural Resource Management Governance (2 %)	0.5%	4.3021	0.5%	4.3021	0.5%	4.3021	0.5%	4.3021	-	-	17.2084
8	Monitoring (1%)	-	-	0.25 %	2.15105	0.25 %	2.15105	0.25%	2.15105	0.25%	2.15105	8.6042
9	Evaluation (1 %)	-	-	0.25 %	2.15105	0.25 %	2.15105	0.25%	2.15105	0.25%	2.15105	8.6042
10	Consolidation phase (3%)	-	-	-	-	-	-	-	-	3%	25.8126	25.8126
11	Administration (10%)	2%	17.2084	2%	17.2084	2%	17.2084	2%	17.2084	2%	17.2084	86.042
	Total	**25%**	**215.105**	**25%**	**215.105**	**25%**	**215.105**	**15%**	**129.063**	**10%**	**86.042**	**860.42**

CHAPTER – 9

CONSOLIDATION AND COMPLETION OF VARIOUS WORKS

Table No. 9.1: Consolidation of Action Plan

Consolidation and withdrawal of support mechanism-The consolidation of the project implementation is envisaged to be attained within five years from the date of start of the watershed development interventions when the result of the input efforts are expected to bear returns I economic terms. Although initially the out put will naturally be low, the output is expected to be economically sustainable within the next two years of time and is likely to be increased non linearly upto optimum productivity. However the activities /interventions proposed in vegetative cover will have more gestation period and is more so in case of forestry sector. The activities proposed for vegetative cover will also give intangible benefits like amelioration of environment besides the expected sustainable economic benefits. A provision of 3% of the project fund amounting to Rupees 25.81260 lakh is set aside exclusively for consolidation .The Watershed Committee (WC) under the technical guidance of the Watershed Development Team (WDT) will maintain the assets through the stakeholders as per need. Further The Watershed Development Fund (WDF) amounting to Rupees 6.22 lakh being raised by the watershed Committee during the project implementation phase by way of contribution from the stakeholders will be utilized for maintenance of the assets after withdrawal of project activities. It is also proposed that the homogeneous stakeholders/beneficiaries will constitute their Community based organizations that will frame adequate byelaws and will collectively be responsible for subsequent maintenance of the assets, as well as to carry out new agenda during post project period. During consolidation phase the following exit protocol is expected to be completed by the Watershed Committee with the help of the Panchayati Raj Institutions (PRI) and the Watershed Development Team (WDT) under active guidance of the Project Implementing Agency (PIA) a) Preparation of project completion report with details about status of each intervention b) Documentation of successful experiences as well as lessons learnt for future use. c) Formal allocation of users right over common property resources (CPRs) on completion each such project/scheme. d) To constitute framework for collection of users charge for CPRs after allocation of users rights. e) Ensure sustainable utilization of developed natural resources. f) Ensure repair, maintenance and protection of

CPRs. DPR for Lakhimpur –I/2021-22 (Sessa) WDC-PMKSY, 2.0, Lakhimpur, Assam g) Up scaling of successful experiences through watershed Development Fund as well as credit and technical support from external institutions. However the environmental sustainability including biodiversity must be observed and monitored by the Government all the time even after the withdrawal. For value addition of the rural product, profitable marketing and maintaining water quality, soil quality, Food processing and warehousing as well as improved management practices infrastructural and technical support from Government machineries through Development Departments and Panchatiraj Institutions must continue.

EXPECTED OUTCOMES

9. Expected outcomes of the interventions in the Integrated Watershed Management Project area can be summarized as below-

9.1.1. Employment

Unemployment is a big problem in the Lakhimpur –I/2021-22 (Sessa) WDC-PMKSY, 2.0 project area .Main occupation of the villagers is agriculture; Fishery and daily wage labours .Due to lack of any irrigation facility people only cultivate one crop that is kharif crop. Only some farmers undertake Ravi crops and summer crops. Due to lack of fodder animal husbandry is also difficult in the project villages. Project will provide wage e mployment as well as self employment to the villagers. Wage employment would be created by engaging the people in watershed development works. Self employment would be created by providing agricultural activities,

9.1.2. Skill development-

All the members of the watershed committee and staff such as watershed Secretary and volunteers and the members of users groups and self help groups have been given orientation and training to improve their knowledge and upgrade technical/management and community organization skills to a level that is appropriate for the successful discharge of their responsibilities on withdrawal of the watershed development team from the project.

9.1.3. Enhanced Production-

The in situ soil and moisture conservation measures, improved agronomic practices would result in increase in cropping are and intensity and agricultural productivity reflecting in over all increase in agricultural production

9.1.4. Income Generation-

Interventions would help in enhancement on income generation not only through increased production but also through wage component to be earned by the farmers.

9.1.5 Ground Water Recharge-

Watershed Intervention would result in increase in Ground water table due to enhanced recharge.

CHAPTER – 9

EXPECTED OUTCOMES

9.1 Describe in detail the "Expected Outcomes"

Table No. 9.2: Summarize in the table given below (Quantifiable indicators)

1	2		3	4	5	6
S. No.	Item		Unit of measurement	Pre-project Status	Expected Post-project Status	Remarks
1	Status of water table (Depth to Ground water level)		Meters	3	2	
2	Ground water structures repaired/ rejuvenated		No.	5	25	
3	Quality of drinking water		Description	Turbid water	Clear. potable	
4	Availability of drinking water		Description	Scarce	sufficient	
5	Increase in irrigation potential		Hec.	Nil	3600	
6	Change in cropping/ land use pattern		Description	Single Cropping	Double Cropping also multiple cropping in suitable areas	
7	Area under agricultural crop		Hec.	4961	5088	
	I	Area under single crop	Hec.	3784	3900	
	Ii	Area under double crop	Hec.	1177	1188	
	iii	Area under multiple crop	Hec.			
8	Net increase in crop production area		Hec.	4961	5088	
9	Increase in area under Vegetation/Forest		Hec.	56	89	
10	Increase in area under horticulture		Hec.	Nil	93.316	
11	Increase in area under fuel		Hec.	25	40	

12	Increase in area under Fodder	Hec.	16	25	
13	Increase in milk production	Litres/day	1150	1670	
14	Environmental Impact Change in Soil Loss Perenniality of flow and change in Run-off Recharge of ground water		Environment is in peril due to lack of vegetation 57 Ton/Ha/Yr 13	Improve in environmental impact will be noticed. Soil loss will be reduced Surface runoff will be reduced due to increase in time of concentration & rate of infiltration. 11	Area under permanent vegetation will be increased Soil loss will have to be monitored Ground water table in 6 open wells as recorded in table 3.14 will have to be maintained and monitored.
14	No. of SHGs Promoted	No.	12	182	Assetless and women will be given priority I selection of SHG.
15	Increase in no. of livelihoods	No.	-	255	
16	Increase in income	Rs.	10000 /family	Av-Rs. 30000/Yr /Family	Socio economic condition will be improved.
17	Status of Migration	No.	361	Nil	Migration is expected to be stopped.

18	SHG Federations formed	No.	-	3	Federations of homogenous SHGs will be organized.
19	Credit linkage with banks	Rs.	-	All UGs and SHGs would have credit linkage	All SHGs will be linked with credit linkage in Banks
20	Resource use agreements		Nil	Frame work under process.	Resource use agreements will be applicable for all stake holders.
21	WDF collection & management	Rs.	Nil	33,12,600.00	As detailed in Water shed Development works schedule
22	Summary of lessons learnt	Systemic efforts are to be made by the PIA/WDT/WC to earn from the field experiences as also from feedback of independent sources. The following measures are suggested for the PIA/WDT/WC to enable the learning process at different levels. 1. Systematic analysis of monitoring data on a regular basis and sharing with DWDU/SLNA. as well as with DOLR through SLNA 2. Engaging services of independent academic and voluntary Organizations by the DWDU/SLNA for taking up research and action research projects. 3. Initiating pilots and innovative models. 4. Organizing Work shops at District/ State level sharing success stories of other projects.			

Table No.9.3: Backward and Forward Linkages

5		6	7
Type of Marketing Facility	Name of the institution	Pre-project (no.)	Expected post project status

(A) Backward linkages			
(i) Seed certification	Assam Seed Corporation Seed corporation of India	Nil	Only certified seeds will be procured.
(ii) Seed supply system	Assam Seed Corporation, Seed corporation of India	Nil	Seed supply will be only through organized sector, Department of Agriculture
(iii) Fertilizer supply system	Fertilizer Corporation of India	Nil	Department of Agriculture, Assam will ensure genuine supply of Fertilizer.
(iv) Pesticide supply system	From reputed manufacturers through the Department of Agriculture	Nil	Department of Agriculture, Assam will ensure genuine supply of pesticides
(v) Credit institutions	K.C.C. Banks	25	KCC and credit linkage with Banks will beensured
(vi) Water supply	State Department of Public Health Engineering	2	Ring wells, Tube wells are being provided from EPA & WD Works. State PHE Deptt will be involved through convergence
(vii) Extension services	State Departments of Agriculture and Allied services	3	Extensive services from Agriculture, Soil Conservation, Fishery, Horticulture, Animal Husbandry and Veterinary will have to been sured.
(viii) Nurseries	Provision for creation of Forestry and Horticultural Nursery is made in the DPR	2	Additional supply of seedlings will be made available from State Agriculture and Forest Departments

(ix) Tools/machinery suppliers	Department of Agriculture, Assam	2	Provision as made in DPR. To be procured through State Department of Agriculture
(x) Price Support system	State Department of Agriculture, Vetty. Dept.	2	State government will have to take appropriate steps
(xi) Labour	State Department of Labour and Employment	Nil	Prevailing rules will be followed
(xii) Any other (please specify)			
(B) Forward linkages			
(i) Harvesting/threshing machinery	State Department of Agriculture	1	Users Federation will take collection action with the State Department of Agriculture
(ii) Storage (including cold storage)	State Department of Agriculture	Nil	State Department of Agriculture will takeappropriate steps
(iii) Road network	State PWD Deptt.	3	Road network will have to be improvedthrough PMGRY
(iv) Transport facilities	State Department of Transport	2	Needs to be improved
(v) Markets / Mandis	VCDC/(Panchayats), Local Bodies	3	Marketing facility will have to be increased. State Department of Agriculture will have to take appropriate action.

(vi) Agro and other Industries	Agro Industries Development Corporation, Assam Small Industries Development Corporation. State Department of Industries and Commerce	Nil	Institution will take initiative so that beneficiaries will get better opportunities.
(vii) Milk and other collection centres	Dairy Development Department	Nil	Institution will take initiative so that beneficiaries will get better opportunities.
(viii) Any other (please specify)			