DETAILED PROJECT REPORT

(KOKRAJHAR- I/2021-22(SUBHAIJHAR) WDC-PMKSY 2.O)

Prepared by

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PREFACE

The detailed project report for Kokrajhar-WDC-I/2021-22 (Subaijhar) 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 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, Kokrajhar acknowledges the effort to the WDT Leader cum Range Officer Kokrajhar, Staff of Kokrajhar Soil Conservation Range, Accountant under WCDC, WDC-PMKSY 2.0, Kokrajhar & Dealing Assistant WDC-PMKSY 2.0 for their support and hard work. They have provided for successful completion of the Detailed Project Report.

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DETAILED PROJECT REPORT OF

WDC -PMKSY 2.O

(Kokrajhar- I/2021-22(SUBHAIJHAR)

Micro Watershed	Karigaon MWS	Dubragaon MWS	Bolagaon MWS	Kalugaon MWS
Micro Watershed Code No				
WDC-PMKSY 2.0 project	**Kokrajhar- I/2021-22(SUBHAIJHAR)**			
Block	**Kokrajhar**			
District	**Kokrajhar**			
Name of the PIA	Divisional Officer, Kokrajhar Soil Conservation Division, Kokrajhar			

Contents

Executive Summary

- Brief about area:

The project area, Kokrajhar-WDC-I/2021-22 (Subaijhar) is located under Kokrajhar Development Block in Kokrajhar District of state Assam. The total geographical area of the watershed is about 4869.00 Ha. of which 4138.00 Ha. has been undertaken to be treated under Watershed Development Component –Pradhan Mantri Kishan Sinchai Yojna 2.0 (WDC-PMKSY 2.0) starting year 2021-22. The watershed includes 26 (Twenty six) villages are the primary inhabitants of the village. The livelihood of these people is primarily based on rainfed agriculture, animal husbandry, wage labour and pisciculture.

A considerable part of the Subhaijhar Project area faces occasional flood and drought upto two months. This has resulted in Productivity of Agriculture Land was too low. In rainy season, the Subhaijhar Watershed in endowed with high intensity rainfall, the average rainfall of the five preceding years being 2050 mm. Moreover the major streams of the watershed area namely Karigaon, Dubragaon, Bolagaon and Kalugaon drains into Subaijhar river that flows along the watershed. The channel capacity of the streams has been adversely affected by the flood as a result occurs of soil erosion and vigorous silting cause by the sediment laden runoff from the agricultural fields.

The agricultural productivity of the area has been adversely affected by the drought and the seasonal waterlog. The inhabitants who are mostly dependent on agricultural. Watershed development works subjected to the mitigation of drought and the seasonal waterlog, measures for productivity enhancements and generation of alternative livelihoods will alleviate the poverty that exits in the villagers in the Watershed area.

- Institutional arrangements:

The Government initiatives in investment for development of common property resources creates a healthy environment for private investment with investment support by financial institute for activities of economic and environmental sustainability such as plantation, food processing, animal husbandry, agriculture etc. Subsidies are also available under various national schemes and missions including financial support for development of human resources, Institutional finance may also be available through SHG financed by the Commercial banks. However, in view of the fact that the credit worthiness of the villagers cannot be ascertained at this stage, Institutional Finance has not been considered for the investment plan so suggested.

- **Salient Project activities**:

Based on the context, secondary data, baseline data, PRA exercises and net planning etc.; activities under Entry Point Activity (EPA) is Waiting shed which would cost 2% of the whole budget.

Other major activities are Soil and Moisture Conservation structures like Agril Bund, Brick Channel Water Harvesting Structures like Brick Canal of Marshy Land

/Community Pond, Drainage Channel, Pond, RCC Check Dam, Vegetative Covers like, Horticulture Plantation etc. Crop production and value addition, live stock development, micro irrigation development and micro enterprise development etc.

A comprehensive training and capacity building plan for all sectors micro enterprise, livelihood system, crop production, ridge line treatment etc. covering all families (with overlaps) would be capacitated during the project period . The entire proposed plans would be implemented by Watershed Committee in close coordination with SHGs and UGs under the facilitation of PIA.

Administrative Overhead (Management Cost):

This Administrative Overhead is the integral part of the Project. To overcome all problems as well as smooth functioning of the project, the item is major head and essential also. It includes (i) the cost of stationery items like paper, pencil, ink and other assesories. (ii) Computer & Printer assecories , (iii) Cost for T.A. for the smooth running in the project area (iv) Fuel/PoL cost.

Another Major Cost of the administrative overhead is cost of Salary i.e. salary for all contractual staff – Computer Assistant, WDT Technical, Village level worker, salary for President & Secretary of Micro Watershed Committee.

- **Capacity Building Strategy**

Capacity building support is a crucial component in achieving desired results from watershed development projects. Programme Guidelines broadly define the contours of capacity building strategy for watershed development projects in the country.

The DoLR and NLNA may use the services of NRAA as *knowledge partner* for capacity building activities. NRAA will have an MoU with DoLR for undertaking activities enumerated under para 24.2 and 25 as described in Guideline. NRAA could help developing operational strategies for capacity building for States/UTs in consultation with SLNA and other relevant organizations.

Key Elements of Capacity Building Strategy:

NRAA will collaborate with reputed national resource organizations for developing National and State/UT specific capacity building strategies. Following may be the key components of capacity building strategies:

a) Dedicated and decentralized institutional support and delivery mechanism.
b) Annual Action Plan for capacity building.
c) Pool of resource persons.
d) Well prepared training modules and text materials.
e) Mechanism for effective monitoring and follow-up.
f) E-resources and self-learning modules in the web.

Preparatory phase:: Entry Point Activities

The Entry Point Activities (E.P.A.) is perceived as the focal point of all micro-watershed region which aims to promote sustainable growth and development. it also forms the focal point in promoting awareness to technology, information and better environment more specifically to emerging trends in land-water management. The activities are considered on a long term economic sustainability through revenue generation. The Entry Point Activities was selected in Gram Sabha through Participatory Rural Appraisal (PRA) and it is implemented by Project Implementing Agency (PIA). The Action Plan of E.P.A. have been already prepared and mentioned as following below:

Sl. No	Name of Work	MWS	Location	GPS POINT	Target		Family Benefitted in Nos.
					Physical (in No./Ha.)	Financial (Rs. in Lakh)	
1	2	3	4	5	6	7	8
1	Waiting Shed	Bolagaon	Vill : Diajhijari G.P. : Haloadal Block : Kokrajhar	26.20405 90.10078	1 No.	4.50	120
2	Waiting Shed	Dobragaon	Vill : Dakin Dobragaon G.P. : Tiniali Chariali Block : Kokrajhar	26.30359 90.21144	1 No.	4.10	75
3	Waiting Shed	Karigaon	Vill : Doljhara G.P. : Tiniali Chariali Block : Kokrajhar	26.31004 90.20140	1 No.	5.50	78
4	Waiting Shed	Kalugaon	Vill : Haltugaon Subhaijhar G.P. : Kalugaon Subhaijhar Block : Kokrajhar	26.29252 90.17146	1 No.	4.1072	156
				Total	**11 nos.**	**18.2072**	**429 Nos.**

WATERSHED WORK PHASE :

1. Natural Resource Management (NRM):

Watershed Development Program has emerged as a major platform for participatory, community based natural resource management. The river Subaijhar have significant impact on the human activities of the Subaijhar Watershed starting with Bank Erosion, Drought, Seasonal Flood etc.

Major problems faced by the villagers of the watershed are –

1. River Bank Erosion
2. Low Agricultural productivity
3. Low upliftment of socio-economic condition
4. Lack of Irrigation Facility
5. Degeneration of Natural Water Bodies
6. Drought during winter season
7. Unemployment
8. Lack of safe Drinking water facility
9. Lack of proper Electricity
10. Poor road communication
11. Seasonal water logged.

With a broad objective considering the above problems, the proposed plan is to lead the way to an approach to build a large scale people's initiative towards managing water, land and biomass resources, enhancing the productivity of these resources and the promote an equitable distribution of their benefits. The main focus of this approach is to develop a sustainable raifed farming systems on the foundation of a sound soil and water conservation effort. The following are the activities identified through conducting participatory rural appraisal survey in the villages of Subaijhar WDC-PMKSY 2.0.

1. RCC Check dams
2. Gully Control Project
3. Farm ponds
4. Horticulture- Plantation
5. Agri Bund
6. Earthen Guide Bund
7. Brick Channel
8. Afforestation Plantation
9. Horticulture –Battle Nut

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 streghten the income generating sources for the asset less persons, both women & men, the following activities are proposed. Moreover, appropretiate technologist which are relivant 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 Appraisal and survey conducted in the villages in the watershed.

i. Handloom
ii. Piggery
iii. Duckery
iv. Goatery
v. Swing Maching
vi. E-Rickshaw

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 activities are identified for allied and livelihood activities for farmers by conducting PRA in the village of the watershed.

i. Horticulture Plantation
ii. Goattery
iii. Piggery
iv. Rotary Tiller
v. Fisheries
vi. Mushroom

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 economic 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.

 # Existing Water Budgeting in different season of the Project area

Sl. No.	Name of the Scheme	Beneficiaries	Village	GPS Reading	Water Level
1		Diajhijari	Diajhijari	26°20405 90°10078	01-03-2022 =2.8 m 01-12-2021 =2.6 m 01-09-2021 =2.2 m 01-06-2021 =1.5 m
2		Dakin Dobragaon	Dakin Dobragaon	26°30359 90°21144	01-03-2022 =3.0 m 01-12-2021 =2.8 m 01-09-2021 = 2.3 m 01-06-2021 =1.8 m
3		Doljhara	Doljhara	26°31004 90°20140	01-03-2022 =3.0 m 01-12-2021 =2.8 m 01-09-2021 =2.4 m 01-06-2021 =1.7 m
4		Holtugaon Subhaijhar	Holtugaon Subhaijhar	26°29252 90°17146	01-03-2022 =2.9 m 01-12-2021 =2.6 m 01-09-2021 =2.3 m 01-06-2021 =1.6 m

Data source: Field Survey

c) Protection and Regulation/Regeneration of Common Lands

Common lands that are typically in the upper reaches of the watershed slopes, including forests, pastures etc. should receive focused attention, along with identification of users, their needs and organizing them into user groups. The plan for regeneration and development should also enlist various products, usufructs arising out of the planned regeneration process, and their benefit sharing norms. Protection measures, norms and their enforcement mechanisms need to be arrived at and must have sanction of the Gram Panchayat.

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 ecsociety at 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 matrix 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 afforestation 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 solely for common benefits which shall be shared by all beneficiaries of the watershed areas.

Physical Targets and Financial Outlays:

Watershed	MWS	Geographical Area	Treatable Area	Fund Allocated	Activities	1st year	2nd year	3rd Year	4th Year	5th year	% of total cost	Amount	Grand Total
Kokrajhar -I (Subhaijhar) WDC-PMKSY 2.0	MWS-1	4869	4138	910.36	Management Cost	2%	2%	2%	2%	2%	10%		
						18.20	18.20	18.20	18.20	18.20	91.04	91.04	
					Monitoring & Evaluation	0%	0.5%	0.5%	0.5%	0.5%	2%		
						0	4.55	4.55	4.55	4.55	18.20	18.20	
					Entry Point Activity	2%	0%	0%	0%	0%	2%		
	MWS-2					18.20	0	0	0	0	18.20	18.20	
					DPR Preparation	1%	0%	0%	0%	0%	1%		
						9.10	0	0	0	0	9.10	9.10	
					Institution & Capacity Building	1.5%	0.5%	0.5%	0.25%	0.25%	3%		
						13.66	4.55	4.55	22.76	22.76	27.31	27.31	
	MWS-3				Natural Resource Management	16%	16%	9.5%	3%	2.5%	47%		
						145.66	145.66	86.48	27.31	227.59	427.87	427.87	
					Production System	1%	3%	6%	4.25%	0.75%	15%		
						9.10	27.31	54.62	38.69	6.83	136.55	136.55	
					Natural Resource Management & Governance	0.5%	0.5%	0.5%	0.5%	0%	2%		
	MWS-4					4.55	4.55	4.55	4.55	0	18.20	18.20	
					Livelihood, Activities for the asset less persons, micro enterprises & business development	1%	2.5%	6%	4.5%	1%	15%		
						9.10	22.76	54.62	40.97	9.10	136.55	136.55	
					Consolidation & Withdrawal Phase	0%	0%	0%	0%	3%	3%		
						0	0	0	0	**27.31**	**27.31**	**27.31**	

CHAPTER 1

INTRODUCTION AND BACKGROUND

INTRODUCTION

- Name of the State : Assam
- Name of the District : Kokrajhar
- Names of the Blocks : Kokrajhar Dev. Block
- Name of the project : Kokrajhar-I (Subhaijhar)
- Financial Year of sanction : 2021-22
- Project duration : From 2022 to 2027

Project Background:

Watershed Development Component - Pradhan Mantri Krishi Sinchai Yojna (WDC-PMKSY 2.0) is a modified programme of previous Drought Prone Areas Programme (DPAP), Desert Development Programme (DDP), Integrated Wastelands Development Programme (IWDP) and Integrated Watershed Management Programme (IWMP) of the Development of Land Resources, Government of India. The scheme is launched during 2021-22. The main objectives of the Watershed Development Component- Pradhan Mantri Krishi Sinchai Yojna (WDC-PMKSY 2.0) are to restore the ecological balance by harnessing, conserving and developing degraded natural resources such as soil, vegetative cover and water. The outcomes are prevention of soil erosion, regeneration of natural vegetation, rain water harvesting and recharging of the ground water table. This enables multi-cropping and the introduction of diverse agro-based activities, which help to provide sustainable livelihoods to the people residing in the watershed area.

Every land area, regardless of its location, is part of a watershed. Some areas are plain and other relatively slope. Every watershed has a physical landscape a complex terrain of landforms, water resources, vegetation, animals and their habitats, human being and the structures they have built. At the watershed scale, conflicts over water and land resources are inherently multi-attribute, multi-stakeholder, and multi-discipline decision problems. Watershed systems from those with many small tributaries to large-scale drainage systems and river basins provide direct inputs to economic processes, serve as waste sinks for economic output, and provide ecosystem that make life possible.

In recent years, the concepts of Watershed Development Component have gained increasing attention as strategies for sustainable resource use within a complex multi-institutional regulatory context. Watershed is a basic hydrologic unit,

and hydrologic and ecologic processes govern the quality of soil and water resources within the watershed. Soil degradable processes are accentuated by anthropogenic factors. It is appropriate; therefore, that issues related to sustainable management of natural resources (e.g., food security and environment quality) are addressed within the context of watershed management.

Watershed Development Component implies rational utilization of natural resources for optimal and sustained production with minimum hazard to environment. It requires collection and analysis of information from multiple services to ensure sustainable economic and social progress of a watershed.

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	Kokrajhar-I(Subhaijhar)					
3	Name of the District	Kokrajhar (Dist. Code-294)					
4	Names of the Blocks	Kokrajhar Dev. Block					
5	Names of VCDCs (GP)	Amguri, Tiniali Chariali, kalugaon, Deobargaon, Simbargaon,Haloadal, Ultapani Labyanapur, Tarang Serfang					
		Sl. No.	**Census Code**	**Village Name**	**Sl. No.**	**Census Code**	**Village Name**
		1	66500	Bhog Amguri	14	62800	Uttar Bashbari
		2	63200	Samsingkilla F V	15	62900	Bashbari
		3	66100	Kashibari	16	63000	Karigaon
		4	65600	Kalugaon	17	63100	DakhinKarigaon
		5	65700	Subhaijhar	18	66900	Pub Borsongaon
		6	65800	Balagaon	19	66600	Amguri (Including Relief Camp)
		7	71500	Balagaon Pt I	20	66800	Borsongaon
		8	65900	Debargaon	21	66400	Uttar Dubragaon
		9	65400	Muja Bari	22	66300	DakhinDubragaon
		10	71600	Balagaon Pt II	23	66200	Hazariguri
		11	71700	Rangalikhata Pt I	24	66700	Doljhara F V
		12	72000	Shamugaon	25	66000	Monchorgaon
		13	71800	Rangalikhata Pt II	26	71200	Diajijiri

*As per PPR

7	Four major reasons for selection of watershed	1. The area preponderance of degraded land. 2. The area is dominated by SC and ST population 3. There is acute problem of drinking water 4. The major area of agriculture is rain fed and most it is susceptible to soil erosion due to over exploitation of ground cover.
8	Name, Address, Phone No and Reg. No. of the PIA(s)	Divisional Officer, Kokrajhar Soil Conservation Division, Kokrajhar. Phone No. 7002671084
9	Date of approval of Watershed Development Plan by the DPC	
10	Area of the Project (ha.)	**4869**
11	Area proposed to be treated (ha.)	**4138**
12	Financial Year of sanction	**2021-22**
13	Project duration	**From 2022 to 2027**
14	Project Cost (Rs. in Lakhs)	**910.36**
15	Date of Sanction by State authority	**24/01/2022**
16	Date of Release of 1st Installment of Central Assistance (To be filled by DoLR)	**23-02-2022**
17	Any other, please specify	

Table No. 1.2 Need and Scope for Watershed Development

About 60-75% of the total population of the area is totally dependent on agriculture. The area has been facing many problems right from low ground water table to perennial flesh flood. Due to erratic climatic character, the project area has to face occasional drought like situation also. Adverse climatic conditions, poor mobilization of the resources and inadequate agriculture infrastructure are some of the factors responsible for the underdeveloped condition of the area. Hence, it is anticipated that the project area of over 4000 Ha. would undoubtedly boost the living standards of the people of the area through the improvement in agriculture and allied activities. The degradation of the natural wet land & drainages has also created the problem of water logging in the catchment areas.

Degradation of soil and water resources in considered not only as an utmost constraint to sustainable agricultural development but also a threat to the society. Poor ecosystem management has and result in the impaired functioning of watershed and will continue to do so in the future and the need to protect and preserve the quality of the ecosystem in very essential.

Due to rapid growth of population there is an excessive damaged for more land both for agriculture and non-agriculture use. This has created a vast stretches of wastelands and some are on the verge of becoming wastelands. There is need to reverse the trend by treating wastelands. Land which is degraded by natural forces needs improvement by appropriate interventions.

Watershed management is the implementation of management systems that ensure the preservation, conservation and sustainable use of all land and water resources. Watershed management also integrates various aspects of forestry, agriculture, hydrology, ecology, soil etc. for choosing acceptable management alternative within the specific social and economic context. As mention above, the major problems of the Subhaijhar Watershed are degradation of Natural Resources, soil erosion, siltation etc. and therefore there is a huge scope for taking up watershed development activities in the watershed area.

Weightage for selection of Watershed (as per DoLR's instructions already issued)

Project Name	Project Type	Weightage												
		i	ii	iii	iv	v	vi	vii	viii	ix	x	xi	xii	xiii
Kokarjhar-I (Subhaijhar) WDC PMKSY 2.0	Others	7.5	5	5	10	5	0	10	5	10	10	10	10	0

*As per PPR

Sl. no.	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

Out of the total Geographical area 4869.00 Ha. of the Kokrajhar-WDC-I/2021-22 (Subhaijhar), an area of 4138 Ha. is proposed for treatment.

Sl. No	Name of Project	Watershed Code	Villages to be Treated	Geographical Area (Ha)	Treatable Area (Ha)	Approval Year
1	Kokrajhar-I (Subhaijhar) WDC PMKSY 2.0		BhogAmguri	143	121	2021-22
2			Samsingkilla F V	60	50	2021-22
3			Kashibari	65	55	2021-22
4			Kalugaon	320	274	2021-22
5			Subhaijhar	350	297	2021-22
6			Balagaon	284	242	2021-22
7			Balagaon Pt I	262	223	2021-22
8			Debargaon	103	87	2021-22
9			Muja Bari	208	176	2021-22
10			Balagaon Pt II	57	48	2021-22
11			Rangalikhata Pt I	177	152	2021-22
12			Shamugaon	362	309	2021-22
13			Rangalikhata Pt II	177	150	2021-22
14			Uttar Bashbari	105	89	2021-22
15			Bashbari	23	121	2021-22
16			Karigaon	84	50	2021-22
17			DakhinKarigaon	163	55	2021-22
18			Pub Borsongaon	210	19	2021-22
19			Amguri (Including Relief Camp)	267	72	2021-22
20			Borsongaon	48	138	2021-22
21			Uttar Dubragaon	142	178	2021-22
22			DakhinDubragaon	286	226	2021-22
23			Hazariguri	313	40	2021-22
24			Doljhara F V	40	126	2021-22
25			Monchorgaon	299	242	2021-22
26			Diajijiri	321	265	2021-22

Data source: GIS Data, Field Survey

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

S no	Name of the programme/ scheme	Sponsoring agency	Objectives of the programme /scheme	Year of commencement	Villages covered	Estimated number of beneficiaries
No other watershed programme was taken up in the Project area.						

Table No. 1.5: Status of previous watershed programme-

S. No	Project name	Year started	Name of villages	No. Of micro watershed	Watershed codes	Area under treatment	Funding source	Nodal agency	PIA	Total cost	Expenditure incurred up to	% financial completion	% physical completion
1	Kokrajhar 1/ 9-10 IWMP			1		3000				360.00			
2	Kokrajhar 2/10-11 IWMP			1		3000				360.00			
3	Kokrajhar 3/10-11 IWMP			1		3000				360.00			
4	Kokrajhar 4/10-11 IWMP			1		3000				360.00			
5	Kokrajhar 5/11-12 IWMP			4		4100				492.00			
6	Kokrajhar 6/11-12 IWMP			4		3600				432.00			
7	Kokrajhar 7/11-12 IWMP			4		3500				420.00			
8	Kokrajhar 8/12-13 IWMP			4		3900				468.00			

CHAPTER 2

General Description of Project Area

Location of Watershed:

The Subhaijhar Watershed is located in Southern part of the district Kokrajhar and near the River Subhaijhar. The geographically project area is located between 26^0 28 '00 ''N 26^0 54' 00 ' N 89^0 42 ' 00'' E longitudes and 90 ^{0} 06 '00'' E latitudes The watershed are covered 15 numbers of revenue villages under Kokrajhar Development Block. The total project area of the watershed is about 4869.00 Ha.

Kokrajhar is one of the four districts of Bodoland Territorial Area District (BTAD) created within the Assam under clauses 6 of Article 332 by the 90th Amendment Act 2003 of the Constitution of India. The entire BTAD area is Autonomous District Council under the provision of Sixth Schedule and the Council is known as Bodoland Territorial Council (BTC). The Kokrajhar District in which the Subhiajhar WDC PMKSY 2.0 Project (Kokrajhar -I/2021-22) falls in the North east corner of the state on the Lower side of the river Brahmaputra under jurisdiction of the Kokrajhar district. The Kokrajhar district is a Council district of Assam. The soil of the district is mostly fertile Alluvial soil and this adjoining with the river Brahmaputra are composed sand and clay in varying proportion.

Climate and Soil –

The Kokrajhar district extends from 26 0 28 ' N 26 0 54 ' N 89 0 42 ' E longitudes and 90 0 06 ' E latitudes. The climate of the district is sub-tropical in nature with warm and humid summer followed by dry and cool winter. The average annual rainfall is 3020 mm out of which 75% is received during monsoon months (June to September). The monsoon months are wet and winter is dry. Both pre and post monsoon months have unpredicted and erratic rainfall. The mean maximum and minimum temperature varies from 330 to 380 C and 90 to 100C, respectively.
The average radiation is the highest during March - April, while overcast sky reduces the solar radiation to the least during July.

The general and average soil character of cultivable land in the watershed area is mainly alluvial and composed of mixture of Coarse silty, Aeric, Fluvaquents (coarse to fine) and clay in varying proportions. The general geochemical characteristic of the soil is mindly 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-

The four orders of soils are found in the district namely (i) Entisols (recent alluvium), (ii) Inceptions (old alluvium), (iii) Alfisols (Mountain Valley) and (iv) Ultisols (Laterised red). The soil of zone is mostly acidic nature and PH increases near the river track. The organic carbon and available Nitrogen of the soil mostly varies from medium to high, low in available P2O5 and medium in K2 O status). Mild micronutrient deficiency specially of Boron has been observed in some areas throughout the district. However in general, soil of the district is acidic in reaction. Soil of major areas are mildly acidic (5.5-6.5 PH), while soil in high land old alluvial is severely acidic. There is a problem of riverbank erosion in the riverine tracts, specially during flood season.

Climatic condition of the area:

The climate is sub-tropical in nature with warm and humid summer followed by dry and cool winter. The average annual rainfall is about 2663 mm per annum of which 75% is received during monsoon month (June to September). The monsoon months are wet and winter is dry. Both pre and post monsoon months have unpredicted and erratic rainfall. The mean maximum and minimum temperature varies from 33 to 380 C and 9 to 100C, respectively. The average radiation is the highest during March - April, while overcast sky reduces the solar radiation to the least during July. The climatic season is classified as follows

(a) winter (b) pre-monsoon, (c) monsoon and (d) retreating monsoon

WINTER:

The winter covers the months of December, January and February. In this season, fair weather prevails occasionally associated with fogs and haze. December and January are the driest months and January is the coldest. The minimum temperature ranges between 8 C and 10 C and the maximum between 27 C and 29 C. The average rainfall in the season is 20 cm.

PRE-MONSOON:

The months of March, April and May constitute the pre-monsoon season. From March the land surface gets steadily heated and the temperature starts rising. Strong convection develops due to the local depressions formed especially in the afternoon. The nor'westers locally called Bordoichilla appears during the period. Rainfall ranges between 59 and 160 cm and maximum temperature ranges between 28 C and 32 C. This season is, in fact, a transitional phase between the dry cool winter and the warm moist monsoon.

MONSOON:

With the onset of monsoon in early June, heavy rainfall occurs. Widespread low clouds and high humidity together maintain almost uniform temperature over the area. The maximum temperature ranges between 33 C and 37 C. The average annual rainfall during the period is 300 cm. The occurrence of thunderstorms is the most conspicuous characteristics of the monsoon weather. This is the season of dominant agricultural operation in the area.

RETREATING MONSOON:

The monsoon withdraws from the area in the last week of September or first week of October. The geographic low is replaced by high pressure and a flat pressure gradient occurs. Rainfall decreases abruptly and the sky becomes progressively clear. Sunny days prevail till the end of November. The CWB climate thus has a profound influence on the economy and life of the people of the area. It is most suitable for the cultivation of a variety of grain and horticultural crops.

Hydrology of the area:-

Hydrology is the science that encompasses the occurrence, distribution, movement and properties of the waters of the earth and their relationship with the environment within each phase of the hydrologic cycle. The water cycle, or hydrologic cycle, is a continuous process by which water is purified by evaporation and transported from the earth's surface (including the oceans) to the atmosphere and back to the land and oceans. All of the physical, chemical and biological processes involving water as it travels its various paths in the atmosphere, over and beneath the earth's surface and through growing plants, are of interest to those who study the hydrologic cycle. There are many pathways the water may take in its continuous cycle of falling as rainfall or snowfall and returning to the atmosphere. It may be captured for millions of years in polar ice caps. It may flow to rivers and finally to the sea. It may soak into the soil to be evaporated directly from the soil surface as it dries or be transpired by growing plants. It may percolate through the soil to ground water reservoirs (aquifers) to be stored or it may flow to wells or springs or back to streams by seepage. They cycle for water may be short, or it may take millions of years. People tap the water cycle for their own uses. Water is diverted temporarily from one part of the cycle by pumping it from the ground or drawing it from a river or lake. It is used for a variety of activities such as households, businesses and industries; for irrigation of farms and parklands; and for production of electric power. After use, water is returned to another part of the cycle: perhaps discharged downstream or allowed to soak into the ground. Used water normally is lower in quality, even after treatment, which often poses a problem for downstream users.

Hydro geologically, the district is proved to be very potential. Ground water occurs under water table to confined conditions. Depth to water level in major parts of the district varies from 2 to 5 m. In the extreme southern and northwestern parts close to hills, the water level is found to be deeper and generally rests within 5 to 7 m. The movement of ground water is from south to north. The water level trend shows that there is gradual rising of water level in the district.

Subhaijhar watershed area is of 2nd order rivulet with a minimum discharge capacity

Ground water potentiality: -

The depth of ground water table plays an important role in determining the risk due to contamination to groundwater. Like the surface water bodies, the pressure on the ground water is increasing in the watershed area. Ground water occurs under phreatic condition in the shallow aquifer zone and under semi-confined condition in the deeper aquifer. Flow of ground water is from north to south. Pre-monsoon water level varies from 0.01 to 9.40 mbgl and during post-monsoon period, water level varies from 0.56 to 8.26 mgbl. Other than higher arsenic (As) and iron (Fe) concentration in ground water, most of the chemical constituents are within the permissible limit.

Ground water resources availability, utilization and stage of development for the district of Kokrajhar as published by the Central Groundwater Board is reproduced below

Socio-Economy:

The economy of the project area depends on agriculture. Paddy is the major crop and it cultivated in Kharif and land remains uncultivated for rest of the year. The farming system is traditional. Low agricultural productivity, lack of irrigation facilities, damage cause by pest and diseases are the major constraints for the agricultural development of the region. Further small scale Tea cultivation fishing, livestock rearing handloom and weaving are other important economic activities of the watershed area.

Land use / Land Cover:

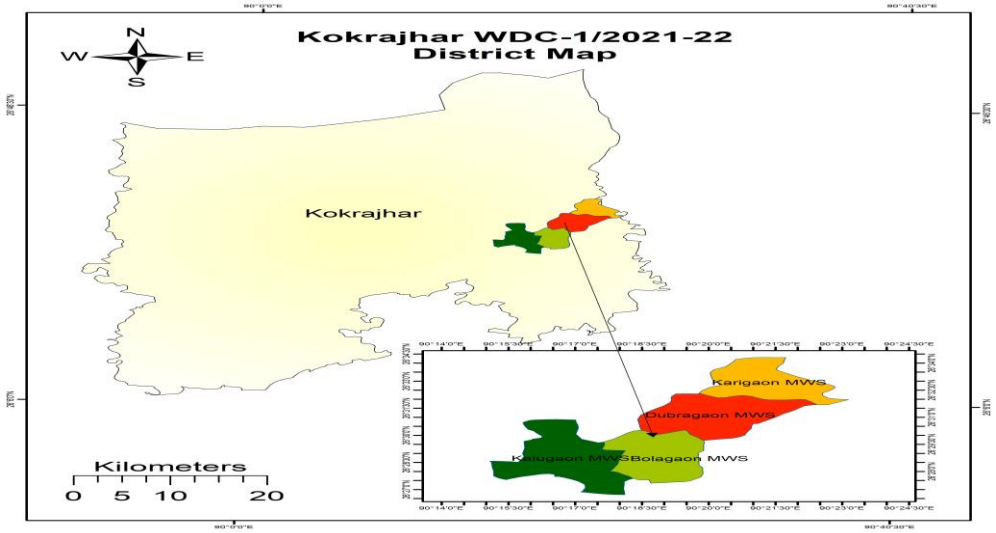
The following landuse categories are identified through visual interpretation of remote Sensing Map and supported by field verification. The identified main land use categories are – Agricultural land (Kharif) constitute about 3213.54 ha about 66% of total geographical area of the watershed, Agricultural Land (Double Crop) constitute about 0%, Agricultural Plantation i.e., Forest (Evergreen/Semi evergreen)

Table 2.1: Location

Longitude	$90^0$13.00/ E to 90^0 24.00/ E
Latitude	$26^0$19.00/ N to $26^0$27.00/ N
State	Assam
District	Kokrajhar
Subdivision	Kokrajhar
Block	Kokrajhar Dev. Block
Panchayat	Amguri, Tiniali Chariali, kalugaon, Deobargaon, Simbargaon, Haloadal, Ultapani Labyanapur, Tarang Serfang
Villages	Bhog Amguri, Samsingkilla FV, Kashibari, Kalugaon, Subhaijhar, Balagaon, Balagaon Pt I ,Debargaon, Muja Bari, Balagaon Pt II, Rangalikhata Pt-I, Shamugaon, Rangalikhata Pt II, Uttar Bashbari, Bashbari, Karigaon, Dakhin Karigaon, Pub Borsongaon, Amguri (Including Relief Camp), Borsongaon, Uttar Dubragaon, Dakhin Dubragaon, Hazariguri, Doljhara F V, Monchorgaon, Diajijiri
Approach Road	NH-37

LOCATION MAP OF SUBAIJHAR WATERSHED

Location Map



Details of the types of areas covered under the project the total Geographical area under major land uses (Area in Ha.)

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	BhogAmguri	143	0	100	75	93	17	2	24
2	SamsingkillaFV	60	5	42	30	0	7	1	10
3	Kashibari	65	0	45	32	34	4	2	14
4	Kalugaon	320	0	224	154	163	23	0	73
5	Subhaijhar	350	35	246	210	122	12	1	56
6	Balagaon	284	0	198	135	167	12	2	72
7	Balagaon Pt I	262	0	184	123	7	8	2	68
8	Debargaon	103	0	72	56	88	2	2	27
9	Muja Bari	208	0	145	123	104	14	3	46
10	Balagaon Pt II	57	0	39	25	56	6	2	10
11	Rangalikhata Pt I	177	0	123	112	156	13	1	40
12	Shamugaon	362	100	183	137	222	23	0	56
13	Rangalikhata Pt II	177	0	123	110	117	9	2	43
14	Uttar Bashbari	105	0	73	58	53	2	2	28
15	Bashbari	23	0	16	12	13	3	1	3
16	Karigaon	84	0	59	40	45	7	2	16
17	Dakhin Karigaon	163	0	114	98	91	3	2	44
18	Pub Borsongaon	210	100	77	65	61	5	0	28
19	Amguri (Including (RC)	267	0	186	174	148	17	2	62
20	Borsongaon	48	0	33	28	25	3	1	11
21	Uttar Dubragaon	142	0	99	85	82	8	1	34
22	Dakhin Dubragaon	286	0	200	180	142	18	2	66
23	Hazariguri	313	0	219	198	175	21	3	70
24	Doljhara F V	40	4	28	20	0	3	2	7
25	Monchorgaon	299	0	209	198	130	6	1	83
26	Diajijiri	321	0	224	210	317	16	1	80
	Total	**4869**	**244**	**3261**	**2688**	**2611**	**262**	**40**	**1071**

Source: PPR Soil Conservation Department, Kokrajhar

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	BhogAmguri	23	16	5	21	65
2	Samsingkilla F V	44	23	6	26	99
3	Kashibari	48	15	9	35	107
4	Kalugaon	30	26	2	24	82
5	Subhaijhar	67	21	8	19	115
6	Balagaon	42	20	6	32	100
7	Balagaon Pt I	45	25	4	25	99
8	Debargaon	24	32	8	19	83
9	Muja Bari	32	28	3	18	81
10	Balagaon Pt II	26	29	4	9	68
11	Rangalikhata Pt I	37	19	7	18	81
12	Shamugaon	48	18	6	17	89
13	Rangalikhata Pt II	26	27	2	12	67
14	Uttar Bashbari	36	26	4	31	97
15	Bashbari	24	32	3	21	80
16	Karigaon	58	34	9	17	118
17	Dakhin Karigaon	24	25	7	18	74
18	Pub Borsongaon	21	16	1	15	53
19	Amguri (Including Relief Camp)	23	18	0	19	60
20	Borsongaon	34	29	2	23	88
21	Uttar Dubragaon	36	41	3	24	104
22	Dakhin Dubragaon	45	27	6	28	106
23	Hazariguri	29	28	8	21	86
24	Doljhara F V	68	19	4	32	123
25	Monchorgaon	49	20	2	28	99
26	Diajijiri	29	23	4	15	71
	Total=	**968**	**637**	**123**	**567**	**2295**

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	Kokrajhar-I/2021-22 (Subhaijhar) WDC PMKSY 2.O	Lower Brahmaputra Valley Zone-4	4869 Ha	BhogAmguri	Alluvial Soil,Sandy Loan	4869 Ha	Wet cultivation	3200.00
2				Samsingkilla F V				
3				Kashibari				
4				Kalugaon				
5				Subhaijhar				
6				Balagaon				
7				Balagaon Pt I				
8				Debargaon				
9				Muja Bari				
10				Balagaon Pt II				
11				Rangalikhata Pt I				
12				Shamugaon				
13				Bashbari				
14				Karigaon				
15				Bashbari				
16				Karigaon				
17				Dakhin Karigaon				
18				Pub Borsongaon				
19				Amguri (Including Relief Camp)				
20				Borsongaon				
21				Uttar Dubragaon				
22				Dakhin Dubragaon				
23				Hazariguri				
24				Doljhara F V				
25				Monchorgaon				
26				Diajijiri				

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

The area faces acute problems of flood and frequent submergence. The discharge in the Subhaijhar River which is primarily responsible to drain the excess runoff from the project area is very high during the peak season and in addition to that the channel capacity of the rivers is often questioned. Moreover, the flow in the major natural waterways has been obstructed by Ipomoea outgrowth and sedimentation.

1	2	3	4		5
Sl. No.	Particulars	Villages	Periodicity		Not affected
			Annual	Any other (please specify)	
1	Flood	No. of villages			
		Bhog Amguri, Samsingkilla FV, Kashibari, Kalugaon, Subhaijhar, Balagaon, Balagaon Pt I ,Debargaon, Muja Bari, Balagaon Pt II, Rangalikhata Pt-I, Shamugaon, Rangalikhata Pt II, Uttar Bashbari, Bashbari, Karigaon, Dakhin Karigaon, Pub Borsongaon, Amguri (Including Relief Camp), Borsongaon, Uttar Dubragaon, Dakhin Dubragaon, Hazariguri, Doljhara F V, Monchorgaon, Diajijiri			Occasional flash flood occurs during high rain fall in upper catchment in Bhutan and cause heavy loss to standing crops and silt/sand deposition takes place on cultivable land on river bank. Also bank cutting and shifting of river course are common in project area.
2	Drought	No. of villages			
		Bhog Amguri, Samsingkilla FV, Kashibari, Kalugaon, Subhaijhar, Balagaon, Balagaon Pt I ,Debargaon, Muja Bari, Balagaon Pt II, Rangalikhata Pt-I, Shamugaon, Rangalikhata Pt II, Uttar Bashbari, Bashbari, Karigaon, Dakhin Karigaon, Pub Borsongaon, Amguri (Including Relief Camp), Borsongaon, Uttar Dubragaon, Dakhin Dubragaon, Hazariguri, Doljhara F V, Monchorgaon, Diajijiri			Scanty and uneven rainfall causes drought during certain monsoon season.

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	2018.00	1324mm/Yr	15.98Mt/Ha/Yr
B	Rill	615.00		
C	Gully	1285.00		
Sub- Total		**3918.00**		
Wind erosion			Nil	
Total		**3918**		

Source: PPR Soil Conservation Department, Kokrajhar

Soil type-A brief overview

The four orders of soils are found in the district namely (i) Entisols (recent alluvium), (ii) Inceptisols (old alluvium), (iii) Alfisols (Mountain Valley) and (iv) Ultisols (Laterised red). The soil of zone is mostly acidic nature and PH increases near the river track. The organic carbon and available Nitrogen of the soil mostly varies from medium to high, low in available P2O5 and medium in K2 O status). Mild micronutrient deficiency specially of Boron has been observed in some areas throughout the district. However in general, soil of the district is acidic in reaction. Soil of major areas are mildly acidic (5.5-6.5 PH), while soil in high land old alluvial is severely acidic. There is a problem of riverbank erosion in the riverine tracts, specially during flood season. The soil type is generally deep imperfectly drained fine loamy soil occurring on level to nearly level plain having loamy surface with moderate flooding ground water table between 1-2 m below the surface & with slight erosion associated with deep moderately well drained fine silty soils with slight erosion.

Table No. 2.7 Details of the Soil pH

Name of the Villages	Sample no	Soil Ph	Soil Type
BhogAmguri	1	pH 6.5 - pH 7.10	Fine loamy, Hapaquepts
Samsingkilla F V	1	pH 6.5 - pH 7.10	Fine loamy, Hapaquepts
Kashibari	1	pH 6.5 - pH 7.10	Coarse silty, Aeric, Fluvaquents
Kalugaon	1	pH 6.5 - pH 7.10	Fine loamy, Hapaquepts
Subhaijhar	1	pH 6.5 - pH 7.10	Fine loamy, Hapaquepts
Balagaon	1	pH 6.5 - pH 7.10	Fine loamy, Hapaquepts
Balagaon Pt I	1	pH 6.5 - pH 7.10	Fine loamy, Hapaquepts
Debargaon	1	pH 4.5- pH 5.0	Coarse silty, Aeric, Fluvaquents
Muja Bari	1	pH 4.5- pH 5.0	Coarse silty, Aeric, Fluvaquents
Balagaon Pt II	1	pH 4.5- pH 5.0	Coarse silty, Aeric, Fluvaquents
Rangalikhata Pt I	2	pH 4.5- pH 5.0	Coarse silty, Aeric, Fluvaquents
Shamugaon	1	pH 6.5 - pH 7.10	Fine loamy, Hapaquepts
Rangalikhata Pt II	1	pH 4.5- pH 5.0	Coarse silty, Aeric, Fluvaquents
Uttar Bashbari	1	pH 4.5- pH 5.0	Coarse silty, Aeric, Fluvaquents
Bashbari	2	pH 4.5- pH 5.0	Coarse silty, Aeric, Fluvaquents
Karigaon	1	pH 4.5- pH 5.0	Coarse silty, Aeric, Fluvaquents
DakhinKarigaon	1	pH 4.5- pH 5.0	Coarse silty, Aeric, Fluvaquents
Pub Borsongaon	1	pH 4.5- pH 5.0	Coarse silty, Aeric, Fluvaquents
Amguri (Including Relief Camp)	1	pH 4.5- pH 5.0	Coarse silty, Aeric, Fluvaquents
Borsongaon	1	pH 4.5- pH 5.0	Coarse silty, Aeric, Fluvaquents
Uttar Dubragaon	1	pH 4.5- pH 5.0	Coarse silty, Aeric, Fluvaquents
DakhinDubragaon	1	pH 4.5- pH 5.0	Coarse silty, Aeric, Fluvaquents
Hazariguri	1	pH 4.5- pH 5.0	Coarse silty, Aeric, Fluvaquents
Doljhara F V	2	pH 6.5 - pH 7.10	Fine loamy, Hapaquepts
Monchorgaon	1	pH 6.5 - pH 7.10	Fine loamy, Hapaquepts
Diajijiri	1	pH 4.5- pH 5.0	Coarse silty, Aeric, 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		
1	2016-17	2885.50	3202.40	33.3	11.1	N/A	NA	73-88	890
2	2017-18	1906.00		33	12.10	N/A	NA	54-88	
3	2018-19	3754.00		32.1	13.5	N/A	NA	63-89	
4	2019-20	2152.65		31.9	14	N/A	NA	56-90	
5	2020-21	2622.36		32.0	12.2	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)
75-100 m	0-5 %	2nd	Subhaijhar River	Alfisol-Sandy Loan Coarse silty, Aeric, Fluvaquents Fine loamy, Hapaquepts	17.3Mt/ha/Yr

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
Oval	**38 KM**	**2 to 2.5 km**	**0 - 3 %**	**75 - 100 M**	**4312300 M**

CHAPTER – 3

BASE LINE INFORMATION OF WATERSHED

To access the impact of any watershed development programme a detailed baseline survey has to be conducted. This acts a benchmark for any intervention during and post implementation of any development programme. A detailed baseline survey was undertaken which involved household census survey, Bio-physical survey and Village level data collection. Household census survey includes a detailed questionnaire which was been filled by visiting each and every household in the village. This gave in the details of the demographic profile of the village, the literacy percentage, SC/ST population, number of BPL household, cattle population, net consumption.

Bio-physical survey was undertaken to identify various natural resources available in the village. It included the soil typology, well in the area, crop taken in the field, cropping pattern, fertilizer used and various sources of irrigation in the field.

Table No. 3.1: Demographic features:

1	2	3	4	5
Sl. No	Feature	Male	Female	Total
1	Population	9739	9081	18820
	SC	195	170	365
	ST	4190	4081	8271
	BC			
	Others	5354	4830	10184
2	Children(0-14 years)	1554	1503	3057
3	Sex Ratio	1000	932	1000:93
4	Literacy			72.37%
	Literates	6123	3548	9671
	Illiterates	1124	2914	4038
5	Work Force			1789
	Agriculture			3124
	Industrial/Business			2214
	Service			
6	Birth Rate			N/A
7	Death Rate			N/A

Table No. 3.2: Livestock details:

1	2	3
S.No	**Feature**	**No./ quantity)**
1	**Milch Animals**	
	Cows	1845
	Buffaloes	78
	Goat, sheep	1200
2	**Draft Animals**	
	Ox	2987
	He Buffalo	650
3	**Others**	
	Poultry	45021
	Piggery	28045
4	**Total Milk production** from milch animals (ltrs/day)	67
5	**Fodder Availability**	
	Dry (Abundant/Sufficient/ Scarce)	Sufficient
	Green (Abundant/Sufficient/ Scarce)	Sufficient
6	**Fuel wood Availability** (Abundant/Sufficient/Scarce)	Sufficient

Table No.3.3: Socio- economic status:

1	2	3	4	5						6			
S. No		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	201	432	403	1124	3	5	8	320000	1250000	750000	2320000
2	Small Farmers	564	0	`434	407	1146	4	4	7	240000	624000	760000	1624000
3	Big farmers	87	0	109	114	358	2	3	5	220000	1054000	224000	1498000
4	Landless	987	987	98	118	221	2	3	6	260000	1988000	284000	2532000
	Total	4181	2519	207	1042	2849	11	15	26	**1040000**	**4916000**	**2018000**	**7974000**

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			76	182	Mostly agricultural activities are seasonal and hence people without any other activity go f rearing livelihood during this period	15-20 km	Daily wages	Rs. 225/- per day

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

1	2	3				4				5			6			7			8				9	
S. 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	10	0	18	(i) Landless	**11**	**24**	**35**	**4**	**8**	**12**	**4**	**8**	**12**				**11**	**24**	**35**		-	Nil
						(ii) MF	**40**	**40**	**80**	**11**	**13**	**24**	**11**	**13**	**24**				**2**	**4**	**6**		-	Nil
						(iii) SF	**41**	**63**	**104**	**16**	**28**	**44**	**18**	**31**	**49**				**13**	**16**	**29**		-	Nil
						(iv) LF	**11**	**15**	**26**	**2**	**3**	**5**	**2**	**3**	**5**				**-**	**-**	**-**		-	Nil
	Total						**103**	**14**	**245**	**33**	**52**	**85**	**35**	**55**	**90**				**26**	**42**	**70**			**Nil**
2	UGs	Not organized				(i) Landless																		
						(ii) MF																		
						(iii) SF																		
						(iv) LF																		
	Total																							

3	VSS	Not organized																	
4	FG/ FC[1]																		
5	WUA																		
6	F-SHG-C																		
7	F-SHG-B																		
8	PG																		
9	PC																		
10	Other related Groups (Specify)																		

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.

able No. 3.6: Infrastructure Facilities:

1	2	3	4	5
S.No	Infrastructure type	No./Quantity	Distance (km)	Status (description)
1	Educational Institutions			Under ICDS of State Social Welfare Department
	Anganwadi	26	Within the Village	In all villages
	Primary School	25	Within the Village	
	Secondary school	2	5 km.	
	Govt. College	1	8 km	
	Vocational Institutions	Nil		
2	Service Institutions			
	Bank	Nil	Nearest Bank at Kokrajhar	

[1]

	Post office	4		
	Primary Health Care Center	3	Karigaon, Simbargaon, Balajan	
	Veterinary Center	1		
	Markets/ Village Haat	6		
3	No. of bore wells/pump sets (Functional)	157		
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		Most of the villages are connected with graveled village roads
6	Bus facility (Yes/No)	yes		State Transport Corporation and Private Buses
7	No. of HHs provided electricity	***3602***		
8	No. of HHs with access to drinking water			
9	Access to Agro Industries (Yes/No)	No		
10	Any other facilities (specify----------)			

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 misce llaneous 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			
1	Bhog Amguri	143	-	0	102	4	0	1	3	98	0	102	-	102
2	Samsingkilla F V	60	-	0	93	3	0	2	3	85	69	93	-	93
3	Kashibari	65	13	0	107	1	0	1	2	95	90	107	-	107
4	Kalugaon	320	23	0	65	3	0	3	1	45	0	65	-	65
5	Subhaijhar	350	-	0	116	-	0	4	2	91	0	116	-	116
6	Balagaon	284	4	0	118	2	0	3	4	110	161	118	-	118
7	Balagaon Pt I	262	-	0	131	3	0	5	3	177	0	131	-	131
8	Debargaon	103	55	0	125	2	0	3	1	140	79	125	-	125
9	Muja Bari	208	-	0	70	3	0	2	2	62	26	70	-	70
10	Balagaon Pt II	57	-	0	171	2	0	1	0	67	158	171	-	171
11	Rangalikhata Pt I	177	-	0	297	4	0	5	3	285	331	297	-	297
12	Shamugaon	362	-	0	138	-	0	0	2	152	0	138	-	138
13	Rangalikhata Pt II	177	3	0	108	-	0	0	1	102	20	108	-	108
14	Uttar Bashbari	105	5	0	53	-	0	4	5	49	0	53	-	53
15	Bashbari	23	25	0	16	4	0	0	0	10	0	16	-	16

16	Karigaon	84	2	0	123	-	0	2	3	138	11	123	-	123
17	DakhinKarigaon	163	-	0	104	-	0	0	1	119	0	104	-	104
18	Pub Borsongaon	210	-	0	119	3	0	1	3	135	0	119	-	119
19	Amguri (Including Relief Camp)	267	5	0	80	-	0	0	2	69	0	80	-	80
20	Borsongaon	48	17	0	175	-	0	0	1	196	3	175	-	175
21	Uttar Dubragaon	142	7	0	134	-	0	2	4	119	0	134	-	134
22	Dakhin Dubragaon	286	-	0	242	2	0	0	0	228	0.10	242	-	242
23	Hazariguri	313	2	0	114	2	0	0	2	105	0	114	-	114
24	Doljhara F V	40	-	0	48	-	0	1	3	34	0	48	-	48
25	Monchorgaon	299	2	0	47	2	0	3	2	37	0	47	-	47
26	Diajijiri	321	-	0	10	-	0	4	5	5	0	10	-	10
		4869	**190**	0	**3784**	**48**	0	58	80	**3547**	**1150.1**	**3784**	-	**3784**

#geographical area here is the area covered under the watershed.

* Column 13 is the summation of column 11 & 12.

Table No. 3.8: Details of Common Property Resources:

1	2	3				4			
Sl. 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	412	Not specified	0	-	395	-	-	-
	Pastures		145	0	-	-	-	-	-
	Orchards	13	0	0	-	11	-	-	-
	Village Forest	0	0	0	-	-	-	-	-
	Forest	0	0	0	-	-	-	-	-
	Village Ponds/ Tanks	69	0	0	-	69	4	-	-
	Community Buildings	2	0	4	-	-	-	-	-
	Weekly Markets	4	0		-	-	-	-	-
	Permanent markets	1	0		-	-	-	-	-
	Temples/ Places of worship	5	0		-	-	-	-	-
	Others (Pl. specify)		0		-	-	-	-	-
Total						-	-	-	

Base: Baseline survey.

Table No. 3.9: Agriculture implements:

1	2	3
S. No	**Implements**	**Nos.**
1	Tractor	15
2	Sprayers-manual/ power	185
3	Cultivators/Harrows	12
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	356
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	Paddy	2688	202	2019	0.25					2688	202	2019	0.25
2	Rabi	Oil Seed	325	118	1200	0.26					325	118	1200	026
3	Summer													
	Total		**3013**	**320**	**3219**	**0.51**					**3013**	**320**	**3219**	**0.51**

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	Agriculture	2260	Fine loamy, Hapaquepts	-	-	2159	912		796	2341	801		2945.20	856.12	602.24		
II	Agricultural (including fallow & Cultivable Waste Land)	720	Coarse loamy, Aeric, Fluvaquents	--	495	313	--	--	--	267	432	--	289	214	98	--	

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

Table No.3.13: Irrigation facilities:

1	2	3	4
Sl. No	**Type of the Source**	**Nos.**	**Command area (in ha)**
1	Ponds	82	For fish farming
2	Open wells	95	For drinking
3	Bore wells	Nil	
4	Canal irrigation	4	Need repairing
5	Natural spring head	Nil	

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 BhogAmguri			**Jan/2022**	**12.10**	**Ridge**	
2	Open Well at Kalugaon			**Jan/2022**	**10.12**	**Ridge**	
3	Open Well at Bashbari			**Jan/2022**	**13.20**	**Middle**	
4	Open Well at Dakhin Karigaon			**Jan/2022**	**12.60**	**Middle**	
5	Open Well at Monchorgaon			**Jan/2022**	**11.80**	**Middle**	
6	Open Well at Muja Bari			**Jan/2022**	**9.20**	**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	3,5 lakh	
2	Present availability of drinking water	Ltrs/day	2.15 lakh	
3	No. of drinking water sources available	Nos	Open well-447	
a)	Functional	Nos	320	
b)	Need Repairing	Nos	90	
c)	Defunct	Nos	7	
4	Short fall if any	Ltrs/day	1.5 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
Sl. No	**Type of water resource**	**Nos**	**Area irrigated (Ha)**	**Storage capacity (Cu.m)**
1	Tank	**4**	**8**	**5000**
2	Pond	**82**	**For fish farming**	**4231**
3	Lake	**Nil**		
4	Check dam	**3**	**Functioning**	
5	Percolation tank	**Nil**		
6	Channel/Canal	**4**	**Not properly functioning**	
7	Any others (specify----------)			

Table No. 3.17 Ground Water Structures to be repaired.

Sl. No	Type of structure	No. available			
		No. to be Repaired	**No. to be rejuvenated**	**No. with no interventions required**	**Total**
	Pond	14	23	4	41
	Open well	20	10		30
	Tank	3	2		5
Total		**37**	**35**		**76**

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 conditio		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	95	18640	36	18771	4092	6859
2	Service				45		
3	Fish Production				15		2400
4	House hold industry				2		12000
5	Livestock rearing				3		5000
6	Wage earner under MGNREGA				1750		11000

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
Sl. No	**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
Sl. 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	Field bunding, on erosible drainage channel, check bund, earthen bund, plantation, horticulture, afforestation, River training
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	Water harvesting structure, check dam Recharge of ground water ,storage of surface water
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	Farm forestry, plantation, afforestation, horticulture, Fodder cultivation
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.	To use advanced package of agronomic practices, improved seeds and inputs, credit linkage, market linkage, improved post harvest management practices. Pest and disease management etc.

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.	To boost up activities of Animal Husbandry and veterinary Dept so that farmers can avail better packages, to take up fodder plantations, To organize farmers through by forming S.H.G to take micro enterprises.
6	**Existing Livelihood activities for Asset less persons**	1. Less income generating activities. 2. Their present occupation is Daily Labour, Rickshaw Pullers etc.	To organize S.H.G. with Financial support and skill up gradation and required guidance. Assistance in Forward and Backward linkages and Marketing etc.
7	**Community Based Organizations & Social capital base**	1. Most of the SHG are not functional.	To form organized S.H.G and U.G etc. Give financial support, Facilitate credit linkage
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.	To impart training on skill development, participation, Community organization ,Awareness camping, to adopt all possible ways for capacity building of the stake holders
9	**Others (specify)**	1. Lack of Marketing Facilities	Skill development, support of supply of improved seeds, market linkage, credit linkage etc.

CHAPTER – 4

Institutional Building and Project Management

OBJECTIVE OF THE WATERSHED MANAGEMENT PROJECT:

As per the Common Guidelines of Integrated Watershed Management Programme, 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 Silty Clay Loam 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.

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 SUBAIJHAR WDC-PMKSY 2.0, 2021-22

I. Livelihood Generation

- Piggery, Goatery, Duckery, Poultry
- Handloom
- Fishing Equipment.

II. Production System & Micro enterprise

- Horticulture
- Crop Demonstration like Papaya, Cabbage / Coli flower / Tomato
- Diary
- Fishery
- Cash Crop Plantation - like Rubber.
- Systematic Rice Intensification. Pasture Land development
- Pasture Land development

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)
1	SHG					(i) Landless	80	120	200	72	88	160	8	32	40					80	120	200		
						(ii) MF	12	24	36	5	7	12	7	17	24									
						(iii) SF	24	40	64	12	8	24	12	32	40									
						(iv) LF	-	-	-	-	-	-	-	-	-									
	Total						116	184	300	93	103	196	22	82	104					80	120	200		
2	UGs			140	140	(i) Landless	1764	756	2520	1411	605	2016	1764	756	2520					1764	756	2520		
						(ii) MF	1323	567	1890	1058	454	1512	1323	567	1890									
						(iii) SF	1103	473	1575	882	378	1260	1103	473	1575									
						(iv) LF	221	95	315	176	76	252	221	95	315									
	Total			140	140		4410	1890	6300	3528	1512	5040	4410	1890	6300					1764	756	2520		140

*Account no. of Watershed Committee, PIA.

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											
MWS-1	Under Process		President														
			Secretary														
			Member														
			Member														
			Member														
			Member														
			Member			Under Process											
			Member														
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			Member														
MWS-2	Under Process		President														
			Secretary														
			Member														
			Member														
			Member			Under Process											
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MWS-3	Under Process		President														
			Secretary														
			Member														
			Member														
			Member														
			Member														
			Member			Under Process											
			Member														
			Member														
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			Member														
			Member														
MWS-4	Under Process		President														
			Secretary														
			Member														
			Member														
			Member														
			Member														
			Member			Under Process											
			Member														
			Member														
			Member														
			Member														
			Member														
			Member														

(NOTE- Member wise details of SHGs, UGs & Watershed Committee has to be enclosed as annexure. 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
Sl. No	Names of WDT members	M/F#	Age	Qualification / Experience	Description of professional training	Role/ Function*
1	Sri Maniram Basumutary	M	42	Diploma in Civil Engg.	3 Years Diploma	ACDEFGH
2	Sri Robert Mushahary	M	36	Diploma in Textile Engg.	3 Years Diploma	ACDEFGH

*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, Kokrajhar Soil Conservation Division, Kokrajhar, Assam
4.	Telephone	7002671084
5.	Fax	NA
6.	E-mail	pmksywdcsoilkok @gmail.com

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

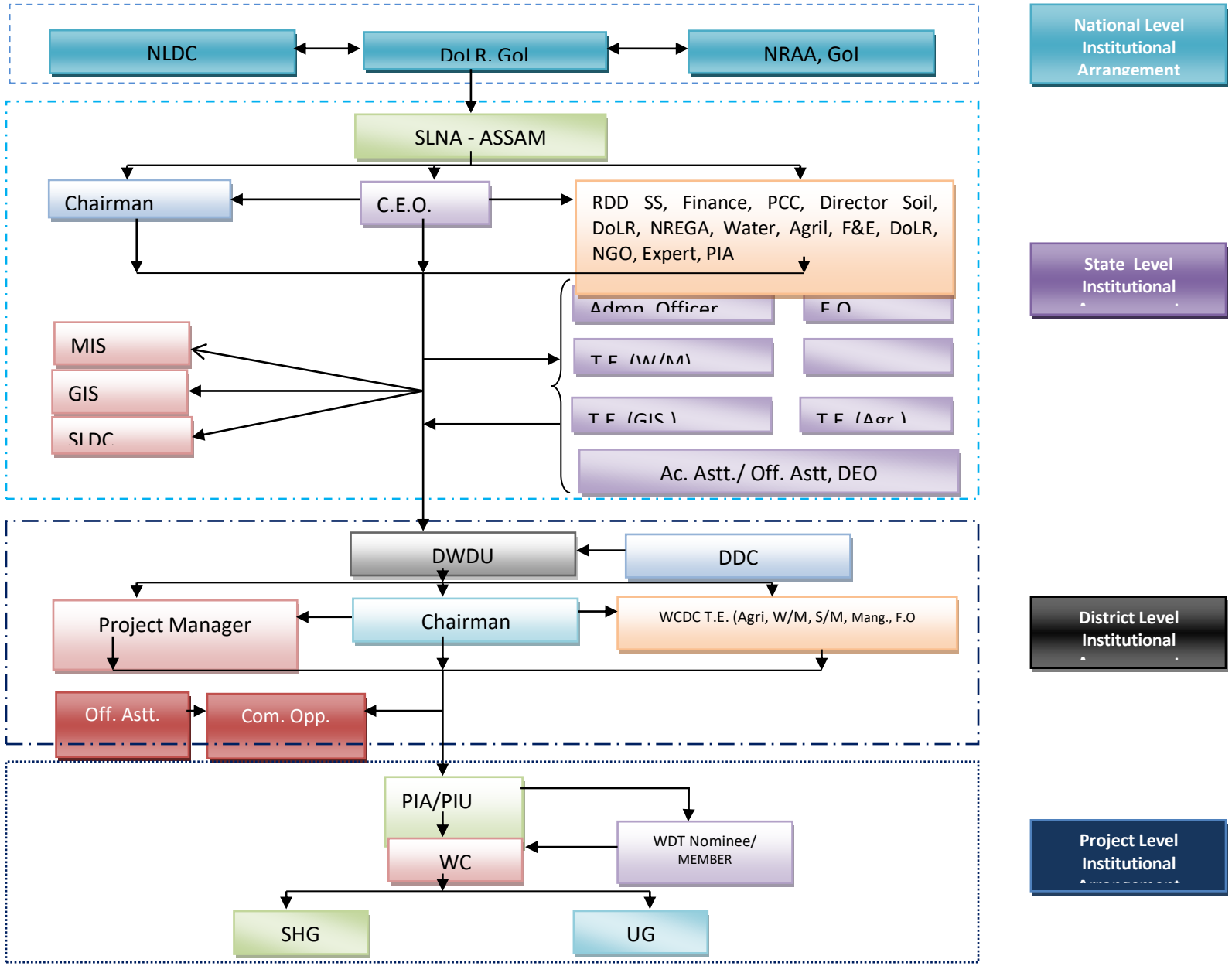
A	Line Dept.	B	Autonomous organization
C	Govt. Institute	D	Research Bodies
E	Zila Parishad	F	Intermediate Panchayat
G	Voluntary Organisations	H	Any other (please specify).

Table No. 4.5 Bank Account Details

Name of WC/PIA	Name of the Bank/Place	Account No.	Name of the Signatory	Address
WC-Subhaijhar WDC-PMKSY 2.0				
PIA Kokrajhar-WDC-1/2021-22	SBI Kokrajhar Branch, Kokrajhar	40754231012		
MWS-1			Secretary & WDT Leader	Divisional Officer, Kokrajhar Soil Conservation Division, Kokrajhar
MWS-2				
MWS-3	Under Process			
MWS-4				
			Divisional Officer, Kokrajhar Soil Conservation Division, Kokrajhar	Divisional Officer, Kokrajhar Soil Conservation Division, Kokrajhar

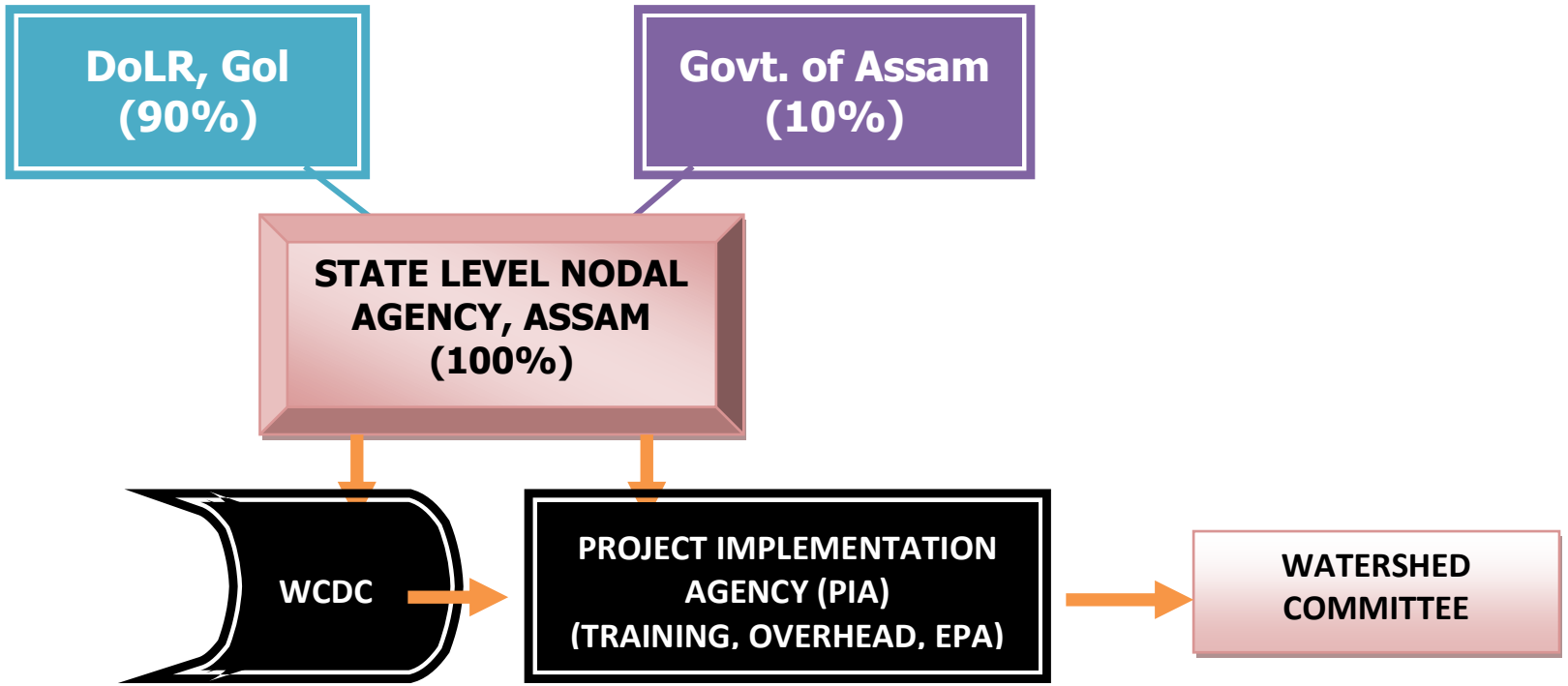
** Institutional Mechanisms:*

Fig. 4.6.1 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 ,Aam Sabha, 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, WCDC and other coordination mechanism.

Project Implementation involves a number of activities. Among them, the major activities are – securing community participation, co-ordination of activities and project management & Controlling, Monitoring.

Co-ordination is the process whereby more people or organizations work together to deal collectively with a shared objective. The rationale for co-ordination shall be –

1. To take immediate corrective action for problems encountered in implementation of the project.
2. To promote better relationship among organizations, institution, departments and individuals connected with the project and to harmonies resources and activities for the achievements of the project objectives.
3. To establish cordial relationship between the target population of the project and all the other section of the society.
4. Team building which include recruiting people with appropriate qualification for positions in the organization, orienting new people to their position to help them learn their responsibilities and providing training when necessary to upgrade people's skills.

Project Management & Controlling means managing activities to ensure progress towards the projects objectives:

1. Measuring progress of project by comparing the current situation with established goals and objectives.
2. Submitting reports to account for project activities and finance
3. Monitoring performance to document the way people carry out their responsibilities.
4. Providing feedback to people on a regular, informal basis including positive feedback and constructive criticism.
5. Adjusting plans to respond to changes in the internal and external organizational environment.

Monitoring:

It is an important part of project implementation which is a process of routinely gathering information on all aspects of the project. The monitoring shall be continuous and it should be in place before start-up.

The first monitoring shall be done by the project staff. The WCDC and PIA shall be responsible for monitoring the staff and task under them and Project Manager shall be responsible for monitoring all aspects of the project. The second level monitoring shall be done by third party. The monitoring team shall be collected the report through field visit, progress and measures performance including financial reporting.

Step for Monitoring Process :

- Defining the objectives of the monitoring system ;
- Designing a programme to systematically monitor achievement ;
- Selection of indicators/parameters to be monitored, the location, method/processes and

frequency of observations and the information processing and reporting procedure and important ; and

- Organizing, motivation and training people to obtain convey and use the information.

Monitoring tools:

- Semi-structured interviews ;
- Community workshops to evaluate the extent of adaption and resulting achievement for conservation practices
- Observation and measurement of easily quantifiable field indicators.
- Farmer's own records can be prepared which provides vital information to great details.
- Ground photographs taken from the same place depicting before and after remedial measures, details concerning landscape CPR's change in the status of natural resources.
- Community evaluation of certain simple technical, ecological, economical, social and essential services indicators.
- Remote sensing satellite imageries and aerial photographs taken at the start of the plan are repeated periodically.
- Geographical Information Systems (GIS)
- Video monitoring.
- Comparison with demonstration and research plots/farms.
- Comparison with demonstration and research micro-watersheds.
- Hydro-meteorological measuring.
- Using the information gathered by other institutional and private enterprises.
- Combination of above mentioned tools.

PIS	Tasks	Responsibility
Project Coordinator	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, WDT Member
	Co-operation and Network Development	WCDC/PIA/ Project Manager, WDT Member
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

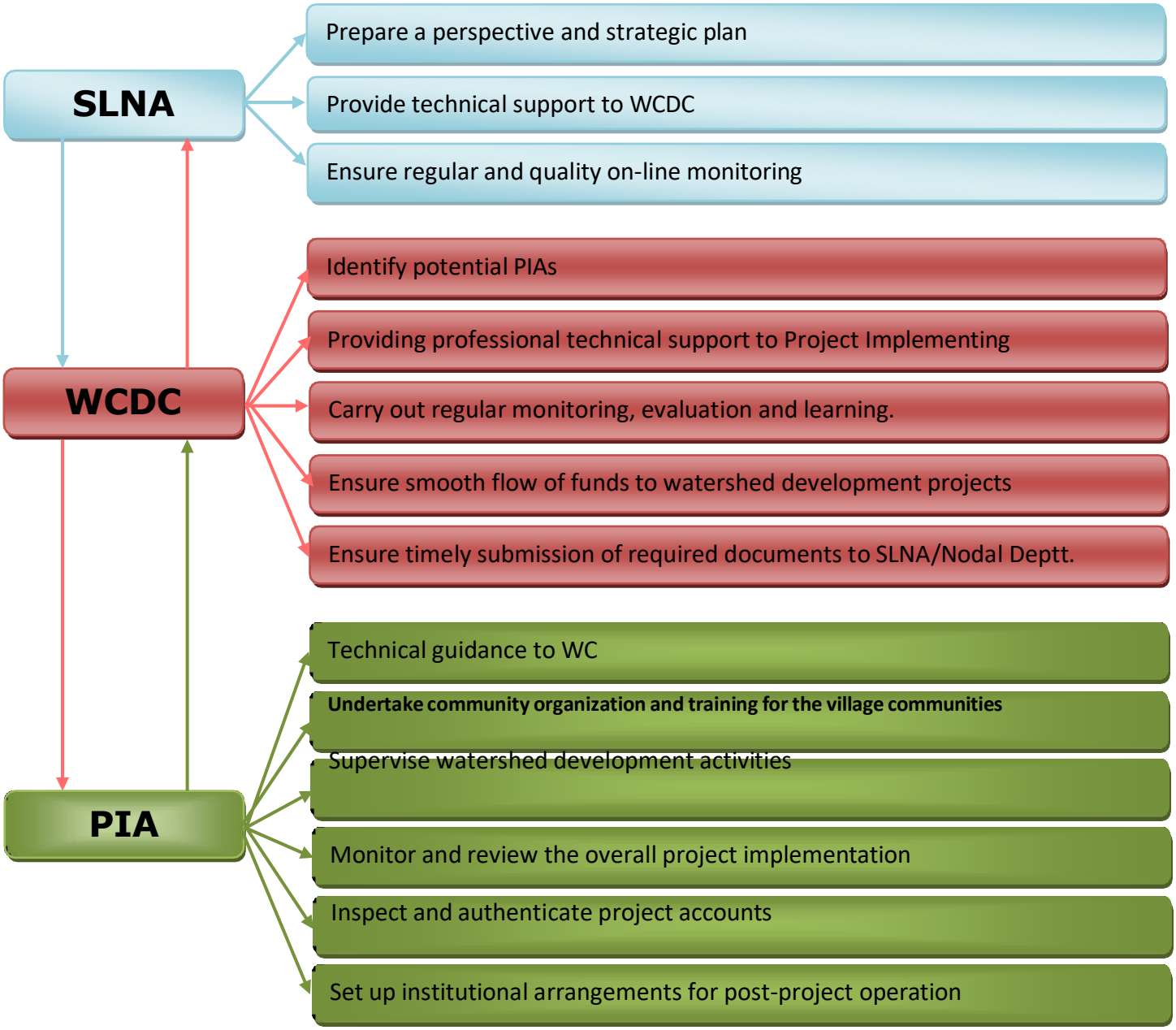


Table No 4.8 Convergence plan with IWMP:

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-Activities relating to Surface Runoff management and Vegetative cover	1.Water Distribution Channel 2. Drainage Channel 3. Guide bunds 4. Block/ Road side plantation	3	a) Structures d). Plantation Scheme	Necessary fund will be provided/implemented by DRDA	
2	Agriculture	Improved Agronomical practices, Horticulture Plantation, STW, Agril Implements. Seeds, Pesticides, Fertillizers, Marketing	2	(d) Horticulture STW Seeds, Pesticides, Fertillizers, Marketing	Necessary fund will be provided/implemented by Agriculture Deptt.	District Level
3	AH & Veterinary	Artificial insemination, Improved Breed, Marketing	1	(c) Capacity building on Artificial insemination, Dairy, Goatery, Pigery	Necessary fund will be provided/implemented by AH & Veterinary Deptt.	
4	Fishery	Renovation of Fishery Tank and Piscicultue activities	2	d) Renovation of Fishery tank and supplying of fish seeds and food.	Necessary fund will be provided/implemented by Fishery Deptt.	
5	Irrigation	Minor and Sprinkler irrigation	1	(d) Minor Irrigation	Necessary fund will be provided/implemented by Irrigation Deptt.	
6	Soil Conservation	Water Harvesting Structure and Switch gate etc.	1	(d)Structure	Necessary fund will be provided/implemented by Soil Conservation Deptt.	
7	PHE-	Drinking water and sanitation	4	(d) Drinking water sanitation	Necessary fund will be provided/implemented by PHE Deptt.	
8	Social Forestry-	Block Plantation, Road side plantation	3	(d) Road Side Plantation	Necessary fund will be provided/implemented by Forest (Social Foresty) Deptt.	
9	PRI	Post project maintenance				
	Total					

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:

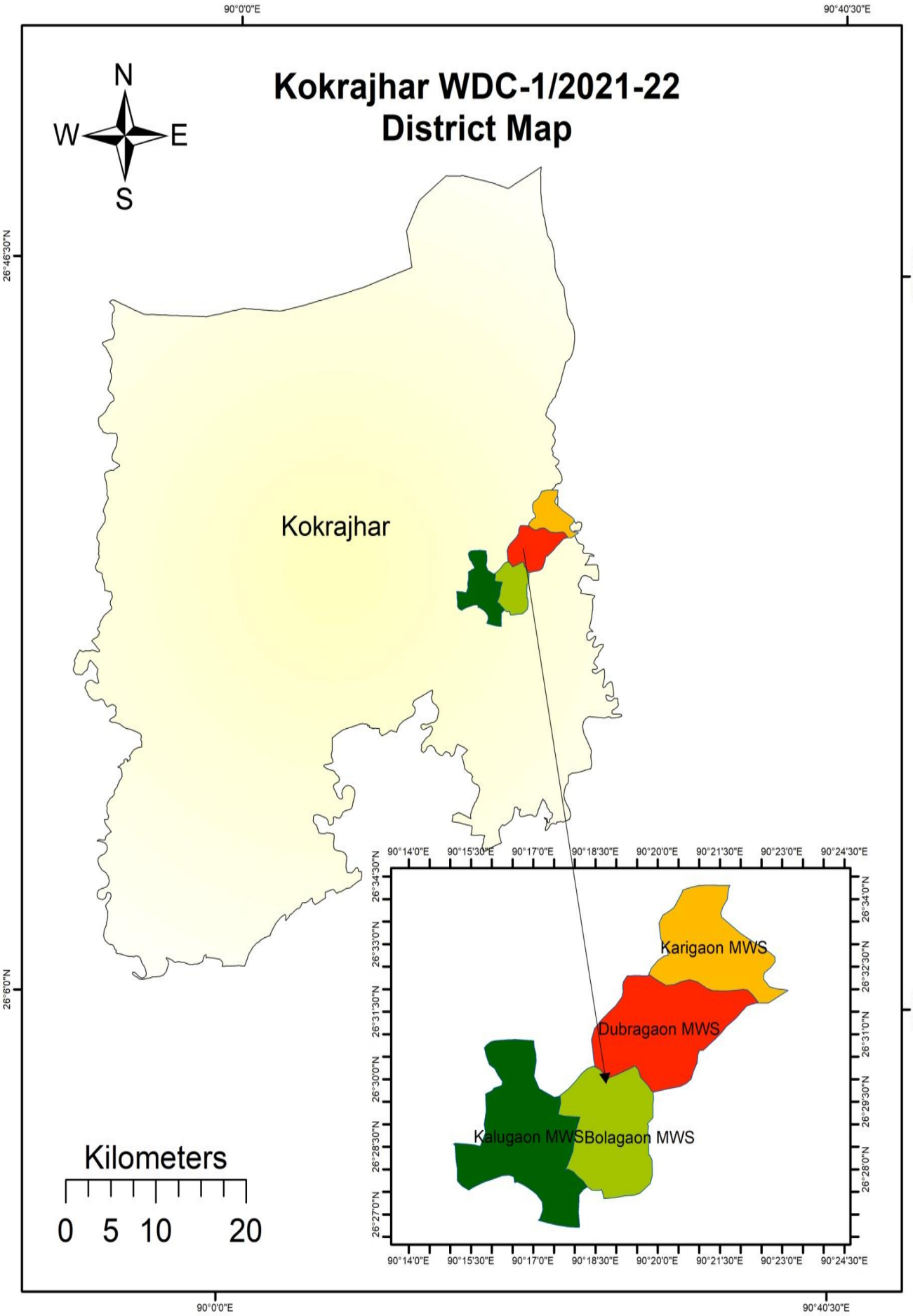
a. **Resource mapping:** Resource Mapping has done to identify valuable resource, and to ensure that everyone has access to the resources they need, avoid duplication of services and resource, enhance service, Identify flexible funding strategies, use data to make informed decision and cultivate new 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. Drainage Map
d. Slope map
e. Soil Map
f. Land Use / Land cover Map showing Proposed Intervention in Different Phase


Kokrajhar WDC-1/2021-22
District Map
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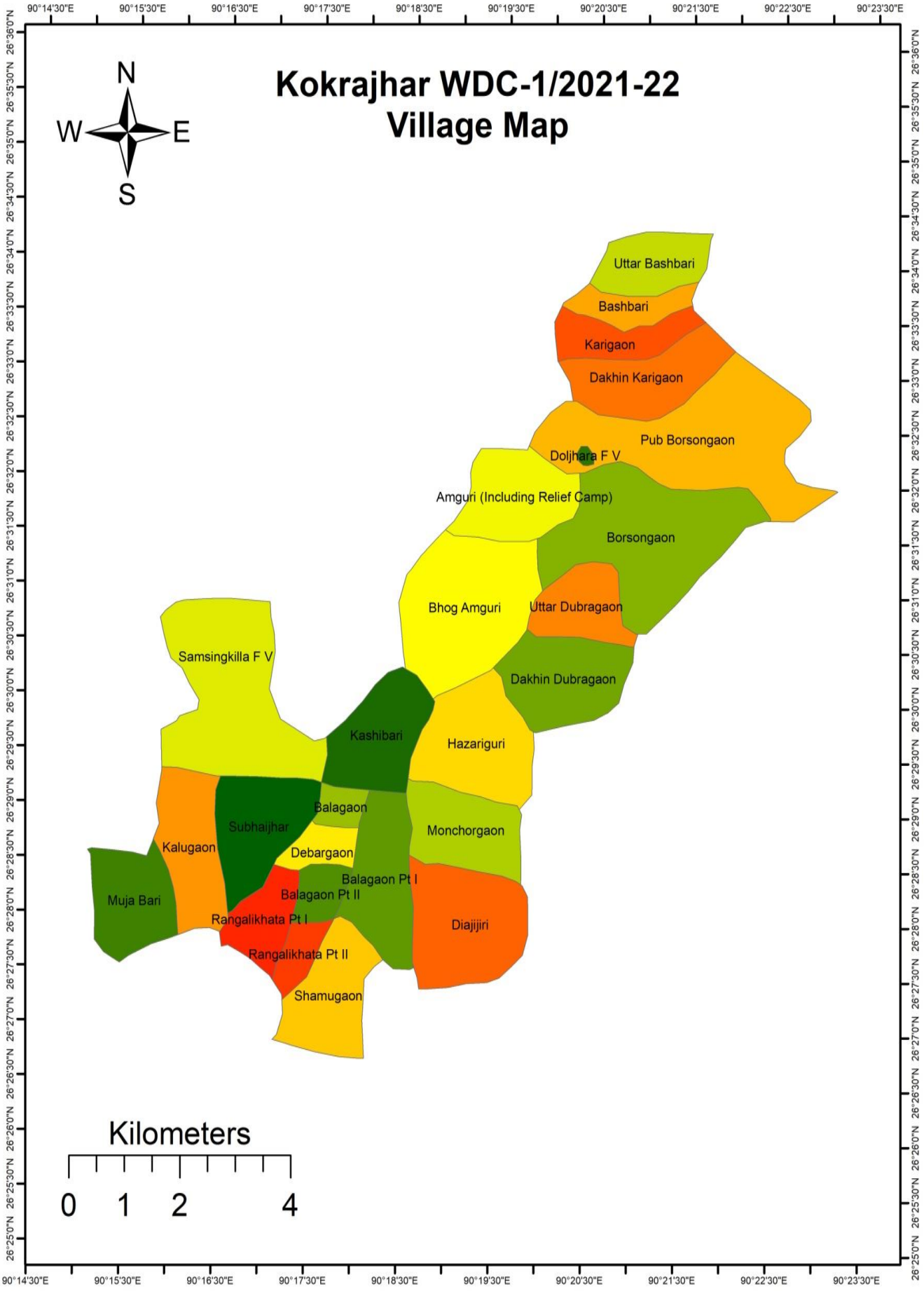
Kokrajhar WDC-1/2021-22
Village Map
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Uttar Bashbari
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Uttar Dubragaon
Dakhin Dubragaon
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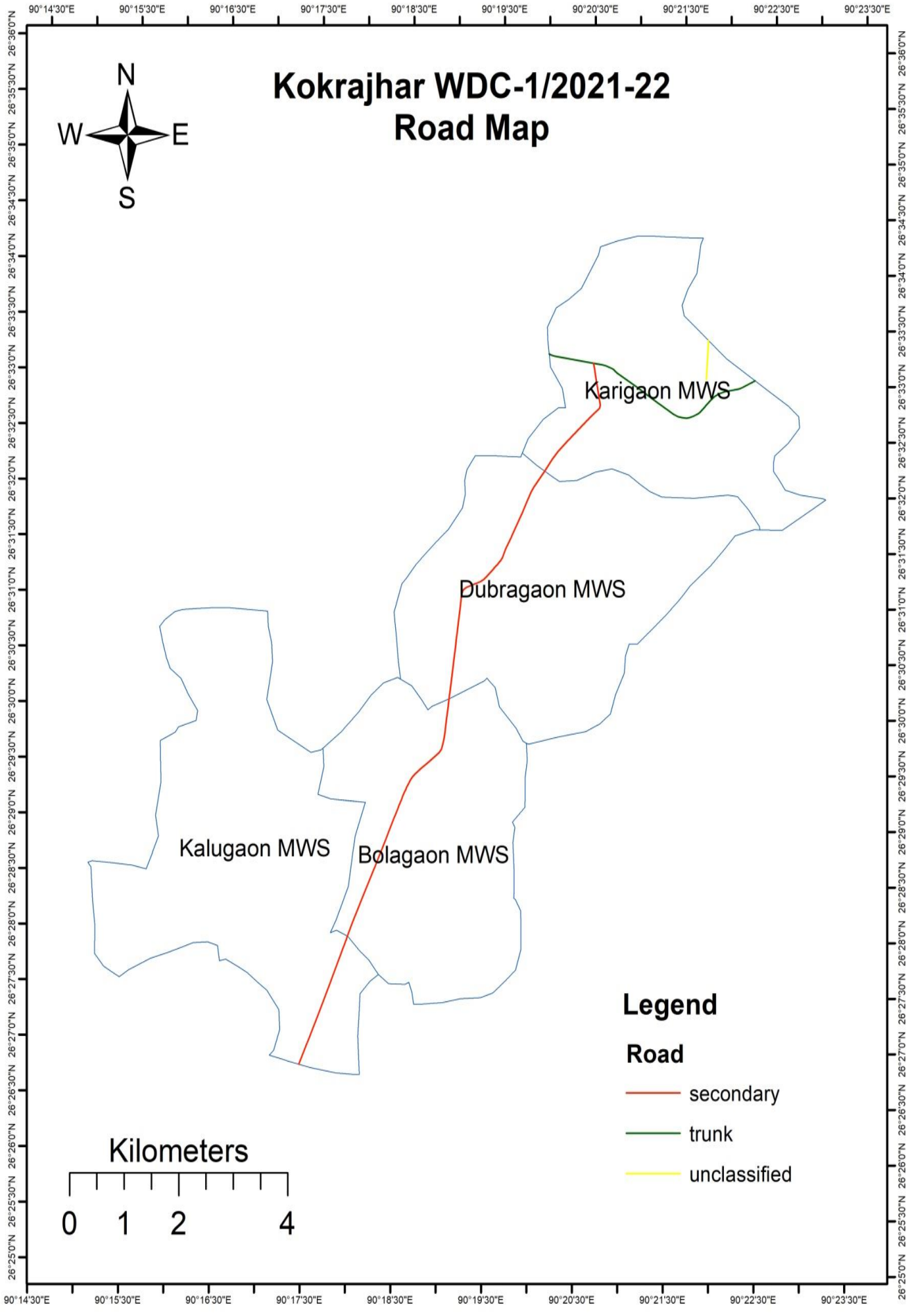
Kokrajhar WDC-1/2021-22
Road Map
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Legend
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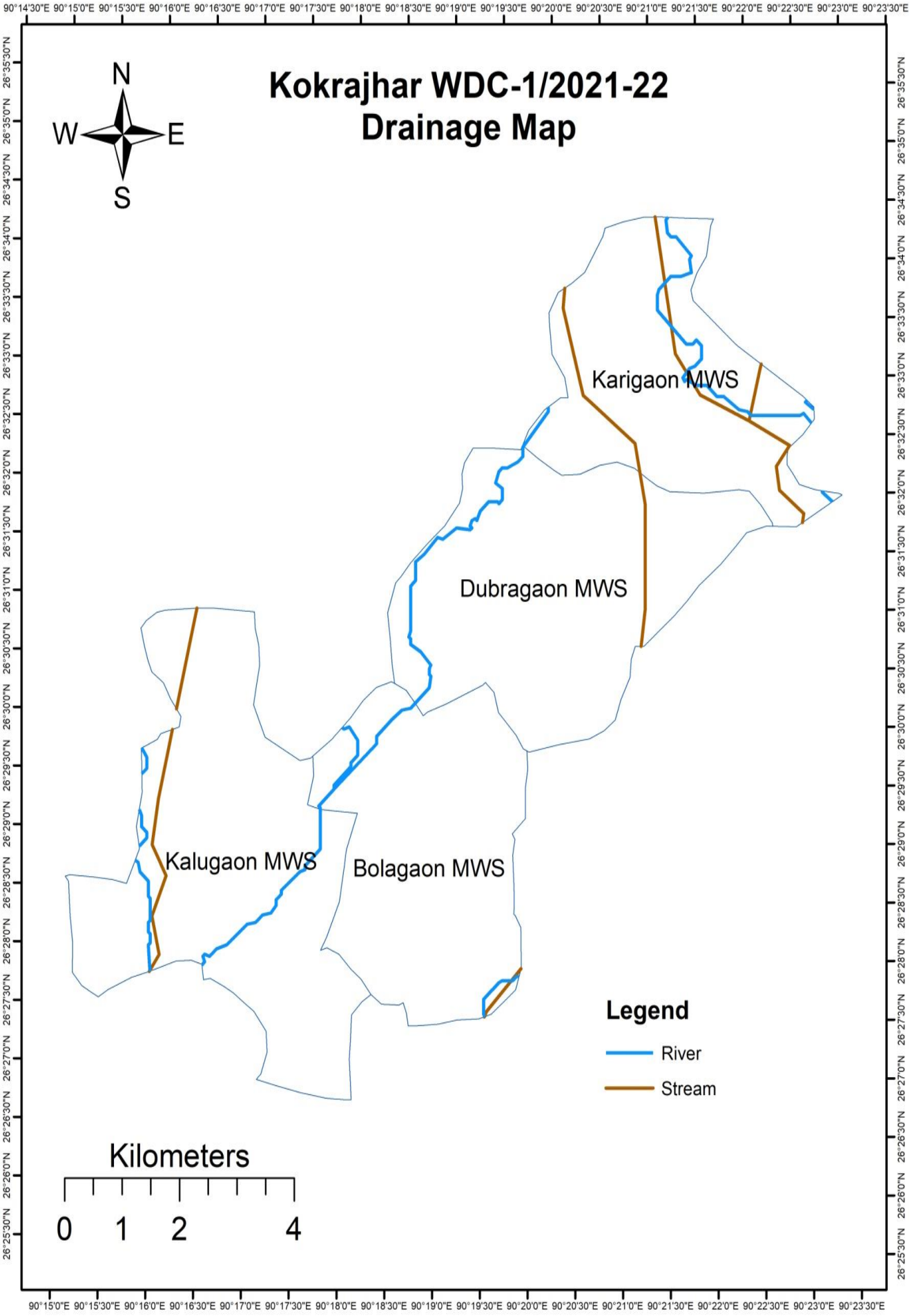
Kokrajhar WDC-1/2021-22
Drainage Map
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Dubragaon MWS
Kalugaon MWS
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Legend
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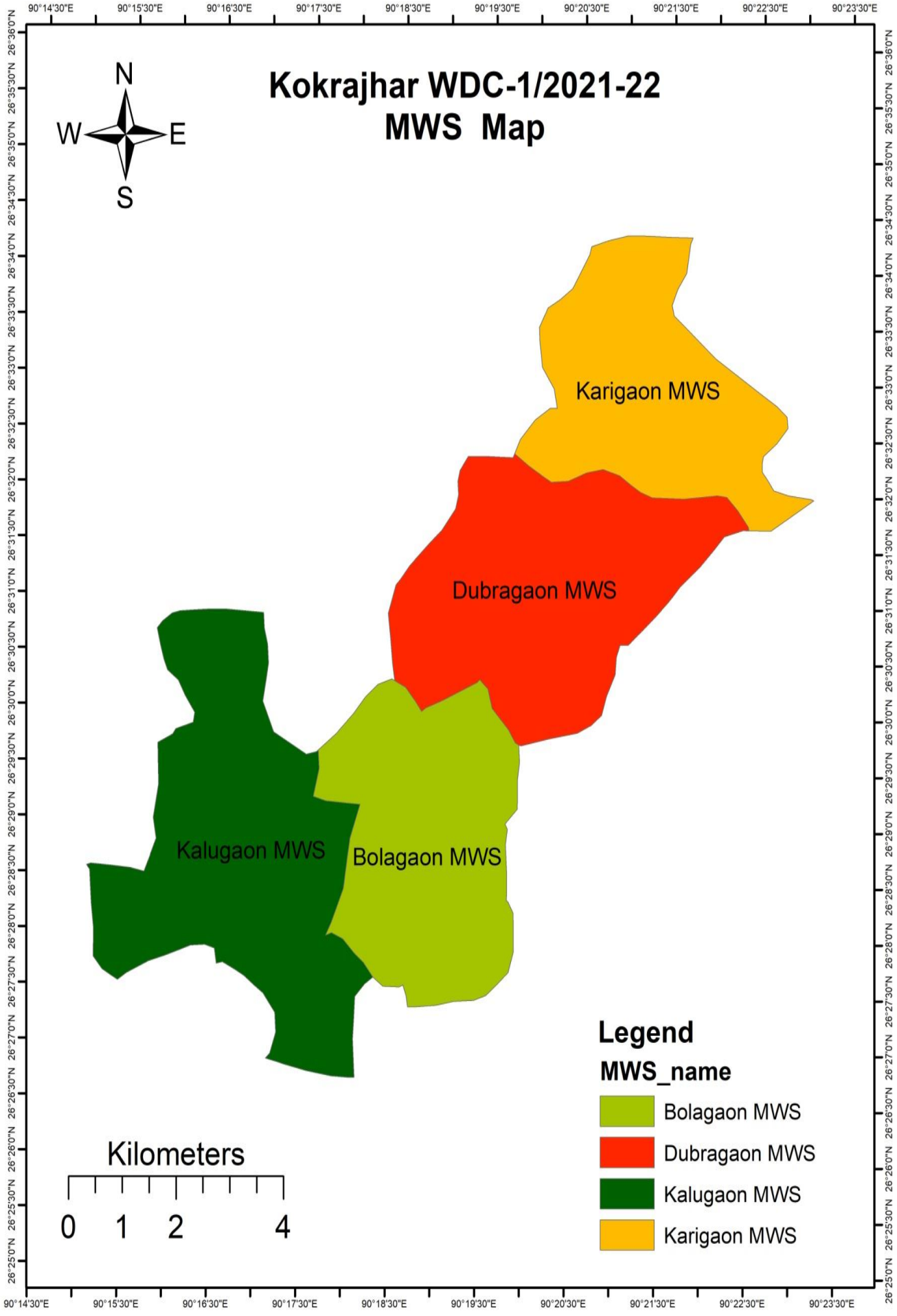
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MWS Map
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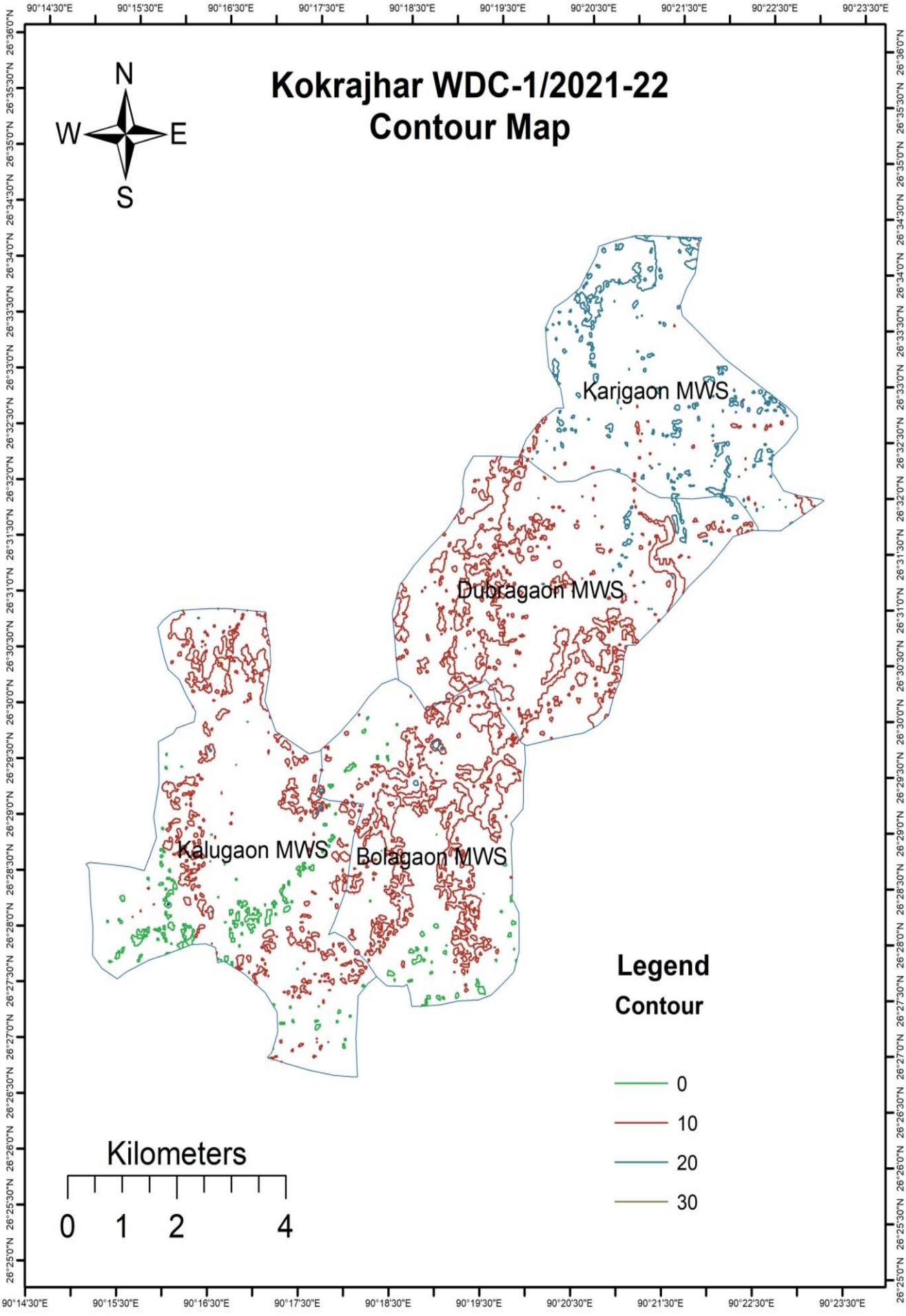
26°29'30"N
26°29'0"N
26°28'30"N
26°28'0"N
26°27'30"N
26°27'0"N
26°26'30"N
26°26'0"N
26°25'30"N
26°25'0"N


Kokrajhar WDC-1/2021-22
Contour Map
N
W
E
S
Karigaon MWS
Dubragaon MWS
Kalugaon MWS
Bolagaon MWS
Legend
Contour
0
10
20
30
Kilometers
0 1 2 4
90°14'30"E
90°15'30"E
90°16'30"E
90°17'30"E
90°18'30"E
90°19'30"E
90°20'30"E
90°21'30"E
90°22'30"E
90°23'30"E
26°36'0"N
26°35'30"N
26°35'0"N
26°34'30"N
26°34'0"N
26°33'30"N
26°33'0"N
26°32'30"N
26°32'0"N
26°31'30"N
26°31'0"N
26°30'30"N
26°30'0"N
26°29'30"N
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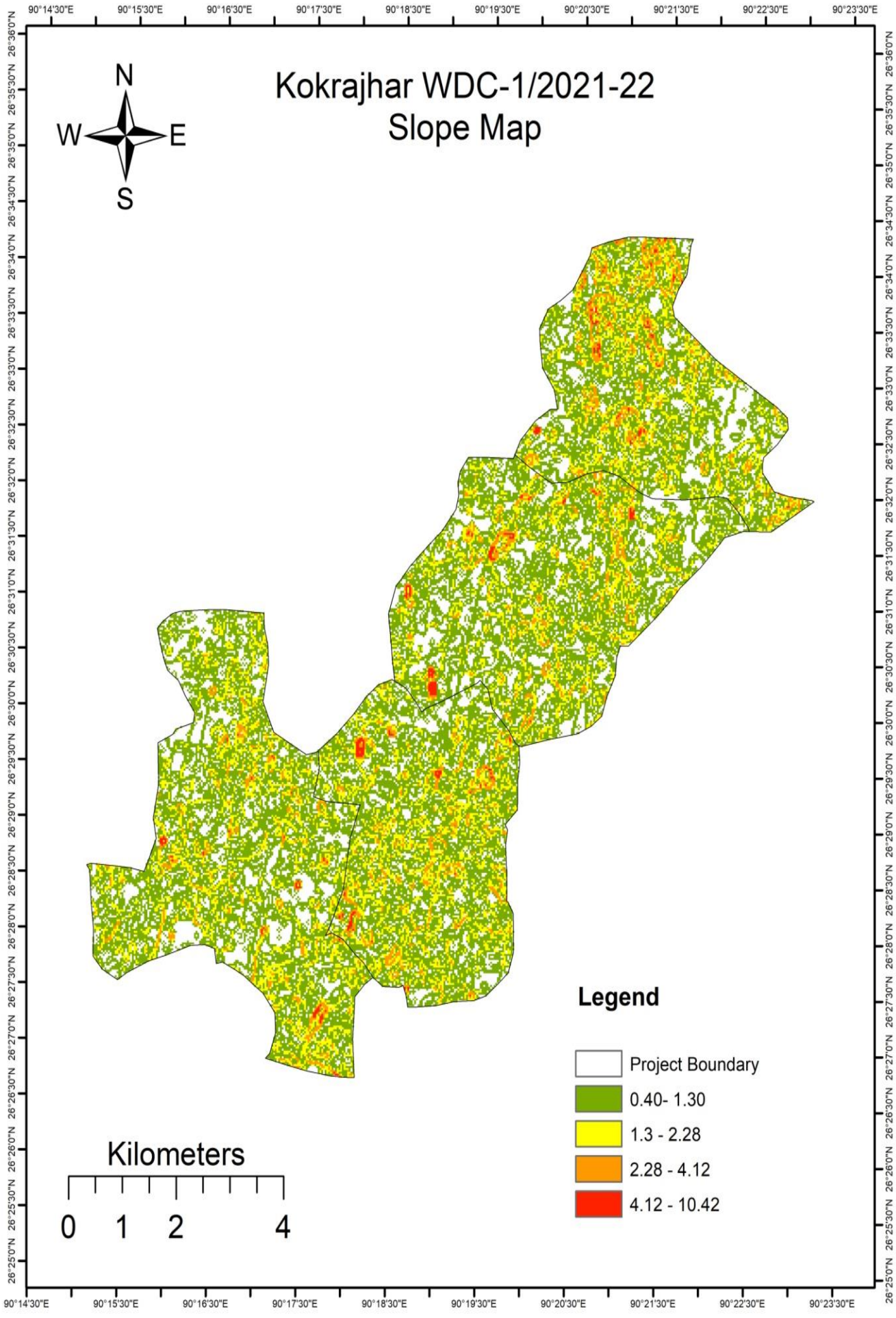
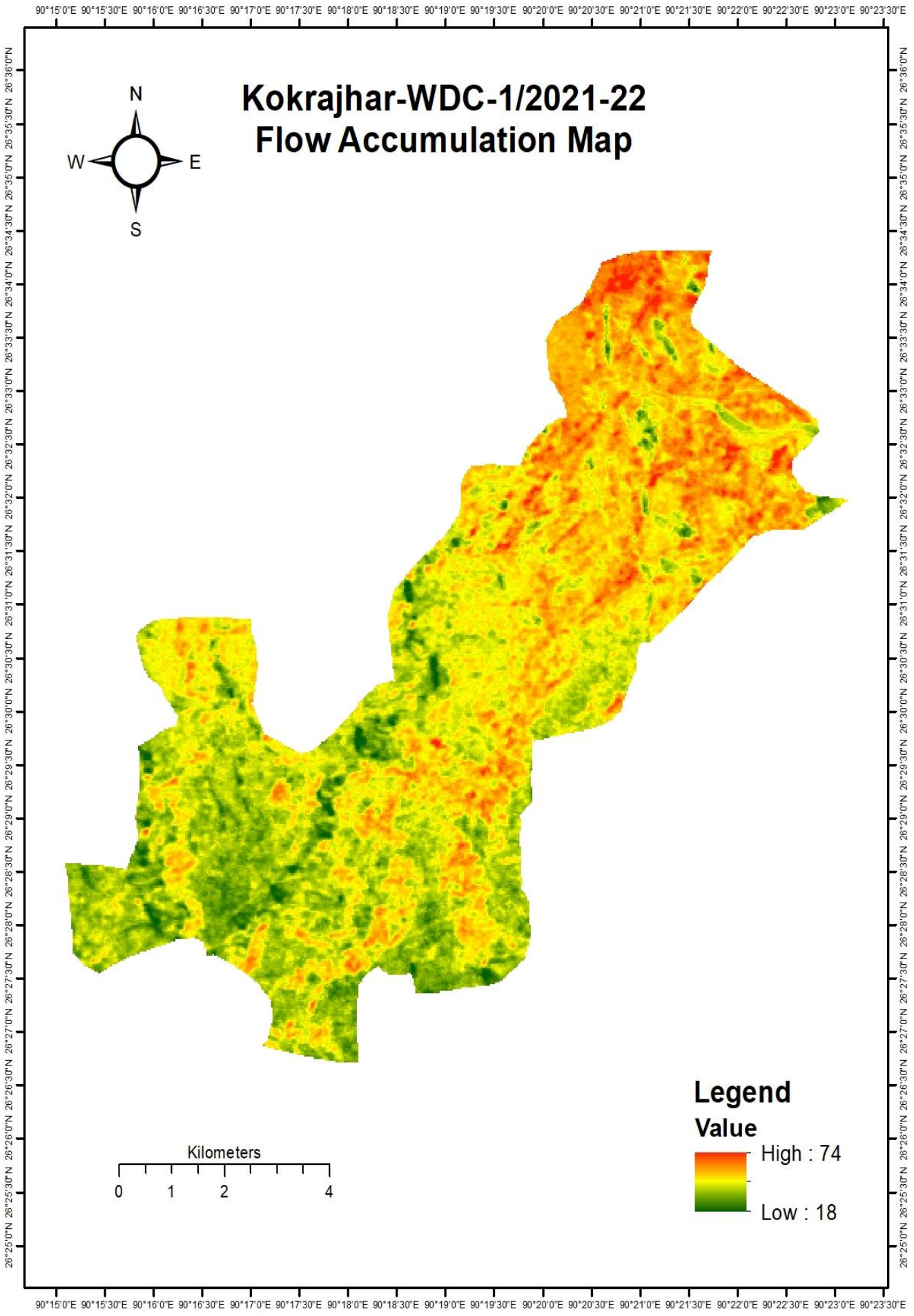
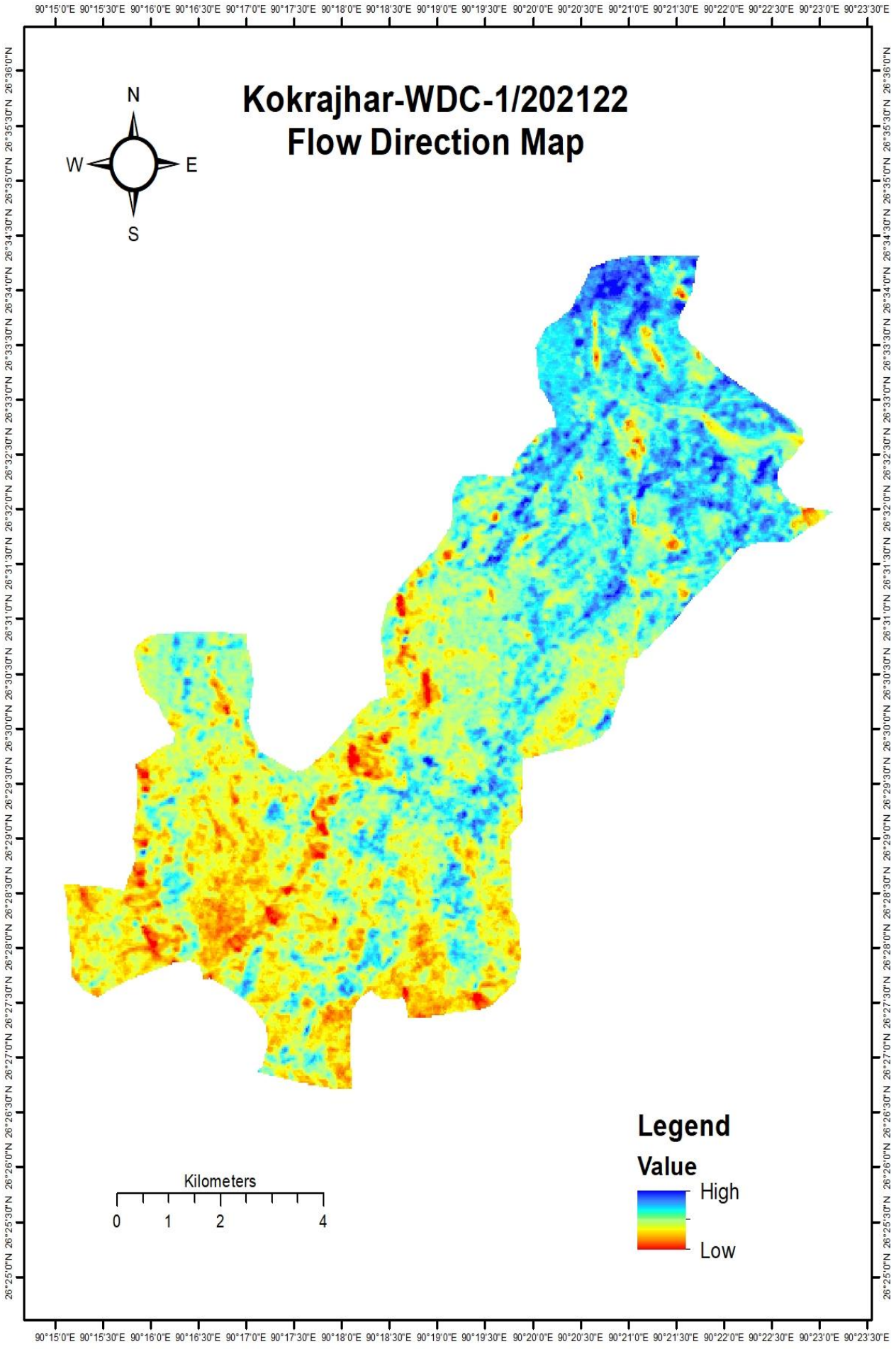
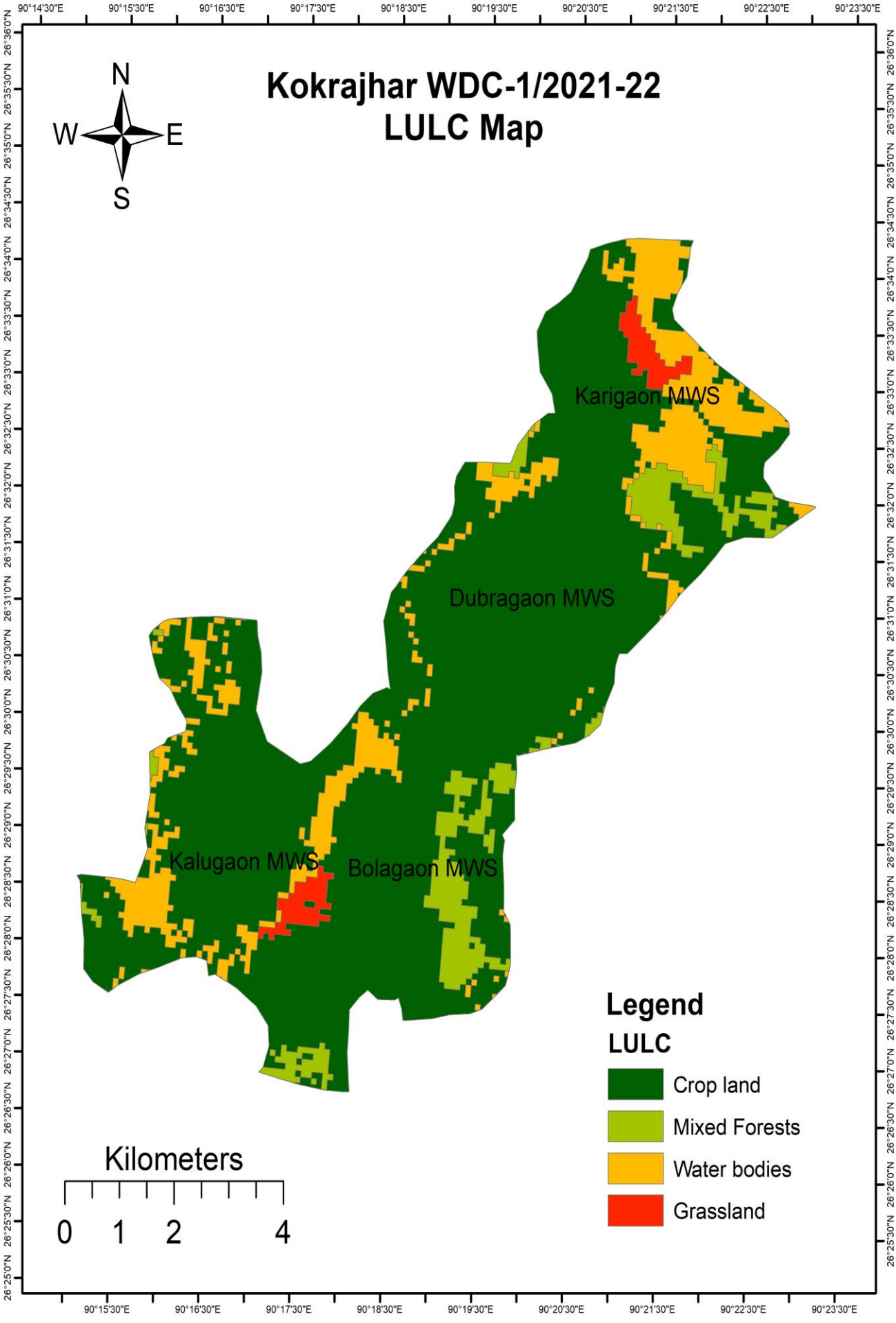
26°28'30"N
26°28'0"N
26°27'30"N
26°27'0"N
26°26'30"N
26°26'0"N
26°25'30"N
26°25'0"N


Kokrajhar WDC-1/2021-22
Slope Map
N
W
E
S
90°14'30"E
90°15'30"E
90°16'30"E
90°17'30"E
90°18'30"E
90°19'30"E
90°20'30"E
90°21'30"E
90°22'30"E
90°23'30"E
26°36'0"N
26°35'30"N
26°35'0"N
26°34'30"N
26°34'0"N
26°33'30"N
26°33'0"N
26°32'30"N
26°32'0"N
26°31'30"N
26°31'0"N
26°30'30"N
26°30'0"N
26°29'30"N
26°29'0"N
26°28'30"N
26°28'0"N
26°27'30"N
26°27'0"N
26°26'30"N
26°26'0"N
26°25'30"N
26°25'0"N
Legend
Project Boundary
0.40- 1.30
1.3 - 2.28
2.28 - 4.12
4.12 - 10.42
Kilometers
0 1 2 4


Kokrajhar-WDC-1/2021-22
Flow Accumulation Map
N
W
E
S
90°15'0"E 90°15'30"E 90°16'0"E 90°16'30"E 90°17'0"E 90°17'30"E 90°18'0"E 90°18'30"E 90°19'0"E 90°19'30"E 90°20'0"E 90°20'30"E 90°21'0"E 90°21'30"E 90°22'0"E 90°22'30"E 90°23'0"E 90°23'30"E
26°36'0"N 26°35'30"N 26°35'0"N 26°34'30"N 26°34'0"N 26°33'30"N 26°33'0"N 26°32'30"N 26°32'0"N 26°31'30"N 26°31'0"N 26°30'30"N 26°30'0"N 26°29'30"N 26°29'0"N 26°28'30"N 26°28'0"N 26°27'30"N 26°27'0"N 26°26'30"N 26°26'0"N 26°25'30"N 26°25'0"N
Kilometers
0 1 2 4
Legend
Value
High : 74
Low : 18


Kokrajhar-WDC-1/202122
Flow Direction Map
N
W
E
S
90°15'0"E 90°15'30"E 90°16'0"E 90°16'30"E 90°17'0"E 90°17'30"E 90°18'0"E 90°18'30"E 90°19'0"E 90°19'30"E 90°20'0"E 90°20'30"E 90°21'0"E 90°21'30"E 90°22'0"E 90°22'30"E 90°23'0"E 90°23'30"E
26°25'0"N 26°25'30"N 26°26'0"N 26°26'30"N 26°27'0"N 26°27'30"N 26°28'0"N 26°28'30"N 26°29'0"N 26°29'30"N 26°30'0"N 26°30'30"N 26°31'0"N 26°31'30"N 26°32'0"N 26°32'30"N 26°33'0"N 26°33'30"N 26°34'0"N 26°34'30"N 26°35'0"N 26°35'30"N 26°36'0"N
Kilometers
0 1 2 4
Legend
Value
High
Low


Kokrajhar-WDC-1/2021-22
Intervention Map
N
W
E
S
90°15'0"E 90°15'30"E 90°16'0"E 90°16'30"E 90°17'0"E 90°17'30"E 90°18'0"E 90°18'30"E 90°19'0"E 90°19'30"E 90°20'0"E 90°20'30"E 90°21'0"E 90°21'30"E 90°22'0"E 90°22'30"E 90°23'0"E 90°23'30"E
26°36'0"N 26°35'30"N 26°35'0"N 26°34'30"N 26°34'0"N 26°33'30"N 26°33'0"N 26°32'30"N 26°32'0"N 26°31'30"N 26°31'0"N 26°30'30"N 26°30'0"N 26°29'30"N 26°29'0"N 26°28'30"N 26°28'0"N 26°27'30"N 26°27'0"N 26°26'30"N 26°26'0"N 26°25'30"N 26°25'0"N
Kilometers
0 1 2 4
Legend
Intervention
MWS


Kokrajhar WDC-1/2021-22
LULC Map
N
W
E
S
Karigaon MWS
Dubragaon MWS
Kalugaon MWS
Bolagaon MWS
Legend
LULC
Crop land
Mixed Forests
Water bodies
Grassland
Kilometers
0 1 2 4
90°14'30"E
90°15'30"E
90°16'30"E
90°17'30"E
90°18'30"E
90°19'30"E
90°20'30"E
90°21'30"E
90°22'30"E
90°23'30"E
26°36'0"N
26°35'30"N
26°35'0"N
26°34'30"N
26°34'0"N
26°33'30"N
26°33'0"N
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26°27'30"N
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26°26'30"N
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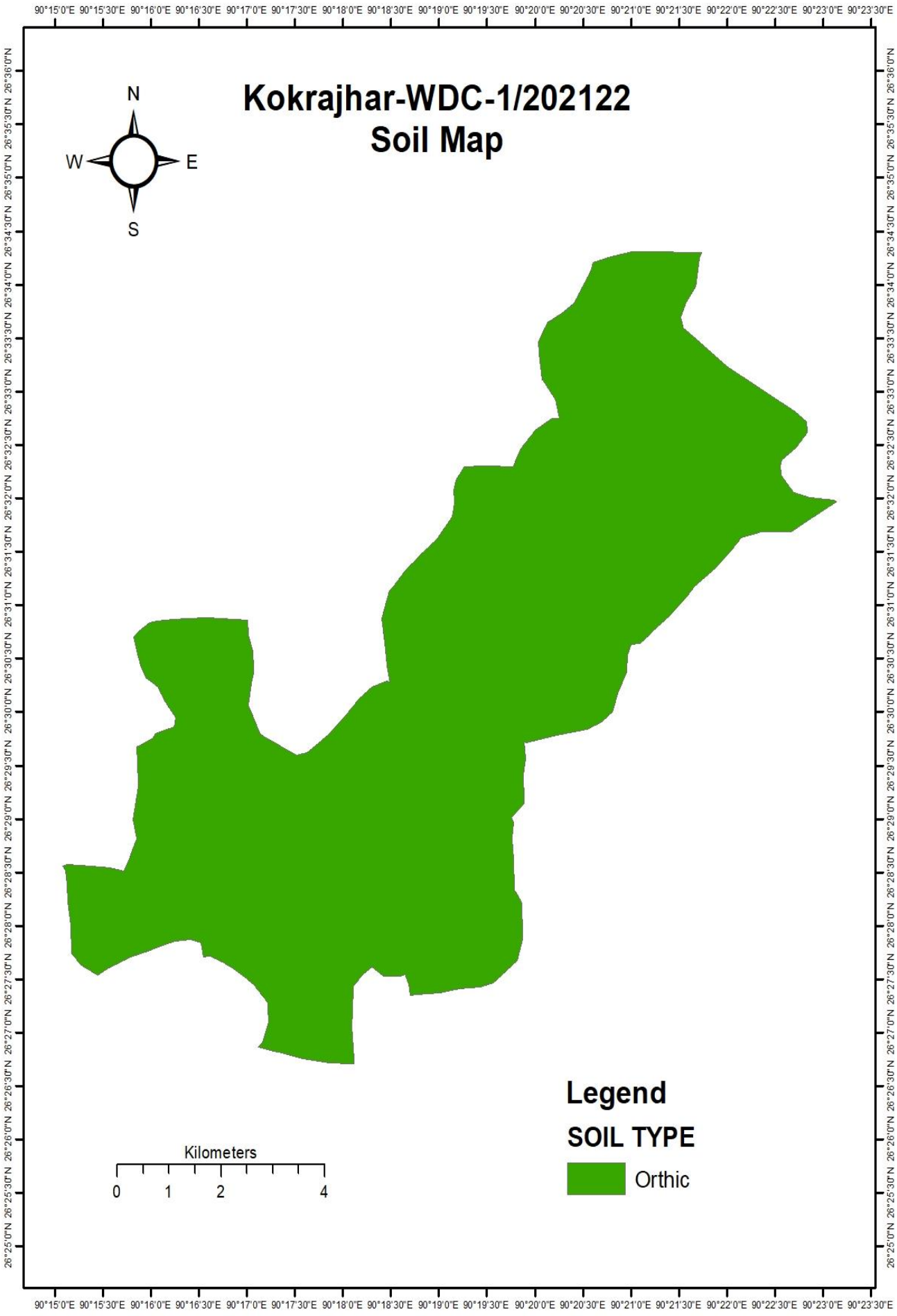
26°25'30"N
26°25'0"N


Kokrajhar-WDC-1/202122
Soil Map
N
W
E
S
90°15'0"E 90°15'30"E 90°16'0"E 90°16'30"E 90°17'0"E 90°17'30"E 90°18'0"E 90°18'30"E 90°19'0"E 90°19'30"E 90°20'0"E 90°20'30"E 90°21'0"E 90°21'30"E 90°22'0"E 90°22'30"E 90°23'0"E 90°23'30"E
26°36'0"N 26°35'30"N 26°35'0"N 26°34'30"N 26°34'0"N 26°33'30"N 26°33'0"N 26°32'30"N 26°32'0"N 26°31'30"N 26°31'0"N 26°30'30"N 26°30'0"N 26°29'30"N 26°29'0"N 26°28'30"N 26°28'0"N 26°27'30"N 26°27'0"N 26°26'30"N 26°26'0"N 26°25'30"N 26°25'0"N
Kilometers
0 1 2 4
Legend
SOIL TYPE
Orthic

5.2 Details of Natural Resource Management Activities

Table No. 5.2.1 Soil and Moisture Conservation structures

1	2	3	4	5	6	7	8	9	10	11	12
Sl. No.	*Name of the Activities (Structures)*	*Name of the Hamlet / Village*	*Plot Numbers (including Name of the local Patch)*	*Name of Beneficiaries*	*Area (in Ha) / Dimension (in M/ Sq. M / m^3) of Structure*	*Unit Cost*	*Total Cost (in Rs.)*	*Contri-bution*	*Total Grant Amount (in Rs)*	*Year of Implementation (1st/2nd/3rd/ 4th/5th)*	*GPS Points*
1	*Brick Channel*	*Dakhin Karigaon*	*Const. of Brick Channel at Dakhin Karigaon*	*All villagers & farmers*	*600Rm*	*0.025*	*15.00*	*0.75*	*15.00*	*1st Year*	N=26°33'26,37, E=90°20'20,0112
2		*North Kalugaon*	Const. of Brick Channel at Dayapara	*All villagers & farmers*	*500Rm*	*0.025*	*12.50*	*0.625*	*12.50*	*1st Year*	N=26°28'44" E=90°16.16"
3		*Pachim Dubragaon*	Const. of Brick Channel at Pachim Dubragaon	*All villagers & farmers*	*500Rm*	*0.025*	*12.50*	*0.625*	*12.50*	*2nd Year*	N=26°31'50,01853 E=90°19'47,95382
4		*Uttar Bashbari*	Const. of Brick Channel at Uttar Bashbari	*All villagers & farmers*	*500Rm*	*0.025*	*12.50*	*0.625*	*12.50*	*3rd Year*	N=26°28'40,7064 E=90°17'15,954
5		*Madhya Kalugaon*	Const. of Brick Channel at Madhya Kalugaon	*All villagers & farmers*	*550Rm*	*0.025*	*13.75*	*0.6875*	*13.75*	*3rd Year*	N=26°28'57,4932 E=90°16'36,3576
6		*Madhya Kalugaon*	Const. of Brick Channel at Madhya Kalugaon	*All villagers & farmers*	*600Rm*	*0.025*	*15.00*	*0.75*	*15.00*	*2nd Year*	N=26°29'08,988 E=90°16'40,3572
7		*Manchargaon*	Const. of Brick Channel at Manchargaon	*All villagers & farmers*	*220Rm*	*0.025*	*5.50*	*0.275*	*5.50*	*4th Year*	N=26°28'58,728 E=90°19'30,5292
					Sub Total		***86.75***	***4.3375***	***86.75***		
8	*Land Dev. Work*	*Dakhin Karigaon*	*Const. of earthen Agri bund at Gwjwnpuri*	*All villagers & farmers*	*3600Cum*	*0.00238*	*8.57*	*0.43*	*8.57*	*2nd Year*	N=26°33'24,7932 E=90°20'23,0208
9		*Samsingkilla*	*Const. of earthen Agri bund*	*All villagers & farmers*	*4500Cm*	*0.00238*	*10.71*	*0.53*	*10.71*	*1st Year*	N=26°31'52,3092 E=90°21'46,9332
10		*Doljhora Boro Basti*	*Const. of earthen Agri bund*	*All villagers & farmers*	*3000Cm*	*0.00238*	*7.14*	*0.35*	*7.14*	*3rd Year*	N=26°31'06,6288 E=90°19'40,9332
11		*Rangalikata*	*Const. of earthen Agri bund*	*All villagers & farmers*	*1500Cm*	*0.00238*	*3.57*	*0.17*	*3.57*	*5th Year*	N=26°27'08,5032 E=90°16'34,847
					Sub Total		***29.99***	***1.478***	***29.99***		

Table No. 5.2.2 Water Harvesting Structures (New created)

1	2	3	4	5	6	7	8	9	10	11	12
Sl. No.	**Name of the Activities (Structures)**	**Name of the Hamlet / Village**	**Plot Numbers (including Name of the local Patch)**	**Name of Beneficiaries**	**Area (in Ha)/ Dimension (in M/ Sq. M / CuM) of Structure**	**Unit Cost**	**Total Cost (in Rs.)**	**Contri-bution**	**Total Grant Amount (in Rs)**	**Year of Implementation (1st/2nd/3rd/ 4th/5th)**	***GPS Points***
1	RCC check dams	Kashibari	Const. of Water Harvesting Structure with guide bund	*All villagers & farmers*	25.00 Sqm	0.53500	13.38	0.67	13.38	1st Year	N=26°29'38" E=90°18.56"
2		Kashibari	Const. of Water Harvesting Structure with guide bund	*All villagers & farmers*	23.00 Sqm	0.53500	12.30	0.61	12.30	3nd Year	N=26°29'13,6806 E=90°17'34.6956
3		Hazariguri	Const. of Water Harvesting Structure with guide bund	*All villagers & farmers*	25.00 Sqm	0.53500	13.38	0.67	13.38	2nd Year	N=26°29'30.6" E=90°18.51.4"
4		Uttar Bashbari	Const. of Water Harvesting Structure with guide bund	*All villagers & farmers*	20.00 Sqm	0.53500	10.70	0.53	10.70	2nd Year	N=26°30'59,4 E=90°20'29,8572
5		Uttar Bashbari	Const. of Water Harvesting Structure with guide bund	*All villagers & farmers*	23.00 Sqm	0.53500	12.30	0.61	12.30	4th year	N=26°34'38,406 E=90°21'18,288
6		North Kalugaon	Const. of GCP with guide bund	*All villagers & farmers*	28.00 Sqm	0.53500	14.98	0.75	14.98	1st Year	N 26°489934", E 90°281271'
Sub Total							**77.02**	**3.85**	**77.02**		

Table No. 5.2.3 Water Harvesting Structures(Renovation)

1	2	3	4	5	6	7	8	9	10	11	12
Sl. No.	**Name of the Activities (Structures)**	**Name of the Hamlet / Village**	**Plot Numbers (including Name of the local Patch)**	**Name of Beneficiaries**	**Area (in Ha)/ Dimension (in M/ Sq. M / CuM) of Structure**	**Unit Cost**	**Total Cost (in Rs.)**	**Contri-bution**	**Total Grant Amount (in Rs)**	**Year of Implementation (1st/2nd/3rd/ 4th/5th)**	***GPS Points***
1	Farm Ponds	Kashibari	Excavation of community pond at Kashibari	*All villagers & farmers*	7000	0.00190	13.30	0.67	13.30	1st Year	N=26°29'27" E=90°18.56"
2		Bashbari	Renovation of community pond at Bashbari	*All villagers & farmers*	5500	0.00190	10.45	0.52	10.45	2nd Year	N=26°34'28,0808 E=90°20'59,172
3		North Kalugaon	Excavation of community pond at North Kalugaon	*All villagers & farmers*	7000	0.00190	13.30	0.67	13.30	2nd Year	N=26°484927" E=90°26904"
4		Bashbari	Excavation of community pond at Bashbari	*All villagers & farmers*	6500	0.00190	12.35	0.62	12.35	5th year	N=26°34'23,4048 E=90°20'59,3628
5		Kalugaon Aitugaon) (Part-A&B)	Excavation of community pond at Kalugaon Aitugaon) A,B	*All villagers & farmers*	16620	0.00190	31.58	1.58	31.58	2nd Year	N=26°27'54,4536 E=90°16'15,9852
6		Kalugaon Aitugaon)	Excavation of community pond at Kalugaon Aitugaon)	*All villagers & farmers*	8000	0.00190	15.20	0.76	15.20	3rd year	N=26°27'54,4536 E=90°16'15,9852
7		Pub Borsongaon (Pt- A&B)	Excavation of community pond at Pub Borsongaon (Pt- A&B	*All villagers & farmers*	22895	0.00190	43.50	2.18	43.50	1st Year	N=26°32'22,0488 E=90°21'35,586
8		Amguri (Dubragaon	Renovation of community pond at Amguri (Dubragaon	*All villagers & farmers*	7000	0.00190	13.30	0.67	13.30	2nd Year	N=26°31'50,01852 E=90°19'47,95392
9		Dakin Karigaon	Renovation of community pond at Dakin Karigaon	*All villagers & farmers*	5670 Cum	0.00190	10.77	0.53	10.77	4th year	N=26°33'38,7 E=90°20'41,5212
						Sub Total	**163.75**	**8.18**	**163.75**		

Table No. 5.2.4 Vegetative Covers

1	2	3	4	5	6	7	8	9	10	11	12
Sl. No.	**Name of the Activities**	**Name of the Hamlet / Village**	**Plot Numbers (including Name of the local Patch)**	**Name of Beneficiaries**	**Area (in Ha)**	**Unit Cost**	**Total Cost (in Rs.)**	**Contri - bution**	**Total Grant Amount (in Rs)**	**Year of Implementation (1st/2nd/3rd/4th/5th)**	***GPS Points***
1	Horticulture-	North Kalugaon	North Kalugaon	*All villagers & farmers*	0.53Ha	2.28	1.2	0.06	1.2	1 St Year	N 26°29'264", E 90º16'881’
2	Horticulture-Betel nut	Kashibari	Kashibari	farmers	1.33Ha	2.28	3	0.15	3	1 St Year	N=26°29'33" E=90°18.50"
3	Horticulture-Betel nut	Samsingkilla (Doyapara)	Samsingkilla (Doyapara)	farmers	0.53Ha	2.28	1.2	0.06	1.2	1 St Year	N=26°28'45" E=90°17.25"
4	Horticulture-Betel nut	Karigaon	Karigaon	farmers	0.80Ha	2.28	1.82	0.09	1.82	5th Year	N=26°33'24,6312 E=90°20'28,356
5	Horticulture-Betel nut	Dhokin Karigaon	Ma Kali Mandir	*All villagers & farmers*	5Ha	2.28	11.4	0.57	11.4	3rd Year	N=26°33'24,0192 E=90°20'21,1632
6	Horticulture-Betel nut	Uttar Dubragaon	Uttar Dubragaon	farmers	1.6Ha	2.28	3.64	0.18	3.64	5th Year	N=26°30'27,9048 E=90°20'04,794
7	Horticulture-Betel nut	Uttar Dubragaon	Uttar Dubragaon	farmers	1.5Ha	2.28	3.42	0.17	3.42	1 St Year	N=26°30'37,1412 E=90°20'07,5228
8	Horticulture-Betel nut	Dhokin Karigaon	Dhokin Karigaon	farmers	3.2 Ha	2.28	7.29	0.36	7.29	3rd Year	N=26°33'23,8725 E=90°20'20,31
9	Horticulture-Betel nut	Madhya Basbari	Madhya Basbari	*All villagers & farmers*	6Ha	2.28	13.68	0.68	13.68	1 St Year	N=26°34'23,448 E=90°21'07,1388
10	Horticulture-Betel nut	Madhya Basbari	Madhya Basbari	*All villagers & farmers*	2.2 ha	2.28	5.01	0.25	5.01	2nd Year	N=26°34'23,448 E=90°21'07,1388
11	Horticulture-Berry	Madhya Kalugaon	Madhya Kalugaon	farmers	1.50 ha	2.28	3.42	0.17	3.42	2nd Year	N=26°27'54,4536 E=90°16'15,9852
12	Horticulture-Betel nut	Pub Barsangaon	Pub Barsangaon	farmers	1.50 ha	2.28	3.42	0.17	3.42	2nd Year	N=26°32'26,376 E=90°21'14,3028
13	Horticulture-Betel nut	Samsingkilla	Samsingkilla	farmers	2.2 ha	2.28	5.01	0.25	5.01	2nd Year	N=26°32'05,7516 E=90°22'27,1308
14	Horticulture-Betel nut	Samsingkilla	Samsingkilla	farmers	1.50 ha	2.28	3.42	0.17	3.42	3rd Year	N=26°31'50,01852 E=90°19'47,95392
15	Horticulture-Betel nut	Doljhora	Doljhora Adivasi	farmers	1.50 ha	2.28	3.42	0.17	3.42	3rd Year	N=26°31'14,286 E=90°20'26,484

Sub Total		**70.35**	**3.5**	**70.35**		

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					
S. No.	Name of structures	Area (ha)	Farmers	Total units (No./ cu.m./ rmt)	UNIT COST (Rs)	Proposed plan					
						Estimated cost* (Rs. in lakh)				Farmers contribution (Rs. in lakh)	Grant Portion (Rs. in lakh)
						M	W	O	T		
A	PRIVATE LAND										
	Brick Channel			3470 Rm	0.02500	**52.05**	34.7	4.3375	**86.75**	4.3375	**86.75**
	Land Development Work			12600 Cum	0.00238	0	29.99	1.478	29.99	1.478	29.99
	Grand total					**52.05**	**64.69**	**5.8155**	**116.74**	**8.42750**	**116.74**

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

5.3.2: Details of engineering structures for Water Harvesting WHS

1	2	3		4				
S. No.	Name of structures	Total units (No./ cu.m./ rmt)	UNIT COST (Rs)	Proposed plan				
				Estimated cost* (Rs. in lakh)				Farmers contribution (Rs)
				M	W	O	T	
A	**PRIVATE LAND**							
A1	**Individual structures**							
1	RCC Drop Spill Way	6	0.53300	46.212	30.808	3.85	77.02	3.85
2	Pond	9	0.00190	0	77.02	8.18	163.75	8.18
	Grand total			**46.212**	**107.828**	**12.03**	**240.77**	**12.03**

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

1	2	3		4			
				Proposed plan			
Sl. 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	Plantation	30.86 Ha	44520	2.28000	70.35	3.50	70.35
	Grand total				**70.35**		**70.35**

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

Chapter 6
Capacity Building Plan

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. The scope of capacity building, in general, is:

- Alternative Land Use Plan
- Scientific technique of Soil and Moisture conservation
- Improved and Scientific agriculture practices
- Fodder development and Management
- Afforestation
- Meteorological Information
- Income Generation Activities
- Micro entrepreneurship
- Food Processing
- Post Harvest management practices

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 & 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 Trainee days (= 3 x 4 x 5)	Cost per Trainee day (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 / PI related										
1	SHG Related	3	15	3	135	0.00200	0.27000	0.81000	1st Year	By PIA
2	WC Related	10	12	1	120	0.00200	0.24000	2.40000	1st Year	By PIA
3	PI Awareness	5	20	2	200	0.00200	0.40000	2.00000	1st Year	By PIA
4	UG Related	5	47	1	235	0.00200	0.47000	2.35000	2nd Year	By PIA
5	PI Orientation	2	63	1	126	0.00200	0.25200	0.50400	3rd Year	By PIA
6	SHG Related	3	77	1	231	0.00200	0.46200	1.38600	1st Year	By PIA
Subtotal		**28**	**234**	**9**	**1047**	**0.01200**	**2.09400**	9.45000		
NRM related										
1	Land Used Practises	2	63	1	126	0.00525	0.66150	0.66150	2nd Year	By PIA
2	Land Used Practises	2	63	1	126	0.00525	0.66150	0.66150	3rd Year	By PIA
3	Land Used Practises	2	63	1	126	0.00525	0.66150	0.66150	4th Year	By PIA
Subtotal		**6**	**189**	**3**	**378**	**0.01575**	**1.98450**	**1.98450**		
Production Enhancement related										
1	Agricultural Production	2	63	1	126	0.00525	0.66150	0.66150	2nd Year	By PIA
2	Fishery Production	2	63	1	126	0.00525	0.66150	0.66150	3rdYear	By PIA
3	Fishery Production	2	63	1	126	0.00525	0.66150	0.66150	4th Year	By PIA
Subtotal		**6**	**189**	**3**	**378**	**0.01575**	**1.98450**	**1.98450**		
Livelihoods / Micro-enterprises related										
1	Animal Husbandry Production	2	63	1	126	0.00525	0.66150	0.66150	2nd Year	By PIA
2	Animal Husbandry	2	63	1	126	0.00525	0.66150	0.66150	3rd Year	By PIA
3	Animal Husbandry Production	2	63	1	126	0.00525	0.66150	0.66150	4th Year	By PIA
Subtotal		**6**	**189**	**3**	**378**	**0.01575**	**1.98450**	**1.98450**		
Convergence / Rights & entitlement / Wel Being related										
1	Rights & entitlement	2	29	1	58	0.00500	0.29000	0.29000	3rd Year	By PIA
2	Convergence Related	1	30	1	29	0.00559	0.16211	0.16211	4th Year	By PIA

Subtotal		**3**	**59**	**2**	**87**	**0.01059**	**0.45211**	**0.45211**		
For PIA / WDT staffs level										
1	Institution and Capacity Building	2	30	1	60	0.00650	0.39000	0.39000	2nd Year	By PIA
2	Production Enhancement	2	30	1	60	0.00525	0.31500	0.31500	3rd Year	By PIA
3	NRM Related	2	20	1	40	0.00650	0.26000	0.26000	4th Year	By PIA
4	Exposer Visit	4	25	1	100	0.01150	1.15000	1.15000	1st Year	By PIA
5	Exposer Visit	4	25	1	100	0.01150	1.15000	1.15000	1st Year	By PIA
6	Outside State Visit	1	10	7	70	0.03000	2.10000	2.10000	1st Year	By PIA
7	Outside State Visit	1	4	5	20	0.03420	0.68400	0.68400	5th Year	By DWDU
8	Exposer Visit	1	17	5	85	0.01560	1.32600	1.32600	3rd Year	By DWDU
9	Exposer Visit	1	6	5	30	0.01560	0.46800	0.46800	5th Year	By DWDU
Subtotal		**18**	**167**	**27**	**565**	**0.13665**	**7.84300**	**7.84300**		
Others										
	TOT/CRP/CSP/Related									
1	Enterprise Promotion	3	30	1	90	0.00525	0.47250	0.47250	5th Year	By PIA
2	Social Audit	2	100	1	200	0.00163	0.32539	0.32539	5th Year	By PIA
3	Gender Equitey	2	40	1	80	0.00525	0.42000	0.42000	3rd Year	By PIA
4	Enterprise Promotion	4	40	1	160	0.00525	0.84000	0.84000	5th Year	By PIA
5	GIS Application	3	26	1	78	0.00300	0.23400	0.23400	1st Year	By DWDU
6	GIS Application	3	84	1	252	0.00525	1.323	1.323	5th Year	By DWDU
Subtotal		**17**	**262**	**6**	**686**	**0.02563**	**2.70139**	**2.70139**		
GRAND TOTAL		**84**	**1289**	**53**	**3519**	**0.23212**	**11.20100**	**27.31080**		

6.2 Livelihood activity; Production system & Micro enterprise for the Watershed area

Incorporation of low-cost farming activities under IWMP scheme has been given priority, keeping in view the benefit of the village people who were unable to procure high-cost mechanized farming equipments. Livelihood generation amongst the villagers and improvement in the production system of watershed area is also priority of the IWMP project. Keeping all this in mind new techniques and low-cost mechanized systems were introduced amongst the common people through proper channel so that the assistance given for the benefit of the people were properly utilized. A new system has been proposed for the self-employment generation of the SHG constituted under IWMP. Receipt of different activities for incorporation in the livelihood has been approved from SLNA. List of items were thoroughly discussed with SHG, WDT, farmers and Watershed committees.

All have shown interest for obtaining the assistance under IWMP guidelines generated under close supervision for generating livelihood and improved production system, the same are incorporated for the Subaijhar Upper Project 21-22. While discussing the details of the activities the different options given by GOI in their operational guidelines for the livelihood and production system are thoroughly narrated to the members of the water shed committee, SHG and enterprising individuals coming forward for such assistance.

The watershed committee and the SHG have expressed their interest to return the grants as per guidelines. Livelihood Options:

1) 25000 for SHG which is returnable within 18 months
2) In case of bigger activity 50% of the total cost of the activity or Rs. 2 lakhs whichever is less are to be given as grants in aids
3) Balance amount to be obtained by the group as bank loan or finance by them selfs. Production System Option:

1) 24000 will be paid to the group, SHG/ woman SHG/entrepreneur as grant in aid
2) 20% of the amount are to be paid by general farmer and 10% by ST or SC farmers

Table No. 6.2.1 Details of Livelihood activity:

Sl. No	MWS	Name of Activity	Physical Target/ Nos.	Unit Cost	Total	1st year	
						Phy (No)	Fin (Rs.)
1	Karigaon –MWS-1	Piggery	1	50,000.00	50,000.00	1	50,000.00
2		Goatery	1	21,000.00	21,000.00	1	21,000.00
3		Handloom	1	50,000.00	50,000.00	1	50,000.00
4		Duckery	1	16,000.00	16,000.00	1	16,000.00
	Sub Total		**4**		**1,37,000.00**	**4**	**1,37,000.00**
5	Dubragaon MWS-2	Piggery	1	50,000.00	50,000.00	1	50,000.00
6		Goatery	1	21,000.00	21,000.00	1	21,000.00
7		Duckery	1	16,000.00	16,000.00	1	16,000.00
8		Handloom	1	50,000.00	50,000.00	1	50,000.00
	Sub Total		**4**		**1,37,000.00**	**4**	**1,37,000.00**
9	Balagaon MWS-3	Piggery	1	50,000.00	50,000.00	1	50,000.00
10		Duckery	1	16,000.00	16,000.00	1	16,000.00
11		Handloom	2	50,000.00	1,00,000.00	1	1,00,000.00
12		E- Rickshaw	1	1,50,000.00	1,50,000.00	1	1,50,000.00
	Sub Total		**5**		**3,16,000.00**	**5**	**3,16,000.00**
13	Kalugaon MWS-4	Piggery	2	50,000.00	1,00,000.00	1	1,00,000.00
14		Duckery	1	16,000.00	16,000.00	1	16,000.00
15		Handloom	1	50,000.00	50,000.00	1	50,000.00
16		E- Rickshaw	1	1,50,000.00	1,50,000.00	1	1,50,000.00
	Sub Total		5		**3,16,000.00**	**5**	**3,16,000.00**
	G. Total		**18**		**9,06,000.00**	**18**	**9,06,000.00**

Sl. No	MWS	Name of Activity	Physical Target/ Nos.	Unit Cost	Total	2nd year	
						Phy (No)	Fin (Rs.)
1	Karigaon –MWS-1	Piggery	2	50,000.00	1,00,000.00	1	1,00,000.00
2		Goatery	2	21,000.00	42,000.00	2	42,000.00
3		Handloom	1	50,000.00	50,000.00	1	50,000.00
4		Duckery	3	16,000.00	48,000.00	3	48,000.00
5		E- Rickshaw	2	1,50,000.00	3,00,000.00	2	3,00,000.00
	Sub Total		**9**		**5,40,000.00**	**9**	**5,40,000.00**
6	Dubragaon MWS-2	Piggery	1	50,000.00	50,000.00	1	50,000.00
7		Goatery	2	21,000.00	42,000.00	2	42,000.00
8		Duckery	3	16,000.00	48,000.00	3	48,000.00
9		Handloom	1	50,000.00	50,000.00	1	50,000.00
10		E- Rickshaw	2	1,50,000.00	3,00,000.00	2	3,00,000.00
	Sub Total		**9**		4,90,000.00	**9**	4,90,000.00
11	Balagaon MWS-3	Piggery	1	50,000.00	50,000.00	1	50,000.00
12		Goatery	2	21,000.00	42,000.00	2	42,000.00
13		Duckery	3	16,000.00	48,000.00	3	48,000.00
14		Handloom	2	50,000.00	1,00,000.00	1	1,00,000.00
15		E- Rickshaw	2	1,50,000.00	3,00,000.00	2	3,00,000.00
	Sub Total		**9**		**5,40,000.00**	**9**	**5,40,000.00**
16	Kalugaon MWS-4	Piggery	2	50,000.00	1,00,000.00	1	1,00,000.00
17		Goatery	1	21,000.00	21,000.00	1	21,000.00
18		Duckery	2	16,000.00	32,000.00	2	32,000.00
19		Handloom	2	50,000.00	1,00,000.00	3	1,00,000.00
20		E- Rickshaw	3	1,50,000.00	4,50,000.00	3	4,50,000.00
	Sub Total		**10**		**7,53,000.00**	**10**	**7,53,000.00**
	G. Total		**37**		**22,73,000.00**	**37**	**22,73,000.00**

Sl. No	MWS	Name of Activity	Physical Target/ Nos.	Unit Cost	Total	3RD year	
						Phy (No)	Fin (Rs.)
1	Karigaon –MWS-1	Piggery	5	50,000.00	2,50,000.00	5	2,50,000.00
2		Goatery	8	21,000.00	1,68,000.00	8	1,68,000.00
3		Handloom	4	50,000.00	2,00,000.00	4	2,00,000.00
4		Duckery	8	16,000.00	1,28,000.00	8	1,28,000.00
5		E- Rickshaw	5	1,50,000.00	7,50,000.00	5	7,50,000.00
	Sub Total		30		**14,96,000.00**	30	**14,96,000.00**
6	Dubragaon MWS-2	Piggery	5	50,000.00	2,50,000.00	5	2,50,000.00
7		Goatery	8	21,000.00	1,68,000.00	8	1,68,000.00
8		Duckery	7	16,000.00	1,12,000.00	7	1,12,000.00
9		Handloom	4	50,000.00	2,00,000.00	4	2,00,000.00
10		E- Rickshaw	4	1,50,000.00	6,00,000.00	4	6,00,000.00
	Sub Total		28		**13,30,000.00**	28	**13,30,000.00**
11	Balagaon MWS-3	Piggery	5	50,000.00	2,50,000.00	5	2,50,000.00
12		Goatery	7	21,000.00	1,47,000.00	7	1,47,000.00
13		Duckery	7	16,000.00	1,12,000.00	7	1,12,000.00
14		Handloom	4	50,000.00	2,00,000.00	4	2,00,000.00
15		E- Rickshaw	4	1,50,000.00	6,00,000.00	4	6,00,000.00
16		Swing Machine	1	12,500.00	12,500.00	1	12,500.00
	Sub Total		28		**13,21,500.00**	28	**13,21,500.00**
17	Kalugaon MWS-4	Piggery	5	50,000.00	2,50,000.00	5	2,50,000.00
18		Goatery	8	21,000.00	1,68,000.00	8	1,68,000.00
19		Duckery	8	16,000.00	1,28,000.00	8	1,28,000.00
20		Handloom	3	50,000.00	1,50,000.00	3	1,50,000.00
21		E- Rickshaw	4	1,50,000.00	6,00,000.00	4	6,00,000.00
22		Swing Machine	1	12,500.00	12,500.00	1	12,500.00
	Sub Total		**29**		**13,08,500.00**	**29**	**13,08,500.00**
	G. Total				**54,56,000.00**		**54,56,000.00**

Sl. No	MWS	Name of Activity	Physical Target/ Nos.	Unit Cost	Total	4TH year	
						Phy (No)	Fin (Rs.)
1	Karigaon –MWS-1	Piggery	4	50,000.00	2,00,000.00	4	2,00,000.00
2		Goatery	4	21,000.00	84,000.00	4	84,000.00
3		Handloom	3	50,000.00	1,50,000.00	3	1,50,000.00
4		Duckery	6	16,000.00	96,000.00	6	96,000.00
5		E- Rickshaw	3	1,50,000.00	4,50,000.00	3	4,50,000.00
	Sub Total		20		**9,80,000.00**	20	**9,80,000.00**
6	Dubragaon MWS-2	Piggery	4	50,000.00	2,00,000.00	4	2,00,000.00
7		Goatery	4	21,000.00	84,000.00	4	84,000.00
8		Duckery	6	16,000.00	96,000.00	6	96,000.00
9		Handloom	4	50,000.00	2,00,000.00	4	2,00,000.00
10		E- Rickshaw	3	1,50,000.00	4,50,000.00	3	4,50,000.00
	Sub Total		21		10,30,000.00	21	10,30,000.00
11	Balagaon MWS-3	Piggery	3	50,000.00	1,50,000.00	3	1,50,000.00
12		Goatery	3	21,000.00	63,000.00	3	63,000.00
13		Duckery	5	16,000.00	80,000.00	5	80,000.00
14		Handloom	4	50,000.00	2,00,000.00	4	2,00,000.00
15		E- Rickshaw	3	1,50,000.00	4,50,000.00	3	4,50,000.00
	Sub Total		18		**9,43,000.00**	18	**9,43,000.00**
16	Kalugaon MWS-4	Piggery	4	50,000.00	2,00,000.00	4	2,00,000.00
17		Goatery	3	21,000.00	63,000.00	3	63,000.00
18		Duckery	5	16,000.00	80,000.00	5	80,000.00
19		Handloom	4	50,000.00	2,00,000.00	4	2,00,000.00
20		E- Rickshaw	4	1,50,000.00	6,00,000.00	4	6,00,000.00
	Sub Total		**20**		**11,43,000.00**	**20**	**11,43,000.00**
	G. Total				**40,96,000.00**		**40,96,000.00**

Sl. No	MWS	Name of Activity	Physical Target/ Nos.	Unit Cost	Total	5th year	
						Phy (No)	Fin (Rs.)
1	Karigaon –MWS-1	Piggery	3	50,000.00	1,50,000.00	3	1,50,000.00
2		Goatery	2	21,000.00	42,000.00	2	42,000.00
3		Duckery	1	16,000.00	16,000.00	1	16,000.00
	Sub Total		6		**2,08,000.00**	6	**2,08,000.00**
4	Dubragaon MWS-2	Piggery	3	50,000.00	1,50,000.00	3	1,50,000.00
5		Goatery	2	21,000.00	42,000.00	2	42,000.00
6		Duckery	1	16,000.00	16,000.00	1	16,000.00
	Sub Total		6		**2,08,000.00**	6	**2,08,000.00**
7	Balagaon MWS-3	Piggery	3	50,000.00	1,50,000.00	3	1,50,000.00
8		Duckery	1	16,000.00	16,000.00	1	16,000.00
9		Handloom	1	50,000.00	50,000.00	1	50,000.00
10		Goatery	2	21,000.00	42,000.00	2	42,000.00
	Sub Total		7		**2,58,000.00**	7	**2,58,000.00**
11	Kalugaon MWS-4	Piggery	3	50,000.00	1,50,000.00	3	1,50,000.00
12		Duckery	1	16,000.00	16,000.00	1	16,000.00
13		Handloom	1	50,000.00	50,000.00	1	50,000.00
		Goatery	1	21,000.00	21,000.00	1	21,000.00
	Sub Total		6		**2,37,000.00**	**6**	**2,37,000.00**
	G. Total		**25**		**9,11,000.00**	**25**	**9,11,000.00**

Table No. 6.3 Details of Production and Micro enterprise:

Sl. No	MWS	Name of Activity	Physical Target/ Nos.	Unit Cost	Total	1st year	
						Phy (No)	Fin (Rs.)
1	Karigaon –MWS-1	Piggery	1	50,000.00	50,000.00	1	50,000.00
1		Fishery	1	50,000.00	50,000.00	1	50,000.00
2		Rotary Tiller MH710	1	75,000.00	75,000.00	1	75,000.00
	Sub Total		3		**1,75,000.00**	**3**	**1,75,000.00**
3	Dubragaon MWS-2	Piggery	1	50,000.00	50,000.00	1	50,000.00
4		Goatery	1	21,000.00	21,000.00	1	21,000.00
5		Fishery	1	50,000.00	50,000.00	1	50,000.00
6		Rotary Tiller MH710	1	75,000.00	75,000.00	1	75,000.00
	Sub Total		4	**1,96,000.00**		4	**1,96,000.00**
7	Balagaon MWS-3	Piggery	1	50,000.00	50,000.00	1	50,000.00
8		Rotary Tiller MH710	2	75,000.00	1,50,000.00	2	1,50,000.00
	Sub Total		3	**2,00,000.00**		**3**	**2,00,000.00**
9	Kalugaon MWS-4	Goatery	1	21,000.00	21,000.00	1	21,000.00
10		Fishery	1	50,000.00	50,000.00	1	50,000.00
11		Mushroom	1	1,26,750.00	1,26,750.00	1	1,26,750.00
12		Rotary Tiller MH710	2	75,000.00	1,50,000.00	2	1,50,000.00
	Sub Total		5		**3,47,750.00**	**5**	**3,47,750.00**
	G. Total		15		**9,18,750.00**	**15**	**9,18,750.00**

Sl. No	MWS	Name of Activity	Physical Target/ Nos.	Unit Cost	Total	2nd year	
						Phy (No)	Fin (Rs.)
1	Karigaon –MWS-1	Piggery	3	50,000.00	1,50,000.00	3	1,50,000.00
2		Goatery	3	21,000.00	63,000.00	3	63,000.00
3		Fishery	1	50,000.00	50,000.00	1	50,000.00
4		Mushroom	1	1,26,750.00	1,26,750.00	1	1,26,750.00
5		Rotary Tiller MH710	3	75,000.00	2,25,000.00	3	2,25,000.00
6		Horticulture	1	30,400.00	30,400.00	1	30,400.00
	Sub Total		12	**6,45,150.00**		12	**6,45,150.00**
7	Dubragaon MWS-2	Piggery	3	50,000.00	1,50,000.00	3	1,50,000.00
8		Goatery	3	21,000.00	63,000.00	3	63,000.00
9		Fishery	1	50,000.00	50,000.00	1	50,000.00
10		Mushroom	1	1,26,750.00	1,26,750.00	1	1,26,750.00
11		Rotary Tiller MH710	4	75,000.00	3,00,000.00	4	3,00,000.00
12		Horticulture	1	30,400.00	30,400.00	1	30,400.00
	Sub Total		13	**7,20,150.00**		13	**7,20,150.00**
13	Balagaon MWS-3	Piggery	3	50,000.00	1,50,000.00	3	1,50,000.00
14		Goatery	3	21,000.00	63,000.00	3	63,000.00
15		Fishery	2	50,000.00	1,00,000.00	2	1,00,000.00
16		Mushroom	1	1,26,750.00	1,26,750.00	1	1,26,750.00
17		Rotary Tiller MH710	4	75,000.00	3,00,000.00	4	3,00,000.00
18		Horticulture	1	30,400.00	30,400.00	1	30,400.00
	Sub Total		14	**7,70,150.00**		14	**7,70,150.00**
19	Kalugaon MWS-4	Piggery	**3**	50,000.00	1,50,000.00	**3**	1,50,000.00
20		Goatery	3	21,000.00	63,000.00	3	63,000.00
21		Fishery	1	50,000.00	50,000.00	1	50,000.00
22		Rotary Tiller MH710	4	75,000.00	3,00,000.00	4	3,00,000.00
23		Horticulture	1	30,400.00	30,400.00	1	30,400.00

	Sub Total	12	**5,93,400.00**		12	**5,93,400.00**
	G. Total		**27,28,750.00**			**27,28,750.00**

Sl. No	MWS		Name of Activity	Physical Target/ Nos.	Unit Cost	Total	3rd year
						Phy (No)	Fin (Rs.)
1	Karigaon –MWS-1	Piggery	6	50,000.00	3,00,000.00	6	3,00,000.00
2		Goatery	8	21,000.00	1,68,000.00	8	1,68,000.00
3		Fishery	2	50,000.00	1,00,000.00	2	1,00,000.00
4		Mushroom	2	1,26,750.00	2,53,500.00	2	2,53,500.00
5		Rotary Tiller MH710	5	75,000.00	3,75,000.00	5	3,75,000.00
6		Horticulture	4	30,400.00	1,21,600.00	4	1,21,600.00
	Sub Total		27		**13,18,100.00**	**27**	**13,18,100.00**
7	Dubragaon MWS-2	Piggery	6	50,000.00	3,00,000.00	6	3,00,000.00
8		Goatery	8	21,000.00	1,68,000.00	8	1,68,000.00
9		Fishery	2	50,000.00	1,00,000.00	2	1,00,000.00
10		Mushroom	2	1,26,750.00	2,53,500.00	2	2,53,500.00
11		Rotary Tiller MH710	5	75,000.00	3,75,000.00	5	3,75,000.00
12		Horticulture	4	30,400.00	1,21,600.00	4	1,21,600.00
	Sub Total		27		**13,18,100.00**	27	**13,18,100.00**
13	Balagaon MWS-3	Piggery	6	50,000.00	3,00,000.00	6	3,00,000.00
14		Goatery	8	21,000.00	1,68,000.00	8	1,68,000.00
15		Fishery	3	50,000.00	1,50,000.00	3	1,50,000.00
16		Mushroom	2	1,26,750.00	2,53,500.00	2	2,53,500.00
17		Rotary Tiller MH710	5	75,000.00	3,75,000.00	5	3,75,000.00
18		Horticulture	5	30,400.00	1,52,000.00	5	1,52,000.00
	Sub Total		29		**13,98,500.00**	**29**	**13,98,500.00**
19	Kalugaon MWS-4	Piggery	7	50,000.00	3,50,000.00	7	3,50,000.00
20		Goatery	7	21,000.00	1,47,000.00	7	1,47,000.00
21		Fishery	3	50,000.00	1,50,000.00	3	1,50,000.00
22		Mushroom	2	1,26,750.00	2,53,500.00	2	2,53,500.00
23		Rotary Tiller MH710	5	75,000.00	3,75,000.00	5	3,75,000.00
24		Horticulture	5	30,400.00	1,52,000.00	5	1,52,000.00
	Sub Total		**29**			**29**	
	G. Total				**54,62,200.00**		**54,62,200.00**

Sl. No	MWS		Name of Activity	Physical Target/ Nos.	Unit Cost	Total	4TH year
						Phy (No)	Fin (Rs.)
1	Karigaon –MWS-1	Piggery	2	50,000.00	1,00,000.00	2	1,00,000.00
2		Goatery	3	21,000.00	63,000.00	3	63,000.00
3		Fishery	2	50,000.00	1,00,000.00	2	1,00,000.00
4		Mushroom	2	1,26,750.00	2,53,500.00	2	2,53,500.00
5		Rotary Tiller MH710	5	75,000.00	375,000.00	5	375,000.00
6		Horticulture	3	30,400.00	91,200.00	3	91,200.00
	Sub Total		17		**9,82,700.00**	**17**	**9,82,700.00**
7	Dubragaon MWS-2	Piggery	2	50,000.00	1,00,000.00	2	1,00,000.00
8		Goatery	3	21,000.00	63,000.00	3	63,000.00
9		Fishery	2	50,000.00	1,00,000.00	2	1,00,000.00
10		Mushroom	2	1,26,750.00	2,53,500.00	2	2,53,500.00
11		Rotary Tiller MH710	5	75,000.00	375,000.00	5	375,000.00
12		Horticulture	2	30,400.00	60,800.00	2	60,800.00
	Sub Total		16		**9,52,300.00**	16	**9,52,300.00**
13	Balagaon MWS-3	Piggery	3	50,000.00	1,50,000.00	3	1,50,000.00
14		Goatery	2	21,000.00	42,000.00	2	42,000.00
15		Fishery	3	50,000.00	1,50,000.00	3	1,50,000.00
16		Mushroom	2	1,26,750.00	2,53,500.00	2	2,53,500.00
17		Rotary Tiller MH710	5	75,000.00	375,000.00	5	375,000.00
18		Horticulture	2	30,400.00	60,800.00	2	60,800.00
	Sub Total		17		**10,31,300.00**	**17**	**10,31,300.00**
19	Kalugaon MWS-4	Piggery	3	50,000.00	1,50,000.00	3	1,50,000.00
20		Goatery	2	21,000.00	42,000.00	2	42,000.00
21		Fishery	3	50,000.00	1,50,000.00	3	1,50,000.00
22		Mushroom	1	1,26,750.00	1,26,750.00	1	1,26,750.00
23		Rotary Tiller MH710	5	75,000.00	375,000.00	5	375,000.00
24		Horticulture	2	30,400.00	60,800.00	2	60,800.00
	Sub Total		**16**		**9,04,550.00**	**16**	**9,04,550.00**
	G. Total		**66**		**38,70,850.00**	**66**	**38,70,850.00**

Sl. No	MWS		Name of Activity	Physical Target/ Nos.	Unit Cost	Total	5TH year
						Phy (No)	Fin (Rs.)
1	Karigaon –MWS-1	Piggery	2	50,000.00	1,00,000.00	2	1,00,000.00
2		Goatery	2	21,000.00	42,000.00	2	42,000.00
3		Fishery	1	50,000.00	50,000.00	1	50,000.00
4		Duckery	1	16,000.00	16,000.00	1	16,000.00
	Sub Total		6		**2,08,000.00**	**6**	**2,08,000.00**
5	Dubragaon MWS-2	Piggery	2	50,000.00	1,00,000.00	2	1,00,000.00
6		Goatery	2	21,000.00	42,000.00	2	42,000.00
7		Fishery	1	50,000.00	50,000.00	1	50,000.00
	Sub Total		5		**1,92,000.00**	5	**1,92,000.00**
8	Balagaon MWS-3	Piggery	2	50,000.00	1,00,000.00	2	1,00,000.00
9		Goatery	2	21,000.00	42,000.00	2	42,000.00
	Sub Total		4		**1,42,000.00**	**4**	**1,42,000.00**
10	Kalugaon MWS-4	Piggery	2	50,000.00	1,00,000.00	2	1,00,000.00
11		Goatery	2	21,000.00	42,000.00	2	42,000.00
	Sub Total		**4**		**1,42,000.00**	**4**	**1,42,000.00**
	G. Total		**19**		**6,84,000.00**	**19**	**6,84,000.00**

Chapter 7

Phasing of Programme and Budgeting

YEAR WISE PHASING IN FUND ALLOCATION IN % DURING THE PERIOD FROM 2021-22 TO 2026-27

COMPONENT	PHASE-II/WORK PHASE %					TOTAL IN %
	1st Year	2nd Year	3rd Year	4th Year	5th Year	
	2021-22	2022-23	2023-24	2024-25	2026-27	
Management Cost	2%	2%	2%	2%	2%	10%
Monitoring & Evaluation	0%	0.5%	0.5%	0.5%	0.5%	2%
Entry Point Activity	2%	0%	0%	0%	0%	2%
DPR Preparation	1%	0%	0%	0%	0%	1%
Institution & Capacity Building	1.5%	0.5%	0.5%	0.25%	0.25%	3%
Natural Resource Management	16%	16%	9.5%	3.0%	2.5%	47%
Production System	1%	3%	6%	4.25%	0.75%	15%
Natural Resource Management & Governance	0.5%	0.5%	0.5%	0.5%	0%	2%
Livelihood, Activities for the asset less persons, micro enterprises & business development	1%	2.5%	6%	4.5%	1%	15%
Consolidation & Withdrawal Phase	0%	0%	0%	0%	3%	3%
Total	**25%**	**25%**	**25%**	**15%**	**10%**	**100%**

YEAR WISE PHASING IN FUND ALLOCATION DURING THE PERIOD FROM 2021-22 TO 2026-27

(Rs in Lakh)

COMPONENT	PHASE-II/WORK PHASE %					TOTAL IN %
	1st Year	2nd Year	3rd Year	4th Year	5th Year	
	2021-22	2022-23	2023-24	2024-25	2026-27	
Management Cost	18.20720	18.20720	18.20720	18.20720	18.20720	91.03600
Monitoring & Evaluation	0.00000	4.55180	4.55180	4.55180	4.55180	18.20720
Entry Point Activity	18.20720					18.20720
DPR Preparation	9.10360					9.10360
Institution & Capacity Building	13.65540	4.55180	4.55180	2.27590	2.27590	27.31080
Natural Resource Management	145.65760	145.65760	86.48420	27.31080	22.75900	427.86920
Production System	9.10360	27.31080	54.62160	38.69030	6.82770	136.55400
Natural Resource Management & Governance	4.55180	4.55180	4.55180	4.55180		18.20720
Livelihood, Activities for the asset less persons, micro enterprises & business development	9.10360	22.75900	54.62160	40.96620	9.10360	136.55400
Consolidation & Withdrawal Phase					27.31080	27.31080
Total	**227.59000**	**227.59000**	**227.59000**	**136.55400**	**91.03600**	**910.36000**

Table No. 7.1: Phasing of the action plan

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.)	Phy (No)	Fin (Rs.)	Phy (No)	Fin (Rs.)	Phy (No)	Fin (Rs.)	Phy (No)	Fin (Rs.)	Phy (No)	Fin (Rs.)
1	Entry Point Activities (2%)															
	1	Waiting Shed	No.	4.50	1	4.50									1	4.50
	2	Waiting Shed	No.	4.10	1	4.10									1	4.10
	3	Waiting Shed	No.	5.50	1	5.50									1	5.50
	4	Waiting Shed	No.	4.1072	1	4.1072									1	4.1072
		Sub Total of Entry Point Activity			**4**	**18.2072**									**4**	**18.2072**
2	**Institution & Capacity Building (3%)**															
	i)	Poor HHs in Watersheds to be covered under SHGs														
		SC	No.		126		42		42		21		22		253	
		ST	No.		2024		674		674		337		336		4045	
		BC	No.													
		OC	No.													
	ii)	Awareness Generation (events) to be conducted														
		Pamphlets distribution	No.	0.0001	2022	0.2022									2022	0.2022
		Wall posters	No.	0.004	100	0.4000									100	0.40
		Small Group meetings	No.	0.0125			10	0.125	10	0.125	5	0.0625	5	0.0625	30	0.3750

		Others: 1 Mass meeting in project level	No.	0.27	1	0.27									1	0.27
		2. Mass meeting in MWS level	No.	0.05	4	0.20	3	0.15	3	0.15					10	0.50
		3. Mass meeting in village level	No.	0.05	15	0.75	4	0.20							19	0.95
	iii)	Formation of UGs	No.	0.0025	30	0.075	20	0.05	20	0.05	10	0.025			80	0.20
		No. of women	No.													
		No. of men	No.													
	iv)	Formation of SHGs	No.	0.00225	500	1.125									500	1.125
		No. of women	No.													
		No. of men	No.													
	v)	Formation of Watershed Committee	No.	0.25	4	1.00									4	1.00
		No. of women	No.													
		No. of men	No.													
	vi)	Regular Meetings to be conducted														
		Watershed Committee	No.	0.00375	30	0.1125	10	0.0375	10	0.0375	5	0.01875	5	0.01875	60	0.225
		UGs/LGs	No.	0.01			20	0.20	20	0.20	10	0.10			50	0.50
		VO/SHGs	No.	0.0125			30	0.375	30	0.375	20	0.25			80	1.00
		Gram Panchayat	No.													
	vii)	No. of Planning events	No.													
	viii)	Registration of WC	No.	0.10	4	0.4									4	0.40
	ix)	Self-Monitoring events (planning, review of activities through tool)	No.	0.005	8	0.04	4	0.02	4	0.02	2	0.01	2	0.01	20	0.10
	x)	Social Audit events	No.	0.025	4	0.10	2	0.05	4	0.10	3	0.075	5	0.125	18	0.45
	xi)	**Trainings & Exposures**														
	a)	On Institutional & Capacity Building	No. Trgs	0.22773	15	3.41595	3	0.6832	3	0.6832	1	0.2277	1	0.2277	23	5.24
		Women	No.													
		Men	No.													
	b)	On Gender	No. trgs													
		Women	No.													
		Men	No.													

	c)	On Natural Resource Management	No. trgs	0.357	5	1.79275	4	1.4181	1	0.3681	1	0.3509	1	0.3759	12	4.31
		Women	No.													
		Men	No.													
	d)	On Enterprise Promotion Livelihood/micro Enterprises	No. trgs	0.23	4	0.92	1	0.23	1	0.23	1	0.23	1	0.23	8	1.84
		Women	No.													
		Men	No.													
	e)	On Productivity Enhancement	No. trgs	0.213	4	0.852	1	0.213	1	0.213	2	0.426	2	0.426	10	2.13
		Women	No.													
		Men	No.													
	f)	Exposure Visits	Nos	2.00	1	2			1	2					2	4.00
		Women	No.													
		Men	No.													
	g)	Participation in Exihibition	No.	0.30			1	0.30					1	0.30	2	0.60
		Women	No.													
		Men	No.													
	h)	Seminar & Workshop	No.	0.50			1	0.50			1	0.50	1	0.50	3	
		Women	No.													
		Men	No.													
	Sub Total IB & CB {Do not sum Men & Women under CB events (a to h)					**13.6554**		**4.5518**		**4.5518**		**2.2759**		**2.2759**		**27.3108**

3	**Production System (15%)**															
	A)	**Agriculture**														
		(Improved practices)														
	i)	Horticultural Plantation	Ha				4	1.216	18	5.472	9	2.736			31	9.454
		(Infrastructure)														
	i)	Rotary tiller MH710	No.		6	4.5	15	11.25	20	15	20	15			61	45.75
	ii)	Mushroom	No.		1	1.267	3	3.802	8	10.14	7	8.872			19	24.0825
	B)	**Animal Husbandry**														
		(Adoptive trials)														
	i)	Goatary	No.		2	0.42	12	2.52	31	6.51	10	2.1	8	1.68	63	13.23
	ii)	Piggery	No.		3	1.5	12	6	25	12.5	10	5	8	4	58	29.00
	iii)	Duckery	No.										1	0.16	1	0.16
	C)	**Fisheries**														
		Improved Practices														
		Fish Pond	No.		3	1.5	5	2.5	10	5	10	5	2	1	30	15.00
	Sub-Total PE				15	9.187	51	27.288	112	54.622	66	38.708	19	6.84	263	136.55

4	**Livelihood (15%)**															
	i)	Piggery	No.		5	2.50	6	3.00	20	10.00	15	7.50	12	6.00	58	29.00
	ii)	Goatery	No.		2	0.42	7	1.47	31	6.51	14	2.94	7	1.47	61	12.81
	iii)	Handloom	No.		5	2.50	6	3.00	15	7.50	15	7.50	2	1.00	43	21.50
	iv)	Duckery	No.		4	0.64	11	1.76	30	4.80	22	3.52	4	0.64	71	11.36
	v)	E-Rickshawe	No.		2	3.00	9	13.50	17	25.50	13	19.50			41	61.50
	vi)	Sewing Machine	No.						2	0.25					2	.025
	Sub-Total EP				18	9.06	39	22.73	115	54.56	79	40.96	25	9.11	276	136.55
5	**Natural Resource Management (47%)**															
	I)	**WHS (MI Works)**														
	a	Check Dams/Sipllways	Nos.		2	28.36	2	24.08	1	12.30	1	12.30				77.02
	b	Farm ponds	Nos.		2	56.80	4	68.63	1	15.20	1	10.77	1	12.35	9	163.75
	II	**Soil Moisture Conservation (SMC)**														
	a	Brick Channel	No.		2	27.50	2	27.50	2	26.25	1	5.50			7	86.75
	b	Land Development Work	No.		1	10.71	1	8.57	1	7.14			1	3.57	4	29.99
	III	**Vegetative Measures**														
	a	Plantation	No.		5	22.50	4	16.86	4	25.53			2	5.46	15	70.35
	VII	**Innovative works/Measures** (5% of NRM funds)	No.													
		Sub Total NRM:			12	145.87	13	145.64	9	86.42	3	28.57	4	21.38	35	427.86

6	**Natural Resources Management Goverance 2%**															
	i)	Maintenance Natural Resources Related Assets														
	a)	Meeting with the members of GP along with PRI members	No.	0.05	7	0.35	7	0.35	7	0.35	7	0.35			28	1.40
	b)	Preparation of overall project Dev. Plan	No.	0.05	3	0.15	3	0.15	3	0.15	3	0.15			12	0.60
	c)	Meeting for Annual Audit under Budgeting with GP & PRI members	No.	0.05			6	0.30	6	0.30	6	0.30			18	0.90
	ii)	**Water Budgeting Management/ Regulatory Norms & Governance**	No.													
	a)	Ground water monitoring (twice a year)	No.	0.10	15	1.50	13	1.30	15	1.50	16	1.60			59	5.90
	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 & Regulation Generation of common lands (For protection of upper reaches of the watershed slopes)**	No.													
	a)	**Meeting with departmental officers & staff of Forest, Agri., Vety., etc. for protection & regeneration / Regulation in upper reaches of the watershed slope**	No.	0.05	14	0.70	14	0.70	14	0.70	14	0.70			56	2.80
	b)	Formation of User's Groups & Mobility	No.	0.02	40	0.80	35	0.70	25	0.50	20	0.40			120	2.40
	c)	Formation of Voluntary org. & Mobility	No.	0.03	15	0.4518	15	0.4518	15	0.4518	15	0.4518			60	1.81
		Sub Total of NRM Governance:				**4.5518**		**4.5518**		**4.5518**		**4.5518**				**18.2072**

7	**Management Cost (10%)**															
	a	WC office expenditure	Rs.		1	7.00	1	7.00	1	7.00	1	7.00	1	7.00	5	35.00
	b	WS secretary Salary	Rs		4	1.20	4	1.20	4	1.20	4	1.20	4	1.20	20	6.00
	c	Stationary & miscillaneous	Rs.		1	10.00	1	10.00	1	10.00	1	10.00	1	10.00	5	50.00
		Sub Total Management			**6**	**18.20**	**6**	**18.20**	**6**	**18.20**	**6**	**18.20**	**6**	**18.20**	**30**	**91.00**
8	**Monitoring & Evaluation (2%)**					**0**		**4.55**		**4.55**		**4.55**		**4.55**		**18.20**
9	**DPR Preparation (1%)**				**1**	**9.10360**										
10	**Natural Resource Management & Governance (2%)**					**4.55**		**4.55**		**4.55**		**4.55**		**0**		**18.20**
11	**Consolidation & Withdrawal phase (3%)**					**0**		**0**		**0**		**0**		**27.31080**		**27.31080**
		Grand Total (sum of all sub-totals 1 to 11)				**227.59**		**227.59**		**227.59**		**136.554**		**91.036**		**910.36**

Table No. 7.2 Estimated Benefit Cost Ratio BCR

S. No.	Name of the activity	Total Cost (Rs.)	Total Benefit expected * (Rs. In L)	BCR	Remarks
1	EPA	18.2072	21.84864	1:1.2	--
2	NRM	427.8692	599.01688	1:1.4	--
3	Production system & Micro Enterprises	136.554	177.5202	1:1.3	--
4	Livelihood for Asset less	136.554	177.5202	1:1.3	--
5	Institution and Capacity building	27.3108	32.77296	1:1.2	--
6	Overall	746.4952	955.51385	1:1.28	--

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 WCDC will 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. 9.10360 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 Kokrajhar –I/2021-22 (Subaijhar) WDC-PMKSY, 2.0, Kokrajhar, 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 favorable report from the evaluators.

(f) An amount of Rs 9.10360 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

1	2	Implementation Phase								Consolidation/exit Phase	
S. No	**Component**	**1 year**		**2nd year**		**3rd year**		**4th year**		**5th year**	
		Phy (No)	Fin (Rs.)	Phy (No)	Fin (Rs.)	Phy (No)	Fin (Rs.)	Phy (No)	Fin (Rs.)	Phy (No)	Fin (Rs.)
1	Entry Point Activities (2%)		18.20720								
2	DPR Preparation by PIA (1%)		9.10360								
3	Institution & Capacity Building (3%)		13.65540		4.55180		4.55180		2.27590		2.27590
4	Production System (15%)		9.10360		27.31080		54.62160		38.69030		6.82770
5	Livelihoods, Activities for the Assetless persons micro enterprises & business development (15%)		9.10360		22.75900		54.62160		40.96620		9.10360
6	Natural Resource Management (47%)		145.65760		145.65760		86.48420		27.31080		22.75900
7	Monitoring & Evaluation (2%)		0.000		4.55180		4.55180		4.55180		4.55180
8	Consolidation & Withdrawal phase (3%)										27.31080
9	Management Cost (10%)		18.20720		18.20720		18.20720		18.20720		18.20720

1	2	Implementation Phase								Consolidation/exit Phase	
S. No	**Component**	**1 year**		**2nd year**		**3rd year**		**4th year**		**5th year**	
10	Natural Resource Management & Governance (2%)		4.55180		4.55180		4.55180		4.55180		

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 27.31080 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 12.83607 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.

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 Kokrajhar –I/2021-22 (Subaijhar) 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 employment 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 overall 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	13	11	At some points recharge may be observed more but the overall raise of Groundwater Table is expected to be about 2 meters.
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	Many Ring well and Tube well etc. would be Provided
5	Increase in irrigation potential		Hec.	Nil	3600	Supplementary irrigation through improved soil moisture regime, Water distribution channel from water harvesting structures, pump etc
6	Change in cropping/ land use pattern		Description	Single Cropping	Double Cropping also multiple cropping in suitable areas	
7	Area under agricultural crop		Hec.	4443	4515	
	I	Area under single crop	Hec.	4043	4100	
	Ii	Area under double crop	Hec.	400	415	
	iii	Area under multiple crop	Hec.			
8	Net increase in crop production area		Hec.	4169	6700	
9	Increase in area under Vegetation/Forest		Hec.	Nil	89	
10	Increase in area under horticulture		Hec.	Negligible	20	
11	Increase in area under fuel		Hec.	50	80	
12	Increase in area under Fodder		Hec.	Nil	25	
13	Increase in milk production		Litres/day	1200	1300	
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.			
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.	-	-	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	--	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	Farmers are not procuring certified seeds	Only certified seeds will be procured.
(ii) Seed supply system	Assam Seed Corporation, Seed corporation of India	Individual purchase from open market	Seed supply will be only through organized sector, Department of Agriculture
(iii) Fertilizer supply system	Fertilizer Corporation of India	From open market	Department of Agriculture, Assam will ensure genuine supply of Fertilizer.
(iv) Pesticide supply system	From reputed manufacturers through the Department of Agriculture	From open market	Department of Agriculture, Assam will ensure genuine supply of pesticides
(v) Credit institutions	K.C.C. Banks	Almost not being practiced.	KCC and credit linkage with Banks will been ensured
(vi) Water supply	State Department of Public Health Engineering	Private arrangements	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	To some extent services are being provided	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	No Nursery is there in the project area	Additional supply of seedlings will be made available from State Agriculture and Forest Departments
(ix) Tools/machinery suppliers	Department of Agriculture, Assam	Farmers are procuring by themselves	Provision as made in DPR. To be procured through State Department of Agriculture

(x) Price Support system	State Department of Agriculture	No price support system is functioning in letter and spirit.	State government will have to take appropriate steps
(xi) Labour	State Department of Labour and Employment	Not in practice	Prevailing rules will be followed
(xii) Any other (please specify)			
(B) Forward linkages			
(i) Harvesting/threshing machinery	State Department of Agriculture	No action	Users Federation will take collection action with the State Department of Agriculture
(ii) Storage (including cold storage)	State Department of Agriculture	No cold storage in Project area	State Department of Agriculture will take appropriate steps
(iii) Road network	State PWD Deptt.	Needs improvement	Road network will have to be improved through PMGRY
(iv) Transport facilities	State Department of Transport	Poor Communication	Needs to be improved
(v) Markets / Mandis	VCDC/(Panchayats), Local Bodies	Only 3 markets at present	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	Not significant	PIA/WDT/WC will coordinate with concerned Authorities.
(vii) Milk and other collection centres	Dairy Development Department	No production in the Project area	PIA/WDT/WC will coordinate with Dairy Development authorities.
(viii) Labour	Department of Labour and Employment	Not significant	PIA/WDT/WC will coordinate with authorities.
(ix) Any other (please specify)			